



Lessons and Impacts of a Phone-Based Parenting Program for Syrian and Jordanian Families with Young Children¹

KEY TAKEAWAYS

- This study, led by Global TIES for Children at New York University, is the first to evaluate a phone-delivered version of a parenting program in the Middle East and the **first randomized-controlled evaluation of an audio-only parenting program** for a community sample (that is, a sample without diagnosed health problems or disabilities). Though extremely relevant for humanitarian and crisis situations, when in-person programs are difficult, very little is known about the impacts of audio-only remote caregiver programs.
- When the International Rescue Committee (IRC) adapted an in-person home-visiting parenting program in 2020 to be delivered remotely, via audio-only phone calls, it created a unique opportunity to evaluate an audio-only remote caregiver program. The original in-person program, Reach Up and Learn (RUL)², had been delivered by the IRC from 2016 to early 2020 in parts of Jordan, targeting both Jordanian and Syrian caregivers. The remote adaptation was made in response to the pandemic and as part of the Ahlan Simsim ("Welcome Sesame" in Arabic)* initiative, in partnership with Sesame Workshop.
- The study showed no difference in impact between the treatment group (caregivers who received health and nutrition content plus early childhood development messages) and the control group (caregivers that only received health and nutrition content) on most hypothesized outcomes, including caregiver-child interactions, child development, caregiver anxiety symptoms, caregiver self-efficacy, or stress related to caregiving.
- Examining the implementation factors behind these results reveals important learning on how to implement remote, phone-call based programs. We hypothesize that the lack of impact is because:
 - Dosage was too low. This RUL adaptation provided three calls per month for six months. Each call was limited to 7-10 minutes of early childhood development (ECD) content, or 126-180 total minutes. This is substantially less contact time than any previously evaluated in-person version of the program, in which caregivers receive approximately 3,000 minutes of ECD content over one year.



- Important components of the in-person RUL content were difficult to implement in the context of audio-only calls. The RUL in-person program centers on three main components: demonstration, practice, and feedback. All three of these components, and the ability to tailor each component to the child's levels of development, are compromised in an audio-only intervention. In contrast, mobile phone-based parenting programs that incorporate video have shown impacts for both parenting and child outcomes³.
- There may have been a mismatch between RUL content and the needs of Syrian and Jordanian caregivers concerning their parenting during COVID-19. Despite successful adaptation of RUL content to other contexts and considerable effort to adapt it for Syrian and Jordanian caregivers, there is little research on parenting in the Arab world to inform design and adaptation of programs such as this.
- Positive results were detected in one of the hypothesized outcomes: the reduction of caregiver depressive symptoms. This reduction was driven by how the Community Health Volunteers (CHVs) delivering RUL interacted with caregivers. This study's findings indicate that trusting, non-judgemental rapport between the person delivering the content and the caregiver may be the most critical driver of reduced depressive systems for this audio-only program. While this intervention was not primarily focused on caregiver mental health or well-being, RUL content was supplemented with check-ins on caregiver well-being. Such check-ins are important to consider for training staff to deliver any program by phone in a way that supports client well-being and builds positive relationships between frontline staff and clients.
- The total cost to the IRC to deliver the RUL messaging components of the program was \$110 per household. The cost to each caregiver to participate was no more than \$10, based on estimates of the opportunity cost of their time. Caregivers did not have to buy any materials to participate in this program and the IRC paid the cost of the phone credit for calls.
- Future research into similar audio-only programs as well as caregiving in the Middle East context are important to continue improving future remote and phone-call based interventions, especially for humanitarian situations, and to ensure that design of caregiver support programs in the region is rooted in local beliefs and practices.

BACKGROUND

Global ECD in crisis contexts

Despite a growing emphasis in the early childhood development (ECD) field to ensure that children reach their full potential in several key areas, including health, nutrition, and cognitive-, motor-, and social-emotional development, evidence from 2017 indicates that some 250 million children under the age of 5, globally, are at risk of not achieving this goal in low- and middle-income countries⁴ (LMICs). We know that children's environments, especially their homes, are critical to their ability to reach their potential⁵, but we also know that parenting young children can be quite stressful, especially in 1) the absence of key support and resources, 2) the presence of substantial challenges and barriers⁶, or 3) both of the aforementioned circumstances. Given limited resources, basic provisions of elements that would help a child survive often take priority over provision of a nurturing environment that would promote learning and development. Indeed, the provision of these resources (food, shelter, safety) poses its own challenge for parents already struggling to make ends meet.

Stressors like exposure to violence, economic downturns, or health crises such as COVID-19 can also severely hamper caregivers' ability to provide secure, responsive relationships and promote developmental opportunities⁷. Forced displacement and conflict exacerbate these challenges, introducing additional stress and risk into the lives of children and their parents. Out of 100 million displaced people world-wide, estimates indicate that 11.7 million are children under the age of five⁸. It is especially important to support caregivers in refugee settings given the lack of stability in their environment. Children growing up in contexts of displacement are less likely to go to school and more likely to suffer the effects of severe stress and to struggle with behavior, emotions, and cognition.

This makes programs that support parents and children in contexts of displacement of critical importance for both early childhood development actors and the humanitarian community.

Caregiving and parenting programs

Parenting programs are an important response to the increased incidence of crises and are central to the Nurturing Care Framework, the global framework for ECD programs and policies. Impact evaluations of programs to improve parenting suggest that they are, on average, quite effective across a range of high-, middle-, and low-income countries. By and large, parenting interventions have been proven to improve child cognitive, language, motor, socioemotional development, and attachment and increase parent knowledge, positive parenting practices, and parent-child interactions⁹. To date, few parenting programs have proactively incorporated caregiver well-being components into their design and objectives¹⁰. In addition, few parenting programs are only implemented through phone calls or other remote tools, and most include in-person components.

In-person parenting programs, often implemented in the form of home visits or parenting groups¹¹, are not always feasible in conflict-affected or rural contexts; with highly mobile and displaced populations; or when faced with health crises that necessitate social distancing. This suggests a need — across a variety of contexts — for parenting support programs that can be delivered remotely¹².

Syrian refugee context in Jordan

Since the start of the Syrian conflict in 2011, nearly 7 million Syrians have fled the country, the vast majority of whom have settled in neighboring countries¹³. Registration numbers suggest that roughly 675,000 Syrian refugees are currently residing in Jordan, although the actual total is estimated to be around 1.3 million when considering those not officially registered as refugees¹⁴. More than three-quarters of Syrian refugees living outside of camps in Jordan live below the poverty line, and most rely on humanitarian assistance to meet basic needs¹⁵. Of all Syrian refugees registered world-wide, 1 in 10 are children under the age of five¹⁶.

Since early 2020, the consequences of displacement have been compounded by stressors of the COVID-19 pandemic. These have resulted in heightened stress among Syrian refugee households and caregivers, including those living in Jordan¹⁷.



Reach Up and Learn in Jordan



Reach Up and Learn (RUL) focuses on caregivers of infants and toddlers¹⁸ and is based on a home-visiting program originally implemented in 1986-87 in Jamaica that has since been adapted for Bangladesh, Colombia, India, Peru, and other contexts¹⁹. In 2016, the International Rescue Committee (IRC), in collaboration with the Arab Resource Collective, further adapted RUL for Syrian refugee and host community families in Jordan, Lebanon, and Syria.

From 2016 to early 2020, the IRC delivered RUL through in-person home visits with caregivers of children aged 6-42 months in Jordan, Syria, and Lebanon, first as part of its child protection and health programming, and later, in partnership with Sesame Workshop as part of the Ahlan Simsim early childhood initiative.²⁰ **When the COVID-19 pandemic halted in-person programming in March 2020, IRC's ECD team in Jordan adapted the RUL curriculum for delivery through audio-only phone calls.** The decision to use audio-only calls was based on input from caregivers indicating that most caregivers preferred audio-only phone calls because of concerns about high data costs associated with other media formats.

PROGRAM DESCRIPTION

The program evaluated in this study was implemented in the Jordanian governorate of Irbid and the city of Ramtha from March to September 2021. Approximately 2,300 households were divided into two groups: a control group and a treatment group. Both groups received phone calls focused on health and nutrition messages, a standard part of IRC's community health programming. The control group only received these messages while the treatment group received phone calls that also included the adapted audio-only RUL content along with a check-in and additional messages focused on caregiver well-being.

Calls were delivered by community health volunteers (CHVs) from the communities where the program was implemented. The Syrian and Jordanian CHVs were hired and trained by the IRC and briefed by NYU. They each worked with an average of 31 families. CHVs called all caregivers three times per month, with a goal to deliver 18 calls to every caregiver over a six-month period. The actual number of calls caregivers received varied and ranged from one to 18, with an average of 12.3 calls per caregiver included in the study.

Control calls were intended to last about 23 minutes, though analysis of a subsample of 311 calls showed that, on average, they wound up lasting just over 19 minutes (19 minutes and 08 seconds). The additional RUL content for the treatment group was expected to increase the call



duration by another 7-10 minutes, although length of call could vary depending on the general conversation flow. On average, it appears the additional RUL content lasted 8.5 minutes, and treatment phone calls were just under 29 minutes (28 minutes and 44 seconds).

- The approximate call structure for both sets of calls is below:

Structure of Control group phone call (23 min)

- Greetings and intro: 3 min
- Community health messages: 10-15 min
- Closing recap: 5 min

Structure of Treatment group phone call (30 min)

- Greetings, intro, and wellbeing check-in: 3 min
- Community health messages: 10-15 min
- ECD activity: 7 min
- Closing recap: 5 min

The additional 7–10 minutes of RUL content was designed to provide caregivers with knowledge about the development of their children and to improve parent-child interactions. This included information as well as suggested activities related to communication, play, and learning through various songs, games, and activities that are easy to do with basic household items. The content was tailored so that caregivers received age-appropriate recommendations, based on the ages of their children.

- At its core, the RUL content was designed to:
- Encourage caregivers to do developmentally supportive activities with children in a way that is responsive, affectionate and encouraging
- Support caregivers to listen, understand, and respond to their children
- Encourage caregivers to praise their children
- Support caregivers to use more positive parenting discipline practices
- Improve caregiver well-being by having CHVs build positive and collaborative relationships with them, focused on responding respectfully to their ideas and questions during calls and checking in on their well-being

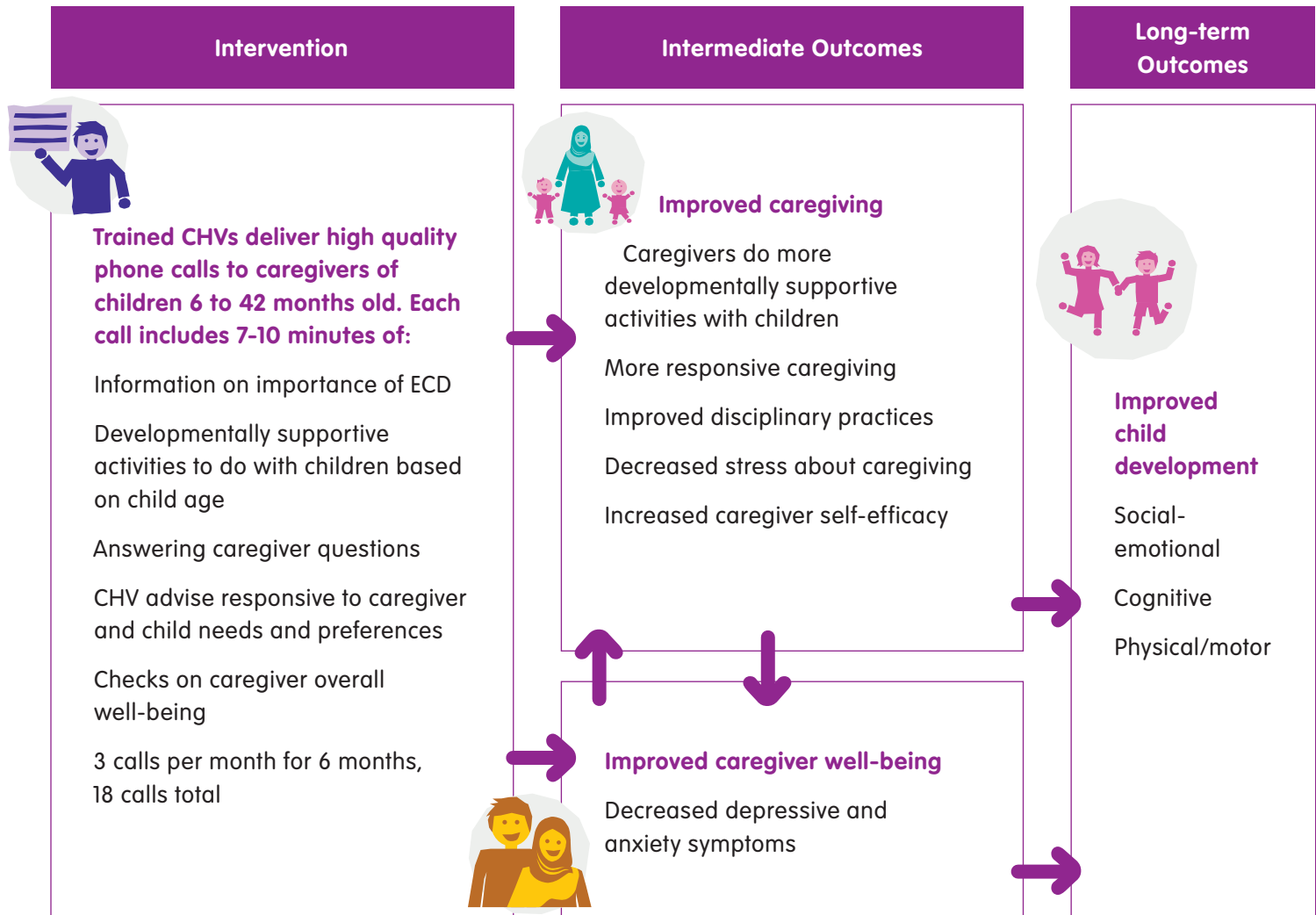


PROGRAM THEORY OF CHANGE

The theory of change of this version of RUL (cf Figure 1) indicates that additional RUL content in the phone calls between CHVs and caregivers should lead to improved caregiving practices, improved caregiver well-being, and improved child development. The idea is that supporting caregivers to 1) improve and increase interactions with children; 2) better understand the importance of ECD, and 3) better understand how they can foster positive

child development will ultimately increase caregiver self-efficacy and decrease parenting stress. This, in turn, should also decrease overall anxiety and depressive symptoms. In the longer-term, this theory of change posited that these intermediate outcomes ultimately improve children's social-emotional, cognitive, and physical development.

Figure 1: Phone-based RUL Program Theory of Change



Important contextual factors: Family member educational backgrounds, nationality, household socioeconomic status, child gender and age

RESEARCH DESIGN AND METHODS

This study, led by the Global TIES for Children research center at New York University, is the first of its kind in several important ways. First, to the best of our knowledge, **it is the first causal impact evaluation of an audio-only²¹, phone-based parenting intervention focused on caregiving for young children (0-3 years old) in a LMIC.** Second, very few studies have evaluated the impact of parenting programs delivered in Arabic-speaking countries. And third, very few evaluations of parenting programs have focused on conflict-affected settings in general.

Research Questions

- What is the impact of six months of the phone-based (audio-only) RUL program on caregiver-reported parenting behaviors and parental well-being (primary hypothesized outcomes), and child learning and development (exploratory outcomes), relative to basic health and nutrition support calls?
- What is the implementation quality of the phone-based RUL program and how does quality predict parenting behaviors, well-being, and child outcomes?
- Are there factors that predict for whom, when, and under what circumstances the phone-based RUL intervention has impacts?
- What is the cost of the phone-based RUL program, relative to receiving health- and nutrition-based calls and which of these costs are borne by the delivering organization versus the caregivers?

Design and Methods

To answer these questions, NYU used a randomized-controlled trial design with an embedded observational quality study. Data were collected from program participants at three points in time. All of the instruments used for data collection were first piloted in-person in 2019 with extensive attention to dialect and intelligibility, during the in-person implementation period of Reach Up and Learn. NYU-TIES and IRC teams worked closely to ensure that the measures in all the tools aligned with the phone-based RUL theory of change.

- **Baseline data collection:** Prior to the intervention's start, and before participating families were randomly allocated to the control or treatment conditions, we collected baseline data with 2,298 families from November 2020 to February 2021. Baseline data collection consisted of an 80-minute phone-based survey that families could elect to complete in either one or two calls, given its length.²² Then random assignment occurred of the CHVs, followed by training in the two conditions, and the beginning of the interventions.
- **Midline data collection:** In the last six weeks of implementing the intervention, we recorded a random subsample of 311 calls in both the treatment (167) and control (144) groups. These recordings were then coded using a structured observation tool to assess the quality of the calls. The coded calls were recorded in the last six weeks of the program to ensure we were observing "mature" calls and evaluating CHV interactions once they had stabilized in their practice.
- **Endline data collection:** After the completion of the 6-month program, a second phone-based caregiver survey of 45 minutes was collected between November 2021 and January 2022. As with baseline, caregivers were given the option to conduct this over one or two phone calls. Of the 2,298 baseline families, we were able to reach 1,714 families (74.6% of our baseline sample) at endline.

Implementation data collected by the IRC were also used where relevant in analysis.

STUDY FINDINGS

Below we summarize findings for each research question. **Our analysis found positive effects of the phone-based RUL intervention in two areas: caregiver depression and call quality.** We did not detect impacts on most other hypothesized outcomes in the areas of caregiving, caregiver well-being, child development.

- What is the impact of six months of the phone-based (audio-only) RUL program on caregiver-reported parenting behaviors and parental well-being (primary hypothesized outcomes), and child learning and development (exploratory outcomes), relative to basic health and nutrition support calls?

Our analysis found no effects of the addition of the RUL ECD messages on caregiver-reported parenting behaviors, child learning and development, caregiver anxiety symptoms, caregiver stress related to caregiving, or caregiver self efficacy. Our analysis did find a statistically significant, small reduction in caregiver depressive symptoms.

We believe that the lack of impact on parenting behaviors was due to three key factors:

- Dosage was too low. This RUL adaptation provided calls three times a month for six months, with the ECD content limited to roughly 7-10 minutes per call: substantially less contact time than any previously evaluated in-person version of the program. For comparison, this means the phone-based RUL program evaluated had approximately 126-180 minutes of total ECD content as compared with other evaluated in-person versions of RUL that included between 3,000 (1-year program) and 6,000 minutes (2-year program). These longer versions of RUL have shown more positive impacts on caregiver-child interactions and child development.
- Important components of the in-person RUL content were difficult to implement in the context of audio-only calls. RUL in-person centers on three main components: demonstration, practice and feedback. That is, the home visitor demonstrates a new parent-child activity with the child (often with a new toy or material or concept); the parent practices the new activity in the presence of the home visitor; and then the visitor provides immediate feedback to the caregiver. All three of these components, and the ability to tailor the component to children's levels of

development, are compromised in an audio-only intervention. In contrast, mobile phone-based parenting programs that incorporate video have shown impacts for both parenting and child outcomes.²³

- Dimensions of parenting culturally specific to Syrian and Jordanian caregivers and/or specific to the COVID-19 context may not have been sufficiently targeted in the intervention. For example, a study of Syrian caregivers of young children in Jordan that tracked changes pre- vs post-COVID found increased perceptions of child behavior problems, suggesting that some specific parenting concerns may have been particularly salient during the COVID-19 pandemic.²⁴ Additionally, there is little research on parenting in the Arab world to inform design and adaptation of programs such as this. The RUL curriculum activities were adapted by both the IRC and an NGO from the region, the Arab Resource Collective, and iteratively revised during pilot implementation in response to caregivers.²⁵ Evidence from other contexts suggests that the program, which originated in Jamaica, can be adapted with positive impacts on child development,²⁶ but the model fundamentally remains one that was brought in from another context; other culturally relevant socialization practices might not have been captured in its theory of change.

We did find a statistically significant, small reduction in caregiver depressive symptoms. In the general parenting intervention literature, this is a relatively rare finding²⁷. The magnitude of the impact on depressive symptoms found in this study was relatively modest and occurred from a base level of depressive symptoms that was relatively low; caregivers reported experiencing depressive symptoms several days a week, on average. Although the reduction in depressive symptoms was modest, it represents a reduction in risk for severe depression from 10 percent down to 7 percent. Severe depression is an important outcome from a global public health perspective, and a predictor of child development outcomes, including lower cognitive and social-emotional development during the first three years²⁸. As of 2019, depression was the sixth leading cause of global burden of disease²⁹. In addition, since the onset of the COVID-19 pandemic, depressive symptoms have increased worldwide, with the particular demographic of this sample (i.e., women of childbearing age) showing larger increases than other groups³⁰.

It is worth noting that we did not find evidence of reductions in related aspects of well-being such as anxiety symptoms or parenting stress and parent self-efficacy. Anxiety is a distinct, yet highly correlated/comorbid, mental health phenomenon from depression, and has also shown increases during the COVID-19 pandemic. It may be that the sources of anxiety may not have been as malleable in a relatively light-touch phone-based intervention as depressive symptoms. It is also the case that treatments for anxiety typically use a different set of techniques than those for depression, so what we might expect to effect depression symptoms, we might not expect to have the same efficacy on anxiety³¹. It is also likely the case that the lack of effect on parenting stress and self-efficacy stems from the same three key factors, discussed above, that limited the impact on parenting behaviors overall.

- What is the implementation quality of the phone-based RUL program and how does quality predict parenting behaviors, well-being, and child outcomes?

Though parents in both the control and treatment groups were equally likely to implement the recommendations of the CHVs, **we found that on both dimensions of call quality we assessed, treatment-group calls were rated substantially higher than control-group calls**. CHVs who provided the treatment content, which included the RUL curriculum, demonstrated increased responsive listening and increased non-judgmental rapport with the caregiver on their calls.

In trying to understand the positive effects of the program on caregiver depression, this became an important insight. We tested whether or not the quality of the call might explain, in a statistical sense, the positive effects of the phone-based RUL program on caregiver depression. Of the two main measures used to assess call quality (responsive listening and non-judgmental report) one — non-judgmental rapport — was found to statistically explain or mediate the overall effect on reduced depression.

This finding suggests that **a positive, non-judgmental, and comfortable rapport between caller and caregiver is critical to achieve reductions in depressive symptoms when an intervention is audio-only** and fully remote. In the psychotherapy literature, it has long been known that the rapport and trust between a therapist or caretaker and a client is critical to improved well-being and mental health outcomes, particularly

around depression³². In situations of displacement, social support may be particularly important³³, and perhaps the regularity of a weekly call from a caring caller helps to provide some of this. IRC program staff do report that some participating caregivers related that they looked forward to the weekly CHV calls to ease their isolation. Such isolation may also have been magnified during the COVID-19 pandemic, as other studies of caregivers of young children have suggested³⁴. This finding is important for training staff to implement any type of remote programming for any population, and especially those who may be suffering from higher rates of depression, such as people affected by conflict or crisis. It may have been that integrating a well-being check-in as well as focusing on the caregivers' roles as parents boosted the callers' listening and rapport skills. This finding may also be important in training staff to implement interventions that focus on depression or mental health as primary outcomes.

- Are there factors that predict for whom, when, and under what circumstances the phone-based RUL intervention has impacts?

We were interested in whether the program impacts differed by population characteristics such as nationality, child gender/age, baseline levels of the outcome, or indicators of household socioeconomic status. We found no evidence of differences in impacts on any outcomes, suggesting that — at least across these dimensions — the treatment is equally effective (or not effective, depending on the outcome) for all subgroups.

- What is the cost of Phone-based RUL relative to receiving health- and nutrition-based calls and which of these costs are borne by the delivering organization versus the caregivers?

Based on finance management data and on survey responses regarding implementation, analysis led by the Center for Benefit-Cost Studies of Education at University of Pennsylvania and the Best Use of Resources team at IRC show that, per household, the intervention cost \$110 on average. This estimate includes both 1) the costs to IRC to deliver the program, which is 99% of the total, and 2) the costs to caregivers to participate, which was only 1% of the total.

Importantly, this cost-effectiveness analysis is focused only on the incremental costs of RUL in addition to the health and nutritional content discussed on calls with caregivers in both treatment and control groups. As



a phone-based program, the cost of supplies and materials was quite low. Caregivers were encouraged to use resources already in their homes to facilitate child development. Though CHV salaries accounted for the biggest category of costs (26% of total IRC costs), national-program-staff structures were actually quite light. That said, it is important to note that the RUL program leveraged existing health infrastructure and staff. The light country-level management team may change if the program was shifted to in-person or was no longer added onto existing health programming.

Additional finding: Reinforcing engagement across Ahlan Simsim interventions

The Ahlan Simsim initiative encompasses several interventions in addition to the RUL program. One additional intervention was a TV show of the same name — *Ahlan Simsim* — produced by Sesame Workshop and broadcast throughout the MENA region. The show designed content for children aged 3–8 years, whereas the RUL content was for parents of children aged 6–42 months. Though watching the *Ahlan Simsim* TV show was not part of the RUL intervention, the study team asked caregivers whether they watched the TV show to better understand caregiver engagement in the show as well as direct service interventions such as RUL. In analyzing responses to these questions, we found a statistically significant impact in the likelihood that caregivers who

were part of the treatment group would report having watched the *Ahlan Simsim* TV show with their child. Caregivers who received the added phone-based RUL content were 1.39 times as likely to report doing so than those who had not. This result likely stems from the fact that CHVs in the treatment group began each call by identifying themselves as calling from the Ahlan Simsim initiative, in addition to stating their affiliation with the IRC. Control group CHVs, by contrast, only identified themselves as calling from the IRC. This mention of Ahlan Simsim (“Welcome Sesame” in Arabic) may have acted as a behavioral nudge to view the TV program of the same name, despite the lack of any specific messaging to view the TV program. The Ahlan Simsim initiative at large has had a goal of increasing access to both mass media content and other ECD services. This mentioning of the name of the initiative may have served to facilitate engagement with the TV program that is so central to the initiative³⁵.

Limitations

It is worth noting some limitations to this study. Primarily, as with the intervention, data collection was audio-only and all done over the phone. Despite extensive efforts to test, validate, and review all questions and translations, it is still possible that some items could have been interpreted differently than intended — particularly over the phone. In addition, this study took place with a specific population in Jordan, and results may not be generalizable to all populations or contexts.



RECOMMENDATIONS

Based on our findings, we have several recommendations for future research and ways in which future phone-based programs could be designed impact on parent mental health symptoms, parenting, parenting stress, and parenting self-efficacy.

Recommendations for Future Research

- **Further research on similar phone call-based interventions is needed:** Understanding the potentials of this tool is critical to improving future interventions. Based on results of this study, future studies might prioritize examining effectiveness of different dosages of audio-only interventions, effectiveness of complementing audio content with videos, pictures or other tools, and what types of interventions are suited to audio-only delivery as compared to in-person. With increases in climate and conflict-driven crises worldwide, there may continue to be situations in which many caregivers of very young children are not available for in-person

services, but may nevertheless have working cell phones. The implementation of a program like the current one, designed for caregivers of 0–3 year-olds and incorporating content not only on parenting and child development, but also check-ins on caregiver well-being, may be important to study in crisis contexts other than the COVID-19 and displacement context reflected in the current Syrian and Jordanian sample.

- **Further research on parenting in this cultural context is also needed:** At the same time, understanding more about parenting in the Arab world is key to building more suitable programs that are culturally grounded and responsive to caregivers' needs and abilities; the contexts of the Syrian refugee crisis and the COVID-19 pandemic make this aim even more urgent. Further qualitative and mixed-methods research about child-rearing in this context may open new approaches to enhancing children's development and further center the voices of refugees and those affected by displacement in initial phases of program development³⁶.



Recommendations for Future ECD Programming

- **In phone-based programs, train callers and structure calls to build stronger rapport:** The capacity of callers to build non-judgmental rapport with caregivers directly contributed to the positive effects on caregiver well-being. Given the inclusion of caregiver well-being checks and well-being components embedded in the overall adapted RUL content, CHVs in this intervention received training on well-being in general as well as how to conduct calls in a way that supports building a stronger rapport and listening more responsively. This suggests that future programs should focus training on conversational approaches as much as they do on content of calls to allow strong rapport to develop between a caller and a caregiver. This finding may be useful not only for ECD programming, but for any type of program using phone calls.
- **Include check-ins and a focus on caregiver well-being in phone-based caregiver programs:** The greater rapport and responsive listening observed in the treatment-group calls in this evaluation may have been brought about in part by the check-ins on well-being that opened the call for that group. Such check-ins may be useful in a variety of phone-based programs.
- **Look for ways to model behaviors and provide feedback to caregivers in phone-based programs:** While all participating caregivers demonstrated responsive caregiving and other positive behaviors, there was no difference between the control and treatment groups for the caregiver behavior outcome areas. These findings reinforce existing research on the importance of being able to model and provide real-time feedback to support caregiver behavior change. This is difficult

to replicate in an audio-only format. The IRC chose to deliver calls by audio only as a result of expressed caregiver preferences (due to concerns about data costs), but findings here suggest that service providers such as IRC may wish to instead consider covering additional data costs for caregivers in order to include additional program components such as video and photos. Other recent models in contexts where this is some internet access, even if spotty, have included brief turning on of video to share visuals of parenting and learning support with successful impacts³⁷. Future interventions could also consider a more blended approach, mixing in-person engagement and video with phone calls that support sharing these components.

- **Increase dosage of phone-based programs:** To increase the potential for more positive effects in curriculum such as that adapted for the phone-based RUL program, it is likely that the duration of the program and the frequency and/or duration of calls covering ECD topics would need to be increased.

It is our hope that the findings from this study, including both positive and null effects, will help us and other ECD stakeholders refine another essential tool and approach for reaching and supporting families, even when we can't reach them in person. Supporting caregivers in displacement settings is imperative to counter the effects of war and displacement that they experience. Our research and programming recommendations point to ways to mobilize the international aid field to focus on better and more knowledge creation related to parenting, especially in the Arab world. Presenting our findings against a more robust understanding of the context and parenting, would enrich and inform our program's designs and hence their effectiveness.

Footnotes

* *Ahlan Simsim* is made possible by funding from the MacArthur Foundation.

¹ The content of this brief is drawn from two longer reports. The first covered all hypothesized and exploratory outcomes and was authored by Joyce Rafla¹, Kate Schwartz², Hirokazu Yoshikawa³, Dennis Hilgendorf³, Anaga Ramachandran¹, Mohammad Khanji², Rawan Abu Seriah³, Mohammad Al Aabed², Ragheb Fityan², Phoebe Sloane², Ayat Al Aqra², Razan Mousa², Tareq Sharawi², Andrés Molano¹, Kimberly Foulds³, Jere Behrman⁴, Alice Wuermli¹. The second, covering cost-effectiveness, was authored by A. Brooks Bowden⁴, Sangyoo Lee⁴, Jere Behrman⁴, Hirokazu Yoshikawa¹, Johanna Bernard⁴, Kayla Hoyer², and Fatima Zahra¹ [where ¹Global TIES for Children Center at New York University; ²International Rescue Committee; ³Sesame Workshop; ⁴University of Pennsylvania]

² RUL was first developed by IRC for implementation in Jamaica in 1986-87 and has since been adapted for multiple contexts. For more information, see: Walker, S. P., Chang, S. M., Smith, J. A., & Baker-Henningham, H. (2018). The Reach up early childhood parenting program: Origins, content, and implementation. *ZERO TO THREE*, 38(4), 37-43.

³ Feil, E. G., Baggett, K., Davis, B., Landry, S., Sheeber, L., Leve, C., & Johnson, U. (2020). Randomized control trial of an internet-based parenting intervention for mothers of infants. *Early Childhood Research Quarterly*, 50, 36-44. <https://doi.org/https://doi.org/10.1016/j.ecresq.2018.11.003>

⁴ Black, M. M., Walker, S. P., Fernald, L. C. H., Andersen, C. T., DiGirolamo, A. M., Lu, C., McCoy, D. C., Fink, G., Shawar, Y. R., Shiffman, J., Devercelli, A. E., Wodon, Q. T., Vargas-Barón, E., & Grantham-McGregor, S. (2017). Early childhood development coming of age: science through the life course. *The Lancet*, 389 (10064), 77-90.

⁵ Black et al., op. cit.; World Health Organization, & United Nations Children's Fund, W. B. G. (2018). Nurturing care for early childhood development: a framework for helping children survive and thrive to transform health and human potential. W. H. Organization.

⁶ Black et al., op. cit.

⁷ Murphy, K. M., Rodrigues, K., Costigan, J., & Annan, J. (2017). Raising children in conflict: An integrative model of parenting in war. *Peace and Conflict: Journal of Peace Psychology*, 23(1), 46-57; Yoshikawa, H., Wuermli, A. J., Britto, P. R., Dreyer, B., Leckman, J. F., Lye, S. J., Ponguta, L. A., Richter, L. M., & Stein, A. (2020). Effects of the Global Coronavirus Disease-2019 Pandemic on Early Childhood Development: Short- and Long-Term Risks and Mitigating Program and Policy Actions. *The Journal of Pediatrics*, 223, 188-193.

⁸ Anderson, K., & Saeed, S. (2022, December). Research on Young Children in Emergencies: Current Evidence and New Directions. <https://movingmindsalliance.org/research-on-young-children-in-emergencies/>.

⁹ Jeong, J., Franchett, E. E., Ramos de Oliveira, C. V., Rehmani, K., & Yousafzai, A. K. (2021). Parenting interventions to promote early child development in the first three years of life: A global systematic review and meta-analysis. *PLOS Medicine*, 18(5).

¹⁰ Rahman, A., Malik, A., Sikander, S., Roberts, C., & Creed, F. (2008). Cognitive behaviour therapy-based intervention by community health workers for mothers with depression and their infants in rural Pakistan: a cluster-randomised controlled trial. *The Lancet*, 372(9642), 902-909.

¹¹ Jeong et al., 2021, op cit.

¹² Ramachandran, A., Al Ogaily, D., Rafla, J., Hilgendorf, D., Molano, A., Schwartz, K., & Yoshikawa, H. (2022). Conceptualizing and measuring quality of phone-call based parenting support programs for early childhood aged children Annual Conference of the International Society for Study of Behavioral Development (ISSBD), Rhodes, Greece.

¹³ Syria Refugee Crisis Explained. (2022, July 8). USA For UNHCR. <https://www.unrefugees.org/news/syria-refugee-crisis-explained/>.

¹⁴ 3RP. (2020). Regional Refugee & Resilience Plan (3RP) Regional Strategic Overview 2021-2022. 3RP Syria Crisis.

¹⁵ Jordan Syrian refugees. (2023). ACAPS. <https://www.acaps.org/country/jordan/crisis/syrian-refugees>

¹⁶ The IRC and Sesame Workshop. (n.d.). International Rescue Committee. <https://www.rescue.org/sesame>

¹⁷ Hastings, P. D., Partington, L. C., Dajani, R., & von Suchodoletz, A. (2021). Adrenocortical and psychosocial responses of families in Jordan to the COVID-19 pandemic. *Child development*, 92(5), e798-e816.

¹⁸ Walker, S. P., Chang, S. M., Smith, J. A., & Baker-Henningham, H. (2018). The Reach up early childhood parenting program: Origins, content, and implementation. *ZERO TO THREE*, 38(4), 37-43.

¹⁹ Grantham-McGregor, S., Adya, A., Attanasio, O., Augsburg, B., Behrman, J., Caeyers, B., Day, M., Jervis, P., Kochar, R., Makkar, P., Meghir, C., Phimister, A., Rubio-Codina, M., & Vats, K. (2020). Group Sessions or Home Visits for Early Childhood Development in India: A Cluster RCT. *Pediatrics*, 146(6), e2020002725; Walker, S. P., et al., op. cit.

²⁰ Wilton, K., Vachon, A., Murphy, K. M., Al Aqra, A., del Sol Prieto Bayona, M., Sloane, P., Kane, E., Yoshikawa, H., Wuermli, A. J., Magan, I., Ramachandran, A., Schwartz, K., & Rafla, J. (2021). *Reach Up and Learn in the Syria Response: Adapting and implementing an evidence-based home visiting program in Lebanon, Jordan and Syria*. <https://www.rescue.org/sites/default/files/document/4803/irc-rul-reportapril27-2020revised-2-10-22.pdf>

²¹ Note: "audio-only" here is used to denote phone calls. The intervention did not include text messages, video chats, or other means of communication possible on mobile phones.

²² 918 (40%) caregivers opted to complete the baseline caregiver survey in one call; 1,274 (55%) opted to complete it in two calls; and 106 (5%) completed only half of the baseline survey (survey order was randomized so all of these caregivers completed core questions and they are split 50/50 in terms of which additional items they are missing depending on which version of the survey they started with).

²³ Feil, E. G., et al op. cit.

²⁴ Hastings et al., op. cit.

²⁵ Wilton, K., et al., op. cit

²⁶ Attanasio, O. P., Fernandez, C., Fitzsimons, E. O., Grantham-McGregor, S. M., Meghir, C., & Rubio-Codina, M. (2014). Using the infrastructure of a conditional cash transfer programme to deliver a scalable integrated early child development programme in Colombia: cluster randomized controlled trial. *BMJ*, 349, g5785; Hamadani, J. D., Huda, S. N., Khatun, F., & Grantham-McGregor, S. M. (2006). Psychosocial stimulation improves the development of undernourished children in rural Bangladesh. *Journal of Nutrition*, 136, 2645-2652; Nahar, B., Hossain, M. I., Hamadani, J. D., Ahmed, T., Huda, S. N., Grantham-McGregor, S. M. et al. (2012). Effects of a community-based approach of food and psychosocial stimulation on growth and development of severely malnourished children in Bangladesh: a randomised trial. *Eur.J Clin.Nutr.*, 66, 701-709.

²⁷ Jeong, J., et al., op. cit.

²⁸ Liu, Y., Kaaya, S., Chai, J., McCoy, D. C., Surkan, P. J., Black, M. M., Sutter-Dallay, A. L., Verdoux, H., & Smith-Fawzi, M. C. (2017). Maternal depressive symptoms and early childhood cognitive development: a meta-analysis. *Psychological Medicine*, 47(4), 680- 689.

²⁹ Vos, T., Lim, S. S., Abbafati, C., Abbas, K. M., Abbasi, M., Abbasifard, M., Abbasi-Kangevari, M., Abbastabar, H., Abd-Allah, F., Abdelalim, A., Abdollahi, M., Abdollahpour, I., Abolhassani, H., Aboyans, V., Abrams, E. M., Abreu, L. G., Abrigo, M. R. M., Abu- Raddad, L. J., Abushouk, A. I., . . . Murray, C. J. L. (2020). Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet*, 396(10258), 1204-1222.

³⁰ Santomauro, D. F., Mantilla Herrera, A. M., Shadid, J., Zheng, P., Ashbaugh, C., Pigott, D. M., Abbafati, C., Adolph, C., Amlag, J. O., Aravkin, A. Y., Bang-Jensen, B. L., Bertolacci, G. J., Bloom, S. S., Castellano, R., Castro, E., Chakrabarti, S., Chattopadhyay, J., Cogen, R. M., Collins, J. K., . . . Ferrari, A. J. (2021). Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. *The Lancet*, 398(10312), 1700-1712.

³¹ Yunitri, N., Kao, C.-C., Chu, H., Voss, J., Chiu, H.-L., Liu, D., Shen, S.-T. H., Chang, P.-C., Kang, X. L., & Chou, K.-R. (2020). The effectiveness of eye movement desensitization and reprocessing toward anxiety disorder: A meta-analysis of randomized controlled trials. *Journal of Psychiatric Research*, 123, 102-113.

³² Cameron, S. K., Rodgers, J., & Dagnan, D. (2018). The relationship between the therapeutic alliance and clinical outcomes in cognitive behaviour therapy for adults with depression: A meta-analytic review. *Clinical Psychology & Psychotherapy*, 25(3), 446-456.

³³ Murphy, K. M., Rodrigues, K., Costigan, J., & Annan, J. (2017). Raising children in conflict: An integrative model of parenting in war. *Peace and Conflict: Journal of Peace Psychology*, 23(1), 46-57.

³⁴ Toscano, C., Lopes, P., Ramos, C., & Baptista, J. (2022). Emotional and Behavioral Health among Portuguese Toddlers during the COVID-19 Crisis: The Impact of Social Isolation and Caregiving Distress. *Child Indicators Research*.

³⁵ Kohn, S., Foulds, K., Murphy, K. M., & Cole, C. F. (2020). Creating a Sesame Street for the Syrian Response Region.

³⁶ (2022). Research Forum on Young Children in Emergencies. In Research on young children in emergencies: Current evidence and new directions.; Smith, L. T., Tuck, E., & Yang, K. W. (2018). Indigenous and decolonizing studies in education. Routledge New York, NY.

³⁷ Schwartz, K., Torossian, L.M., Michael, D., Razzak, S., Hajal, D., Yoshikawa, H., & Sloane, P. (2023, Feb). Impacts of a Remote Early Learning Program on Child Development, Caregiver Perceptions of Play, Caregiver-Child Interactions, and Caregiver Wellbeing. Paper presented at Comparative and International Education Society (CIES).