

Appendix

For Online Publication Only

A1 Survey Instruments and Outcomes

This appendix provides additional details on the survey instruments used to collect data and details on the components and questions included in the estimation of each outcome. Following information protection protocols, we stored collected data on the survey firm's private server. Access to the data was restricted to project staff and researchers. In the three rounds, we followed the same best practices on survey protocols. For example, we trained enumerators in the content and structure of the baseline instrument and protocol and contacted each participant up to 10 times. To reduce the risk of respondent fatigue, we limited the instrument length to approximately 35 minutes in each round.

The baseline survey includes modules on the caregiver's characteristics and outcomes, including employment status and well-being; attitudes and perpetration of violence against children; parental self-efficacy; social networks; and economic anxiety. We also include questions to measure the child's behavior and other socio-demographic characteristics. Finally, we add a module that collects information on household socioeconomic conditions.

The structure of the first follow-up survey was similar to that of the baseline survey. In the former, however, we included a module on content assimilation to measure if caregivers self-report comprehending concepts taught in the vIHT.

The structures of the first and second follow-up surveys were similar in most of the modules, except that in the second follow up we excluded questions to measure caregivers' social networks and economic anxiety; and included alternative measures of parental self-efficacy and mental health distress, vignettes to measure parental discipline, and a module on social desirability bias.

A. SMS viewership, attendance, App use, and learning

We collected information to measure the take-up or use of each program component from different sources. First, TrendMedia shared information on weekly SMS delivery to participants. Also, we asked caregivers in the first follow-up survey if they received SMS messages with in-

formation on positive parenting and, conditional on receiving them, how relevant the content was for them. Second, TrendMedia shared individual-level information on whether caregivers logged in to the App and the time (in minutes) they were connected to the App. Finally, ECC officers collected attendance data for the virtual groups for each caregiver.

We also collected information to measure if caregivers learned some concepts and practices that were taught in the program in the two follow-up rounds. We included two statements for each of the four key concepts taught in the intervention. For example, to measure the learning of the “building positive relationships between parent and child” concept, we asked caregivers to what extent they agreed with the following statements “Praising children helps them learn to behave well” and “It is important that parents take some time every day to play with their child doing what their child wants.” The response options for each statement were on a 1- to 5-point Likert scale (1–Strongly disagree, and 5–Strongly agree). We estimate a learning index—the greater the index, the more caregivers knew about the program content.

B. Main outcomes

Attitudes towards violence against children: We use an adapted version of the UNICEF MICS questionnaire to measure parental attitudes towards physical and psychological violence against children at baseline and follow-up rounds. The adapted instrument includes 5 items asking about some attitudes such as if they agree that a good parent can slap the child if he misbehaves, and if shouting and yelling would make the child more obedient, among others. The response options were “Yes” or “No.” Since the survey was over the phone and our goal was to conduct a 35-minute length survey, we only selected the 5 items (out of 13 items) with the greatest variation according to the results from the instrument piloting that was conducted before baseline data collection. The greater the index, the more pro-violence the caregivers’ attitudes. The items on attitudes to VAC included in the survey instrument were the following:

- In order to bring up, raise, or educate a child properly, the child needs to be physically punished.
- A good parent slaps their child when they misbehave.
- When a child is beaten, he/she will stop doing the unwanted behavior.
- Shouting and yelling makes the child more obedient.

- Shouting, yelling, and threatening to slap will harm the child

Violence against children (self-reported): In the three rounds of data collection, we used a shortened version of the UNICEF MICS questionnaire to measure caregivers' perpetration of physical or psychological violence against children. The adapted instrument includes 5 items asking about some violent behaviors. These can be grouped into physical violence (hitting the child with a bare hand or with an object) or psychological violence (shouting, yelling, or screaming at the child; saying to send the child away; threatening to hit the child). We asked each caregiver about perpetrating these violent acts separately to the "target child" (eldest child 2 to 6 years old) or to another older child within the household (eldest child between 7 to 12 years old). Using these reports, we created two indexes: violence against the target child and violence against any child within the household. The latter is a pooled measure for both the target child and any other older child within the household. Moreover, using the items for each of the types of violence against the target child, we also created separate indexes for physical and psychological violence. The greater any of the indexes, the more violent acts were perpetrated by the caregiver against the target child or another child in the household. We asked the caregiver to report how many days in the past week they did the action stated in the following list:

- Shouted, yelled, or screamed at him/her?
- Said you would send him/her away?
- Hit him/her on the bottom, hand, arm, or leg with your bare hand?
- Threatened to hit him/her but not actually done it?
- Hit him/her on the bottom, hand, arm, or leg with something like a belt, hairbrush, stick, or some other hard object.

C. Secondary Outcomes

Caregiver's mental health: We collected data to measure caregiver's depression using the Patient Health Questionnaire (PHQ-2 survey, [Kroenke et al. \(2003\)](#)) and a question on having difficulty sleeping at night. We also measure anxiety using the Generalized Anxiety Disorder (GAD-2, [Donker et al. \(2011\)](#)) instrument. The PHQ-2 and GAD-2 questionnaires include two items each

asking how often the caregiver had been bothered by any of the problems over the last two weeks. Specifically, we asked caregivers to report how often they have been bothered by any of the two following issues during the last two weeks.

The items included for depression were:

- Have you been feeling little interest or pleasure in doing things?
- Have you been feeling down, depressed, or hopeless?

The two items included for anxiety were:

- Have you been feeling nervous, anxious or on edge?
- Have you not been able to stop or control worrying?

Moreover, during the second follow-up, we also included the questions from the 18-items Parental Stress Scale (PSS-18, [Berry and Jones \(1995\)](#)).

Our main outcomes of interest are the aggregate indexes of depression, anxiety, and stress separately. The greater the index, the higher the levels of each mental distress.

Child conduct and emotional problems: We use the 10 items related to children's conduct and emotional problems (5 items each) from the Strengths and Difficulties Questionnaire (SDQ) instrument to measure a child's behavior index. We collected this information in each of the survey rounds. Each question is answered on a 0-2 scale (Not true, somewhat true, certainly true). The items ask if some behaviors related to conduct and emotional problems occurred for the child during the previous 3 months. The greater the index, the more conduct or emotional problems the child has.

The questions included in emotional strengths and difficulties are as follows:

- He/she often complains of headaches, stomach-aches, or sickness
- He/she has many worries, often seems worried
- He/she is often unhappy, downhearted, or tearful
- He/she is nervous or clingy in new situations, easily loses confidence

- He/she has many fears, is easily scared

And the questions included in conduct strengths and difficulties are the following:

- He/she often has temper tantrums or hot tempers
- He/she is generally obedient, usually does what adults ask/request
- He/she often fights with other children or bullies them
- He/she is often argumentative with adults
- He/she is often spiteful to others

D. Mechanisms

Parental self-efficacy: We measure parental self-efficacy at baseline and during the first follow-up round using the 5 items from the Brief Parental Self Efficacy Scale (BPSES) instrument. The scale asks parents about their agreement with statements that can describe their ability to improve a child's behavior. For the second follow-up, we adapted and used the Tool to Measure Parenting Self-Efficacy (TOPSE) for more detailed questions relating to discipline and self-acceptance. In each survey wave, the main outcome of interest is the aggregate index of parental self-efficacy. The greater the index, the higher the self-assessment of efficacy.

Caregiver's support networks: As existing evidence shows, the effectiveness of positive parenting programs can be driven by the creation of support networks for participant caregivers. To test this potential mechanism in our context, we collected information on whether caregivers obtained support from friends, family, or professionals to solve parenting or financial issues. We asked how many people they could reach out to in case they need to talk about issues related to parenting and child rearing or borrowing money.

The support network variables were divided in the following groups:

Borrowing Money Support Instruction was: "How many people could you go to if you needed to borrow JMD 5,000? Please indicate separately for friends, family, and professionals. Professionals here could include bank officers and other moneylenders."

Parenting Issues Support Instruction was: "How many people could you go to if you wanted to talk about issues relating to parenting and child rearing? Please indicate separately for

friends, family, and professionals. Professionals here could include ECC officers and other such individuals.”

Using this information, we created two indexes: one for parenting support and another for financial support. The greater the index, the larger the network the caregivers have.

E. Sociodemographic characteristics and other controls

Socio-economic and demographics. We collected the following socio-demographic data on the main caregivers: age, gender, education, marital status, employment status and occupation, income, household composition, and recent changes in lifestyle as a result of COVID-19 experiences. We also collected the age and gender of the target child. We collected information from all children aged 17 and below and their caregivers who regularly live under the same roof in the household. For both children and caregivers, we asked about their age and gender. In addition, we also asked about the education, marital status, employment, and occupation of all household members for each caregiver living in the household. All this information was provided by the caregiver enrolled in the study.

Social Desirability Bias: A potential concern with using self-reported data to measure sensitive outcomes such as violence is the experimenter demand effect. To account for this potential bias in our estimations, we included the short form of the Marlowe-Crowne Social Desirability Scale (Crowne and Marlowe, 1960). It consists of a survey module developed by social psychologists to measure a person’s propensity to give socially desirable answers. The module, which we included in the second follow-up survey, asks respondents if they have several too-good-to-be-true traits such as never being jealous of another person’s good fortune and always being a good listener. Using this information, we created an index of social desirability bias for each participant. The greater the index, the more socially desirable the responses of the participant.

A2 Qualitative Study

This Appendix provides further information on the methods used in the qualitative component of the study and their main results.

A2.1 Objective and selection of participants

The qualitative study aims to complement the quantitative results by gathering information on (i) perceptions about the different components of the intervention (SMS messages, App, and Virtual meetings with ECC specialists); (ii) dynamics within the households and perceived changes due to the intervention; (iii) transmission of information to other caregivers; and (iv) general perceptions about the program.

To this end, we selected caregivers from the group of treated participants from three of the largest parishes (Saint Catherine, Kingston, and Saint Andrew) based on (i) the change between baseline and medium-term follow-up on their violence against children (VAC) index and (ii) attendance at the virtual meetings. Based on these characteristics, we assigned them to one of the following groups: a) high change in VAC and high attendance, b) high change in VAC and low attendance, c) low change in VAC and high attendance, and d) low change in VAC and low attendance. We conducted eight focus group discussions (between 5-6 participants per group) in May 2023 with a total of 43 participants.

A2.2 Approach

The interviewers used a narrative technique that employed a semi-structured approach of open-ended questions to permit more variation in responses. These interviews and focus groups create a natural in-depth discussion that yields specific details on the different components included in the instruments.

Focus group discussions lasted up to one hour. A local consultant with expertise in qualitative research conducted the discussions. She was responsible for recruiting participants who met the eligibility criteria, obtaining their informed consent, conducting the focus group discussion, and producing their transcripts.

Special care was taken to preserve participant anonymity and freedom to consent. Indeed,

the strategy for maintaining trust and safety was to be extremely clear to all participants that the purpose of the survey was purely academic. The focus group discussions were conducted virtually to increase participation. Participants were invited to turn their cameras on but it was not mandatory. The sessions were held via Zoom and were recorded after the participants consented. These recordings are stored in secure servers that only the research team can access through an encrypted password.

A2.3 Focus Group Questions

We developed a semi-structured guide to lead the focus group discussions. This guide included three main components. First, there were questions that allowed participants to introduce themselves. Second, we included questions on the four main topics mentioned above. To gather information about participants' perceptions of the different components of the intervention, we included specific questions for each of the components. For example, we asked them 1. *Did you find that the SMS messages gave you new information?* 2. *How useful was the information you received through SMS messages?* In the case of the App, we included some questions such as 1. *Do you remember what the App consisted of?* 2. *Did you use the App? If you did, how many times per week? Why did you or did not?* 3. *What features of the App should have been included to facilitate your use of it?* 4. *Can the App be improved or are alternative methods necessary?* Similar questions were included to gather perceptions about the virtual meetings. For example, 1. *Do you remember what the virtual meetings with ECC officers consisted of?* 2. *Did you join the meetings?* 3. *Why did/did not you join these meetings*

To collect information on the dynamics within the households and perceived changes due to the intervention, we asked questions such as 1. *Who was in charge of disciplining your child before the intervention?* 2. *During the intervention or after it ended, who was in charge of disciplining your child? If the person in charge changed, why did it change?* among other questions. Similarly, to understand potential spillovers to other non-relatives, we asked 1. *Have you shared the information you learned from the intervention with other adult friends? With whom? What is your relationship with them? Are they caregivers of children 2-6 years of age? Why did you share this information with them?*

Lastly, we also asked for information on general perceptions about the program. Specifically, we asked 1. *Do you remember what the program was about? What activities or components were*

included? 2. Overall, what is your assessment of the program? 3. What are the areas or elements of the program that you liked the most? What areas or elements could be improved?¹

A2.4 Main results

This subsection summarizes the main results presented in [Szekely \(2023\)](#).

Use of three different components of the intervention. We asked participants about their use and assessment of each component of the program (SMS messages, App, and virtual meetings). In terms of the SMS messages, we observe that participants with low attendance to the virtual meetings were more likely to report that the SMS messages were very useful and helpful, some even reported that these were an even better resource than the meetings because the SMS messages felt more one-on-one. In terms of the virtual meetings, all participants reported that they found the virtual meetings with ECC officers very relevant, engaging, and interactive. For instance, the officers gave participants practical activities to practice at home. Like the SMS messages, participants reported substitutability between the SMS messages and virtual meetings. When we asked participants with low virtual meeting attendance their reasons for not attending many sessions, they explained it was because they knew they were going to receive similar materials via SMS/WhatsApp. The second most relevant reason was that they had to work at the same time as the meetings.

Across the different groups, most of them recalled they had access to the App. Yet, they explained that they did not use it because they thought it was not useful or they felt that it was not user-friendly. The only group reporting that the App was useful was the group with high attendance to virtual sessions but a low improvement on VAC. In sum, these results confirm that the App was not as good a resource to deliver this information-based program and that some adjustments will be required to make it more attractive/accessible to this population. Moreover, these results also suggest there was some substitutability across the other two components of the intervention.

Networks and spillovers to other non-related caregivers. We included a section to explore the mechanism of the network and whether the participants shared information with other caregivers. Similar to our findings using the survey data, participants across the different focus

¹The complete interview guide is available upon request.

groups reported that they did not make any friends from the program and that they are not in touch with anyone from a virtual group. Some of the reasons they mentioned include the location (the groups were randomly formed, that is, they were not formed considering proximity across participants) and the virtual nature of the meetings. In terms of sharing the information they acquired through the intervention, the participants mentioned that they only shared it with close relatives (family members, such as partners and spouses). Since we excluded other caregivers within the same household from the study, we are fairly confident there was no contamination from treatment to control caregivers.

Dynamics within the household. A potential concern from our study was the displacement of violent disciplining from the caregiver participating in the program to the other that did not join. As we discussed above, the participants reported sharing the information they learned from the program with their partner/spouse. This could have caused two potential outcomes. On the one hand, the partner/spouse may have learned the new practices from the participant caregiver. On the other hand, after the parent/spouse observes that the participant caregiver has learned new positive parenting practices that differ from the social norm (violent discipline), then the parent/spouse may feel responsible to compensate for this and discipline the child using violence. Results from the focus group discussions suggest there were positive spillovers within the household. Participants report they encouraged their partners to praise their children for good actions. In fact, they report that family dynamics have improved after the program. They now try to be more gentle with their children instead of immediately being aggressive, and now they play games as a family as well.

Appendix Figures & Tables

For Online Publication Only

Figure A1: Features Available in the App for Week 4

THE APP: WEEK 4



Clear Instructions Video



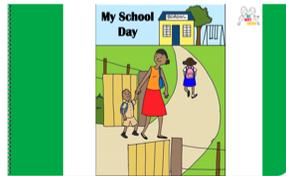
Week 4 – Irie Challenge



The Irie Tower – Session 4



Looking at Books Video



My School Day Picture Book

Figure A2: Enrollment of Participants - SMS Snapshot

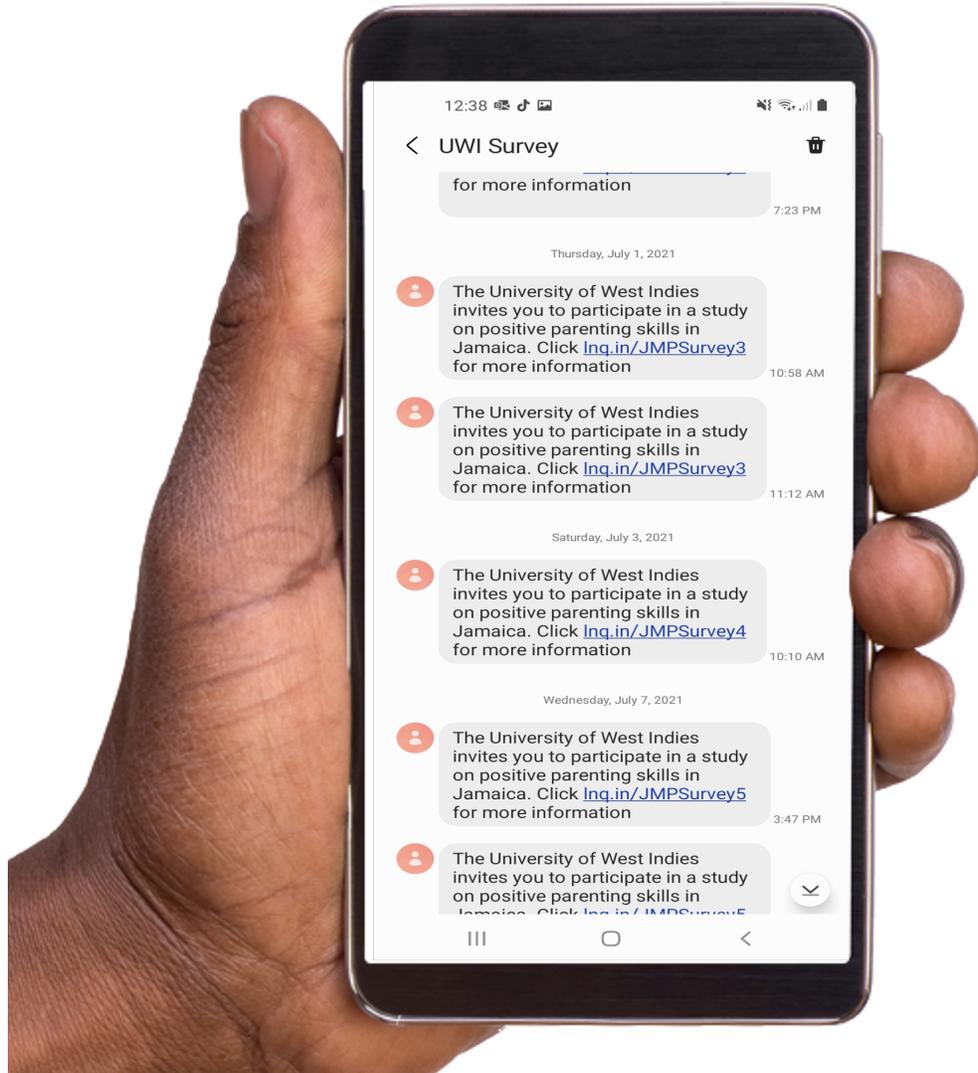


Figure A3: Enrollment of Participants

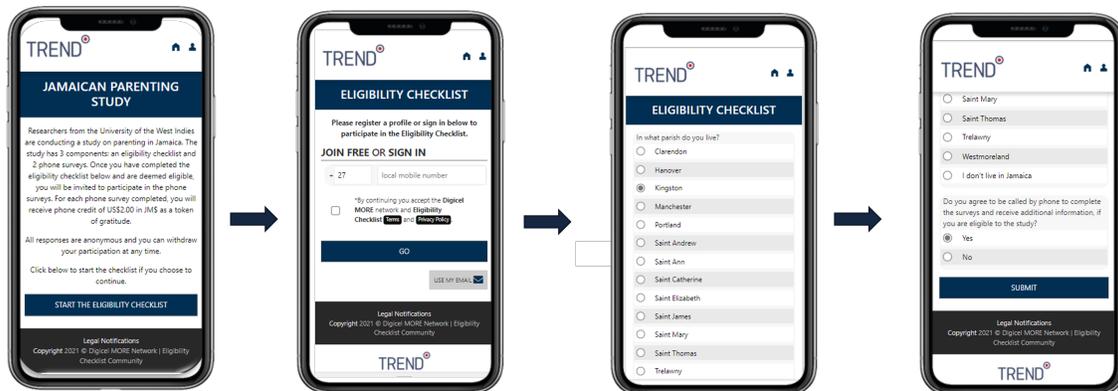


Figure A4: Enrollment Survey

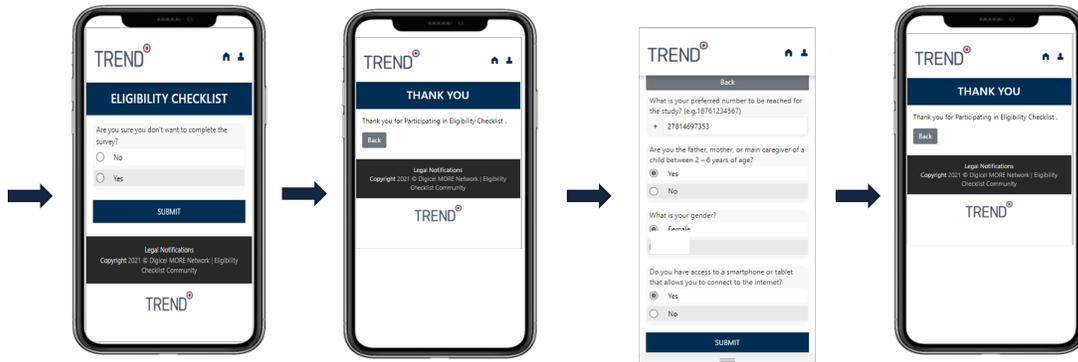
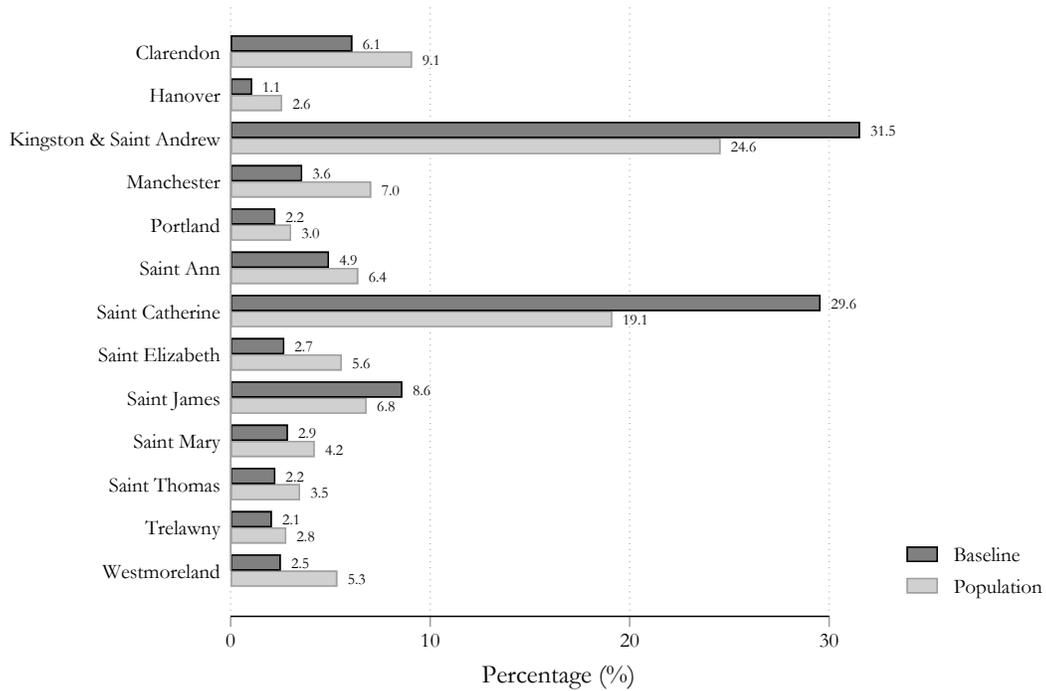
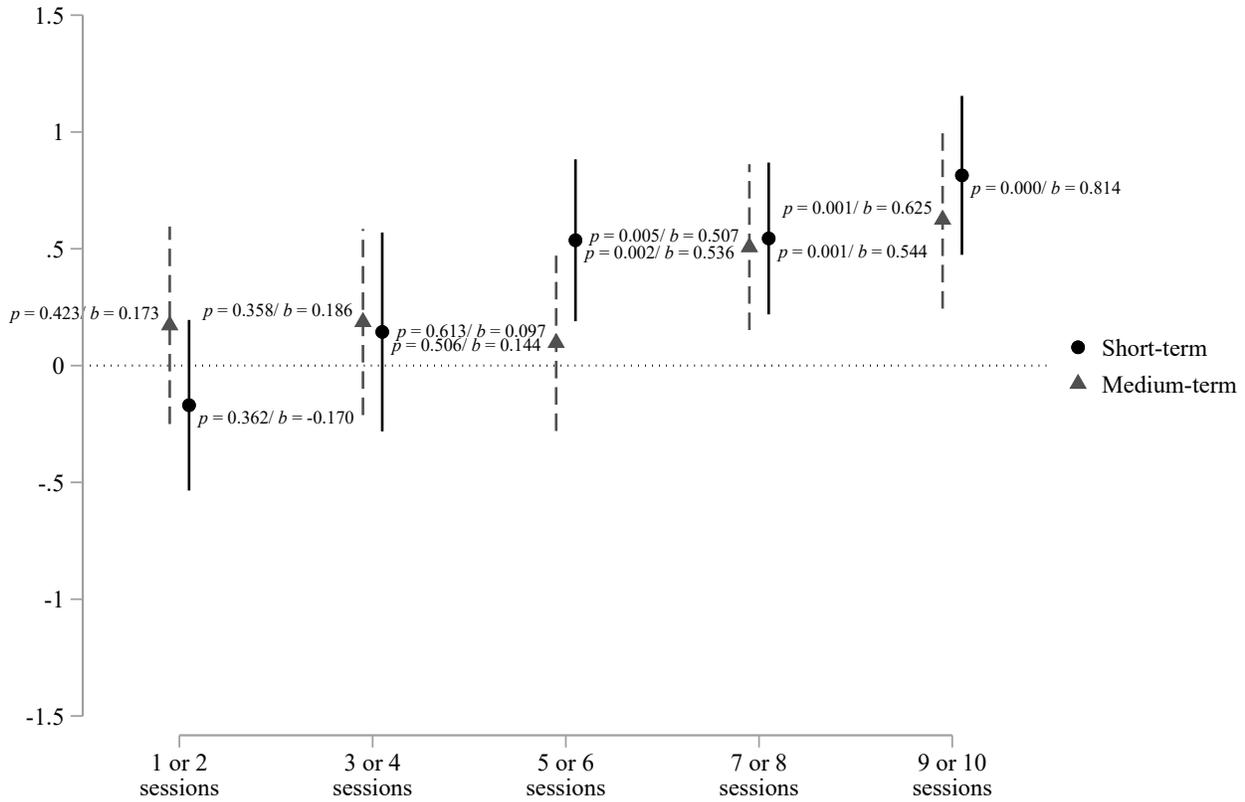


Figure A5: Distribution of Participants Compared to Population



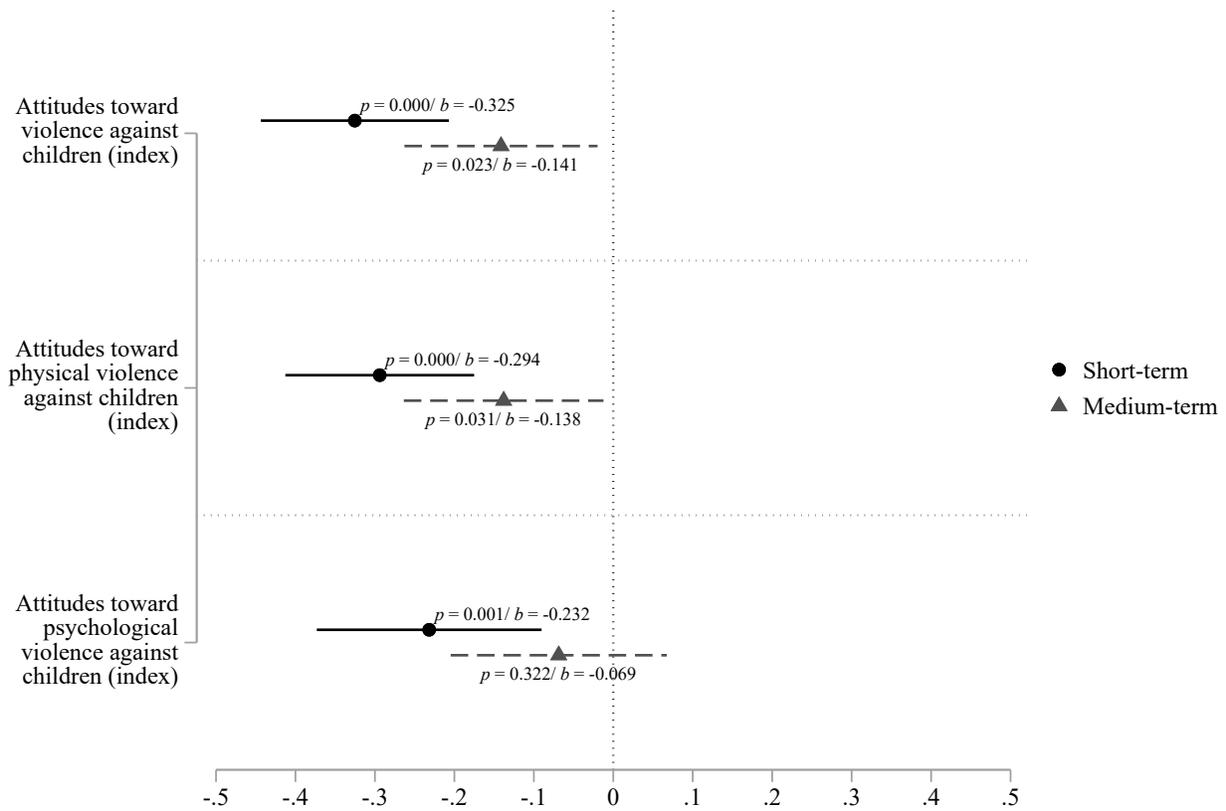
Notes: This figure presents the distribution of study participants compared to the population of caregivers in Jamaica. We report Kingston and St. Andrew as a combined parish because the Kingston urban area includes both parishes.

Figure A6: Dose-response Regressions on Information Index by Number of Sessions Attended



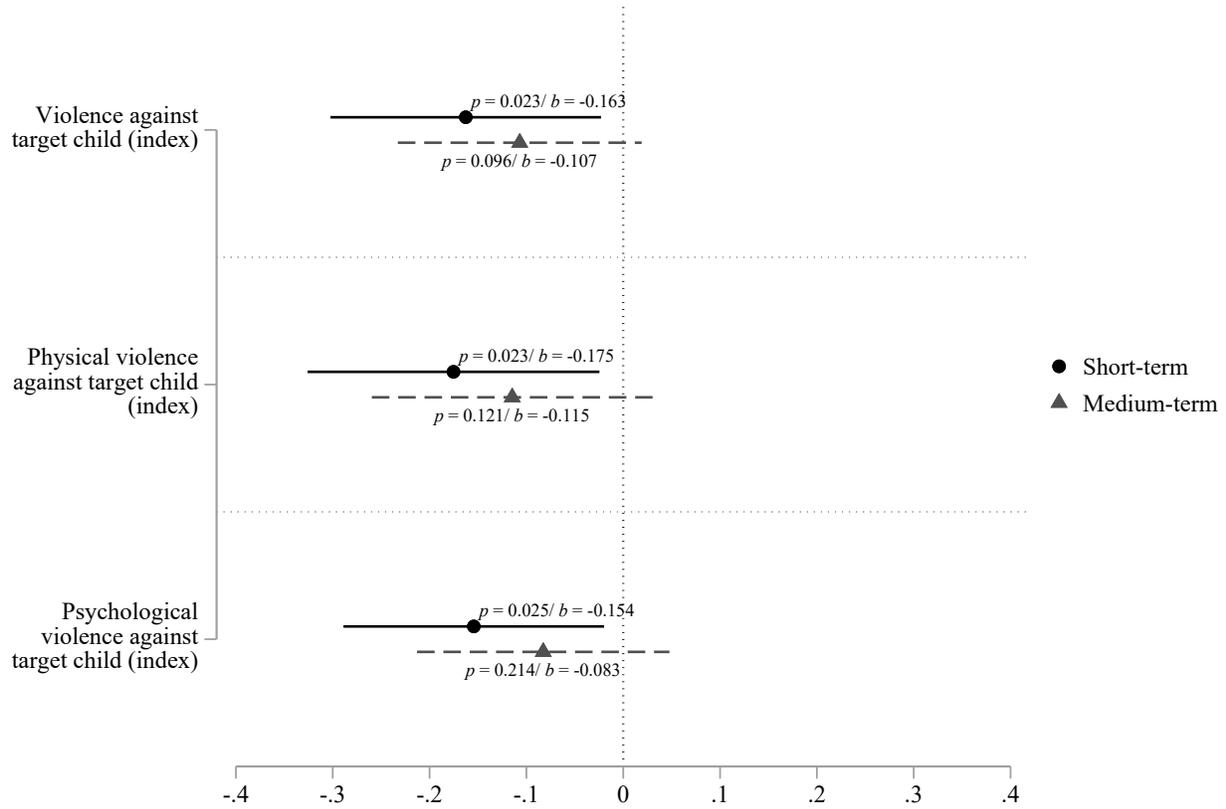
Notes: This figure plots point estimates and corresponding 95% confidence intervals from OLS regressions of the information index (dependent variable) on the number of sessions attended by caregivers (the independent variable). These dose-response regressions are only run with caregivers in the treatment group. To improve precision, we group the number of sessions attended into five categories (with attendance at zero sessions being the omitted base category). The black circles and corresponding solid lines represent the point estimates and 95% confidence intervals from the first follow-up survey. The gray triangles and corresponding dotted lines represent the point estimates and 95% confidence intervals from the second follow-up survey. Standard deviation units are used for the y-axis.

Figure A7: ITT Impacts on Caregiver Attitudes Toward Violence Against Children (Balanced Panel)



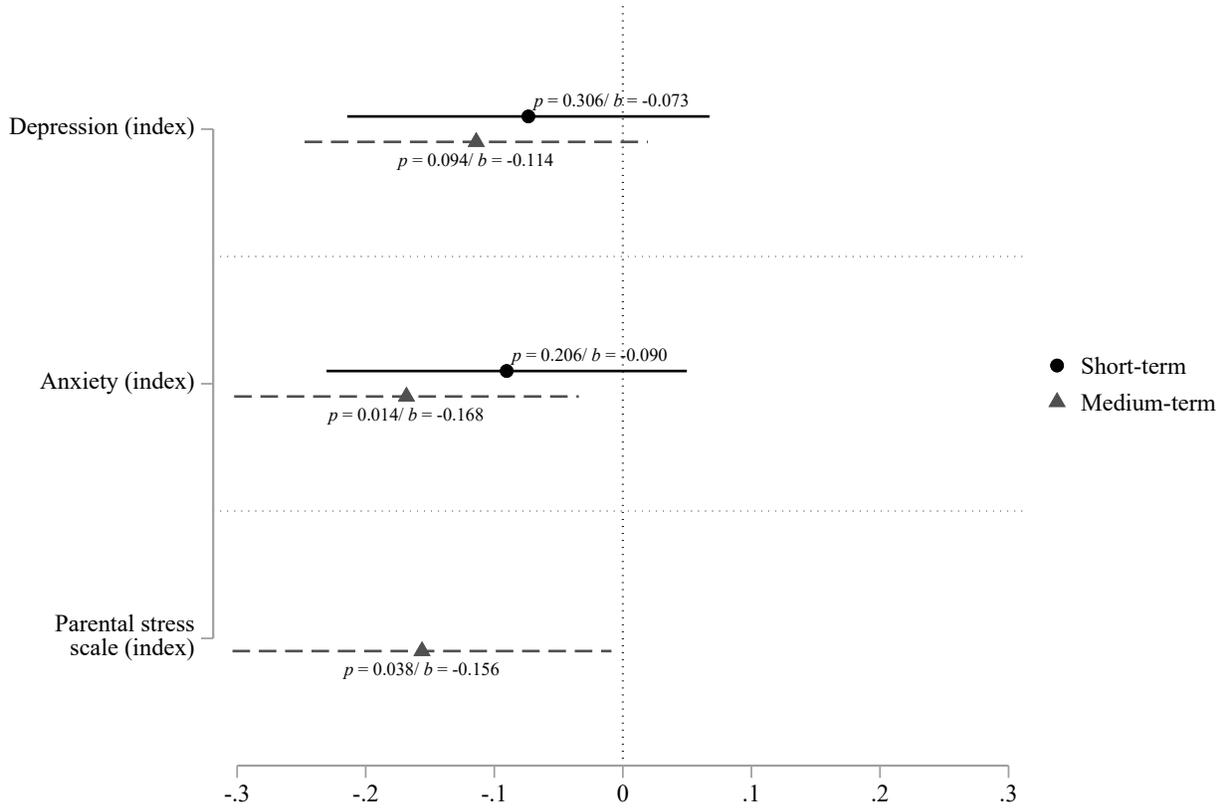
Notes: This figure presents estimates of β_1 (the ITT estimate) on caregivers' attitudes toward violence against children. This figure uses a balanced panel of caregivers who were present at both the first and second follow-ups. Each outcome consists of a standardized index estimated following Anderson (2008) and standardized relative to the control group. For a detailed description of the indices, see Section 3.3. The black circles and corresponding solid lines represent the point estimates and 95% confidence intervals from the first follow-up survey. The gray triangles and corresponding dashed lines represent the point estimates and 95% confidence intervals from the second follow-up survey. Standard deviation units are used for the x-axis.

Figure A8: ITT Impacts on Caregiver Behaviors Related to Violence Against Target Child (Balanced Panel)



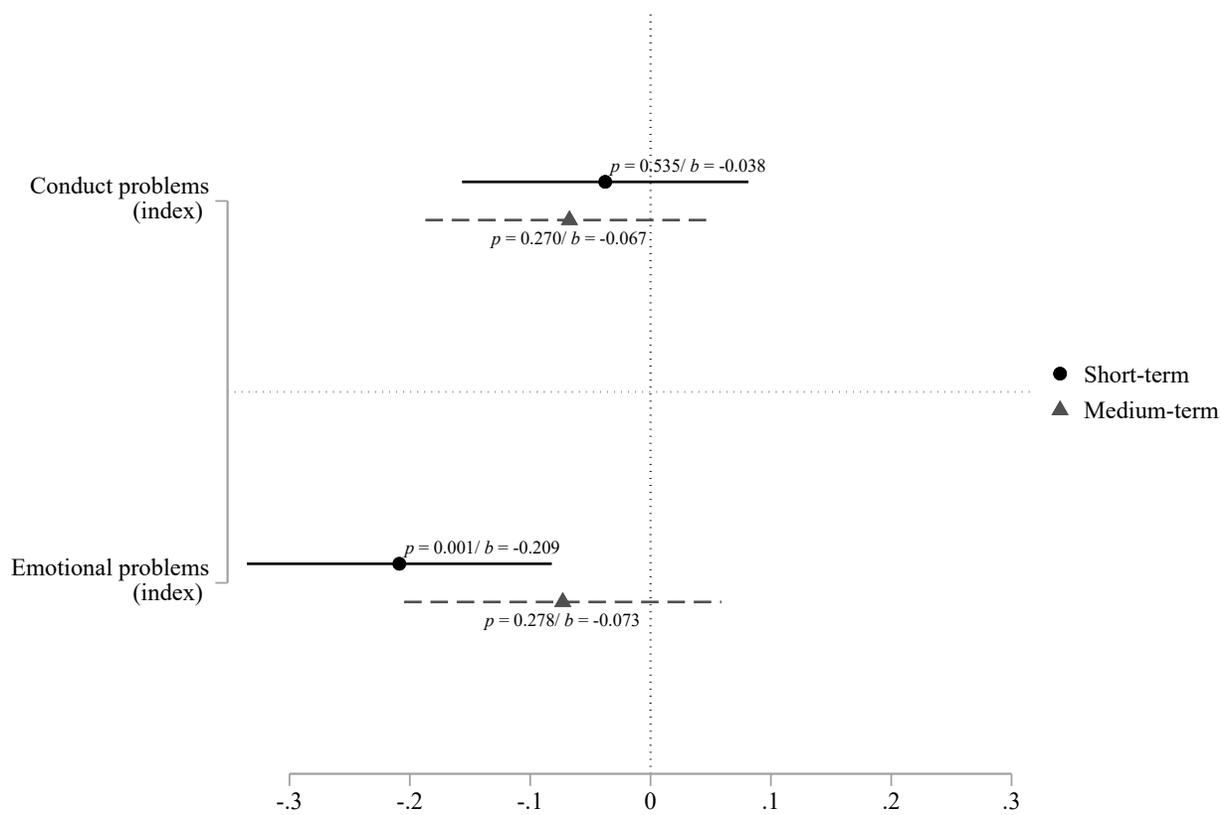
Notes: This figure presents estimates of β_1 (the ITT estimate) on caregivers' behaviors relating to violence against target child. This figure uses a balanced panel of caregivers present at both first and second follow-ups. Each outcome consists of a standardized index estimated following Anderson (2008) and standardized relative to the control group. For a detailed description of the indices, see Section 3.3. The black circles and corresponding solid lines represent the point estimates and 95% confidence intervals from the first follow-up survey. The gray triangles and corresponding dashed lines represent the point estimates and 95% confidence intervals from the second follow-up survey. Standard deviation units are used for the x-axis.

Figure A9: ITT Impacts on Caregivers' Mental Health (Balanced panel)



Notes: This figure presents estimates of β_1 (the ITT estimate) on caregivers' depression (measured using PHQ-2 at both follow-ups), anxiety (measured using GAD-2 at both follow-ups), and parental stress (measured using PSS-18 only at second follow-up). This figure uses a balanced panel of caregivers present at both first and second follow-ups. Each outcome consists of a standardized index estimated following Anderson (2008) and standardized relative to the control group. For a detailed description, see Section 3.3. The black circles and corresponding solid lines represent the point estimates and 95% confidence intervals from the first follow-up survey. The gray triangles and corresponding dashed lines represent the point estimates and 95% confidence intervals from the second follow-up survey. Standard deviation units are used for the x-axis.

Figure A10: ITT Impacts on Child Conduct and Emotional Problems (Balanced Panel)



Notes: This figure presents estimates of β_1 (the ITT estimate) on the target child's conduct and emotional problems. This figure uses a balanced panel of caregivers present at both first and second follow-ups. Conduct and emotional problems were measured using caregivers' responses to the Strengths and Difficulties Questionnaire (SDQ) instrument. Each outcome consists of a standardized index estimated following Anderson (2008) and standardized relative to the control group. For a detailed description, see Section 3.3. The black circles and corresponding solid lines represent the point estimates and 95% confidence intervals from the first follow-up survey. The gray triangles and corresponding dashed lines represent the point estimates and 95% confidence intervals from the second follow-up survey. Standard deviation units are used for the x-axis.

Table A1: Structure of Virtual Parenting Programme

Session	TOPICS COVERED EACH SESSION
Session 1	<p>PRAISING YOUR CHILD</p> <ul style="list-style-type: none"> - Importance of praising your child - How to praise your child - What to praise your child for <p>PRAISING YOURSELF: Importance of praising yourself for being a good parent</p>
Session 2	<p>INTRODUCING IRIE TIME</p> <ul style="list-style-type: none"> - The importance of Irie Time - How to follow your child's lead in play - How to talk about what your child is doing - Using Respond, Describe, and Praise when playing with your child - Ideas for Irie Time activities
Session 3	<p>GIVING YOUR CHILD POSITIVE ATTENTION THROUGHOUT THE DAY</p> <ul style="list-style-type: none"> -Paying attention to positive behaviour during daily routines -Getting children involved in chores - Using Describe, Respond, and Praise during daily activities <p>MODELLING: Modelling the behaviour you want / Being a good role model</p> <p>IRIE TIME: Playing with toys with your child</p>
Session 4	<p>GIVING CLEAR INSTRUCTIONS</p> <ul style="list-style-type: none"> - How to give clear instructions (clear, specific, short, positively phrased, realistic, get child attention first) - Using labelled praise to praise child when they follow an instruction <p>KNOW YOUR CHILD: Understand what your child likes/dislikes and factors that affect his/her behaviour</p> <p>IRIE TIME: looking at books with your child (using 'Going to School' book)</p>
Session 5	<p>TEACHING YOUR CHILD NEW SKILLS: - teach children how to follow the rules and expectations in the household.</p> <p>INDEPENDENCE: giving children independence</p> <p>CHOICES: -giving children choices.</p> <p>IRIE TIME: colouring with your child</p>
Session 6	<p>REASONS WHY CHILDREN MISBEHAVE: Identify why children misbehave</p> <p>ME-TIME: the importance of taking time to do something that you like to do.</p> <p>IRIE TIME: playing outside (ball, skipping, chasing) – how to do 'outside play activities' during Irie Time.</p>
Session 7	<p>MANAGING YOUR EMOTIONS</p> <ul style="list-style-type: none"> -How we feel affects the way we behave. -Link back to the importance of trying to understand why children misbehave -How to recognize our own emotions. -How to calm down when feeling angry. <p>HELPING CHILDREN UNDERSTAND THEIR OWN EMOTIONS</p> <ul style="list-style-type: none"> -Labelling children's emotions <p>IRIE TIME: Looking at books with your child (Use Emotions Book)</p>
Session 8	<p>HOW TO MANAGE YOUR CHILD'S MISBEHAVIOUR USING WITHDRAW ATTENTION AND REDIRECT</p> <ul style="list-style-type: none"> -How to redirect children -How to withdraw attention from attention seeking behaviours. -How to use redirect and withdraw attention together. <p>IRIE TIME: singing & dancing during Irie Time</p>
Session 9	<p>HOW TO MANAGE YOUR CHILD'S BEHAVIOUR USING CONSEQUENCES AND CHILLAX</p> <ul style="list-style-type: none"> -How to use chillax -Giving children consequences -Problem solving <p>IRIE TIME: pretend play (how to do pretend play activities during Irie Time)</p>
Session 10	<p>REVIEW OF THE YELLOW AND GREEN BLOCKS OF THE IRIE TOWER</p> <p>I AM AN IRIE PARENT</p> <p>GOAL SETTING</p>

Table A2: Structure of Virtual Parenting Programme

Week #	Date	Message
1	Sept 20 – 24	Message 1 Children love to be praised. When you praise your child for doing something good, they will want to do it again and again. Learn more at: LINK HERE FOR SESSION 1
		Message 2 When praising, describe exactly what your child did, praise him/her and use your child’s name. Add a clap or hug to make praise extra special. LINK HERE FOR SESSION 1
		Message 3 Irie Challenge for the week: Praise your child every day for all the good things they do. Praise yourself for being an Irie Parent. LINK HERE FOR SESSION 1
2	Sept 27 - Oct 1	Message 1 Irie time is when we play and have fun with our child, doing what they want. Irie Time makes our child feel special and loved. LINK HERE FOR SESSION 2
		Message 2 During Irie Time, we can play with toys, look at books and play games. We let our child choose what they want to do and follow their lead. LINK HERE FOR SESSION 2
		Message 3 Irie Challenge for the week: Have Irie Time with your child for at least 10 minutes every day. Have fun! Great job for being an Irie Parent. LINK HERE FOR SESSION 2
3	Oct 4 - 8	Message 1 Give your child positive attention and praise throughout the day. This will help your child learn to behave well and to learn new things. LINK HERE FOR SESSION 3
		Message 2 We are role models for our children. Children copy our behaviour. We need to speak and act in ways that we want our child to speak and act. LINK HERE FOR SESSION 3
		Message 3 Irie Challenge this week: Give your child positive attention throughout the day. Have Irie Time every day. Good job for being an Irie Parent. LINK HERE FOR SESSION 3
4	Oct 11 – 15	Message 1 Try to give your child clear instructions and praise them whenever they follow your instruction. Praise encourages positive behaviour. LINK HERE FOR SESSION 4
		Message 2 As parents we know our child best. We know when they are most likely to misbehave. This can help us to prevent bad behaviour. LINK HERE FOR SESSION 4
		Message 3 Irie Challenge this week: Give your child clear instructions and praise them when they do what you say. Have Irie Time every day. Awesome Job. LINK HERE FOR SESSION 4
5	Oct 18 – 22	Message 1 We can teach our child the little rules we have in our house and teach them important daily skills. This makes our life easier. LINK HERE FOR SESSION 5
		Message 2 We can help our child to behave well and learn well by giving them simple choices and allowing them some independence. This makes them feel good. LINK HERE FOR SESSION 5
		Message 3 Irie Challenge: Teach your child one skill this week. Give your child choices and some independence. Praise yourself for being an Irie Parent. LINK HERE FOR SESSION 5

6	Oct 25 - 29	Message 1 To prevent our child from misbehaving, we need to understand the reason why our child is behaving in a certain way. LINK HERE FOR SESSION 6
		Message 2 As parents we are very busy. We need to take some time out for ourselves. In Me Time we do something that relaxes us and makes us feel happy. LINK HERE FOR SESSION 6
		Message 3 Irie Challenge: If your child misbehaves, try to understand why so you can prevent the behavior next time. Have some Me Time every day. LINK HERE FOR SESSION 6
7	Nov 1 – 5	Message 1 When we feel angry with our child, we can stop, think and calm down before dealing with the situation. We can be a good role model for our child. LINK HERE FOR SESSION 7
		Message 2 We can help our child understand and manage their feelings by naming the emotion and describing why our child is feeling that particular emotion. LINK HERE FOR SESSION 7
		Message 3 Irie Challenge: Find ways to calm down when you are angry. Name your child’s emotions and explain why they feel that way. You are an Irie Parent. LINK HERE FOR SESSION 7
8	Nov 8 - 12	Message 1 Sometimes our child misbehaves when they are having fun, exploring & copying us. We can redirect our child’s attention away from these behaviors. LINK HERE FOR SESSION 8
		Message 2 Children may try to get attention by crying for things, complaining, and nagging. We can withdraw attention from these behaviors. LINK HERE FOR SESSION 8
		Message 3 Irie Challenge: Use redirect and withdraw attention to deal with misbehavior. Praise your child when they behave well. Great job Irie Parent. LINK HERE FOR SESSION 8
9	Nov 15 - 19	Message 1 We can give consequences for more serious misbehaviour. Consequences work best when they are short and not too harsh. We can also use Chillax. LINK HERE FOR SESSION 9
		Message 2 Chillax & consequences work best at managing our child’s behaviour when we give them praise throughout the day for the good things they do. LINK HERE FOR SESSION 9
		Message 3 Irie Challenge: Give your child positive attention & praise for all the good things they do throughout the day. Awesome! You are an Irie Parent. LINK HERE FOR SESSION 9
10	Nov 22 - 26	Message 1 Irie parents make Irie Homes for their children. Children feel safe, secure and loved and they have lots of opportunities to learn and play. LINK HERE FOR SESSION 10
		Message 2 Go back through the previous sessions. Set yourself parenting challenges each week to help you to continue making an Irie Home. Great job! LINK HERE FOR SESSION 10
		Message 3 CONGRATULATIONS. You have completed the Irie Homes Toolbox sessions. Praise yourself for being an Irie Parent and for making an Irie Home. LINK HERE FOR SESSION 10

Table A3: Strata Composition

Strata	Frequency	Percentage
SMS - female	875	78.62
SMS - male	163	14.65
Principals or social media - female	70	6.29
Principals or social media - male	5	0.45
Total	1,113	100.00

Notes: This table shows the gender decomposition of the different recruitment sources for all participants in the intervention. The first two rows correspond to the participants recruited via SMS messages. Rows three and four correspond to participants recruited via school principals or social media. The columns show the absolute and relative frequencies associated with those variables.

Table A4: Text Messages for Control Group

No.	Message
1	Thank you for participating in our parenting survey. You will now receive 3 SMS/week with tips on how to keep you and your child safe from COVID. Stay safe
2	COVID-19 Tip: Remind children to avoid sharing food, toys, pencils, books with friends.
3	COVID-19 Tip: Encourage children to wash their hands often with soap and water.
4	COVID-19 Tip: Remind children to avoid touching their face during COVID-19.
5	COVID-19 Tip: Wash your hands regularly when interacting with children
6	COVID-19 Tip: Avoid crowded spaces and close contact with others when traveling with children.
7	COVID-19 Tip: Keep children a safe distance from anyone with a cold or flu symptoms.
8	COVID-19 Tip: Remind children two years and over to avoid touching masks to reduce risks of contamination.
9	COVID-19 Tip: Remember to have children two years or older wear a mask outdoors and supervise mask wearing.
10	COVID-19 Tip: Show children 2 years and older, proper way to wear a mask and supervise them during mask wearing.
11	COVID-19 Tip: For children over two years, discard single use masks after each use and throw mask away without delay
12	COVID-19 Tip: Teach children proper ways to cover nose and mouth, when sneezing or coughing.
13	COVID-19 Tip: Remember to follow the COVID-19 protocols of the Ministries of Health and Education
14	COVID-19 Tip: Ensure children two years and older wear mask properly over nose, mouth, chin, it is secure, and they are supervised.
15	COVID-19 Tip: Remember to regularly wash reusable masks used by children over two years old.
16	COVID-19 Tip: Remove face masks of children in the right way, by removing from the ties and not touching the front.
17	COVID-19 Tip: For children over two years, remind them to wash their hands with soap and water after touching a used mask.
18	COVID-19 Tip: Ensure children have their own resources, to limit sharing with others
19	COVID-19 Tip: Remind children to avoid sharing food, toys, pencils, books with friends.
20	COVID-19 Tip: Dispose of single use face masks right after removal in a closed bin.
21	COVID-19 Tip: Remember to keep child at home or see a doctor if they are unwell with fever and cough.
22	COVID-19 Tip: Avoid crowded spaces and close contact with others when traveling with children.
23	COVID-19 Tip: Teach children to throw tissues used for sneezing or coughing into closed bin right after use, and wash hands.
24	COVID-19 Tip: Remember to teach your children over two years the proper way to wash their hands.
25	COVID-19 Tip: Remind children to keep safe distance from non-family members.
26	COVID-19 Tip: Remind children two years and over to wash their hands after coughing or sneezing.
27	COVID-19 Tip: Remember to clean your phones before giving to children to play.
28	COVID-19 Tip: Clean and disinfect high touch areas around the home used by children
29	COVID-19 Tip: Teach children how to properly wash hands with soap and water.
30	COVID-19 Tip: Regularly disinfect or wash toys and resources of children.
31	COVID-19 Tip: Wash your hands regularly when interacting with children.

Notes: This table enumerates the different COVID-19-related weekly SMS tips received by the caregivers in the control group.

Table A5: Survey Modules

Survey Modules	Baseline	First Follow up	Second Follow up
<i>Caregivers Outcomes</i>			
Attitudes towards violence against children	X	X	X
Violence against target child	X	X	X
Depression and anxiety	X	X	X
Parental Stress Scale			X
<i>Child Outcomes</i>			
Conduct and emotional problems (SDQ)	X	X	X
<i>Mechanisms</i>			
Brief Parental Self-Efficacy Scale (BPSES)		X	
Parental Self-Efficacy [From TOPSE - Discipline & Self-Acceptance]			X
Support networks	X	X	
<i>Caregiver and target child socio-demographic characteristics</i>			
Household Roster	X	X	X
Social Desirability Bias			X
<i>Intervention take up and learning</i>			
Information module		X	X
Receipt of parenting support (+ take-up)		X	X

Notes: This table shows if the data for each of the survey modules was collected at baseline and/or during the first or second follow up.

Table A6: Comparison of Study Sample with Representative Survey

	Mean JLCS 2019	Mean Study Sample	<i>p</i> -value
<i>Panel A. Caregiver's characteristics</i>			
Age (years)	36.9 (11.4)	33.2 (7.49)	0.000
Female (%)	0.89 (0.31)	0.85 (0.35)	0.076
Education level completed (years)	13.3 (2.64)	14.3 (2.75)	0.000
Married (%)	0.21 (0.41)	0.37 (0.48)	0.000
Employed (%)	0.62 (0.48)	0.79 (0.41)	0.000
Household size (N)	4.61 (1.86)	4.58 (1.95)	0.793
Children 17 years or younger (N)	2.23 (1.19)	1.91 (1.03)	0.000
<i>Panel B. Target child's characteristics</i>			
Age (years)	4.16 (1.37)	4.12 (1.43)	0.651
Female (%)	0.47 (0.50)	0.49 (0.50)	0.518

Notes: This table compares relevant descriptive statistics between our main sample and Jamaica Survey of Living Conditions restricted to caregivers with a child aged between two and six years. Panel A contains demographic variables associated with the caregiver. Panel B shows information about the eldest child aged two to six years old for each caregiver in the JLCS (2019) sample and information about the target child in the study sample. Standard deviations are presented in parentheses below the means. The last column shows the *p*-value associated with the null hypothesis of the mean values across both groups being the same.

Table A7: Summary Statistics of Violence Against Target Child and Caregivers' Mental Health in the Control Group

Variable	Baseline	First Follow-up	Second Follow-up
Violence against target child			
Shouted, yelled, or screamed at him/her?	1.54 (1.39)	1.49 (1.32)	1.49 (1.42)
Said you would send him/her away?	0.23 (0.72)	0.18 (0.66)	0.20 (0.69)
Threatened to hit him/her but not actually done it?	1.48 (1.50)	1.54 (1.49)	1.58 (1.53)
Hit him/her on the bottom, hand, arm, or leg with your bare hand?	0.52 (0.79)	0.52 (0.75)	0.51 (0.86)
Hit him/her on the bottom, hand, arm, or leg with a hard object?	0.08 (0.36)	0.09 (0.35)	0.11 (0.38)
Caregivers' mental health			
Have you been feeling down, depressed, or hopeless?	0.62 (0.91)	0.58 (0.87)	0.62 (0.95)
Have you been feeling nervous, anxious or on edge?	0.46 (0.83)	0.39 (0.75)	0.51 (0.84)
Have you been feeling little interest or pleasure in doing things?	0.69 (0.99)	0.65 (0.92)	0.76 (1.00)
Have you not been able to stop or control worrying?	0.55 (0.90)	0.55 (0.91)	0.68 (1.04)

Notes: This table presents mean and SD values for violence against target child and caregivers' mental health at baseline, first, and second follow-up for the control group only. Standard deviations are presented in parentheses below the means.

Table A8: Comparison of Treatment Impacts Between First & Second Follow-ups

Variable	First follow-up		Second follow-up		p-value $\beta_{f1} - \beta_{f2}$
	β_{f1}	SE_{f1}	β_{f2}	SE_{f2}	
Panel A. First Stage: Learning					
Praising children helps	0.189	0.045	0.104	0.049	0.203
Important for parents to play with child	0.059	0.038	0.039	0.044	0.729
Clear instructions help	0.224	0.046	0.248	0.060	0.753
Understand why child misbehaves	0.063	0.037	-0.058	0.038	0.023
Calm down before disciplining	-0.011	0.039	-0.026	0.040	0.788
Withdraw attention from child's whining	0.624	0.068	0.480	0.079	0.168
Redirect rather than reprimand	0.278	0.053	0.165	0.058	0.150
Consequences and timeout appropriate	0.080	0.040	0.071	0.044	0.870
Information index	0.525	0.070	0.394	0.080	0.217
Panel B. Primary Outcomes					
Attitudes towards violence against children (index)	-0.198	0.050	-0.144	0.061	0.497
Attitudes towards physical violence against children (index)	-0.191	0.051	-0.150	0.063	0.615
Attitudes towards psychlogical violence against children (index)	-0.120	0.058	-0.075	0.068	0.612
Violence against target child (index)	-0.121	0.056	-0.127	0.062	0.950
Physical violence against target child (index)	-0.136	0.060	-0.124	0.069	0.897
Psychological violence against target child (index)	-0.101	0.055	-0.105	0.065	0.961
Panel C. Secondary Outcomes					
Depression (index)	-0.033	0.059	-0.124	0.067	0.309
Anxiety (index)	-0.070	0.059	-0.157	0.068	0.330
Conduct problems (index)	-0.030	0.049	-0.053	0.059	0.760
Emotional problems (index)	-0.166	0.053	-0.051	0.065	0.170

Notes: This table presents a comparison of treatment impacts between the first and second follow-ups as estimated using our main specification (1). β refers to the estimated coefficients and SE refers to the estimated heteroskedasticity-robust standard errors. The last column presents the p-value for a test of the difference in means between the estimated coefficients for the first and second follow-ups.

Table A9: ITT Impacts on Caregiver Attitudes and Violent Behaviors Against Children (First Follow-up)

	Caregivers survey				
	(1)	(2)	(3)	(4)	(5)
	Physical punishment needed	Slap when misbehave	Beat to stop unwanted behavior	Shout and yell for obedience	Shout, yell, threaten to slap not harmful
<i>Panel A: Attitudes towards violence against children</i>					
Treatment	-0.039** (0.02)	-0.062** (0.02)	-0.051*** (0.02)	-0.023 (0.02)	-0.027 (0.03)
Observations	916	847	882	886	870
Control Mean	0.121	0.226	0.097	0.077	0.329
	Hit with bare hand	Hit with an object	Yelled	Threaten to send child away	Threaten to hit
<i>Panel B: Violence against target child</i>					
Treatment	-0.097*** (0.03)	-0.026 (0.02)	-0.101*** (0.03)	0.040** (0.02)	-0.055* (0.03)
Observations	916	885	934	884	928
Control Mean	0.395	0.074	0.745	0.090	0.675

Notes: This table shows the estimated short-term impacts for each of the components in the caregivers' attitude and behavior indices described in Figure 3. We present the estimated coefficient β_1 from the specification (1) in all the panels. "Treatment" is a dummy variable taking a value of one if the observed caregiver is in the treatment group, while "Control Mean" is the mean of the outcome for the control group. The sample size in each specification varies according to the number of observations available for each outcome. All results correspond to the first follow-up of the intervention. Since all dependent variables are measured as dummy variables whose descriptions are available in Appendix A2, these results are the extensive margin impacts. Panel A describes the results of caregivers' attitudes toward violence against children. The first three columns correspond to attitudes toward physical violence, while the last two columns correspond to psychological violence. These components are framed as Yes/No questions regarding the following statements: (1) In order to bring up, raise, or educate a child properly, the child needs to be physically punished. (2) good parent slaps their child when they misbehave. (3) When a child is beaten, he/she will stop doing the unwanted behavior. (4) Shouting and yelling make the child more obedient. (5) Shouting, yelling, and threatening to slap will harm the child. Panel B shows the extensive margin short-term impacts for the five components that comprise the violence against the target child (index). These are framed as Agree/Disagree responses to the questions regarding the following statements: (1) hit the child on the bottom, hand, arm, or legs with their bare hands (2) hit the child with something like a belt, hairbrush, stick, or some other hard object, (3) shout, yell, or scream at their child, (4) threaten to send the child away in response to behavior perceived as inappropriate, (5) threaten to hit the child in response to behavior perceived as inappropriate. All specifications include strata-fixed effects for the four strata. Strata were defined as the cross between the gender of the caregiver (male or female) and the mode of recruitment into the study (SMS messages campaign or ECC/Principal referral and social media campaign). The sample size in each specification varies according to the number of observations available for each outcome. Heteroskedasticity-robust standard errors are reported in parenthesis. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A10: ITT Impacts on Caregiver Attitudes & Behaviors - [Kling et al. \(2007\)](#) Indices

	Primary hypotheses					
	(1) Attitudes toward violence against children (index)	(2) Attitudes toward physical violence against children (index)	(3) Attitudes toward psychological violence against children (index)	(4) Violence against target child (index)	(5) Physical violence against target child (index)	(6) Psychological violence against target child (index)
<i>Panel A: Short-term</i>						
Treatment	-0.201*** (0.05)	-0.186*** (0.05)	-0.110* (0.06)	-0.145*** (0.05)	-0.142** (0.06)	-0.122** (0.05)
Observations	977	974	961	943	920	942
Control mean	-0.002	-0.005	0.006	0.000	0.002	-0.000
<i>Panel B: Medium-term</i>						
Treatment	-0.149** (0.06)	-0.148** (0.06)	-0.076 (0.07)	-0.140** (0.06)	-0.123* (0.07)	-0.110* (0.06)
Observations	696	694	685	681	676	681
Control mean	-0.002	-0.002	-0.014	-0.000	-0.007	-0.000

Notes: This table presents estimates of β_1 (the ITT estimate) from Equation 1. Each column is a separate dependent variable. Panel A displays the short-term effects and Panel B the medium-term effects. Columns (1)-(3) present treatment impacts on the caregiver attitudes while columns (4)-(6) present treatment impacts on caregiver behaviors. All dependent variables are index variables, constructed following [Kling et al. \(2007\)](#). All specifications include controls for strata fixed effects and the baseline dependent variable as a control. The control mean in Panels A and B refer to the mean of the control group from the first and second round of data, respectively. The sample size in each specification varies according to the number of observations available for each outcome. Heteroskedasticity-robust standard errors are reported in parentheses below the coefficient estimates. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A11: Social Desirability Bias Analysis - Violence-Specific SDB Items

	Primary hypotheses						
	(1) SDB (Violence index)	(2) Attitudes toward violence against children (index)	(3) Attitudes toward physical violence against children (index)	(4) Attitudes toward psychological violence against children (index)	(5) Violence against target child (index)	(6) Physical violence against target child (index)	(7) Psychological violence against target child (index)
<i>Panel A: Controlling for SDB</i>							
Treatment	0.027 (0.08)	-0.142** (0.06)	-0.149** (0.06)	-0.073 (0.07)	-0.131** (0.06)	-0.120* (0.07)	-0.113* (0.06)
SDB (Violence index)		-0.061* (0.03)	-0.050 (0.03)	-0.073** (0.04)	0.010 (0.03)	0.003 (0.03)	-0.009 (0.03)
Observations	700	696	694	685	677	672	677
Control Mean	0.000	-0.000	-0.000	-0.014	0.001	0.016	0.009
<i>Panel B: Heterogeneity by SDB</i>							
Treatment		-0.272*** (0.08)	-0.189** (0.08)	-0.224** (0.09)	-0.124 (0.08)	-0.056 (0.09)	-0.145 (0.09)
High SDB (Violence)		-0.283*** (0.09)	-0.123 (0.10)	-0.351*** (0.10)	0.028 (0.10)	0.066 (0.11)	-0.003 (0.10)
Treatment × High SDB (Violence)		0.295** (0.12)	0.089 (0.12)	0.340** (0.14)	-0.016 (0.13)	-0.149 (0.14)	0.075 (0.13)
Treat + Treat × High SDB (Violence)		0.023 (0.09)	-0.100 (0.09)	0.116 (0.10)	-0.140 (0.10)	-0.205* (0.11)	-0.070 (0.10)
Observations		696	694	685	677	672	677
Control Mean		-0.000	-0.000	-0.014	0.001	0.016	0.009

Notes: Panel A presents estimates of β_1 (the ITT estimate) from Equation 1, additionally controlling for SDB (violence-specific index). Panel B presents heterogeneity by SDB (violence-specific index) and reports estimates of β_1 , β_2 , and β_3 (the ITT estimates) from the following equation: $Y_{i,t} = \beta_0 + \beta_1 T_i + \beta_2 HighSDB_i + \beta_3 T_i * HighSDB_i + \beta_4 Y_{i,t-1} + \gamma_s + \varepsilon_{i,t}$. “High SDB (Violence)” is a dummy variable that takes the value 1 if the SDB score was above the median SDB score for the sample, and 0 otherwise. Each column is a separate dependent variable. Medium-term effects are shown, estimated using data from the second follow-up and baseline. Column (1) presents treatment impacts on the Social Desirability Bias (violence-specific index). Columns (2)-(7) of this table show our results on caregiver attitudes and behaviors controlling for SDB (violence-specific index). The SDB score was only measured at second follow-up. The term “Treat + Treat × High SDB (Violence)” denotes the total effect of the treatment for those in the treatment group with above-median SDB scores (violence-specific index). All dependent variables are index variables, constructed as described in Section 4. All specifications include controls for strata fixed effects, while specifications (2) - (7) additionally include the baseline dependent variable as a control. The estimation sample for columns (5)-(7) uses 4 fewer observations relative to the estimation sample for columns (4)-(6) in Table 3 as SDB measures were not collected for the 4 caregivers. The control mean refers to the mean of the control group from the second follow-up round of data. The sample size in each specification varies according to the number of observations available for each outcome and the SDB index. Heteroskedasticity-robust standard errors are reported in parentheses below the coefficient estimates. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A12: Robustness Check: Lee Bounds for Attrition Analysis (First Follow-up)

	Primary hypotheses					
	(1) Attitudes toward violence against children (index)	(2) Attitudes toward physical violence against children (index)	(3) Attitudes toward psychological violence against children (index)	(4) Violence against target child (index)	(5) Physical violence against target child (index)	(6) Psychological violence against target child (index)
Treatment						
Lower Bound	-0.301*** (0.07)	-0.289*** (0.07)	-0.231*** (0.07)	-0.291*** (0.08)	-0.277*** (0.10)	-0.249*** (0.09)
Upper Bound	-0.168*** (0.06)	-0.184*** (0.06)	-0.088 (0.06)	-0.110 (0.08)	-0.120* (0.07)	-0.081 (0.08)
Observations	1111	1109	1105	1095	1079	1094
Control mean	0.001	0.004	-0.005	-0.000	-0.002	-0.000

Notes: This table shows the Lee bounds associated with the estimates for treatment effects. P-values for non-significant bounds: (i) Attitudes toward psychological violence against children (index) upper bound: 0.177; (ii) Violence against target child (index) upper bound: 0.177; (iii) Psychological violence against target child (index) upper bound: 0.302. Bounds tightened by quartiles of the dependent variable, in spirit of the ANCOVA specification (since bounds cannot be tightened using continuous variables). Sample size in each specification varies according to the number of observations available for each outcome. The sample size in each specification varies according to the number of observations available for each outcome. Heteroskedasticity-robust standard errors are reported in parenthesis. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A13: Double LASSO for Selection of Controls

	Primary hypotheses					
	(1) Attitudes toward violence against children (index)	(2) Attitudes toward physical violence against children (index)	(3) Attitudes toward psychological violence against children (index)	(4) Violence against target child (index)	(5) Physical violence against target child (index)	(6) Psychological violence against target child (index)
<i>Panel A: Short-term</i>						
Treatment	-0.186*** (0.05)	-0.182*** (0.05)	-0.109* (0.06)	-0.112** (0.06)	-0.133** (0.06)	-0.091* (0.05)
Observations	977	974	961	943	920	942
# of controls selected	4	4	4	5	4	6
Control mean	-0.000	-0.000	0.000	-0.000	0.000	-0.000
<i>Panel B: Medium-term</i>						
Treatment	-0.142** (0.06)	-0.149** (0.06)	-0.072 (0.07)	-0.107* (0.06)	-0.120* (0.07)	-0.087 (0.06)
Observations	696	694	685	681	676	681
# of controls selected	3	3	3	4	4	6
Control mean	-0.000	-0.000	-0.014	0.000	0.017	0.008

Notes: This table presents estimates of β_1 (the ITT estimate) from Equation 1. Each column is a separate dependent variable. Each specification includes the Double Lasso suggested controls for each of the main outcomes. Panel A describes the short-term effects corresponding to the first follow-up, while Panel B presents the analog results for the second follow-up. "Number of Controls Selected" refers to the total number of controls included in the specification. "Control Mean" describes the mean of the outcome for the control group. The sample size in each specification varies according to the number of observations available for each outcome. The sample size in each specification varies according to the number of observations available for each outcome. Heteroskedasticity-robust standard errors are reported in parenthesis. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A14: Randomization Inference Adjusted p -values

	Primary hypotheses					
	(1)	(2)	(3)	(4)	(5)	(6)
	Attitudes toward violence against children (index)	Attitudes toward physical violence against children (index)	Attitudes toward psychological violence against children (index)	Violence against target child (index)	Physical violence against target child (index)	Psychological violence against target child (index)
<i>Panel A: Short-term</i>						
Treatment	-0.198*** (0.05)	-0.192*** (0.05)	-0.120** (0.06)	-0.121** (0.06)	-0.136** (0.06)	-0.101* (0.05)
Observations	977	974	961	943	920	942
Control mean	-0.000	-0.000	0.000	-0.000	0.000	-0.000
RI p-value	0.000	0.000	0.050	0.025	0.023	0.043
<i>Panel B: Medium-term</i>						
Treatment	-0.144** (0.06)	-0.150** (0.06)	-0.075 (0.07)	-0.127** (0.06)	-0.124* (0.07)	-0.105 (0.06)
Observations	696	694	685	681	676	681
Control mean	-0.000	-0.000	-0.014	0.000	0.017	0.008
RI p-value	0.015	0.017	0.269	0.040	0.071	0.106

Notes: This table presents estimates of β_1 (the ITT estimate) from Equation 1. Each column is a separate dependent variable. Panel A describes the short-term effects corresponding to the first follow-up, while Panel B presents the analog results for the second follow-up. "Control Mean" describes the mean of the outcome for the control group. The sample size in each specification varies according to the number of observations available for each outcome. All regressions include strata-fixed effects. "RI p-value" presents p -values estimated using randomization inference. The sample size in each specification varies according to the number of observations available for each outcome. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A15: Comparison of Intervention Costs with Face-to-Face Intervention Costs
Cost per Caregiver Targeted (USD)

Cost Category	vIHT Costs			IHT Costs		
	Fixed Costs	Variable Costs	Total Costs	Fixed Costs	Variable Costs	Total Costs
SMS	0.00	1.43	1.43			
Costs to send SMS messages	0.00	1.43	1.43			
App	54.21	0.00	54.21			
Consultant and staff costs	6.40	0.00	6.40			
Costs associated with filming videos for the App	33.93	0.00	33.93			
KnowHub App development costs	13.87	0.00	13.87			
Sessions	26.45	34.53	60.98	86.61	37.34	123.95
Staff salaries	19.19	0.00	19.19	60.07	0.00	60.07
Staff training and materials	0.73	0.00	0.73	19.17	0.00	19.17
Indirect costs to administer sessions	6.53	0.00	6.53	7.37	0.00	7.37
Data plans to caregivers to participate in sessions	0.00	34.53	34.53	0.00	12.28	12.28
Intervention materials for parents/children				0.00	25.06	25.06
Total per Caregiver Targeted (USD)	80.66	35.96	116.61	86.61	37.34	123.95

Notes: This table presents fixed and variable costs (in 2021 USD) associated with each component of the vIHT and the comparison with the face-to-face IHT costs. Costs for the vIHT were divided across 557 treatment group caregivers to compute the costs per caregiver targeted. IHT intervention costs were divided across 115 treatment group caregivers (Francis and Baker-Henningham, 2021). For costs incurred in Jamaican Dollars, the following exchange rate was used: 1 USD = 154.94 JMD.