

Pre-Analysis Plan
“Effects of Promoting Child Sleep in Kenya”¹

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Investigators: Michelle Layvant, Edward Miguel, and Michael Walker²

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Summary: This document describes a randomized controlled trial (RCT) for parents and their children in Kenya that promotes child sleep by providing free pillows and blankets, along with information about the importance and benefits of adequate sleep. This document outlines the plan for the RCT, consisting of an intervention administered to primary caregivers of children and a follow-up survey conducted an average of 6 weeks after the intervention. This document outlines planned regression specifications and outcome variable definitions and descriptions. Note that there may be further analyses beyond those included in this document; hence, this document is not intended to be comprehensive or to preclude additional or exploratory analysis.

Appendices: PC-module including the sleep intervention module and information script read to primary caregivers as part of the intervention; informational poster provided to households as part of the intervention; informational brochure provided to households as part of the intervention; KSSI (6 week follow-up phone survey).

1. Introduction

1.1 Summary

There is growing awareness of the “global sleep epidemic” and sleep’s importance as an input into children’s cognitive development, academic performance, physical health, and emotional and behavioral outcomes -- yet there remains little social science research on sleep (Gildner et al., 2014, Hirshkowitz et al. 2015, Walker 2017, Jagnani 2018). Forming good sleep habits is an especially interesting topic for social and behavioral researchers, as it requires daily decisions, can be exacerbated by self-control issues (which can themselves be reinforced by poor sleep), and takes place in settings where many may be poorly informed about the health benefits of sleep (Dupas and Miguel 2017). To date, sleep in low and middle-income countries, and in particular, Sub-

¹ As data collection launched prior to the registration of this pre-analysis plan, a Data Management Plan was registered under AEA RCT Registry #3995 (Estimating Causal Intergenerational Impacts of Parent Human Capital Interventions in Kenya) on March 16, 2021, describing who would have access to any data collected prior to the registration of this pre-analysis plan.

² Layvant: University of California, Berkeley; Miguel: University of California, Berkeley; Walker: University of California, Berkeley. Corresponding author: Edward Miguel (emiguel@berkeley.edu).

Saharan Africa, has received especially scant scholarly attention, but as incomes and urbanization continue to rise, problems associated with inadequate sleep may be exacerbated (Simonelli et al., 2018, Bessone et al. 2021). This intervention seeks to improve the early-childhood health in Kenya by encouraging beneficial sleep practices for young children at home, including getting an adequate amount of sleep, and supporting a healthy home sleep environment. In particular, this project is a randomized controlled trial that promotes child sleep by providing free pillows and blankets, along with information about the benefits of sleep. This project seeks to estimate effects on total sleep time, sleep home environment, and knowledge about the benefits of sleep. This project also estimates long-term complementarities with human capital interventions previously provided to parents.

This pre-analysis plan outlines the sleep randomized controlled trial and subsequent analysis. The research design includes an intervention administered at baseline and one follow-up phone survey that is administered approximately 6 weeks after baseline. Additional phone follow-up surveys beyond the one described in this plan may be conducted in the future, which will be registered in an addendum to this pre-analysis plan.

1.2 Sample

The Kenya Life Panel Survey (*KLPS*) is a longitudinal dataset that contains educational, health, nutritional, demographic, labor market, and other information for nearly 10,000 Kenyan adults, spanning from their time in primary school up through early adulthood. The KLPS sample comprises individuals who participated in one of two previous randomized NGO programs: one which provided deworming medication to primary school students during 1998–2003 (known as the Primary School Deworming Program, or *PSDP*; Miguel and Kremer, 2004) and one which provided merit scholarships to upper primary school girls in 2001 and 2002 (known as the Girls' Scholarship Program, or *GSP*; Kremer, Miguel, and Thornton, 2009). An approximately 20% subset of these individuals also participated in the vocational training and cash grants programs during 2009–2014 (Hicks et al., 2015b).

The fourth round of the KLPS data collection effort (*KLPS-4*) focuses on the subsets of the KLPS sample who participated in the PSDP or the vocational training and cash grants interventions. KLPS-4 collects information from the KLPS focus respondent (through survey modules known as the E+ and *I Modules*) and also targets a subset of their children aged 3–5 and 6–8 and the primary caregivers (*PCs*) of these children.³ Selected children (one per age group) are administered a series of child assessments known as the *KLPS-Kids* modules (see Fernald et al. 2019 for more details), and PCs are administered a *PC-Module*. KLPS-4 data is collected in two representative waves; Wave 2 is currently ongoing.

The sample for the sleep intervention includes all of those participating in the KLPS-Kids modules from Wave 2. The intervention is administered as part of the PC-Module in order to convey the information treatment and collect baseline information from the primary caregiver of the children.

³ Analyses on the adult respondents, in particular related to the long-term impacts of the PSDP intervention, have been pre-specified separately; see Baird et al. (2019) and references therein.

As previously mentioned, KLPS-4 data collection is currently ongoing. At the time of finalizing and registering this plan (week of May 17, 2021), 2,388 children have been sampled for the sleep intervention, 2,522 I-Modules have been completed (in Wave 2), 1,501 PC Modules have been completed, 1,485 children's assessments have been completed, and 760 KSSI follow-up phone surveys have been completed. This activity will include a full sample of approximately 1,900 children in Wave 2 of the main KLPS-Kids activity, though the exact number will depend both on the tracking rate and the number of children that fall within the target age range. A two-stage tracking methodology will be used to minimize the biases related to survey attrition.⁴

1.3 Child Sleep Promotion Intervention

The child sleep intervention entails the following:

- A free pillow;
- A free blanket;
- A video explaining the benefits and importance of sleep;
- A pamphlet explaining the benefits of sleep, how sleep affects learning and memory, and information on how to help your child sleep better;
- A poster summarizing the video and pamphlet;
- An informational script, which walks through the video, pamphlet, and poster.

Please see the Appendix for the PC-Module, video script, pamphlet, and poster. The poster includes a drawing of a child sleeping with a pillow and a blanket and summarizes the key points of the video, pamphlet, and information script. It also serves as a later reminder for parents to continue reading to their children.

1.4 Experimental Design: Child Sleep Promotion

The experiment consists of one sleep treatment group (25 percent of sample) and one control group (75 percent of sample⁵). In the sleep treatment group, the primary caregiver of the child is offered a pillow and a blanket to give to the child, as well as an informational video, poster, and script as described above. The second group is the control group, which receives no pillow and blanket and no informational materials.

Assignment to sleep treatment groups was done as follows:⁶ since eligible children (aged 3-8) are not identified until the time of the I-Module interview (as discussed in Section 1.2 above), the full

⁴ For more information on the two-stage tracking procedure employed in the main KLPS study, see Baird, Hamory, and Miguel (2008) and Baird et al. (2016).

⁵ The 75 percent of the sample comprises 50 percent of the sample that receives no intervention (control) and 25 percent of the sample that receives a separate child reading intervention at the end of the in-person follow-up (PC-Module).

⁶ Randomization was stratified by three adult characteristics: PSDP or GSP group, grade in school at baseline, and gender. There were three PSDP/ GSP groups used for stratification: i) PSDP treatment (Groups 1 and 2), ii) PSDP control (Group 3), iii) GSP sample.

sample of KLPS Wave 2 adults were assigned to either sleep treatment or control. Randomization was stratified by three adult characteristics: treatment status, grade in school at baseline, and gender. The PSDP group⁷ was stratified by deworming treatment group and cost-sharing status, gender, and the school grade at baseline while the GSP group⁸ was stratified based on the GSP treatment status and the school grade at baseline. Stratification by grade ensures that the age distribution of the KLPS respondent is balanced across treatment groups.

At the time of the I-Module survey with the KLPS respondent, enumerators determine whether the respondent has a child (or children) eligible for the KLPS-Kids activity. For those with eligible children, sampled children are selected and information is collected about their primary caregivers. These primary caregivers are visited as part of the PC-Module where the child sleep intervention is implemented separately for each child. In cases where two children are selected (one per age group) and have the same primary caregiver, each child receives a separate pillow and blanket; however, the primary caregiver only receives the information treatment a single time (including only receiving one pamphlet and poster).

The expected eligible sample for the child reading promotion intervention is estimated at 1,900 individuals for Wave 2 of the KLPS-4 round, with 25% of these assigned to the sleep treatment.

1.5 Data

1.5.1 PC-Module: Child Sleep Baseline

The KLPS-4 PC-Module serves as a baseline for the child sleep intervention. Immediately before the intervention, a PC-Module is administered to the primary caregiver of the child, and asks detailed questions about the child's bed and wake times, home environment, sleep routine, behaviors, and the primary caregiver's knowledge on the benefits of sleep and recommended sleep time (Sections 4, 8.1, and 8.2).

As part of the sleep intervention, data is collected on which benefits of sleep the PC would like to see in this child (Section 8.3, Question 8b); whether, given the information, they would like the child to sleep more hours than they currently do (Section 8.3, Question 2); whether their neighbors would find these materials useful relative to the respondent (Section 8.4, Question 1); and whether they anticipate these materials will help their child sleep more (Section 8.4, Question 2).

1.5.2 KSSI Follow-up Phone Survey: Child Sleep Endline

The KSSI follow-up phone survey asks additional follow-up questions on sleep time, sleep home environment, child behavior, and knowledge about the benefits of sleep. The interview lasts about

⁷ There are two PSDP groups used for stratification: i) PSDP treatment (Groups 1 and 2), ii) PSDP control (Group 3).

⁸ The GSP group was all female and so was not stratified by gender.

10 minutes over the phone and is conducted with the primary caregiver⁹ of each child 6 weeks after the PC-Module. Outcome families include sleep time, sleep environment, and sleep knowledge. Please see Section 3 and Appendix I below for a detailed description of outcomes.

1.6 Analysis and Data Examined to Date

At the time of registering this pre-analysis plan, a subset of the Wave 2 sample have been surveyed using a tablet-based survey instrument and have been administered the intervention.

At the start of Wave 2 data collection, a data management memo was registered on the AEA registry to outline who would have access to KLPS-4 and KSSI data in advance of filing pre-analysis plans. The data management memo specifies that all KLPS-4 data collected prior to the registration of this plan has been compiled, organized, and stored only by those team members who are *not* involved in writing of this pre-analysis plan. Research team members who have been involved in writing this pre-analysis plan have only seen summary statistics and tracking rates for the purposes of ensuring data quality. They have not examined the data nor performed any data analysis before registering this plan. No team members have performed any estimates of treatment effects. Access to the survey data will be provided to research team members involved in writing the pre-analysis plan only after the pre-analysis plan is filed on the AEA RCT Registry.

2. Analysis

This pre-analysis plan outlines the planned analysis for estimating the impact of pillows, blankets, and information on the benefits of sleep on total sleep time, sleep behaviors, and sleep knowledge in this sample. The analysis will focus on Intention-to-Treat (ITT) estimates of sleep treatment group assignment.

2.1 Effects of Child Sleep Promotion: Full Sample

The full sample includes children of parents who were in the Primary School Deworming Program (PSDP) sample and/or vocational education and cash grant samples.

Results are estimated using the following equation:

$$Y_{it} = \alpha_0 + \alpha_1 Treat_{it} + X'_{it}\lambda + \varepsilon_{it}, \quad (1)$$

⁹ The first attempt of the KSSI follow-up phone survey aims to interview the Primary Caregiver or spouse, if they have spent time with the child in the last week. If they both have not, but usually spend time with the child, the interview is rescheduled. If the Primary Caregiver or spouse are not currently spending time with the child, an alternative contact is requested. The main analysis is expected to include respondents regardless of their relationship to the child or primary caregiver that received the intervention. If data quality is systematically worse among non-primary caregiver respondents, additional robustness checks restricting the sample to primary caregiver respondents may also be conducted.

where Y_{it} is an outcome of interest for respondent i at time t , $Treat_i$ is an indicator equal to 1 if respondent i was in the sleep treatment group at time t , and X'_{it} is a vector of control variables. This specification includes a vector of control variables X'_{it} , containing the variables used for stratification during sleep treatment randomization: PSDP or GSP treatment group, gender of KLPS parent, and baseline (1998) grade of KLPS parent. This specification also includes an indicator for respondents assigned to the storybook intervention, as this is administered in advance of the KSSI survey.¹⁰ The analysis also includes an indicator for PSDP program participation, gender of interviewer; months elapsed since the start of the survey wave; and an indicator for inclusion in the vocational education / cash grant sample as well as treatment groups within that intervention. Survey weights will be used which take into account the two-stage tracking strategy of KLPS data collection.¹¹ Standard errors will be robust to heteroscedasticity.

The main hypothesis test is a two-sided t-test of the null hypothesis that $\alpha_1=0$, which captures the effect of being assigned to the sleep treatment group. It measures the average effect for receiving a free pillow, blanket, and information on the importance and benefits of child sleep.

2.2 Complementarities with Human Capital Interventions

Results also explore whether there are complementarities between human capital interventions previously provided to KLPS respondents and the effects of the sleep intervention. Throughout the rest of this section, the sleep treatment status of the KLPS respondent is used in the corresponding intervention, even if the KLPS respondent is not the primary caregiver of the child.

2.2.1 Deworming (PSDP) Sample

The first set of analyses looks for complementarities with a deworming intervention, known as the Primary School Deworming Program (**PSDP**), which took place between 1998 and 2003. Primary schools were assigned to one of three treatment groups (Group 1, Group 2, or Group 3); individuals in Group 1 and 2 schools (*treatment* schools) were assigned 2.41 more years of deworming on average than Group 3 individuals (*control* schools). See Miguel and Kremer (2004), Miguel et al. (2014) and Baird et al. (2016) for more details.

For the PSDP sample, treatment group individuals in the vocational training and cash grants intervention (described in the next section) are excluded. Thus, the sample includes PSDP individuals who were not involved in the training/grant program, as well as PSDP individuals who were part of the training/grant program control group. Because the voucher/grant winners and non-winners were randomly selected, the analysis will adjust the survey weights for individuals in the

¹⁰ See Bonds et al. 2019 and Bonds et al. 2020 for a description of the storybook interventions which took place during Wave 1 and Wave 2 of the KLPS-4 I-Module.

¹¹ Survey weights are assigned at the child and PC level. Robustness of the results will be tested using several different weighting strategies. In one strategy (the primary method), in cases where there are 2 biological children surveyed from 1 KLPS respondent, each child is assigned the same survey weight as the KLPS respondent from Wave 2 of the I-Module. The second strategy will evenly split KLPS respondent weights across children in cases where there are 2 biological children surveyed from 1 KLPS respondent.

non-winner comparison group in order to maintain initial (baseline PSDP) population representativeness.

The main estimating equation for PSDP complementarities interacts PSDP treatment status with the indicator for sleep treatment (Equation 1):

$$Y_{it} = \alpha_0 + \alpha_1 Treat_{it} + \alpha_2 T_i^{PSDP} + \alpha_3 T_i^{PSDP} * Treat_{it} + X'_{it} \lambda + \varepsilon_{it}, \quad (1a)$$

where Y_i is an outcome of interest for individual i . The binary variable T_i^{PSDP} is an indicator for individual i in the PSDP Deworming Groups 1 or 2 (versus Group 3) in 1998. This specification includes a vector of control variables X_i' , containing the variables used for stratification during sleep treatment randomization: gender of KLPS parent, and baseline grade (1998) of KLPS parent. This specification also includes a vector of controls used either to stratify the original PSDP sample, or in the sampling of the KLPS sample, as well as other key controls used in Baird et al. (2016, 2017). This vector comprises an indicator for gender of interviewer; month of interview fixed effects; the total density of primary school children in a 6 km radius around the parents' PSDP school in 1998; an indicator for inclusion in the vocational education / cash grant sample; indicator for geographic zone of parent's school in 1998; population of parent's school in 1998; indicator for participation in deworming cost-sharing in 2001 (Kremer and Miguel 2007); and average 1996 test score of parent's PSDP school. In addition, an indicator for whether respondents assigned to the storybook intervention is included, as this is administered in advance of the KSSI survey. Survey weights that take into account the sampling for the KLPS and the two-stage tracking strategy of KLPS data collection are used, corrected for individuals in the non-winner comparison group of the vocational training and cash grant interventions, in order to maintain initial (baseline PSDP) population representativeness. Analyses report robust standard errors clustered at the 1998 school level.

The main coefficient of interest is α_3 , the differential effect of the sleep intervention for the PSDP treatment group. The main hypothesis test is a two-sided t-test of the null hypothesis that $\alpha_3=0$. The research investigators are interested in both the magnitude and the statistical significance of the coefficient.

Of secondary interest for Equation 1a is the magnitude and significance of the coefficient on the indicator for PSDP treatment status (α_2), which captures whether PSDP treatment increases the level of outcomes of interest in this pre-analysis plan. Analyses will also test the null hypothesis that there is no effect of PSDP treatment status on reading and investment outcomes using a joint test significance of all PSDP terms. This is an F-test of the joint significance of α_2 and α_3 .

2.2.2 Vocational Training and Cash Grant Samples

The vocational training and cash grant program took place during 2009-2014 and included 2,163 adolescents and young adults ranging from roughly 17 to 28 years of age who applied for vocational education tuition vouchers. Approximately 70% of these individuals were participants of PSDP, and the others were participants in the Girls' Scholarship Program (GSP), a separate

randomized education intervention that took place in a neighboring area.¹² A randomly selected half of all training program applicants were awarded a vocational training voucher worth approximately 35,000 Kenyan shillings (about US \$460), an amount sufficient to fully (or almost fully) cover the tuition costs for most public or private vocational education programs in Kenya. Voucher winners attended courses during 2009-2011. In 2013 and 2014, a random half of voucher winners and voucher non-winners were given an unconditional cash grant worth 20,000 Kenyan shillings (about US \$230 at the time). In the present analysis, voucher winners are considered “treated” with respect to the vocational training program if they were randomly selected to receive a voucher, and the cash grant winners are considered “treated” with respect to the cash grant program if they were selected to receive a grant.¹³

The vocational training and cash grants sample consists of individuals who previously participated in either the PSDP or the GSP, and applied to participate in the vocational training voucher program which launched in 2009. For this sample, analyses proceed similarly as for the PSDP sample. The main estimating equation will interact indicators vocational training and cash grant treatment status with the any reading intervention indicator from Equation 1:

$$Y_{it} = \alpha_0 + \alpha_1 Treat_{it} + \alpha_2 T_i^{VOCED} + \alpha_3 T_i^{VOCED} * Treat_{it} + \alpha_4 T_i^{SCY} + \alpha_5 T_i^{SCY} * Treat_{it} + X'_{it}\lambda + \varepsilon_{it}, \quad (1b)$$

As before, Y_{it} is an outcome for individual i in time t . The binary variable T_i^{VOCED} indicates whether individual i is in the vocational training treatment group. The binary variable T_i^{SCY} indicates whether individual i is in the cash grant treatment group. Note that some individuals were in only one treatment group (or none), while others were in both voucher and cash grant treatment groups. This specification includes a vector of control variables X_{it} , containing the variables used for stratification during the reading promotion randomization: PSDP/ GSP treatment group, gender of KLPS parent and baseline grade of KLPS parent. This specification also includes an indicator for PSDP or GSP program participation, gender of interviewer and months elapsed since the start of the survey wave. Survey weights that take into account the two-stage tracking strategy of KLPS data collection are used. Standard errors will be robust to heteroscedasticity. This specification also includes an indicator for respondents assigned to the storybook intervention, as this is administered in advance of the KSSI survey.

The main coefficients of interest are α_3 and α_5 . The main hypothesis tests will be two-sided t-tests for i) the null hypothesis that $\alpha_3=0$, which tests for differential effects of the sleep intervention by vocational education treatment status, and ii) the null hypothesis that $\alpha_5=0$, which tests for differential effects of the sleep intervention by SCY treatment status.

Of secondary interest is the magnitude and significance of the coefficients on the indicator for vocational training (α_2) and SCY treatment status (α_4), which captures whether these treatments

¹² Additional details on this program are not provided in this pre-analysis plan as it is not analyzed separately in the proposed study. For more details on this program, see Kremer, Miguel, and Thornton (2009).

¹³ For more details on the vocational training voucher program, see Hicks et al. (2015b); for more details on the cash grant program, see Hicks et al., (2015a). As described in these references, there were two variants of the vocational education voucher, but both are considered treatment here for simplicity.

increase the level of outcomes of interest in this pre-analysis plan. Analyses will also test the null hypothesis that there is no effect of vocational training and SCY treatment status on reading and investment outcomes using a joint test significance of all terms. For vocational training, this is an F-test of the joint significance of α_2 and α_3 . For SCY, this is an F-test of the joint significance of α_4 and α_5 .

Further analyses may explore interaction effects between the vocational training voucher and cash grant, but anticipate limited statistical power given the smaller sample size for individuals that received both interventions, and thus do not consider this to be primary.

2.4 Heterogeneous Effects

In additional analyses beyond the main regression specification above, heterogeneity will be investigated in two dimensions. First, analyses estimate heterogeneous treatment effects based on household socioeconomic and demographic variables of particular interest.

- KLPS respondent education level, split above and below median years of educational attainment
- Total income of KLPS household, split above and below median (KLPS-4 E+ Module, Sections 15.1-15.4)
- Urban residence of KLPS respondent, where urban status is defined as those living in Nairobi, Mombasa or Kampala (KLPS-4 I Module, question 3.1). Analyses may also explore effects based on the amount of time spent in urban areas, and including those that live in towns as well.
- Gender of child (KLPS-4 I Module child selection)
- Gender of KLPS parent (KLPS-4 I Module, Section 1)
- Total number of children in household (KLPS-4 E+ household roster, Section 4 Question 10)¹⁴
- KLPS respondent age at baseline, split above and below median age at baseline (12 and younger and older than 12)

Heterogeneous effects are estimated by interacting these covariates with the sleep treatment indicator variables in Equations 1 and 2.¹⁵ Note that some of these dimensions may have been affected by human capital treatments for KLPS respondents, which could affect interpretation of these estimates. Further analyses may also estimate heterogeneous treatment effects of the human capital interventions by interacting these treatment variables with the household socioeconomic and demographic variables listed above. Additionally, analyses may also examine whether the characteristics of the PC are meaningful (including, but not limited to, the PC's age and gender). Analyses may also explore other dimensions of heterogeneity, using KLPS-4 (baseline) data, in secondary exploratory tests.

¹⁴ Analyses may also look at the number of biological children reported in the KLPS-4 I Module, Section 4, though not all biological children may live in the same household.

¹⁵ If analyses show limited evidence of heterogeneous effects, the research investigators may focus on reporting results from Equation 1.

To assess statistical significance for heterogeneous effects, analyses will include the False Discovery Rate (FDR) adjusted q-values across the six dimensions of heterogeneity following Anderson (2008), Casey et al. (2012) and the references cited therein.

2.5 Tracking and attrition by group

The research investigators will follow procedures outlined in Baird et al. (2019) for checking for balance and attrition, and for handling problematic levels of differential attrition. For this study, tracking rates will be checked for a) the administration of the intervention and b) conducting follow-up KSSI survey by treatment and control. The research investigators will also check to ensure that characteristics such as original program treatment statuses and demographic variables are balanced across sleep treatment and control (see Baird et al. 2019 for a list of variables that will be included).

2.6 Robustness Checks and Additional Analyses

This pre-analysis plan outlines several robustness checks and secondary analyses, described below:

1. A secondary analysis includes estimating additional sets of equations that restrict the sample to households for which the respondent of the KSSI follow-up phone survey is the same person as the PC. This may result in noisier treatment effects for households where the KSSI respondent is not the PC of the child. The priors of the research investigators is that the PC of the child may have a better estimate of the child's total sleep time, sleep environment, and activities before bed.
2. A robustness check will be included that drops the 1/3 of the control group that is assigned to the storybook intervention in order to check that the storybook intervention is not driving any differences in treatment effects over time.
3. The targeted timeline of the KSSI follow-up phone survey is 6 weeks after the PC-Module, but note that there is some uncertainty of what the exact distribution will look like due to tracking activities. Additional robustness checks will be included to explore whether any differences in tracking affect estimates. This includes first, dropping those surveyed more than 4 months after the PC-Module, and second, checking for balance based on those surveyed "on time" versus those surveyed "late," and then testing for differences in treatment effects by months since the PC-Module.
4. For child-level outcomes (Sleep Time and Sleep Environment, as described in Section 3 and Appendix I), robustness check will be included which assigns survey weights equal to that of the KLPS respondent divided by the number of surveyed children for that respondent (as noted in footnote 11).

Further analyses may be conducted beyond those included in this document; hence, this document is not intended to be comprehensive or to preclude additional or exploratory analysis.

3. Outcomes

Effects are estimated for three families of outcomes. For each family, this pre-analysis plan defines primary, secondary, and exploratory outcomes. In addition to looking at a variety of mean effects indices, analyses will also examine raw outcomes for each family. To account for multiple hypothesis testing, results will include a calculation of False Discovery Rate (FDR) adjusted q-values following Anderson (2008), Casey et al. (2012) and the references therein across the mean effects indices. When looking at outcomes within each family, FDR adjusted q-values are calculated based on the number of outcomes within each family.

Outcomes within Family 1 (Sleep Time) and Family 2 (Sleep Environment) are constructed at the child-level. Outcomes within Family 3 (Sleep Knowledge) are constructed at the PC-level. Table 1 provides a complete listing of the outcomes and details (including survey question numbers) used to construct each outcome.

3.1 Family 1: Sleep Time

The first outcome family looks at total sleep time in order to document whether access to free sleep materials and information about the importance of sleep lead to increases in total time asleep for children. There is one primary outcome for this family -- total time in bed yesterday. This is calculated as the child's bedtime minus their wake time plus nap time. While this measure does not exactly equal time asleep (which would account for the time it took the child to fall asleep and the total amount of time they were awake in the night), the research investigators believe caregiver-reports about the amount of time it took the child to fall asleep and amount of time they were awake in the night may be unreliable.

The secondary outcome includes total time in bed yesterday excluding total nap time. Finally, the exploratory outcomes include indicators for whether the child's bedtime is earlier than typical or whether their wake time is later than typical.

3.2 Family 2: Sleep Environment

The second family of outcomes will examine the effects of the intervention on the child's sleep environment and activities before bed. The main measure is the Sleep Environment Index, a mean effects index which includes the following outcomes: indicator for the child not sharing a room for sleeping; indicator for the child not sleeping in a room with a TV or radio on when they are sleeping; indicator for not sleeping in a room with bright lights on when they are sleeping; indicator for sleeping on a mattress; indicator for using a pillow for sleeping; indicator for sleeping with a stuffed dolly; and indicator for sleeping with a blanket.

The secondary outcome includes a Sleep Environment Index excluding indicators for whether the child uses a pillow for sleeping and whether the child uses a blanket for sleeping in order to eliminate effects that may be driven simply by experimental design (i.e., providing a free pillow and blanket to the treatment group).

In addition to the sleep environment indices, analyses will be included which look at each of the index components separately.

An additional secondary outcome includes an indicator for the child reading 1 hour before bed. Finally, exploratory outcomes include indicators for what the child is doing 1 hour before bed, including: eating; doing chores; watching TV; talking the phone; using a smartphone, tablet or computer; listening to the radio; playing with siblings; playing with toys; doing homework/studying; bathing; and praying.

3.3 Family 3: Sleep Knowledge

The third family of outcomes will examine the effects of the intervention on sleep knowledge for the PC. The main measure is the Sleep Knowledge Index, a mean effects index which includes two sub-indices: a Sleep Time Knowledge Index and a Sleep Benefits Index. The Sleep Time Knowledge Index is a mean effects index which includes an indicator which measures whether the PC is able to correctly answer that experts recommend between 7-9 hours of sleep for adults and an indicator which measures whether the PC is able to correctly answer that experts recommend between 8-13 hours of sleep for children.¹⁶ The Sleep Benefits Index is a mean effects index which includes indicators for whether the PC correctly names the following outcomes as benefits of sleep: mental relaxation; physical relaxation; physical growth; increased alertness; improved behavior; reduced stress; improved mood; improved memory; improved school performance/test scores

Secondary outcomes include a Sleep Time Knowledge and Sleep Benefits Index separately. In addition to the Sleep Benefits Index, analyses will be included which look at each of the index components separately.

¹⁶ While respondents are asked to provide a precise number of hours that sleep experts recommend, all answers within the corresponding range are considered “correct.”

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Table I: Main Domains and Outcomes

Outcome	Index Components	Survey Question(s)		Notes
		KLPS-4 PC-Module	KSSI Survey	
Family 1: Sleep Time				
Primary Outcomes				
Total time in bed yesterday (including naps)		4.1, 4.3, 4.6b	2.1, 2.2, 2.3b	Bed time minus wake time plus nap time
Secondary Outcome				
Total time in bed yesterday (excluding naps)		4.1, 4.3	2.1, 2.2	Bed time minus wake time
Exploratory Outcomes				
Indicator for bedtime earlier than typical		4.1a	2.1a	
Indicator for waketime later than typical		4.4a	2.2a	
Family 2: Sleep Environment				
Primary Outcome				
Sleep environment index	Indicator for child not sharing room for sleeping	8.1.3a	3.2	
	Indicator for child not sleeping in a room with tv or radio	8.1.4	3.3	
	Indicator for not sleeping in a room with bright lights	8.1.5	3.4	
	Indicator for sleeping on mattress	8.1.7	3.5	Coded as one if the child sleeps on a mattress on the bed or a mattress on the floor, or zero otherwise.
	Indicator for using a pillow for sleeping	8.1.8	3.6b	
	Indicator for sleeping with stuffed dolly	8.1.10	3.7b	
	Indicator for sleeping with blanket	8.1.9	3.1.5	

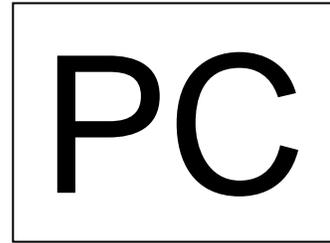
Outcome	Index Components	Survey Question(s)		Notes
		KLPS-4 PC-Module	KSSI Survey	
Secondary Outcomes				
Sleep environment index (excluding pillow and blanket)	Indicator for child not sharing room for sleeping	8.1.3a	3.2	
	Indicator for child not sleeping in a room with tv or radio	8.1.4	3.3	
	Indicator for not sleeping in a room with bright lights	8.1.5	3.4	
	Indicator for sleeping on mattress	8.1.7	3.5	Coded as one if the child sleeps on a mattress on the bed or a mattress on the floor, or zero otherwise
	Indicator for sleeping with stuffed dolly	8.1.10	3.7b	
Indicator for reading 1 hour before bed		8.1.1b	3.1a	
Exploratory Outcomes				
Indicator for eating 1 hour before bed		8.1.1b	3.1a	
Indicator for household chores 1 hour before bed		8.1.1b	3.1a	
Indicator for watching TV 1 hour before bed		8.1.1b	3.1a	
Indicator for talking on the phone 1 hour before bed		8.1.1b	3.1a	
Indicator for using a smartphone, tablet, or computer 1 hour before bed		8.1.1b	3.1a	
Indicator for listening to the radio 1 hour before bed		8.1.1b	3.1a	
Indicator for playing with siblings 1 hour before bed		8.1.1b	3.1a	
Indicator for playing with toys 1 hour before bed		8.1.1b	3.1a	

Outcome	Index Components	Survey Question(s)		Notes
		KLPS-4 PC-Module	KSSI Survey	
Indicator for doing homework / studying 1 hour before bed		8.1.1b	3.1a	
Indicator for bathing 1 hour before bed		8.1.1b	3.1a	
Indicator for praying 1 hour before bed		8.1.1b	3.1a	
Family 3: Sleep Knowledge				
Primary Outcomes				
Sleep knowledge index	Sleep time knowledge index	8.1.14a	3.1.6a	Sub-index consists of: (1) Indicator for answering between 7-9 hours of total recommended sleep time for adults and (2) Indicator for answering 8-13 hours of total recommended sleep time for children. Answers of "don't know" are coded as incorrect.
	Sleep benefits knowledge index	8.1.14b	3.1.6b	Sub-index consists of indicators for: (1) mental relaxation, (2) physical relaxation, (3) physical growth, (4) increased alertness, (5) improved behavior, (6) reduced stress, (7) improved mood, (8) improved memory, (9) improved school performance / test scores.
Secondary Outcomes				
Sleep time knowledge index	Indicator for answering between 7-9 hours of total recommended sleep time for adults	8.1.14a	3.1.6a	Answers of "don't know" are coded as incorrect
	Indicator for answering 8-13 hours of total recommended sleep time for children	8.1.14b	3.1.6b	Answers of "don't know" are coded as incorrect

Outcome	Index Components	Survey Question(s)		Notes
		KLPS-4 PC-Module	KSSI Survey	
Sleep benefits knowledge index	Indicator for mental relaxation	8.1.16b	3.1.7b	
	Indicator for physical relaxation	8.1.16b	3.1.7b	
	Indicator for physical growth	8.1.16b	3.1.7b	
	Indicator for increased alertness	8.1.16b	3.1.7b	
	Indicator for improved behavior	8.1.16b	3.1.7b	
	Indicator for reduced stress	8.1.16b	3.1.7b	
	Indicator for improved mood	8.1.16b	3.1.7b	
	Indicator for improved memory	8.1.16b	3.1.7b	
	Indicator for improved school performance / test scores	8.1.16b	3.1.7b	

Appendix I: PC Module

Log Number: | | | | |



**KLPS-KIDS
PC-MODULE
Wave -2**

VERSION: NOVEMBER 2, 2020 — ENGLISH

CHILD ID									
							--		

This survey should be administered to the PRIMARY CAREGIVER of the child identified above. Note that for a caregiver with multiple children in our sample, a separate PC Module should be filled out for each child.

SECTION 1. Pre-Interview Information and Consent

READ: We would like to consult the child’s health card during the interview in order to record information on birthdate, weight, and/or vaccinations. Could you get that card, or the birth certificate, before we begin?

If PC hesitates to produce health card, read: Please be assured that any information you share with me will be held as confidential as possible. You do not have to answer any question or provide me with the health card if you do not want to.

Note: Child can play during PC.

Fill in this information before the interview from IDENTITY SECTION of TRACKING SHEET:

- 1. KLPS Adult ID: |__| |__| |__| |__| |__| |__| |__|
- 2. KLPS Adult Family Name: _____
- 3. KLPS Adult (a) Name 1 / (b) Name 2: (a) _____ / (b) _____
- 4. KLPS Adult Gender: |__| (1=Male, 2=Female)
- 5. KLPS Adult Baseline School ID / Name: |__| |__| |__| / _____

Fill in this information before the interview from PARTICIPATING CHILD INFO SHEET:

- 6. Child First Name: _____
- 7. Child ID: |__| |__| |__| |__| |__| |__| |__| -- |__| |__|
- 8a. Caregiver Family Name: _____
- 8b. Caregiver Name1 / Name2: _____ / _____

9a. Date of interview: (DD/MM/YYYY) |__| |__| | / |__| |__| | / |__| |__| |__| |__|

9b. Time start interview: (24 hr clock) |__| |__| : |__| |__|

10a. Interviewer ID: |__| |__| |__| |__|

10b. Interviewer name: (first) _____ / (surname) _____

11a. **Do you have access to the child’s health card or birth certificate?** (1=Yes, 2=No) |__|

11b. **If YES, record birthdate from the health card or birth certificate. If NO, ask FR:** Can you tell me the child’s date of birth?

(DD/MM/YYYY) |__| |__| | / |__| |__| | / |__| |__| |__| |__|

If the birth date given is different than that collected in the I-module and included on the tracking sheet, probe to get the most accurate birthdate.

11c. **Are you confident that the birthdate recorded above is correct?**
(1=Very confident, 2=Somewhat confident, 3=No, not confident) |__|

If 2 or 3, continue. Otherwise, skip to question 11e.

11d. Why are you not very confident? (1=Parent does not seem sure, 2=Parents/caregivers disagree about age, 3=Child looks to be a different age, 4=Other(specify)) |__|

11e. **From what source did you record the child’s birth date?** (1=Health Card, 2= Birth certificate, 3=Parent’s or caregiver’s memory, 4=Tracking sheet, 5=Other(specify))

|__| _____

12. **Do not ask the following question. Simply record your response.** Has a separate PC Module already been filled out for this caregiver, with regard to a different child with the same KLPS Parent? (1=Yes, 2=No)

If YES, continue. If NO, skip to question 13.

12a. **List the identification number for that other child's PC Module here. Make sure to record the other child's ID number carefully and correctly.**

--

Skip to Question 6 of Section 2.

13. Is this interview with the KLPS adult respondent specified on the tracking sheet? (1=Yes, 2=No)

If YES, continue. If NO, skip to CONSENT.

Hello, I am [name] from IPA, in [Busia Town / Nairobi]. IPA is an organization that was established by the research team who formerly worked with ICS on health and education projects in Kenya.

We spoke with you recently to invite you to participate in a new research study. For the present study, we are interested in children who were born between April, 2012 and March, 2018. If you have multiple children in this age range, then we have randomly selected which children we would like to participate. We would like to speak to you about [name(s) of child(ren) to be assessed today] and your interactions with him/her (them).

To participate in this study, we will ask you to do three things. First, we would like to briefly interview you. Second, we will ask this child (these children) to participate in a series of child assessment exercises. Most of these exercises will be described as "games" to the child(ren). To put the children at ease, you and/or another caregiver may sit with them during any of the activities, but you are free to stop the assessments at any time. Finally, we will ask you to be around while we take height measurements of the child (these children). We expect the survey will take approximately 45 minutes for each child. To thank you for your participation, we will give you a small token of our appreciation to compensate you for your time in form of Mpesa/airtime amounting to Ksh.150 that will be sent to you within 24 hours. If you have a Ugandan-based line, we will send your phone number to a service provider contracted by IPA to disburse your airtime.

Skip to question 14.

CONSENT

Hello, I am [FO Name] from IPA, in [Busia Town / Nairobi]. IPA is an organization that was established by the research team who formerly worked with ICS on health and education projects in Kenya. I work with a research team from the University of California, Berkeley, in the United States. We are studying the effectiveness of health and training programs administered by ICS and IPA over many years. We are contacting many individuals who were participants in or applicants to these programs. We hope to better understand the long-term effects of these programs on health and employment, and in particular, we are interested in how these effects may impact the biological children of individuals who participated in those programs. For the present study, we are interested in children who were born between April 2012 and March 2018. If you have multiple children in this age range, then we have randomly selected which children we would like to participate. We are speaking with you because you are the guardian or caregiver a child of one of the individuals who participated in or applied to these ICS and IPA programs. That parent, [name of KLPS Adult], has told us that you are the primary caregiver for one or more of their own children who was born between April 2012 and March 2018. That parent has already given us

permission to perform some assessments on their child(ren). We would also like to speak to you about this child (these children), and your interactions with him/her (them).

Let me briefly tell you what your participation will entail.

You are freely providing consent for Innovations for Poverty Action (“IPA”) to collect, process and transfer your sensitive personal data and personal data (“data”). In doing so, IPA commits to comply with the principles of data protection set forth in the Kenya Data Protection Act, 2019. We would like to inform you that you have the right: 1) to be informed on IPA’s use of your data, 2) access your data that IPA holds, 3) to request IPA update, correct, or delete my data, or opt-out at any time.

In this survey, IPA will collect, process, store and may transfer the following data of yours inside or outside Kenya including:

1. Your information; Name, phone number, address, gender.
2. Mental health
3. Child health development
4. Sleep pattern for the child
5. Home environment information
6. Strength and difficulties
7. Sleep environment

IPA may transfer your data inside or outside Kenya including:

- All the data points listed above will be shared with the study researchers from the University of California, Berkeley and the University of California, Berkeley’s Center for Effective Global Action (CEGA). These parties will be responsible for data analysis in a bid to understand the impact of the KLPS’s interventions on health and education.
- Innovations for Poverty Action – United States (IPA-US): IPA-US will access the data points as they will be responsible for ensuring the data is stored in a secure storage and ensuring all data recipients have data security standards similar to those of IPA before the data is transferred.

When IPA collects, stores, processes, and transfers your data, IPA uses Boxcryptor software and limits access to your personal data on a need-to-know basis. When IPA transfers your data to a third-party, IPA ensures the recipient will have similar security standards to IPA.

If at any time you would like to withdraw consent, know how your data is being used, receive a copy of, update, correct, change, or delete your data, you may contact IPA through the contacts provided below. Your data will be retained as long as reasonably necessary for the Project. Afterwards, IPA will either delete your data or anonymize or de-identify (remove personal identifiers from) your data, in a manner to ensure you are no longer identifiable.

Disclosure of your data is voluntary. If you do not wish to provide data, you will not be eligible to participate in this Study/Project.

By providing this consent, you acknowledge that you are at least 18 years of age/or older.

This consent shall not be construed as an offer of employment or imply any rights except as explicitly stated. This consent shall not be construed in any way to provide rights in excess of those prescribed under the Kenya Data Privacy Act, 2019 and subsequent interpretation or regulations.

We expect the survey will take approximately 45 minutes for each child. To thank you for your participation, we will give you a small token of our appreciation to compensate you for your time

in form of Mpesa/airtime amounting to Ksh.150 that will be sent to you within 24 hours. If you have a Ugandan-based line, we will send your phone number to a service provider contracted by IPA to disburse your airtime.

If you have any further questions or concerns about this study, please contact the following individuals:

Eric Ochieng- 0742984643
Ronald Mandela -0721433648
Esther Isokat- 0799477457
Abigael Mwanyiro- 0701805451

14. Will you participate in the interview? (1=Yes-Caregiver agrees to participate; 2=No- Caregiver refuses to participate; 3=No- Caregiver does not refuse but is unable to participate)

If YES, skip to question 16. If NO, continue.

15. **Describe your impressions of the refusal / inability to participate. Do not ask.**

- 1 = Wants to reschedule (**skip to “Rescheduling instructions” below**) – **Choose this option if the caregiver wants to speak to the child’s parent before proceeding, and you are unable to get that parent on the phone at that time.**
- 2 = Refusal for this round only (**skip to question 15a**)
- 3 = Refusal for this round and any future rounds (**skip to question 15b**)
- 4 = Unable to survey – someone else refuses on caregiver’s behalf (**skip to “Closing Interview Statement A”**)
- 6 = Unable to survey – in prison (**skip to “Closing Interview Statement A”**)
- 7 = Unable to survey – mental illness / disability (**skip to “Closing Interview Statement A”**)
- 10 = Unable to survey – other (**skip to question 15c**)

Rescheduling instructions: Please ask the caregiver when they are next available, and then call your team lead (or other senior team member) to confirm this day and time. If you are unable to confirm this day and time, make a tentative appointment with the caregiver. Then, let the caregiver know that you will contact them to confirm when you will return. Record this information and the current time on the tracking sheet now. End the interview.

||| Other: _____
Skip to “Closing Interview Statement C”.

15a. **Record your impressions of why the caregiver refuses to participate during this survey round. If you feel comfortable doing so, you may ask them why:** Why don’t you want to participate? **Choose up to 3 reasons.**

- 1 = Survey is too long
- 2 = Caregiver has caregiving duties
- 3 = Caregiver has to work
- 4 = Caregiver does not want to disclose personal information
- 5 = Caregiver is suspicious of IPA
- 6 = Caregiver hasn’t received assistance from IPA
- 7 = Caregiver just doesn’t want to / no reason given
- 10 = Other (specify)

15b. **Record your impressions of why the caregiver refuses to participate during this round and any future rounds. If you feel comfortable doing so, you may ask the caregiver why:** Why don’t you want to participate?

Choose up to 3 reasons.

- 1 = Survey is too long
- 2 = Caregiver has caregiving duties
- 3 = Caregiver has to work
- 4 = Caregiver does not want to disclose personal information
- 5 = Caregiver is suspicious of IPA
- 6 = Caregiver hasn't received assistance from IPA
- 7 = Caregiver just doesn't want to / no reason given
- 10 = Other (specify)

Skip to "Closing Interview Statement B."

15c. **Record your impressions of why we are unable to survey the caregiver during this round.** _____

(skip to "Closing Interview Statement B")

Closing Interview Statement A: Read: Thank you very much for your time. **End interview here.**
Note on the tracking sheet that we should try to find an alternate caregiver to interview, if possible.

Closing Interview Statement B. Read: Thank you very much for your time. If you change your mind and would like to participate in the interview, please contact us at the IPA office. **End interview here. Note on the tracking sheet that we should try to find an alternate caregiver to interview, if possible.**

Closing Interview Statement C: Read: Thank you very much for your time. **End interview here.**

Read: Now I would like to make certain that we have your current address information correct.

0. Are you currently in boarding school? (1=Yes, 2=No) |
If NO, skip to question 0a. If YES, continue.

Read: Because you are in boarding school, we would like the current address information for the place you stay at boarding school.
Skip to question 0c..

0a. What is your occupation? (1=Guard or house help, 2=Other) |
If 1, continue to question 0b. If 2, skip to "read #1" statement below.

0b. Are you currently working as live-in house help or a live-in guard? (1=Yes, 2=No) |
If YES, skip to "read #2" statement below. If NO, continue to "read #1" statement.

16. **Do not read the following question aloud.** Is there another IPA FO present at this interview, who will be conducting the child assessments? (1=Yes, 2=No) |
If YES, continue. If NO, skip to Section 2.

While I continue to talk to you, my colleague **[FO name]** would like to begin interviewing the child. The interview will consist of a series of games for the child. Most children find these games fun to play. Some games will be a bit hard for the child, and some will be easy for the child. If you feel more comfortable, you are welcome to sit here with the child while we play these games. However, we kindly ask that you do not tell the child what to do, laugh or comment on the child's behavior. We want to learn how the child can play these games on their own, without any help or comment from you. Do you understand? **Answer any questions the caregiver may have about the games.**

17. For now we will continue our conversation here while my colleague introduces these games to the child just over there. Is that okay? (1=Yes, 2=No)

If the caregiver allows this, second FO may begin the child assessments with the child nearby. If the caregiver seems reluctant, probe gently to explain that this speeds up the interview process. If they would prefer to be sitting with the child during the assessments, complete the PC Module first, and then move on to the assessments.

Oj. If that number isn't working or I can't reach you, is there another number that I can call? (1=Yes, 2=No / Do not know a number)

Probe FR for a second phone number. If NO, skip to question Ok. If YES, continue.

Oja. Please give me that number.

i. **If Kenyan phone number**, Number: | 0 | | | | | | | | | | | | |

ii. **If non-Kenyan phone number:**

A. Country of phone number: **Use G1 codes.** Other: _____

B. Number: _____

Ojb. Whose phone is this? **Write name.** _____

Ojc. What is this person's relationship to you? **Use G4 codes.** Other: _____

Ok. Is there a phone number where you can receive money by M-pesa, even if the phone is not yours?

(1=Yes, 2=No)

If "no", probe the FR for one again. If the FR insists that there is no way to send them the money by M-Pesa, skip to the next read statement.

If "yes", continue.

Oka. Please give me that number.

i. **If Kenyan phone number**, Number: | 0 | | | | | | | | | | | | |

ii. **If non-Kenyan phone number:**

A. Country of phone number: **Use G1 codes.** Other: _____

B. Number: _____

Okb. Whose phone is this? **Write name.** _____

Okc. What is this person's relationship to you? **Use G4 codes.** Other: _____

Read: Before I collect some information from you about the child(ren), I would like to ask you just a few questions about yourself.

Oa. What is your relationship with the child? **Use G4 codes.**

Ob. Next I would like to learn whether the child lives in your household. By your household, I mean the place where you usually sleep, not necessarily your ancestral lands or family home. Please consider the child to be part of your household if you "eat from the same pot" as the child and if the child spends 4 nights or more in an average week sleeping in your home.

Does the child "eat from the same pot" and spend 4 nights or more in an average week sleeping in your home? (1=Yes, 2=No, 99=DK)

If this interview is with the KLPS adult respondent listed on the tracking sheet, OR if the answer to Section 1, Q12 is YES, SKIP TO QUESTION 6. Otherwise, continue.

Oc. What is your relationship with the parent of the child, [name of KLPS Adult]?

Use G4 codes.

Od. Next I would like to learn whether the parent of the child, [name of KLPS Adult] lives in your household. By your household, I mean the place where you usually sleep, not necessarily your ancestral lands or family home. Please consider the parent to be part of your household if you "eat from the same pot" as the parent and if the parent spends 4 nights or more in an average week sleeping in your home.

Does the parent of the child, [name of KLPS Adult] "eat from the same pot" and spend 4 nights or more in an average week sleeping in your home? (1=Yes, 2=No, 99=DK) |____|

1. **Do not ask the following question.** What is the caregiver's gender? (1=Male, 2=Female) |____|
2. What is your current age, in years? **Probe if the caregiver says they don't know. Try to get them to estimate year of birth, and calculate age from that.** (99=DK) |____|
3. What is the highest level of education you received? **Use G6 codes.** |____|
4. What is your current occupation? **Use G9 codes.** |____|
5. What is your tribe (or mother tongue)? **Use G10 codes. Females should NOT give the tribe of their husband. If caregiver is LUHYA, press for subtribe.** |____| _____

Answer question 6 even if FR is KLPS FR.

6. What language do you speak most often with the child? **Use G13 codes.** |____| _____

6a. Are there other languages you speak often with the child? (1=Yes, 2=No, 99=DK) |____|

If YES, continue. If NO or DK, skip to question 7.

6b. Which other languages? **List up to three. Use G13 codes.** |____||____||____|
Other, Specify _____

If this interview is with the KLPS parent respondent listed on the tracking sheet, OR if the answer to Section 1, Q12 is YES, SKIP TO SECTION 3. Otherwise, continue.

7. CESD

Read: I will read out a list of some of the ways you may feel or behave. Please indicate how often you have felt this way during the past week, using the following scale.

- 1= Rarely or none of the time
- 2= Some or a little of the time
- 3= Occasionally or a moderate amount of time
- 4= All of the time

Show the respondent scale D. Demonstrate that they should select their response using the scale. Note: For the rest of the questions in this section, read the questions exactly as written. You may repeat any questions as many times as you'd like, but do not rephrase any question or add additional comments or explanations. If the FR has trouble understanding the statement, please re-read but do not try to explain the questions in a different manner.

- 7a. In the past week, I was bothered by things that usually don't bother me |____|
- 7b. In the past week, I had a problem in concentration on what I was doing |____|
- 7c. In the past week, I felt depressed and troubled in my mind |____|
- 7d. In the past week, I felt that everything that I did took up all my energy |____|
- 7e. In the past week, I felt hopeful about the future |____|

- 7f. In the past week, I felt afraid
- 7g. In the past week, I had difficulty in sleeping peacefully
- 7h. In the past week, I was happy
- 7i. In the past week, I felt lonely
- 7j. In the past week, I lacked the motivation to do anything

SECTION 2.1 Religious Denomination

0. **Do not ask the following question. Simply record your response.** Has a separate PC Module already been filled out for this caregiver, with regard to a different child with the same KLPS Parent? Note that this is the same as Q12 in section 1 (1=Yes, 2=No)
If YES, Skip to Section 3.

Read: Now I'd like to ask you some questions about your religion and that of the parents for [KLPS adult Focus Respondent].

DO NOT READ: Religious denomination of the Parents of the Focus respondents

1. **DO NOT READ ALOUD: Is this PC-Module with the [KLPS adult Focus Respondent]?**
 1=YES, 2=NO
If No, skip to the read statement before Question 4 otherwise continue
2. Is your MOTHER alive? 1=YES, 2=NO
 2a. What year was the mother to [KLPS adult FR Name] born? (9999=DK)
 2b. Does the mother to [KLPS adult FR Name] live with you in the same compound/place?
 (1=Yes, 2=No, 99=DK)
If YES, Skip to Question 7, otherwise
 2c. Where does the mother to [KLPS adult FR Name] currently live?
 2ci. Country? **Use G1 codes.** Other: _____
 2cii. County? **Refer to "1992 district" if FR does not know county (1992 district and county are equivalent). For FRs living in Uganda, this is "district" rather than "county". Use G2a codes.** Other: _____
If 77=FR DK COUNTY, continue. OTHERWISE, skip to question 6eiv.
 2ciii. 2010 District? **If FR doesn't know 2010 district, but does know an earlier district name, write old district name and make a remark in FO Comments. Use G2b codes.** Other: _____
 2civ. Town / city? **Use G3a codes. Code 20=Lives in a rural area.** Other: _____

3. Is your FATHER alive? 1=YES, 2=NO
 3a. What year was the father to [KLPS adult FR Name] born? (9999=DK)
 3b. Does the father to [KLPS adult FR Name] live with you in the same compound/place?
 (1=Yes, 2=No, 99=DK)
If YES, Skip to Question 2, otherwise
 3c. Where does the father to [KLPS adult FR Name] currently live?
 3ci. Country? **Use G1 codes.** Other: _____
 3cii. County? **Refer to "1992 district" if FR does not know county (1992 district and county are equivalent). For FRs living in Uganda, this is "district" rather than "county". Use G2a codes.** Other: _____

If 77=FR DK COUNTY, continue. OTHERWISE, skip to question 1eiv.

8ciii. 2010 District? **If FR doesn't know 2010 district, but does know an earlier district name, write old district name and make a remark in FO Comments. Use G2b codes.** Other: _____

8civ. Town / city? **Use G3a codes. Code 20=Lives in a rural area.** Other: _____

Read: Think about the **[KLPS adult Focus respondent (FR)]**.

4. Is MOTHER of the focus respondent alive? 1=YES, 2=NO
If YES, 4a. what is the religion / denomination of MOTHER of the focus respondent? Use G11 Codes
If OTHER, describe: _____

5. Is FATHER of the focus respondent alive? 1=YES, 2=NO
If YES, 5a. what is the religion / denomination of FATHER of the focus respondent? Use G11 Codes
If OTHER, describe: _____

DO NOT READ: Religious denomination of the Caregiver

6. **DO NOT READ ALOUD: Is survey with the [KLPS adult Focus respondent (FR)] or his/her spouse?** 1=YES, 2=NO
If Yes, skip to question 8 otherwise continue

7. What is your religion / denomination? **Use G11 Codes**
If OTHER, describe: _____

SECTION 3. Child Health and Development

Read: Thank you. Now I would like to ask you some questions about the health of **[child]**. You may not know the answers to some of these questions, and that is fine. Please try to answer to the best of your knowledge.

1. ***Is the caregiver being interviewed here the child's biological parent? If you are unsure, you may ask.*** Are you the biological parent of the child? (1=Yes, 2=No)
2. ***If you can see the health card, record the following information without asking. Otherwise, ask:*** What was the weight of **[child]** at birth? (9.9 = Weight not measured at birth, 99.0 = Weight measured but caregiver doesn't know it, or caregiver doesn't know if weight was taken at birth)

|___|.|___| kg

- 2a. ***Was information on birth weight recorded from the health card?*** (1=Yes, 2=No)

Note: *If you can see the health card, record responses to questions 3-3f using the health card. If no health card is available or if a vaccine is not indicated, ask the respondent.*

3. Has **[child]** ever received any vaccinations to prevent him/her from getting diseases? (1=Yes, 2=No, 99=DK)

If YES, continue. Otherwise, skip to question 4.

- 3a. Has **[child]** received a BCG vaccination against tuberculosis, that is an injection in the left arm that usually causes a scar? (1=Yes, on health card, 2=No, 3=Don't know what the vaccine is, 4=Yes, not on health card but PC confirms, 99=Don't know whether child has received vaccine)
- 3b. Has **[child]** received a Polio vaccine, that is drops in the mouth? (1=Yes, on health card, 2=No, 3=Don't know what the vaccine is, 4=Yes, not on health card but PC confirms, 99=Don't know whether child has received vaccine)
- 3c. Has **[child]** received a DPT vaccination, that is an injection in the thigh, sometimes at the same time as the polio drops? (1=Yes, on health card, 2=No, 3=Don't know what the vaccine is, 4=Yes, not on health card but PC confirms, 99=Don't know whether child has received vaccine)
- 3d. Has **[child]** received a measles (or MMR or MR) vaccination, that is an injection in the arm at the age of 9 months or older, to prevent him/her from getting the measles? (1=Yes, on health card, 2=No, 3=Don't know what the vaccine is, 4=Yes, not on health card but PC confirms, 99=Don't know whether child has received vaccine)
- 3e. Has **[child]** received a yellow fever vaccination, that is an injection in the arm at the age of 9 months or older, to prevent yellow fever? (1=Yes, on health card, 2=No, 3=Don't know what the vaccine is, 4=Yes, not on health card but PC confirms, 99=Don't know whether child has received vaccine)
- 3f. Has **[child]** received any other vaccination?
(1= Yes (specify), 2= No, 99=DK) _____

4. Last night, did **[child]** sleep under a bed net? (1= Yes, 2= No, 99=DK)

5. Have any drugs for worm infections or schistosomiasis been given to **[child]** in the last 12 months? (1= Yes, 2= No, 99=DK)

6. During the past seven days, has **[child]** experienced any of the following: (1=Yes, 2=No, 99=DK)
- a. Fever / malaria?
 - b. Vomiting?
 - c. Cough?
 - d. Diarrhea?
 - e. Any other infection? **If Yes, Specify:** _____

7. Overall, would you say **[child]**'s health is very good, good, fair, poor, or very poor?
(5=Very good; 4=good; 3=fair; 2=poor; 1=very poor; 99=DK)

8. Has **[child]** experienced any major health problems since or at birth? By this I mean serious illnesses or injuries, whether they required hospitalization or not, such as cerebral malaria, pneumonia, tuberculosis, asthma, malnutrition, anemia or a broken arm or leg, or any other diagnosis of chronic or acute problems? (1=Yes, 2=No, 99=DK)

8a. **If yes:** Describe. _____

9. How old (in months) was **[child]** when he/she began walking? months (99=DK)

If DK, continue. Else skip to question 10.

9a. Was the child older or younger than 2 years old when he / she began walking?
(1=Older, 2=Younger, 99=DK)

10. Compared with other children, does **[child]** have difficulty seeing, either in the daytime or at night? (1=Yes, 2=No, 99=DK)

11. Does **[child]** appear to have difficulty hearing? (1=Yes, 2=No, 99=DK)

12. When you tell **[child]** to do something, does he/she seem to understand what you are saying? (1=Yes, 2=No, 99=DK)

13. Does **[child]** have difficulty in walking or moving his/her arms or does he/she have weakness and/or stiffness in the arms or legs? (1=Yes, 2=No, 99=DK)

14. Does **[child]** sometimes have seizures, become rigid, or lose consciousness? (1=Yes, 2=No, 99=DK)

15. Does **[child]** learn to do things like other children his/her age? (1=Yes, 2=No, 99=DK)

16. Does **[child]** speak at all (can he/she make himself/herself understood in words; can he/she say any recognizable words)? (1=Yes, 2=No, 99=DK)

17. Is **[child]**'s speech in any way different from normal? (1=Yes, 2=No, 99=DK)

18. Compared with other children of his/her age, does **[child]** appear in any way cognitively delayed, or delayed in language? **Note: If parent's do not understand, probe if child was speaking or saying words by age 2. If not speaking, please select YES.** (1=Yes, 2=No, 99=DK)

19. During the last **14 days**, did you, or any adult member of your household ever beat any of the children living in this household? (1=Never, 2=Sometimes, 3=Often, 88=Refuse)

SECTION 5. Home Environment Information

Read: Thank you. Now I would like to ask you some questions about the daily life of **[child]**.

1. Now I'd like to ask about things that are in the home where the child lives.

1a. Is there a music player or radio that **[child]** can listen to at home?
(1=Yes, 2=No, 99=DK)

1b. Is there something **[child]** uses to make music at home such as a drum, horn, kayamba, or guitar? (1=Yes, 2=No, 99=DK)

1c. About how many books are there in **[child]**'s home (including the Bible or other religious book, dictionary, textbooks, children's books and picture books)? (99=DK)

1dv. Did you purchase any children's storybooks since [INSERT MONTH], when **[KLPS adult Focus respondent (FR)]** was interviewed by Innovations for Poverty Action (IPA)? Please DO NOT include any gifts. Note: DO NOT include any free storybooks received as part of the KLPS storybook intervention. (1=Yes, 2=No, 3 = DK)

1di. About how many storybooks or picture books are in **[child]**'s home? Please include any storybooks or picture books you received as a gift. Please only include children's storybook and/or picture books. DO NOT include any textbooks or magazines. **Note: Here you SHOULD include any books that were received for free from IPA as part of the KLPS storybook intervention** (99=DK)

1dii. What language(s) are these storybooks in? **Please select all that apply**) (1=English, 2=Kiswahili, 3=Luo, 4=Luhya, 5=Other (specify), 9=DK) Specify: _____

1diii. About how many children's textbooks are in **[child]**'s home? (99=DK)

1div. What language(s) are these textbooks in? **Please select all that apply**) (1=English, 2=Kiswahili, 3=Luo, 4=Luhya, 5=Other (specify), 9=DK) Specify: _____

Number of children's books and number of textbooks should not exceed total number of books (question 1c).

1e. Is there any other reading material in **[child]**'s home, such as newspapers, magazines, pamphlets, or brochures?
(1=Yes, 2=No, 99=DK)

1f. Are there any pictures, posters, calendars, or other type of art work on the walls at **[child]**'s home?
(1=Yes, 2=No, 99=DK)

1g. Does **[child]** have paper and pencil, pen or art supplies (such as crayons or paints) to write or draw with at home?
(1=Yes, 2=No, 99=DK)

1h. Does **[child]** make his/her own toys to play with, such as a football or dolls?
(1=Yes, 2=No, 99=DK)

1i. Does **[child]** play any games of strategy such as ludo game, draught (checkers), chess, or strategy video/phone games?
(1=Yes, 2=No, 99=DK)

1j. In the last year, how often has a family member taken **[child]** to travel to another region or city?

If Busia-based FR Read: By another region, we mean a trip of 30km or more. 30km is about the distance from Busia Town to Segla or Malaba.

If Nairobi-based FR Read: By another region, we mean a trip of 30km or more. 30km is about the distance from Nairobi Town to Kitengela or Ruiru

Enter number of times in the last year. (99=DK) times

2. I am interested in learning about the things that **[child]** plays with when he/she is at home. Does he/she play with:

2a. Homemade toys (such as dolls, cars, or other toys made at home)? (1=Yes, 2=No, 99=DK)

2b. Toys from a shop or manufactured toys? (1=Yes, 2=No, 99=DK)

Note: In the following questions, please round to the nearest hour.

- 3.
- a. How many hours did **[child]** spend at school, pre-school or daycare during the last day **[child]** attended school? (99=DK)
 - b. How long does it take **[child]** to get to and from school? (99=DK)

From 6am yesterday morning to 6am this morning...

- c. How many hours did **[child]** spend doing structured activity outside of school or daycare, for example, a dancing/music/drama club, an environmental club, a scouts club, not including religious activities or sports? (99=DK)
- d. How many hours did **[child]** spend doing prayers, bible study, religious study or other religious activities? (99=DK)
- e. How many hours did **[child]** spend playing formal sports with a team? (99=DK)
- f. How many hours did **[child]** spend playing with friends (such as rukaruka, playing football with friends, or other games), not including formal sports? (99=DK)
- g. How many hours did **[child]** spend doing chores, such as fetching water, washing, cooking, caring for other siblings, etc (not including agricultural activities or taking care of chicken, livestock or other animals)? (99=DK)
- h. How many hours did **[child]** spend on the family business, family farm, or agricultural activities including taking care of chicken, livestock, or other animals? (99=DK)
- i. How many hours did **[child]** spend reading, doing homework, or studying for school? (99=DK)
- j. How many hours did **[child]** spend watching television, listening to the radio, playing video games, or playing with a phone, tablet, or computer? (99=DK)
- k. Is there another activity, beside sleep, that the child did for more than 2 hours? **If yes**, what is the activity, and how many hours did **[child]** do this activity?

(99 = Don't know) Other, specify: _____

3l. In the last 7 days, how many days did you or another adult or teenager (age 13 or older) read with **[child]** at home? Here we mean any form of reading, including reading from a storybook, textbook, or magazine, as long as you or another adult or teenager were reading to the child. DO NOT include any reading that occurred at school.(Enter number of days from 0 to 7; 99= DK)

days

If 1 or more days, continue to 3li. Otherwise skip to 3m.

3li. Now think about yesterday. How many minutes did you or another adult or teenager (age 13 or older) read with **[child]** yesterday? Here we mean any form of reading, including reading from a storybook, textbook, or magazine, as long as you or another adult or teenager were reading to the child. DO NOT include any reading that occurred at school.

(Enter number of minutes, 99 = DK) minutes

3m. In the last 7 days, how many days did **[child]** read by themselves (or with other children) at home. Here we mean any form of reading, including reading from a storybook, textbook, or magazine. DO NOT include any reading that occurred at school.

(Enter number of days from 0 to 7; 99 = DK) days

If 1 or more days, continue to 3mi. Otherwise skip to 4.

3mi. Now think about yesterday. How many minutes did **[child]** read by themselves or with other children yesterday? Do not include any time spent reading while in school.

(Enter number of minutes, 99 = DK) minutes

4a. In the past 7 days, did you or any other person over the age of 15 in the child's household: Read books to or look at books with **[child]**? (1=Yes, 2=No, 99=DK). **relation:** /

If yes, ask who performed this activity with child. (1=mother; 2=father, 3=mother and father, 4=PC module respondent (if not a parent), 5=siblings, 6=other adult relative, 7=other adult non-relative)

4b. Tell stories to **[child]**? **relation:** /

4c. Sing songs or play musical instrument with **[child]**? **relation:** /

4d. Play with **[child]**? **relation:** /

4e. Construct objects or art from paper, wire, mud, sticks, etc with **[child]**? **relation:** /

4f. Name, count, or draw things for or with **[child]** for instance, letters, numbers, shapes, colors, plants, animals, etc? **relation:** /

4g. Help **[child]** with homework? (88=Not in school) **relation:** /

4h. Talk about what **[child]** is learning in school? (88=Not in school) **relation:** /

4i. Teach vocabulary words in Swahili or English? **relation:** /

4j. Teach vocabulary words in local language? **relation:** /

4k. Play sports or games or other physical activity, such as football, rukaruka, swimming, etc? **relation:** //

4l. Take **[child]** on a fun outing, such as a football match, other sports event, religious services or event, hotel, restaurant, or to a local event? **relation:** /

5. Read: Adults use certain ways to teach children the right behavior or to address a behavior problem. I will read various methods that are used and I want you to tell me if you or anyone else in the child's household has used this method with **[child]** in the past month.

5a. Took away privileges, forbade something **[child]** liked or did not allow him/her to leave the house/compound. (1=Yes, 2=No, 99=DK)

5b. Explained why **[child]**'s behavior was wrong. (1=Yes, 2=No, 99=DK)

5c. Shouted, yelled at or screamed at him/her. (1=Yes, 2=No, 99=DK)

5d. Gave him/her something else to do. (1=Yes, 2=No, 99=DK)

5e. Called him/her dumb, lazy, or another name like that. (1=Yes, 2=No, 99=DK)

5f. Physically punish, for example caning, slapping etc. (1=Yes, 2=No, 99=DK)

6. Is **[child]** currently enrolled in school, including ECD, pre-school, primary school, or another school? (1=Yes, 2=No, 99=DK)

If YES, continue to 6a. If NO or DK, skip to question 8.

7a. In which class / grade is **[child]** currently enrolled? (99=DK) _____

7b. Is the school that **[child]** is enrolled in public or private? (1=Public, 2=Private, 99=DK) _____

7c. Is the school that **[child]** is enrolled in a boarding school or day school?
(1=Day school, 2=Boarding, 99=DK) _____

7d. Did **[child]** attend school last week? *If it is currently a holiday from school, ask about the last week before the holiday started.* (1=Yes, 2=No, 99=DK) _____

7di. Of the last five days school was in session, how many days did **[child]** attend? _____

7ei. How much was your household asked to pay for school fees for **[child]** in the last month? *If paid on a term or annual basis, calculate monthly amount asked to pay.*

(KSH) _____

7eii. How much did your household actually pay in school fees for **[child]** in the last month?

(KSH) _____

Skip to Question 9.

8. Why is **[child]** not enrolled in any type of ECD or schooling program?

1=Child is too young

2=Child would not do well / is not smart

3=There is not enough money to pay for it / those programs are too expensive

4=Distance/too far away

5=Program is not available

6=Child refuses/doesn't want to

7= Child helps with work around the house/ takes care of other children

8=Dropped out

9 =Schools are closed due to covid-19

77=Other (specify)

9. Is **[child]** currently enrolled in a daycare? (1=Yes, 2=No, 99=DK) _____

If NO, skip to Question 10. If YES, continue.

9a. How much did your household pay for this daycare for **[child]** in the last month? (KSH)

_____ (99=DK)

10. Was **[selected KLPS child]** enrolled in school the last time we spoke to child's guardian on [INSERT DATE OF I-MODULE], including ECD, pre-school, primary school, or another school?

(1=Yes, 2=No, 99=DK) _____

If YES, continue to 10a. If NO or DK, skip to question 11

10a. In which class / grade was **[Selected Storybook Child Name]** enrolled? (99=DK) _____

10b. Was the school that **[Selected Storybook Child Name]** was enrolled in public or private?

(1=Public, 2=Private, 99=DK) _____

11. Does **[selected KLPS child]** ever attend religious services? (1=Yes, 2=No) _____

12. What is the religion / denomination of this **[selected KLPS child]**? *Use G11 Codes* _____

If OTHER, describe: _____

READ: Now we're going to ask you a few more questions about reading with **[Selected child]**.

		1=Strongly Disagree	2=Disagree	3=Agree	4=Strongly Agree	88=Refuse to answer	99=DK
13a.	I can choose appropriate storybooks for my child.						
13b.	I can provide active involvement for my child with storybook reading.						
13c.	I can ask appropriate recall questions after I finish reading a storybook.						
13d.	I can encourage my child to talk about a book while reading						
13e.	I can help my child answer, "What?", "Why?", and "How?" questions about a story when reading						
13f.	I can help my child to learn new words through storybook reading						

READ: Now we are ready to start some questions about your [CHILD] reading. You can think about your[CHILD]'s reading, or reading by other people (like your parents or teacher), that you just listen to. Listen to each sentence and tell me whether it is a lot like your [CHILD], a little like your [CHILD], or not like your [CHILD]. There are no right or wrong answers. We only want to know how you feel about your [CHILD] reading.

14a. [Child] is a good listener when someone else is reading a story. |___|

(1= a lot like me, 2 = a little like me, 3= not like me)

14b. [Child] has favorite stories from books that he/she like to read about or listen to. |___|

(1= a lot like me, 2 = a little like me, 3= not like me)

14c. [Child] likes to tell others about what he/she is reading/ someone has read to him/her.

|___|

(1= a lot like me, 2 = a little like me, 3= not like me)

If Storybook Treatment Group, Read 13a, Otherwise continue to 13b:

13ai. Do you remember you or anyone in your household receiving three storybooks from IPA in [INSERT MONTH]? (1 = Yes, 2=No, 3 = DK) |___|

If yes, continue to 13aii. Otherwise skip to question 13aiii.

13aii. Do you remember the titles of your storybook(s) from IPA? If yes, kindly tell us. **Note: Do Not read answers out loud, but select all that apply. If FR gives approximate title, please mark as correct):**

1=Hyena learns a lesson

2=Why Chameleon Eats Insects

3=Thank you Oba

4=Super Sara and the School Trip

5=Sungura na Mbweha

6=Kisa cha Mebo

7=Ndege wa Nyumbani

8=Usalama wa Sudi na Shada

13a.iii. Do you remember you or someone else in your household receiving an SMS message from IPA reminding you to read with your child? (1 = Yes, 2 = No)

13bi. How can you make reading with your children interactive?

Did the respondent give an answer including at least one of the following: "ask your children questions about the story", "connect the story to your children's experiences", "encourage them to talk about the story", "read the story together", and/or "let your children sound out the words"? Note: the FR does not need to use the exact language above as long as they are describing one of these concepts. (1 = Yes, 2 = No, 9 = respondent answered DK)

13ci. When reading with your children, what is the minimum amount of time in minutes recommended to spend reading? **Enter number of minutes that respondent states. If they answer in a unit other than minutes, probe them to get minutes. (99=DK)**

READ: Now we're going to ask you a few questions about **[Selected child]'s** Schooling

14. If child ever been enrolled in school read: Is/was your child an average student, better than average, or below average? **If child has never been in school read:** Is your child average, better than average, or below average in terms of their learning and development? (1=Below Average, 2=Average, 3=Above Average, 99=DK)

15. Now please think about other children of the same age in neighborhoods similar to **[neighborhood]** in all of **[county]**. How does **[child name]'s** ability in Math/Reading/Overall compare to other children of the same age in similar neighborhoods in **[county]**?

		1=Much worse	2=A little worse	3=About the same	4=A little better	5=Much better	99=DK
i.	Math						
ii.	Reading						
iii.	Overall						

16. Now think about other children of the same age in all of **[neighborhood]**. How does **[child name]'s** academic ability in Math/Language/Overall compare to other children of the same age in **[neighborhood]**?

		1=Much worse	2=A little worse	3=About the same	4=A little better	5=Much better	99=DK
i.	Math						
ii.	Reading						
iii.	Overall						

17. Please think about other children of the same age in neighborhoods similar to **[neighborhood]** in all of **[county]** in households with a similar financial situation as your household. How does **[child name]'s** ability in Math/Reading/Overall compare to other children of the same age in households with a similar financial situation in similar neighborhoods in **[county]**?

		1=Much worse	2=A little worse	3=About the same	4=A little better	5=Much better	99=DK
i.	Math						

ii.	Reading						
iii.	Overall						

18. Skip if not in school: Compared to other children in your child’s class, how well do you think he/she is doing in school in math, reading, and overall? Do you think he/she is doing:

		1=Much worse	2=A little worse	3=About the same	4=A little better	5=Much better	99=DK
i.	Math						
ii.	Reading						
iii.	Overall						

19. When it comes time for your child to take the KCPE/PLE, he/she will receive a total score across all subjects. Please take a moment to think about how your child will perform when he/she takes the exam in the future based on what you know about his/her ability. Now think about how other children of the same age in neighborhoods similar to **[neighborhood]** in all of **[county]** will perform. How do you think your child will score compared to other children of the same age in similar neighborhoods in **[county]**?

(1: Much worse 2: A little worse 3: About the same 4: A little better 5: Much better, 99:DK) |____|

20. IF KENYA FR READ: Out of a minimum of 0 and a maximum of 500, what score do you think **[Selected Child]** will most likely earn based on his/her ability? Please make your best guess.

Most likely KCPE Score: |____|

IF UGANDA FR READ: Out of a minimum of 0 and a maximum of 34 points, what score do you think **[Selected Child]** will most likely earn in the PLE based on his/her ability? Please make your best guess.

MOST LIKELY PLE SCORE:

21. Please indicate your level of agreement with the following:

		1= Strongly agree	2=Agree	3= Disagree	4= Strongly Disagree	Do Not Read 5=Neither Agree nor Disagree	99=DK
i.	I feel confident that I understand my child’s ability.						
ii.	I feel confident that I know how my child’s ability compares to other children of the same age in [county] .						
iii.	I receive information about my child’s general abilities or how my child does in school from teachers, school representatives, or other adults in my community.						
iv.	My choices, actions, and effort as a parent/caregiver will determine how my child will do in school and in life.						

For the following pair of statements, tell me which statement is closest to your view. Please choose Statement A or Statement B.

<p>24. A. My child's ability and effort will determine how well he/she will do in school & in life.</p> <p>B. External factors such as the quality of my child's school will determine how well he/she will do in school and in life.</p>	<p>Probe: Which statement is closest to your view?</p>	<p> ____ </p>
<p>25. A. A child of average ability from a relatively poor family in [county] will do well in school and in life.</p> <p>B. A child of average ability from a relatively rich family in [county] will do well in school and in life.</p>	<p>Read if FR asks for meaning of doing well in school and in life: By doing well in school, I mean learning the material in school, passing exams, and so on. By doing well in life, I mean getting a good job, being able to take care of his/herself or his/her family, being satisfied with his/her own life, and so on.</p>	<p> ____ </p>
<p>26. A. A child of above average ability from a relatively poor family in [county] will do well in school and in life.</p> <p>B. A child of above average ability from a relatively rich family in [county] will do well in school and in life.</p>	<p>1=Agree very strongly with A 2=Agree with A 3=Agree with B 4=Agree very strongly with B,</p>	<p> ____ </p>
<p>27. A. A child of above average ability from a relatively poor family in [county] will do well in school and in life.</p> <p>B. A child of average ability from a relatively rich family in [county] will do well in school and in life.</p>	<p>Do not read: 5: Agree with neither, 99=Don't know)</p>	<p> ____ </p>

SECTION 6. Strengths and Difficulties Questionnaire

0. **Do not ask the following question.** Indicate the age of child in years, from **Section 1**. _____ years

Read: Now I would like to read some different descriptions of child behavior. Please consider [child]'s behavior over the last six months, and let me know whether each description that I read is not true, somewhat true, or certainly true for this child. Please answer as best as you can, even if you are not absolutely certain.

For the following table, use the response codes. If PC says "True", repeat choices 0-2.

- | | |
|--------------------------|--------------------------|
| 0= Not True | 8= Not applicable |
| 1= Somewhat True | 9= Don't know |
| 2= Certainly True | |

1. Considerate of other people's feelings	_____
2. Restless, overactive, cannot stay still for long	_____
3. Often complains of headaches, stomach-aches or sickness	_____
4. Shares readily with other children, for example toys, treats, pencils	_____
5. Often loses temper	_____
6. Rather solitary, prefers to play alone	_____
7. Generally well behaved, usually does what adults request	_____
8. Many worries or often seems worried	_____
9. Helpful if someone is hurt, upset or feeling ill	_____
10. Constantly fidgeting or squirming	_____
11. Has at least one good friend	_____
12. Often fights with other children or bullies them	_____
13. Often unhappy, depressed or tearful	_____
14. Generally liked by other children	_____
15. Easily distracted, concentration wanders	_____
16. Nervous or clingy in new situations, easily loses confidence	_____
17. Kind to younger children	_____
If child is age 3 or younger, read: Often argumentative with adults	
18. If child is age 4 or older, read: Often lies or cheats	_____
19. Picked on or bullied by other children	_____
20. Often offers to help others (parents, teachers, other children)	_____
If child is age 3 or younger, read: Can stop and think things out before acting	
21. If child is age 4 or older, read: Thinks things out before acting	_____
If child is age 3 or younger, read: Can be spiteful to others	
22. If child is age 4 or older, read: Steals from home, school or elsewhere	_____
23. Gets along better with adults than with other children	_____
24. Many fears, easily scared	_____
25. Good attention span, sees work through to the end	_____

26. Do you have any other comments or concerns regarding [child]'s behavior? (1=Yes, 2=No) _____

26a. **If yes:** What are they? _____

SECTION 8.1 Sleep Home Environment

READ: Thank you. Now I'd like to ask you about the routines of you and your child and your home environment.

1a What activities did you do last night one hour before going to bed bed?

Do not read possible responses, simply mark all that apply. Write any additional responses in the "other" blank.

- | | |
|--|---|
| <input type="checkbox"/> 1 = Eating | <input type="checkbox"/> 8 = Preparing children for bed |
| <input type="checkbox"/> 2 = Household chores | <input type="checkbox"/> 9 = Returning from job |
| <input type="checkbox"/> 3 = Watching TV | <input type="checkbox"/> 10 = Bathing |
| <input type="checkbox"/> 4 = Talking on the phone | <input type="checkbox"/> 11 = Praying |
| <input type="checkbox"/> 5 = Using smartphone, tablet, or computer | <input type="checkbox"/> 12 = Reading |
| <input type="checkbox"/> 6 = Listening to the radio | <input type="checkbox"/> 13 = Other (specify) _____ |
| <input type="checkbox"/> 7 = Playing with children | <input type="checkbox"/> 99 = Don't know |

1b. What activities did [CHILD NAME] do last night one hour before going to bed bed?

Do not read possible responses, simply mark all that apply. Write any additional responses in the "other" blank.

- | | |
|--|---|
| <input type="checkbox"/> 1 = Eating | <input type="checkbox"/> 8 = Playing with toys |
| <input type="checkbox"/> 2 = Household chores | <input type="checkbox"/> 9 = Homework / studying |
| <input type="checkbox"/> 3 = Watching TV | <input type="checkbox"/> 10 = Bathing |
| <input type="checkbox"/> 4 = Talking on the phone | <input type="checkbox"/> 11 = Praying |
| <input type="checkbox"/> 5 = Using smartphone, tablet, or computer | <input type="checkbox"/> 12 = Reading |
| <input type="checkbox"/> 6 = Listening to the radio | <input type="checkbox"/> 13 = Other (specify) _____ |
| <input type="checkbox"/> 7 = Playing with siblings | <input type="checkbox"/> 99 = Don't know |

2a. Do you have a TV in your house? (1=Yes, 2=No, 99=DK)

2b. Do you have a radio in your house? (1=Yes, 2=No, 99=DK)

2c. Do you have a smartphone, computer, or tablet in your house? (1=Yes, 2=No, 99=DK)

2d. Do you have electricity in your house? (1=Yes, 2=No, 99=DK)

2e. Do you have solar energy in your house? (1=Yes, 2=No, 99=DK)

3a. Does [CHILD NAME] share a room for sleeping? (1=Yes, 2=No, 99=DK)

3b. How many people in the following age categories does **[child name]** share a room with when sleeping?

4. Does [CHILD NAME] sleep in a room where the radio or TV is on when they are sleeping? (1=Yes, 2=No, 99=DK)

5. Are the lights typically on in the room when [CHILD NAME] is going to sleep? (1=Yes, 2=No, 99=DK)

6. Does [CHILD NAME] share a bed for sleeping? (1=Yes, 2=No, 99=DK)

7. What does [CHILD NAME] typically sleep on? (1=Mattress on a bed, 2=Mattress on the floor, 3=Mat on the floor, 4=Other (specify), 99=Don't know) Other: _____

8. Does [CHILD NAME] have a pillow that they use when sleeping? (1=Yes, 2=No, 99=DK)

9. Does [CHILD NAME] have a blanket they use when sleeping? (1=Yes, 2=No, 99=DK)

10. Does [CHILD NAME] have a stuffed dolly that they use when sleeping?

(1=Yes, 2=No, 99=DK)

11. Does [CHILD NAME] use a mosquito net when sleeping? (1=Yes, 2=No, 99=DK)

12a. Which member of the household usually decides when the children should sleep and wake up?
Use G4 codes

12b. Do you encounter disagreement about when the children should sleep and wake up?
 (1=Yes, 2=No)

13. I will read a list of characteristics or behaviors that [CHILD NAME] may exhibit. How often does [CHILD NAME] do the following? Please use the following scale.

- 1=Rarely or none of the time
- 2=Sometimes
- 3=Occasionally, or a moderate amount of time
- 4=All of the time
- 5= Not Applicable

13a. Is active and energetic	<input type="text"/>
13b. Has a good memory	<input type="text"/>
13c. Performs well in school	<input type="text"/>
13d. Is well-behaved	<input type="text"/>

14a. How many hours of sleep do you think sleep doctors/experts recommend for adults?
 (99=DK) **Hours:**

14b. How many hours of night sleep do you think sleep doctors/experts recommend for children?
 (99=DK) **Hours:**

15a. What kind of challenges do you face in having [CHILD NAME] get more sleep?
Do not read possible responses, simply mark all that apply. Write any additional responses in the "other" blank.

- | | |
|--|---|
| <input type="checkbox"/> 1 = Come home late from work / school | <input type="checkbox"/> 8 = Too much noise |
| <input type="checkbox"/> 2 = Need to wake up early for work | <input type="checkbox"/> 9 = Difficult to get children to bed |
| <input type="checkbox"/> 3 = Eat dinner late | <input type="checkbox"/> 10 = Mosquitos / bugs |
| <input type="checkbox"/> 4 = Cooking and cleaning | <input type="checkbox"/> 11 = No challenges / child gets enough sleep |
| <input type="checkbox"/> 5 = Too hot | <input type="checkbox"/> 12 = Other (specify) _____ |
| <input type="checkbox"/> 6 = Too crowded | <input type="checkbox"/> 99 = Don't know |
| <input type="checkbox"/> 7 = Too much light | |

	Codes	Challenge #1	Challenge #2	Challenge #3	Challenge #4	Challenge #5
15b. If you wanted [CHILD NAME] to get more sleep, would it be possible to address this challenge?	1=Yes, easily 2=Yes, with some difficulty 3=Not sure 4=Not likely 5=Absolutely not	<input type="text"/>				

16a. Are you aware of any benefits of sleep for children? (1=Yes, 2=No)

16b. What are some of these benefits?

Do not read possible responses, simply mark all that apply. Write any additional responses in the "other" blank.

- | | |
|--|--|
| <input type="checkbox"/> 1 = Mental relaxation | <input type="checkbox"/> 7 = Improved mood |
| <input type="checkbox"/> 2 = Physical relaxation | <input type="checkbox"/> 8 = Improved memory |
| <input type="checkbox"/> 3 = Physical growth | <input type="checkbox"/> 9 = Improved school performance / test scores |
| <input type="checkbox"/> 4 = Increased alertness | <input type="checkbox"/> 10 = Other (specify) _____ |
| <input type="checkbox"/> 5 = Improved behavior | <input type="checkbox"/> 99 = Don't know |
| <input type="checkbox"/> 6 = Reduced stress | |

SECTION 8.2 Sleep Behavioral Part 1

- 1a. Do you often go to sleep later than you planned? (1=Yes, 2=No)
- 1b. Do you often wake up at a different time than you planned? (1=Yes, 2=No)
- 2a. How hard do you think it is to increase the number of hours that you sleep?
Would you say it is (Very easy, Easy, Medium, Hard, very hard) (99=DK)
- 2b. How hard do you think it is to increase the number of hours that [CHILD NAME] sleeps?
Would you say it is (Very easy, Easy, Medium, Hard, very hard) (99=DK)

SECTION 8.3 Sleep Intervention

READ: Next, I'd like to show you a video about the benefits and importance of sleep.
Show FR video.

READ: As you saw in the video, sleep is necessary for our mental and physical health, and our emotional well-being. It improves our memory and ability to make decisions; it helps our immune system, and it improves our metabolism.

Perhaps most importantly, sleep is critical to learning and school performance. When children sleep, their brains store the information they learned at school earlier in the day. It also helps them learn better the *next* day. Without enough sleep, the brain has less capacity to store and absorb new information. In fact, one study by Dr. Mathew Walker, a sleep expert at the University of California, Berkeley, in the United States, he shows that kids who stayed up all night scored 40 percent *lower*, on average, than students who got the recommended hours of sleep.

At different ages in our life, we require different amounts of sleep. For example, infants should sleep up to 15 hours, and adults should sleep 7-8 hours. Since [CHILD NAME] is **X** years old, (s)he should receive **hh-hh** hours of sleep. Both children and adults sleep best in a quiet, cool, dark environment.

8b. We have now talked about quite a number of benefits of sleep for children. What type of benefits would you like to see in [Child Name]?

Do not read possible responses, simply mark all that apply. Write any additional responses in the "other" blank.

- | | |
|--|--|
| <input type="checkbox"/> 1 = Mental relaxation | <input type="checkbox"/> 7 = Reduced depression |
| <input type="checkbox"/> 2 = Physical relaxation | <input type="checkbox"/> 8 = Improved memory |
| <input type="checkbox"/> 3 = Physical growth | <input type="checkbox"/> 9 = Improved school performance / test scores |
| <input type="checkbox"/> 4 = Increased alertness | <input type="checkbox"/> 10 = Other (specify) _____ |
| <input type="checkbox"/> 5 = Improved behavior | <input type="checkbox"/> 99 = Don't know |
| <input type="checkbox"/> 6 = Reduced stress | |

READ: [Give the FR the pamphlet.] Here, we have a pamphlet with more details on sleep. It has three sections:

[Open pamphlet completely to the inside.]

First, we have the benefits of sleep – its effects on learning and test scores, and also on health. As you can see on this graph, which is based on a study by Dr. Matthew Walker, children who did not get adequate sleep scored considerably lower on a test than children who did. And we know from recent research this is because sleep has big effects on learning and memory.

The second section explains in more detail *how* sleep affects learning and memory through something in our brain called the hippocampus **[refer to picture]**.

Please feel free to read through these pages more carefully if you're interested in learning more about the effects of sleep and how it all works.

[Fold right flap back in]. And finally, the last part gives you information on how you can help your child sleep better. **[Go through main bullets]**.

Before putting your child to bed, you could turn off all electronics, bathe your child, and/or read a story together.

Regularity is also very helpful in improving sleep quality, so it would help to put your child to bed at a consistent time every night.

This chart **[refer to chart]** gives the recommended hours of sleep for each age group. So you can see how old your child is, and learn how many hours of sleep they should get. You can also do this for yourself and other members of the household.

And here **[refer to second chart]** you have a time table to see sleep and wake up times to ensure your child gets 10 hours of sleep. So, for example, if your child needs to wake up at 5:30 in the morning, you should ensure they are in bed by 7:30 the previous evening. Your child may need more than 10 hours of sleep, so please use this chart only as a guide.

Finally, keeping the room cool, dark, and quiet will increase your child's sleep quality so that they wake up feeling more rested. This means that other members of the household may need to turn off the TV, radio, and lights earlier than usual. By doing this, you are helping your child get the amount of sleep that they need.

[Give FR poster.] This information is further summarized on this poster. **[Read the poster from top to bottom. Point to the picture while noting how the child is using a pillow and a blanket when sleeping.]**

2. Based on the information we've given you, would you like [CHILD NAME] to sleep longer than they do now? (1=Yes, 2=No, 99=DK)

|____|

READ: We would like to offer your child some things to help them sleep better. We'd like for them to choose what they would like. Are they available?

***If child not available have FR choose on child's behalf.
Offer pillow options; child chooses one.
Offer blanket options; child chooses one.***

3. ***Do not read.*** Did [CHILD NAME] choose the pillow and blanket? (1=Yes, 2=No)

Please take good care of these. They are meant especially for times when you are putting your child to sleep, so please put them away when your child wakes up.

SECTION 8.4 Sleep Behavioral Part 2

1. Given the information that you have learned, If your neighbors had these materials, how likely would they be to use them relative to you?

(1=More likely, 2=Likely, 3=Equally as likely, 4=Unlikely, 5=More unlikely)

2. Based on the information we've given you, how likely is it that [CHILD NAME] will sleep more than they currently do? (1=Very likely, 2=Likely, 3=Equally as likely, 4=Unlikely, 5=Very unlikely)

SECTION 9. Conclusion of Module

Read: These are all of the questions I have for you regarding **[name of child]** and yourself.

Do not read the questions in the remainder of this section aloud.

1. Did the caregiver terminate the survey module early? (1=Yes, 2=No) |
If YES, continue. If NO, skip to question 2.

1a. Why did the respondent terminate the survey early? | _____

- 1 = Temporary stop only – Wishes to continue survey at a later time. See “Temporary Stop Instructions” below.
- 2 = Tired
- 3 = Too busy, does not have time

- 4 = Offended at question
- 5 = Suspicious of FO / survey intent / IPA
- 6 = Does not feel like continuing survey
- 7 = Other (specify)

1b. **If “4”:** Can you guess at which question or set of questions offended the caregiver?

Temporary Stop Instructions: You have indicated that the caregiver wishes to continue the survey in the future. Please ask the caregiver when they are next available, and then call your team lead (or other senior team member) to confirm this day and time. If you are unable to confirm this day and time, make a tentative appointment with the caregiver. Then, let the caregiver know that you will contact them to confirm when you will return. Record this information and the current time on the tracking sheet now.

2. Time end survey module: (24 hr clock) | | : | |

3. How was the respondent’s skill in speaking and understanding Kiswahili? |
(1 = Displayed no problems speaking or understanding Kiswahili
2 = Displayed a little difficulty speaking or understanding Kiswahili
3 = Displayed moderate difficulty speaking or understanding Kiswahili
4 = Displayed serious problems speaking or understanding Kiswahili)

4. Were any people present during all or part of this interview (other than the respondent, IPA staff, and the other children to be assessed)? (1 = Yes, 2 = No) |

4a. **If YES:** What is their relationship to the caregiver?
Use G4 codes, list up to 4. | | | | Other: _____

5. Are you very confident, somewhat confident or not very confident in the overall quality and truthfulness of this respondent’s responses? (1=Very confident, 2=Somewhat confident, 3=Not confident) |

5a. **If SOMEWHAT or NOT CONFIDENT:** Why? _____

6. Were the child assessments started by another FO while the I-module or this PC module were in progress? (1=Yes, 2=No) |

If yes, stop here. Say: Thank you for your time. ***Otherwise, continue.***

Read: I would now like to begin interviewing the child. The interview will consist of a series of games for the child. Most children find these games fun to play. Some games will be a bit hard for the child, and some will be easy for the child. If you feel more comfortable, you are welcome to sit here with the child while we play these games. However, we kindly ask that you do not tell the child what to do, laugh or comment on the child's behavior. We want to learn how the child can play these games on their own, without any help or comment from you. Do you understand? ***Answer any questions the caregiver may have about the games. Once the caregiver is comfortable, proceed to child assessments.***

Appendix II: Sleep Video Script (English Version)

Hello! Do you know the benefits you get when you sleep? Do you know how bad things can be when you don't get enough sleep?

Today we are going to talk a bit about the benefits of sleep when you get it, and the bad things that happen when you don't get enough. Sleep has profound effects on the brain and the body.

Let me start with the brain. As we all know, one of its main functions is to help us learn. Over the past 10 years we have learned that without sleep, our brain's capacity to store information naturally falls. When we sleep, our brain transfers information from short-term memory to long-term memory to keep them safe. This is why sleep is important after learning. But recently, we discovered that you also need sleep before learning to prepare your brain to store new information. Without sleep, the memory pathways in the brain are blocked, and you can't create new ones.

Now let me tell you about the body. Sleep allows the body to repair and rejuvenate. Energy is restored. Rest helps the healing of injuries and protects from disease by strengthening the immune system. And it reduces stress by regulating hormones. Sleep is shown to have extremely positive effects on the health of our hearts, and even our DNA. Through this, it helps prevent cancer, inflammation, and decreased memory associated with aging. There's a simple truth: sleep has the power to prolong your life.

School-going kids in Kenya are not getting enough sleep. Doctor Walter Otieno, a pediatrician based in Western Kenya, agrees and discusses a number of health implications in the Daily Nation. He quotes "It's true that children are waking up too early, a factor that is manifested in the number seeking treatment for airway infections and asthmatic attacks... a child needs at least 10 hours of sleep, but most school-going children in Kenya get between 6-8 hours, which is not enough; they are growing, and there are many changes taking place in their bodies, changes that require the body to get sufficient rest for the process to take place efficiently."

So how do we get enough sleep? Sleep experts suggest two pieces of advice for you.

The first is regularity. Go to bed at the same time, wake up at the same time, no matter whether it's the weekday or the weekend. It will improve the quantity and the quality of that sleep.

The second is keep the room quiet, dark, and cool. This environment helps our brains recognize that the body needs sleep and produces hormones that help initiate and stay asleep.

So what is the critical statement here? Sleep, unfortunately, is not an optional lifestyle luxury. Sleep is a nonnegotiable biological necessity. It is your life-support system, and it is Mother Nature's best effort yet at keeping you alive.

I believe it is now time for us to reclaim our right to a full night of sleep, and without embarrassment

or that unfortunate stigma of laziness. And now I will simply say, good night, good luck, and above all ... I do hope you sleep well.

Appendix III: Sleep Pamphlet

Help your child sleep better

“A child needs at least 10 hours of sleep, but most school-going children in Kenya get ... not enough; they are growing, and there are many changes taking place in their bodies, changes that require the body to get sufficient rest.” – Dr. Walter Otieno, source: Daily Nation

- Start a quiet time routine at least 20-30 minutes before bedtime. TVs, phones, and tablets should be switched off at this time. You might bathe your child or read storybooks together.
- Put your child to bed at a consistent time every day which allows them to get the recommended number of hours of sleep for their age group.

Age (years)	Hours
3-5	10-13
6-13	9-11
14-17	8-10
18+	7-9

For example, to ensure your child gets 10 hours of sleep, follow the given sleep and wake times.

Sleep time (pm):	7:30	8:00	8:30
Wake time (am):	5:30	6:00	6:30

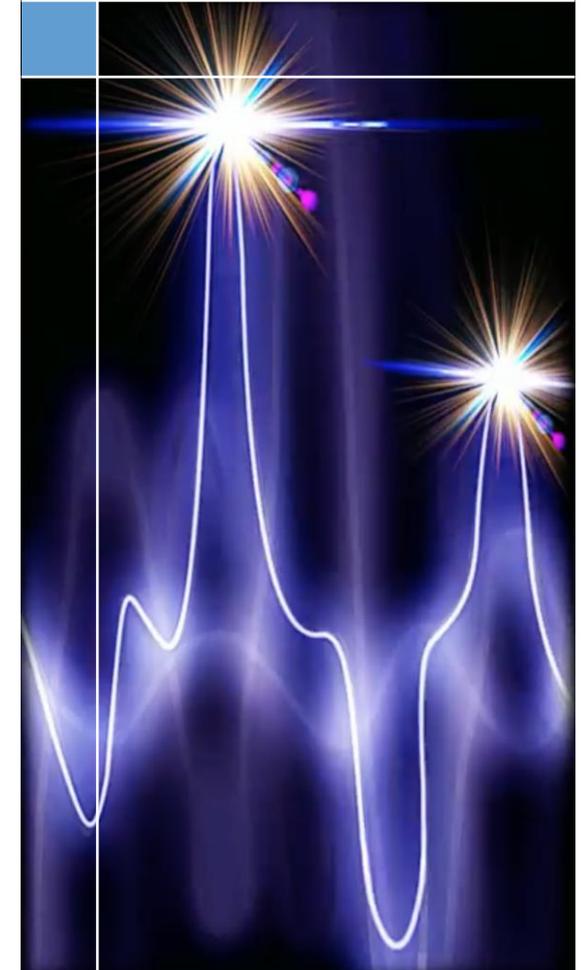
- Keep the room cool, dark, and quiet maximize sleep quality.



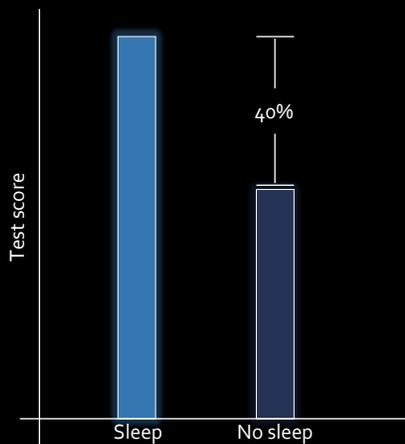
Innovations for Poverty Action - Kenya

Physical Address: Sandalwood Lane, Next to the Sandalwood Apartments (off Riverside Drive), Nairobi, Kenya
Postal Address: P.O. Box 72427 - 00200 Nairobi, Kenya
Phone: +254 (0) 707 387 429
Email: info-kenya@poverty-action.org

The Power of Sleep



Unlocking the Power of Sleep and Dreams



"[Sleep] allows us to deal with our memories properly; to process; to process emotional experiences; to replenish our brain fuel; and to protect our cognitive activity." – Daily Nation

LEARNING. Sleep is essential to the functions of learning and memory. Research over the past 10 years shows that sleeping *after* learning allows us to store new information safely in our memory so that we don't forget. Recent research shows that we need sleep *before* learning to prepare the brain, like a dry sponge ready to soak up new information. Without sleep, the memory circuits of the brain shut down, and we can't absorb new information.

TEST SCORES. Matthew Walker, a sleep specialist at the University of California, Berkeley, tested two groups: a sleep group and a sleep deprivation group. The sleep group received a full eight hours of sleep; the sleep deprivation group was kept awake under

supervision. The two groups were shown a list of new facts and tested on them. The sleep deprivation group scored 40 percent lower.

IMMUNE SYSTEM. Our bodies contain natural killer cells. They identify dangerous, unwanted elements in the body and eliminate them. An experiment showed one night of deprived sleep lead to a 70% reduction in the activity of such cells – a concerning state of immune deficiency.

GENERAL HEALTH. So it is not surprising that short sleep is associated with numerous forms of cancer, heart disease, and high blood pressure, among several other diseases. There is a simple truth: the shorter you sleep, the shorter your life.

Sleep is one of the best ways to keep us to keep us happy, healthy, and *alive*.

How does it work?

There is a part of the brain [see photo below] which is responsible for storing memories that we have learned throughout the day. Sleep triggers changes in the brain that solidify memories in order to be accessed later.

People who don't get enough sleep have more difficulty receiving information because they don't have the same concentration and attention. The brain can no longer transfer information properly from one side of the brain to another.

People who get a full night's sleep, however, are able to preserve memories that help with learning, and have the capacity to learn more.



Saidia mtoto wako kulala vvema.

"Mtoto anahitaji angalau masaa 10 ya kulala, lakini Watoto wengi wanaoenda shule nchini Kenya wanapata ... kulala ambayo haitoshi; wanakua, na kuna mabadiliko mengi yanayofanyika katika miili yao, mabadiliko yanayohitaji mwili kupata mapumziko ya kutosha. – Dr. Walter Otieno, source: Daily Nation

- Anza kwenye mazingira taratibu na wakati wa utulivu angalau dakika 20-30 kabla ya kulala. Televisheni na simu hazipaswi kuw katika mazingira haya tulivu. Unaweza kumwogesha mtoto wako au kumsomea vitabu vya hadithi.
- Weka mtoto wako kitandani kwa wakati thabiti kila siku ili apate idadi ya masaa inayopendekezwa na wataalamu ya kulala kulingana na umri wao.

Umri (Miaka)	Masaa
3-5	10-13
6-12	9-11
13-19	8-10
20+	7-9

- Kwa mfano, ili kuhakikisha kuwa mtoto wako anapata masaa 10 ya kulala, fuata taratibu wakati wa kulala na wakati wa kuamka.

Masaa ya kulala (pm):	7:30	8:00	8:30
Masaa ya kuamka (am):	5:30	6:00	6:30

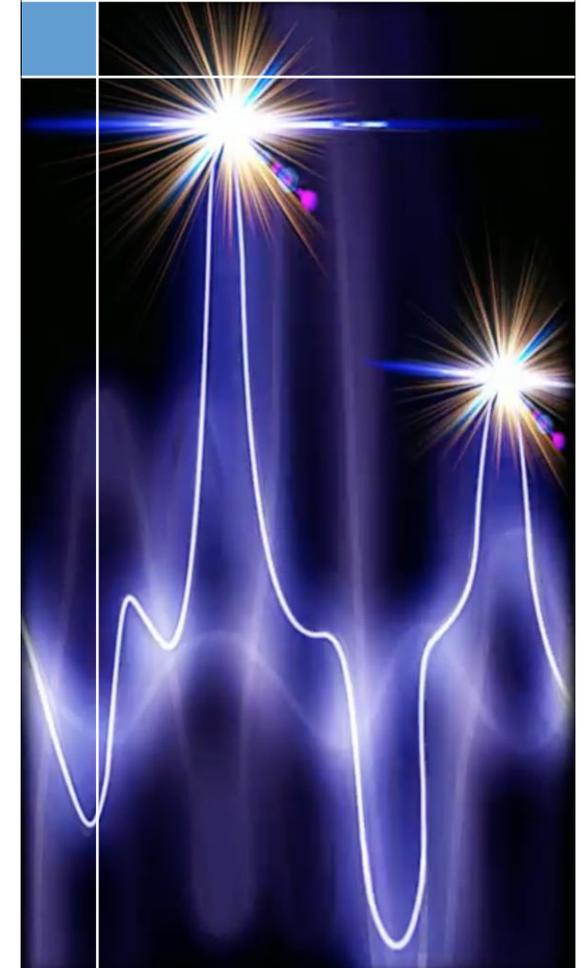
- Weka chumba kiwe na baridi ya wastani, kiwe na giza, na kimya ili kuongeza ubora wa kulala.



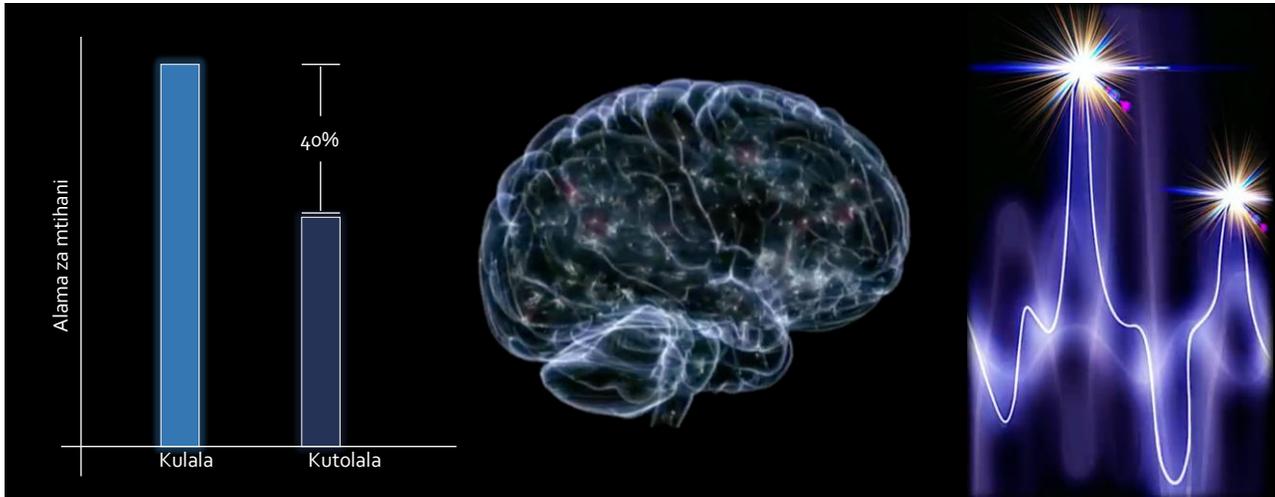
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Nguvu za kulala



Kufungua Umuhimu wa kulala vyema



"[Kulala] huturuhusu kushughulikia bongo zetu vizuri; kusindika; kushughulikia uzoefu wa kihemko (emotional experiences); kujaza bongo zetu akili; na kulinda shughuli zetu za utambuzi."
"- Daily Nation

MASOMO. Kulala ni muhimu kwa masomo na akili. Utafiti katika kipindi cha miaka 10 iliyopita unaonyesha kwamba kulala baada ya kusoma husaidia kuhifadhi masomo katika akili zetu ili tuisisahau. Utafiti wa hivi karibuni unaonyesha kuwa tunahitaji kulala kabla ya kusoma ili kuandaa ubongo, kama sifongo (sponge) kavu iliyo tayari kupata habari mpya. Kutolala hufanya mizunguko ya kumbukumbu ya ubongo kufungika, na hutuwezi kupata habari mpya..

ALAMA ZA SHULE. Matthew Walker, mtaalam wa chou kikuu cha California, Berkeley, alijaribu vikundi viwili: Kikundi cha watu kulala na kikundi cha watu wasiolala. Kikundi cha kulala kilipewa masaa nane ya kulala; na kikundi cha kutolala kilisimamiwa ili kisilale. Vikundi hivi

viwili vilionyeshwa orodha ya vitu walivyofanyiwa kwenye utafiti. Kikundi ambacho hakikulala kilipata alama 40 chini ya kile kiliruhusiwa kulala.

MFUMO WA IMMUNE. Miili yetu ina seli asili za kuua. Inatambua vitu hatari kwenye milli yetu, visivyohitajika katika mwili na huondoa. Jaribio la Mathew Walker lilionyesha usiku mmoja wa kutolala ulisababisha upungufu wa kazi za seli hizi kwa alama 70% - hali inayohusu upungufu wa kinga.

AFYA KWA UJUMLA. Kwa hivyo haishangazi kuwa usingizi mfupi unahusishwa na aina nyingi za saratani, magonjwa ya moyo, na shinikizo la damu, kati ya magonjwa mengine kadhaa. Kuna ukweli rahisi: ukilala kidogo, unafupisha maisha yako.

Kulala ni moja wapo ya njia nzuri ya kutufanya tuendelee kuwa na *furaha, afya njema na uhai.*

Kuna sehemu ya ubongo [angalia picha hapa chini] ambalo lina jukumu la kuhifadhi kumbukumbu ambazo tumejifunza siku nzima. Kulala husababisha mabadiliko katika ubongo ambayo yanahakikisha kuimarishwa kwa kumbukumbu ili iweze kufikiwa baadaye.

Watu ambao hawalali kutosha wako na ugumu zaidi kupokea habari kwa sababu hawana umakini na uzingatizi sawa na wale wanao lala kutosha. Ubongo hauwezi kuhamisha habari vizuri kutoka upande mmoja wa ubongo kwenda nyingine.

Hata hivyo, watu ambao hupata usingizi wa kutosha usiku wana uwezo wa kuhifadhi kumbukumbu zinazosaidia kwa masomo na wana uwezo wa kujufunza Zaidi.



Appendix IV: Sleep Poster

ENSURE YOUR CHILD SLEEPS WELL TONIGHT



Pillow Blanket

KEEP THE ROOM
COOL, DARK & QUIET

Go to sleep at:	7:30PM	8:00PM	8:30PM
Wake up at:	5:30AM	6:00AM	6:30AM

BETTER SLEEP LEADS TO:

- Better school performance
- Reduced stress
- Growth
- Better memory

HAKIKISHA MTOTO WAKO ANALALA VIZURI USIKU WA LEO

Pillow Blanketi



**HAKIKISHA NYUMBA
KUNA GIZA NA
KUMENYAMAZA**

Kuenda kulala saa: 7:30PM | 8:00PM | 8:30PM

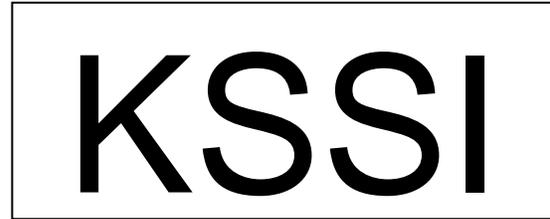
Kuamka ni saa: 5:30AM | 6:00AM | 6:30AM

KULALA BORA HUAKIKISHA:

- Matokeo bora shuleni
- Upungufu wa dhiki/ stress
- Ukuaji wa mtoto
- Kukumbuka vitu haraka

Appendix V: KSSI Follow-up Phone Survey

Log Number: | | | | |



**KLPS-KIDS
Sleep and KSI Follow Up
Wave -2**

VERSION: JANUARY 14, 2021 — ENGLISH

CHILD ID
--

This survey should be administered to the PRIMARY CAREGIVER of the child identified above. Note that for a caregiver with multiple children in our sample, a separate PC Module should be filled out for each child.

Log Number: |__|__|__|__|__|__|

SECTION 1. Pre-Interview Information and Consent

Fill in this information before the interview from IDENTITY SECTION of TRACKING SHEET:

- 1. KLPS Adult ID: |__|__|__|__|__|__|
- 2. KLPS Adult Family Name: _____
- 3. KLPS Adult (a) Name 1 / (b) Name 2: (a)_____ / (b) _____
- 4. KLPS Adult Gender: |__| (1=Male, 2=Female)
- 5. KLPS Adult Baseline School ID / Name: |__|__|__| / _____

Fill in this information before the interview from PARTICIPATING CHILD INFO SHEET:

- 6. Child First Name: _____
- 7. Child ID: |__|__|__|__|__|__|__| -- |__|__|
- 8a. Caregiver Family Name: _____
- 8b. Caregiver Name1 / Name2: _____ / _____

9a. Date of interview: (DD/MM/YYYY) |__|__| / |__|__| / |__|__|__|__|

9b. Time start interview: (24 hr clock) |__|__| : |__|__|

10a. Interviewer ID: |__|__|__|__|

10b. Interviewer name: (first) _____ / (surname) _____

11. **Do Not Read:** Please confirm if this is the respondent, we visited on [RESPONDENT VISIT DATE] from the tracking sheet. (1=Yes, 2=No)

12. Are you a household member in this house? By your household, I mean the place where you usually sleep, not necessarily your ancestral lands or family home. (1=Yes, 2=No)

PROBE CAREFULLY TO DETERMINE WHETHER THIS RESPONDENT HAS BEEN IN THIS HOUSEHOLD FOR THE LAST TWO WEEKS.

If Yes continue, if No end survey

13. What is your relationship with [CHILD NAME].

Hello, I am [name] from IPA, in [Busia Town / Nairobi]. We visited you on [RESPONDENT VISIT DATE], and we asked you some questions about your children's home environment and how sleep affects children in this household. We would like to briefly ask you a few more questions about this child(ren) under your care and his or her home environment. The interview will take about 30 minutes, but you may choose to discontinue participation at any time.

Some of the research questions may make you uncomfortable or upset. You are free to decline to answer any questions you don't wish to, or to stop the interview at any time.

We will keep you and the children's study data as confidential as possible. If we present results of this study, we will not use individual names or other personally identifiable information. To help protect confidentiality, any information that identifies you will be separated from your other answers. Your identifying information will be replaced with a code, so that only our researchers will be able to track your answers back to you.

Log Number: |___|_|___|_|___|_|___|_|___|

Participation in this study is completely voluntary. You have the right to decline to participate or to withdraw at any point in this study without penalty. To thank you for your participation, we will offer you a gift of Ksh.100 of airtime within 5 working days of the interview.

14a. Will you participate in the interview?

(1=Yes-Caregiver agrees to participate, 2= No-Caregiver refuses to participate, 3=No-Caregiver does not refuse but is unable to participate) |___|

If “No – Caregiver refuses to participate,” proceed to 14b. If “No – Caregiver does not refuse, but is unable to participate,” terminate the interview, proceed to 14c.

14b. Why don't you want to participate? |___| Other: _____

1=Wants to reschedule (*skip to “Rescheduling instructions” below*)

2=No time/too busy

3=Privacy concerns

4=Religious concerns

5=Other (specify))

Skip to Section 2.

Rescheduling instructions: Please ask the FR when they are next available, and then call your team lead (or other senior team member) to confirm this day and time. If you are unable to confirm this day and time, make a tentative appointment with the FR. Then, let the FR know that you will contact them to confirm when you will return. Record this information and the current time on the tracking sheet now. End the interview

14c. **Do not read.** Describe your impressions of the inability to participate. |___|ther: _____

1=Someone else refuses on caregiver's behalf

2=In prison

3=Mental illness / disability

4=Other (specify)

Log Number: |___|_|___|_|___|_|___|_|___|

Section 2 : Sleep Pattern Follow Up Questions

READ: Now I'd like to ask you about [CHILD NAME].

1. What time did [CHILD'S NAME] go to bed last night? [__][__] : [__][__] (99 = DK)
(hour) (min)

1a. Was that earlier than, later than, or the same as [CHILD'S NAME]'s typical bedtime?
(1=Earlier; 2=Later; 3=Same; 99=DK) [___]

If SAME, skip to question 2. Otherwise continue.

1b. Over the last month what was [CHILD'S NAME]'s usual bedtime? [__][__] : [__][__] (99=DK)
(hour) (min)

2. What time did [CHILD'S NAME] wake up this morning? [__][__] : [__][__] (99 = DK)
(hour) (min)

2a. Was that earlier than, later than, or the same as [CHILD'S NAME]'s typical wake up time?
(1=Earlier; 2=Later; 3=Same; 99=DK) [___]

If SAME, skip to question 3. Otherwise continue.

2b. Over the last month what was [CHILD'S NAME]'s usual wake up time? [__][__] : [__][__]
(99=DK) (hour) (min)

3. Did [CHILD'S NAME] nap yesterday? [___] (1 = Yes; 2 = No; 99 = DK)

If YES, continue to 3a. If NO, skip to section 3.

3a. How many daytime naps did [CHILD'S NAME] take yesterday? [___] (99=DK)

3b. In total, how long did [CHILD'S NAME] nap yesterday? [__][__] : [__][__] (99=DK)
(hour) (min)

READ: Now think about the night before last.

4. What time did you go to bed last night? [__][__] : [__][__] (99=DK)
(hour) (min)

5. What time did you wake up this morning? [__][__] : [__][__] (99=DK)
(hour) (min)

Log Number: |___|_|___|_|___|_|___|_|___|

SECTION 3: Sleep Home Environment

READ: Thank you. Now I'd like to ask you about the routines of you and your child and your home environment.

1a What activities did you do last night one hour before going to bed?

Do not read possible responses, simply mark all that apply. Write any additional responses in the "other" blank.

- | | |
|--|---|
| <input type="checkbox"/> 1 = Eating | <input type="checkbox"/> 8 = Preparing children for bed |
| <input type="checkbox"/> 2 = Household chores | <input type="checkbox"/> 9 = Returning from job |
| <input type="checkbox"/> 3 = Watching TV | <input type="checkbox"/> 10 = Bathing |
| <input type="checkbox"/> 4 = Talking on the phone | <input type="checkbox"/> 11 = Praying |
| <input type="checkbox"/> 5 = Using smartphone, tablet, or computer | <input type="checkbox"/> 12 = Reading |
| <input type="checkbox"/> 6 = Listening to the radio | <input type="checkbox"/> 13 = Other (specify) _____ |
| <input type="checkbox"/> 7 = Playing with children | <input type="checkbox"/> 99 = Don't know |

1b. What activities did [CHILD NAME] do last night one hour before going to bed?

Do not read possible responses, simply mark all that apply. Write any additional responses in the "other" blank.

- | | |
|--|---|
| <input type="checkbox"/> 1 = Eating | <input type="checkbox"/> 8 = Playing with toys |
| <input type="checkbox"/> 2 = Household chores | <input type="checkbox"/> 9 = Homework / studying |
| <input type="checkbox"/> 3 = Watching TV | <input type="checkbox"/> 10 = Bathing |
| <input type="checkbox"/> 4 = Talking on the phone | <input type="checkbox"/> 11 = Praying |
| <input type="checkbox"/> 5 = Using smartphone, tablet, or computer | <input type="checkbox"/> 12 = Reading |
| <input type="checkbox"/> 6 = Listening to the radio | <input type="checkbox"/> 13 = Other (specify) _____ |
| <input type="checkbox"/> 7 = Playing with siblings | <input type="checkbox"/> 99 = Don't know |

2. Does [CHILD NAME] share a room for sleeping? (1=Yes, 2=No, 99=DK)

3. Does [CHILD NAME] sleep in a room where the radio or TV is on when they are sleeping? (1=Yes, 2=No, 99=DK)

4. Are there bright lights other than dim light for the child typically on in the room when [CHILD NAME] is going to sleep? (1=Yes, 2=No, 99=DK)

5. What does [CHILD NAME] typically sleep on? (1=Mattress on a bed, 2=Mattress on the floor, 3=Mat on the floor, 4=Other (specify), 5= On the Floor 99=Don't know) Other: _____

Log Number: |___| |___| |___| |___| |___|

6a. Does [CHILD NAME] have a pillow? |___| (1=Yes, 2=No, 99=DK)

6b. Does [CHILD NAME] use this pillow for sleeping? |___| (1=Yes, 2=No, 99=DK)

7a. Does [CHILD NAME] have a stuffed doll or toy? |___| (1=Yes, 2=No, 99=DK)

7b. Does [CHILD NAME] use this stuffed dolly/ toy for sleeping? |___| (1=Yes, 2=No, 99=DK)

SECTION 3.1: Sleep Intervention Follow Up Questions -(Some questions in this section should be asked to interventions only)

1. Was the sleep video shown to you when you were visited on [PC VISIT DATE]? |___| (1=Yes, 2=No, 99=DK)

2. Did you receive a blanket and a Pillow from IPA on [PC VISIT DATE]? |___| (1=Yes, 2=No, 99=DK)

3. Did you receive a pamphlet and a sleep chart from IPA on [PC VISIT DATE]? |___| (1=Yes, 2=No, 99=DK)

4. **Ask if q2 = Yes:** In the last week did [CHILD NAME] ever use a pillow they received from IPA when sleeping? |___|(1=Yes, 2=No, 99=DK)

5. **Ask if q2 = Yes:** In the last week did [CHILD NAME] ever use a blanket they received from IPA when sleeping?|___| (1=Yes, 2=No, 99=DK)

6a. How many hours of sleep do you think sleep doctors/experts recommend for adults? (99=DK)

Hours: |___|

6b. How many hours of night sleep do you think sleep doctors/experts recommend for children?

(99=DK) **Hours:** |___|

7a. Are you aware of any benefits of sleep for children? (1=Yes, 2=No) |___|

If YES, go to 7b; if NO, skip to Section 8:

7b. What are some of these benefits?

Do not read possible responses, simply mark all that apply. Write any additional responses in the "other" blank.

|___| 1 = Mental relaxation

|___| 7 = Improved mood

|___| 2 = Physical relaxation

|___| 8 = Improved memory

|___| 3 = Physical growth

|___| 9 = Improved school performance / test scores

|___| 4 = Increased alertness

|___| 10 = Other (specify) _____

|___| 5 = Improved behavior

|___| 99 = Don't know

|___| 6 = Reduced stress

8. Since we last visited, has sleep pattern changed for you, your child or anyone else in your household? (1=Yes, 2=No, 99=DK)

Log Number: |__| |__| |__| |__| |__|

Section 4: Kids Storybook follow-up

Read: Thank you. Now I would like to ask you some questions about your home environment and reading with your children

1. About how many books are there in **[child]**'s home (including the Bible or other religious book, dictionary, textbooks, children's books and picture books)? (99=DK) |__|

2. About how many storybooks or picture books are in **[child]**'s home? Please include any storybooks or picture books you received as a gift or purchased. Please only include children's storybook and/or picture books. DO NOT include any textbooks or magazines. **Note: Here you SHOULD include any books that were received for free from IPA as part of the KLPS storybook intervention** (99=DK) |__|

If Question 2 >=1 continue to Question 2a. Otherwise, skip to Question 3.

2a. What language(s) are these storybooks in? **Please select all that apply** (1=English, 2=Kiswahili, 3=Luo, 4=Luhya, 5=Other (specify), 9=DK) |__-|
Specify: _____

3. In the last 7 days, how many days did you or another adult or teenager (age 13 or older) read with **[storybook child]** at home? Here we mean any form of reading, including reading from a storybook, textbook, or magazine, as long as you or another adult or teenager were reading to the child. DO NOT include any reading that occurred at school. (Enter number of days from 0 to 7; 99= DK) |__| days

If 1 or more days, continue to 3a. Otherwise skip to 4.

3a. Now think about yesterday. How many minutes did you or another adult or teenager (age 13 or older) read with **[storybook child]** yesterday? Here we mean any form of reading, including reading from a storybook, textbook, or magazine, as long as you or another adult or teenager were reading to the child. DO NOT include any reading that occurred at school. (Enter number of minutes, 99 = DK) |__| minutes

4. In the last 7 days, how many days did **[storybook child]** read by themselves (or with other children) at home. Here we mean any form of reading, including reading from a storybook, textbook, or magazine. DO NOT include any reading that occurred at school. (Enter number of days from 0 to 7; 99 = DK) |__| days

If 1 or more days, continue to 4a.

4a. Now think about yesterday. How many minutes did **[storybook child]** read by themselves or with other children yesterday? Do not include any time spent reading while in school. (Enter number of minutes, 99 = DK) |__| minutes

5. Is **[child]** currently enrolled in school, including ECD, pre-school, primary school, or another school? (1=Yes, 2=No, 99=DK) |__|

If YES, continue to 5a. If NO, continue to 5b.

Log Number: |__| |__| |__| |__| |__|

5a. Of the last five days school was in session, how many days did **[child]** attend? (Enter number of days from 0 to 5, 99 = DK) |__|

5b. Why is **[storybook child]** not enrolled in any type of ECD or schooling program? |__|

1=Child is too young

2=Child would not do well / is not smart

3=There is not enough money to pay for it / those programs are too expensive

4=Distance/too far away

5=Program is not available

6=Child refuses/doesn't want to

7= Child helps with work around the house/ takes care of other children

8=Dropped out

9 = Covid-19 safety/health concerns

77 =Other (specify)_____