

A Randomized Impact Evaluation of scaled-up Early Childhood Development activities in Rural Mozambique: Baseline survey -Data documentation-

General background information

As part of the Education Sector Support Project in Mozambique (P125127) an initial credit of US\$40 million has been provided by the World Bank, to the Republic of Mozambique for the purpose of scaling-up Early Childhood Development activities in the country starting from 2012. This project followed a seminal impact evaluation of center-based community driven preschool model in rural areas of the Gaza Province of Mozambique implemented by Save the Children between 2008 and 2010. Results of this study¹ showed promising impact in terms of cognitive and socio-emotional skills of children in communities with ECD centers, and led the Government of Mozambique increase its involvement in preschool activities by creating 150 new ECD across 5 provinces in a first phase, and subsequently 200 additional ECD centers in a second phase. This impact evaluation concerns the second phase of implementation and aims primarily at assessing the impact of ECD provision in rural area under governmental management. The Impact Evaluation uses Clustered Random Control Trial at community level.

Provision of Community-Based Early Childhood Development Services was done through Third Party Providers and includes construction of the preschool premises and playground, training of local instructors, acquisition of the pedagogical material, and organization of parenting activities.

In parallel, another Bank-supported intervention in nutrition occurred simultaneously in one of the three provinces covered by the IE. The original design was made to take advantage of this opportunity to ensure that at least some geographical areas (in Nampula provinces) receive both types of interventions, thus maximizing the likelihood that beneficiary children will be both well-nourished and receive adequate cognitive and overall stimulation in the early years of life, thus optimizing their potential to succeed in school and to lead healthy and productive lives.

ECD activities target children aged between 36 and 59 months while nutrition activities target pregnant women and children aged between 0 and 35 months.

The baseline survey was carried out in 236 communities across the Provinces of Cabo Delgado, Nampula and Tete. Two districts were selected to participate to the program in each provinces, namely Chiure and Macomia in Cabo Delgado; Erati and Memba in Nampula; and Changara and Angonia in Tete.

Communities were allocated randomly to one of the four following groups:

- (i) Communities with ECD and nutrition intervention ;
- (ii) Communities with only ECD intervention;
- (iii) Communities with only Nutrition intervention
- (iv) Control communities with no interventions.

¹ see Martinez, S., Naudeau, S., and Pereira, V. (2012). “*The Promise of Preschool of Africa: A Randomized Impact Evaluation of Early Childhood Development in Mozambique*”

In total, 6,171 households were sampled across 6 participating districts.

The original primary research questions of the study are:

1. Can a community-based integrated ECD model (for children ages 0-5 and their parents) that was proven effective when implemented by an NGO at small scale remain effective when the implementation is: (i) government-led, (ii) at scale, and (iii) implemented in a diverse range of geographic and socio-cultural settings?
2. How does an early nutrition intervention targeted at adolescent girls, pregnant mothers and children ages 0-2 years affect growth, overall development outcomes and learning potential of beneficiary children?
3. What is the value-added and comparative cost effectiveness of doing both types of interventions (integrated ECD and early nutrition) versus only one or the other?

However, problem in the implementation of the nutrition program made non-random the assignment of communities benefiting from this program in the province of Nampula. Thus, while the RCT design for ECD intervention is still valid, questions 2 and 3 might be answered through non or quasi-experimental methods in subsequent stages.

Data collection was carried out jointly by the National Statistical Agency of Mozambique (INE), Ministry of Education and the World Bank following the original RCT design.

Field work took place from September to December 2016, and 6,171 households' questionnaires were administrated over 236 communities.

Questionnaires

In 2016, the following survey instruments were used: (i) a Socio-economic questionnaire, (ii) adapted version of Ages and Stages questionnaire for children aged between 36 and 59 months, (iii) a community leader questionnaire.

A more detailed description of the various instruments is presented below.

Instrument	Sections of the instruments
Socio-economic questionnaire	1. Household general information
	2. Education Information on members between 5 and 18 years old.
	3. Pregnancy and Pre-natal care of target children
	4. Infant food intake
	5. Learning environment
	6. Crops information
	7. Job section (all members)
	8. Transfer and consumption of the household
	9. Dwelling condition ad characteristics
	10. Asset and durable goods

	6. Parental situation of children
	7. Anthropometric measures of target children
	10. Contacts
Ages and Stages Questionnaire*	1. Communications Skills
	2. Gross motor coordination
	3. Fine motor coordination
	4. Problem solving skills
	5. Socio-personal skills
Community Leader Questionnaire	1. Information on the leader
	2. Information on existing Pre-school centers
	3. Estimated distances from basic facilities
	4. Information on local crops
	6. Social capital in the community

* Ages-and-Stages questionnaire has been adapted and translated with the authorisation of the copyrights owners. The test provides different set of questions each of the sections depending of the age categories the target child belongs to. Ages categories are divided as followed : (i) between 36 and 41 months; (ii) between 42 and 47 months; (iii) between 48 and 53 months and (iv) between 54 and 59 months.

Sample:

Communities sampling-process (baseline)

The design used for this impact evaluation is that of a clustered randomized control trial (C-RCT) at community levels.

Communities were firstly selected in each district according to eligibility criteria and then randomly assigned to the one of the four treatment arms in the Province of Nampula and to the ECD treatment in the provinces of Cabo Delgado and Tete. As part of the phase 2, the project planned to provide 20 ECD centers per district, except in Cabo Delgado where Macomia will receive 10 ECD centers while Chiùre will receive 30 centers.

Community Eligibility.

Within the six target districts, a subset of eligible communities is identified to meet the criteria for implementation of the program:

1. The community is located in a rural area;
2. The community already has a Primary School;
3. The community has more than 30 children in the age range of 3-5 years old ;
4. There was no other education program for children 3-5 years old in the community in the past 5 years.

Eligible communities not assigned to treatment nor control group remained substitute communities. Some communities had to be substituted (randomly) because of extreme access condition or when an eligibility criteria could not be confirm on the field.

Number of community sampled in each district:

	Cabo Delgado		Tete		Nampula	
	Chiure	Macomia	Angonia	Changara	Erati	Memba
ECD	30	8	20	20	10	10
Nutrition	-	-	-	-	10	
ECD + Nutrition	-	-	-	-	10	10
Control	29	9	20	20	10	10
Total	59	17	40	40	40	40

In the two participating districts of Cabo Delgado the pool of eligible communities was finally not big enough to have a total of 80 communities after substitutions.

Household sample:

A total of 6,171 households with preschool age children were sampled from the 236 evaluation communities at baseline. With no household listing available at the time of the survey, a census of each community was carried out to identify households with children in the age range of 36 to 59 months. Taking the list of households with at least one child in this age range, 24 households per community were planned to be selected randomly in Cabo Delgado and Tete. In Nampula, in addition of those 24 selected household, 13 households with at least a child aged between 0 and 35 months and no child between 36 and 59 months.

Field-work details:

Activity	Description
Socio-economic questionnaire and Ages-and-Stages test	<p><i>Fieldwork :</i> <u>Date:</u> September 9 to December 30, 2016 Number of questionnaire administrated: 6,171 for socio-economic questionnaire and 5,142 ASQ tests (for target children between 36 and 59 months only).</p> <p><i>Data entry :</i> All questionnaires were administrated using tablets and questionnaires were designed and administrated using Survey Solutions CAPI.</p> <p><i>Main Issues :</i> One community in Tete, Dziwanga, was administrated in a wrong place and was then dropped from the survey.</p> <p><u>Administrated to:</u> the caregivers of the target child. In some specific case the caregiver was not a member of the household. In this case, questions in relation to the household were asked to the head of the household and questions in relation to the target child were asked to the caregiver.</p>
Community-leader Questionnaire	<p><u>Date:</u> September 9 to December 30, 2016 Number of community leaders interviewed : 228</p> <p>7 community leaders' questionnaires are missing from the database.</p>

	<u>Administrated to:</u> the person recognized as the leader of the community.
--	--------------------------------------------------------------------------------

Use of the data:

Weights

No weights have been created for the baseline data analysis.

Access

The name and contact information of the representative of the World Bank authorized to grant access to this information is: Sophie Naudeau (snaudeau@worldbank.org) and Fadila Caillaud (fcaillaud@worldbank.org).

Documentation:

List of documentation available :

- Socio-economic questionnaire
- Community leader questionnaire

Codes

All codes are included in the questionnaires and/or labelling of the data sets.

Other

Metadata collected by the tablet and application are available upon request.