

Welcome to the first issue of Firelight Foundation's Learning Series. This series shares summaries of our analyses and learnings, and our thoughts on what they mean for community approaches to international development. In this issue, we summarize our findings from the first year of our study using the Zambia Child Assessment Test in Tanzania, Zambia, and Malawi. Subscribe to this series at: <http://info.firelightfoundation.org/learningseries>.

Community-based early childhood programs and children's school readiness in Tanzania, Zambia, and Malawi: Year 1 findings - summary report

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Firelight's partner organizations are implementing early childhood development (ECD) programs in their communities. This study examines correlates of child development and school readiness, and compares outcomes of children attending partners' ECD programs with outcomes of comparison children in the same communities.

A sample of children was randomly selected from those attending ECD programs implemented by Firelight's partner CBOs. A comparison group of children who were not attending the ECD programs was also sampled from each catchment area.

The total sample included about 600 children across the three countries (Tanzania, Zambia, and Malawi). In the final data set, the sample ranged in age from 3.7 to 6.6 years. The Zambia Child Assessment Test (ZamCAT) was used to assess children's development and school readiness.

The table below presents relationships between demographic characteristics and the various subscale scores. Also included is the overall ZamCAT score, which was developed by combining five subscales that were well correlated with each other.



Table 1. Relationships between demographic characteristics and ZamCAT scores

	<i>Receptive Language</i>	<i>Expressive Language</i>	<i>Letter Naming</i>	<i>Rapid Naming / Info Process</i>	<i>Attention / Exec Function</i>	<i>Tactile Pattern Recognition</i>	<i>Fine Motor Skills</i>	<i>Social-Emotional</i>	<i>Task Orientation</i>	<i>Overall ZamCAT Score</i>
<i>Primary caregiver's education</i>	*	*	*						*	*
<i>Home possessions</i>	*	*	(o)	*		(o)		*		
<i>Home literacy</i>	*	*		*				*		
<i>Primary caregiver's stress</i>			*			*	*	(o)	*	*
<i>Country</i>	*	*	*	*		*	*	*	*	*
<i>Gender</i>							*	*		
<i>Age</i>				*			*			
<i>ECD or Comparison Group</i>	*	*	*				*			*

Notes:

Statistically significant associations are indicated with * .

(o) means that a statistically significant relationship was found in the opposite direction to what was expected.

The Overall ZamCAT Score is a combined score including Receptive language, Letter naming, Tactile pattern recognition, Fine motor skills, and Task orientation.

Overall, the results indicate that:

- Primary caregiver's education was associated with slightly higher scores on a few subscales, as well as on the overall ZamCAT score. In other words, children whose primary caregiver had some primary level education performed better on the ZamCAT than children whose primary caregiver had no education.
- Home literacy environment and interactions were associated with slightly higher scores on a few subscales. This means that children whose home environments had more literacy materials and interactions tended to perform better on some subscales, including the language measures.
- The relationship between home possessions and scores was mixed.
- Caregiver stress was correlated with slightly lower scores on a few subscales, such that children whose primary caregiver had greater levels



- of stress tended to perform slightly worse on some subscales. However, for social emotional development, there was an unexpected but still small positive correlation, such that children whose primary caregiver had greater stress performed better on social emotional development.
- Children in Tanzania generally performed higher on many subscales, as well as on the overall ZamCAT score.
- Girls scored higher than boys on fine motor and social emotional subscales, but there was no difference on the overall ZamCAT score.
- Age was correlated with scores on rapid naming and fine motor skills, but there was no correlation with the overall ZamCAT score.
- Children participating in ECD programs scored higher than comparison group children on receptive language, expressive language, letter naming, and fine motor skills, as well as on the overall ZamCAT score.

Overall, with all three countries' data combined, the main predictors found to be correlated with children's overall ZamCAT scores were the **child's primary caregiver's education**, the **primary caregiver's stress level**, and the **child's participation in ECD programs**. Also, children in Tanzania scored higher than children in Zambia and Malawi.

Each country was also examined separately. The table below summarizes the significant relationships between different demographic variables and the overall ZamCAT score.

Table 2. Summary of statistically significant bivariate relationships with overall ZamCAT scores

<i>Higher overall ZamCAT scores were associated with:</i>	<i>Tanzania</i>	<i>Zambia</i>	<i>Malawi</i>	<i>Overall</i>
<i>Primary caregiver's education</i>	*			*
<i>Home possessions</i>	*	*		
<i>Home literacy environment and interactions</i>	*		*	
<i>Primary caregiver's stress</i>	*			*
<i>Age</i>	*			
<i>Gender</i>				
<i>Participation in ECD programs</i>	*	*	*	*

Note:

Statistically significant associations are indicated with * .



In Tanzania, higher overall scores on the ZamCAT were associated with the primary caregiver's education, greater numbers of home possessions, a stronger home literacy environment, the primary caregiver's lower stress levels, the child's age, and the child's participation in ECD programs.

In Zambia, greater numbers of home possessions and the child's participation in ECD were associated with higher scores.

And in Malawi, a stronger home literacy environment and the child's participation in ECD programs were associated with higher scores.

To summarize, in all three countries, children participating in ECD programs performed appreciably better on the ZamCAT than comparison group children. However, there were also considerable demographic differences between ECD group children and comparison group children – particularly in Tanzania and Malawi, and so it is likely that there were factors other than participation in ECD programs contributing to the difference. Indeed, the findings indicate that demographic and home characteristics play important roles in children's school readiness outcomes.

Overall, the findings from this study underscore the importance of ECD programs supporting children and their families holistically, including both direct programming for children as well as programs and services to strengthen families.

Questions?

Let us know what you think:
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