www.komyra.com

2022 02

Volume 9 No 1

ISSN 2383-6563 (Online)

The Myanmar JOURNAL

Co-published with Yangon University of Economics (YUE) and
Korea Myanmar Research Association (KOMYRA)

Letter from the Editor-in-Chief

Myanmar and Korea have many similarities and are complementary relationship. Therefore, we believe that research exchange will expand mutual understanding between Myanmar and Korea, and will be the cornerstone for mutual development.

KOMYRA and YUE have co-published The Myanmar Journal since August 2014. So far, many scholars have published numerous papers through the journal, and We are sure that this journal has helped many people understand Myanmar and Korea more clearly and closely.

The Myanmar Journal covers various issues in Myanmar and Korea. It covers various topics that can promote bilateral development and mutual understanding, not limited to specific topics such as economy, industry, society, education, welfare, culture, energy, engineering, healthcare, and agriculture.

We hope that this journal will continue to promote understanding of the current status and potential capabilities of Myanmar and South Korea and promote in-depth international exchange and cooperation.

We would like to express our deepest gratitude to the editorial board and YUE and KOMYRA for their valuable support in The Myanmar Journal publication.

February 28, 2022

Youngjun Choi *yj choi*

Editor-in-Chief of THE MYANMAR JOURNAL
Vice-President of KOMYRA
Email: yjchoi@khu.ac.kr
Office: +82-2-961-0485
Web address: komyra.com/doc/scope.php

EDITORIAL BOARD

INFORMATION ABOUT
The Myanmar Journal

The Myanmar Journal (ISSN 2383-6563) is the official international journal co-published by Yangon University of Economics (YUE) and Korea Myanmar Research Institute (KOMYRA).

This journal aims to promote the mutual cooperation and development of Myanmar and Korea through intensive researches in the entire filed of society, economy, culture, and industry.

It will cover all general academic and industrial issues, and share ideas, problems and solution for development of Myanmar.

Articles for publication will be on-line released twice a year at the end of February and August every year on the Myanmar Journal webpage (http://www.komyra.com/bbs/board.php?bo_table=articles).

Factors Associated with Early Childhood Development in Myanmar

Aye Aye Htwe*
Yangon University of Economics

ABSTRACT : International community recognizes investing in early childhood as a moral and legal obligation of the state to provide for an environment that allows the child to develop maximally, as well as an economically beneficial policy to break poverty traps. Using the Demographic and Health Survey carried out in 2015-2016 in Myanmar, the binary logistic regression analysis was applied to explore the factors associated early childhood development. This study gave an emphasis to only on 1942 sample children age between 36 and 59 months. This study found that factors associated with the early childhood education programs are: education levels of mother and father, child's age, states/regions and wealth quintiles. In additions, factors associated with the early childhood learning materials are: mother's age and education, father's education and occupation, child's age, residence, states/regions and wealth quintiles. Furthermore, factors associated with the parent support for early learning are: mother's age and education, father's education and occupation, child's age, birth order, residence and states/regions.

Key words *: Early childhood development, Demographic and health survey and Logistic regression*

I. Introduction

1. Rationale of the Study

* Associate Professor, Department of Statistics, Yangon University of Economics

Around the world, children face disruptions to their right to go to school and learn. In 2019, war, disaster, disease and the effects of climate change were barriers to children's right to education. In addition, vulnerabilities including poverty, gender norms and disability continue to put education out of reach for far too many children. And at the start of 2020, children in many corners of the world were forced from school by COVID-19 (UNICEF, 2019).

Early childhood care and development support children to grow, learn and develop. When children begin learning from a young age, they are more confident, are well-prepared to enter primary school and can communicate their thoughts with adults. Early Childhood Care and Development (ECCD) program provides children to get the best possible start in their lives. Currently, just 23% of children have access to pre-schools and playgroups in Myanmar and these are mainly in urban areas.

Early childhood education programs are important in preparing children for school. In Myanmar, preschool services are offered for all children age 3 and 4 years, including services providing activities to transition children to kindergarten and primary school. Social organizations, the Department of Social Welfare, voluntary welfare schools run by NGOs, private schools, monasteries, and churches also provide day care and similar preschools and preprimary classes attached to basic education schools (MOHS and ICF, 2017).

While the country has a national early childhood development policy, much of the curriculum focuses on preschool-aged children and measures of early childhood development in Myanmar are limited and may vary by demographic characteristics, socio-economic conditions of parents and cultural differences.

Although early childhood development is essential for each and every child in the country, there is very limited studies have been undertaken concerning early childhood development in Myanmar. The findings of this study may appraise the policy makers regarding the development of children aged 36 to 59 months in Myanmar.

2. Objectives of the Study

This study mainly aims to discover the factors associated with early childhood development in Myanmar. The specific objectives of the study are

(i) to explore the factors associated with early childhood education program

(ii) to explore the factors associated with early childhood learning materials and

(iii) to explore the factors associated with support for learning.

II. Literature Review

According to the Convention on the Right of the child, early childhood is defined as the first 8 years of age (United Nations, 1989). However, UNICEF's ECDI (Early Childhood Development Index) is focused on children under 5 years old. Since the events during this time shape their health and social outcomes, this period is crucial on children's cognitive, social, emotional and physical development (Shonkoff and Phillips, 2000). Healthy and socially adapt children are more likely to be economically and socially productive when they grow up (Heckman, 2006). Although genetics play a vital role in brain development of the children, several factors can alternate genetic traits.

That's why, there a number of studies have been investigated the impact of socio-economic and demographic factors on early childhood development. Studies have found an association between economic status and children's cognition and school attainment (Sigman, 1991; Stein, 2005). A study in Madagascar also showed that children from wealthiest families, or with mothers who had secondary education, performed better in cognitive and language tests (Fernald et al., 2011).

Caregiver engagement with children in activities such as reading or looking at picture books; telling stories; singing songs; taking children outside the home; playing; and naming/counting are one of the most important factors on the language development of the children (Hart and Risley, 1995).

The study of Bornstein and Putnick (2012) showed that only 25% of the mothers have read to their children in the past 3 days, more than one third have told stories to their children in the past 3 days, and 47% have counted, named or engaged in other learning activities. The same authors looked at learning opportunities at home, and found that the number of children's books is generally low. Poorer households tend to have fewer children's books, which could explain the low percentage of parents that read to their children.

Another study found that in all the countries surveyed, except for Cote d'Ivoire and the Gambia, children in the richest 20% of households received more support for learning than children in the poorest 20% of households. In most countries surveyed, mothers are the most likely to engage young children in early learning activities. While there is evidence on the importance of a father's engagement in the socio-emotional development of his children (Cabrera et al., 2007), fathers are, on average, 2 to 3 times less likely than mothers to be involved in early learning activities (UNICEF, 2012).

Availability of books and toys can additionally support development of the child. Children who grow up in households where books are available are likely to get, on

average, 3 more years of schooling than children from homes with no books (Evans et al., 2010). The percentage of households with 3 or more children's books varies from almost zero in the Lao PDR to almost 97% in Ukraine.

Access to early education programs is an important factor. Early childhood care and education make up the foundation of a quality basic education (Irwin et al., 2007). Early education programs include day care facilities, kindergartens, preschools, and other community programs. These programs benefit not only children, but also mothers who can use the free time to invest in their education or career.

In a third of countries surveyed, attendance in such programs is 10% or less. While these programs are widely available, it is usually the wealthier children who have access to them. This is worrisome since early education programs can be used to reduce gaps in cognitive skills that often determine children's future low social and economic status. Furthermore, recent studies showed that the returns on such investments are highest among poorer children, and can serve as stepping stone out of poverty and exclusion (Heckman, 2006).

III. Methodology

1. Source of Data and Sample Size

For the data analysis, the datasets from the 2015-16 Myanmar Demographic and Health Survey (MDHS) was used. This study emphasized only on 7395 children age between 36 and 59 months. To obtain nationally representative estimates, sampling weights were applied and only 1942 children age between 36 and 59 months were included in the final weighted samples.

2. Variables and Categorizations

To explore the factors associated with early childhood development, the dependent variables considered in this study are early childhood education, early childhood learning materials and support for learning. Independent variables are divided into three groups such as parental, child's and household characteristics. The description and categorizations for the variables are as follow.

Model	Dependent variables
Model 1	Y= Early childhood education = 1 if participated = 0 if no or don't know
Model 2	Y= Early childhood learning materials = 1 if children have books and playing things = 0 if children have not books and playing things
Model 3	Y= Support for learning = 1 if father and/or mother support for learning = 0 if father and mother do not support for learning

Independent Variables (For all models)

Parental Characteristics	Child's Characteristics	Household Characteristics
X1= Age of mother = 1 if 15-19 years = 2 if 20-24 years = 3 if 25-29 years = 4 if 30-34 years = 5 if 35-39 years = 6 if 40 years and above	X6= Age of children = 1 if 36-47 months = 2 if 48-59 months	X9 = Residence = 1 if urban = 2 if rural
X2= Education of mother = 1 if no education = 2 if primary = 3 if secondary = 4 if higher	X7= Sex of children = 1 if boys = 2 if girls	States/ Regions X10 = 1 if Chin = 2 if Kachin = 3 if Kayah = 4 if Kayin = 5 if Sagaing = 6 if Tanintharyi = 7 if Bago = 8 if Magway = 9 if Mandalay = 10 if Mon = 11 if Rakhine = 12 if Yangon = 13 if Shan = 14 if Ayeyarwady = 15 if Nay Pyi Taw
X3= Employment status of mother = 1 if unemployed = 2 if employed	X8= Birth order of children = 1 if first = 2 if second = 3 if third = 4 if 4 and above	X11 = Wealth index = 2 if poorer = 3 if middle = 4 if richer = 4 if richest
X4= Education of father = 1 if no education = 2 if primary = 3 if secondary = 4 if higher		
X5= Occupation of father = 1 if unskilled labor = 2 if skilled labor = 3 if professional = 4 if agriculture = 5 if other		

3. Statistical Analysis

Data were analyzed using the STATA version 15. The descriptive statistics, the Chi-squares test for bivariate analysis and to demonstrate the association between dependent and independent variables, the binary logistic regression model for multivariate analysis were carried out as the dependent variables used in this study are categorical.

IV. Findings

1. Descriptive Analysis

Appendix Table 1 shows the percent distribution of children by background characteristics. The results indicate that 25.49% and 25.28% of children's mothers are in the age of 24-29 and 30-34 years, respectively. The 46.34% of children's mothers have only primary level of education and 60.30% of those are employed. Likewise, the 42.43% children's fathers have only primary level of education and 38.72%u of those are unskilled labors. The 51.80% of children are 48-59 months old, 47.73% are girls and about 30% of the children are the first child. The 80.18% of the children are from the rural area, 10.09%, 4.69% and 5.56% of those are from Chin state, Yangon region and Nay Pyi Taw, respectively. The 32.34% of children are from poorer households while only 11.84% of those are from richest households.

2. Bivariate Analysis

The bivariate analysis on the relationship between early childhood education development variables and independent variables was performed using chi-square test and the results of early childhood education, early childhood learning material and support for learning by parental, child's and household characteristics are shown in Appendix Table 1.

It is found that the participation in early childhood education programs is significantly associated with education level of mother, education level of father, occupation of father, age of children, birth order of children, residence, states/ regions and wealth index at 1% level.

Having access to early childhood learning material is significantly associated with education level of mother, education level of father, occupation of father, age of children (10% level), and birth order of children, residence, states / regions and wealth index at 1% level. Moreover, it is significantly associated with age of mother and employment status of mother at 5 % and 1% levels, respectively.

Furthermore, parent engagement in support for early learning activities to promote learning and school readiness is significantly associated with education level of mother, education level of father, occupation of father, age of children (5% level), and birth order of children, residence, states / regions and wealth index at 1% level.

3. Multivariate Analysis

Binary logistic regression analysis was performed to investigate the factors associated with early childhood development, using the dependent and independent variables mentioned above.

1) Early childhood education (Model 1)

The summary results of the factors associated with participation in early childhood education programs are shown in Appendix Table 2.

Dealing with parental characteristics, the odds of mother education at secondary level and higher level are 1.82 and 1.97 times higher for participation in early childhood education programs, respectively, compared to no education of mother. Likewise, the odds of father education at primary level and secondary level are 1.48 and 1.46 times higher for participation in early childhood education programs, respectively, compared to no education of father.

Regarding child's characteristics, the participation in early childhood education programs for children age of 48-59 months is 2.83 times higher than those of 36-47 months old children.

Concerning household characteristics, children in Chin state are 3.65 times more likely to participate in early childhood education programs than those in Kayah state whereas 0.31 to 0.79 times less likely to participate in early childhood education programs than those in some other states and regions (except for Kachin, Sagaing, Mandalay, Mon and Shan). Besides, children of middle, richer and richest families are 1.57, 2.78 and 3.56 times higher participation in early childhood education programs than those in poorer families.

2) Early childhood learning material (Model 2)

In addition to early childhood education, this study used early childhood learning material such as books and playing things as a predictor of early childhood development. Appendix Table 3 shows the results of the factors associated with access to early childhood learning material.

Among the parental characteristics, children with mother's age of 20-24, 25-29, 30-34, 35-39, and 40 years and above are 0.10, 0.17, 0.21, 0.24 and 0.27 times, respectively, less likely to have access to books and playing things than those of 15-19 years old mothers. Children whose mothers have secondary level and higher level education are 2.33 and 4.53 times more likely to have access to books and playing things, respectively, compared to children whose mothers have no education.

Similarly, children whose fathers have higher level education are 2.30 times more likely to have access to books and playing things than those fathers have no education. Also, children whose fathers engage in skilled labor, professional, agriculture and other jobs are 1.74, 2.44, 1.61 and 1.68 times, respectively, more likely to have access to books and playing things than those fathers are unskilled labors.

Regarding child's characteristics, the odd ratio indicates that having access to learning materials such as books and playing things for children age of 48-59 months is 1.95 times higher than those of 36-47 months old children.

Concerning household characteristics, children in rural areas are 0.58 times less likely to have access to early childhood learning materials than their urban counterparts. Children in Chin state are 1.80 times more likely to have access to books and playing things than those in Kachin state while they are 0.43 times less likely to have access to books and playing things than those in Nay Pyi Taw. Moreover, children of middle, richer and richest families are 1.71, 2.71 and 4.86 times, respectively, higher in having access to books and playing things than those in poorer families.

3) Support for learning (Model 3)

Other than early childhood learning material, support for learning was used as a predictor of early childhood development in this study. Appendix Table 4 displays the results of the factors associated with parent engagement in support for early childhood learning.

In terms of the parental characteristics, mothers in the age of 30-34, 35-39, and 40 years and above are 3.93, 4.18 and 5.04 times, respectively, more likely to engage in support for learning than 15-19 years old mothers. Mothers having primary level and secondary level education are 1.35 and 1.59 times more likely to engage in support for learning, respectively, compared to those with no education. Correspondingly, fathers with primary level education are 1.41 times more likely to engage in support for learning than fathers having no education. However, fathers occupy in professional, agricultural and other jobs are 0.59, 0.77 and 0.63 times, respectively, less likely to engage in support for learning than unskilled labor fathers.

Relating to child's characteristics, the odd ratio points out that parent engaged in support for learning activities of 48-59 months old children is 0.66 times lower than those of 36-47 months old children. Concerning child's birth order, the second, third and fourth and above children are 0.66, 0.54 and 0.41 times, respectively, less likely to engage in learning activities with parents than the first child.

Dealing with household characteristics, children in Chin state are 1.98, 2.34 and

2.54 times more likely to engage in learning activities with parents than those in Kayah, Rakhine and Ayeyarwaddy, respectively, but they are 0.64 times less likely to engage in learning activities with parents than those in Sagaing region.

V. Conclusion

Early childhood development is essential for each and every child all over the world. This study tried to provide key factors associated early childhood development in Myanmar using the data from the Myanmar Demographic and Health Survey.

Although the relationship between early childhood education development variables and independent variables apart from sex of children are statistically significant, the findings highlight that the education levels of both mother and father and states/regions have consistent associations with all three early childhood development predictors used in this study.

Thus, mediations should be intended to improve education levels and develop the states/regions in the country. The results of this study will support the government of Myanmar, civil society, communities, and other stakeholders to design and implement programs and policies which help the early child care and education. Consequently, the young children can reach their full potential by assisting families and communities and rising access to quality early childhood development.

Acknowledgements

My deepest gratitude goes to the Rector and Pro-Rectors of Yangon University of Economics for giving the chance to prepare this paper. I would like to thank to the Head of the Department and all Professors for encouraging me to write the research paper. My special thanks go to authors and publishers of different journals for open access to researchers, without them this study would be not realized. Moreover, I am especially thankful to all the anonymous reviewers and the editors for having an opportunity to publish in this journal.

References

Bornstein MH, Putnick DL. 2012. Cognitive and Socioemotional Caregiving in Developing Countries. Child Development 83: 46-61.

Cabrera NJ, Jacqueline DS, Catherine TLM. 2007. Fathers' Influence on Their Children's Cognitive and Emotional Development: From toddlers to pre-K. Applied Development Science 11 (4): 208-213.

Evans MDR. et al. 2010. Family Scholarly Culture and Educational Success: Books and schooling in 27 nations. Research in Social Stratification and Mobility 28 (2): 171-197.

Fernald LC, Weber A, Galasso E et al. 2011. Socioeconomic gradients and child development in a very low income population: Evidence from Madagascar. Dev. Sci. 14: 832-47.

Hart B, Risley TR. 1995. Meaningful differences in the everyday experience of young American children. Paul H Brookes Publishing.

Heckman JJ. 2006. Skill Formation and the Economics of Investing in Disadvantaged Children. Science 312 (5782): 1900-1902.

Irwin LG, Arjumand S, Clyde H. 2007. Early Childhood Development: A powerful equalizer. Final report for the World Health Organization's Commission on the Social Determinants of Health. Human Early Learning Partnership, Vancouver.

Kondirolli F. 2017. Determinants of Early Childhood Development in Kosovo, Master of Public Administration Thesis. Faculty of the Graduate School, Cornell University.

Milner EM. 2016. Environmental Determinants of Early Childhood Development in Rural Kenya. Doctor of Philosophy dissertation. Faculty of Environmental Health Sciences, University of California.

Ministry of Health and Sports and ICF. 2017. Myanmar Demographic and Health Survey: 2015-2016. Nay Pyi Taw, Myanmar and Rockville, MD, USA.

Rai NK, Tiwari, T, 2018. Parental Factors Influencing the Development of Early Childhood Caries in Developing Nations: A Systematic Review. Front. Public Health 6, Article 64: 1-8.

Shonkoff J, Phillips D. 2000. From neurons to neighborhoods: the science of early childhood development. Committee on Integrating the Science of Early Childhood Development, National Research Council.

Sigman M, McDonald MA, Neumann C, Bwibo N. 1991. Prediction of cognitive competence in Kenyan children from toddler nutrition, family characteristics and abilities, J. Child Psychol. Psychiatry 32: 307-320.

Stein AD, Behrman JR, DiGirolamo A et al. 2005. Schooling, educational achievement and cognitive functioning among young Guatemalan adults. FoodNutr. Bull. 26: 46-54.

UNICEF. 2020. For Every Child, Reimagine: UNICEF Annual Report 2019. New York, USA.

The Myanmar JOURNAL

– Volume 9 Number 1 February 2022

28 February 2022

Yangon University of Economics (Myanmar)
Korea Myanmar Research Association (Korea)
2014~, Semiannual
ISSN : 2383-6563(Online)

Co-published with **Yangon University of Economics (YUE)** and
Korea Myanmar Research Association (KOMYRA)
http://www.komyra.com/doc/submission.php