

# Early Childhood Education and Social Economic Status

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**Abstract**—This study examines the early childhood education and social economic status of children between 2 – 5 years of age in Emuoha Local Government Area of Rivers State, Nigeria. The results provide evidence of a significant linear relationship between family income and early childhood education. However, there is no evidence of a significant relationship between mothers' employment status and early childhood education. The study recommends that government educational policies should focus on children at the grass root level and provide unlimited access to quality education regardless of their family socio-economic conditions.

**Keywords**—Early childhood, Education, Income, Socio-economic Status, Family Income

## I INTRODUCTION

The first goal in the Education for All (EFA) adopted by the World Education Forum at Dakar Framework for Action, is expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children (Barry, Brun, & Baeyens, 2000; UNICEF, 2013). This suggests that all children born must enjoy healthy, safe and caring learning environment, notwithstanding the background of the child. It primarily behooves the government to mobilize all the necessary resources to ensure that there are quality and adequate basic and early childhood care and education for all, including socio-economically disadvantaged children.

As real and concerted efforts are being made by most governments across the world to achieve this goal of the World Education Forum; more needs to be done, as the challenges of poverty and under nutrition remain apparent, especially in the less developed and developing countries including Nigeria.

From the Global study, in 2010, 171 million children under the age of 5 were affected by moderate or severe stunting (de Onis, & Blossner, Borghi, 2011; Prendergast&Humphrey, 2014). It also predicts that one out of four children under the same age of 5 will suffer stunting by 2015. Stunting presupposes a health condition where a child or a person is distorted in growth and size, as a result of chronic under nutrition during the early childhood; it is associated with suboptimal brain damage which has a long and significant negative impact on the cognitive ability of the child. "57% of children in developing countries, including 83% of Sun-Saharan Africa and 78% of the Arab region, are unable to have access to preschool" (Kristjansson et al., 2012, P. 1; UNICEF, 2013, P. 1).

The most vulnerable and disadvantaged children that are living in the poorest households are about 10 times less likely to attend early childhood education than their peers in rich households. This is because they were born with high-risk factors such as poverty, poor health care system, malnutrition, heightened environmental and family stress, exposed to infectious diseases and HIV/AIDS, Violence, abuses, neglect, migration, exploitation, and inadequate education opportunities (Engle, & Maureen, Black, 2008; Ferguson, Bovaird & Mueller, 2007; UNICEF, 2013; Valdez, 2015). It follows that about 200 million children under the age of 5 in developing countries may not reach their full development potentials; at least 250 million children across the world, at primary school-age, are unable to attend the minimum learning standard; because they cannot read, write nor count very well; notwithstanding that some of them have spent four years and above in the school (UNICEF, 2013; Hassan, Idu, Uyo, & Ogbole, 2012)

In Nigeria, a remarkable progress has been made in the effort to achieve improved living standard of children. However, greater effort needs to be made to achieve more. The mortality of children under the age of 5 has reduced from 201 out of every 1000 in 2003 to 124 in 2011. There is also an improvement in the nutrition of children under the age of 5; because the percentage of stunted children under the age of 5, has reduced from 41 percent in 2008 to 36 in 2011 (UNICEF, 2013).

However, in this study, malnutrition and under nutrition are used interchangeably. Malnutrition is a term used to refer to both under nutrition and over nutrition. It is a nutrition disorder. For example, if one consumes excess calories and protein, it is referred to as over nutrition, and it leads to obesity. On the other hand, if one consumes insufficient calories and protein it is referred to as under nutrition.

Poverty and under nutrition cannot be separated from each other. Poverty begets under nutrition. Poverty causes hunger, disease and under nutrition. Under nutrition at early childhood causes low mental and physical development, and cannot be remedied; as a result, it leads to poor educational performance, low income and low standard of living in the long run (Hadded, 2000).

The result of an effective early childhood education is adequate cognitive abilities. Cognitive abilities are mental based skills that are needed for effective reasoning, thinking and problem-solving from simple to complex. It is easily

developed by a child within the first 1000 days of his life, with the help of adequate nutrition (UNICEF, 2013).

More specifically, the objectives of this study are to determine whether there is relationship between family socio-economic status and early childhood education, and to determine whether there is relationship between family income and early childhood education.

## II LITERATURE REVIEW

### 2.1 Theoretical Framework

#### *Jean Piaget's Theory of Cognitive Development:*

Jean Piaget's theory of cognitive development is widely acknowledged as a preeminent theory on evaluating child cognitive development (Simatwa, 2010; Weibell, 2011). This theory can be used to explain factors that can affect the cognitive ability of a child during childhood education. The Piaget's theory of intellectual development according to Simatwa (2010) and Ojose (2008), states that children progress through four stages of intellectual development namely sensorimotor, preoperational, concrete operational, and formal operational. This intellectual development starts from 'rudimentary reflex response' and with the formal deductive reasoning, attains complete maturity (Simatwa, 2010). Piaget's theory also describes that child as an 'active investigator' who reacts to his environment with reflex responses as an infant and later during his early childhood interaction responds in a more complex way.

For Piaget, interaction involves assimilation and accommodation. Assimilation is a situation where the child, for example, absorbs new experience and information into an existing system or structure. On the other hand, accommodation suggests a situation where knowledge and experience a child gathers concerning his environment is modified by allowing the absorption of more fresh information as required by the environment at that time (Weibell, 2011; Simatwa, 2010). Ball, Bindler & Cowen (2010) note that Piaget's theory presupposes that the perception of the child concerning life is largely influenced by the child's age, nurturing experience, and natural thinking maturational ability. Children are major players in developing their own cognitive ability; by absorbing new experiences through assimilation and changes to dwell on these experiences through accommodation (Ball, Binder & Cowen, 2010). However, Simatwa (2010) posits that the relationship between accommodation and assimilation is reciprocal and their interaction results in improvement in the cognitive ability.

According to Simatwa (2010, p. 2), "the major stages of Piaget's cognitive growth are sensory motor stage; which is between 0-2 years, Preoperational or intuitive stage; which is between 2-7 years, concrete operations stage; which is 7-11 years and formal operations stage which is 11-15 years".

In line with the interest of this study which is based on the impact of socio-economic disadvantages on early childhood

education, which suggests that the sensory motor stage and the preoperational or intuitive stage of Piaget's cognitive growth stages are associated with this study (Simatwa, 2010). The effects of these stages suggest that for children at these stages to achieve quality cognitive growth, the families, day-care centres, child development agencies and the governments, should initiate intervention policies and programmes that would ensure quality and effective sensory and intuitive environment. For example, they should be more concerned about the nutritional and health status of these socioeconomically disadvantaged children (Simatwa, 2010). Piaget's theory is relevant to this study in the sense that the caregivers, for example, should be able to understand the children's thought pattern in so as to come up with appropriate activities and educational plans; such as toys, story books, draw pictures and games. Also, for children behaving strangely as a result of anxiety and other negative socio-economic factors a warm support from the parents will be relevant (Ball, Bindler & Cowen, 2010).

### 2.2 Empirical Review

Acharya, Teijlingen, Murphy & Hind (2015) investigated nutritional problems in preschool-age children for Kaski District of Nepal, using cross-sectional mixed-methods approach comprising of the quantitative and qualitative survey utilizing 524 mothers of children who are no longer breastfed. The study investigates Knowledge, beliefs and attitudes about nutritious food, child feeding patterns, and major barriers, food insecurity, and health seeking behaviour. They study found that about 42% of mothers included in the study have little or no knowledge of the signs and symptoms of under nutrition, and 20% believe that it is harmful to consume nutritious food when suffering from illness. They study also finds that age of the mother, level of education, child's age and gender, family type, and size, all have significant relationship with nutritional problems in 3-5 years old children. The study further shows that poverty, caste, gender and social inequality and conflict are considered as secondary contributors to challenges of under nutrition in Nepal.

Alderman, Hoddinott, and Kinsey (2003) using a maternal fixed effects instrumental variable with a long-term panel data set, investigated the long-term consequence of early childhood malnutrition by examining the impact of preschool malnutrition on subsequent human capital formation in Zimbabwe. Proxies of civil war and drought "shocks" are used to show differences in preschool nutritional status across siblings. The study shows that increases in the height-for-age in preschoolers have a relationship with increased height as a young adult and number of schooling grades attained.

Adopting descriptive cross-sectional study Amosu, Degun, Atulomah and Olanrewju (2011) examined the nutritional status of under-5 children of low-income earners in a south-western Nigerian community. 600 children comprising 304 males and 296 females were randomly selected for the study. Height, weight, Chest, and Arm circumferences were used as

measures of nutritional status. Also utilized to calculate the children's weight-for-age, height-for-age, and weight-for-height. A pretested questionnaire was employed to gather information on the socio-demographic and economic characteristics, household food purchase and infant feeding practices of children's mothers. The result of the study shows that the differences between the males and females children included in the study were not significant. In terms of weight-for-age, 82.13% of the Under-5 children were underweight, 33.52% were stunted while 85.15% were wasted. The result also indicates that in all the children, there is an inadequacy in the consumption of protein, iron, calcium and vitamin A. Perhaps, this is as a result of the high level of illiteracy of the mothers to the tune of 80.7% and very low of the monthly income level of 1500-5900 Naira. In a nutshell, the study finds that malnutrition is very common among the Under-5 children in relation to those that are well nourished.

Chilton, Chyatte and Breaux (2007) investigate the negative effects of poverty and food insecurity on child development, by examining the importance of early childhood nutrition on child health and education. They observe that investment in early child education, maternal-child physical and emotional care and nourishment and effective nutritional initiatives are important in addressing the problems of poverty. They see under nutrition and poor development of a child as an injustice to the child. Additionally, Akindele (2012), examines how poverty that manifests in the form of inadequate infrastructure, inaccessibility of schools, low supply of qualified and trained school teachers, and the paucity of the fund to implement effective educational policies that will promote Early Childhood Education, affect early childhood education in Nigeria. The study recommended practical ways out of poverty, particularly early childhood poverty. For example, the formulation and effective implementation of poverty eradication policies and programmes, with effective public-private participation.

### III METHODOLOGY

#### 3.1 Data and Sample

The sample consists of 300 respondents drawn from the five communities, 60 for each community in Emuoha Local Government Area of Rivers State, Nigeria. The communities are Emuoha, Ndele, Elele Alimi, Ogbakiri and Rundele. The respondents are mothers (or guardians) of children between 2 – 5 years of age regardless of child enrolment status.

This study uses a descriptive survey research design. There is evidence in the literature that suggests that it is the most suitable for obtaining information about child nutrition and education. In this study, the instrument used to collect data is a structured questionnaire.

The sample was obtained using two different non-probability methods. Specifically, convenience and purposive sampling technique was used. The convenience sampling will be used to

select the five communities considering their proximity to the researcher. On the other hand, the purposive sampling will be used to select 60 respondents from each community because the researcher believes that this technique will produce the desired results since the target individuals share similar (specific) features (mothers of children between 2 – 5 years of age).

#### 3.2 Research Instrument

In this study, the instrument used to collect data is a structured questionnaire titled Poverty, Malnutrition and Early Childhood Education (PMECE). The questionnaire comprises four sections, A, B, C and D. Section A is designed to collect the biological information about the respondents, section B is designed to collect the mother's socioeconomic information, Section C is designed to collect the child's nutritional information and section D is designed to collect the child's education and enrolment information.

#### 3.3 Method of data analysis

To analyze the impact of malnutrition and poverty on early childhood education, several different statistical methods will be employed. These include frequencies, percentages and correlation analysis. Frequencies and percentages will be used for descriptive analysis while Chi-square test of linear association will be used for inferential analysis and hypothesis testing. These methods will be employed because of body of empirical evidence that suggests that they can be used to capture the relationships of interest.

## IV DATA ANALYSIS AND RESULTS

#### 4.1 Mother's Employment Status

Figure 1 shows the employment status of mothers of the children under study. As this figure indicates, mothers who are currently employed or self-employed are substantially higher than mothers who are currently unemployed. 195 (65%) of the mothers are currently employed while 105 (35%) of them are currently unemployed.

#### 4.2 Family Income

Figure 2 shows the estimated income levels of mothers of children under study. As we can see, 128 (42.7%) of the mothers earn between ₦18,000 – ₦24,999 per month, 118 (39.3%) earn between ₦25,000 – ₦31,999 per month, 25 (8.3%), 13 (4.3%) and 16 (5.3%) earn between ₦32,000 – ₦38,999, ₦39,000 – ₦45,999 and ₦46,000 or above per month respectively. From table 4.1, majority (60.2%) of the mothers who are in the lowest income category (₦18,000 – ₦24,999) are farmers, hunters or fishermen while almost all (93.8%) of those in the highest income category (₦46,000 or above) are teachers or civil servants.

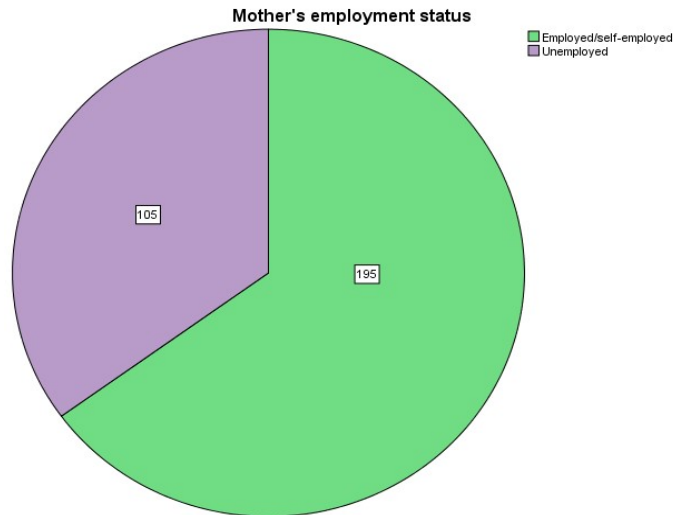


Figure 1: Mother's employment status; source: Author's Field Report 2015

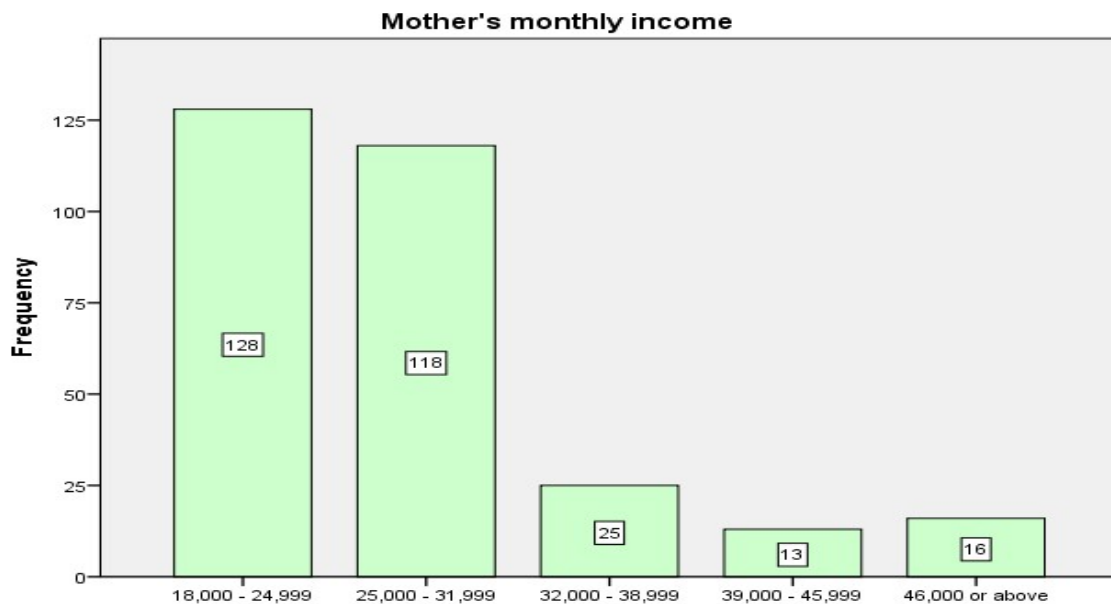


Figure 2: Mother's Income Level

Source: Author's Field Report 2015

TABLE 1: PERCENTAGE DISTRIBUTION OF MOTHER'S OCCUPATION BY INCOME LEVEL

Mother's Income Level	Farmer/Fisherman/Hunter	Trader/ Businessman	Artist/ Craftsman	Agent/ Contractor	Pastor/ Clergy	Teacher/Civil Servant
₦18,000 - ₦24,999	77 (60.2%)	36 (28.1%)	3 (2.3%)	8 (6.2%)	3 (2.3%)	1 (0.8%)
₦25,000 - ₦31,999	41 (34.7%)	44 (37.3%)	6 (5.1%)	23 (19.5%)	0 (0.0%)	4 (3.4%)
₦32,000 - ₦38,999	6 (24.0%)	4 (16.0%)	2 (8.0%)	12 (48.0%)	1 (4.0%)	0 (0.0%)
₦39,000 - ₦45,999	1 (7.7%)	1 (7.7%)	0 (0.0%)	1 (7.7%)	8 (61.5%)	2 (15.4%)
₦46,000 or above	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (6.2%)	15 (93.8%)
Total	125 (41.7%)	85 (28.3%)	11 (3.7%)	44 (14.7%)	13 (4.3%)	22 (7.3%)

Figure 3 indicates that 121 (40.3%) of the mothers do not have other source of income apart from their regular work while 179 (59.7%) of them have. Thus, there is substantial

difference between mothers who have supplementary income source and those who do not have.

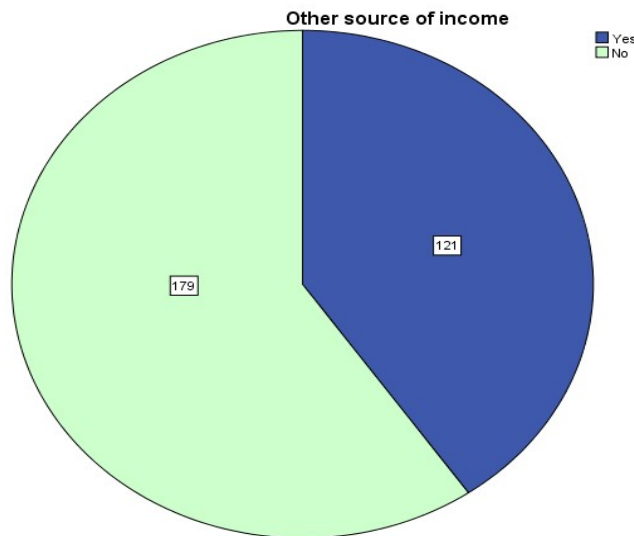


Figure 3: Other source of income; source: Author’s Field Report 2015

#### 4.3 Child’s Enrolment Information

Table 2 shows the number of children of school age who have ever attended school. As we can see, 54.7% of the children have ever attended school while 45.3% are yet to attend school.

TABLE 2: HAS YOUR CHILD EVER ATTENDED SCHOOL?

Options	Frequency	Percentage
Yes	164	54.7%
No	136	45.3%
Total	300	100%

Source: Field work 2015

Table 3 shows the number of children of school age who are currently enrolled in school. As we can see, 54.7% of the children are currently enrolled in school while 45.3% are not currently enrolled in school.

TABLE 3. IS HE/SHE CURRENTLY ENROLLED IN SCHOOL?

Options	Frequency	Percentage
Yes	164	54.7%
No	136	45.3%
Total	300	100%

Source: Field work 2015

Table 4 shows the number of children of school age who are currently at school this year. As we can see, 54.7% of the children are currently at school this year while 45.3% are not currently at school.

TABLE 4. IS HE/SHE CURRENTLY AT SCHOOL THIS YEAR?

Options	Frequency	Percentage
Yes	164	54.7%
No	136	45.3%
Total	300	100%

Source: Field work 2015

Table 5 shows the type of school the children under study are currently enrolled or planned to be enrolled. As we can see, majority of the children (214 or 71.3%) are either currently enrolled or planned to be enrolled in public schools while 86 (28.7%) of them are either currently enrolled or planned to be enrolled in mission schools. No child is currently enrolled in a private school.

TABLE 5 WHAT TYPE OF SCHOOL IS HE/SHE CURRENTLY ENROLLED OR PLANNED TO BE ENROLLED?

Options	Frequency	Percentage
Public School	214	71.3%
Private School	0	0%
Mission School	86	28.7%
Total	300	100%

Source: Field work 2015

Table 6 shows that the majority of the children under study are currently at Nursery school level while 71 (23.7%) of them are currently at Pre-Nursery school level. No child is currently at Primary School Level.



TABLE 6. WHAT IS HIS/HER CURRENT LEVEL OR GRADE AT SCHOOL?

Options	Frequency	Percentage
Pre-Nursery	71	23.7%
Nursery	227	76.3%
Primary	0	0%
Total	300	100%

Source: Field work 2015

Table 7 shows how many times on average a child goes to school in a week. As this table reveals, only 69 (23%) of the children go to school every school day, 89 (29.7%) go to school more than three times a week and 142 (47.3%) go to school less than three times a week.

TABLE 7. HOW MANY TIMES ON AVERAGE DOES HE/SHE GO TO SCHOOL IN A WEEK?

Options	Frequency	Percentage
Every school day	69	23%
Not every school day but more than three times a week	89	29.7%
Less than three times a week	142	47.3%
Total	300	100%

Source: Field work 2015

Table 8 shows the mothers' rating of their children performance in school or school-like activities at home. As we can see, more than half of the children (199 or 66.3%) are rated below average in performance, 63 (21%) are rated average in performance, and only 38 (12.7%) are rated above average.

TABLE 8. HOW CAN YOU RATE HIS/HER PERFORMANCE AT SCHOOL OR SCHOOL-LIKE ACTIVITIES AT HOME?

Options	Frequency	Percentage
Below Average	199	66.3%
Average	63	21%
Above Average	38	12.7%
Total	300	100%

TABLE 9. CROSSTABS FOR FAMILY INCOME AND EARLY CHILDHOOD EDUCATION

Cross tabulation: Daily food expenses* How many times does your child go to school in a week?					
		How many times does he/she go to school in a week?			
		Ever school day	Not every school day but more than three days a week	Less than three days a week	Total
Family Income	₦18,000 - ₦24,999	26 (20.3%)	41 (38%)	61 (60.6%)	128 (42.7%)
	₦25,000 - ₦31,999	25 (21.2%)	32 (27.1%)	61 (51.7%)	118 (39.3%)
	₦32,000 - ₦38,999	6 (24%)	7 (28%)	12 (48%)	25 (8.3%)
	₦39,000 - ₦45,999	7 (53.8%)	3 (23.1%)	3 (23.1%)	13 (4.3%)
	₦46,000 or above	5 (31.2%)	6 (37.5%)	5 (31.2%)	16 (5.3%)
Total		69 (23%)	89 (29.7%)	142 (47.3%)	300 (100%)

Source: Author (SPSS output)

Source: Field work 2015

#### 4.4 Inferential Analysis and Hypothesis Testing

The inferential analysis is based on cross-tabulation of the relationships of interests while the hypothesis testing is based on Chi-Square test of Linear by Linear Association (LLA).

##### 4.4.1 The Relationship between Family Income and Early Childhood Education:

$H_{03}$ : There is no significant relationship between family income and early childhood education

The analysis of the relationship between family income and early childhood education is based on the information in table 9 which shows the cross tabulation of number of mother's monthly income and number of days he/she goes to school in a week. It is our view that the number of mother's monthly income is a good proxy for family income since the respondents comprise mothers of children under study. Again, we use the number of days a child goes to school in a week to proxy early childhood education. As table 9 reveals, more than half (60.6%) of the 128 children whose mothers or head of households earn between ₦18,000 – ₦24,999 in a month (the largest category of children) go to school less than three days a week, and 51.7% of the children whose mothers or head of households earn between ₦25,000 – ₦31,999 in a month (the second largest category of children) go to school less than three days in a week. This may suggest a linear association between mother's monthly income and early childhood education.

To test the third hypothesis, the Chi-square test of linear association is used since the analysis of the relationship between mother's monthly income and early childhood education is based on counts and percentages of categorical nominal data. As we can see from table 4.18b, the LLA  $\chi^2$  statistics is significant at 5% significant level ( $\chi^2 = 4.007, p = 0.045$ ), suggesting evidence of linear association between mother's monthly income and the number days he/she eats in a week. The hypothesis of no significant relationship between family income and early childhood education is therefore, rejected

TABLE 10 TEST OF LINEAR BY LINEAR ASSOCIATION (LLA)

Chi-square tests	Value	Asymptotic Sig. (2-sided)
LLA $\chi^2$ statistic	4.007	0.045

Source: Author (SPSS output)

4.4.2 *The Relationship between Socio-Economic Status and Early Childhood Education:*

$H_{04}$ : There is no significant relationship between socio-economic status and early childhood education

The analysis of the relationship between socio-economic status and early childhood education is based on the information in table 11 which shows the cross tabulation of number of mother’s employment status and number of days he/she goes to school in a week. Here, we used mother’s employment status to proxy socio-economic status because it is our view that a child whose mother is currently unemployed is more likely to be malnourished than a child whose mother is currently employed or self-employed. As usual, we use the number of days a child goes to school in a week to proxy early childhood education. As table 11 reveals, 95 (48.7%) of the

195 children whose mothers are currently employed or self-employed go to school less than three days in a week, 56 (28.7%) go to school more than three days a week but not every school day, and 44 (22.6%) go to school every school day. For the 105 children whose mothers are currently unemployed, 47 (44.8%) go to school less than three days a week, 33 (31.4%) go to school more than three days a week but not every school day, and 25 (23.8%) go to school every school day. This may also suggest a linear association between mother’s employment status and how many times a child goes to school in a week.

To test the fourth hypothesis, the Chi-square test of linear association is used since the analysis of the relationship between mother’s employment status and early childhood education is based on counts and percentages of categorical nominal data. As we can see from table 12, the LLA  $\chi^2$  statistics is not significant at conventional levels ( $\chi^2 = 0.286, p = 0.593$ ), suggesting no evidence of linear association between mother’s employment status and the number days he/she eats in a week. The hypothesis of no significant relationship between family socio-economic status and early childhood education is therefore, not rejected.

TABLE 11 CROSSTABS FOR FAMILY INCOME AND EARLY CHILDHOOD EDUCATION

Cross tabulation: Daily food expenses* How many times does your child go to school in a week?					
		How many times does he/she go to school in a week?			
		Every school day	Not every school day but more than three days a week	Less than three days a week	Total
Socio-Economic Status	Employed/Self-employed	44 (22.6%)	56 (28.7%)	95 (48.7%)	195 (65%)
	Unemployed	25 (23.8%)	33 (31.4%)	47 (44.8%)	105 (35%)
Total		69 (23%)	89 (29.7%)	142 (47.3%)	300 (100%)

Source: Author (SPSS output)

TABLE 12 TEST OF LINEAR BY LINEAR ASSOCIATION (LLA)

Chi-square tests	Value	Asymptotic Sig. (2-sided)
LLA $\chi^2$ statistic	0.286	0.593

SOURCE: AUTHOR (SPSS OUTPUT)

V DISCUSSION OF FINDINGS

First, the analysis of the relationship between family income and early childhood education in table 4.18a reveals that children whose mothers are in the lowest income category (i.e. ₦18,000 – ₦24,999) constitute about 43% of all the children under study, and approximately 61% of them go to school less than three days a week. Further, children whose mothers earn between ₦25,000 – ₦31,999 in a month constitute 39.3% of the all the children under study, and more than half of them (51.7%) go to school less than three times in a week. This also implies a direct association between mother’s monthly income and early childhood education. This is also supported by the results of hypothesis testing in table 4.18b which suggests clear evidence that mother’s monthly

income and early childhood education are linearly related. Thus, the null hypothesis that there is no significant relationship between family income and early childhood education was rejected. This finding is consistent with the argument that poor children and their parents hope and aspire for a better future but do not know actually how to achieve it (Treanor, 2012). This makes their peers from good income homes to have a competitive edge over them (Nicklas, & Hayes, 2008).

Second, the analysis of the relationship between family socioeconomic status and early childhood education in table 4.19a reveals that children whose mothers are currently employed or self-employed constitute 65% of the children under study, and 48.7% of them go to school less than three days in week while only 22.6% go to school every school day. On the other hand, children whose mothers are currently unemployed constitute 35% of the children under study, and 44.8% of them go to school less than three days in a week. This does not clearly suggest a direct association between mother’s socioeconomic status and early childhood education.

However, the result of hypothesis testing in table 4.19b suggests no evidence of linear association between socioeconomic status and early childhood education. Thus, the null hypothesis that there is no significant relationship between socioeconomic status and early childhood education was not rejected.

This study, however, recommends that government educational policies should focus on children at the grass root level and provide unlimited access to quality education regardless of their family socio-economic conditions. Hence the evidence provided by the result that there is a relationship between socioeconomic status and early childhood education in Rivers State, Nigeria.

#### REFERENCES

- [1]. Acharya, J., VanvanTeijlingen, E., Murphy, J., & Hind, M. (2015). Study on nutritional problems in preschool aged children of kaski district of Nepal.
- [2]. Alderman, H., Hodinott, J., & Kinsey, B. (2003). Long-Term Consequences of Early Childhood Education Malnutrition, *International Food Policy Research Institute*, Paper 168
- [3]. Amosu, A., Degun, A., Atulomah, N., & Olanrewju, M. (2011). A study on nutritional status of under-5 children of low-income earners in a south-western Nigerian community. *Nigeria, Maxwell Scientific Organization*.
- [4]. Ball, J., Bindler, R., & Cowen, K. (2010). Concepts of growth and development. *Child Health Nursing: Partnering with Children & Families*, , 141-154.
- [5]. Barry, U., Brun, K., & Baeyens, S. (2000, April). The Dakar framework for action. In *World Education Forum*.
- [6]. Chilton, M., Chyatte, M., & Breaux, J. (2007). The negative effects of poverty & food insecurity on child development. *Indian Journal of Medical Research*, 126(4), 262.
- [7]. de Onis, M., & Blossner, M. Borghi, Elaine. Prevalence and trends of stunting among pre-school children, 1990–2020. Geneva, Switzerland: World Health Organization; 2011. *Growth Assessment and Surveillance Unit*.
- [8]. Engle, P. L., & Maureen, M. Black. (2008). “The effect of poverty on child development and educational outcomes.”. *Annals of the New York Academy of Sciences*, 1136(1), 243-256.
- [9]. Ferguson, H., Bovaird, S., & Mueller, M. (2007). The impact of poverty on educational outcomes for children. *Paediatrics & Child Health*, 12(8), 701-706.
- [10]. Haddad, L. (2011). Ending under nutrition: Our legacy to the post 2015 generation. *Public Health Nutrition*, 1, 1-7.
- [11]. Hassan, A., Idu, A. Y., Uyo, A. J., & Ogbole, O. J. (2012). Rethinking poverty reduction and sustainable development in Nigeria: An advocacy for the bottom-top paradigm. *Canadian Social Science*, 8(6), 78-90.
- [12]. Kristjansson, E., Francis, D. K., Liberato, S., BenkhaltiJandu, M., Welch, V., Batal, M., . . . Shea, B. (2012). Feeding interventions for improving the physical and psychosocial health of disadvantaged children aged three months to five years. *The Cochrane Library*,
- [13]. Nicklas, T. A., & Hayes, D. (2008). Position of the American Dietetic Association: nutrition guidance for healthy children ages 2 to 11 years. *Journal of the American Dietetic Association*, 108(6), 1038-44.
- [14]. Ojose, B. (2008). Applying piaget's theory of cognitive development to mathematics instruction. *The Mathematics Educator*, 18(1)
- [15]. Prendergast, A. J., & Humphrey, J. H. (2014). The stunting syndrome in developing countries. *Paediatrics and international child health*, 34(4), 250-265.
- [16]. Simatwa, E. M. (2010). Piaget's theory of intellectual development and its implication for instructional management at pre-secondary school level. *Educational Research and Reviews*, 5(7), 366.
- [17]. Treanor, M. (2012). Impacts of poverty on children and young people. *Scottish Child Care and Protection Network (SCCPN)*.
- [18]. UNICEF. (2013). Improving child nutrition: The achievable imperative for global progress. *United Nations Children's Fund*.
- [19]. Valdez, J. (2015). Effects of poverty on children's education. *Nebraska College Preparatory Academy Senior Capstone Projects*. Paper 23.
- [20]. Weibell, C. J. (2011). Principles of learning: A conceptual framework for domain-specific theories of learning.