

## **School Attendance among Orphans, and their Relationship to Household Head and Non-Orphans in Egypt**

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### **Abstract**

#### **OBJECTIVE**

The objective of this study is to examine the association between orphan status (orphans and non-orphans) of children aged (6-17) and school attendance, also, examine whether the extended family is meeting the educational need of orphans by accessing the implication for school attendance of a child's relationship to the household head (son/daughter) versus other relationships (more distant), focus beyond different school levels of children and between poor and non-poor households.

#### **MEHODS**

This study applies five logistic regression models to estimate the factors affecting children's school attendance based on data from the 2014 Egypt Demographic and Health Survey.

#### **RESULTS**

The results indicate that orphans who have distant relative to their household heads are less likely to attending school than those who have close relative to household head (son/ daughter), specifically when they reside in poor households. The important recommendation is that policy of caring for orphaned children needed to alleviate their suffering in all aspects of their lives with an emphases on adolescent, especially aged (15-17) (secondary school stage) and encourage the participation between the Sate and NGO's in education funding to help orphan children especially who reside in poor extended family (distant relatives to household heads) through programs such as conditional cash transfers, food allocation,...etc., which would motivate household heads to allow orphans to attend to school.

#### **CONTRIBUTION**

The study contributes to a better understanding of whether extended family networks can meet the educational needs of orphans in Egypt.

### **1. Introduction**

Orphans are usually disadvantaged in many aspects of life; one of the most important aspects is school due to lack of essential support. Many studies have shown that children who lose one or both parents at a young age (under 5 years) are more likely to low educational achievement. Between 2002 and 2003, UNICEF reviewed the effects of orphan status on both schooling attendance and child labor among twenty Sub-Saharan African countries. In all countries included in the study, orphaned children aged (5-14) were less likely to be in school and more likely to be working more than 40 hours a week (Monasch and Boerma, 2004). It is true that orphaned children under 5 years could have largest effected in their emotion and mental but they can easily adapt with living with relatives (Beegle et al., 2006).

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One important factor in the determination of school attendance and outcomes for orphan children whether a boy or girl is the relationship between the child and the household head. Orphans who have close the biological/genetic ties with their household heads more likely to attend school than those with more distant relationship, in spite of the poverty level (UNICEF, 2006; Kazeem and Jensen, 2017).

Case et al., (2004), this study stated that school attendance may be lower for orphans than for non-orphans. It further commented that orphan children may be more likely to live in poor households than non-orphan children which lead to reduce investment in schooling. The impact of one or both parent's death on children's school attendance would depend upon the way in which orphan hood status affects the children's economic circumstances and their relationship to household head, leaving a child less able to benefit from education and therefore we expect a smaller proportion of orphans attending school (Smith et al., 1997) studied that association between family income and parental education with children's academic achievement. This study finds that the percentage of children attending schools is low for poorest and poorer households as compared to middle, richer and richest household categories. Thus poverty at the household level is the main cause which leads to non-attendance in school (Case and Ardington, 2006; Operario et al., 2008).

The loss of one or both parents has short-term and long-term negative consequences for children, currently, it would put them at risk of both less attending to school and less schooling outcomes as a result of being orphaned, and in the future, low education attainment will be lead to living in low standard of life in different aspects such as lower socioeconomic status (Yamano, et al., 2006). In addition, orphans schooling is likely to be negatively influenced by other factors like the process of their living rearrangements when they are forced to move because of the death of a parent. In this case, the child not only suffers psychological trauma but in some cases his attendance to school is disrupted where he has to work to contribute in household economy or to take care of one parent (Ainsworth et al, 2005; Evans and Miguel, 2007). Also Guarcello, et al., (2004) explore study the influence of orphan hood on two important determinants of child vulnerability: child schooling and labor in ten Sub Saharan Africa countries. The main finding is that double orphans appear to be especially vulnerable to work exposure and schooling loss in the analyzed countries.

Few studies have dealt with the situation of orphans in Egypt. Gibbons (2005), presents an ethnographic study of girls' orphanages in Egypt. This study examines cultural notions of unwanted children of six orphanages in and around Cairo. It also addresses the social and cultural circumstances of girls' orphanages in Egypt. This study has highlighted the orphans struggle against "age-old prejudices", in a place where such terminology as "laqet (bastard)" remains "active" in street, school. Orphans, who aspire to enhance their academic educational and to marry 'normally', face discrimination. "These are the challenges of contemporary Egyptian society". Ibrahim, al, (2012), study "the prevalence and predictors of depressing among orphans in Dakahlia's orphanages. Egypt". The main finding of this study is that "depression is common among orphans, especially girls. Therefore, mental and psychological should be part of routine health care provided to orphans".

Generally, the important socio-economic factors that affecting children's school attendance include child's gender, urban-rural residence, child's current age, parental education, household level of wealth, number of children aged under 5 in household, whether a mother or father live in the household, gender of the household head, parental attitude to gender equality in education and child labor, and the region of in which the child resides ( Nyamukapa and Gregson 2005; Yamano and Jayne 2005; Yamano et al. 2006; Evans and Miguel, 2007). All of these variables will be included for in the multivariate analyses in this study.

## **1.1 Research Problem**

In Egypt, about 5% of children aged (6-17) are single/ double orphans. The proportion of children who are orphans increases with the child's age, 10% of children aged (15-17) (EDHS, 2014). As it is not a small proportion in the most critical age and educational stage in the child's life. Orphan status is associated with psychological trauma, mainly originating from the deaths of one or both parents, coupled with the household poverty. This increases the child's probability to face more challenges which in turn highly affects their school attendance. In addition, orphan children who living in this environment may be in risks of child labor, child marriage (especially girl) and denial of other advantage of not being in school (Alwang, Siegel & Jorgensen 2001). Therefore, it is important to conduct a study to show how orphan status affects school attendance in Egypt and if there is a significant difference between orphan who have a close relationship with the household head (son/daughter) and the orphan children who lives with more distant relationship between poor and non-poor households.

## **1.2 Research Questions**

- 1) Are orphans (one/ both parents died) less likely to attend school than those are non- orphans?
- 2) Are orphans (one/both parents died) who have a close relationship (son/daughter) with the household head more likely to attend school than those with more distant relationship, based on age in different educational stages, ((primary school (6-11 years), preparatory school (12-14 years) and secondary school (15-17)) and between poor and non-poor households.

## **1.3 Objectives of the Study**

The objectives of this study are:

- 1) To examine the association between orphan status (orphans and non-orphans) of children aged (6-17) and school attendance.
- 2) To examine whether the extended family is meeting the educational need of orphans by accessing the implication for school attendance of a child's relationship to the household head (son/daughter) verses other relationships (more distant), focus beyond different school levels of children aged (6-17) and between poor and non-poor households.

## **1.4 Research Hypotheses**

The null hypotheses based on objectives are:

H<sub>0</sub>: There is no significant difference in school attendance among orphan (one/both parents died) and non-orphan children.

H<sub>0</sub>: There is no significant difference in school attendance among orphan children (one/both parents died) who have a close relationship with the household head (son/daughter) and the orphan children who lives with more distant relationship by age group and between poor and non- poor households.

## **2. Maternal and Methods**

### **2.1 Sampling Design and Selection**

The data used in this paper come from the Egypt Demographic Health Survey (EDHS) conducted in 2014. "The 2014 EDHS involved two questionnaires: a household questionnaire and an individual questionnaire". The household questionnaire was used to enumerate all usual members and visitors to the selected households and to collect information on the age, sex, marital status, educational attainment, and relationship to the household head. The individual questionnaire was administered to all ever-married women aged 15-49 who were usual residents in the household during the night before the interviewer's visit. It obtained information on respondent's background,

reproduction, contraceptive knowledge and use ...etc. “The 2014 EDHS included a series of questions on children’s living arrangements and parental survival that provide information on the extent to which children under age 18 years are orphaned (one or both parents are died) or fostered, i.e., they are living with someone other than their parents even though one or both parents is alive”<sup>2</sup>. The household file and children’s data was used. Overall, the database contained 28175 households, 46299 children under age 18 and 29126 children aged (6-17). For this analysis, only children aged 6-17 years were included, since this is the school-going age in Egypt, out of these children 1628 are orphaned.

## 2.2 Methodology

To examine the factors affecting children's school attendance school in the aspect of child, household and interaction variables (terms), this study used a dummy  $D_{ij}$  which takes one if child  $i$  of household  $j$  is currently attending school and zero otherwise.

The logistic model is adopted because of the dichotomous nature of the dependent variable. In a general form, the logistic regression model with a set of child and household variables, in addition to interaction terms is state as:

$$Prob(D_{ij} = 1) = F(Ch_{ij}, Ho_{ij}, I_{ij})$$

Where:

$D_{ij}$  = child currently attending school (1 if a child is currently attending school; 0 otherwise).

$Ch_{ij}$  : is a set of characteristics of child  $i$  in household  $j$ .

$Ho_{ij}$  : is a set of household characteristics of child  $i$  in household  $j$ .

$I_{ij}$ : is a set of interaction terms between indicator of orphan status and both children’s relationship to household head, and household level of wealth.

This study fits five models for children aged (15-17). Model (1) contains the mixed set of child's personality including (orphan status), household variables, and interaction term between children’s relationship to the household head and mother education to examine the research question whether “one/ both orphans have lower chance of attending school than non-orphans. In Model (2), we examine the research question of whether “one/both orphans who have close ties (son/daughter) with their household heads have higher chance of attending school than those with more distant relationships”. This model includes an interaction term between orphan status and both children’s relationship to their household head and mother education. Model (3) includes the interaction terms between orphan status, children’s relationship to the household head, mother education and household level of wealth index (poorest and poorer households). Model (4) includes the interaction terms between orphan status, children’s relationship to the household head, mother education and household level of wealth index (middle households). Model (5) includes the

<sup>2</sup> Ministry of Health and Population [Egypt], El-Zanaty and Associates [Egypt], and ICF International (2015). “Egypt Demographic and Health Survey 2014 (EDHS, 2014, Report)”. Cairo, Egypt and Rockville, Maryland, USA: Ministry of Health and Population and ICF International.

interaction terms between orphan status, children's relationship to household head, mother education and household level of wealth index (richer and richest households).

### 2.3 Description of Predictors (Variables)

The dependent variable is a binary variable. Child currently attending school is coded 1 if the child currently attending to school and 0 otherwise.

The independent variables include **three factor groups**: First group: factors that belong to the child's characteristics: child's sex that is used as categorical variable 1 if male and 0 if female (which is the reference), in Model (1), orphan status is coded as 1 if the child loss one/both parents, 0 if not (which is the reference). Second group: factors related to household characteristics: sex of the household head is coded as 1 if male and 0 if female (which is the reference), Urban-Rural residence is coded as 1 if the family live in urban area and 0 if lives in rural area (which is the reference). Region of residence is divided into six regions with Urban Governorate kept as reference category. Household level of wealth index<sup>3</sup> is used in five quintiles with the highest (richest) quintile kept as reference category in both Model (1) and Model (2), whereas is used in three quintile (poorest/poor, middle and rich/richest) with the highest (rich/richest) quintile kept as reference category in Model (3), Model (4) and Model (5). Household size (number of members in household) is coded as, 1 if large household size (6 and over members) and 0 if small household size ( $\leq 5$  members) (which is the reference category). Number of children under 5 years in household is coded as, 0 if "no child", 1 if "one child", and if "2-3 children" (which is the reference category). Third group: factors related to interaction terms: In Model (2), orphan status and children relationship to their household head is coded as 1 if the children are orphans (loss one/both parents) and have close ties (son/daughter) with their household heads, 2 if the children are orphans (loss one/both parents) with more distant relationship (other relative (grandchild, brother/sister,...)) with their household heads and 0 if the children are non-orphans (which is the reference category). In Model (3), there are three separate interaction terms related to orphan status, children's relationship to household head and household level of wealth: the first interaction term is coded as 1 if the children are orphans (loss one/both parents) and have close ties (son/daughter) with their household heads and live in poorest/poorer households, 0 otherwise (which is the reference); the second interaction term is coded as 1 if the children are orphans (loss one/both parents) with distant relationships (other relative (grandchild, brother/sister,...)) with their household head and live in poorest / poorer households, 0 otherwise (which is the reference), the third interaction term is coded as 1 if the children are non-orphan and live in poorest/poorer households, 0 otherwise (which is the reference). Similarly, in both Model (4) and Model (5), respectively, poorest/ poorer households are replaced by middle and rich/ richest households.

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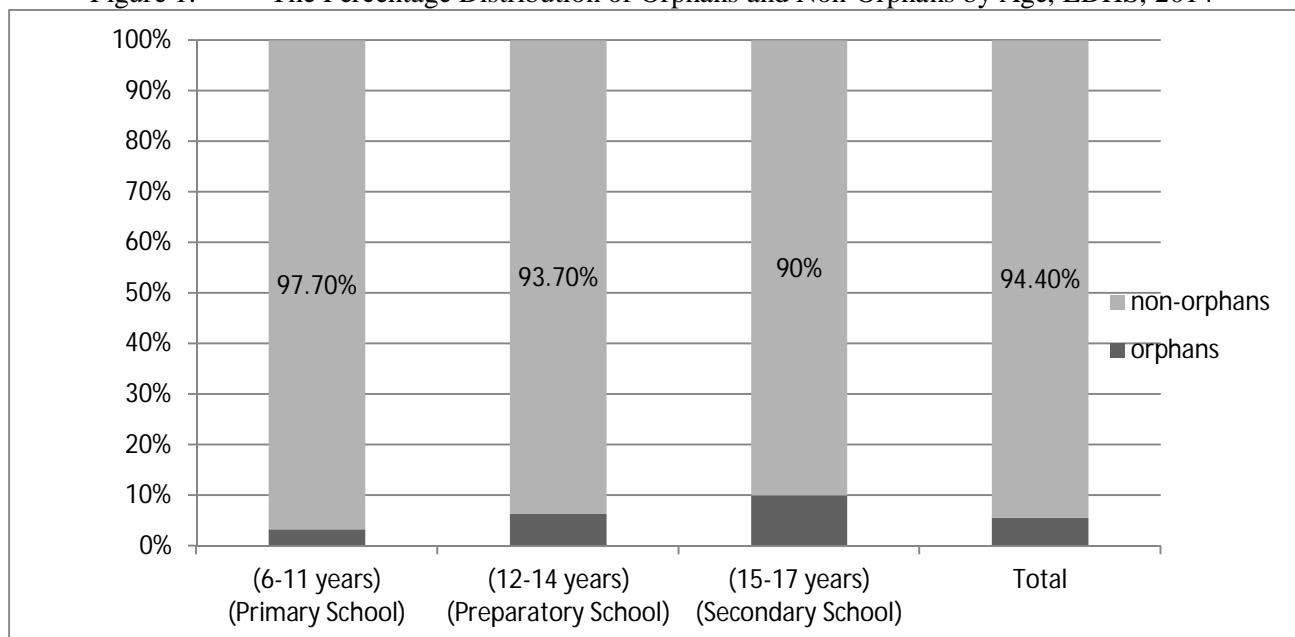
<sup>3</sup> Household level of wealth index is a measure related to inequalities in household income. It was constructed using household asset data and principle components analysis. Asset information was collected in the 2005 Egypt DHS Household Questionnaire and covers information on household ownership of a number of consumer items ranging from a radio to a computer, as well as dwelling characteristics such as source of drinking water, type of sanitation facilities, and type of material used in flooring. Each household was then assigned a score for each asset, and the scores were summed for each household; individuals were ranked according to the total score of the household in which they resided. The sample was then divided into quintiles from one (lowest) to five (highest) (EDHS, 2014, Report)

### 3. Results and Discussion

This study examines the association between orphan status, child's relationship with the household head and school attendance focus beyond different school levels of children aged (6-17) (school going age) and between poor and non-poor households in Egypt using data collected by EDHS 2014. Although the proportion of orphaned children aged (6-17) is relatively low in Egypt, just about 5% among the whole sample in this study as shown in figure (1). It is useful to investigate the influence of orphan hood on school attendance. And thus, more attention by policy maker may be needed to alleviate this effect.

Figure (1) shows that about 5% of Egyptian children aged (6-17) are single/double orphans. The proportion of children who are orphans increases with the child's age. The percentage with one/both parents dead increases from 3.3% of children aged (6-11) (primary school) to 6.3% of children aged (12-14) (preparatory school) to 10% of children aged (15-17) (secondary school). In light of previous results, this study presents first the characteristics of orphans and non-orphans as a whole and then presents the characteristics of orphans, and their relationship to the household head, and non-orphans by age groups related to the level of schooling (primary, preparatory and secondary).

Figure 1: The Percentage Distribution of Orphans and Non-Orphans by Age, EDHS, 2014



Source: Calculated by the researcher.

#### 3.1 Association between Orphan Status and the Selected Socio-Economic Characteristic of Individuals and the Households:

Table (1) presented the selected socio-economic background characteristics of the individuals and the households for both orphan and non-orphan children aged (6-17). Results from table (1) shows that school attendance was high in both orphans and non-orphans, 83.2% of orphan children had ever attended school versus 87.4% of non-orphans, while only 16.8% of orphans and 12.6% of non-orphans had never been to school. The association between orphan status and school attendance is statistically significant. 51.4% of orphan children were male versus 50.5% of non-orphan children. The association between orphan status and child's sex is not statistically significant. The majority of both non-orphan (82.0%) and orphan children (92.7%) were live with

their parents or one of them, while 7.3% of non-orphans and 18.0% of orphans live with distant relationship to their household head. The association between orphan status and child's relationship to the household head is statistically significant.

Results from table (1) indicate that majority (96.6%) households of non-orphans were male-headed, while the majority (70.4%) households of orphans were female-headed. The association between orphan status and the household head's sex is statistically significant.

Region of residence where orphan and non-orphan children live; the results show that the biggest percentage for both orphan and non-orphan children (about 29.0%) were from Upper Egypt Rural, whereas respectively (23.1% vs. 24.9%) were from Lower Egypt Rural, respectively (13.8% vs. 15.9%) were from Urban Governorates, respectively (14.9% vs. 12.6%) were from Upper Egypt Urban, respectively (12.9% vs. 11.0%) were from Lower Egypt Urban, and the remaining, respectively (6.1% vs. 6.7%) were from Frontier Governorates. The association between orphan status and region of residence is statistically significant. Most both orphan and non-orphan children respectively (54.3% vs. 56.4%) were based in rural areas. The association between orphan status and place of residence is statistically significant.

Household level of wealth index of orphan and non-orphan children: results from table (1) show that the biggest percentages of the households were in the poorest wealth index (24.6% for orphans and 23.1% for non-orphans), whereas 17.0% of orphans and 22.0% of non-orphans were within the richest wealth index. The association between orphan status and household level of wealth index is statistically significant.

Education of mother; the results show that 46.8% of orphan children (father died) live with uneducated mothers, while 30.1% of non-orphan children, respectively (13.2% vs. 12.3%), their mothers with primary education, respectively (33.7% vs. 46.9%), their mothers with secondary education and respectively (6.3% vs. 10.7%), their mothers with high education. The association between orphan status and mother education is statistically significant.

The results from table (1) also indicate that the most orphan children living in small households ( $\leq 5$  members) (51.3%), while 52.9% of non-orphan children living in large households (6 and over members), which is due to the death of one parent. The association between orphan status and household size is statistically significant. Most non-orphans and orphans households (77.7% vs. 51.3%) had no child aged under five years, whereas respectively (20.3% vs. 46.0%) had one child aged under five years and respectively (2.7% vs. 2%) had (2 or 3 children) aged under five years. The association between orphan status and number of children aged under five years is statistically significant.

The results from table (1) can be concluded that the selected background socio-economic characteristics are significant association with the orphan status of children aged (6-17) except child's sex.

Table 1: Characteristics of Orphan and Non-Orphan Children, Aged (6-17), EDHS, 2014

	<b>Orphans</b>	<b>Non-Orphans</b>	<b>Chi-Square Test</b>
<b>Socio-Economic Background Characteristics:</b>			
• <b>Individual Characteristics</b>			
<u>School Attendance:</u>			(23.920)**
- Yes.	83.2%	87.4%	
- No.	16.8%	12.6%	
<u>Sex of the Child:</u>			(0.294)
- Male.	51.4%	50.5%	
- Female.	48.6%	49.5%	
<u>Child's Relationship to the Household Head:</u>			(246.87)**
- Son/ Daughter.	82.0%	92.7%	
- Other Relative.	18.0%	7.3%	
- Non-Relative.	0.0%	0.0%	
• <b>Household Characteristics</b>			
<u>Sex of the Household Head :</u>			(10393.1)**
- Male.	29.6%	96.6%	
- Female.	70.4%	3.4%	
<u>Place of Residence:</u>			(2.83)*
- Urban	45.7%	43.6%	
- Rural	54.3%	56.4%	
<u>Region of Residence:</u>			(18.85)**
- Urban Governorates.	13.8%	15.9%	
- Lower Egypt Urban.	12.9%	11.0%	
- Lower Egypt Rural	23.1%	24.9%	
- Upper Egypt Urban.	14.9%	12.6%	
- Upper Egypt Rural.	29.2%	29.0%	
- Frontier Governorates.	6.1%	6.7%	
<u>Mother Education:</u>			(181.30)**
- No Education	46.8%	30.1%	
- Primary	13.2%	12.3%	
- Secondary	33.7%	46.9%	
- High and above.	6.3%	10.7%	
<u>Household Level of Wealth Index:</u>			(25.26)**
- Poorest	24.6%	23.1%	
- Poor	21.8%	20.0%	
- Middle	15.8%	16.2%	
- Rich	20.7%	18.7%	
- Richest	17.0%	22.0%	
<u>Household Size:</u>			(207.6)**
- Small (<=5 members)	65.4%	47.1%	
- Large ( 6 and over members)	34.6%	52.9%	
<u>Number of Children Under 5 years in Household::</u>			(433.877)*
- 0 Child.	51.3%	77.7%	
- 1 Child.	46.0%	20.3%	
- (2 or 3) Children.	2.7%	2.0%	
<b>Number</b>	<b>1628</b>	<b>27491</b>	

Source: Calculated by the Researcher.



### **3.2 Association between Orphan Status, Child's Relationship to the Household Head and the Selected Socio-Economic Characteristic of Individuals and the Households:**

Table (2) presents the association between orphan status, child's relationship to the household head and the selected socio-economic background characteristics of the individuals and the households of orphans, and their relationship to the household head, and non-orphans by stratified the child's age into three age groups related to education stages in Egypt(primary, preparatory and secondary).

The results from table (2) indicate that school attendance of both children aged ((12-14) and (15-17)) was high among orphans who have a close relationship with their household head (son/daughter), respectively (91.1% and 76.1%), than those with more distant relationship (grandchildren, siblings, nieces/nephews), respectively (86.8% and 68.4%), while respectively (93.7% and 80.3%) for non-orphans. The association between orphan status and school attendance is statistically significant for both children aged ((12-14) and (15-17)), but is not statistically significant for children aged (6-11). 52.4% of orphans (son/daughter) were male versus 41% of orphans (distant relationship), while 50.8% of non-orphans of children aged (15-17). The association between orphan status, child's relationship to the household head and child's sex is statistically significant for children aged (15-17), but is not statistically significant for both children aged ((6-11) and (12-14)).

Results from table (2) indicate that majority households of both orphans (distant relationship) and non-orphans were male-headed of all age groups respectively (79%, 82.9% and 83.8%), and (96.4%, 96.7% and 97%), while the majority respectively (79.6%, 82.5% and 83%) households of orphans (son/daughter) were female-headed of all age groups. The association between orphan status, child's relationship to the household head and sex of the household head is statistically significant of children within the various age groups.

Household level of wealth index of orphan ((son/daughter) or distant relationship)) and non-orphan of children aged (6-11) and (15-17): results from table (2) show that the biggest percentages of the households were in the poorest wealth index of both children aged (6-11) and (15-17), respectively ((22.4% vs. 25%) for orphans (son/ daughter), (29% vs. 32.5%) for orphans (distant relationship and (21.4% vs. 26%) for non-orphans), whereas respectively ((16.8% vs. 20.2%) for orphans (son/daughter), (5% vs. 9.4%) for orphans (distant relationship) and (21.8% vs. 22.6%) for non-orphans were within the richest wealth index. The association between orphan status, child's relationship to the household head and household level of wealth index is statistically significant of both children aged (6-11) and (15-17), but is not statistically significant of children aged (12-14).

Table 2: Characteristics of Orphans, and their Relationship to Household Head and Non-Orphans by Age, EDHS, 2014

	(6-11) Years (Primary School)				(12-14) Years (Preparatory School)				(15-17) Years (Secondary School)			
	Orphans/ Son	Orphans/ Other Relative	Non- Orphans	P- Value	Orphans/ Son	Orphans/ Other Relative	Non- Orphans	P- Value	Orphans/ Son	Orphans/ Other Relative	Non- Orphans	P- Value
<b>Socio-Economic Background Characteristics:</b>												
<b>Individual Characteristics</b>												
<b>School Attendance:</b>												
- Yes.	89.4%	87.0%	87.7%	0.57	91.1%	86.8%	93.7%	0.01	76.1%	68.4%	80.3%	0.00
- No.	10.6%	13.0%	12.3%		8.9%	13.2%	6.3%		23.9%	31.6%	19.7%	
<b>Sex of the Child:</b>												
Male.	52.5%	47.0%	51.6%	0.61	49.2%	51.3%	51.4%	0.71	52.4%	41.0%	50.8%	0.05
Female.	47.5%	53.0%	48.4%		50.8%	48.7%	48.6%		47.6%	59.0%	49.2%	
<b>Household Characteristics:</b>												
<b>Sex of the Household Head</b>												
Male.	20.4%	79.0%	96.4%	0.00	17.5%	82.9%	96.7%	0.00	17.6%	83.8%	97.0%	0.00
Female.	79.6%	21.0%	3.6%		82.5%	17.1%	3.3%		83.0%	16.2%	3.0%	
<b>Place of Residence:</b>												
Urban	43.7%	32.0%	43.1%	0.07	46.2%	47.4%	44.1%	0.62	50.1%	40.2%	44.1%	0.01
Rural	56.3%	68.0%	56.9%		53.8%	52.6%	55.9%		49.9%	58.8%	55.9%	
<b>Region of Residence:</b>												
Urban Governorates.	14.1%	9%	15.7%	0.41	13.4%	13.2%	15.8%	0.12	15.4%	10.3%	16.3%	0.00
Lower Egypt Urban.	12.8%	7.0%	10.9%		14.8%	6.5%	11.2%		14.9%	7.7%	10.9%	
Lower Egypt Rural	23.9%	33.0%	25.5%		22.6%	26.3%	24.5%		20.0%	25.6%	24.1%	
Upper Egypt Urban.	12.8%	11.0%	12.4%		13.4%	21.3%	12.8%		16.6%	17.9%	12.7%	
Upper Egypt Rural.	30.7%	33.0%	29.0%		29.3%	22.4%	28.7%		27.8%	31.6%	29.4%	
Frontier Governorates.	5.7%	7.0%	6.5%		6.5%	10.5%	7.1%		5.3%	6.8%	6.6%	
<b>Mother Education:</b>												
No Education	42.6%	31.2%	25.8%	0.00	47.9%	42.6%	33.0%	0.00	51.6%	50.0%	37.7%	0.00
Primary	11.4%	19.5%	11.3%		13.7%	18.5%	13.3%		12.0%	16.7%	13.7%	
Secondary	38.8%	49.4%	50.6%		32.9%	38.9%	44.5%		28.5%	33.3%	40.4%	
High and above.	7.3%	-	12.3%		5.5%	-	9.1%		7.9%	-	8.2%	
<b>Household Level of Wealth Index:</b>												
Poorest	22.4%	29.0%	21.4%	0.00	22.3%	27.6%	24.4%	0.21	25.0%	32.5%	26.0%	0.01
Poor	22.4%	23.0%	20.0%		21.8%	27.6%	20.2%		20.9%	19.7%	19.5%	
Middle	17.3%	29.0%	17.5%		15.4%	11.8%	15.0%		13.1%	13.7%	14.3%	
Rich	21.1%	14.0%	19.3%		20.2%	22.4%	18.5%		20.9%	24.8%	17.7%	
Richest	16.8%	5.0%	21.8%		19.4%	10.5%	21.9%		20.2%	9.4%	22.6%	
<b>Household Size:</b>												
Small (<=5 members)	71.6%	42.0%	49.8%	0.00	65.5%	43.4%	42.7%	0.00	70.3%	54.7%	45.4%	0.00
Large ( 6 and over members)	28.4%	58.0%	50.2%		34.4%	56.6%	57.3%		29.7%	45.3%	54.6%	
<b>Number of Children's under 5 Years in Household:</b>												
0 Child.	72.9%	44.0%	39.5%	0.00	84.9%	57.9%	58.8%	0.00	88.3%	62.4%	71.5%	0.00
1 Child.	27.1%	43.0%	56.9%		15.1%	35.5%	39.2%		11.7%	33.3%	27.1%	
(2 or 3) Children.	-	13.0%	3.6%		-	6.6%	2.0%		-	4.3%	1.3%	
<b>Number</b>	<b>398</b>	<b>100</b>	<b>14719</b>		<b>372</b>	<b>76</b>	<b>6643</b>		<b>565</b>	<b>117</b>	<b>6129</b>	
	<b>15217</b>				<b>7091</b>				<b>6811</b>			

Source: calculated by the researcher.

Region of residence where orphan ((son/ daughter) or distant relationship) and non-orphan children live; the results show that the biggest percentage of children aged (15-17) for both orphan ((son/ daughter) or (distant relationship)) and non-orphan children, respectively (27.8%, 31.6% and 29.4%) were from Upper Egypt Rural, whereas respectively (20%, 25.6% and 24.1%) were from Lower Egypt Rural, respectively (16.6% ,17.9% and 12.7%) were from Upper Egypt Urban, respectively (15.5%, 10.3% and 16.3%) were from Urban Governorates, respectively (14.9%, 7.7% and 10.9 %) were from Lower Egypt Urban, and the remaining, respectively (5.3%, 6.8% and 6.6%) were from Frontier Governorates. The association between orphan status and region of residence of children aged (15-17) is statistically significant, but is not statistically significant for both children aged (6-11) and (12-14). Most both orphan (distant relationship) and non-orphan children aged (15-17) respectively (58.8% vs. 55.9%) were based in rural areas, while 50.1% of orphans (son/ daughter) were based in urban. The association between orphan status, child's relationship to the household head and place of residence is statistically significant of children aged (15-17), but is not statistically significant of both children aged (6-11) and (12-14).

Education of mother; the results show that the biggest percentage of both orphan children ((son/daughter) or distant relationship) and non-orphan children in different age groups who live with uneducated mothers, respectively ((42.6%, 47.9% and 51.6%) for orphans (son/daughter), (31.2%, 42.6% and 50%) for orphans (distant relationship), (25.8%, 33% and 37.7%) for non-orphans), respectively, (11.4%, 13.7% and 12%) for orphans (son/daughter), (19.5%, 18.5% and 16.7%) for orphans (distant relationship), (11.3%, 13.3% and 13.7%) for non-orphans, their mothers with primary education, respectively, (38.8%, 32.9% and 28.5%) for orphans (son/daughter), (49.4%, 38.9% and 33.3%) for orphans (distant relationship), (50.6%, 44.5% and 40.4%) for non-orphans, their mothers with secondary education. The association between orphan status, child's relationship to the household head and mother education is statistically significant.

The results from table (2) also indicate that the most orphans (son/ daughter) in all age groups living in small households ( $\leq 5$  members), respectively, (71.6%, 65.6% and 70.3%), while, respectively, non-orphan living in large households (6 and over members), respectively, (50.2%, 57.3% and 54.6%) which is due to the death of one parent, whereas, respectively, (58%, 56.6% and 45.3%) of orphans (distant relationship) living in large households (6 and over members). The association between orphan status, child's relationship to the household head and household size is statistically significant.

Most both orphan children households (son/daughter) and (distant relationship) in all age groups, respectively ((72. 9% vs. 44%), (84.9% vs. 57.9%) and (88.3% vs. 62.4%)) had no child aged under five years, whereas respectively ((27.1% vs. 43%), (15.1% vs. 35.5%) and (11.7% vs. 33.3%)) had one child aged under five years. and respectively ( 0% vs. 13%), (0% vs. 6.6%) and (0% vs. 4.3%)) had (2 or 3 children) aged under five years, while non-orphans in all age groups, respectively (39.5%, 58.8% and 71.5%) had no child aged under five years, whereas respectively (56.9%, 39.2% and 27.1%) had one child aged under five years. and respectively (3.6%, 2% and 1.3%) had (2 or 3 children) aged under five years. The association between orphan status, child's relationship to the household head and number of children aged under five years is statistically significant.

The results from table (2) can be concluded that all the selected background socio-economic characteristics are statistically significant association with the orphan status and child's relationship to the household head for children aged (15-17), whereas child's sex, place of residence, region of residence and household level of wealth index are not statistically significant for children aged (12-14), while, school attendance, child's sex, place of residence and region of residence are not statistically significant for children aged (6-11).

Based on the above results, the following series of logistic regression models will be limited to children aged (15-17), since it includes the largest percentage of children orphaned about 10% and also, it is a critical age in children's lives where they may be more at risk of child labor and early marriage (especially girl) and denial of the advantage of being in school.

#### 4. The Multivariate Analysis

To examine the socio-economic background characteristics influence on school attendance, this study estimates five logistic regression models, In Model (1): We examine whether orphans (one/ both parents died) aged (15-17) are less likely to attend school than those are non-orphans aged (15-17). The results of Model (1) indicate that orphan status, child's sex, region of residence, household level of wealth index, number of children under 5 years in household and mother education are significant at 5% level. This finding is supported by the results of Birungi, 2017. The main finding of Model (1) show that orphan children are less likely to attend school by about 38% comparing with non-orphan children with probability 0.381.

The results of table (3) show that compared to female children, males are more likely to attend school by about 37% with probability 0.579. This finding is supported by the results of Ainsworth and Filmer (2006).

Also, results from table (3) indicate that the household level of wealth index is a key factor of school attendance of the child. The likelihood of attending to school is significantly increased as the child moves from the poorest quintile to any other quintiles. Children from household whose wealth index is poorest (lowest), poor, middle and rich are less likely to report having ever attending school by about 93%, 91%, 88%, 82% respectively than children whose household level of wealth index is richest, with probability respectively, 0.065, 0.079, 0.105 and 0.154.

Children are living in households have no child and/or one child under 5 years are more likely to attend school by 2.9 and 2.24 times respectively compared to households have (2-3) children with probability 0.744 and 0.692 respectively.

According to the analysis results in table (3), children from Lower Egypt Urban, Lower Egypt Rural, Upper Egypt Urban, Upper Egypt Rural and Frontier Governorates compared to Urban Governorates are more likely to attending school by 1.786, 2.940, 1.690, 2.065 and 1.314 respectively, with probability 0.641, 0.746, 0.628, 0.673 and 0.567 respectively.

Mother education as a determinant of school attendance, orphan children whose mothers are educated are more likely to attend school by 3.383 times than those mothers are uneducated with probability 0.777, this due to the fact that educated mothers are more effective in helping their children in a daily academic work by spending enough time with them.

Based on the above findings, there is enough evidence to reject the null hypothesis that there is no significant difference in school attendance among orphan (one/ both parents died) and non-orphan children aged (15-17).

In Model (2): We examine whether orphans (one/both parents died) aged (15-17) who have a close relationship (son/daughter) with the household head are more likely to attend school than those with more distant relationship. The results of Model (2) indicate that, orphaned children and their relationship to the household head, child's sex, region of residence, household level of wealth, number of children under 5 years in household and mother education are significant at 5% level. The main finding of Model (2) show that, comparing with non-orphan children, orphan children who have a close relationship (son/ daughter) with the household head are less likely to attend school by about 37%, while orphan children who live with more distant relationship (grandchild, brother/ sister,..) are less likely to attend school by about 42% with probability 0.387 and 0.365 respectively. This finding is supported by the result of Kazeem and Jensen, 2017). The findings of

the rest of the determinant affecting children's school attendance in Model (2) are closely related findings as in Model (1).

Table 3: The Results of the Logistic Regression Analysis of Model (1) and Model (2) for Children Aged (15-17), EDHD, 2014

	Model (1)				Model (2)			
	$\beta$	Sig.	Odds Ratio	Prob.	$\beta$	Sig.	Odds Ratio	Prob.
<b>Socio-background Characteristics:</b>								
<b>Individual Characteristics:</b>								
<u>Orphan Status:</u>								
-Orphan	-0.484	0.000	0.616	0.381	-	-	-	-
<u>Sex of the Child:</u>								
- Male.	0.319	0.000	1.376	0.579	0.321	0.000	1.378	0.579
<b>Household Characteristics:</b>								
<u>Region of Residence:</u>								
- Lower Egypt Urban.	0.580	0.000	1.786	0.641	0.578	0.000	1.782	0.640
-Lower Egypt Rural	1.078	0.000	2.940	0.746	1.066	0.000	2.905	0.744
-Upper Egypt Urban.	0.525	0.000	1.690	0.628	0.513	0.000	1.671	0.625
-Upper Egypt Rural.	0.725	0.000	2.065	0.673	0.713	0.000	2.039	0.671
-Frontier Governorates.	0.479	0.003	1.314	0.567	0.467	0.004	1.595	0.614
<u>Number of Children's under 5 Years in Household:</u>								
-0 Child.	1.067	0.000	2.905	0.744	1.063	0.000	2.895	0.743
-1 Child.	0.807	0.000	2.242	0.692	0.805	0.000	2.237	0.691
<u>Household Level of Wealth Index:</u>								
-Poorest	-2.664	0.000	0.070	0.065	-2.666	0.000	0.070	0.065
-Poor	-2.458	0.000	0.086	0.079	-2.463	0.000	0.085	0.078
Middle	-2.147	0.000	0.117	0.105	-2.152	0.000	0.116	0.104
-Rich	-1.697	0.000	0.183	0.154	-1.704	0.000	0.182	0.154
<b>Interaction Terms:</b>								
<u>Orphans and Relation with the Head:</u>								
-Orphan and son/daughter	-	-	-	-	-0.459	0.000	0.632	0.387
-Orphan and other relative	-	-	-	-	-0.568	0.009	0.576	0.365
<u>Mather education:</u>								
-Mother educated and orphan (son or daughter)	1.248	0.000	3.483	0.777	1.235	0.000	3.438	0.775
Constant	1.683	0.000	5.381	0.843	1.700	0.000	5.473	0.846
Correct Classification	<b>80.1%</b>				<b>80.1%</b>			

Source: Calculated by the Researcher.

Table (4) shows the logistic regression analysis results for Model (3), Model (4) and Model (5).

In Model (3): We examine whether orphans (one/both parents died) aged (15-17) who have a close relationship (son/ daughter) with the household head are more likely to attend school than those with more distant relationship between poor and non-poor households by using three separate interaction terms related to orphan status (orphans and non-orphans), children's relationship to the household head (close and distant) and household level of wealth index (poorest/poor) (as mention before in the methodology).

The results of Model (3) indicate that orphan children who have close ties (son/ daughter) with their household head and live in poorest/ poorer households, orphan children with distant relationships (other relative (grandchild, brother/sister,...)) and live in poorest/ poorer households, non-orphan children and live in poorest/ poorer households, child's sex, region of residence, household level of wealth, number of children under 5 years in household and mother education are significant at 5% level. The main findings of Model (3) are that the probability of school attendance for orphan children who have close ties (son/daughter) with their household heads and live in poorest/ poorer household (0.244) is higher than the probability of school attendance for orphan children with distant relationships with their household heads and live in poorest/ poorer households (0.222), while the highest probability of school attendance (0.301) is for non-orphan children who reside in poorest/poorer households.

The results of table (4) show that compared to female children, males are more likely to attend school by about 35% with probability 0.574. This finding is closely related which results of both Models (1) and (2), and also is supported by the results of Birungi, 2017, and it's reinforce the role of "the social norms which favor the education of boys over that of girls as girls are expected to become wives and mothers while boys are expected to seek employment in the formal sector".

Children are living in households have no child and/or one child under 5 years in household are more likely to attend school by 3.023 and 2.334 times respectively compared to households have (2-3) children with probability, respectively, 0.751 and 0.700

According to the analysis results in table (3), children from Lower Egypt Urban and Lower Egypt Rural are more likely to attending school by about 36% and 17% respectively compared to Urban Governorates with probability 0.576 and 0.538, while children from Upper Egypt Urban, Upper Egypt Rural and Frontier Governorates are less likely to attending school by about 3%, 10% and 20% respectively compared to Urban Governorates, with probability 0.493, 0.472 and 0.444 respectively. This result may be due to the lack of educational services in these regions especially among poor communities.

Mother education as a determinant of school attendance, orphan children whose mothers are educated are more likely to attend school by 2.695 times than those mothers are uneducated with probability 0.729, this due to the fact that educated mothers are more effective in helping their children in a daily academic work by spending enough time with them.

In both Model (4) and Model (5), the three separate interaction terms related to orphan status (orphans and non-orphans), children's relationship to the household head (close and distant) and household level of wealth (middle) in Model (4) and rich/ richest in Model (5) are not statistically significant, except the case of non-orphan children in rich/ richest households who are more likely to attend school by about 4 times compare with other non-orphans children who live in poorest/ poorer or middle households with probability 0.80.

Table (4) also shows that the findings of some remaining factors that have effects on school attendance are relatively close as in both Model (4) and Model (5), such as child's sex, mother education, number of children under 5 years in household, while the matter is different as in the case of region of residence.

Compared to female children, males are more likely to attend school in both Model (4) and Model (5) by about 34% and 37% respectively with probability 0.571 and 0.578 respectively.

Children are living in households have no child and/or one child under 5 years are more likely to attend school in both Model (4) and Model (5) by 3.582 and 3.035 times respectively (no child) compared to households have (2-3) children with probability, 0.782 and 0.752 respectively, whereas, by 2.698 and 2.372 times respectively if households have one child compare to households have (2-3) children with probability 0.731 and 0.703 respectively.

Mother education as a determinant of school attendance, orphan children whose mothers are educated are more likely to attend school in both Model (4) and Model (5) by 2.945 and 3.931times respectively than those mothers are uneducated with probability 0.747 and 0.797 respectively

According to the analysis results in table (4), in Model (4), children from Lower Egypt Urban are more likely to attending school by about 34% compared to Urban Governorates with probability 0.573, while children from Lower Egypt Rural, Upper Egypt Urban, Upper Egypt Rural and Frontier Governorates are less likely to attending school by about 29%, 16%, 55% and 46% respectively compared to Urban Governorates, with probability 0.416, 0.455, 0.310 and 0.352 respectively, while in Model (5), children from Lower Egypt Urban, Lower Egypt Rural, Upper Egypt Urban, Upper Egypt Rural and Frontier Governorates are more likely to attending school by 1.397, 2.062, 1.179, 1.361 and 1.116 times respectively compared to Urban Governorates, with probability 0.582, 0.673, 0.541, 0.576 and 0.527 respectively.

Table 4: The Results of the Logistic Regression Analysis of School Attendance among Orphans, and Their Relationship to Household Head and Non-Orphans, aged (15-17), EDHS, 2014, with Interaction Terms on Selected Independent Variables

	Model (3)				Model (4)				Model (5)			
	$\beta$	Sig.	Odds Ratio	Prob.	$\beta$	Sig.	Odds Ratio	Prob.	$\beta$	Sig.	Odds Ratio	Prob.
<b>Socio-Economic Background Characteristics:</b>												
<b>Individual Characteristics</b>												
<b>Sex of the Child:</b>												
Male.	0.301	0.000	1.351	0.574	0.289	0.000	1.335	0.571	0.315	0.000	1.370	0.578
<b>Region of Residence:</b>												
Lower Egypt Urban.	0.309	0.034	1.362	0.576	0.293	0.044	1.340	0.573	0.334	0.024	1.397	0.582
Lower Egypt Rural	0.153	0.198	1.165	0.538	-0.337	0.002	0.714	0.416	0.723	0.000	2.062	0.673
Upper Egypt Urban.	-0.026	0.839	0.974	0.493	-0.178	0.153	0.837	0.455	0.164	0.215	1.179	0.541
Upper Egypt Rural.	-0.011	0.362	0.895	0.472	-0.799	0.000	0.450	0.310	0.308	0.022	1.361	0.576
Frontier Governorates.	-0.224	0.129	0.799	0.444	-0.609	0.000	0.544	0.352	0.110	0.489	1.116	0.527
<b>Household Characteristics:</b>												
<b>Number of Children's under 5 Years:</b>												
0 Child.	1.106	0.000	3.023	0.751	1.276	0.000	3.582	0.782	1.116	0.000	3.035	0.752
1 Child.	0.848	0.000	2.334	0.700	0.993	0.000	2.698	0.731	0.864	0.000	2.372	0.703
<b>Interaction Terms:</b>												
Mather Education (yes)/ Orphan Children (Son /Daughter)	0.991	0.001	2.695	0.729	1.080	0.000	2.945	0.747	1.369	0.000	3.931	0.797
Household Wealth Index (Poorest/Poorer) and Orphan Children(Son/ Daughter)	<b>-1.131</b>	<b>0.000</b>	<b>0.323</b>	<b>0.244</b>	-	-	-	-	-	-	-	-
Household Wealth Index (Poorest/ Poorer) and Orphan Children ( Other Relative)	<b>-1.248</b>	<b>0.000</b>	<b>0.287</b>	<b>0.222</b>	-	-	-	-	-	-	-	-
Household Wealth Index (Poorest/ Poorer) and Non-Orphan Children	<b>-0.840</b>	<b>0.000</b>	<b>0.443</b>	<b>0.310</b>	-	-	-	-	-	-	-	-
Household Wealth Index (Middle) and Orphan Children (Son/Daughter)	-	-	-	-	<b>-0.547</b>	<b>0.051</b>	<b>0.579</b>	<b>0.366</b>	-	-	-	-
Household Wealth Index (Middle) and Orphan (Other Relative)	-	-	-	-	<b>-0.477</b>	<b>0.430</b>	<b>0.621</b>	<b>0.383</b>	-	-	-	-
Household Wealth Index (Middle) and Non-Orphan Children	-	-	-	-	<b>0.177</b>	<b>0.070</b>	<b>1.193</b>	<b>0.544</b>	-	-	-	-
Household Wealth Index (Rich/ Richest) and Orphan Children (Son/ Daughter)	-	-	-	-	-	-	-	-	<b>0.398</b>	<b>0.076</b>	<b>1.789</b>	<b>0.641</b>
Household Wealth Index (Rich/ Richest) and Orphan Children (Other Relative)	-	-	-	-	-	-	-	-	<b>0.089</b>	<b>.820</b>	<b>1.093</b>	<b>0.522</b>
Household Wealth Index (Rich/ Richest) and Non-Orphan Children	-	-	-	-	-	-	-	-	<b>1.399</b>	<b>0.000</b>	<b>4.051</b>	<b>0.800</b>
Constant	0.633	0.007	1.884	0.653	0.407	0.081	1.503	0.600	0.578	0.020	0.561	0.359
Correct classification	<b>79.9%</b>				<b>79.9%</b>				<b>79.9%</b>			

Source: Calculated by the Researcher.



The previous results about the influence of the household level of wealth index on school attendance explain that the ability of the extended family to meeting the educational need of orphans is highly dependent on the economic resources in their households, thus extended family may not be able to face the cost of educated orphans comparing with orphan children who have close relationships with their household head (son/daughter) or non-orphan children, especially in poorest/poorer households. It is mean that poverty is still a strong barrier in influencing school attendance for both orphan and non-orphan children especially orphaned who have more distant relationships with their household head.

Based on the above findings, there is enough evidence to reject partially the null hypothesis that there is no significant difference in school attendance among orphan children (one/both parents died) who have a close relationship with the household head (son/ daughter) and the orphan children who have more distant relationship by age group and between poor and non-poor households for children aged (15-17), especially when they reside in poorest and/poorer households.

## 5. Conclusion and Recommendations

### 5.1 Conclusion

This study aims to examine the association between orphan status (orphans and non-orphans) of children aged (6-17) and school attendance and to determine whether the extended family is meeting the educational need of orphans by accessing the implication for school attendance and child's relationship to the household head (son/daughter) verses other relationships (more distant), focus on age and household level of wealth index differences in Egypt, using data collected by Egypt Demographic and Health Survey (EDHS, 2014). The household file and children's data was used. Overall, the database contained 28175 households, 46299 children under age 18 and 29126 children aged (6-17). For this analysis, only children aged (6-17) were included, since this is the school-going age in Egypt, out of these children 1628 are orphaned.

Although the proportion of orphaned children aged (6-17) is relatively low in Egypt, just about 5% among the whole sample in this study (82% for orphans have a close relationship with their household head (son/ daughter) vs. 18% for orphans with more distant relationship (grandchild, brother/ sister,...)). The proportion of children who are orphans increases with the child's age. The percentage with one/both parents dead increases from 3.3% of children aged (6-11) (80% for orphans have a close relationship with their household head (son/ daughter) vs. 20% for orphans with more distant relationship (grandchild, brother/ sister)) (primary school) to 6.3% of children aged (12-14) (82.7% for orphans have a close relationship with head households (son/ daughter) vs. 17.3% for orphans with more distant relationship (grandchild, brother/ sister)) (preparatory school) to 10% of children aged (15-17) (83% for orphans have close relationship with head households (son/daughter) vs. 17% for orphans with more distant relationship (grandchild, brother/ sister))(secondary school). It is useful to investigate the influence of orphanhood on school attendance. And thus, more attention by policy maker may be needed to alleviate this effect.

The results of this study can be concluded that the selected background socio-economic characteristics: school attendance, child's relationship with the household head, sex of the household head, place of residence, region of residence, mother education, household level of wealth index, household size and number of children aged under 5 years in household are significant association with the orphan status of children aged (6-17), while child's sex is not significant. Also, the results can be concluded that all the selected background socio-economic characteristics are statistically significant association with the orphan status and child's relationship to the household head for children aged (15-17), whereas child's sex, place of residence, region of residence and household level of wealth are not statistically significant for children aged (12-14),

while, school attendance, child's sex, place of residence and region of residence are not statistically significant for children aged (6-11).

Thus series of logistic regression models used in this study are limited to children aged (15-17), since it includes the largest percentage of children orphaned about 10% and also, it is a critical age in children's lives where they may be more at risk of child labor and early marriage (especially girl) and denial of the advantage of being in school.

Also, the results of this study (Model (1)) indicate that orphan status, child's sex, region of residence, household level of wealth index; numbers of children under 5 years in household and mother education are significantly associated with school attendance at 5% level. The main finding of Model (1) show that orphan children are less likely to attend school by about 38% comparing with non-orphan children with probability 0.381. Thus, there is enough evidence to reject the null hypothesis that there is no significant difference in school attendance among orphan (one/ both parents died) and non-orphan children aged (15-17).

The results of this study ( Model (2)) indicate that, orphaned children and their relationship to the household head, child's sex, region of residence, household level of wealth index, number of children under 5 years in household and mother education are significant associated with school attendance at 5% level. The main finding of Model (2) shows that, comparing with non-orphan children, orphan children who have a close relationship (son/daughter) with the household head are less likely to attend school by about 37%, while orphan children who live with more distant relationships (grandchild, brother/ sister,..) are less likely to attend school by about 42% with probability 0.387 and 0.365 respectively. Thus, there is enough evidence to reject the null hypothesis that there is no significant difference in school attendance among orphan children (one/ both parents died) aged (15-17) who have a close relationship with the household head (son/ daughter) and the orphan children aged (15-17) who with more distant relationship.

Also, the main findings of this study (related to Model (3), Model (4) and Model (5)), indicate that extended family may not be able to face the cost of educated orphans comparing with orphan children who have a close relationship with their household head (son/daughter) or non-orphan children, especially in poorest/ poorer households. It is mean that poverty is still a strong barrier in influencing school attendance for both orphan and non-orphan children especially orphaned who have more distant relationships with their household head. Thus, there is enough evidence to reject partially the null hypothesis that there is no significant difference in school attendance among orphan children (one/both parents died) who have a close relationship with the household head (son/daughter) and the orphan children who with more distant relationship by age group and between poor and non- poor households for children aged (15-17), especially when they reside in poorest and/poorer households.

## **5.2 Recommendations**

Based on the main findings derived from this study, the following are important recommendations would promote school attendance:

- 1- Policy makers should take effort and time to understand the determinants that influence on school attendance and design the policies that improve Egypt's education system in all stages.
- 2-The State should design interventions that can reduce the influence of wealth on school attendance and reduce the gap between the poor and rich by determining the key education standards to achieve the goal of quality of education for all.
- 3- Policy of caring for orphaned children needed to alleviate their suffering in all aspects of their lives with an emphases on adolescent, especially aged (15-17) (secondary school stage).
- 4- Encourage the participation between the Sate and NGO's in education funding to help orphan children especially who reside in poor extended family (distant relatives to household heads) through programs such as conditional cash transfers, food allocation,...etc., which would motivate household heads to allow orphans to attend to school.

## **References**

- Ainsworth, M., Beegle, K., and Koda, G. (2005). "The Impact of Adult Mortality and Parental Deaths on Primary Schooling in North-Western Tanzania". *The Journal of Development Studies*, Vol., 41, No., 3, PP. 412-439.
- Ainsworth, M., and Filmer, D. (2006). "Inequalities in Children's Schooling: AIDS, Orphanhood, Poverty, and Gender". *World Development*, Vol., 34, No., 6, PP 1099-1128.
- Alwang, J., Siegel, P. B., and Jorgensen, S. L. (2001). "Vulnerability: a View from Different Disciplines", Vol., 115. *Social Protection Discussion Paper Series*.
- Beegle, K., De Weerd, J. O. A. C. H. I. M., and Dercon, S. (2006). "Orphanhood and the Long-Run Impact on Children", *Amer. J. Agr. Econ*, Vol., 88, No. 5, PP. 1266-1272.
- Birungi, E. (2017). "The Effects of Orphanhood Status on School Attendance in Uganda". Master Thesis, Makerere University, Uganda.
- Case A., and Ardington, C., (2006). "The Impact of Parental Death on School Outcomes: Longitudinal Evidence from South Africa", *Demography*, Vol., 43, No., 3, PP. 401-420.
- Case, A., Paxson, C., and Ableidinger, J. (2004). "Orphans in Africa: Parental Death, Poverty, and School Enrollment". *Demography*, Vol., 41, No., 3, PP. 483-508.
- Evans, D. K., and Miguel, E. (2007). "Orphans and Schooling in Africa: A Longitudinal Analysis". *Demography*, Vol., 44, No., 1, PP. 35-57.
- Gibbons, J., (2005). "Orphanages in Egypt", *SAGE Publications*, Vol., 40, No., (4), PP. 261-285.
- Guarcello, L., Lyon, S., Rosati, F.C., and Valdivia, C. A., (2004). "The Influence of Ophanhood on Children's Schooling and Labour: Evidence from Sub Saharan Africa". Working Paper, Understanding Children's Work (UCW) Project, University of Rome "Tor Vergata". Faculty of Economics.

- Ibrahim, A., El-Bilsha, M., El-Gindy, A., Khater, M., (2012). “ Prevalence and Predictors of Depression among Ophans in Dakahlia’s Orphanages, Egypt, *International Journal of Collaborative Research on Internal Medicine & Public Health*, Vol. 4, No. 12, PP. 2036-2043.
- Kaseem, A., and Jensen, L., (2017). “Orphan Status, School attendance, and Their Relationship to Household Head in Nigeria”. *Demographic Research*, Vol., 36, Article 22, PP. 659-690.
- Ministry of Health and Population [Egypt], El-Zanaty and Associates [Egypt], and ICF International (2015). “Egypt Demographic and Health Survey 2014(EDHS, 2014,Report)”. Cairo, Egypt and Rockville, Maryland, USA: Ministry of Health and Population and ICF International.
- Monasch, R., and Boerma, J. T. (2004). “Orphanhood and Childcare Patterns in Sub-Saharan Africa: An Analysis of National Surveys from 40 Countries. *AIDS*, Vol., 18, PP. 555-565.
- Nyamukapa, C. and Gregson, S. (2005). “Extended Family’s and Women’s Roles in Safeguarding Orphans’ Education in AIDS-Afflicted Rural Zimbabwe”, *Social Science & Medicine* Vol., 60, No., 10, PP. 2155–2167.
- Operario, D., Cluver, L., Rees, H., Mac Plrail, C., (2008). “Orphanhood and Completion of Compulsory School Education". *Among Young People in South Africa: Findings from a National Representative Survey*", *Journal of Research on Adolescence*, Vol., 18, No. 1, PP. 173-186.
- Smith, J. R. (1997). “Consequences of Living in Poverty for Young Children’s Cognitive and Verbal Ability and Early School Achievement.¶ in *Consequences of Growing up Poor*”. Greg. J. Duncan and Jeanne.
- UNICEF (2006). “Africa’s Orphaned and Vulnerable Generations: Children Affected by AIDS”.  
New York: UNICEF.
- Yamano, T. and Jayne, T.S. (2005). ”Working-Age Adult Mortality and Primary School Attendance in Rural Kenya”. *Economic Development and Cultural Change*, Vol., 53, No., 3, PP. 619–654.
- Yamano, T., Shimamura, Y., and Sserunkuuma, D. (2006). “Living Arrangements and Schooling of Orphaned Children and Adolescents in Uganda”. *Economic Development and Cultural Change*, Vol., 54, No. 4, PP. 833-856.