Child Labour Hour and Household Expenditure on Child's Health: Case Study of Lapai Local Government Area of Niger State

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Abstract

This study investigates the contribution of household head's expenditure on child health in rural areas of Lapai, Niger State. The study used primary data with 382 observations and applied a logit and Two-Stages-Least-Square. The study reveals that a child's household head expenditure, nature of work and child's labour hours positively predict child health status, while educational level of household head negatively predicts child health status. The study therefore recommends active legislation and granting of adequate autonomies to monitoring agencies and authorities in order to reduce involvement of children in labour.

Keywords: Child, Labour, Expenditure, Health, Lapai
 JEL Classification: D10, J23

1. Introduction

In Nigeria, children below the age of 17 usually participate in both domestic and economic work within and outside the family with the aim of earning income at the detriment of schooling. Children are exposed to long hours of work couple with too many responsibilities with little reward. These children are exposed to health hazards which lead to ill health or severe damage, especially those engaged in agricultural, manufacturing and mining sectors. With almost 250 million children across the globe, about 179 million are engaged in the worst form of child labour (WHO, 2018). Nigeria in particular represents around 6.1% (15million), with 50% of children participating fully in child labour, where North-Central with 56.8% having the highest against other regions (Kingston, 2018). Evidence by Agbo (2017) showed that 25% of child labourers do experience severe injuries mostly from all body pains in Nigeria.

In an effort to provide a legal framework for protection and welfare of children in Nigeria, the National Assembly in 2003 enacted The Child's Right Act (CRA, 2003). The Act made

lucid provisions for protection and welfare of a child. The first part guarantees and places the interest of the child to be of paramount consideration in all situations such that all actions undertaken by an individual or institution be it public or private must give priority attention to the interest of the child (CRA, 2003). This is not unconnected with the growing menace of child labour and other social vices confronting the child. He is often regarded as endangered species because his life is threatened (Iweala, 2005).

While attaching prominence to interest of the child, the law provides for the rights and duties of the child's parents, legal guardians, or other individuals, institutions, services, agencies, organisations or bodies legally responsible for the child (CRA, 2003). These are rights that are considered sacrosanct and have their foundation rooted in the United Nations Universal Declaration of Human Rights (UDHR)[1], The African Charter on Human and People Right (ACHPR)[2] as well as the Constitution of Federal Republic of Nigeria as amended.[3]

A very significant aspect of section 14 of the Child's Right Act is the right to parental care and protection which is specifically placed on the parents or guardian (CRA, 2003). As an inalienable right, the child is entitled to feeding, shelter, clothing, medical attention and other auxiliary services from the parents or guardian in accordance with their financial capability. It is not their duty to ask the child to do or provide for himself and the family any of such duties. Where there is a failure on the part of the parents or guardians the Child has a right of legal redress against them in a family court.

The Section 20 of the Act also places on the parents and guardians, institution, person and authority responsible for the care, maintenance, upbringing, education, training, socialization, employment and rehabilitation of a child the duty to provide necessary guidance, discipline, education and training for the child as will prepare him to be assimilated and appreciated in the society (CRA, 2003).

On the issue of Child labour, the Act is not oblivious of the physical and exploitative abuse our children are subjected to. It specifically prohibits exploitative labour.[4] A child shall not be subjected to any form of forced or exploitative labour, or be required to lift, carry or move any object or material that can affect physical or mental being, or be employed as domestic servant outside his home, or employed to carryout work in any capacity but can be

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[1] The UDHR was ratified in 1948 after the second World War. Drafted by representatives with different legal and cultural backgrounds from all regions of the world.

[2] The ACHPR is an international human rights instrument that is intended to promote and protect human right and basic freedoms in the African continent. It came into force on 21st Oct 1986.

[3] Chapter IV of the 1999 Constitution of the Federal Republic of Nigeria (as amended). Section 4(2) grants powers to the National Assembly to make law and pursuant of which the Child Right Act was enacted.

[4] Section 28 Child Right Act 2003.

engaged on light work of agriculture, horticultural or domestic nature. Any contravention to this provision is meted with grave penal consequences.

The expenses on child labour injuries are mostly incurred by their parents with majority of parents relying on self-medication at homes, therefore demonstrating deficient treatment of the ailments. Given a worst situation of child injury, parents end up spending more than what the child has contributed to household fold. Earlier in 2016, Nigerian government launched the National Social Protection Programme with the sole aim of providing financial assistance to poor family with enlistment in school as a prerequisite.

Earlier studies have emphasized on various child labour consequences, with majority of them focusing on educational attainment of a child. Alfa Garba, Abdullahi and AbdulRahim, (2012) investigated the impact of child labour on school attendance in Nigeria, Allais and Hagemann (2008) examined the negative effect of child labour on Education-For-All (EFA) in 34 countries. However, Krutikova (2009) focused on household composition, income shocks and parental preferences as key determinants of child labour. Beegle, Dehejia and Gatti (2009) emphasized on the consequences of child labour on socio-economic factors notably education, health and wages. Other studies like Duflo (2000) only emphasized on child health, and the study aimed at investigating the effect of old age pension programme on child health in South Africa; while Page, Schaller and Simon (2017) looked at child health but in respect to aggregate labour demand shocks. Only a few studies recognized the role of household head; for example Alfa and Karim (2016) concentrated on child labour hours and their relationship with household head. Despite these, the studies did not look at household expenditure on child health. Does that mean children who engage in labour are not prone to illness? If they do, then who bear the burden of the illness especially when it involves huge resources? Therefore, this study investigates the contribution of household expenditure on child health.

2. Literature Review

Child labour has continued to be trading phenomena among various households both in rural and urban areas. Many societies have flouted global laws and national enactment of ILO (2000) with persistent increase in child labour, despite the labour carried out are at the detriment and danger of the children. This labour denies children of their early days, their prospects and their dignity, and that is hazardous to their substantial and psychological development (Shelburne, 2001). Although parents allow their children to participate in labour especially when the family can't generally meet its subsistence needs (Basu & Van, 1998). Despite all this, little has been known on how labour market affects children's health (Page et al, 2019). The role of household expenditure on child health is absent in many empirical studies on child labour.

Considering the empirical studies on child labour and child health; Nelson and Quiton (2018) used the logistic model to examine the effect of work on child health and recreation activities in Philippines, and found various risks to affect working children's health. Karimli, Rost and Ismayilova (2018) applied the mixed-effect model to test the relationship between types of hazardous work and child health outcomes in Burkina Faso, and the result showed a significant relationship between child health and hazards children are exposed to. Another study by Ibrahim, Abdalla, Jafer, Abdelgadir and Vries (2018) concentrated on

child labour and child physical and mental health in low-and-middle-income countries. They found children engaging in child labour to be experiencing malnutrition. Similarly, Beegle et al (2004) emphasized on child labour and health consequences in Vietnam where the instrumental variable was used and the result showed no significant effect between child labour and child health, because those ill among them did not significantly increase in child labour participation. However, looking at the objective of this study, a closer study to it is Duflo (2000). The study used the nonparametric regression to investigate household resources of aged pensioners and child health in South Africa, and found money given to old-age parents became of critical importance to them than child health. Reinhold and Jurges (2012) further concentrated on parental income and child health; the ordered probit result indicated that children from high income home do cope even when they are in chronic conditions. But other characteristics were emphasized by other scholars. Reichman, Corman and Noonan (2018) looked into relationship between status of parents and child health, and their findings revealed that poor health of a child reduces low income parents commitment to a stronger relationship. Finally, Lindeboom, Llena-Nozal and Klaauw (2009) investigated parental education on child health, and their OLS results showed that no effect of parent education on child health.

3. Methodology

In assessing the contribution of household expenditure on child health of those that engage in labour, this study used a cross sectional data set generated through the use of questionnaires that were obtained from urban and rural areas of Lapai and its environs (Reinhold & Jurges 2012; Alfa *et al.,* 2012). A total of 382 samples were obtained from a population of 130,000 households in the Local Government Area, using Saunder et al (2007) sample size calculation. The purposive sampling was used to obtain information from children aged 10 to 14 years who engaged in child labour. Child health status is used as a dependent variable, with a binary outcome of one if the child has been sick within the period of engaging in labour and zero for otherwise. The independent variables consist of nature of work measured by one if hazardous and zero otherwise, household expenditure measured by monetary expenditure on child health, child labour hours measured by average hours a child work per day; parent educational level measured by number of years schooling. This study used a logistic regression as seen in the study of Nelson and Quiton (2018) given the nature of the dependent variable to be categorical in nature. The model is specified as

$$P_r (C_i = 1/0)_i = \alpha + \beta_1 NWk_i + \beta_2 HExp_i + \beta_3 Chdlb_i + \beta_4 PEdu_i + \mu_i \dots\dots\dots\dots\dots\dots\dots 1$$

Where: $P_r (C_i = 1/0)$ is Probability of child been sick before; i is individual response, α is the constant parameter of the equation; β_s refers to the coefficient of the independent variables; with NWk as nature of child work; HExp as household expenditure on child health; Chdlb as child Labour; PEd as parent education and μ denotes error term.. Model two consists of child and household characteristics to see whether the variables contribute to child health status, which is specified below:

$$P_r (C_i = 1/0)_i = \alpha + \beta_1 NWk_i + \beta_2 HExp_1 + \beta_3 Chdlb_i + \beta_4 PEdu_i + \beta_5 Ocup_i + \beta_6 AgCh_i + \beta_7 GnCh_i + \beta_8 HAg_i + \beta_9 HGnd_i + \beta_{10} FlySz_i + \mu_i \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 2$$

Where: P_r (C_i = 1/0) is Probability of child been sick before; i is individual response, α is the constant parameter of the equation; $β_s$ refers to the coefficient of the independent variables; with NWk as nature of child work; HExp as household expenditure on child health; Chdlb as child Labour; PEd as parent education; HhW is household welfare; AgCh as age of a child; GnCh represent gender of a child; HAg indicates household head age; HGnd denotes household head gender; FlyS is family size; and μ denotes error term. This study also used Two-Stages Least Square (2SLS) to stay clear of endogeneity, with household expenditure on health (HExp) as dependent variable, while child health status, parent education and occupation as independent variables, where child health status is instrumented by nature of child work (NWk) and child labour hours (Chdlb), which is presented in model 3 and 4.

$$HExp_i = β_1ChHlt_i + β_2PEdu_i + β_3Ocup_i + μ_i \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.. \; 3$$

$$ChHlt_i = β_1NWk_i + β_2Chdlb_i + v_i \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots...\ldots\ldots.. \; 4$$

4. Result Analysis

Table 4.1: Descriptive Statistics

Variable	Mean	Standard Deviation
Child Health Status	0.78	0.41
Household Expenditure on Health	498.61	142.21
Child Labour Hours	3.42	1.51
Nature of Work	0.66	0.48
Age of Child	11.89	1.36
Gender of Child	0.59	0.49
Household Head Age	47.00	10.61
Household Head Gender	0.19	0.39
Education of Household Head	0.60	0.49
Occupation of Household Head	0.23	0.42
Family size	10.14	3.69

Source: Authors Computation

The result in Table 4.1 entails the descriptive result of the variables used in this study. child health status has a mean value of 0.78 signifying majority of children that engaged in child labour might have one element of sickness or the other, either having physical or mental disability. The average expenses of household on child health was 498.61 with a deviation of 142.21, indicating households do spend a reasonable amount of money to treat a child that was unhealthy, which might even affect the gains from labour. For child labour hours, the average hour children spent on work was 3.42 hours with standard deviation of 1.51, with majority of them working under hazard condition given the mean to be 0.66 and difference from the mean to be 0.48. This shows that majority of children purposively sampled worked on 3 hours and above per day under hazardous conditions. Child age also have a mean value of 11.89 with a difference of 1.36 from the mean, and gender having the mean of 0.59 with standard deviation value of 0.49. This means all children are within the international definition of a child, with the majority of children sampled to be male.

For the household characteristics, the average age of the head was 47 with standard deviation of 10.61, and gender of household to have a mean value of 0.19 with deviation

value of 0.39. This suggests that majority of the household heads were in their 40s with female heads as the majority. In terms of educational level, majority of them had attained formal education with majority having either primary or secondary certificate. Majority of the household heads were employed in the informal sector given the average value to be 0.23 and standard deviation of 0.42, which signifies their greater participation in agricultural production. Also of the sample obtained from the population, the average family size was 10.14 and measure of dispersion of 3.69, which indicates that majority of the household heads, had large families.

Table 4.2: Logit Result with Child Health Status as Dependent Variable

Variables	1		2	
	Logit	Margins	Logit	Margins
Household Expenditure	0.0205***	0.0007	0.0271***	0.0002
	(0.0027)		(0.0043)	
Nature of work	1.5975***	0.0716	1.1473*	0.0106
	(0.4971)		(0.6029)	
Child Labour Hours	0.9680***	0.0319	1.4203***	0.0104
	(0.1768)		(0.2812)	
Education of Head	-1.7542***	-0.0541	-2.1576***	-0.0152
	(0.5717)		(0.7663)	
Occupation of Head			1.9118**	0.0098
			(0.8275)	
Age of a Child			0.1280	0.0009
			(0.2221)	
Gender of a Child			-0.2969	-0.0021
			(0.6289)	
Household Age			0.0590*	0.0004
			(0.0327)	
Household Gender			-2.3098***	-0.0417
			(0.7342)	
Family Size			0.4273***	0.0031
			(0.1224)	

*Notes: Robust standard errors are in parentheses, P values: significance *10%; **5%; ***1%.;*

Table 4.2 shows a logit result with child health status as dependent variable. Model 1 has factors that directly worsen child's health, while model 2 is combined with other child and household characteristics. From the result, household expenditure coefficient is positive and significant at 1% in the two models; it indicates that expenditure by household leads to expenditure on child health by 0.07% in the model and 0.02% in the second model. Despite child labour benefit to some households, they still spend some portion of their personal income on child health. The nature of work by child also affects their health status; the coefficient is positive and significant at 1% in the first model and significant at 10% in the second model. It shows that the more a child works in hazardous condition, the more likely the child will be ill. The probability of child working in hazardous condition worsens child health by 7.16% and 1.06% respectively. By this nature, children are found in various forms

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of trade which affects their physical and mental ability. Similarly, child labour hours positively affect child health and significant at 1% in the two model as obtained by Nelson and Quiton (2018). It means an increase in the hour of labour affects child physical and mental ability by 3.19% and 1.04% respectively, that is the more a child engage in work, the more tendencies that the work will be injurious either physically or mentally. However, educational attainment of household head is negative and significant at 1% in the two models, signifying that the more educated households were, child health complication from work reduces by 5.41% and 1.52% respectively. But occupation in the second model is positive and significant at 5%, these shows that being an unskilled work increases child exposure to hazardous condition of work, because majority of children equally assist their parents or guardian in work. This is in line with the study of Reichman, *et al*. (2018)

Looking at child characteristics in term of age and gender, the result obtained shows that the two variables are not significant to child health status. This means age and being male or female child does not count in terms of child health status. But for the household characteristics, age of the household head is significant at 10%, while gender of household head is negative and significant at 1%. This indicates that, the older the household becomes, the more a child engage in injurious work, because household head contribution to house income will be diminishing and children may decided to spend additional hours on work. Also, being a female head increases child involvement in hazardous work that might affect their physical and mental health. On the other hand, the coefficient for family size is positive and significant at 1%, it shows that the larger the family sizes the more a child experience health challenges most especially if engaged in work.

Table 4.3: Regression Result with Household Expenditure as Dependent Variable

Variables	3 OLS	4 2SLS	5 2SLS (Robust)
Child Health Status	227.1843***	156.6914***	160.9167***
	(11.6858)	(26.8799)	(26.9912)
Education of Head	7.5783	-9.9361	3.8118
	(11.6244)	(13.4990)	(12.6462)
Occupation of Head	39.0934***	52.6618***	
	(13.7650)	(14.5352)	

*Notes: Robust standard errors are in parentheses, P values: significance *10%; **5%; ***1%.;*
Instrumented: Child health; instruments: nature of work, child labour hours

The two stage least square (2SLS) was used in order to stay clear of endogeneity problem, and presented in Table 3 with nature of work and child labour hours being instrumented by child health status. The result shows that child health is positively related to household expenditure and significant at 1% in all in the three models even after instrumentation in model 4 and 5. This shows that households do spend more on child health particularly those who engage in labour; because household expenditure on medicines is always elastic, and it does follow the level of an individual income. The educational level of the head is not significant in the entire model, indicating household head educational level does not count on household head expenditure. The fact still remains that household heads do spend money

once it comes to domestic affairs. But nature of occupation is positively and significantly related to household expenditure that a head who works in informal sector increases household expenditure by 39 and 53 units in model 3 and model 4 respectively. This finding is not in conformity with the findings of Lindeboom *et al.* (2009) as household heads in informal sector have a large participation of their children engaged in child labour, which eventually make them to spend more once it comes to the issue of child health and other child related factors.

5. Conclusion and Recommendation

In investigating the contribution of household expenditure on child health, this study found household head expenditure, nature of work and child labour hours do positively predict child health status, while educational level of head negatively predicts child health status. However, child health status and occupation of head are positive and significantly influence household head expenditure. The study therefore recommends use of active legislation and programme for eradicating children involvement in labour, with granting of adequate autonomies to monitoring agencies and authorities. Because their involvement in labour exposes them to more hazardous condition, which eventually makes household heads to spend more of their income on child health.

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