

Mothers' Literacy, Public Health Expenditure and under-five Mortality rate in Funtua Local Government Area of Katsina State

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Abstract

The study examines Mothers' literacy, public health expenditure and under-five mortality rate in Funtua local government area of Katsina State. Two-stage clustered sampling method was used to select the study units, thus, one secondary and two primary health care centres within Funtua local government were selected. 100 questionnaires were administered to the selected adult female respondents. The study further used secondary time series data, specifically on local government expenditure on health, and under-five mortality rate in Funtua local government. The Pairwise correlation coefficient result indicated that there is a strong correlation between public health expenditure and under-five mortality rate. The study further established that female literacy is the most contributing factor in reducing the under-five mortality rate in Funtua local government. The study recommends that government at all levels should focus on increase budgetary allocation to the health sector. In addition, the government should also come up with policies that make education compulsory for all females.

Keywords: Under-five mortality, female literacy, expenditure, Pairwise correlation
JEL Classification: I12, I22,

1. Introduction

Health is an important part of human basic needs, while, the under-five mortality rate is a key health outcome. In fact, under-five mortality is known to be the most important indicator for early childhood development and health status of population for any country (Hassan, Zaman & Shabir, 2014). Under-five mortality rate refers to the tendency for a new born baby to die before reaching the age of five years in every 1,000 live births, due to health problems of the baby or the mother. Being a vital health outcome, the world has made significant progress in reducing child mortality in the past few decades. Globally, the under-five mortality rate dropped from 91 per 1000 live birth in 1990 to 43 per 1000 live birth in 2016 (World Health Organization (WHO), 2017). However, in spite of the substantial improvement in child survival between 1990-2015, the driven aim of a two third reduction before 2015, as contained in Millennium Development Goals target was not achieved at the global scale (UN Inter-agency Group for Child Mortality estimation (IGME), 2016). Although, large disparity were observed in under-five mortality rate among

different regions of the world during these periods, compared to other regions, yet Sub Saharan Africa and Southern Asia have the highest under-five mortality rate (IGME 2017). According to UNICEF (2017) about 80 per cent of under-five deaths occurred in two regions, Sub-Saharan Africa (38 per cent) and Southern Asia (39 per cent). Still, six countries account for half of the global under-five deaths, namely, India, Nigeria, Pakistan, the Democratic Republic of the Congo, Ethiopia and China. Though, India and Nigeria alone account for almost a third (32 per cent) of the global under-five deaths.

Therefore in an attempt to reduce these inequities; International organizations have set up a frame work which was declared in September, 2000 to be known as Millennium Development Goal (MDG). Since most countries in Sub-Sahara Africa, Nigeria inclusive were unable to achieve this target, because there is still high rate of under-five mortality rate inequalities in the region, this has necessitated the extension of MDG in 2015 to a new framework called Sustainable Development Goal (SDG). One of the targets of these goals is to promote equity among the regions in the world by reducing child's mortality rate among developing countries by 2030. To achieve this goal, social- economic factor such as female literacy must be put into consideration, in order to reduce under-five mortality rate and increase economic productivity (UNICEF, 2016).

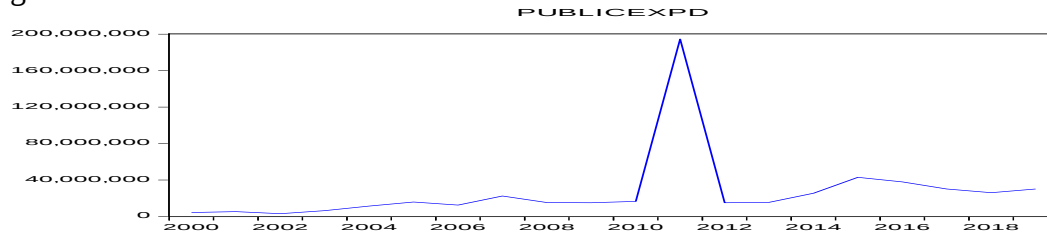
However, the significant progress recorded especially between 2010 to 2015 in reduction of under-five mortality rate in Africa and developing countries in general, was associated with increased in public health spending in most of these countries, following a substantial increase donor funding of health programs from USD\$1.4 billion in 2002 to US\$ 8.7 billion in 2010 (Wexler, Valentine & Kate, 2013). WHO (2011) further observed that these interventions have reduced death from malaria, measles and pertussis, infectious diseases, etc. Therefore, improvement in health service delivery through rising public health expenditure has incremental effect on the quality of life and health capital to the beneficiaries that led to low mortality rates. This point out that government-funded public health activity plays an important part in a country's health development, through strengthening health systems and generation of human, financial and other resources. This allows health systems to achieve their goals of improving health, reducing health inequalities, securing equity in health care financing and responding to population needs (Roperto & Peralta, 2014).

Importantly, health expenditure is viewed as an important element of health status across the world. Therefore, health spending is normally seen as a direct determinant of health outcome. This is because the amount of resources devoted to health directly determines the level of health outcome, all other things being equal. It is therefore expected that as nation/region spends more on health, its health outcomes should also improve. This is however not the situation in Nigeria, where the improvements in health do not correspond to the increases in health expenditure. According to Matthew, Adegboye, and Fasina (2015) public health expenditure in Nigeria from 1970s to 2000s has shown a significant and substantial improvement; yet, the under-five mortality rates remain relatively high in Nigeria. Evidently, the under-five mortality rate has increased from 147 per 1,000 in 1990 to 176 per 1,000 in 1995, before falling to an all-time low of 119 in 1998. Multiple Indicator Cluster Survey (2018) has further reported that the national average of under-five mortality rate is relatively high and still far from the target of Sustainable Development Goal. PMNCH (2019) also documented that under-five mortality ratio in Nigeria was 201 deaths per 1,000 live births, meaning that one in five Nigerian never reach the age of 5. Furthermore, Federal Ministry of Health (FMH) (2016) documented that there are about 5.3 million births annually in Nigeria, out of which over 1 million die before the age of five. In terms of regional comparism of the under-five mortality rate spread in Nigeria, North West has the highest under-five mortality with 269 deaths per 1000, this followed by North East Zone. However, nine (9) states with the higher number than the national average are: Nasarawa, Niger, Bauchi, Gombe, Jigawa, Kano, Katsina, Kebbi, and Zamfara

In Katsina State, government has maintained a sustain increase in total financial allocation to the health sector from ₦567.7 million in 2000, to ₦1.74 billion in 2005, further from ₦6 billion in 2010 to ₦23 billion in 2018 (Katsina State approved estimate of various years). Therefore, the budgetary allocation to health sector as a percentage of total state budget over the years, has been well above the National recommended level of 5%. Despite that, the pattern of morbidity and mortality in the state appears not to deviate remarkably from the overall estimates for the nation (State health profile 2003-2007). According to the Katsina State health profile (2003-2007), the under-five mortality rate has reduced from 120 per 1000 live births in 2003 to about 114 per 1000 live births in 2007. However, in 2014 factsheet (2018) reported that the under-five mortality rate in Katsina State has reached 169 per 1000 live birth. Katsina State local governments annual estimates (various years) also reported a gradual and slowly increased in Funtua Local Government health expenditure from ₦4,409,000 in 2000 to ₦ 15,929,909

in 2005, increased further from ₦16,593,092 in 2010 to ₦30,205,683 in 2019. The average government expenditure in Funtua local over the period of 2000 to 2019 was found to be ₦27,360,570, with the minimum expenditure of ₦3,150,000.

Figure 1: Graphical representation of public health expenditure in Funtua Local government



Source: Researcher's computation

However, an important determinant of under-five mortality rate is mother's education as reported in the plethora of literature. Cleland (1990) argued that education leads to behavioural changes, that is, child health improvement. Even father's education is not important as mother's in child health production (Glewwe, 1999). To Thomas, Strauss and Henriques (1991) and Glewwe (1999) maternal education makes mothers able to process information, that a literate mother will be able to read a medication label and give proper dose to the child. Also, education results to better health knowledge (Glewwe, 1999, Webb & Block, 2004). It has been established that the children born to a literate mother are 50% more likely to survive than the illiterate mother. Therefore, increase level of Mothers' education reduces the risk of mortality among their children (UNESCO, 2017). It is also observed that the child immunization rate and nutritional status is significantly higher among the educated mothers than illiterate mother. Therefore, women's education has been a key factor to lower infant and under-five mortality rate (Iyewumi *et al.* 2013). According to Pillai (2013) educated women are less likely to experience poverty, and more likely to maintain good nutrition status and make right decision on health and well-being.

According to UNICEF (2007) education for girls is critical for the development of women, it raises economic productivity, reduces poverty, lowers infant and mortality, and helps improve nutritional status and health. Therefore, mother's education is very important in reducing under-five mortality rate in any country. According to Neuman and Weiss (1995) parents' education positively affects child health Therefore, High rate of literacy in women will have effect on child health,

and it will reduce under-five mortality rate. The higher a woman's level of education, the more likely it is that she will marry, play a greater role in decision making, and exercise her reproductive rights. Her children will tend to be better nourished and enjoy better health (Iyewumi *et al.* 2013). Children of mothers who are un-educated are almost three times as likely to die before their fifth birthday compared with mothers with secondary school education (IGME 2017). Education helps mothers to delay and space births, gives opportunity to access maternal and child health care centres to look for treatment for their children whenever they fall sick. Thus, educating girls can save millions of lives, if all women had a primary education; there would be 15% fewer child deaths, also if all women had a secondary education, child death would be cut in half, saving 3 million lives (UNESCO, 2016). UNICEF (2016) further argue that healthier country is related to increase in public health expenditure, education level, high income earning, children vaccination etc. To Strauss and Thomas, (1995) education is a means to improve child health and reduce fertility. According to Paxson (2005) health and education are inverse related. Therefore, Bravman, Eagerta and William (2011) view that mother's education and socio-economic status are two factors to measure under-five mortality inequalities in developing countries. Pradan (2017) observes that between 1970 to 2010, 14 per cent reduction in under-five mortality rate in the world was as a result of increased in mother's literacy

However, the theoretical link between education, health and health care expenditure goes back to Grossman's (1972) model of the demand for good health, also known as health production function. According to the theory individual health output depends on individual inputs to the health production function. In other word, the Grossman model proposed that individuals inherit an initial stock of health that depreciates over time, but can be increased by more investments in health. Gross investments in health capital are produced by production functions, whose direct inputs include the time of individual and market goods such as medical care, diet, exercise, income, education, recreation and housing. However, the amount spent on these market goods directed to improve the stock of health may be considered as health care expenditure or public health expenditure.

Other environmental factor that may influence the production function is education. Based on the prediction of the model, if education improves the efficiency of gross investments in health, then more educated people would choose a higher optimal stock of health. This means that education positively affects health. In most families, especially in Nigeria and African countries in general, mothers spend

more time than fathers taking care of children; this means that mothers play a more important role in decisions about child health and nutrition. This suggests that it is likely that mothers' education would matter more than fathers' education, after controlling for income. Therefore, more educated mothers should have healthier, better nourished children. Consequently, Filmer and Pritchett (1999), examined the effect of female literacy on under-five mortality rate from 1960-1992, using data across 20 OECD countries. The study revealed that under-five mortality depends on the female literacy, that 10% increase in female schooling will lead to 39 per cent decrease in under-five mortality rate. Moreover, Data from NDHS (2008) revealed that educational levels among females were related to higher infant and under-five mortality (Iyewumi, Donald & Ofoegbu, 2013). Desai (2005) also discovered that a mother's education is one of the single most significant determinant of infant and child mortality.

Despite the vital role plays by education particularly, female literacy in reducing under-five mortality, the global literacy rate for all people above 15 years of age is 86.3%, while the global literacy rate for all males is 90.0% and the rate for all females is 82.7%. The literacy rate of each region or country varies throughout the world with developed nation having rate of 99.2%; Oceania (71.3%), South and West Asia (70.2%) and Sub Saharan Africa (64.0%). Furthermore, over 75% of the world 781 million illiterate adults are found in Sub Sahara Africa, South Asia and West Asia. While, women represent almost two-thirds of illiterate adult globally (UNESCO institute of statistics, 2015). UNESCO (2006) institute of statistics, explained that literacy is the ability to read/or write simple statement in either a national or indigenous language. In African countries literacy rate continues to rise from one generation to the next. Yet according to new data from the UNESCO (2016), there are still 750 million illiterate adults, two-thirds of whom are women. It has also been observed that 95 per cent of world illiterate people living in developing countries, almost 70% are women. Especially in Sub Saharan Africa female literacy is very high, for example 90% of Burkina-Faso and Niger are illiterates (Verner, 2005).

In Nigeria however, a survey conducted by Multiple Indicator Cluster Survey (2018) shows that the states in the southern part of the country have a high Percentage of young men and women, who are literates by being able to read some simple statements compare with the states from the northern part of Nigeria. At least 9 in 10 young persons in states in the Southern part of the country are literates. Specifically, literacy rates among young people in all the states in the South South

are over 90 per cent. Illiteracy is notably high (more than half) among young women in Niger, Bauchi, Gombe, Yobe, Jigawa, Katsina, Kebbi, Sokoto and Zamfara states. The data on literacy index recently published by the National Bureau of Statistics (NBS) revealed that the huge gap in the educational development between the southern and northern Nigeria is yet to close up, nearly sixty years after independence. According to the data, the states where majority of people can neither read nor write are in the Northeast, Northwest, and North-central. The report shows that Yobe State has only 7.23% literacy level, the lowest in the country. The dismal record of Yobe is followed by Zamfara (19.16%); Katsina (10.36%); Sokoto (15.01%); Bauchi (19.26%); Kebbi (20.51%); and Niger (22.88%) respectively. Only Taraba is an exception with 72 % literacy rate (The guardian newspaper, 2017).

Against this background this research intends to examine mothers' literacy, public health expenditure and under-five mortality rate in Funtua Local government area of Katsina State. Other specific objectives are to assess the degree of correlation between under-five mortality rate and public health expenditure, also to investigate the impact of mothers' literacy on under-five mortality rate in Funtua local government. This will enable the researcher to assess the achievement of the Millennium Development Goals, during the civilian government, and by extension the possible attainment of SDG in Nigeria before 2030 at micro level. Existing studies connecting health expenditure to reduction of child mortality is yet to be concluded. Some studies were unable to find a significant connection between health expenditure and child mortality. Thus, the issue of whether public health spending has an impact on under-five mortality is yet to be settled, especially at a micro level.

Following this introduction in section one, section two covered data and method. The results are presented and discussed in section three. Finally, section four consists of conclusion and recommendation.

2. Data and Method

Funtua local government has a population of 225,571 (2006 population census) and 502,110 according to 2016 estimate, covering an area of 448KM². Funtua became a local government area in Katsina state in 1967. It is the headquarters of the Katsina South senatorial district, which comprises of eleven local governments. It is the second largest city in the state after Katsina. In selecting the study units for

this study, a two-stage clustered sampling method is employed. The population is divided into subgroups, known as clusters, which are randomly selected to be included in the study. In this light, and to begin with, Funtua local government has a General Hospital (Sarkin Maska Shehu Hospital) managed by the State Health Services Management Board which form the secondary level of health care, and also considered to be the first cluster. There is one Comprehensive Health Centre and various primary health centres spread across the local government area, managed and controlled by the local government health department, which form the primary level of health care, also serve as the second cluster. Therefore, within Funtua local government, one secondary and two primary health care centres are selected in this research.

The target population of this research are all adult female as a proxy for female level of education. Sample size selection of the respondents was guided by Sekaran (1992), who submits that for a population size that ranges from 75,000 to 1,000,000, a sample size of 384 is ideal. Given that the total population size in Funtua local government is not up to 75,000 people, 100 adult female respondents are selected, while, they were administered with opened and closed-ended questionnaires.

Beside the primary data, this study also used secondary data on Funtua local government expenditure on health from 2000 to 2019 obtained from Katsina State local governments annual estimates. Observation on under-five mortality rate in Funtua local government from 2015 to 2019 was sourced from Health Facility Monthly Summary form. The methods used to analyse the data are frequency tables, percentage, descriptive statistics and Pairwise correlation coefficient.

The Correlation analysis is a statistical technique used to estimate the strength and direction of association between two variables say X and Y. Example, relationship between Mothers' literacy and under-five mortality rate, and link between government health expenditure and under-five mortality rate. The basic concept of correlation is to measure the strength of the linear relationship between the variables as:

$$r = \frac{\sum_{i=1}^n (y_i - \bar{y})(x_i - \bar{x})}{\sqrt{\sum_{i=1}^n (y_i - \bar{y})^2 \sum_{i=1}^n (x_i - \bar{x})^2}}$$

Correlation Coefficient (r) value of 1 indicates a perfect positive correlation between the two variables. On the other hand, r value of -1 implies perfect negative correlation. A value of r close to 1 indicates a strong correlation, but a value close to zero shows a weak correlation between the variables of interest.

3. Result and Discussion

A total of 100 questionnaires were administered, out of which 94 were returned, even with that, many respondents chose not answer all the questions. For the secondary data the study was constraints to only gather observations from 2015 to 2019 for the under-five mortality rate, due to non-availability of the complete data beyond this period.

Table 1: Descriptive statistics of the under-five mortality rate in Funtua Local Government

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
mortality	5	51.00	223.00	1.2840E2	61.61818
Valid N (listwise)	5				

The table 1 above shows that from 2015 to 2019, the minimum under-five mortality rate recorded in Funtua local government was 51. The maximum however was 223 with the standard deviation of approximately 61.62.

Table 2: Pairwise Correlation result

		Mortality	Public expenditure
mortality	Pearson Correlation	1	.717
	Sig. (2-tailed)		.172
	N	5	5
Public expenditure	Pearson Correlation	.717	1
	Sig. (2-tailed)	.172	
	N	5	5

The Pairwise Correlation value obtained is 0.717 revealing that there is a strong positive correlation between public health expenditure and under-five mortality rate. This result has established the lack of correspondence between improvement in the under-five mortality rate and increase in public health expenditure in Funtua local government. This result is not surprising, as it was earlier established by Matthew et al. (2015) that, despite huge spending on the health sector by government, private individuals and non-governmental organizations as well as improved female literacy due to globalization and advancement in technology, still under-five mortality rates remain high in Nigeria. This may not be unconnected with the fact that the funding for health sector in Nigeria has been inadequate to meet the needs of the sector, and thus, the sector is experiencing a number of basic systemic problems, which contribute to the low sectoral-performance. Moreover, poor management of funds and human resources, limited coverage and inadequate number of workers are some of the key sectoral problems.

Data Presentation and Analysis of the questionnaire

Table 3: Social Characteristics of the respondents

Variable	Response	Frequency	Percentage
Age	15 - 25	58	63.04
	26 - 35	28	30.43
	36 – 45	6	6.52
Tribe	Hausa/Fulani	90	97.83
	Others	2	2.17
Religion	Islam	92	98.92
	Others	1	1.08
Income level	Poor	34	37.78
	Middle income	54	60.0
	Rich	2	2.22

The table 3 shows that approximately 63.04% of the respondents were within the age bracket of 15-25 years, while those in the age limit of 26-35 years represented about 30.43%. The remaining 6.52% are within 36-45 age limits. This indicated that majority of the respondents are at their young age limit, therefore, most of them are first pregnancy women (Primigravidas), and hence some questions are irrelevant to them.

The table further illustrated that 90 out of 92 (97.83%) of the total respondents are Hausa/Fulani, only 2 respondents (2.17%) represent other tribes. This portrays that Funtua local government is pre-dominantly Hausas. Moreover, about 92 respondents (98.92%) are Muslims, and only 1 respondent (1.08%) is from the other religion. We can therefore deduce that majority of the respondents, are young, married women, and within the ages of 15 to 25 years, who are Hausa by tribe and Muslims by religion.

On the income level of the respondents, we use the World Bank international poverty line as a basis for categorization between poor and rich. According to the World Bank the international poverty line is USD\$ 1.90 per day (equivalent to 760 Naira). Therefore, table above illustrates that about 60% of the respondents are observed to be in the middle income group. This may be unconnected with the fact that, people in Funtua and its environs specialized in farming and trading activities, which serve as their major source of income besides the civil service job. Similarly, 37.78% are in the poor income group. However, only 2.22% are considered to be in the rich income category.

Table 4: Response to the questions related to health issues

Variables	Response	Frequency	Percentage
Where did you give birth to your child?	Public/Private hospital	28	42.42
	Home	20	30.30
	Others (Hospital and Home delivery)	18	27.27
If at the hospital. Assess the health care service delivery	Poor	6	13.64
	Fair	4	9.09
	Good/effective	30	68.18
	Excellent	4	9.09
How many children do you have?	None	34	36.17
	1-2	36	38.30
	3-4	10	10.64
	5-above	14	14.89
Children die before reaching the age of 5	None	36	64.29
	1	18	32.14
	3	2	3.57
Do you attend Ante-Natal Care (ANC)?	Yes	90	97.83
	No	2	2.17
If yes, at what level?	Early pregnancy	88	97.78
	Late pregnancies	2	2.22
How often do you immunize your child?	Early	10	16.67
	Skipping some	14	23.33
	Complete	28	46.67
	Only during outbreak	8	13.33

For those respondents with one or more birth records, the table above shows that majority of them (represent 42.42%) had delivered in either private or public hospital. Those who delivered at home have represent 30.30%, whereas, about 18 out of 66 respondents (27.27%) have given birth both at home and in the hospital for different children they born.

For those who gave birth at the hospital, majority of them or 30 out of 44 (equivalent to 68.18%) agreed that the health service delivery in Funtua local government hospital is effective/good. Moreover, 13.64% of the total respondents viewed that the health service delivery is poor. However, 9.09% of the respondents are of the opinion that the health care service delivery is fair. The remaining 9.09% reasoned that health care service delivery is excellent. This signifies that public health expenditure is commendable, and it further corroborated the observations obtained through secondary data, on the trend of public health expenditure in Funtua local government.

The Table further shows that majority of our respondents, who accounted for 38.30% (36) have 1 or 2 children. Followed by 34 out of 94 (equivalent to 36.17%) with no children, meaning that they either never gave birth or have their first pregnant. Therefore, most of the questions raised in the questionnaire are not applicable to them. However, respondents with 5 and above children are 14 (14.89%). Lastly, respondents who have 3 to 4 children are 10 (10.64%).

For the respondents who gave birth before, majority of them 36 out of 56 (64.29%) indicated that, none of their children die before reaching the age of 5. However, 18 out of 56 (32.14%) of the total respondents admitted that only one of their child die before reaching the age of 5. We also have 2 out of 56 respondents (3.57%) who disclosed that 3 of their children die before reaching the age of 5. The result corroborated the study by Iyewumi et al. (2013) who also observed that as more babies are delivered at places where healthcare services are available, the level of child mortality in those places will definitely reduce.

The table also indicates that about 97.83% of the total respondents (represent 90 out of 92) have been attending ANC. The remaining 2 respondents (2.17%) are not attending ANC. Similarly, those who attend ANC, majority of them 88 out of 90 (97.78%), do attend ANC at the early pregnancy. However, 2 out of 90 (2.22%) do attend, but at late pregnancy. Majority of those who gave birth before, are observed to take their child for complete immunization which represented 28 out of 60

(46.67%). This followed by 14 out of 60 (23.33%), who testified that they usually skip some immunization for their children. While 10 respondents (16.67) indicated that they take their children for immunization early. Finally, 8 respondents (13.33%) have agreed that they take their children for immunization only when there is an outbreak of diseases such as Cholera outbreak, Meningitis etc.

Table 5: Literacy rate

Variables	Response	Frequency	Percentage
Female educational levels	Primary	6	6.82
	Secondary	54	61.36
	Higher	20	22.73
	Non-formal	4	4.55
	None	4	4.55
Husband educational level	Secondary	26	28.26
	Higher	56	60.87
	Non-formal	8	8.70
	None	2	2.17
Ability to read and write	Write only	2	2.17
	Read and write	80	86.96
	None of the above	10	10.87

From table 5 above, 54 out of 88 respondents (61.36%) have secondary level education when they married. This followed by 20 respondents (22.73%) with the higher certificates such as Diploma, NCE, degrees, etc. However, 6 respondents (6.82%) were having primary certificate of education. 4 out of 88 respondents (4.55%) have non-formal education, that is to say they attended Islamic schools only. The remaining 4 respondents (4.55%) are found to have neither the formal nor the non-formal education, when they married. This shows that majority of our respondents are educated. Therefore, from the sample observations, the mothers' literacy rate in Funtua local government is high.

The table further indicated that 56 out of 92 (60.87%) respondents' husbands have higher educational qualifications. Those who married husbands with secondary education have accounted for 26 out of 92 (28.26%). The third categories are those whose husbands have non-formal education as they accounted for about 8.70%. Finally, 2 out of 92 respondents' husbands (2.17%) have no education at all. This

also reveals that majority of our respondents' husband have secondary and higher education qualifications. The table also shows that, 80 out of 92 (86.96%) can be able to read and write. Those who can neither read nor write have accounted for 10 out of 92 (10.87%). Finally, 2 out of 92 (2.17%) can be able to write only.

We can therefore deduce that education is the most influential factor determines child mortality levels among all the socio-economic aspects. Consistent to this finding is Iyewumi et al. (2013), who also observed that the child immunization rate and nutritional status is significantly higher among the educated mothers than illiterate mother. This finding supports the early studies by Neuman and Weiss (1995), Desai (2005), Paxson (2005), UNICEF (2007), Pillai (2013) and Pradan (2017), who equally found that women education is the key factor to lower the infant and under-five mortality rate. Furthermore, IGME (2017) viewed that children of mothers who are un-educated are almost three times as likely to die, before their fifth birthday compared with mothers with secondary school education. In addition, UNESCO (2016) claimed that educating girls can save millions of lives, therefore, if all women had a primary education; there would be 15% fewer child deaths. Also if all women had a secondary education, child death would be cut in half, saving 3 million lives.

4. Conclusion and Recommendations

The Pairwise correlation result obtained has established a strong positive relationship between public health expenditure and under-five mortality rate. This proved that there is no correspondence between the observed high public health spending and under-five mortality rate. Again, response from the primary source reinforces the fact that there are still cases of under-five mortality rate in Funtua local government. The major causes identified of the under-five mortality rate are: Malaria, excessive headache during pregnancy, neonate death, vomiting and diarrhoea, high fever, suspected appetites, complicated labour and measles. On the other hand, high female literacy rate found in Funtua contributes significantly in minimizing cases of under-five mortality rate. In other word, under-five mortality rate is low in Funtua local government due to high male and female literacy rates. As observed that majority of the respondents are serious to the health conditions of their babies as they usually take their children for complete immunizations and attending ANC at earlier stage of their pregnancy. Therefore, female literacy would lead to a better child health, high effectiveness and lower the under-five mortality rate provided that it is used simultaneously with high health expenditure.

The study recommends that government at all levels should focus on increase budgetary allocation to the health sector. In addition, government should come up with policies that will make education compulsory for all females. Also policies on maternal and child health development should be integrated with women empowerment programs through education.

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