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INFLUENCE OF PRIMARY HEALTH CARE DELIVERY SERVICES ON THE HEALTH STATUS OF RURAL DWELLERS IN ABIA STATE, NIGERIA

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Abstract:

The study examined the influence of primary Health Care delivery services on the health status of rural dwellers in Abia State Nigeria. A sample size of 120 respondents selected via multi-stage random sampling technique was used. in selecting .Primary data generated using structured questionnaire and Focus Group Discussion were analyzed using descriptive statistics such as frequency counts, percentages, means, pooled means, and KAP analysis respectively. Result showed a mean age of 25 years, 58.3% were male, and 75% were married. About 61.0% had secondary education, 58.3% were farmers/traders, and earned mean monthly income of N48, 250.00 and had a mean household size of 4 persons respectively. Majority (50.0%) owed water system toilets, and 58.3% sourced their drinking water from boreholes, 75.0% fed 3^2 meals/day and 83.3% were not registered with NHIS. Result further showed high (X = 3.03) level of awareness on seven out of eight PHC delivery service packages in the study area. There was also high level of utilization on immunization (X= 3.00) and moderate level of utilization on treatment for malaria, prevention/ treatment of communicable diseases, family planning/ HIV and AIDS, maternal / child health care, public health education and environmental health education respectively. The KAP analysis showed the Knowledge, Attitude, and Practice Levels of the respondents towards these PHC activities and interventions influenced their health status positively in the study area. The study concluded that PHC delivery services influenced the health status of the rural dwellers positively. It recommends that the Ministries of Health at the three tier

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levels of government should provide the needed support for enhancing and sustaining the PHC as well as encouraging participation among the rural dwellers mostly in the study area.

Keywords: primary health care, health status, rural dwellers

1. Introduction

Health is a treasure of inestimable value, which has implications for the individuals and national economic activities (Federal Ministry of Health (FMOH) 2007). Good health not only contributes to better life but also is essential for sustained economic and social development of a country. On the other hand, poor health generally imposes cost on the society and individuals in terms of reduced ability to enjoy a good living, or work effectively. It was on the above premise that Effiong and Ebong (2009) asserted that health should not be considered in isolation from other elements of development process, given, the fact that it affects socio economic factors notably income and production. Health is equally, according to Johns et al (1995) a quality resulting from the total functioning of the individual in his environment that empowers him to achieve a personally satisfying and socially useful life. Consequently, therefore, the inseparable relationship between health and economic development and the fact that right to health is the most basic of all human rights and a fundamental objective of social and economic development (WHO, 1999) made Nigeria in 1987 to launch her Primary Health Care Plan, which categorized health care delivery services under three levels, Tertiary, Secondary and Primary levels respectively (FMOH, 2007).

The Federal Ministry of Health of Nigeria is responsible for Tertiary Health Care Delivery Services, the State, through the State Ministry of Health and Hospital Management Board is responsible for the Secondary Health Care Delivery Services and the Local Government Area is responsible for Primary Health Care Delivery Services respectively (FMOH, 2007). The PHC represents "*essential health care based on practical scientifically sound and socially acceptable to individuals and families in the community through their full involvement"* (FMOH, 1988). This approach to health care emphasizes the cooperation and involvement of the community as contributor and customer in the health care system in Nigeria (Nwafor, 2014). A community health center is a core programme for many communities in Nigeria; it is not only the first point of contact but the only available health practice in the area (Nwafor, 2014). In other words, the principles of PHC allow individuals and groups particularly rural communities active participation in planning, implementing, monitoring and evaluating health

interventions (FMOH, 2007). Therefore, PHC is at the core of the Nigerian health system and key to providing basic health services to the people with their full participation (Nwafor, 2014). Abia State Strategic Health Development Plan (ASSHDP) (2010 - 2015) reported that there were 501 PHC Centres in the state, employing 2702 health personnel as in 2008. It further, reported that the PHC in Abia State is divided into three main categories namely: Primary Health Care Centres which cover an expected population of between 10,000 and 20,000 persons, Primary Health Clinics which cover an expected population of between 2,000 and 5,000 persons and The Health Posts which cover an expected population of 500 persons respectively.

The ASSHDP (2010 – 2015) equally stated that the PHC Centres discharge the following functions among others: prevention and treatment of malaria, prevention and treatment of communicable diseases, immunization, maternal and child health service, family planning & HIV/AIDS, public health education, environmental health and the collection of statistical data on health and health related events. In other words, PHC reflects and evolves from the economic conditions and sociocultural and political characteristics of the country and communities (Nwaafor, 2014). It addresses the main health problems in the communities, providing preventive, curative and rehabilitative service, which includes education concerning prevailing health problems and the methods of preventing and controlling them. PHC also involves, in addition to the health sector all related sectors and aspects of national and community development such as agriculture, education and housing among others (FMOH, 2007). Therefore, the essence of bringing PHC to the Local Government Areas (LGAs) in Abia State is to make the management of the PHC services more effective and closer to the grassroots (Nwafor, 2014). However, studies Effiong and Ebong (2009) and Nwafor (2014) have shown that health needs of many rural dwellers in Abia State were not adequately met. They further, observed that rural and remote communities continued to show poorer health outcomes than residents in urban areas of the State. Nwafor (2014) further observed that rural communities in Abia State still experience difficulties in recruiting and retaining adequately trained medical and health personnel in the workforce of PHC Centres. Similarly, Killen (2005) reported that rural dwellers in Nigeria incur heavy losses due to poor health through expensive health – care fees and menace of fake drugs syndrome. In like manner, Nwafor (2014) observed that there was the problem of insufficient PHC Centres in Abia State. He further highlighted the problem of accessibility to the available ones, due to the spatial inefficiency of their distribution and insufficiency in trained medical personnel. Abia State Health Data Bulletin (2007) reported that between 2008 and 2015 human resources for health was on the decline with high attrition rate of health care workers. That there were 41 doctors employed

under PHC in 2002, 38 in 2004 and 28 in 2008 respectively. The report further added that the same was the case for other cadres of health – care workers in the State.

Going by the aforementioned, there is no empirical study to the best knowledge of the researcher that has investigated the influence of PHC delivery services on the health status of rural dwellers in Abia State, Nigeria.

2. Objectives of the Research

Therefore, the study was guided by the following specific objectives, to:

1. examine the socio economic characteristics of the rural dwellers in the study area;
2. assess the respondents level of awareness to the activities and interventions of PHC in the study area;
3. assess the respondents' level of utilization of PHC delivery services; and
4. ascertain the extent to which the PHC health activities and interventions influence the health status of the respondents in the study area.

2. Methodology

2.1 The Study Area

The study was conducted in Abia State which is located in the South East Ecological Zone of Nigeria. It covers a total land area of about 5,243.3 Km^2 being about 5.8 % of the total land area of Nigeria (Abia – State Ministry of Health, 2010). Abia State has a population of 2.8 million people and a population growth rate of 3 % per annum (Abia State Health Data Bulletin, 2007). The State lies within Longitude 7^0 23′ E and 8^0 2′E and Latitude 4^0 47'N and 6^0 12' N and is in the rainforest belt of Nigeria (Abia -ADP 2006). The minimum and maximum temperature range is between 20^0 and 30^0 Celsius and the rainy season starts from April to October, with an average annual relative humidity of 75% (Abia – ADP, 2006). The State is divided into three Political Senatorial Zones namely: Abia North, Abia Central and Abia South Senatorial Zones respectively. The State is also, made up of 17 Local Government Areas where the PHC Centres are situated (Abia State, Ministry of Health, 2010). About 70 % of Abians are involved in agricultural production which contributes about 27 % to the State GDP (Abia SHDB, 2007). The major crops cultivated in the state include: cassava, yam, cocoyam, maize, melon, vegetables, plantains, cocoa, oil- palm, oranges, rubber, and coconuts among others. While livestock production includes: sheep and goat production, rabbitary, poultry, piggery, snailary, and fisheries (Abia ADP. 2006). A sample size of 120

respondents (40 from each of the three Senatorial Zones) realized through multi stage random sampling technique was used for the study. Primary data were generated using structured questionnaire and Focus Group Discussion (FGD). Data generated were analyzed using descriptive statistics such as frequency counts, percentages, means, pooled means, and ranks respectively. Objective 2 was realized by requesting all the respondents to indicate the extent of their awareness of PHC activities and interventions in the study area through the use of 4 point Likert type scale of Highly aware, weighted and scored 4pts, Aware, weighted and scored 3pts, Not highly aware, weighted and scored 2 pts and Not aware, weighted and scored 1pt respectively. The significant level of awareness was established through the threshold of 2.5 mean score. Any mean score ≥ 2,5 was adjudged aware, while any mean score < 2.5 was adjudged not aware and level of awareness was established as follows:

1.00 - 2.49 = Low Awareness Level

2.5 - 4.00 = High Awareness Level.

Objective 3 was realized by requesting the respondents to indicate their extent of utilizing PHC activities and interventions by using a 3 point Likert type scale of Highly utilized weighted and scored 3 points, Utilized, weighted and scored 2 points and Not utilized weighted and scored 1 point respectively. The significant level of utilization was modeled after Olatunji, *et al* (2007) and specified as follows:

S/No	Mean Values	Levels
01	1.00 - 1.49	Very Low Utilization Level
02	1.50 - 1.99	Low Utilization Level
03	2.00 - 2.49	High Utilization Level
04	2.50 - 3.00	Very High Utilization Level

Source: Olatunji *et al* (2007)

KAP Survey Analysis was adopted for objective 4. Knowledge, Attitude and Practice (KAP) Survey is problem – solving oriented and operate at a micro level with a focus on determining the knowledge, attitude and practice levels of target audiences vis – a – vis the critical elements of a given technology recommendation (Adhikarya, 1994). It was based on the above premise that a grand mean of KAP survey on PHC activities and interventions provided to the respondents was used as a baseline to determine the influence of these PHC activities and interventions had on the health status of the respondents in the study area. In this study, the Knowledge Level of the respondents was equated to be the same as their Awareness Level therefore; the Table 2 generated for awareness level of the respondents was used for knowledge level as well. Also, the Practice Level was equated to be the same as the Utilization Level therefore results

generated in Table 3 for utilization were as well used in discussing practice level of the respondents in PHC activities in the study area. For the Attitudinal disposition (opinions) of the respondents on PHC activities and interventions, a three point Likert type rating scale of Agreed, weighted and scored 3 points, Undecided, weighted and scored 2 points and Disagreed, weighted and scored 1 point respectively was employed. A threshold of 2.00 was established. Any mean score ≥ 2.00 was adjudged positive attitude, while any mean score < 2.00 was adjudged negative attitude respectively. A grand mean was established through the summation of the pooled mean from the KAP Survey scores and divided by the number of items to get a grand mean score of 2.17 for each activity / intervention of PHC in the study area. Therefore, any grand mean ≥ 2.17 was adjudged to have influenced the health status of the respondents positively, while on the other hand, grand mean < 2.17 was adjudged not to have significantly influenced the health status of the respondents in the study area respectively.

3. Results and Discussion

3.1 Socio–economic characteristics of the respondents

Table 1 shows that the mean age of the respondents was 25 years, and 58.3 % of them were males and 41.7 % were females respectively, among whom 75 % were married and 16.7 % single. Table1 further shows that 88.5 % were literates, with about 61 % having attained at least secondary education with a mean monthly income of ₦48,250.00 and about 58.3 % of them were either farmers or traders with only 16.7 % as public servants and a quarter (25 %) were from other professions. Table 1 equally, shows that the mean household size was about 4 persons with a mean of 4 children that were ≤ 5 years per household. Table 1 also shows that about 4.2 % of the respondents had no toilets and 45.8 % had pit toilets. About 16.7 % of them had no source of drinking water, (rain/ well water) while 25 % got their drinking water from streams/ rivers and only 58.3 % got theirs from boreholes. Also, about 25 % of the respondents could not afford three square meals par day, with very high proportion (83.3 %) not registered with the National Health Insurance Scheme (NHIS). The implications of the results are that: the respondents earned mean monthly income of ₦48,250.00, which was moderately higher than ₦18,000.00 the National Minimum Wage. This implies that they will be spending a lot on drugs due to health challenges given the high percentage (49 %) that either had no toilet or had pit toilets, coupled with the fact that about 25 % could not afford three square meals a day and a very high proportion (83.3 %) not registered with NHIS, which subsidizes the cost of treatment therefore, one could conclude that their income

will be majorly spent on drugs and medication. The finding collaborates with Killen (2005) who stated that rural dwellers in Nigeria incur heavy losses due to poor health through expensive health care fees coupled with the menace of fake drug syndrome.

Table 1: Distribution of the Respondents' Personal and Socioeconomic Characteristics

S/No	Variables	Frequency	Percentage	Mean
01	**Age in Years**			
	≤ 20	5	4.17	
	21 - 31	10	8.33	
	32 - 42	20	16.67	25.17years
	43 - 53	40	33.33	
	54 and Above	45	37.50	
02	**Gender**			
	Male	70	58.33	
	Female	50	41.67	
03	**Marital Status**			
	Single	20	16.67	
	Married	90	75.00	
	Separated/ Divorced	06	5.00	
	Widowed	04	3.33	
04	**Educational Attainment**			
	No formal Education	15	12.50	
	Primary Education	30	25.00	
	Secondary Education	55	45.83	
	Tertiary Education	20	16.67	
05	**Monthly Income in (₦)**			
	≤ 18,000.00	30	25.00	
	19,000.00 – 29,000.00	40	33.33	₦48,250.00
	30,000.00 – 40,000.00	30	25.00	
	41,000.00 – 51,000.00	15	12.50	
	52,000.00 and above	05	4.17	
06	**Primary Occupation**			
	Farming	30	25.00	
	Trading	40	33.33	
	Public Servant	20	16.67	
	Others	30	25.00	
07	**Household Size**			
	≤ 2	20	16.67	
	3 - 5	40	33.33	3.8 persons
	6 and Above	60	50.00	
08	**Number of Children ≤ 5 yrs**			
	1 - 2	20	16.67	
	3 - 4	40	33.33	3.9 children

	5 and Above	60	50.00
09	**Type of Toilets owed**		
	None	5	4.17
	Pit – toilet	55	45.83
	Water – System Toilet	60	50.00
10	**Source of Drinking Water**		
	Rain Water and wells	20	16.67
	Streams / Rivers	30	25.00
	Borehole water	70	58.33
11	**Feeding rate No. of Square meal/ day**		
	Once	10	8.33
	Twice	20	16.67
	Thrice	90	75.00
12	**Registration with NHIS**		
	Yes	20	16.67
	No	100	83.33

Source: Field Survey 2016

3.2 Level of awareness of respondents on the activities and interventions of PHC

Table 2 shows that out of eight PHC service delivery packages investigated, the respondents in the study area indicated high level of awareness in seven of them. They include::prevention & treatment of malaria ($\bar{x}$ = 3.08), prevention & treatment of communicable diseases ($\bar{x}$ = 3.17), immunization ($\bar{x}$ = 3.33), maternal / child health care ($\bar{x}$ = 2.54), family planning ($\bar{x}$ = 3.25), public health education ($\bar{x}$ = 3.38) and environment health ($\bar{x}$ = 3.42) respectively. It is only collection of statistical data on health and health related events that they indicated low level of awareness with $\bar{x}$ = 2.08.

The implication of the findings is that it is not surprising that the respondents had high level of awareness on the activities of the PHC due to the fact that many Non – Governmental Organizations and Agencies such as USAID, WHO among others assisted in the awareness creation by donating free malaria drugs, treated mosquito nets, de-wormer drugs among other things, free of charge through the PHC centres in the State (Abia State Health Data Bulletin, 2007).

Table 2: Distribution of the Respondents According to Their Level of Awareness on PHC Health Delivery Services in the Study Area

S/NO	PHC Health Delivery Services	V/M/A	A	N/V/M/A	N/A	Total	Mean	Remarks
01	Treatment/ Prevention of Malaria	25	80	15	-	370	3.08	High
02	Treatment/ Prevention of Communicable Diseases	30	80	10	-	380	3.17	High
03	Immunization	40	80	-	-	400	3.33	High
04	Maternal / Child Health Care Services	15	50	40	15	305	2.54	High
05	Family Planning	30	90	-	-	390	3.25	High
06	Public Health Education	45	75	-	-	405	3.38	High
07	Environmental Health Education	50	70	-	-	410	3.42	High
08	Collection of Statistical Data on Health & Health Related Events	10	30	40	40	250	2.08	Low
	Grand mean						**3.03**	

Source: Field Survey 2016

N/B

V/M/A = Very Much Aware, weighted and scored 4 points, A = Aware, weighted and scored 3 points, N/V/M/A = Not Very Much Aware, weighted and scored 2 points, N/A = Not Aware, weighted and scored 1 point respectively. $\bar{x} \geq 2.5$ was adjudged significant, while $\bar{x} < 2.5$ was adjudged not significant.

Level of Awareness: Mean 1 - 2.49 = Low Level of Awareness and Mean 2.5 - 4.00 = High Level of Awareness

3.3 Assessing the level of utilization of PHC packages among the respondents in the study area

Table 3 shows that out of eight PHC delivery services investigated upon in the study area, seven were significantly utilized and only one was not significantly utilized. The significant ones included: immunization ($\bar{x}$= 3.00) which had high level of utilization. This collaborates the assertion of Abia State Health Data Bulletin (2007) which reported that Abia State had achieved about 39 % immunization coverage against polio and other child killer diseases in the State. Table 3 equally, shows that the moderately utilized PHC delivery services to include: prevention & treatment of malaria ($\bar{x}$= 2.33),

prevention & treatment of communicable diseases ($\bar{x}$ = 2.50), maternal / child health care ($\bar{x}$ = 2.33), family planning & HIV/ AIDS ($\bar{x}$ = 2.33), public health education ($\bar{x}$ = 2.08), and environmental health ($\bar{x}$ = 2.75) respectively. The implication is that for the fact that some NGOs/ Agencies such as USAID and WHO and coupled with the assistance of some notable sons and daughters of Abia State in diaspora who donated free medical care such as drugs, mosquito treated nets, de- wormers and free eye treatment among others through the PHC centres located at the different parts of the State and also the fact that WHO introduced exclusive breast feeding awareness creation and family planning / HIV & AIDS testing centres in the state, assisted in a great deal in the moderate utilization increase in the use of PHC delivery services in the State. Table 3 shows non- significant utilization of PHC statistical data collection on health and health related events by the respondents. The implication is that rural dwellers in Abia State do not on their own go to the PHC centres in- order to supply information unless they go there for other reasons, mostly, health - wise and thereby giving information.

Table 3: Distribution of Respondents According to their Level Utilization of PHC Delivery Services

S/No	PHC Delivery Services	Highly Utilized	Utilized	Not utilized	Total	Mean	Remarks
01	Prevention & treatment of malaria	60	40	20	280	2.33	Utilized
02	Prevention & treatment of communicable diseases	70	40	10	300	2.50	Utilized
03	Immunization	100	20	-	360	3.00	Utilized
04	Maternal / Child health care	60	40	20	280	2.33	Utilized
05	Family planning / HIV & AIDS	50	50	20	270	2.25	Utilized
06	Public health education	40	50	30	250	2.08	Utilized
07	Environmental health	70	50	-	310	2.75	Utilized
08	Collection of data on health & heath related events	-	40	80	160	1.33	Not utilized
	Grand Mean					**2.32**	

Source: Field Survey 2016

Decision Rule: Any mean score ≥ 2.00 was adjudged utilized, while any mean score < 2.00 was adjudged not utilized.

Level of Utilization: 1.00 - 1.49 = Very Low Utilization Level, 1.5 - 1.99 = Low Utilization Level, 2.00 - 2.49 = High Utilization Level and 2.5 - 3.00 = Very High Utilization Level respectively.

3.4 Provision of PHC Activities / Interventions in the Study Area

Table 4: Distribution of the Respondents According to Their Opinions on PHC Activities/ Interventions Provided in the Study Area

S/No	PHC Activities / Interventions	Agreed	Undecided	Disagreed	Total	Mean	Remarks
01	Prevention& treatment of Malaria	60	20	40	260	2.17	Positive Attitude (P/A)
02	Prevention & treatment of Communicable Diseases	40	40	40	240	2.00	P/A
03	Immunization	80	20	20	300	2.50	P/A
04	Maternal/Child Health Care Services	60	40	20	280	2.33	P/A
05	Family Planning/ HIV/ AIDS	70	30	20	290	2.42	P/A
06	Public Health Education	40	60	20	260	2.17	P/A
07	Environmental Health Education	50	60	10	280	2.33	P/A
08	Collection of Data on Health & health related events	-	80	40	200	1.67	Negative Attitude
	Grand mean					**2.20**	

Source: Field Survey 2016

N/B

Decision Rule: $\bar{x} \geq 2.00$ was adjudged Positive Attitude, while $\bar{x} < 2.00$ was adjudged Negative Attitude.

3.5 Influence of PHC Activities and Interventions on the Health Status of the Respondents in the Study Area

Table 5 shows that out of 8 PHC packages that were investigated, seven of them significantly influenced the health status of the respondents in the study area. They included: prevention & treatment of malaria with grand mean $\bar{x}$ = 2.53, prevention & treatment of communicable diseases ($\bar{x}$ = 2.56), immunization ($\bar{x}$= 2.94), maternal / child health care ($\bar{x}$= 2.40), family planning/ HIV& AIDS ($\bar{x}$= 2.64), public health ($\bar{x}$= 2.54) and environmental health ($\bar{x}$= 2.83) respectively. The implication of the finding is that the KAP analysis of the respondents has shown that the Knowledge, Attitude, and Practice Levels of the respondents towards the PHC activities and interventions influenced their

health status positively in the study area with ($\bar{x}$= 2.17). On the other hand, Table 5, equally shows that collection of statistical data on health and health related events ($\bar{x}$= 1.69) did not influence the health status of the respondents in the study area. The implication could be that the policy makers on health did not consider the unique situation (if any) of the study area in the programme development on health matters or that they did not consider the data collected on health/ health related issues from the study area. The finding collaborates with Nwachukwu (2003) who postulated that any programme for the people must start from the felt needs of the people through bottom – top approach instead of the reverse which was always the case in Nigeria.

Table 5: Distribution of the Respondents According to the Influence of PHC Activities and Interventions On Their Health Status in the Study Area

S/No	PHC Activities and Interventions	Knowledge Level	Attitudinal Disposition	Practice Level	Pooled Mean	Grand Mean	Remarks
01	Prevention & Treatment of Malaria	3.08 (High)	2.17 (P/A)	2.33 (M/ P)	7.58	2.53	Positive Influence
02	Prevention & treatment of Communicable diseases	3.17 (High)	2.00 (P/A)	2.50 (H/P)	7.67	2.56	Positive Influence
03	Immunization	3.33 (High)	2.50 (P/A)	3.00 (H/P)	8.83	2.94	Positive Influence
04	Maternal / Child Health care	2.54 (High)	2.33 (P / A)	2.33 (M/ P)	7.20	2.40	Positive Influence
05	Family Planning & HIV/ AIDS	3.25 (High)	2.42 (P / A)	2.25 (M/P)	7.92	2.64	Positive Influence
06	Public Health Education	3.38 (High)	2.17 (P /A)	2.08 (M/P)	7.63	2.54	Positive Influence
07	Environmental Health	3.42 (High)	2.33 (P /A)	2.75 (H/P)	8.50	2.83	Positive Influence
08	Collection of health data & health related events	2.08 (Low)	1.67 (N/A)	1.33 (L/P)	5.08	1.69	No Influence on Health status
		Grand Mean			**6.50**	**2.17**	Baseline

Source: Field Survey 2016. n= 120

Grand $\bar{x}$ ≥ 2.17 was adjudged to influence the health status of the respondents, while $\bar{x}$ < 2.17 was adjudged not to have had influence on the health status of the respondents.

4. Conclusion and Recommendation

The study provided an empirical evidence of the effect of Primary Health Care delivery services on the health status of the rural dwellers in the study area. The study concluded that Primary Health Care delivery services influenced the health status of the rural dwellers positively. The study therefore recommended that Ministry of Health both at the Federal and State levels should provide the needed support for enhancing and sustaining the programme as well as encouraging participation among the rural dwellers.

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