Constraints to the Utilization of Primary Healthcare by Farm Families in Rural Communities of Rivers State, Nigeria

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Abstract

The study assesses the constraints to the utilization of primary healthcare by farm families in rural communities of Rivers State, Nigeria. It described the socio-economic characteristics of the respondents in the study area; determined the level of access by farm families of primary healthcare services provided in the study area; and determined factors that hinder farm families access to primary healthcare delivery system in the study area. A multi-stage sampling technique was used to select 172 primary health centre staff and 376 farmers. Questionnaires were used to elicit data from the respondents. The reliability of instrument was 87%. Descriptive statistical tools such as frequency distribution, percentage, mean and inferential statistics such as Multiple Regression and Analysis of Variance (ANOVA) were also used. Result of the descriptive statistic showed that most of the farm families (51.1%) were males while most (72.3%) of the staff of primary healthcare centre was female. The mean age of the respondents were 38 years and 39 years for farm families and staff of primary healthcare centre, 59.0% of the farm families had secondary education and (98.1%) staff of primary healthcare centre had tertiary education. 69.4% of the farm families and 56.0% of the staff of primary healthcare centre were married. A mean household size of 5 and 4 persons for farm families and staff of primary healthcare centre, and a mean monthly income of N61,876 and N154,745 for farm families and staff of primary healthcare centre. Based on level of access to primary healthcare services by farm families, result shows that farm families in agricultural zones 1, 2 and 3 had access to immunization ($\bar{X}$ = 4.77, $\bar{X}$ = 4.96, $\bar{X}$ = 4.83 respectively). The constraints of farm families' access to primary healthcare delivery system were; lack of capital to fund the health centres ($\bar{X}$=3.75, $\bar{X}$=3.38 and $\bar{X}$=3.61), non-availability/insufficient health centres ($\bar{X}$=3.66, $\bar{X}$=3.58 and $\bar{X}$=3.66), inadequate health workers ($\bar{X}$=3.54, $\bar{X}$=3.26 and $\bar{X}$=3.39), unfriendly attitude of health personnel ($\bar{X}$=3.43, $\bar{X}$=3.39 and $\bar{X}$=3.44) for agricultural zone 1, 2, 3 respectively. The socio-economic characteristics influencing level of access to primary healthcare services were; gender, age, educational level, occupation, marital status, household size and income level.

Keywords: *Primary Healthcare, Rural, Access, Farm families*

INTRODUCTION

According to White (2015), primary healthcare recognizes that healthcare is not a short-lived intervention, but an ongoing process of improving people's lives and alleviating the underlying socio-economic conditions that contribute to poor health. The principles link health, development and advocating political interventions rather than passive acceptance of economic conditions. To Mona (2016), behind these elements lies a series of basic objectives that should be formulated in national policies to launch and sustain primary healthcare as part of a comprehensive health system and coordination with other sectors. This was buttressed by World Health Organization (WHO) (1978) who opined that primary healthcare entails three inter-related and synergistic components, including: comprehensive integrated health services that embrace primary care as well as public health goods and functions as central pieces; multi-sectoral policies and actions to address the upstream and wider determinants of health; and engaging and empowering individuals, families, and communities for increased social participation and enhanced self-care and self-reliance in health. They went further to define primary healthcare as a "whole-of-society approach to health that aims at ensuring the highest possible level of health and well-being and their equitable distribution by focusing on people's needs and as early as possible along the continuum from health promotion and disease prevention to treatment, rehabilitation and palliative care and as close as feasible to people's everyday environment." Hence the provision of portable water, a clean environment that promotes eradication of contagious disease, good living standards and access to health facilities are all embodiments of primary healthcare delivery (WHO, 1978).

Statistics presented by WHO (2011), has it that about 930 million people worldwide are at risk of falling into poverty due to out-of-pocket health spending of 10% or more of their household budget. Scaling up primary healthcare interventions across low and middle-income countries could save 60 million lives and increases average life expectancy by 3.7 years by 2030. Achieving the targets for primary healthcare requires an additional investment of around US$ 200 to US$ 370 billion a year for a more comprehensive package of health services (WHO, 2011). At the United Nations (UN) high level meeting in 2019, several countries committed to strengthening primary healthcare. World Health Organization recommends that every country allocate or reallocate an additional 1% of Gross domestic product (GDP) to primary healthcare from government and external funding sources. The foregoing reveals that there is a renewed path towards providing affordable and accessible healthcare delivery as part of Millennium development Goals (MDGs) of the 21st century. However, the current state of primary healthcare system in Nigeria is appalling with only about 20% of the 30,000 primary healthcare facilities across Nigeria working (Adewole, 2016). Presently, most of the primary healthcare facilities in Nigeria lack the capacity to provide essential health-care services, in addition to having issues such as poor staffing, inadequate equipment, poor distribution of health workers, poor quality of healthcare services, poor condition of infrastructure, and lack of essential drug supply (Chinawa, 2015). In part, problems with the implementation of primary healthcare in Nigeria are blamed on the hand over in 1980s to the local government administration, which is the weakest level of government (Okafor, 2010). The Local Governments do not have means of getting adequate and sustainable revenues except those formed in the urban centres. With very meager and limited

revenues the Local Governments cannot provide the needed funds for financing the operations of the available primary healthcare facilities. The impact of local government administration on the people in Nigeria still remains a subject of intense debate and argument (Agba, 2013).

Rivers state has a wide coverage of health facilities within their 23 Local Government Areas (LGAs). However the presence of these healthcare facilities does not equate the provision of adequate healthcare delivery in these local communities. Primary healthcare delivery must equate commitment to social fairness, justice, solidarity and participation. It is hinged on the acknowledgment that the enjoyment of the utmost and attainable health standards is one of the basic rights of every human being without distinction. According to Packard (2016), a shift is needed from health systems designed around diseases and institutions towards health systems designed for people which entails a people-oriented health provisions that impacts on cost, accessibility, effectiveness, efficiency and other amenities that improve general hygiene and public health. Primary healthcare requires governments at all levels to stress the importance of action beyond the health sector in order to pursue systematic approach to health, including health-in-all-policies, a strong focus on equity and interventions that encompass the entire life-course. Hence provision of preventive and proactive actions towards healthcare mandates falls under this category. This includes provision of portable water, improved waste disposal systems, proscribed illegal burial processes and inclusive management of sewage systems in these rural areas that will lead to improved health conditions among the local dwellers. The presence of these factors will determine the wellbeing of the rural dweller to a very large extent. Therefore, the purpose of study; which was to identify the constraints to farm families' utilization of primary healthcare delivery in rural communities of Rivers State, Nigeria.

Objectives of the study

The specific objectives were to:

i. describe the socio-economic characteristics of the respondents in the study area;

ii. determine the level of access by farm families to primary healthcare services provided; and

iii. determine factors that hinder farm families access to primary healthcare delivery system in the study area;

Hypotheses of the study

H_{O1}: The socio-economic characteristics of the respondents do not significantly influence their level of access to primary healthcare delivery in the study area.

H_{O2}: There is no significant difference in the level of access by farm families to primary healthcare service delivery among the three agricultural zones in the study area.

H_{O3}: **There** is no significant difference in the factors that hinder farm families' access to primary healthcare delivery system among the three agricultural zones in the study area.

MATERIALS AND METHODS

The study area for this research is Rivers State. Rivers state is located in southern Nigeria's Niger Delta region. Rivers State borders Imo and Abia States to the north, Akwa Ibom State to the east and Bayelsa and Delta States to the west, having split from the previous Eastern Region in 1967. The State is located between latitudes 40 15' N and 50 45' N and longitudes 60 22' E and 70 35' E. Rivers State is Nigeria's 26th largest state, with a total size of 11,077 km2 (4,277 sq mi). Port Harcourt, the state capital, is a bustling metropolis that serves as the commercial hub for Nigeria's oil industry (Rivers State Government, 2019). Rivers State is the 6th most populated state in Nigeria, with a population of 7,745,000 people as of 2018 (Rivers State Government, 2019).

The study adopted the descriptive survey design. The population of this study comprised all registered farmers from Rivers State Ministry of Agriculture and the primary health centre staff from Rivers State Primary Healthcare Management Board in the selected rural communities of Rivers State. Thus a total of 6,226 registered farmers from the selected Local Government Areas from Rivers State Ministry of Agriculture and 303 primary health centre staff from Rivers State Primary Healthcare Management Board were used for the study. The study adopted a multi-stage sampling technique. At the first stage, five Local Government Areas were selected from each of the three senatorial districts of the state for the study, using purposive sampling procedure, with the aim of choosing Local Government Areas which have more rural communities. As a result, fifteen Local Government Areas were selected for the study. The selected Local Government Areas for Rivers South East include Khana, Gokana, Oyigbo, Tai and Eleme also for Rivers South Eest include Abua/odual, Andoni, Asari-Toru, Degema and Okrika and Rivers East agricultural zone three include Ahoada East, Emohua, Etche, Ikwerre and Onelga. In the second stage, two communities were chosen from each of the fifteen Local Government Areas already selected using purposive sampling procedure, with the aim of choosing one community that have primary healthcare centre from the selected Local Government Areas, giving a total of thirty (30) communities that were used for this study. In the third stage, simple random sampling was adopted in the selection of primary health centre staff and farmers from the selected communities for the study. The sample size of 172 primary health centre staff and 376 farmers were used for the study. The sample size is based on the derivation of the Taro Yamane's formula with a 95% confidence level. However, the sample size was derived using the population of the selected 15 out of the 23 Local Government Areas in Rivers State. The Bowley's proportional allocation formula was used to allocate respondents to the various communities, with a proportionate sampling fraction (PSF) of 0.5677 for primary health centre staff and 0.0604 for farmers. However, only 159 copies of the questionnaire of primary health centre staff and 356 copies of the questionnaire of farmers were retrieved which is 92.4% for primary health centre staff and 94.7% for farmers of total questionnaire distributed. Data for the study were gotten from primary sources with the aid of questionnaire, interview schedule and personal observations. The data collected were analyzed using descriptive and inferential statistics. Objective 1, 2 and 3 were analyzed using descriptive statistics namely: frequency, percentages and mean score, while the hypotheses were tested using Multiple Regression and Analysis of Variance (ANOVA).

Model Specification

The model of the multiple regression analysis that was used for the test of the hypothesis one is presented below as:

Linear Model
$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \ldots\ldots \beta_n x_n + e_1$ .... (1)

Semi-log Model

$\text{LogY} = \alpha_0 + \alpha_1 x_1 + \alpha_2 x_2 + \dots\dots\dots\dots\dots\dots\dots\dots \alpha_n x_n + e_2$

  OR

$Y = \alpha_0 + \alpha_1 \log x_1 + \alpha_2 \log x_2 + \dots\dots \alpha_n \log x_n + e_2 \dots\dots (2)$

Double-Log Model (Cob-Douglas)

$\text{LogY} = b_0 + b_1 \log x_1 + b_2 \log x_2 + \dots b_n \log x_n + e_3 \dots\dots\dots (3)$

Where:

β_0, α_0, b_0 = Intercept

$\beta_1 - \beta_n, \alpha_1 - \alpha_n$ & $b_1 - b_n$ = Regression coefficient

Y = Wellbeing

X_1 = Medical care; X_2 = Maternal and child healthcare; X_3 = Health Education; X_4 = Immunization

X_5 = Availability and distribution of essential medicine; X_6 = Treatment of communicable diseases

X_7 = Prevention and control of non-communicable diseases

Model of Socio-economic Characteristics of Rural Farmers

$Y = a_0 + a_1 Ge + a_2 Ag + a_3 Edu + a_4 Occu + a_5 Ms + a_6 Fs + a_7 Inc + e$

Model of Socio-economic Characteristics of Primary Health Centres Staff

$Y = b_0 + b_1 Ge + b_2 Ag + b_3 Edu + b_4 Js + b_5 Ms + b_6 Fs + b_7 Inc + e$

Where Y = Wellbeing

a_0, b_0 = Intercept

$a_1 - a_7, b_1 - b_7$ = Regression Coefficient

Ge ---- Gender; Ag ---- Age; Edu --- Education; Occu – Occupation; Js ----- Job Status; Ms ---- Marital Status; Fs ----- Family Size; Inc ---- Income

RESULTS

Socio-economic Characteristics of the Respondents

The result in Table 1, shows that more (51.1%) of the farm families were male, while 48.9% were female. In the same vein, more (72.3%) of the staff of primary healthcare centres were female, while 27.7% were male. Result on age revealed that the mean age for the respondents (farm families and staff of primary healthcare centres) were 38 years and 39 years respectively with a pooled mean of 38 years. Educationally, a small proportion 7.0% of the farm families had no formal education, while more (59.0%) of the farm familes had secondary education and 98.1% staff of primary healthcare centres had tertiary education. Also, 18.0% of the farm families had tertiary education while 1.9% of the staff of primary healthcare centre had secondary education, while only 16.0% of farm families had primary education. Based on occupation, more (56.5%) of the farm families were into farming. A higher proportion 27.5% of the farm families were into fishing. This was followed by 15.4% farm families who were in civil/public service. A lower proportion 0.6% of them was into trading. Result on job status reveled that, more (28.3%) of the staff of primary healthcare centres were nurses, followed by 27.7% who were health extension workers, 14.5% were health officials, 11.9% were pharmacists, 9.45% were doctors while only 8.2% were medical laboratory scientists. The result on marital status revealed that more (69.4%) of the farm families and 56.0% of the staff of primary healthcare centres

were married followed by 9.0% farm families and 17.0% staff of primary healthcare centres that were single. Another percentage (9.0%) farm families and 9.4% staff of primary healthcare centres were widowed, 6.7% farm families and 8.2% staff of primary healthcare centre were divorced. A lower percentage 5.9% of the farm families and 9.4% of the staff of primary healthcare centres were separated. Result on household size showed that more (71.6%) of the farm families and 79.2% of the staff of primary healthcare centres had household sizes ranging between 1 to 5 persons, while 27.8% of the farm families and 20.1% of the staff of primary healthcare centres had household sizes ranging between 6 to 10 persons and a low proportion 0.3% of the farm families and 0.6% of the staff of primary healthcare centres had household sizes ranging between 11 to 15 persons while only 0.3% of the farm families had 15 persons and above. The mean household size for farm families was 5 persons that of staff of primary healthcare centres were 4 persons with a grand mean of 5 persons. Finally, the result on income revealed that the mean monthly income for farm families was ₦61,876.00 and staff of primary healthcare centres was ₦154,745.00.

Table 1: Socio-economic Characteristics of the Respondents

Variables	Farm Families (n=356)			Staff of Primary Healthcare Centres (n=159)			Pooled (515)		
	Freq.	%	Mean	Freq.	%	Mean	Freq.	%	Mean
Gender									
Male	182	51.1		44	27.7		226	43.9	
Female	174	48.9		115	72.3		289	56.1	
Age (Years)									
18-25	2	0.5		8	5.0		10	1.9	
26-33	48	13.5		20	12.6		68	13.2	
34-41	251	70.5	38	83	52.2	39	334	64.9	38 years
42-49	48	13.5		32	20.1		80	15.5	
50 and above	7	2.0		16	10.1		23	4.5	
Educational Level									
Non-formal Education	25	7.0					25	4.9	
Primary Education	57	16.0					57	11.1	
Secondary Education	210	59.0		3	1.9		213	41.3	
Tertiary Education	64	18.0		156	98.1		220	42.7	
Occupation									

	Freq	%	Mean	Freq	%	Mean	Freq	%	Mean
Farming	201	56.5					201	56.5	
Fishing	98	27.5					98	27.5	
Civil/Public Service	55	15.4					55	15.4	
Trading	2	0.6					2	0.6	
Job Status									
Doctors				15	9.4		15	9.4	
Nurses				45	28.3		45	28.3	
Pharmacist				19	11.9		19	11.9	
Medical lab. Scientist				13	8.2		13	8.2	
Health officials				23	14.5		23	14.5	
Health Extension workers				44	27.7		44	27.7	
Marital Status									
Single	32	9.0		27	17.0		59	11.5	
Married	247	69.4		89	56.0		336	65.2	
Widow/Widower	32	9.0		15	9.4		47	9.1	
Divorced	24	6.7		13	8.2		37	7.2	
Separated	21	5.9		15	9.4		36	7	
Household Size									
1-5	255	71.6		126	79.3		381	74.0	
6-10	99	27.8	5	32	20.1	4	131	25.4	5 person
11-15	1	0.3		1	0.6		2	0.4	
16- and above	1	0.3		0	0		1	0.2	
Level of income (₦)									
1,000-50,000	169	47.5		0	0		169	32.8	
51,000-100,000	133	37.4		32	20.1		165	32.0	
101,000-150,000	40	11.2	₦61,876	39	24.5	₦154,745	79	15.3	₦90,548
151,000-200,000	10	2.8		51	32.1		61	11.9	
201,000 and above	4	1.1		37	23.3		41	8	

Source: Field Survey, 2023.

Level of Access to Primary Healthcare Services by Farm Families in Rivers State

The Table 2 shows that out of nineteen primary healthcare service delivery packages investigated, the respondents in the study area indicated high level of access in twelve of them from the pooled result.

Consequently, zone 1 had access to 10, zone 2 had access to 12 and zone 3 had access to 13 primary healthcare services in Rivers State. On a whole, a pooled grand mean of 3.16 was recorded for the entire State, with agricultural zone 1 responses as 3.14 that of agricultural zone 2 was 3.12 while a grand mean of 3.22 was recorded for agricultural zone 3.

Table 2: Level of Access by Farm Families to Primary Healthcare Services Provided

S/N	Items	Agricultural Zone 1 (n=175)		Remark	Agricultural Zone 2 (n=77)		Remark	Agricultural Zone 3 (n=104)		Remark	Pooled (n=356)		Remark
		Sum	Mean		Sum	Mean		Sum	Mean		Sum	Mean	
1	Medical care	659	3.77	A	270	3.51	A	426	4.10	A	1355	3.81	A
2	Maternal and Child Healthcare	787	4.50	A	344	4.47	A	462	4.44	A	1593	4.47	A
3	Adolescent health	627	3.58	A	235	3.05	A	342	3.29	A	1204	3.38	A
4	Immunization	834	4.77	A	382	4.96	A	502	4.83	A	1718	4.83	A
5	Health Education	678	3.87	A	319	4.14	A	390	3.75	A	1387	3.90	A
6	Nutrition	600	3.43	A	295	3.83	A	357	3.43	A	1252	3.52	A
7	Availability and distribution of essential medicine	504	2.88	N	166	2.16	N	294	2.83	N	964	2.71	N
8	Treatment of communicable Diseases	625	3.57	A	258	3.35	A	358	3.44	A	1241	3.49	A
9	Prevention and Control of Non-Communicable Diseases	664	3.79	A	251	3.26	A	351	3.38	A	1266	3.56	A
10	Health insurance	196	1.12	N	82	1.06	N	123	1.18	N	401	1.13	N
11	Environmental and occupational health	352	2.01	N	216	2.81	N	237	2.28	N	805	2.26	N
12	Community health extension services	603	3.45	A	268	3.48	A	410	3.94	A	1281	3.60	A
13	Accommodation for Inpatients	450	2.57	N	230	2.99	N	270	2.60	N	950	2.67	N
14	School Health	495	2.83	N	265	3.44	A	383	3.68	A	1143	3.21	A
15	Portable Water and Basic Sanitation	447	2.55	N	225	2.92	N	339	3.26	A	1011	2.84	N
16	Prevention and Control of Local Endemic Diseases	506	2.89	N	247	3.21	A	336	3.23	A	1089	3.06	A
17	Disaster Management	197	1.13	N	82	1.06	N	133	1.28	N	412	1.16	N

18	Dental care	485	2.77	N	143	1.86	N	235	2.26	N	863	2.42	N
19	Referrals	741	4.23	A	280	3.64	A	420	4.04	A	1441	4.05	A
	Grand Mean		**3.14**	A		**3.12**	A		**3.22**	A		**3.16**	A

Source: Field Survey, 2023. Decision Means ≥ 3.0 = Access (A).   < 3.0 = No Access (N)
Factors hindering Farm Families Access to Primary Healthcare Services in Rivers State

Table 3 shows the mean scores of the responses on constraints of farm families' access to primary healthcare delivery system in the study area. Based on order of severity, the respondents agreed to the following in the three agricultural zones; lack of capital to fund the health centres ($\bar{X}$=3.75, $\bar{X}$=3.38 and $\bar{X}$=3.61) respectively, followed by non-availability/insufficient health centres ($\bar{X}$=3.66, $\bar{X}$=3.58 and $\bar{X}$=3.66) respectively, inadequate health workers ($\bar{X}$=3.54, $\bar{X}$=3.26 and $\bar{X}$=3.39) respectively, unfriendly attitude of health personnel ($\bar{X}$=2.19, $\bar{X}$=3.43 and $\bar{X}$=3.39) respectively, non-affordability of health services ($\bar{X}$=3.43, $\bar{X}$=3.43 and $\bar{X}$=3.63) respectively, inadequate medication ($\bar{X}$=3.41, $\bar{X}$=3.21 and $\bar{X}$=3.24) respectively, inadequate basic health amenities or facilities ($\bar{X}$=3.24, $\bar{X}$=3.18 and $\bar{X}$=3.09) respectively, lack of information ($\bar{X}$=3.22, $\bar{X}$=3.01 and $\bar{X}$=3.10) respectively, inadequate inter-sectorial collaboration ($\bar{X}$=3.21, $\bar{X}$=3.04 and $\bar{X}$=3.17) respectively, insufficient agricultural extension workers ($\bar{X}$=3.18, $\bar{X}$=3.08 and $\bar{X}$=3.19) respectively, literacy level ($\bar{X}$=3.13, $\bar{X}$=3.04 and $\bar{X}$=3.15) respectively, belief systems ($\bar{X}$=3.09, $\bar{X}$=2.60 and $\bar{X}$=3.04) respectively, proximity of health centres ($\bar{X}$=3.09, $\bar{X}$=3.38 and $\bar{X}$=3.16) respectively. The pooled result showed that literacy level, lack of capital to fund the health centres, proximity to health centres, non-availability /insufficient health centres, non-affordability of health services, inadequate health workers, belief system, unfriendly attitude of health personnel and inadequate medication among others were all identified as constraints of farm families' access to primary healthcare delivery system in the study area (mean scores > 2.5). Furthermore, Table 3 shows that; non-availability of potable water and sanitary facilities, lack of good hygiene, bad shelter, lack of proper food and basic nutrition, lack of government empowerment, lack of incentives, poor leadership and political instability, lack of manpower training and development, endemic contagious diseases, and insufficient community health extension workers among others were not identified as constraints of farm families' access to primary healthcare delivery ($\bar{X} < 2.5$).

Table 3: Mean Distribution of Factors that hindered Farm Families Access to Primary Healthcare Services among the Three Agricultural Zones

S/N	Items	Agricultural Zone 1 (n=175)		Remark	Agricultural Zone 2 (n=77)		Remark	Agricultural Zone 3 (n=104)		Remark	Pooled (n=356)		Remark
		Sum	Mean		Sum	Mean		Sum	Mean		Sum	Mean	
1	Literacy Level	547	3.13	A	234	3.04	A	328	3.15	A	1109	3.12	A
2	Lack of Capital to Fund the Health Centres	657	3.75	A	260	3.38	A	375	3.61	A	1292	3.63	A
3	Proximity of Health Centres	540	3.09	A	260	3.38	A	329	3.16	A	1129	3.17	A
4	Non-availability/Insufficient Health Centres	641	3.66	A	276	3.58	A	381	3.66	A	1298	3.65	A
5	Non-affordability of Health Services	601	3.43	A	264	3.43	A	378	3.63	A	1243	3.49	A
6	Inadequate Health Workers	620	3.54	A	251	3.26	A	353	3.39	A	1224	3.44	A
7	Belief Systems	540	3.09	A	200	2.60	A	316	3.04	A	1056	2.97	A
8	Inadequate Medication	596	3.41	A	247	3.21	A	337	3.24	A	1180	3.31	A
9	Non-availability of potable water and Sanitary Facilities	304	1.74	D	124	1.61	D	186	1.79	D	614	1.72	D
10	Lack of Good Hygiene	287	1.64	D	98	1.27	D	187	1.80	D	572	1.61	D
11	Bad Shelter	256	1.46	D	113	1.47	D	149	1.43	D	518	1.46	D
12	Lack of Proper Food and Basic Nutrition	325	1.86	D	115	1.49	D	199	1.91	D	639	1.79	D
13	Inadequate Basic Health Amenities or Facilities	567	3.24	A	245	3.18	A	321	3.09	A	1133	3.18	A
14	Lack of Government Empowerment	323	1.85	D	116	1.51	D	201	1.93	D	640	1.80	D
15	Lack of Incentives	208	1.19	D	88	1.14	D	126	1.21	D	422	1.19	D
16	Lack of Information	563	3.22	A	232	3.01	A	322	3.10	A	545	3.11	A
17	Inadequate Community Participation	421	2.41	D	138	1.79	D	254	2.44	D	813	2.28	D
18	Inadequate inter-sectorial collaboration	329	3.21	A	247	3.04	A	316	3.17	A	1129	3.14	A
19	Rapid Turnover of Policy Makers	324	1.85	D	108	1.40	D	203	1.95	D	635	1.78	D
20	Poor leadership and political instability	348	1.99	D	104	1.35	D	216	2.08	D	668	1.88	D

21	Lack of Manpower Training and Development	367	2.10	D	113	1.47	D	228	2.19	D	708	1.99	D
22	Endemic Contagious Diseases	349	1.99	D	115	1.49	D	223	2.14	D	687	1.93	D
23	Lack of Quarantining Facilities for Highly Contagious Diseases	353	2.02	D	110	1.43	D	222	2.13	D	685	1.92	D
24	Insufficient Agricultural Extension Workers	556	3.18	A	237	3.08	A	332	3.19	A	1125	3.16	A
25	Insufficient Community Health Extension workers	414	2.37	D	144	1.87	D	245	2.36	D	803	2.26	D
26	Unfriendly attitude of health personnel	383	2.19	D	264	3.43	A	353	3.39	A	1000	2.81	A
	Grand Mean		**2.56**	**A**		**2.34**	**D**		**2.63**	**A**		**2.53**	**A**

Source: Field survey, 2023. Decision Means ≥ 2.5 = Agreed (A; a factor) < 2.5 = Disagreed (D; not a factor)

Factor analysis for factors militating against Farm Families' access to Primary Healthcare delivery system

Table 4 shows the results of factor analysis on the constraints of farm families' access to primary healthcare delivery system in the study area. The result which showed 4 extracted factors in the pattern matrix used maximum likelihood as the extraction method and Promax with Kaiser Normalization as the rotation method. The extracted factors are Socioeconomic factors (factor 1), technical factors (factor 2), institutional factors (factor 3), and cultural factors (factor 4). The extracted factors presented in Table 4 showed that fourteen (14) constraints were extracted out of twenty-six (26) indicating that 54% of the factors were actual constraints of farm families' access to primary healthcare delivery system. The following factors were accepted as factors of high loadings; loaded high under the socio-economic factor l were: lack of capital to fund the health centres (0.969), non-affordability of health services (0.547), lack of information (0.840), proximity to health centres (0.770) and literacy Level (0.599). Under the technical factors 2, the following factors were accepted as factors of high loadings; inadequate health workers (0.858), inadequate medication (0.580), insufficient agricultural extension workers (0.558) and inadequate basic health amenities or facilities (0.546). Under the institutional factors 3, the following factors were accepted as factors of high loadings; non-availability/insufficient health centres (0.934), inadequate inter-sectoral collaboration (0.540) and inadequate community participation (0.510). Finally, cultural factors 4, factors were; unfriendly attitude of health personnel (0.958) and belief Systems (0.632).

Table 4: Factor Analysis for Factors that hinder Farm Families from access to Primary Healthcare Services in the study area

	Factors			
	Socioeconomic	Technical	Institutional	Cultural
Lack of capital to fund the health centres	0.969			
Non-affordability of health services	0.547			
Lack of information	0.840			
Proximity to health centres	0.770			
Literacy Level	0.599			
Inadequate health workers		0.858		

Inadequate medication	0.580	
Insufficient agricultural extension workers	0.558	
Inadequate basic health amenities or facilities	0.546	
Non-availability/insufficient health centres		0.934
Inadequate inter-sectoral collaboration		0.540
Inadequate community participation		0.510
Unfriendly attitude of health personnel		0.958
Belief Systems		0.632

Extraction Method: Maximum Likelihood.
a. Rotation converged in 5 iterations.
Source: Field survey, 2023.

Test of the Hypotheses
Multiple Regression Analysis on the effects of the Socio-economic Characteristics of the Respondents on the Level of Access to Primary Healthcare Services

H$_{01}$: The socio-economic characteristics of the respondents do not significantly influence their level of access to primary healthcare delivery.

Table 5 shows the results of multiple regression analysis on the effects of the socio-economic characteristics of the respondents on the level of access to primary healthcare services. The result showed that the coefficient of determination (R^2) were 0.354, 0.327, and 0.321 for linear model, semi-log model and double log model. Consequently, the linear model was preferred to both the semi-log model and the double-log model because of its higher value of coefficient of determination (R^2).
The result of the linear model showed a multiple correlation of 0.595 indicating a strong correlation between the explanatory variables and the dependent variable. The coefficient of determination (R^2) = 0.354 shows that 35.4% variation in the level of access to primary healthcare services was explained by variation in socio-economic characteristics. The remaining 64.6% were explained by other variables not included in the model. This does not show a good fit. The result revealed that gender had PV = 0.013 < 0.05 level of significance, consequently, the null hypothesis was rejected and concluded that gender had significant effects on the level of access to primary healthcare services. Age of respondents had a positive regression coefficient of 0.09 and PV = 0.041 < 0.05 level of significance. The null hypothesis was rejected and concluded that age had significant effects on the level of access to primary healthcare services. The coefficient of education (0.21) was positively related to level of access to primary healthcare services at PV = 0.000 < 0.05 significant level. The null hypothesis was rejected and concluded that education had significant effects on the level of access to primary healthcare services. The coefficient of occupation was negative (-0.08) at PV = 0.000 < 0.05 significance level. The null hypothesis was rejected and concluded that occupation had significant effects on the level of access to primary healthcare services. Marital status and household size also had negative influence (-0.09 and -0.15) on level of access to primary healthcare services at PV = 0.002 < 0.05 and PV = 0.009 < 0.05 significant level. The null hypothesis was rejected and concluded that marital status and household size had significant effects on the level of access to primary healthcare services. The result further showed a positive significant relationship between income (0.28) and level of access to primary healthcare services at PV = 0.000 < 0.05 level of significance.. The null hypothesis was rejected and concluded that income had significant effects on the level of access to

primary healthcare services

Table 5: Summary of Multiple Regression Analysis Results on the Effects of Socio-Economic Characteristics of the Respondents on their Level of Access to Primary Healthcare Services

Variables	Linear Model			Semi-log Model			Double-Log Model		
	Coeff	t-cal	PV.	Coef	t-cal	PV.	Coef	t-cal	PV
(Constant)	1.56	8.42	0.000	0.30	12.10	0.000	1.89	12.14	0.000
Gender	0.12	2.49	0.013	0.07	2.53	0.012	0.42	2.44	0.015
Age	0.09	2.05	0.041	0.09	1.87	0.063	0.59	1.89	0.060
Educational Level	0.21	5.39	0.000	0.13	4.40	0.000	0.83	4.42	0.000
Occupation	-0.08	-2.34	0.020	-0.07	-3.11	0.002	-0.30	-2.14	0.033
Marital Status	-0.09	-3.10	0.002	-0.09	-3.05	0.002	-0.51	-2.84	0.005
Household Size	-0.15	-2.64	0.009	-0.10	-3.22	0.001	-0.65	-3.38	0.001
Income Level	0.28	6.61	0.000	0.19	7.54	0.000	1.23	7.77	0.000
R	0.595			0.572			0.567		
R-Square	0.354			0.327			0.321		
F-Cal	27.19			24.14			23.54		
Sig F-	0.000			0.000			0.000		

a. Dependent Variable: The level of access by farm families to primary healthcare services
*=Significant difference (P≤0.05), NS = Not significant (P > 0.05)
Source: Researcher's computation with SPSS 25.0.

The level of Access by Farm Families to Primary Healthcare Service delivery among the three agricultural zones

H$_{O2}$: There is no significant difference in the level of access by farm families to primary healthcare services delivered among the three agricultural zones.

Table 6 presents the summary of the analysis of variance results on the level of access by farm families to primary healthcare service delivery among the three agricultural zones. The results showed that F-calculated = 3.23 with a corresponding PV = 0.041< 0.05 level of significance, therefore, the null hypothesis was rejected. It was consequently concluded that there is a significant difference in the level of access by farm families to primary healthcare services delivered among the three agricultural zones. The implication therefore is that statistical difference exists in the access levels given the agricultural zones. It was concluded that a significant difference exists in the level of access by farm families to primary healthcare services delivered among the three agricultural zones, it is necessary to find out the Agricultural Zones where this difference is; hence the need to conduct multiple comparisons. Table 7 shows the Post Hoc Test conducted using the Least Significant Difference (LSD) to compare the difference among the three agricultural zones in the level of access by farm families to primary healthcare services delivered. The results showed that there is no significant difference between Agricultural Zone 1 and Agricultural Zone 2, in the level of access to primary healthcare services by farm families (PV = 0.517), however, the Post Hoc result also showed that there is significant difference between Agricultural Zone 1 and Agricultural Zone 3 in the level of access to primary healthcare services by farm families (PV = 0.037), there is significant difference between Agricultural Zone 2 and Agricultural Zone 3 in the level of access to primary healthcare

services by farm families (PV = 0.021)

Table 6: Summary of Analysis of Variance Result on the Difference in the Level of Access to Healthcare Services Delivered to Farm Families among the Three Agricultural Zones

Sources of Variation	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	0.612	2	0.306	3.228	0.041
Within Groups	33.474	353	0.095		
Total	34.087	355			

Source; Field Survey Data 2023, SPSS 27.0 output.

Table 7: Summary of Post Hoc Multiple Comparison Test (Least Significant Difference LSD) showing the Difference between Agricultural Zones, in the Level of Access to Primary Healthcare Services Delivered to Farm Families

Agricultural Zones	Mean	Sig.
Agricultural Zone 1 Vs Agricultural Zone 2	0.02734	0.517
Agricultural Zone 1 Vs Agricultural Zone 3	-0. 07981*	0.037
Agricultural Zone 2 Vs Agricultural Zone 3	-0. 10716*	0.021

Source: Researcher's computation with SPSS 25.0
Difference in the Factors hindering Farm Families' Access to the Primary Healthcare Delivery System among the three agricultural zones.

H$_{03}$: There is no significant difference in the factors hindering farm families' access to the primary healthcare delivery system among the three agricultural zones.

Table 8 presents the summary of the analysis of variance results on the difference in the factors hindering farm families' access to primary healthcare delivery among the three agricultural zones. The results showed that F-calculated = 2.554 with a corresponding PV = 0.097> 0.05 level of significance, therefore, the null hypothesis was accepted. It was consequently concluded that there was no significant difference in the factors hindering farm families' access to primary healthcare delivery systems among the three agricultural zones. The inference of no statistical difference therefore is that, the factors hindering farm families' access to primary healthcare delivery are the same across the agricultural zones.

Table 8: Summary of Analysis of Variance Result on the Difference in Factors Hindering Farm Families from Access to Primary Healthcare Services among the Three Agricultural Zones

Sources of Variation	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	0.5799	2	0.289	2.554	0.097
Within Groups	40.071	353	0.114		
Total	45.869	355			

Source; Field Survey Data 2023, SPSS 27.0 output.

DISCUSSION

The study shows that the farm families in the study area were male dominated, while more female made up the staff of the primary healthcare centres than their male counterparts. This finding agrees with Aina *et al.* (2015) in the study on determinant of demand for healthcare services among rural household in Ekiti State, Nigeria who found that men, being the heads of the rural households tend to have higher demand for healthcare services for the family including their wives than women who are mostly submissive to the will of their husbands regarding health seeking.

Result on age revealed a pooled mean of 38 years for farm families and staff of primary healthcare centres. This implies that the respondents were still in their reproductive and active ages and are therefore conscious of the importance of good health to their farming enterprise and career. The finding of this study confirms that of Aminu and Asogba (2020) in the study on utilization of healthcare facilities among farming households in Yewa South Local Government Area, Ogun State, Nigeria who found that most of the respondents were still in their reproductive ages. The result further corroborates that of Alarima and Obikwelu (2018) in the study on assessment of utilization of primary healthcare services among settled Fulani agro pastoralists in Ogun State, Nigeria who found that the mean age of the respondents was 35 years and Rogers and Elenwa (2021) in the study of health care services among fisherfolks in Bonny LGA of Rivers State.

Based on education, the result revealed that cumulatively, 93.0% farm families and 100% staff of primary healthcare centres had formal education implying that they are capable of understanding and differentiating the various healthcare services available to them which could inform their choices of healthcare services in the study area. This finding agrees with that of Nwafor, Ogbonna, Kalu and Adetayo (2016) in the study on the effect of the performance of primary healthcare service providers on the wellbeing of cassava farmers in Abia State, Nigeria, where majority (97.8%) of the respondents had formal education. This finding is also in line with the study of Oyewole (2018) on utilization of primary healthcare services among rural dwellers in Oyo state in which more (63.9%) of the respondents had between 4 and 7 years of education.

Result on occupation revealed that, more (56.5%) of the farm families were into farming. This implies that most of the respondents were into farming. This finding is in agreement with that of Adebisi, Oyebode and Olubode (2017) who found that more (62.5%) of the respondents were into farming in a study in Oyo State on assessment of rural dwellers access to primary healthcare services.

Result on job status reveled that, more (28.3%) of the staff of primary healthcare centres were nurses. This implies that more staff of primary healthcare centres were nurses, this could be attributed to the fact that more nurses are needed in health centres with fewer doctors. The study revealed that more (69.4%) of the farm families and 56.0% of the staff of primary healthcare centres were married. This implies that

majority of the respondents were married. Marriage confers a higher level of responsibility on an individual as well as the probability of higher utilization of healthcare services in the study area. This is because married respondents would have to see to the healthcare needs of their spouses, children and other members of their households thereby incurring higher cost of treatments than the unmarried farmers. The finding of this study is in line with that of Obinna and Onu (2017) in the study on influence of primary healthcare delivery services on the health status of rural dwellers in Abia State, Nigeria who also found out that majority (75%) of the respondents in Abia state were married.

Result on household size showed that more (71.6%) of the farm families and 79.2% of the staff of primary healthcare centres had household sizes ranging between 1 to 5 persons. The mean household size for farm families was 5 persons that of staff of primary healthcare centres were 4 persons with a grand mean of 5 persons. This implies that both farm families and staff of primary healthcare centres had a moderate household size. This collaborates with the study of Omonona, Obisesan and Aromolaran (2015) in the study on health-care access and utilization among rural households in Nigeria who found out that the respondents maintained an average household size of 8 members. Finally, the result on income revealed that the mean monthly income for farm families was ₦61,876.00 and staff of primary healthcare centres was ₦154,745.00. This implies that respondents are likely to patronize healthcare facilities because the mean average income in the study area was above the minimum wage of ₦30,000.00 in Nigeria at the time of conducting this study. It is also above the poverty line of a dollar per day. According to Olugbamila (2016) in the study on correlates of residents' socio-economic characteristics and frequency of visits to healthcare facilities in Ondo State, Nigeria found out that the income of a resident is a measure of wealth and will reflect the ability of a household/resident to make decisions on type of facility visited, duration of visit, and action taken after sickness is a function of their income. Where the household income is not sufficient, it will leave the household with no other option than self-medication. Some earlier studies showed a positive correlation between income and patronage of available healthcare facilities (Olugbamila, 2016). These studies established that the income level of household dictates their ability to patronize and pay for available healthcare services.

On the level of access to primary healthcare services by farm families in rivers state, the result shows that out of nineteen primary healthcare service delivery packages investigated, the respondents in the study area indicated high level of access in twelve of them from the pooled result. On a whole, a pooled grand mean of 3.16 was recorded for the entire State. These findings showed that the respondents had high level of access to primary healthcare services in the study area. These findings are in tandem with the finding of Adebisi, Oyebode and Olubode (2017) in their study on assessment of rural dwellers access to primary healthcare services in Oyo State, Nigeria who found that respondents in Oyo State had access to immunization, antenatal and child delivery services. The study also agreed with Alarima and Obikwelu (2018) who found in their study on assessment of utilization of primary healthcare services among settled Fulani agro pastoralists in Ogun State, Nigeria that the majority (95.0%, 98.3%, and 86.7%), of the respondents, visited primary health facilities for pharmacy/dispensary, maternity and vaccination/immunization respectively.

The constraints of farm families' access to primary healthcare delivery system from the pooled result showed that literacy level, lack of capital to fund the health centres, proximity to health centres, non-availability /insufficient health centres, non-affordability of health services, inadequate health workers, belief system, unfriendly attitude of health personnel and inadequate medication among others were all identified as constraints of farm families' access to primary healthcare delivery system in the study area (mean scores > 2.5). The pool grand mean of 2.53 indicates that the respondents moderately agreed to all

the factors hindering farm families' access to primary healthcare services among the three agricultural zones of Rivers State. This finding is in agreement with the finding of Adebisi, Oyebode and Olubode (2017) in their study on assessment of rural dwellers access to primary healthcare services in Oyo State, Nigeria who found that inadequate healthcare facilities, unfriendly behavior of healthcare officers, insufficient healthcare officers were the constraints to accessing primary healthcare services in Oyo state. In the same vein, this finding agrees with the findings of Ugochukwu *et al.* (2022) in the study on determinants of primary healthcare services utilization in an under-resourced rural community in Enugu State, Nigeria who found that the main reasons reported by respondents for not utilizing primary healthcare services in this study were perceived poor quality health services, unavailability of doctors and drugs, long patient waiting time and high cost of services at the primary healthcare facilities.

The study revealed the results of factor analysis on the constraints of farm families' access to primary healthcare delivery system in the study area. The study showed that fourteen (14) constraints were extracted out of twenty-six (26) indicating that 54% of the factors were actual constraints of farm families' access to primary healthcare delivery system. Using the decision rule of loaded factors ≥3.0 (Hair, Hult, Ringle and Sarstedt, 2017), the following factors were accepted as factors of high loadings; loaded high under the socio-economic factor l were: lack of capital to fund the health centres (0.969), non-affordability of health services (0.547), lack of information (0.840), proximity to health centres (0.770) and literacy Level (0.599). Under the technical factors 2, the following factors were accepted as factors of high loadings; inadequate health workers (0.858), inadequate medication (0.580), insufficient agricultural extension workers (0.558) and inadequate basic health amenities or facilities (0.546). Under the institutional factors 3, the following factors were accepted as factors of high loadings; non-availability/insufficient health centres (0.934), inadequate inter-sectorial collaboration (0.540) and inadequate community participation (0.510). Finally, cultural factors 4, factors were; unfriendly attitude of health personnel (0.958) and belief Systems (0.632). These results corroborated the findings of Kwaskebe, Atolagbe and Kayode (2022) in their study on factors affecting service delivery of primary healthcare centers in Nigeria: a case study of Isiala-Ngwa North Local Government who identified shortage of healthcare workers, poor funding responsible for the inadequate medical facilities, delays in payment of salaries and work stress due to lack of equipment as constraints hindering families from access to primary healthcare services.

This study agrees with the findings of Azuh, Chinedu and Azuh (2019) in the study on factors influencing primary healthcare service utilization among women in rural communities in Ogun State Nigeria, who identified cost of service (28.4%), low quality service (21.1%), low awareness level (16.5%), poor transport (14.7%), cultural practices (11%) and lack of amenities (8.3%) as constraints hindering families from access to primary healthcare services. The result also corroborated the findings of Alarima and Obikwelu (2018) in the study on assessment of utilization of primary health care services among settled Fulani agro-pastoralists in Ogun State, Nigeria who identified distance of health facility from their settlement, expensive cost of health services they required, inability to understand officers' language, poor reception/performance of the attendant and inadequate staff/personnel as constraints hindering agro pastoralists from access to primary healthcare services.

The results of multiple regression analysis on the effects of the socio-economic characteristics of the respondents on the level of access to primary healthcare services, showed that the coefficient of determination (R^2) were 0.354, 0.327, and 0.321 for linear model, semi-log model and double log model. Consequently, the linear model was preferred to both the semi-log model and the double-log model

because of its higher value of coefficient of determination (R^2). The result of the linear model showed a multiple correlation of 0.595 indicating a strong correlation between the explanatory variables and the dependent variable. The coefficient of determination (R^2) = 0.354 shows that 35.4% variation in the level of access to primary healthcare services was explained by variation in socio-economic characteristics. The remaining 64.6% were explained by other variables not included in the model. This does not show a good fit. The result revealed that gender had PV = 0.013 < 0.05 level of significance, consequently, the null hypothesis was rejected and concluded that gender had significant effects on the level of access to primary healthcare services. Age of respondents had a positive regression coefficient of 0.09 and PV = 0.041 < 0.05 level of significance, meaning that a one-year increase in the age of the respondents leads to a 0.09 unit increase in the level of access of primary healthcare centres and vice versa (as the age increases, the respondents have more reasons to visit primary healthcare centres and to understand how primary healthcare works). This implies that older farming families were more likely to access primary healthcare centre than the younger ones. The null hypothesis was rejected and concluded that age had significant effects on the level of access to primary healthcare services. The coefficient of education (0.21) was positively related to level of access to primary healthcare services at PV = 0.000 < 0.05 significant level. This implies that as educational status increases, level of access to primary healthcare services increases as well and vice versa. This finding contradicts the finding of Aminu and Asogba (2020) who found negative relationship between education and utilization of primary healthcare centres in Ogun state. The null hypothesis was rejected and concluded that education had significant effects on the level of access to primary healthcare services. The coefficient of occupation was negative (-0.08) at PV = 0.000 < 0.05 significance level. This implies that the higher the occupation of a respondent, the lower the chances of accessing primary healthcare services. This may be true since when a person's occupation increases, income also increases and as such most people resort to private hospitals for their healthcare needs. The null hypothesis was rejected and concluded that occupation had significant effects on the level of access to primary healthcare services. Marital status and household size also had negative influence (-0.09 and -0.15) on level of access to primary healthcare services at PV = 0.002 < 0.05 and PV = 0.009 < 0.05 significant level. Thus married farm families with large household size have low level of access to primary healthcare services than the unmarried ones with small household size and vice versa. A percentage increase in the number of married respondents and household size will decrease level of access to primary healthcare services by 0.09% and 0.15% respectively.

This finding contradicts the finding of Alarima and Obikwelu (2018) who reported a significant positive relationship between marital status and utilization of primary healthcare services by settled Fulani agro pastoralist in Ogun State. This finding also contradicts the finding of Pandeh *et al.* (2019) in their study on the impact of marital status on healthcare utilization among medicare beneficiaries, who stated that married respondents have a higher utilization rate of outpatient services compared to the unmarried. The null hypothesis was rejected and concluded that marital status and household size had significant effects on the level of access to primary healthcare services. The result further showed a positive significant relationship between income (0.28) and level of access to primary healthcare services at PV = 0.000 < 0.05 level of significance. This implies that the higher the income of a farm family, the higher the level of access to primary healthcare services. This was expected because of the cost of services they may require since there is no health insurance policy for the respondents, there may be need for them to pay for services provided for them. This implies that those with higher income may tend to seek for medical attention when compared to those with no means of paying for the services they required. The null

hypothesis was rejected and concluded that income had significant effects on the level of access to primary healthcare services. This supports the findings of Alarima and Obikwelu (2018) whose regression analysis result showed that income, distance from home to a healthcare centre, information, and attitude were significant in affecting the level of access to primary healthcare services. This result also agrees with the findings of Olalekan and Oladoyin (2021) whose findings showed that the age of respondents and monthly income were significant in affecting the level of access to primary healthcare services. However the implication here is that the null hypothesis which states that "socio-economic characteristics of the respondents do not significantly influence their level of access to primary healthcare delivery in the study area" was rejected. Thus the study concludes that socio-economic characteristics of the respondents which are gender, age, educational level, occupation, marital status, household size and income level significantly influence their level of access to primary healthcare delivery in the study area.

The results of the analysis of variance on the level of access by farm families to primary healthcare service delivery among the three agricultural zones showed that F-calculated = 3.23 with a corresponding PV = 0.041< 0.05 level of significance, therefore, the null hypothesis was rejected. It was consequently concluded that there is a significant difference in the level of access by farm families to primary healthcare services delivered among the three agricultural zones. The implication therefore is that statistical difference exists in the access levels given the agricultural zones. It was concluded that a significant difference exists in the level of access by farm families to primary healthcare services delivered among the three agricultural zones, it is necessary to find out the Agricultural Zones where this difference is; hence the need to conduct multiple comparisons. Table 7 shows the Post Hoc Test conducted using the Least Significant Difference (LSD) to compare the difference among the three agricultural zones in the level of access by farm families to primary healthcare services delivered. The results showed that there is no significant difference between Agricultural Zone 1 and Agricultural Zone 2, in the level of access to primary healthcare services by farm families (PV = 0.517), however, the Post Hoc result also showed that there is significant difference between Agricultural Zone 1 and Agricultural Zone 3 in the level of access to primary healthcare services by farm families (PV = 0.037), there is significant difference between Agricultural Zone 2 and Agricultural Zone 3 in the level of access to primary healthcare services by farm families (PV = 0.021).

The results of the analysis of variance on the difference in the factors hindering farm families' access to primary healthcare delivery among the three agricultural zones showed that F-calculated = 2.554 with a corresponding PV = 0.097> 0.05, therefore, the null hypothesis was accepted. It was consequently concluded that there was no significant difference in the factors hindering farm families' access to primary healthcare delivery systems among the three agricultural zones. The inference of no statistical difference therefore is that, the factors hindering farm families' access to primary healthcare delivery are the same across the agricultural zones.

CONCLUSION AND RECOMMENDATION

The study shows that the respondents (agricultural zones 1, 2, and 3) had more access to immunization. The constraints of farm families' access to primary healthcare delivery system were; lack of capital to fund the health centres, non-availability/Insufficient health centres, inadequate health workers, Inadequate Medication and unfriendly attitude of health personnel. The study also revealed

that gender, age, educational level, occupation, marital status, household size and income level were the socio-economic characteristics that influenced the level of access to primary healthcare services. Based on the findings of this study, the following recommendations were made. Female farmers should be encouraged to seek more medical attention from primary healthcare centres and not only to go for immunization of children. Other types of healthcare services should be delivered promptly to farm families apart from immunization and maternal and child healthcare. The level of access to availability and distribution of essential medicine as well as dental care should be improved upon at primary healthcare centres.

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