

Utilization of health care facilities among residents of Lake Bosomtwe basin of Ghana

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Abstract

Utilization of health care facilities is an important elements factored into any policy or programme aimed at improving the health status citizens of every country. The paper examines factors which determine health care utilization of residents of Lake Bosomtwe basin of Ghana. The study employed the human ecology of disease triangle model to assess how residents utilize health care facilities. The study employed questionnaire and interview guide as the main instruments to generate data, from 120 household heads. Utilization of local health care facilities was found to be low among respondents, due to the inadequacy of health care facilities, lack of qualified staff and equipment. Place of residence, family members and health insurance were found to determine health care utilization. The paper recommends that health care facilities within the basin, supplied with qualified staff and equipment to enhance utilization of health care facilities.

Key words: Utilization, Lake Bosomtwe basin, Health care, Health insurance, Ghana

1: INTRODUCTION

Health care utilization is influenced by several factors the world over, with slight differences among cultures. Certain factors such as the age of the individual, educational level, gender, economic status, need and availability of the service influence utilization of health care services and facilities. According to Say and Raine, (2007), age, educational level and place of residence affect utilization of antenatal health services. Hoerger et al. (1998) and Young et al. (2006) have identified age as a factor that predisposes an individual to ill-health and health care utilization. Young et al (2006) found that health care utilization for people with good health follows a curvilinear relationship with utilization increasing in age to a point when it begins to decline to a situation in which older people access less health care services.

Gender is a variable that has significant influence on health care utilization. According to Doyal (2001: 1061), inequality exists between the health of males and females, suggesting that “*gender inequalities in income and wealth make women vulnerable to poverty*”, [making] “*it difficult for them [women] to acquire the necessities for health*”. Hutchinson, Habte and Mulusa (1999) have, on the other hand, found that women are more likely to utilize health care services than men and that women’s independence is a

great factor towards the utilization of health care when ill. A WHO report on gender and health indicates that women in developed countries utilize more health care services than their counterparts in developing countries (WHO, 1998). This is confirmed by Lipton et al. (2002) who posit that, in the U.S.A, more females (73%) suffering from migraine utilize health care services than male sufferers (49%). But in Ghana, it is suggested that women do not utilize health care services as much as they require due to the inadequacy of the health care system to address women's needs and the location of health care services in places far away from them (University of Sussex, 1994; World Bank, 1999). There is a likelihood of differences occurring between health care utilization of males and females in Ghana considering the fact that in most developing countries women depend on men for most of their needs; men often are the decision makers and in charge of household finances (WHO, 1998) making it difficult for women to pay for the cost of accessing health care and transport when travelling to a facility.

The level of education of an individual is another major component of one's everyday activity and as a result has a bearing on health, health behaviour and thus, health care utilization. Maurer (2006) suggests that there is a significant relationship between education and health care utilization for people with very low levels of education in Greece. In their study of diabetes among Americans, Nichols et al. (2007) identified level of education as a factor in the utilization of ambulatory care. Citing examples from USA, Taylor, Larson and Correa-de-Araujo (2005) argue that the higher one moves on the education ladder the greater one utilizes health care facilities. However, Maurer (2006) in a work on socio-economic determinants of health care utilization among elderly Europeans, found no significant relationship between education and health care utilization among the sick but among the healthy there is a positive gradient between education and utilization in countries such as Denmark, France and Germany. Maurer's view is supported by Grimsom & Siem (1984) who claimed that in Norway there is no difference in the utilization of primary health care services regarding the level of education.

Utilization of health care is also influenced by user fees paid at the point of care in many countries. A study by Ensor and Ronoh (2005) shows that payment of fees at health care facilities tend to reduce utilization of maternal and child care services in many countries. Again, results from a research on utilization of maternal health by Kruk et al. (2007) indicate that where governments finance health care, more people access essential services. Cost of health care has been identified as a major barrier to health care utilization in Ghana and other developing countries and according to van den Boom and Nsawah-Nuamah (2004), the cost of health care in Ghana is expensive and varied thereby affecting utilization. Similarly, Smith (2002: 768) argues that the effect of the "cash and carry system" resulting in increased cost of health care is that many people resorted to "*self-medication as an alternative to medical care*". Asenso-Okyere et al. (1998) found that the cost of modern health care is gradually turning into a barrier in the way of health care seekers, suggesting further that purchasing non-prescribed drugs has become a means of escaping the payment of hospital fees. The impact of cost on health care utilization in the Lake Bosomtwe basin of Ghana may not be different from other parts of the country.

Health insurance has become essential in health care provision and utilization. As a result, it has been introduced into the health care systems of many countries to ensure equal and easy access to health care. Even though utilization of health care hinges mostly on availability of health care services and the individuals health seeking behaviour, the ability to pay often acts as a barrier to the poor, women and children. Health insurance therefore enables access to health care by shielding individuals against high cost of health care (Hoffman & Paradise, 2008). In USA, it has been found that uninsured children are less likely to have a usual source of health care than their insured counterparts (NHCS, 2006). It is again argued by Ku and Ross, (2002) that increasing the number of people who enrol in health insurance and retaining those already insured is a cost effective method to improve quality of health. In their study of health insurance and

cancer screening in the United States of America, Hsia et al. (2000) established that women who had no health insurance had a higher failure rate of screening irrespective of the availability of a care provider.

The socio-economic condition of an individual is related to his or her access to health care and may affect one's utilization of health care facilities positively or negatively. Using HIV/AIDS as a case, Awusabo-Asare and Anarfi (1997) argue that socio-economic difficulties have made individuals and groups vulnerable to infections in Ghana. Similarly, Zelman et al. (2003: 17) assert that there is a positive relationship between "*income, access and health status*". In their work on income and access to health care in Uganda, Hutchinson, et al. (1999) concluded that differences in income affect the utilization of health care. Similarly, Castro-Leal et al (2000) report that health as a normal good corresponds with household income, asserting that households with higher incomes utilise more health care. People with low income are more likely to report poor health than those who earn higher incomes (Hoffman & Paradise, 2008) due to their inability to pay for health care.

2: Theoretical perspectives

The analytical framework for this study is built on the human ecology of disease model and the Andersen model (Life-cycle determinant model). The Human Ecology model (Meade & Earickson 2000) has been applied in this work to study the behaviour of people in relation to choice or utilization of health care facility. The model is applied in this study to examine how the environment/habitat, behaviour and population characteristics affect health care utilization. Considering the habitat of the individual, the natural environment plays a major role in health care utilization since human mobility is influenced by the natural topography of an area. Utilization is also likely to be affected by the location of health care facilities. The built environment such as the availability of facilities, type of buildings housing the health care facilities and staff affect utilization of health care. Every individual lives as a social being and so lives with people who in one way or another influence his/her decision on health care utilization; family members, friends and influential people in society are very important when it comes to health seeking behaviour of an individual. It suggests that usage of health care depends much on "*the social networks of family and friends within which an individual finds himself*" (Joseph & Philip, 1984: 112) as well as influential people in the community whose advice are sought before major decisions on health care utilization are taken. The family, clan and the general community are important when it comes to the health of individuals in many African societies, for example "*in Ghanaian cosmology, health and illness are socialissues that are of concern to kin members and the community. The physical health of an individual... is perceived to be linked with the health of the corporate clan*" (Awusabo-Asare, 2004: 266). As a result, family members, clans and the whole community take interest in the health conditions of individual members and in most situations, contribute in the decision of the action of the sick person as well as the type of service to use for cure or treatment.

The Andersen model explains utilization behaviour of sick individuals with reference to a chain of circumstances which tend to control the degree of health care services utilized. This model is based on predisposing, enabling and need factors (Bradley et al., 2002). Joseph and Philip (1984) argue that the predisposing factors include family composition (age, sex, family size and marital status); social structure (occupation, social class and education) and health beliefs. Enabling factors to utilization of services and facilities include the resources of the family in the form of financial, sources of income and health insurance. The model also posits that the community in which one lives must have health care resources in terms of facilities, equipment and the requisite staff. These factors influence utilization of health care facility; for example in their study of adolescents' sexual and reproductive health in Ghana, Kumi-Kyereme, Awusabo-Asare and Biddlecom (2007) found that adolescents in rural communities are more likely to use drugs

obtained from chemical shops as compared to their counterparts in urban centres who are more likely to use modern health care facilities.

3: Methodology

The study was conducted in towns within the Lake Bosomtwe Basin in the Ashanti region of Ghana. Lake Bosomtwe, a crater lake, is located about 32 km south-east of Kumasi, Ghana. It is the largest natural lake in Ghana, approximately 8 km wide, and is popular for its recreational vicinity. There are about 30 villages in the lake basin, with a population of 11,532 inhabitants (Ghana Statistical Service, 2002). The Lake Bosomtwe basin is located in two administrative districts in the Ashanti region of Ghana; namely the Bosomtwe-Atwima-Kwanwoma and Amansie East districts.

The data for this study was collected from a sampled population drawn from the communities around Lake Bosomtwe in the Ashanti region of Ghana. Employing a multi-stage sampling technique, 120 household heads were selected from six out of the 22 towns around the lake basin. The sample size of 120 was arrived at to ensure fair representation of different categories of people living within the Lake Bosomtwe basin. This is in line with Hair et al.'s (1987) suggestion that a sample size of 100 is enough for statistical analysis.

In stage one of the sample frame, a purposive sampling technique was used to select towns where respondents were drawn from, based on distance to an orthodox health facility as well as availability or otherwise of access roads. The location of the towns with reference to the two administrative districts was also considered in the selection process. Consequently, Abono, Pipie No 2, Bansa, Amakom, Domba and Apewu were selected because they present similar social, economic, and cultural characteristics as the other towns within the basin and fall within the criteria used. The second stage applied quotas to choose respondents based on the population size of the sampled towns as indicated by the 2000 population census while simple random sampling technique was employed in the third stage to select 120 household heads as the research subjects. All the houses in the selected towns were numbered and listed and the required number of houses selected, in houses where there were more than one household, the number of households was listed and one household selected using simple random sampling technique. A questionnaire was administered to the 120 selected household heads. Chi square tests were run during the analysis to establish the relationship between socio-demographic variables (educational level, income levels, marital status, place of residence) and utilization of health care facilities within the basin.

4: Results

The study relates the background characteristics of respondents to the utilization of health care facilities within and outside the Lake Bosomtwe basin. It considers how gender, age, place of residence, level of education and marital status influence utilization of health care.

Sick individuals take various decisions regarding treatment which includes inaction, self treatment and consultation with medical practitioners. When a decision is taken to utilize the services of a medical practitioner, one may utilize local health care facilities or travel outside his/her community to consult a medical service. The study therefore analysed the level at which respondents utilize local health care facilities; utilization of health care here refers to at least one visit within the last two years.

4.1: Utilization of local health care facilities by sex and age

Sex and age were used as demographic variables to determine how they relate to health care utilization. Table 1 shows the utilization of health care facilities within the Lake Bosomtwe basin by sex and age. Out of 120 respondents, 57.5% said they utilize health facilities within the study area; 65.5% of respondents within

age group 50-65 utilize local health care facilities. 56.2% females and 55.6% males within 20-29 years age group utilize local health care facilities. Similarly, 55% (57.1% females and 52.6% males) respondents within age group 30-39 years said they utilize local clinics as against 53.8% of respondents between 40 and 49 years.

4.2: Place of residence and utilization of local health care facilities

It became necessary to find out utilization of local health care facilities by place of residence due to the fact that most residents have to travel to other towns to seek health care. From Table 2, it is observed that Apewu and Amakom which have health care facilities recorded the highest percentage of respondents who utilize local health care facility; 89.5% and 60.1% of respondents at Apewu and Amakom respectively utilize the local clinics. Fifty-seven percent of respondents from Abono said they utilize the local health facilities despite the fact that there is no health care facility at Abono. At Pipie No.2, 33.3% of the respondents said they utilize the health care facilities within the basin. A chi-square test set at 0.05 produced a p -value of 0.021 indicating a significant relationship between place of residence and utilize of local health care facilities.

4.3: Education and utilization of local health care facilities

Education usually influences utilization of health care. Table 3 reveals the relationship between education and utilization of health care facilities. Sixty-five percent of respondents with secondary education said they utilize local health care facilities compared to 62.3% for respondents who have completed Junior Secondary school. Fifty percent of respondents with primary education responded positively to utilization of local health care facilities and 38.9% of those with no formal education utilize the local health care facilities when sick.

4.4: Utilization of local health care facilities by marital status

In Table 4, the relationship between marriage and utilization of health care facilities is presented. The analysis shows that 62.8% of respondents in marriage utilize health care facilities within the study area as against 38.5% of those who are not in any form of marriage.

A chi-square test run produced a p -value of 0.027 indicating that married people utilize local health care facilities more than single people.

4.5: Reasons for utilizing of local health care facilities

Attendance to a health care facility is usually induced by a cause; while in some environments people visit health care practitioners as a routine activity, people in other environments do so only when they are ill or involved in an accident. The type of medical facility one utilizes is also determined by factors such as nearness, one's preference, quality service and advice from other people. Respondents had varied reasons for utilizing local health care facilities which include nearness, the only available option in times of need and high travelling cost.

The majority of respondents (85.5%) who answered "yes" to utilization of local health care facilities cited nearness as the reason for utilizing them. High travelling cost to other hospitals outside the basin was mentioned by 47.8% of the respondents as being what influenced them to patronise health care facilities within their locality, 47.8% said effective treatment they receive at the local health care facilities was the motivating factor while 44.9% said availability at the time of need compelled them to utilize local health care facilities. Cost of consultation was mentioned as a reason for utilizing local health care facilities as 24.6% of respondents associated their utilization of local facilities to low consultation fees they pay at the

local health care facilities as compared to other hospitals outside the basin. Twenty-nine percent of respondents linked their utilization of local clinics to the advice and influence of family members and other influential individuals in the community.

4.6: Utilization of health care facilities outside the Lake Bosomtwe basin

For various reasons, some health care seekers decide to utilize facilities outside their localities or utilize both local and external health care facilities. The study analysed the utilization of external health care facilities within the two years preceding the study. Table 5 shows that 33.4% of respondents from Amakom had utilized health care services outside the basin within the two years preceding the study. 71.4% of respondents from Abono and 72.2% from Bansa responded positively to utilization of health care facilities outside the basin within the study period. Domba had the highest number of respondents (73.9%), who claimed to utilize external health care facilities.

The analysis indicates that people living in towns with health care facilities are less likely to utilize health care facilities outside their environs than those who live in towns without health care facilities. This confirms the distance decay function that distance is an essential element in resource use. People find it convenient accessing the local clinics than travelling to hospitals elsewhere considering time, distance, cost of transport and the nature of the roads they will travel on. It may also be due to the confidence they have in the local clinics and therefore find no reason to seek health care elsewhere. A chi-square test produced a result of $p=0.001$ indicating a significant relationship between place of residence and utilization of health care facilities outside one's locality.

With a $p=0.535$ obtained from a chi-square test, sex was found to have no significant relationship with utilization of health care facilities outside the basin. Both men and women utilize services outside the basin. For example, as much as 60.0% of female respondents and 63.3% of male respondents said they utilize external health care facilities. On the other hand, 15% males said they utilize external health care facilities very often as against 10% females.

4.7: Health insurance and utilization of health care facilities

Health insurance influences one's utilization of health care facilities; the study analysed the impact of health insurance on the utilization of health care facilities by residents. This became necessary because there was the need to establish whether the introduction of the NHIS has had any influence on the health care utilization of respondents. The results presented in Table 7 show that a greater percentage of respondents who have registered for the national health insurance patronize more external health care facilities than those who have not registered. Indeed, 75% of health insurance policy holders said they utilize external health care facilities as against 56.2% of non-policy holders. With regard to local health care facilities, 65.6% of NHIS holders utilize them as compared to 54.4% of non-policy holders.

4.8: Reasons for by-passing local health care facilities

Many individuals by-pass health care facilities within their localities and utilize those outside their place of residence for various reasons which include trust in the services rendered by the facility, availability of qualified staff, availability of required equipment, type of disease and severity of illness. Discussions earlier have shown that the majority of respondents (61.7%) by-pass the local health care facility and utilize health care facilities outside the Lake Bosomtwe basin. When respondents who revealed that they utilized external health care facilities were asked for reasons, 54.2% said they did so because those health care facilities have the required personnel, equipment and medicine for most of the ailments reported; 49.2% cited effective treatment obtained at the health care facilities outside the basin as being the rationale behind their action;

and 47.5% assigned serious ill condition which the local clinics cannot deal with as the basis for their utilization of external health care facilities.

5: Discussion

The results have revealed that more males (65%) utilize health care facilities within the basin than females (50%). This might be due to the fact that males and females have varying health needs, confirming Doyal's (2001) suggestion that men and women have different health care needs and hence require different health care services. Relating this finding to the Human Ecology of Disease model it is found that the gender of an individual is a determinant factor in the utilization of local health care facilities within the Lake Bosomtwe basin of Ghana.

Place of residence seems to have a greater influence on health care utilization. Communities with or near health care facilities recorded the highest percentage of respondents who claim to utilize local health care facilities. Apewu has a community clinic operated by members of the community and this seems to be the reason for the high utilization of the health centre despite the inadequate human and material resources as compared to the result from Amakom which has a comparatively well resourced clinic. Amakom has the most well equipped health care facility within the basin and one will assume that a higher percentage of the population would take advantage of that and utilize the health care centre but this is not so as compared to respondents from Apewu. This situation can be attributed to the long absence of medical personnel at the Amakom clinic therefore compelling residents to travel to seek health care beyond the Lake Bosomtwe basin. On the other hand, a minority of respondents from Pipie No.2 (33.3%) and Domba (47.8%) (these are towns without health care facilities and are far from the local health care facilities) said they utilize local health care facilities. This seems to confirm the distance-decay function which suggests that people living closer to a resource are likely to utilize it more than those living far away from it. The finding is also in line with the demand and supply function because if health care facilities were adequately supplied, residents would utilize them.

It was established that utilization of local health care facilities increases with higher education. This might be due to the realization of the importance of first aid by respondents with "higher" education who seek medical care at the local health care facilities at the onset of an illness to avoid complications. This is in line with Taylor et al. (2005) suggestion of a positive relationship between education and utilization of health care. Even though the analysis revealed a positive relationship between education and utilization of local health care facilities in the study area, a chi-square test set at 0.05 produced a p -value of 0.483 indicating that the relationship between education and utilization of health care facilities within the basin is not statistically significant. This might be as a result of the sample size used for the study.

With a chi-square test of a p -value of 0.027 the study revealed that married people utilize local health care facilities more than their unmarried counterparts. This result is due mainly to the influence of spouses in deciding the type of health care service and facilities their spouses utilize. As observed by Bastani and Marcaus, (1991) marriage relates to health care counselling observance. Marriage seems to be a predisposing factor to health care utilization an issue also suggested by the Andersen's life cycle determinant model.

Twenty-nine percent of respondents linked their utilization of local clinics to the advice and influence of family members and other influential individuals in the community, thus confirming the assertion by Awusabo-Asare (2004) that families, clans and the community have influence and interest in the health of individual family members in Ghana. This is also in line with the Human Ecology Triangle model which suggests that individual health care decisions are linked with their social grouping. It is clearly

demonstrated here that respondents utilize local health care facilities not because of the quality of service but due to their availability and other geographical elements such as distance, terrain and location.

The results also suggests that residents by-pass the local health care facilities and utilize those outside the basin because of the poor state of the local health care facilities and their wish for better health care facilities. It also confirms the demand and supply theory that sick people will follow quality service irrespective of distance and cost involved, indicating therefore that if the health care facilities within the basin are well equipped, residents will utilize them.

6: Conclusion and recommendation

The discussions on this paper have centred on examining factors affecting the health care utilization patterns. The results show that local clinics are utilized less by residents due to their poor resource base in terms of equipment, personnel and services provided. People tend to by-pass the local clinics to seek health care at nearby hospitals.

Utilization of health care facilities was found to be influenced by place of residence, sex, age, education, marital status, health insurance as well as advice from “influential others”. People living in towns with clinics utilize more health care facilities than those who live in towns without health care facilities. Those living in towns without health care facilities are more likely to by-pass local health care facilities and utilize health care outside the basin. Married respondents were found to utilize more health care facilities than their single counterparts due to the influence of their spouses. Family members, clans and the general society contribute towards the health care decisions of individuals. Health insurance holders utilize more health care facilities and complained of inadequate health care facilities than the uninsured. When one signs up with the scheme, one expects to obtain quality health care provision commensurate with the premium paid; this could account for NHIS policy holders utilizing more well resourced external health care facilities than their uninsured counterparts.

It is therefore recommended that the ministries of health and local government should collaborate to properly equip the health care facilities within the basin in order to encourage their utilization. It is also recommended that the two district assemblies together with the national health insurance secretariat educate the resident on the importance of the NHIS so that many residents will register for the NHIS for them to be able to utilize the more resourced health care facilities outside the basin.

Table 1: Utilization of local health care facilities by sex and age (Percentages)

Age	Sex	YES	NO	Total	(N)
20-29 years	FEMALE	56.2	43.8	100	(16)
	MALE	55.6	44.4	100	(9)
	Sub-Total	56.0%	44.0%	100	(25)
30-39 years	FEMALE	57.1	42.9	100	(21)
	MALE	52.6	47.4	100	(19)
	Sub-Total	55.0%	45.0%	100	(40)
40-49 years	FEMALE	33.3	66.7	100	(12)
	MALE	71.4	28.6	100	(14)
	Sub-Total	53.8%	46.2%	100	(26)

50-65 years	FEMALE	45.5	54.5	100	(11)
	MALE	77.8	22.2	100	(18)
	Sub-Total	65.5%	34.5%	100	(29)
TOTAL (Females and males)		57.5%	42.5%	100%	(120)

Source: Fieldwork data 2007

Table 2: Place of residence and utilization of local health care facilities (Percentages)

TOWN	Utilization of facilities within the basin		Total (N)
	Yes	No	
Abono	57.1	42.9	100% (21)
Pipie No.2	33.3	56.7	100% (18)
Amakom	60.1	39.9	100% (21)
Dompa	47.8	52.2	100% (23)
Apewu	89.5	10.5	100% (19)
Banso	61.1	38.9	100% (18)

Source: Fieldwork data 2007

Chi-square: Value = 13.229, df = 5, Asymp. Sig. = 0.021

Table 3: Education and utilization of local health care facilities (Percentages)

Level of education	Utilization of facilities within the basin		Total (N)
	Yes	No	
No education	38.9	61.1	100% (18)
Primary	50.0	50.0	100% (14)
Mid school/JSS	62.3	37.7	100% (77)
Sec/SSS/Voc	65.0	35.0	100% (8)
Teacher Training	66.7	33.3	100% (3)
Total	57.5%	42.5%	100% (120)

Source: Fieldwork data 2007

Chi-square: Value = 4.478, df = 5, Asymp. Sig. = 0.483

Table 4 Marital status and utilization of local health care facilities (Percentages)

Marital Status	YES	NO	TOTAL
Single	38.5	61.5	100% (26)
Married	62.8	37.2	100% (94)
TOTAL	57.5%	42.5%	100% (120)

Source: Fieldwork data (2007)

Chi-square: Value = 4.923, df = 1, Asymp. Sig. = 0.027

Table 5: Utilization of health care facilities outside the basin (Percentages)

Town	Utilization of health care facilities outside the basin				Total (N)
	Yes, Very Often	Yes, Often	Yes, Seldom	No, Never	
Abono	23.8	-	47.6	28.6	100% (21)
Pipie No,2	11.1	22.2	33.3	33.3	100% (18)
Amakom	-	4.8	28.6	66.6	100% (21)
Dompa	30.4	8.7	34.8	26.1	100% (23)
Apewu	5.2	15.8	31.6	47.4	100% (19)
Banso	-	44.4	27.8	27.8	100% (18)
Total	12.5%	15.0%	34.2%	38.3%	100% (120)

Source: Fieldwork data (2007)

Pearson's chi-square: Value = 38.459, df=15, Asymp. Sig. = 0.001

Table 6: Utilization of health care facilities outside the basin (Percentages)

Sex	Utilization of health care facilities outside the basin				Total
	Yes, Very Often	Yes, Often	Yes, Seldom	No, Never	
Female	10.0	11.7	38.3	40.0	100%
Male	15.0	18.3	30.0	36.7	100%
Total	12.5%	15.0%	34.2%	38.3%	100%

Source: Fieldwork data (2007)

Value = 2.186, df = 3, Asymp. Sig. = 0.535

Table 7: Utilization of health care facilities outside the basin by NHIS holding (Percentages)

NHIS	Utilization of health care facilities outside the basin				Total (N)
	Yes, Very Often	Yes, Often	Yes, Seldom	No, Never	
Holders	25.0	15.6	34.4	25.0	100%
Non Holders	8.0	14.8	34.0	43.2	100%
Total	12.5%	15.0%	34.2%	38.3%	100%

Source: Fieldwork data (2007)

Value = 7.490, df = 3, Asymp. Sig. = 0.058

References

- Asenso-Okyere, W. K., Anum, A., Osei-Akoto, I. & Adukonu, A. (1998). Cost recovery in Ghana: are there any changes in health care seeking behaviour? *Health Policy and Planning*, 13(2): 181-188.
- Awusabo-Asare, K. & Anarfi, J. K. (1997). Health-seeking behaviour of persons with HIV/AIDS in Ghana. *Health Transition Review*, Supplement to Volume 7, 1997, 243-256.

- Awusabo-Asare, K. (2004). Living with AIDS: perceptions, attitudes and post-diagnosis behaviour of HIV/AIDS patients in Ghana. *Health Transition Review*, Supplement to Volume 5, 1995, 265-278
- Bastani, R. & Marcuas, A. C. (1991). Screening mammography rates and barriers to use. A Los Angeles County Survey. *Prev Med*; 249: 488–91.
- Bradley, E. H.; McGraw, S. A.; Curry, L.; Buckser, A.; King, K. L.; Kasl, S. V. & Andersen, R. (2002). Expanding the Andersen model: the role of psychosocial factors in long-term care use. *Health Services Research*, Vol. 37, No. 5 (1221-1242). Blackwell Publishing.
- Castro-Leal, F., Dayton, J., Demery, L. & Mehra, K. (2000). Public spending on health care in Africa: do the poor benefit? *Bulletin of the World Health Organization*, 78 (1).
- Doyal, L. (2001). Sex, gender, and health: the need for a new approaches. *BMJ* 323; 1061-1063.
- Ensor, T. & Ronoh, J. (2005). Effective financing of maternal health services: a review of the literature. *Health Policy* 75: 49–58.
- Ghana Statistical Service (2002). 2000 *Population and housing Census*. Summary Report of Final Results. Ghana Statistical Service, Accra
- Golafshani, N. (2003). Understanding Reliability and Validity in Qualitative Research. *The Qualitative Report* Volume 8 Number 4 December 2003, 597-607.
- Grimsom, A, & Siem, H. (1984). Factors affecting primary health care utilization. *Fam Pract.*; 1:155-161.
- Hair, J., Anderson, E. R. & Tatham, R. L. (1987). *Multivariate data analysis with readings* (2nd Ed). London, Collier Macmillan
- Hoerger, T.; Eleazer, K.; Lindrooth, R.; West, S. & Ohsfeldt, R. (1998). *Health Care Use in Women Age 45 and Older Value in Health*, Volume 1, Number 1, May 1998, 64-65(2). Blackwell Publishing.
- Hoffman, C. & Paradise, J. (2008, forthcoming) Health Insurance and Access to Health Care in the United States. *Annals of the New York Academy of Sciences*
- Hsia, J.; Kempe, E.; Kiefe, C.; Zapka, J.; Sofaer, S.; Pettinger, M.; Bowen, D.; Limacher, M.; Lillington, L. & Mason, E. (2000). The Importance of Health Insurance as a Determinant of Cancer Screening: Evidence from the Women's Health Initiative. *Preventive Medicine*, Volume 31, Number 3, 261-270.
- Hutchinson, P.; Habte, D. & Mulusa, M. (1999). *Health care in Uganda: selected issues*. World Bank publication.
- Joseph, A. E. & Philips, D. R. (1984). *Accessibility and utilization: geographical perspectives on health care delivery*. London, Harper & Row Ltd.
- Kruk, M. E.; Galea, S.; Prescott, M. & Freedman, L. P. (2007). Health care financing and utilization of maternal health services in developing countries. *Health Policy and Planning* 22:303–310.
- Ku, L. & Ross; D. C. (2002). Staying Covered: The Importance of Retaining Health Insurance for Low-Income Families. Center on Budget and Policy Priorities. The Commonwealth Fund.
- Kumi-Kyereme, A; Awusabo-Asare, K. & Biddlecom, A. (2007). Adolescents' sexual and reproductive health in Ghana: Quality evidence from Ghana. *Occasional report*, No. 30, New York, Guttmacher Institute.
- Lipton, R. B.; Scher, A. L.; Kolodner, K.; Liberman, J.; Steiner, T. J. & Stewart, W. F. (2002). Migraine in the United States: Epidemiology and patterns of health care use. *Neurology* 58 March (2 of 2)
- Maurer, J. (2006). Socioeconomic and Health Determinants of Health Care Utilization Among Elderly Europeans: A New Look at Equity, Intensity and Responsiveness in Ten European Countries. HEDG *Working Paper* 06/08 ISSN 1751-1976.
- Meade, M. S. & Earickson, R. J., (2000). *Medical Geography*, The Guilford Press, New York.
- NCHS (2006). Data on Health Insurance and Access to Care. National Center for Health Statistics

- Nichols, L.; Barton, P. L.; Glazner, J. & McCollum, M. (2007). Diabetes, minor depression and health care utilization and expenditures: a retrospective database study *Cost Effectiveness and Resource Allocation* 5:4.
- Say, L. & Raine, R. (2007). A systematic review of inequalities in the use of maternal health care in developing countries: examining the scale of the problem and the importance of context. *Bulletin of the World Health Organization*, (WHO) Volume 85, Number 10, 2007, 733-820
- Smith, F. (2002). Reflections on health care in Ghana. *The Pharmaceutical Journal*, Vol. 268.
- Taylor, A. K.; Larson, S. & Correa-de-Araujo, R. (2005). Women's Health Care Utilization and Expenditures. *Agency for Healthcare Research and Quality Working Paper* No. 05014, June 2005, University of Sussex (1994). "*Background Paper on Gender Issues in Ghana*". Institute of Development Studies. BRIDGE, ODA, UK.
- Van den Boom, G. J. M., Nsowah-Nuamah, N. N. N. & Overbosch, G. B. (2004). Health care provision and self medication in Ghana. *Jel Classification*: 111; H51; O55.
- WHO (1998). Gender and health: Technical paper *WHO/FRH/WHD/98.16*
- World Bank (1999). Ghana: Women's role in improved economic performance. No. 145.
- Young, J. T.; Menken, J.; Williams, J.; Khan, N. & Kuhn, R. S. (2006). Who Receives Healthcare? Age and Sex Differentials in Adult Use of Healthcare Services in Rural Bangladesh. *World Health and Population*.
- Zelman, W. N.; McCue, M. J.; Millikan, R. & Glick, N. D. (2003) *Financial Management of Health Care Organizations: An Introduction to fundamental tools, concepts and applications*. Blackwell Publishing.