Analysis of the Effect of Socio-Cultural and Economic Factors on Healthcare Choices in Minna Metropolis

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Abstract

Socio-cultural and economic factors often determine the choice of healthcare facility. This study therefore investigates the effects of Sociocultural and Economic factors on health care choice in Minna, Niger State, Nigeria with the objectives of examining the effect of income and marital status on the choice of healthcare facilities among the residents of Minna metropolis. The study adopted a questionnaire method in collecting data while Chi-Square and logistic regression were used to estimate the effect of socio-cultural and economic factors on healthcare choice among Minna residents. Finding from the studies reveal that predisposition factors such as age, marital status, gender and religious inclination were all significant in determining the choice of healthcare facilities while education was found to be insignificant. The enabling factors such as user's fee, waiting time, accessibility, and availability of trained health personnel were all found to be significant in determining the choice of health care facilities. Income was also found to be significant in influencing the choice of healthcare facilities. Based on these findings, the study recommends that the government should equip all the public hospital with modern facilities and drugs, keep the user fees very low for affordability, trained more medical personnel and build more health centers for easy accessibility.

Keywords: Socio-cultural, economic, choice, healthcare facilities.

1.0 Introduction

The World Health Organization (WHO, 2019) defines the "attainment of the highest level of health as a fundamental human right which, includes physical, mental and social well-being, and not merely the absence of disease or infirmity. Sound health is a fundamental requirement for living a socially and economically productive life. However, poor health inflicts great hardships on households, including debilitation, substantial monetary expenditures, loss of labor and sometimes death (Omonona*et al*., 2015).

In Nigeria, cultural practices affect the utilization of health care services. For example, certain religious groups or tribes may believe that the cause of sickness is spiritual as

opposed to biological or environmental and will therefore seek the services of a pastor, a Malam (a Muslim spiritual leader), or a traditional religious leader. People lack the essential knowledge on how to live healthily, recognize dangerous signs and situations and mobilize resources to solve health problems. The very high morbidity and mortality rates (especially in the rural areas) of these developing countries can also be due to poor hygiene and lack of funds and poor households' health behaviour (Imam, 2020). In areas where health care services are readily available, the factors that determine the utilization of the services range from the level of awareness to the level of education, distance to health care, cost of treatment, bureaucracy in the medical practice and mismanagement of facilities and equipment. Those who cannot afford the cost of care in the hospitals, opt for traditional healers and other spiritual homes especially in the treatment of cardiovascular diseases like cancer (Asuzu, Akin-Odanye, and Asuzu, 2019).

Many patients seek care from different systems of health care, be it traditional, orthodox, spiritual healers and self-medication exclusively or simultaneously at various stages during illness. These choices often represent highly rational responses to the constraints and opportunities (quality of care, proximity of the services, accessibility, cost of treatment, income, cultural believes, socio-economic status of the patients, geographic location, level of education) faced by patients. The previous literature were unable to study some ethnic groups and their behaviors to healthcare choices hence, in the light of these facts, there is an urgent need for a study to understand the reasons of individuals' and households' choices of health care in Minna Metropolis.

Concerns for the level and distribution of health demands that measures be taken to redress this problem. It therefore, becomes imperative to know the effect of such factors as level of education, size of household, health insurance status, quality of care and geographic location of individuals on the choice of health care of residents of Minna metropolis.

The study comprises of introduction followed by objectives of the study, literature review, methodology, results/finding and finally conclusion and recommendations.

2.0 Literature Review

Conceptualy, the relationship between the predisposition factors (age, sex, marital status, education, religion and ethnicity) and the choice of health care facilities either public (general hospital), private hospital or spiritual home.. The enabling factors such as income, distance, occupation and health care system also determine the choice of health care facilities either private, general hospital (public) or spiritual homes. The Need for care factors such as chronic condition, and other diseases such as heart failure, diabetics, lung diseases etc also determines the choice of health care facility public, private or spiritual homes. Hence, each of the factors may influence individual, family on choice of health care facilities in other to seek for medical attention.
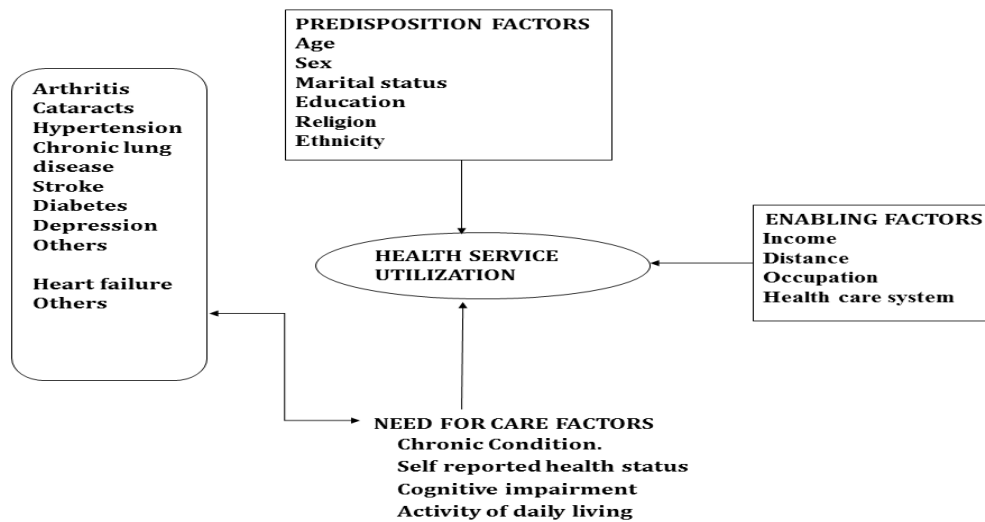
Figure 1: Conceptual frame work showing possible determinants of health care choice (adapted from Amente and Kebete, (2016).

Theoretically, many theories were advanced to explain the behavior of people in seeking for healthcare services. Notable among them are; the famous Grossman Health Demand Theory (1972) which explain health demand as derived demand and how individuals allocate their resources to produce health. Another theory is the health believe model which explain why so few people were participating in programs to prevent and detect diseases. Hence, this study is underpinned by health belief model which has some element of socio-economic and cultural factors in selecting healthcare facility.

Several studies exist on the determinants of healthcare choices. However, a good number of such literature on healthcare choice determinants have their scope outside Nigeria, for example, the works of Muriithi (2013), Kazi and Noman (2013). Hence, there is a need to carry out a study of a similar nature but by introducing other variables in addition to the ones employed by studies outside Nigeria. On the few available literature in Nigeria, works such as Itoe (2012), Omonona, Obisesan & Aromolaran (2015), Owoyele et al (2015) and Oluyemi (2015) identified key determinants of healthcare choice as accessibility to health facilities as well as occupation, income, marital status and education with Oluyemi (2015) singling out the gender, particularly as the key determinant of health care utilization.

This study concludes that factors such as user fee, waiting time, and accessibility sometimes determine the choice of health care facility in Minna metropolis however, education, age and religion do not in any way affect the choice of health care facility.

3.0 Methodology
The study adopts a case study design approach, utilizing qualitative data, and mixed methods consistent with descriptive research survey design. The case study approach was chosen because it is best suited to explore the research questions and the researcher used the information obtained from a sample of the study population to determine the extent

to which the identified factors affect the health care choice of the residents of Minna Metropolis.

The 3-point Likert scale was used to arrange responses from the questions in the questionnaire and a numerical value was assigned to each degree of response The individual's and households of Minna Metropolis ranging from age 18years and above are the study population. Based on the 2019 projected National Population Commission's figures, the total population of our study will be three hundred and sixteen thousand, seven hundred and eighty two (316,782) adult population in Minna metropolis.

The sampling technique employed is the disproportionate stratified random sampling given the fact that the study group is made up of people of different age groups and gender, and as such have varying degrees of economic and social responsibilities. Three hundred and Ninety Nine (399) questionnaires was issued to the respondents based on convenience sampling technique since the research requires the respondents to be adequately knowledgeable about the subject matter.

3.1 The Model

When individuals are faced with an accident, illness or injury, they would decide whether to seek a medical treatment or not, and those who are seeking would also decide which health care unit to use (i.e., the modern or the traditional services). Moreover, from the modern health care services that are available to them, individual users would choose from among governmentally, privately, traditionally or spiritually provided services that would
enable them to maximize their utility. Hence, in order to determine the probability of individuals seeking treatment at times of illness and/or the probability of choosing any one health care unit, the following logit model is employed which was adopted from Astaraye (2002) in a study, Determinant of Demand for Healthcare Services and their Implication on Health Care Financing: The Case of Bure Town in Ethopia.

$$P_r(D_i = 1) = P_i = F(\beta X_i) = \frac{\exp(\beta X_i)}{1 + \exp(\beta X_i)} = \frac{1}{1 + \exp(\beta X_i)} = \lambda(\beta X_i)\ldots\ldots\ldots\ldots 3.1$$

hence

$$p_r(D_i = 0) = 1 - p_i = 1 - F(\beta X_i) = \frac{\exp(-\beta X_i)}{1 + \exp(-\beta X_i)} = 1 - \lambda(\beta X_i)\ldots\ldots\ldots\ldots 3.2$$

Where, $p_r(D_i = 1) = P$ is the probability of individual seeking for medical treatment or the probability of choosing a certain healthcare service provider in times of illness

$\beta^{'s}$ are vector of parameters to be estimated

$X^{'s}$ are vector of explanatory variables

$\lambda(.)$ denotes the logistic distribution

3.1.1 The Dependent Variable

The dependent variable, Health care choice (Hcc) examine whether individual choice of health care facility (private hospital, General hospital, Spiritual homes or Health centers) is driven by socio-cultural factors of individuals.

Hcc = (Predisposingcomponentsinclude: age, gender, maritalstatus, Religion, etnicity while the enablingcomponentsinclude: occupation, andeducation).

3.1.2 The Independent Variables

Age (agg) is the age of the respondents who are within the age of15 to 55 years during the survey period.*Gender (gder)* is the sex of the respondent coded as 1 for male and 2 for female.

Marital status (mstus) is the marital status of the respondent coded from as 0 to 5 in the following order: single, married, widow, separated, missing information. **Religion inclination (relgn)** is the religious affiliation of the respondent. This is coded as 0 to 3 as follows: Islam, Christianity, Traditional and others. **Ethnicity (ethn)** is the categorization

of Minna metropolis by the eisting ethnic groups coded as 0 to 7 as follows: Hausa, Yoruba, Igbo, Nupe, Gwari, Tangale, Others*Occupation (occp)* is coded 0 – 4 as follows: Business, Civil Servants, Students, Others, Missing information. **Education (eduq)** is the type of knowledge acquired coded in the following other from 0-4: Quranic education/No formal education, Junior school certificate, Senior school certificate, NCE/Diploma, HND/B.Sc.

3.2 Analytical Technique

Health care service utilization was measured as a binary variable among those who fell sick in the past three months. The analytical method is first descriptive. These descriptive analyses are supported by chi-square tests to test the relationship between health care choice and various socio-economic and cultural determinants of health care choice. Logistic regression is used to show the empirical relationship between health care choice and independent variable as selected from the predisposing factor, enabling factors and need factors.

4.0 Results and Discussion
4.1 Chi-Square Results

Table 4.1 revealed the result of the association or relatedness between socio-economic/cultural factors and health care choice of the 380 respondents in the study area. From the table, it can be inferred that only 6 of the 7 socio-economic/cultural factors of the respondents were significantly related in terms of the demographic features of their

cooperators to their choice of health care facility since the obtained chi-square values for gender(χ^2 =23.385, df =3, p =0.000),age(χ^2= 207.086, df=12, p=0.000), marital status($\chi^2(3)$ 17.452, p=0.001), Religious inclination ($\chi^2(3)$ 68.815, p=0.000), Ethnicity ($\chi^2(24)$ 147.412, p=0.000) as the calculated chi-square values far exceeded the critical value at 5% significance level.

However, from the Chi-square table it can be observed that the educational status of the respondents is not significantly related or associated to their preference or choice of health care facility in the study area(χ^2= 11.327, df=6, p=0.079). This is so as analysis of responses on the educational qualification in Table 2 revealed all the respondents patronized health centers, private hospitals, general hospitals and spiritual homes irrespective of the educational background/qualification

Table 4.1: Degree of association between socio-economic/cultural factors and health care choice of the respondents

Socio-economic/cultural factors	Health Care Choice				Chi-Square Test (χ^2)
	Health centres	Private hospital	General hospital	Spiritual homes	
Gender of Respondent					
Female	10	50	70	10	$\chi^2(3)$ 23.385, p=0.000
Male	40	80	120	0	
Age of Respondent					
18-20 years	10	0	0	0	$\chi^2(12)$ 207.086, p=0.000
21-30 years	20	70	80	0	
31-40 years	20	50	70	0	
41-50 year	0	10	20	0	
51 years and above	0	0	20	10	
Marital Status					
Single	30	80	110	0	$\chi^2(3)$ 17.452, p=0.001
Married	20	40	80	10	
Religious Inclination					
Islam	30	50	150	0	$\chi^2(3)$ 68.815, p=0.000
Christianity	20	80	40	10	
Ethnic group of Respondents					
Hausa	10	30	50	0	$\chi^2(24)$147.412, p=0.000
Yoruba	10	10	20	10	
Igbo	0	10	0	0	
Nupe	20	30	50	0	
Ebira	10	40	40	0	
Gbagyi	0	0	10	0	

Tangale	0	0	10	0		
Others	0	10	0	0		
Educational Qualification						
Quranic /No formal education	0	10	10	0	$\chi^2(6)$ p=0.079	11.327,
Junior School Certificate	10	10	20	0		
Senior School Certificate	40	110	160	10		
NCE/OND/Diploma	0	10	10	0		
HND and BSC	10	10	20	0		

Socio-economic/cultural factors	Health Care Choice				Chi-Square Test (χ^2)	
	Health centres	**Private hospital**	**General hospital**	**Spiritual homes**		
Nature of Occupation						
Business	20	30	40	0	$\chi^2(9)$ p=0.000	75.482,
Civil servant	20	20	90	10		
Student	10	30	40	0		
Others	0	40	20	0		

Author's computation, (2024)

4.2 Interpretation of Logistic Regression Results

The coefficients obtained in Logit regression models are not directly interpreted as the change in the probability of occurrence caused by a unit change in the independent variables. But the signs of these coefficients, as usual, indicate the directions of association between the explanatory variables and the probability of occurrence. To capture the marginal effects (i.e., the magnitude of the change in the probability of occurrence) caused by the changes in the explanatory variables, the odds ratios Exp (B) are calculated. Hence, an odds ratio greater than one indicates the increase in the probability of an event occurring compared for it not occurring, while the reverse holds when the ratio is less than one.

The results indicate that all the variables marital status, gender, educational status, health facility cleanliness, availability of trained personnel, user fee and waiting time are all statistically significant in determining Health care choice utilization in the study area except for two variables (religion of physician and accessibility) that were not statistically significant in determining health care choice. The odd ration Exp(B) for marital status shows that for every married couple, they are 90 percent more likely to choose a health care facility to attend than non- married individual. The odds ratio for education shows that those with NCE/OND/ND are 75 percent more likely to choose a health care facility when sick while those with HND/B.sc are 24 percent more likely to choose health care facility. This result is consistent with Farhad. L. Soraya .N.M, Ghadir

M, Khosro K, Mohammad H and Hassa.A, (2017) who also found that education does not affect the health care choice.

The odd ratio for health facility cleanliness revealed 90 percent likelihood of individual to choose health facility that is clean. This shows that cleanliness is an important factor in choosing a health care facility, this in consistent with the study of Harvey (2014) who also finds that cleanliness of hospital determined its choice by individuals. The religion of physician is statistically insignificant in choosing health care facility when sick. The odd ration for availability of trained health personnel is 35 percent likelihood in determining the choice of health care facility. Accessibility is insignificant in determining the choice of health care facility. The sign of the coefficient is also negative and not in consistent to our apriori expectation of the sign. The odd ratio for user fee shows those individuals are 89 percent likely to choose a health care facility because of the user fee or cost. The coefficient is negative indicating that the higher the fee the less likelihood for people to choose the health care facility. The odd ratio for waiting indicates 86 percent likelihood to choose hospital with less waiting time. The sign of the coefficient is also negative showing that people will choose health facility with less waiting time when sick. The more the waiting time, the less the health facility will be chosen. This result concurred with findings of Uchendu, Ilesanmi and Olumide (2013) who present similar result in their study Factors Influencing the Choice of Health Care Providing Facility Among Workers in Local Government Secretariat in South Western Nigeria

Table 4.2: Logistic regression model predicting health care choice

Predictors	Coefficient	Standard Error	Wald z-Statistic	Sig.	Exp(B)
Constant	-.281	.580	.235	.628	**.755**
Marital status	-.100	.226	.194	.660	**.905**
Gender	.046	.235	.038	.845	**1.047**
Educational status					
NCE/OND/ND	-.276	.513	.289	.591	**.759**
HND/BSC	.218	.390	.314	.575	**1.244**
Health facilities cleanliness	-.095	.357	.071	.789	**.909**
Religion of physician	.813	.259	9.834	.002*	**2.255**
Availability of trained health personnel	.303	.510	.354	.552	**1.354**
Accessibility	-1.076	.363	8.800	.003*	**.341**
User Fee	-.112	.314	.127	.722	**.894**
Waiting time	-.147	.260	.320	.571	**.863**

Author's computation, (2024)

4.3 Discussion of Results
The discussion of the results will be organized within the three factors that characterized the health care choice or utilization which are; **predisposing factors** (demographic features like age, marital status, educational status, age, sex, religion) **enabling factors** (user's fee, waiting time, accessibility, availability of trained health personnel) and (sickness, disability, symptoms)

4.3.1 Predisposing Factors

Within Andersen's (2005) framework, the predisposing factor of beliefs refers to the underlying values, attitudes, and cultural norms individuals may have towards health and healthcare services. This is assumed to influence the perception of an individual's needs and choice of health care facility (Andersen & Davidson, 2005).

Age: the results shows that age respondents between the age of 21-30 and 31-40 prefer general hospital compared to private clinic. This may be as a result of cost and availability of health professional compared private health care facility however, people who have attained the age of 50 and above prefer to visit spiritual homes instead of hospital. This may be as a results of socio-cultural believe of people within the age group. **Gender**: from the respondents and results, male respondent prefer to go to the general hospital compared to female counterparts who prefers private clinic. The decision by male to choose general hospital may be as a result of presence of qualified doctors and other health personnel, secondly, cost of services is less and majority of the respondents are civil servants and may not be able to afford private hospital. Female on the other hand, female respondent were found to visit spiritual home unlike the male counterpart. **Marital status**: the result from the marital status revealed that people who are not married patronize general hospital compared to married couples. Also married couple also visits spiritual homes when they are face with health challenges. Single individual do not attend spiritual homes. The choice of private hospital and health is more preferred among those who are single compared to those who are married. **Religious inclination**: this variable revealed that more number of Muslims chooses general hospital more than their Christian counterparts. It also shows that individual does not considered the religion of the physician in their choice of health care facility. The implication of this is that people are only after quality health services regardless of the physician involved. **Educational qualification**: education qualification was found to be insignificant in determining the choice of health care facility. The implication of this finding is that everybody whether educated or not will choose a health care facility based on some factors that will give him maximum utility in terms of wellness and service satisfaction. However, those who less educated will have lower income and may likely choose general hospital compared to private hospital.

4.3.2 Enabling factors: the enabling factors in this study includes user's fee, waiting time, accessibility, availability of trained health personnel. The user fees as reported as significant in determining the choice of health care facility. This implies that the choice of hospital either private or general hospital will depends on the user fee (cost). The user fee of private hospital is usually higher compared to public owned hospital hence, majority of the people are likely to choose general hospital and health centers when they sick. Waiting time also influence the choice of hospital. Those with high income are more likely to choose private hospital because of time that will be wasted in waiting for attention of medical personnel. The general hospital is mostly chosen by civil servants with high number of patients hence, more waiting time. Accessibility is insignificant in determining health care choice. This implies that access is not a determinant of health care choice. Individual may not choose a particular health care facility despite its closeness to him.

Individual may choose a health care facility (general, private or healthcare center) however far provided the patient will drive maximum satisfaction from the services rendered. Availability of trained health personnel is also significant in determining the choice of hospital by individual. Sometimes people go for the best no matter the cost. This implies that notwithstanding the cost, people will choose health care where there are highly qualified or trained health personnel, whether it is a general hospital or a private or spiritual home.

4.4 Findings
Based on the results from the chi-square and logistic regression model, findings from the study reveal the following;

Education is not significant in determining the choice of healthcare facility. This suggests that whether a patient has an educational certificate like a O'level, diploma, or degree does not determine the choice of health care facility but more importantly the kind of services he is likely to get.

User fees are statistically significant in determining the choice of healthcare facility; this implies that fees charged in the healthcare facility can influence the decision of a healthcare user in choosing the healthcare facility for treatment. The cheaper a healthcare facility, the more patronage will come from the public religious inclination of the physician is not statistically significant in determining the choice of a health care facility whether public or private; Religion is not a determinant of choice of health care facility in the study area.

Accessibility is not a determinant of health care facility. This implies that nearness of healthcare facility is not a determinant of healthcare facility. Some patient may not attend the healthcare facility close to them but sometime prefer to travel far to get the right treatment.; Availability of trained health care personnel determines the choice of health care facility. Patients prefer healthcare facility with many qualified health care personnel. Facilities with inadequate health personnel are usually not patronize because of long queue or waiting period.

Age is an important factor in determining the choice of health care especially those within the 21-30 years of age. Those within this age group bracket (21-30) usually prefer a particular hospital or healthcare facility. Even though, some hospital are specialized hence, the choice mostly depend on the age. For example, paediatrics hospital is usually for those whose age is between 0-12

5. 0 Conclusion and Recommendations
Based on the results and finding emanating from this study, the following conclusions are made.

The choice of healthcare facility whether public, private or spiritual home does not depend on one's level of education; Choice of healthcare facility depends on availability of trained health personnel; User fees influence the choice of health care facility; Long waiting period discourage individuals from choosing a health care facility

Based on the conclusion of the study, the study recommends that since education does not influence the choice of healthcare center, government should equip all the public heath care centers with adequate health facilities and drugs to encourage patronage, especially for the fact that majority of the populace are educated. Secondly, government should give scholarship and special sponsorship be given to deserving students to study health related courses (medicine, Pharmacy and nursing). Thirdly, since user fees determines the choice of healthcare facility, public healthcare canters including general hospital user's fee should be kept low to encourage public in seeking for health care services in the hospital rather than visiting spiritual home with minimum charges. Fourthly, **t**o avoid long waiting period, more health facilities should be built. This will reduce population and stress on the existing ones thereby reducing waiting time or period.in addition, more physician should be recruited to reduce the doctor patient ratio.

Several studies exist on the determinants of healthcare choices. However, a good number of such literature on healthcare choice determinants have their scope outside Nigeria, for example, the works of Muriithi (2013), Kazi and Noman (2013). Hence, there is a need to carry out a study of a similar nature but by introducing other variables in addition to the ones employed by studies outside Nigeria. On the few available literature in Nigeria, works such as Itoe (2012), Omonona, Obisesan & Aromolaran (2015), Owoyele et al (2015) and Oluyemi (2015) identified key determinants of healthcare choice as accessibility to health facilities as well as occupation, income, marital status and education with Oluyemi (2015) singling out.

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