

Summary

The thesis examines the factors that impact on access and utilisation of health services in Ghana. The utilisation behaviour of residents of a typical urban and a typical rural district are used as representing the entire Ghanaian experience. Literature has demonstrated the dichotomy in utilisation between rural and urban areas, with urban residents having advantage over rural. It also shows that in developing countries, such as Ghana, need (health status) is not as significant as predisposing, enabling and restrictive factors in determining utilisation. Women are at a disadvantage, implying gender inequity, whilst health insurance has a strong positive effect on utilisation. Empirical data from the study area confirm the theoretical foundations. Quantitative analyses are made, supported by a few qualitative methods, whilst empirical papers dominate the thesis.

Chapter 1, The Overview, looks at Ghana's economy and its socio-economic conditions and health status. The nation, though having rich natural resources, is poor. Resources have not been won to improve the socio-economic conditions of the people. Poverty is a predominant feature, especially in the rural areas and urban fringes. Gross National Income (GNI) per capita is below \$400, which is far below the average for low-income countries including China and India, though better than some countries in the deprived West African sub-Region. Yet, population growth rate and the total fertility rate are quite high, implying that, if measures are not taken to improve micro economic indicators, economic status would continue to decline, and standards of living deteriorate. Health promoting factors of access to safe water and sanitation are not favourable. Percentage of the population with access to safe water falls below that for low-income countries, though access to sanitation is comparatively slightly better. Coupled with these poor socio-economic indicators are inadequate health facilities. The health personnel problem is rather alarming: a physician takes care of over 10,000 people, which falls far below the average of a physician per 2,000 people for low-income countries including China and India. Health facilities are concentrated in the main urban centres to the detriment of the rural population.

Literature for the status of access and use of health care in developing countries identifies cost, distance and education as the principal factors influencing utilisation. The cost problem deprives the poor of access to health facilities whilst distance impedes utilisation by those who don't have access to good transport. The need factor in utilisation is subsumed by the predisposing, enabling and restrictive factors like distance, travel and waiting times. Insurance has been found to improve utilisation by the few that have access to it. Unfortunately, the insurance system is

poorly developed in developing countries. In Ghana, a National Health Insurance Scheme (NHIS) is yet to take off, after Parliament has passed the Bill. Access and use of health services is thus strongly influenced by the political ecology.

The empirical part of this thesis is based on a cross-sectional survey about access and utilisation of health services in Ghana, using a rural and an urban district as case studies. The Andersen-Newman model has been fundamental to the models used for the thesis. A probability sample was drawn using systematic randomisation. Data were analysed using cross-tabulations, bivariate correlation, linear regression, and maps and charts. Explanatory models have been structured for some outcomes. Biases arising out of difficulty of some respondents to supply data and consistency in applying the systematic random technique were effectively addressed.

Chapter 2 is made up of an analysis of existing data, concerning the economy, health spending and health status in Sub-Saharan Africa, isolating the position of Ghana in the Sub-Region. It specifies the relationship between health outcomes and strength of the economy for Sub-Saharan African countries and shows whether Ghana's health status could be predicted from her economic strength. Data at country level were collected from WHO and World Bank databases. Multiple regression was used for the analysis. It was found that the association between wealth and health is very strong. HIV infection showed as a factor influencing health status. Ghana is doing better in terms of healthy life expectancy than can be predicted based on its economic position.

Chapter 3 discusses the comparative analysis of utilisation of health services in rural and urban settings in Ghana. Two districts, Kumasi Metropolis and Ahafo-Ano South District were used as case study. Formal interview and questionnaire schedules were the research instruments used for data collection. A multiple regression model was used for the study that is based on the Andersen-Newman model. Results showed that there was a need-utilisation discrepancy in the study area. Although health status (need), which has no significant influence on utilisation, does not significantly differ between the rural and urban districts, the urban district used health services more than the rural. The study also showed that health status (need) is insignificant in explaining differences in utilisation between the two areas, and is relatively a weaker factor, compared with predisposing-enabling-restrictive factors, in determining utilisation in both areas. Finally, predisposing, enabling and restrictive factors were found to explain differences in utilisation between the two districts. Whereas education, distance and service cost were the most important factors influencing health care use in the metropolis, distance and income emerged as the most important factors in the rural Ahafo-Ano South District. The research was subject to some biases that had the potential to influence the results even though efforts were made to limit negative repercussions

on it. There were problems of memory that could affect data on income and regularity of attendance. Secondly, sample targets for the aged and tertiary education had to be changed for lack of such respondents in some areas. Finally, health status was assessed by the number of ailments, avoiding severity of ailments that could affect the need factor. Such weaknesses run through the other access and utilisation papers. It has been recommended that health facilities in the rural areas be increased, formal education given a broader coverage and income opportunities improved. Finally, it is recommended that a national health insurance scheme be introduced to improve access.

Chapters 4 and 5 examine the role of distance in the utilisation of health services. Two published papers emerged, one on the Kumasi Metropolis and one on the Ahafo-Ano South District, which is rural. Both used the formal (face-to-face) interviews and questionnaires as instruments of data collection whilst the systematic random sampling technique was used in the sampling framework. Distance had a greater effect on utilisation in the rural district than in the metropolis; though, in the Kumasi Metropolis distance emerged as the most important factor after education and followed immediately by service cost. In the Kumasi Metropolis, the vulnerable groups of women, the aged, the sickly, the illiterate and the poor were not found to be more strongly affected by distance decay. In the Ahafo-Ano South District where the nature of roads is very poor however, distance emerged as the most important factor influencing utilisation.

Chapters 6 and 7 discuss gender issues in utilisation. It is made up of two published papers: one, a review paper, on the impact of education of mothers on childhood mortality in Ghana, and the other, an empirical paper, on gender and utilisation of health services in the Ashanti Region of Ghana. In the previous, secondary data mainly drawn from the Ghana Demographic and Health Surveys (1998) and World Bank (2000) data were used. A regression model and charts were used to illustrate the relationship. The factors that were measured against mothers' education were infant mortality, maternal and child nutrition, childhood vaccination, antenatal care and incidence of childhood diarrhoea. The survey established that there was an inverse relationship between mothers' education and child survivorship. It was also found that the use of basic health facilities that relate to childhood survival showed a direct relationship with mothers' education. Emphasis on the education of the girl-child, providing adequate maternal and child health services to improve access, and the initiation of a project to integrate maternal education and child health services have been recommended.

The gender and the utilisation paper sought to structure a model for gender-based health services utilisation for the Ashanti Region of Ghana and to recommend

intervention measures to ensure gender equity in the utilisation of health services. A multiple regression model was used for the analysis. The survey has revealed that although females have a greater need for health services than males, they do not utilise health services as much. Quality of service, health status, service cost and education had greater effect on male utilisation than females whilst distance and income had greater influence on females than males. To ensure equity in health care it is recommended that females be empowered through increased access to formal education and sustainable income opportunities. A model on utilisation of health services by gender emerged. The key components were government policy, provider characteristics, male utilisation and female utilisation, with utilisation of health services at the centre. Government policy directly affects provider characteristics, male and female utilisation through distribution, employment and wages, universal education and health insurance policies. Health providers influence male and female utilisation through quality of service, practice patterns and affective behaviour. The need factor was found to affect males whilst the predisposing factor of education and need factor of income affected both sexes. Quality of service affected males whilst distance and service cost were common to both sexes.

Chapter 8 attempts to establish the primacy of income in the utilisation of health services in a rural district in Ghana. It is also driven by the passion of determining the position of income among the key variables influencing utilisation. A sample of 400, selected using systematic random, the questionnaire and formal interviews instruments, is used for the survey. Using multiple regression as tools of analysis, the survey has established that income is exceeded only by distance as the most important factor influencing the utilisation of health services in the rural district. It has also been established that the illiterate, female, ageing and the sickly are vulnerable to the income-utilisation syndrome. Recommendations to improve utilisation, and a conceptual model of utilisation, have emerged.

The final chapter addresses the role of health insurance in utilisation, using the Kumasi Metropolis as case study. The rural district was not drawn into the analysis due to the poor development of insurance there. A sample of 250 persons drawn using systematic random procedure was used. Data were collected using formal interviews and the questionnaire. The interviews covered the communities, health and legal personnel and economists. Data were analysed using linear regression and the qualitative approach. Results showed that there is a strong positive association between access to insurance and utilisation of health services. Popular opinion wants a certain percentage of workers' (in formal sector) income to be deducted as premium whilst a systematic mechanism be introduced to collect premiums from workers in the informal sector. It is strongly recommended that a national health

insurance scheme be introduced as a mechanism for addressing the underutilisation problem.