

# Exploring the Expectation and Perception of Healthcare Needs of the Elderly in Ghana: An Empirical Analysis

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## Abstract

Ageing is a natural process, which presents a unique challenge for all sections of the society. Further, by the year 2025, almost 75% of this elderly population will be living in developing nations, which already have an overburdened health-care delivery system. Our research integrated the Refined Kano Model with the RAND study to evaluate the value of health service quality offered to the elders as a basis for redesigning the healthcare component of Ghana elderly healthcare policy. Further the study identifies the specific elements of healthcare which are of importance to the elderly as opposed to the general use of the world healthcare which completely buries the specific healthcare challenges that elders in Ghana are suffering from and what they want done about it. The results demonstrate areas in which the healthcare sector in Ghana especially elderly care services is close to meeting elder's expectations, and areas in which it falls far short of expectations. From a methodological perspective, it can be concluded that the ability of designing elderly healthcare services upon patient satisfaction makes this approach a powerful tool for health service managers and hospital business sector like other sectors

**Keywords:** Ghana, Elderly Health Care, Perception, Expectation, Integrated model

## Introduction

Ageing is a natural process, which presents a unique challenge for all sections of the society. Although the exact definition of elderly age group is controversial, it is defined as persons with a chronological age of 60 years and above in Ghana (World Health Organization, 2013). With gradual improvement in health-care delivery services, life expectancy has increased and thus the percentage of the elderly population. It has been estimated that the number of people aged 60 and over will increase to 1.2 billion in 2025 and subsequently to two billion in

2050 (World Health Organization, 2013). Further, by the year 2025, almost 75% of this elderly population will be living in developing nations, which already have an overburdened health-care delivery system (Boutayeb and Boutayeb, 2005).

These demographic transitions essentially require shifting the global focus to cater to the preventive health-care and medical needs of the elderly population (Song et al, 2013). An ageing population tends to have a higher prevalence of chronic diseases, physical disabilities, mental illnesses and other co-morbidities (World Health Organization, 2011). The health needs and health related problems of elderly people cannot be viewed in isolation. A wide gamut of determinants such as social concerns (viz. children moving out of their parents' home in search of occupation, leaving them isolated without any physical support in daily activities) (Braz et al, 2012) maltreatment towards elderly (World Health Organization, 2013) poor knowledge and awareness about the risk factors; food and nutritional requirements (Boutayeb and Boutayeb, 2005) psycho-emotional concerns (viz. isolation, mental stress, difficulty in keeping themselves occupied) (World Health Organization, 2013) financial constraints (viz. definite reduction in income upon retirement, to the extent that it may interfere with bare needs of life as adequate nutrition, clothing and shelter); health-care system factors (viz. most countries lack effective health insurance system for elderly coupled with accessibility concerns and inadequacies in the government health-care system) (Braz et al, 2012) and physical correlates determine the medical problems and thus cast a significant impact on the quality-of-life of the elderly (Song et al, 2013)

Prevention and control of health problems of elderly necessitates a multifaceted approach incorporating active collaboration of health, social welfare, rural/urban development and legal sectors (Sivamurthy and Wadakannavar, 2001). A community based geriatric health-care program should start with the development of a comprehensive policy so as to include not only medical aspects, but other determinants as well. Strong political commitment and social action are imperative for the effective implementation of customized policy at the grass root level. Other measures such as improvement in the health knowledge of the elderly about potential risk factors; social measures like developing a culture wherein children voluntarily take the responsibility of looking after their aged parents (Desai et al, 2010) regulatory mechanisms, which make it obligatory for the members of society to look after their elder parents; development of a health insurance scheme to cover their health-care needs; development of pension schemes with contribution from employee, employer and government. The rest includes advocating the construction of elderly-friendly houses/roads/staircases; promotion of primary prevention to inculcate healthy life-styles in early adulthood; information, education and communication strategies toward three broad groups namely elderly persons, the middle aged who would move into elderly age group in the near future and younger people who are the potential care providers for their elderly parents/relatives regarding the issues of hygiene, nutrition, physical exercise, avoidance of tobacco and alcohol, accident prevention measures and awareness about recognition of early signs/symptoms of common geriatric problems (Sivamurthy and Wadakannavar, 2001). There is also the need to train and re-train medical and paramedical staff to effectively understand the special health needs of the elderly; immunization services; necessity of periodic health assessment in early detection of conditions; provision of prostheses and other medical aids development of gerontology units; and ensuring effective communication; can be implemented in a strategic manner for achieving the best outcome (Tamiya,et al, 2011). In essence the provision of quality assured health-care services for the elderly population is a challenge that requires joint approach and strategies. Failure to address the health needs

today could develop into a costly problem tomorrow. While Ghana's elderly care policy provides an inroads about the Improving Health, Nutrition and Well-Being of Older Persons as part of the components of the fifth chapter of the National Ageing Policy which is still to be enacted by law, a critical review of the policy suggest several limitations. Typically the policy on healthcare of the elderly is part of a larger criticism of a policy which is developed using a top to bottom approach (Productivity Commission, 2011). The views and expectations of elderly peoples were ignored in developing the national policy contrary to best practices internationally. In the effort to redefine Ghana healthcare policy for the elderly, there is the need to evaluate or explore the expectation and perception of healthcare needs of the elderly in Ghana from the elders themselves in order to design a strategic fit approach to ameliorating the challenges confronting the elderly population in Ghana (Ikeda, et al, 2011). Our research employs Refined Kano Model to evaluate the value of health service quality offered to the elders as a basis for redesigning the healthcare component of Ghana elderly healthcare policy. Further the study seeks to identify the specific elements of healthcare which are of importance to the elderly as opposed to the general use of the world healthcare which completely buries the specific healthcare challenges that elders in Ghana are suffering from and what they want done about it. The study is designed to be a starting point to the redesign of healthcare policy for the elderly in Ghana.

### **Health Care Needs of the Elderly**

Gordon and Singer (1995) note that most countries are looking at ways to reduce health care costs and the older adult population often becomes the focus or the target of such efforts at cost control. However, there are counter-arguments that question the inevitability of spending on health care for older people becoming an unsustainable economic burden. Sandhu, et al (2009) reviews some data on health care spending as a percentage of GDP and its association with population ageing. The United States spends 14% of GDP on health care, but is among the lowest of 12 industrialized nations in its percentage of older adults. In contrast, 17.8% of the Swedish population is over 65 years old and that country spends 7.5% of GDP on health care (one third less than the United States). In Japan, the older adults population increased by 30% from 1980 to 2010 while there was only a 1.6% increase in the proportion of its GDP that went to general health care during that period. In the United States, the increase in the percentage of those aged 65 and over in the same period was about 10% (around one third that of Japan) and health care spending went up by 31.5% (World Health Organization, 2013).

Most of the spending data reviewed above refers to the costs associated with acute care, and the issue is potentially very different in regard to the costs of long-term care. In order to place this economic data in perspective, we should emphasize that older adults are relatively successful at remaining functional in the community. The majority report themselves to be in relatively good health despite frequently reporting the presence of chronic conditions and physical symptoms (Meyer, and Derr, 2008).

The Ministry of Health notes that less than one in 12 of the older disabled population is cared for in institutions and aged care facilities. The importance of appropriate and well-timed health service access cannot be underestimated in this context, In fact, Ministry of Health proposes that: Timely access to health services is important in influencing the health of older people. ..Early recognition and prompt assessment/referral and treatment is essential in promoting the health, independence and mobility of all older people. As Sumit and Ulf-Goran (2011) note, health service planners' views of what people need are often not based on

empirical data and there may be an inherent conflict between the planners "I know what you need" and the consumers "I know what I want" views of reality. Thus satisfaction with health service use is a variable that is important to understanding the overall health experience among older adults. Satisfaction is one element among many to be folded into the development of enlightened health care policy. In fact, Bean (2007). argue that satisfaction must enter into public policy debate, a process that is best accomplished through the generation of empirical data. While the research area of satisfaction with health care is an extensive one (Barton, et al, 2000), there is relatively limited Ghana data available. Secker, et al (2003) reports some Ghana data looking at satisfaction with general practitioner services in South Accra and found that younger respondents (in the 18-29 age group) were most dissatisfied with these services. The Ministry of Health identifies knowledge about the extent and nature of health experiences and health service use as an important research issue: ...research projects could better inform health service planning and purchase for older people...we have little information about the health service needs of older [adults]...or current levels and trends in disability among older people and Khananurak (2009). For example, the process of policy analysis, programme development and realistic health outcome target setting for older adults can be enhanced by additional knowledge about the types of health problems and ongoing levels of activity and disability with which older adults present when visiting their family physician.

Likewise, in terms of developing national policies that might underpin planning and purchase decisions in the area of mental health, there is clearly a need for additional information about the extent and nature of this type of health service use among older adults. While the need for mental health services for older adults and the efficacy of appropriate interventions have been well established in the literature, policies affecting access to services, service system coordination, financing of care, and the training of the professional health service professional have lagged behind need. As a consequence, a substantial proportion of older people whose mental and emotional problems are serious enough to warrant professional care do not receive services. With the need for utilisation and satisfaction data in mind, and following on from previous research ( Kim and Antonopoulos, 2011), the present study sought to describe in a sample of New Zealand older adults: the experience of health (conceptualised and measured in a variety of ways), and reported satisfaction with general practitioner health service provision and the use of primary and secondary health care services (general practitioner visits, accident and emergency use, hospital admissions, outpatient service use), as well as other types of health services.

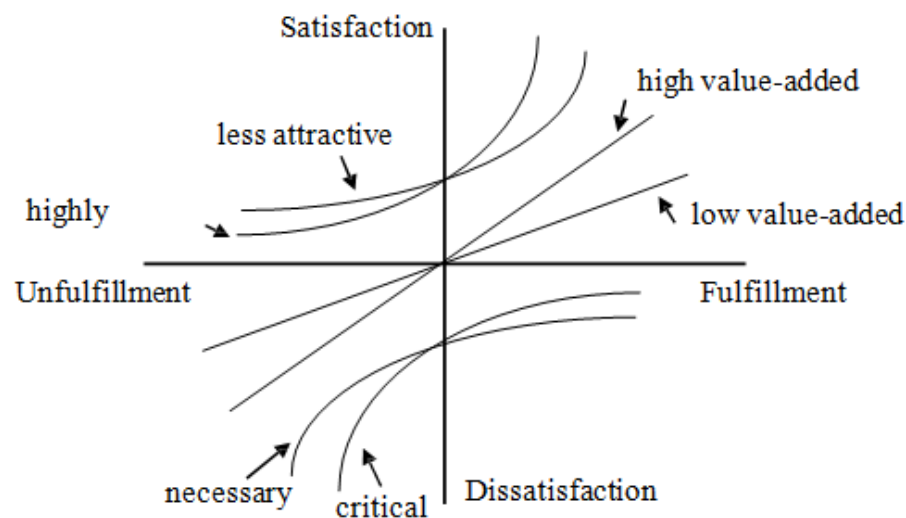
### **Kano model and refined Kano model**

Kano Model, presented by Kano et al. (1984), presumes that satisfaction does not necessarily occur when all the relevant qualities are possessed, and that is possible for customers to experience dissatisfaction or no feeling at all. The Kano Model, initially applied in product development in the manufacturing industry, classifies quality into five attributes, as follows: (1) attractive quality attributes, which customers are satisfied with if present, but not dissatisfied if absent; (2) one-dimensional quality attributes, which are positively and linearly related to customers' satisfaction—that is, the greater the degree of fulfilment of the attribute, the greater the degree of customers' satisfaction; (3) must-be quality attributes, which absence will result in customers' dissatisfaction, but presence does not significantly contribute to customers' satisfaction; (4) indifferent quality attributes, the presence or absence of which results in neither satisfaction or dissatisfaction; (5) reverse quality

attributes, which presence causes customers' dissatisfaction, and whose absence results in customers' satisfaction. In Kano Model, the horizontal coordinate represents the degree to which the quality attribute is sufficiently fulfilled. The more it approaches the left, where the quality attribute becomes insufficient, the higher the degree of deficiency is; while the more it approaches the right, the higher the degree of fulfilment is. The vertical axis indicates the satisfaction that customers feel with regard to the quality attributes. The higher it is, the more satisfaction shown; while the lower it is, the more dissatisfaction shown. Based on Kano Model, Yang (2005) developed the Refined Kano Model, as shown in Figure 1, categorizing quality into eight elements, as follows:

- Attractive qualities, including highly attractive qualities which are the best tool to achieving greater market competitiveness, and low attractive qualities, which have less ability to attract customers, so that firms can decide on the importance of providing them based on the cost
- One-dimensional qualities, including high value-added qualities, which make a high contribution to customers' satisfaction, and which promote the overall service quality, so that firms should provide as many items with these attributes as possible, and low value-added qualities which cannot be ignored by firms, because of their contribution being less aiming to prevent customers' dissatisfaction caused by insufficient service standard
- Must-be qualities, including critical qualities whose related items should be sufficiently provided because of their importance to customers, and necessary qualities that firms should provide to a certain service standard to prevent customers from being dissatisfied.
- Indifferent qualities, including potential qualities whose items can become strategic weapons for firms to attract customers, and care-free qualities, which are not taken into account in cost considerations, in order to effectively deal with limited resources.

Previous scholars applied Kano Model to various service contexts, like banks, laundries, supermarkets, restaurants, tourism and so on (Schvaneveldt et al., 1991; Sa Moura and Saraiva, 2001). This study will examine hospital service quality using a questionnaire survey and Kano Model, adopting majority decisions to classify attributes and to gather patients' perceptions as to whether or not attributes are fulfilled as references for the service quality improvement in hospitals. In case the importance of quality items and the characteristics of attribute classification are not effectively sequenced as items for improvement, the Refined Kano Model (Figure 1), presented by Yang (2005), is applied to modify the importance ranking and quality item classification.



**Figure 1: Refined Kano Model**

## Materials and Methods

### Data Collection

To investigate elder's expectations and perception with regard to medical service quality and their corresponding weights, the questionnaire requirement items were adopted from the RAND study. A team of experts from RAND Health, a unit of the RAND Corporation, has developed a system for measuring the quality of care delivered to the elderly and used the system to assess the quality of care given to a group of community-dwelling older adults who were members of a managed care plan. The key elements of the RAND study is to find out whether vulnerable elders receive about half of the recommended care, and the quality of care varies widely from one condition and type of care to another and whether preventive care suffers the most, while indicated diagnostic and treatment procedures are provided most frequently. It is also to find out whether care for geriatric conditions, such as incontinence and falls, is poorer than care for general medical conditions such as hypertension that affect adults of all ages and whether physicians often fail to prescribe recommended medications for older adults. Researchers at RAND Health have collaborated to develop and apply the first quality-of-care system for vulnerable older adults. To date, the Assessing Care of Vulnerable Elders (ACOVE) study is the most comprehensive examination of the quality of medical care provided to vulnerable older Americans.

We sampled 500 representative elders from the Brong Ahafo Region of Ghana using stratified sampling process. This is a very diverse universe stratified sampling is used were the population is divided into several groups that are more similar and then items are selected from each strata as a sample. The strata are a subjective choice of the researcher based on his experience and judgment by using simple random sampling. Primary data were collected from the elders using the integrated Kano and RAND study questionnaire. The strata to whom the questionnaire were administered included

- Elders classified as public sector employees earning pension
- Elders classified as former private sector workers with social security
- Elders who were self-employed but have retired from work
- Traditional Peasant Farmers
- Elders who have never being employed

- Elders still working for a living
- Elders with disability
- Elders with chronic disease

The researcher was very particular about getting representation from both male and female respondents as well as those within different age brackets of between 60-70 years, 71-80 years, 81-90 years, More than 90 years. In the end a total of 474 responses were collected even though. The remaining respondents did not return the questionnaire even after several days of follow up on them. This gave the research a 94.8% rate of response. This high rate of response can largely be attributed to the fact that most of the questionnaires were self-administered to the respondents. When the data was collected it was cleaned and prepared for reliability test before further analysis was done.

### **Reliability and Validity Analysis**

Reliability, related to the accuracy and precision of a measuring tool, indicates the coincidence and stability of findings. This study adopts the coefficient value presented by Cuieford (1965) to stand for reliability, with a Cronbach's value of 0.7 or above representing high reliability. The results show that the reliability of the overall Kano quality attributes is 0.924, and non-possessed 0.926, and the reliability of overall importance and overall satisfaction are 0.936 and 0.923, respectively, showing that this research has high reliability. Validity assesses whether the questionnaire examines what it is intended to. When questionnaire is based on theory and refers to questionnaire items used in similar studies, it is considered as having acceptable content validity. In this case, this study refers to the questionnaire dimensions designed by RAND study aimed at examining the medical service quality dimensions for the elderly, with some appropriate changes made before the questionnaires were distributed. These were based on focus groups, interviews and evaluations by five hospital experts who are in charge of daily hospital operations. The validity of this questionnaire should therefore be above the necessary standard.

### **Data Analysis**

The questionnaire covered the Kano scale. In this part, for every health service quality attribute, elders responses were measured by two questions-one is functional and the dysfunctional of the same question. The first question in each pair was intended to capture the respondent's feeling if a the health service possesses a certain attribute, whereas the second captures the respondent's feeling if the health service does not have that attribute. For each part of the questions, the customer selects one of five alternative answers. These five alternatives were described as very satisfied, satisfied, not sure, dissatisfied and very dissatisfied (Kano, & Shinichi, 1984). The perceptions were then evaluated into quality dimensions on the basis of how the respondents perceived the functional and dysfunctional form of health service quality attribute as shown by table 1.1. As a result, elderly patient requirements were measured by a total of 32 questions with the Kano model.

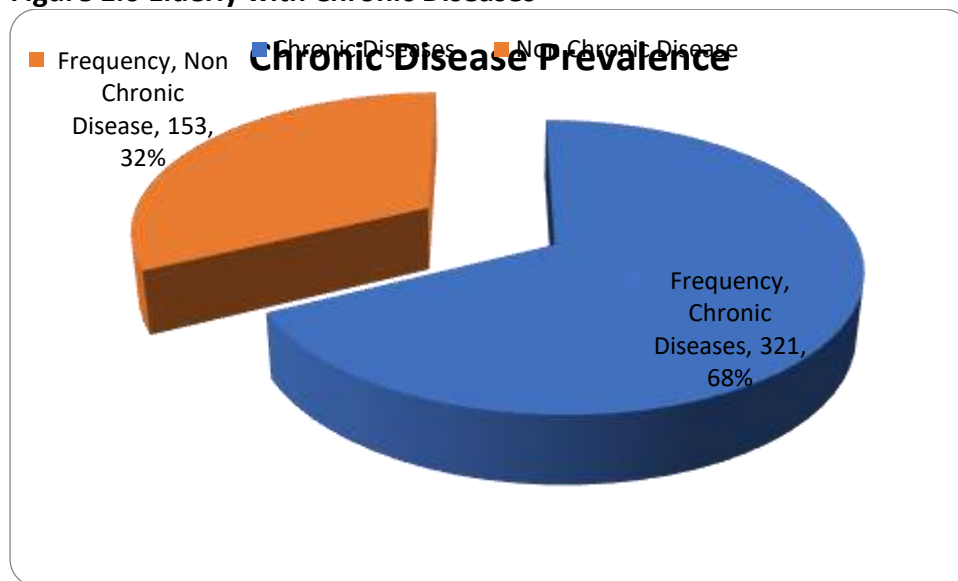
Table 1.1

Modified Kano Matrix for evaluating functional and dysfunctional health service quality attributes

Service Requirement		Quick and appropriate staff response for patient				
		Very satisfied	Satisfied	Not Sure	Dissatisfied	Very Dissatisfied
Lack of quick and appropriate staff response for patient	Very satisfied	Questionable	Attractive	Attractive	Attractive	One-dimensional
	Satisfied	Reverse	Indifferent	Indifferent	Indifferent	Must-Be
	Not Sure	Reverse	Indifferent	Indifferent	Indifferent	Must-Be
	Dissatisfied	Reverse	Indifferent	Indifferent	Indifferent	Must-Be
	Very Dissatisfied	Reverse	Reverse	Reverse	Reverse	Reverse

Results

Figure 1.0 Elderly with Chronic Diseases

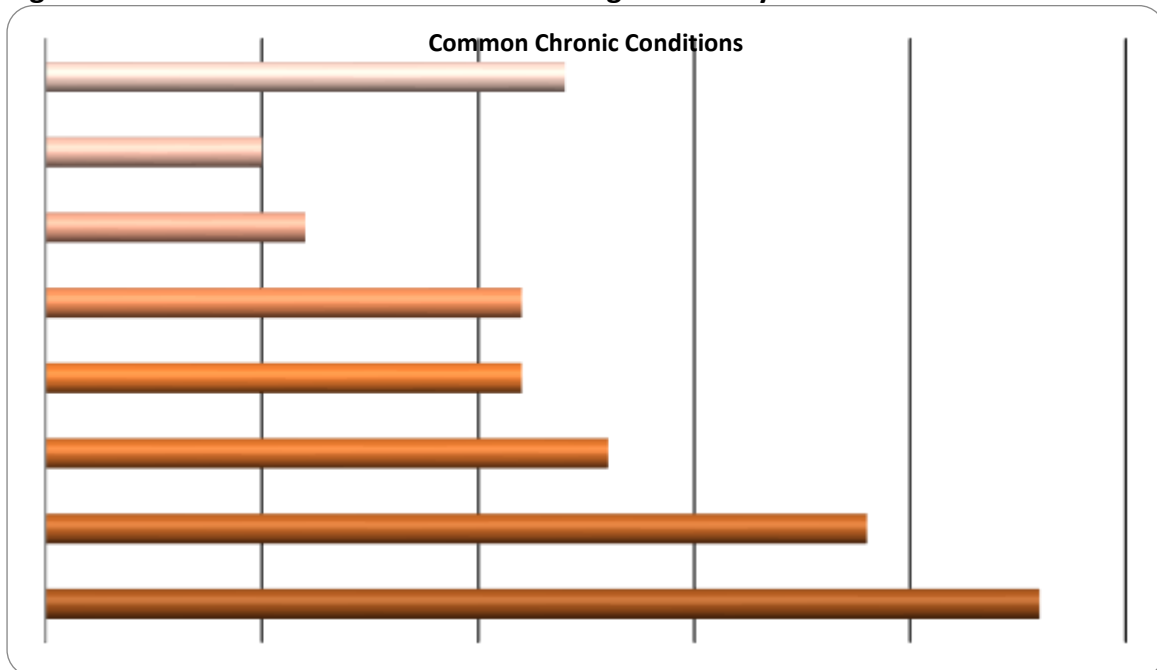


Chronic disease is one the major health issues associated with the elderly population throughout the world According to the WHO organisation about 61% of all chronic diseases affect elderly people (above the age of 65). This position is consistent with statistics of the Ghana Health Service and the Ministry of Health in Ghana who indicates that 2 out of every 3 elderly people (above the age of 60) have a chronic disease. This information in figure 1 goes further to affirm the validity of the claim of the WHO, the Ghana Health Services and the Ministry of Health of Ghana that about 68% of the elderly sample in this study have one chronic disease or the other.. This information suggests that healthcare is a critical factor for majority of the elderly population in Ghana as they have to deal with diseases which take



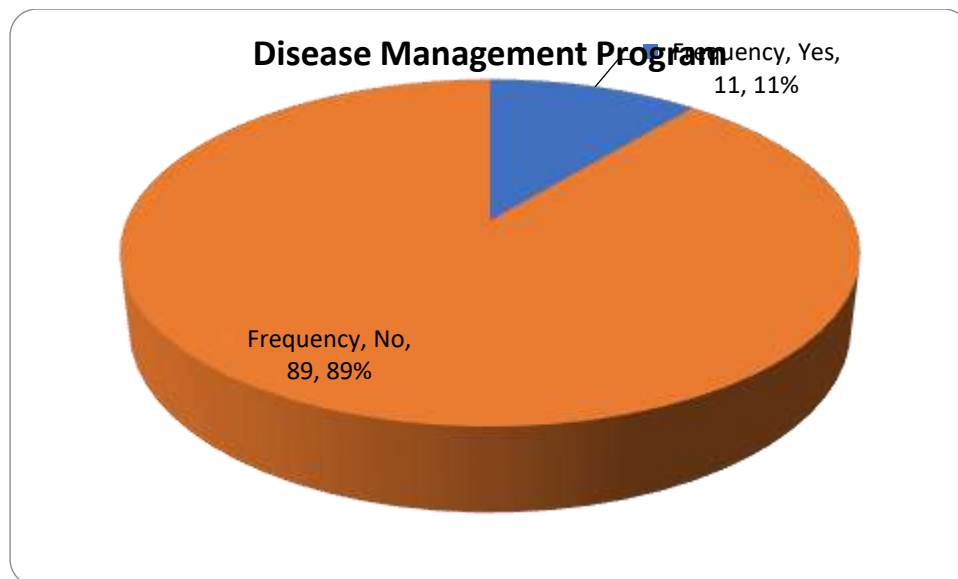
them through their lifetime. Even among those respondents who do not have one chronic disease or the other, they agreed that they are susceptible to diseases now than they were younger hence frequently visits the hospital than before for check-up. This is because as their bodies grow their immune system become weaker and hence more susceptible to diseases. This is why healthcare services are important issues for the elderly in Ghana

**Figure 1.1 Common Chronic Conditions among the Elderly in Ghana**



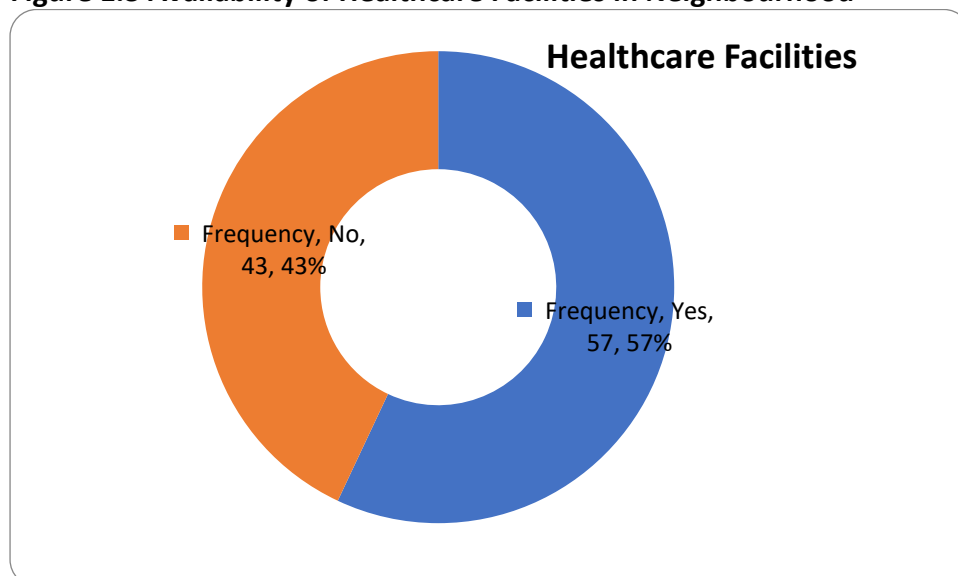
According to Ghana's 2010 Housing and Population Census the most common chronic disease found among the elderly was hypertension. The information analysed in figure 2 is a testimony of this fact because the data shows that the leading chronic diseases among the elderly in the population is hypotension. The percentage of the population of chronically ill patients that had the disease was 23% which is close to the prevalence rate in Sub-Saharan Africa among elderly people. The next disease which was found to be high among the elderly population is diabetes which accounts for 19% of chronically ill elderly people while coronary heart diseases accounted for 13% of the chronically ill patients. Stroke and chronic respiratory diseases accounted for 11% each of the population while chronic-obstructive pulmonary and cancers accounted for 6% and 5% respectively. All other diseases including blindness, HIV-AIDS, which are not technically counted as chronic disease internationally but which is considered in the Ghana Health Index and also accounted for the remaining 12% of the chronically ill elderly population. In effect the evidence in the research gives ample testimony of the diversity of chronic disease hence the diversity in the medical needs of the elderly in Ghana

**Figure 1.2 Participation in Chronic Disease Management Program (DMP)**



All over the world disease management program (DMPs) have been planned by the government and private healthcare providers to support chronic disease patients. In Ghana there is no specific program that is designed to account for those who are chronically ill but there are some private health packages available. This is the reason why only 11% of the population basically those who are rich or have enough resources at their disposal are enrolled in a chronic disease management program in the private health care market. In many countries chronic disease management program helps to drastically reduce mortality and aggravation of the chronic condition. Based on the information in this research it is important for the national health system to begin looking at developing a mechanism or program that will deal with chronic diseases as it is with dealing with communicable diseases which has been the focus of most Sub-Saharan African states. Recently the World Health organisation has launched a chronic care model for developing countries but it is yet to be implemented in Ghana

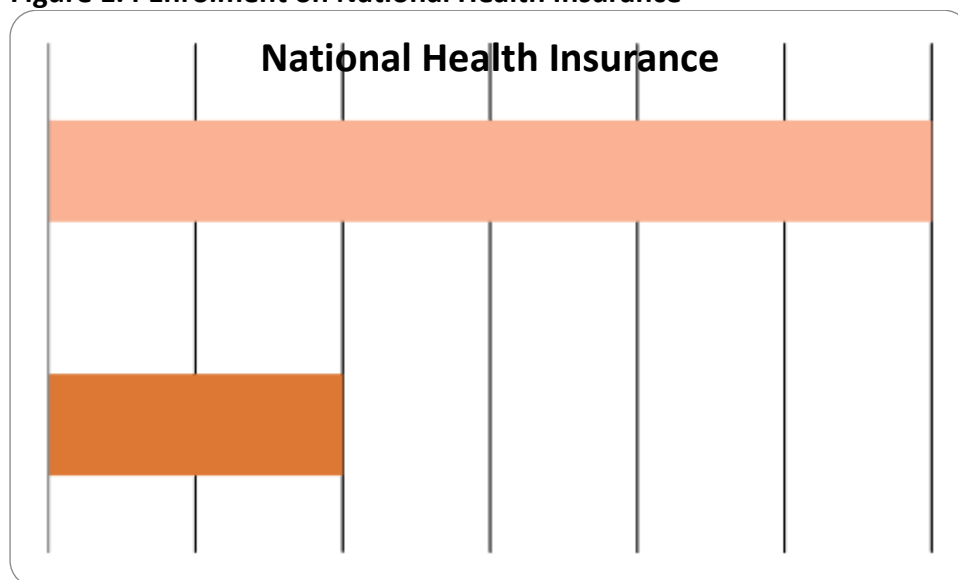
**Figure 1.3 Availability of Healthcare Facilities in Neighbourhood**



One of the major challenges of healthcare in Ghana and developing countries is the lack of healthcare facilities. According to Help Age Ghana (2009) there are many elderly people in

Ghana who have to trek more than 1 kilometre to access medical care. Even though health centres have been opened in small villages they are without the basic facilities to help solve the overwhelming healthcare burden of the elderly. When asked if they have a good healthcare facility within their neighbourhood, 57% respondents gave a negative response confirming the fact that Ghana is still behind when it comes to provision of healthcare services for the elderly. Even among the 43% that indicated that they have access to healthcare facilities within their neighbourhood, most of them said that they only have access to basic districts health care services which are usually below the standard in regional and tertiary hospitals where services are better rendered. This explains why Residents in Kumasi which is the regional capital were those who did indicate that they get good care services while some few elderly in rural areas where mission hospitals are located also gave similar remarks. All in all there is the need to move on as a country to provide better healthcare facilities for all elderly people irrespective of their location

**Figure 1.4 Enrolment on National Health Insurance**



When the National health Insurance scheme was launched in 2004, the enrolment level was 20% of the entire national population. Gradually the scheme has grown and has almost 40% of the population enrolled currently. In this research the questions was intended to determine the proportion of the elderly peoples enrolled in the national health insurance program. This social healthcare intervention is important as it helps elderly people to reduce the cost of their healthcare. It is significant to have noted that 51% of the elderly mainly in the district and regional capital did indicate that they have not enrolled in the program. Their reason was that the services rendered to cash and carry patients were far better than those rendered to the health insurance card bearing members. If this allegation is true then it calls for radical measures on the part of the authorities to redesign and reorient the healthcare service providers about the national health insurance and its importance in the national healthcare system in general

**Figure 1.5 Expenditure on Healthcare in a month**

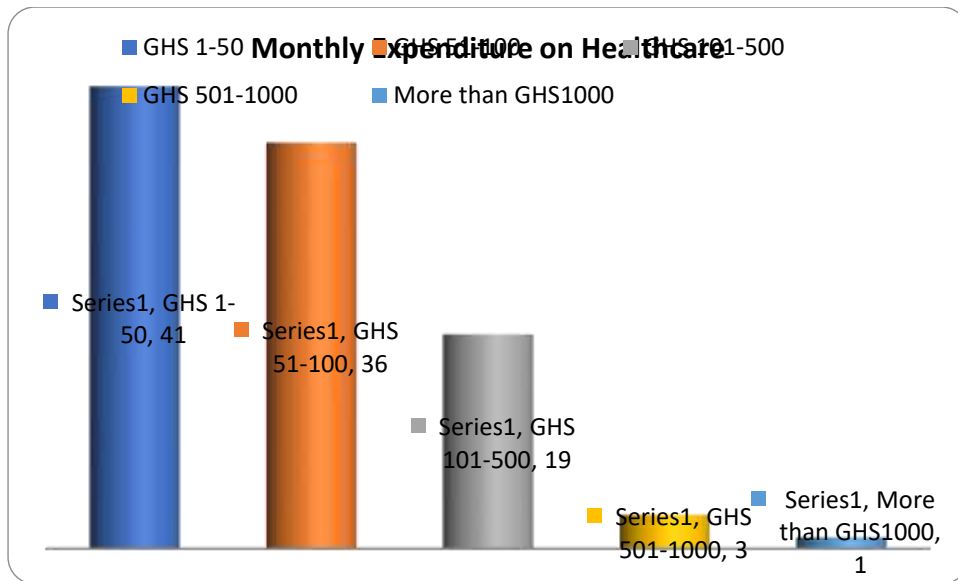
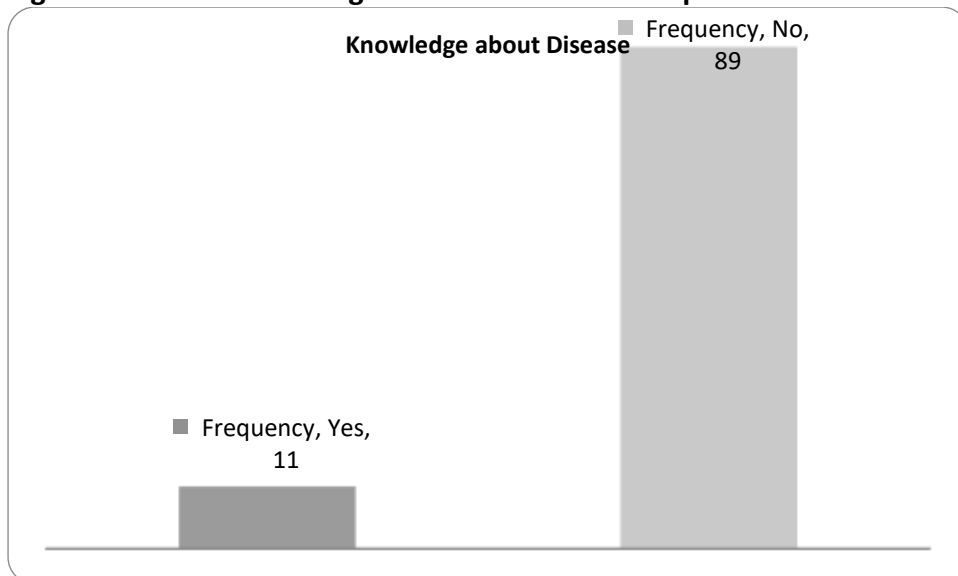


Figure 1.5 is the analysis of the information about the average healthcare expenditure of the each of the elderly that were contacted in this research. Comparatively most of the respondents indicated that they spend between GHS1-100 on health care each month. Most of them do not earn income and receive remittance of not more than GHS100 in a month. This implies that the cost of healthcare is very high for the ordinary person. Even for those who receive some pension income this figure suggest that almost half is spent on healthcare. If the health insurance is well structured it can help to reduce this cost and give elders the opportunity to meet other equally important need aside healthcare

**Figure 1.6 Detail Knowledge about diseases and implications**



It is often said that without knowledge people perish. The knowledge that people have about their sickness, it consequences and implications is important for effective medical care. If the population has knowledge, they will eat better, exercise better and do things well than ignorant elders. From the information that has been collected from the respondents, it is abundantly clear that 89% of the population do not have in-depth knowledge about diseases and how it works in their life. They lack basic understanding of what is happening to them and

for that matter do not know how they can help prevent it or reduce the impact to prolong their life. This may partly explain the low life expectancy (longevity rate) at 66 years which is the 148<sup>th</sup> in the world. This information thus requires of the community health service workers to intensify healthcare education among elderly people so that they can live longer by managing their diseases as much as possible.

Table 1.2  
*Elderly Healthcare Service Evaluation*

<b>Expectation of Health Service Quality of Elderly</b>	<b>Expectation</b>	<b>Perception</b>	<b>Expectation Gap</b>	<b>Kano Classification</b>	<b>Refined Kano Classification</b>
Quick and appropriate staff response for patient	4.82	2.52	2.30	Must be Quality	Critical quality
Efficiency of service procedures and appointment system	4.71	3.21	1.50	Must be Quality	Critical quality
Medical treatment and doctor visiting as scheduled	3.89	2.94	0.95	Must be Quality	Critical quality
Available and adequate visiting for patient family as scheduled	4.53	2.67	1.86	One Dimensional	High value-added quality High
Adequate rest time for patient as promised	4.07	2.4	1.67	Attractive Quality Must be	attractive quality Critical quality
Quick medical treatment response	3.90	2.13	1.77	Quality	High quality
Clear and understandable information given	3.73	1.86	1.87	Attractive Quality	attractive quality
Provision of good communication of the service right from the first time	3.56	1.59	1.97	Indifferent Quality Must be	Care-free quality Critical quality
Availability of immunization services	3.39	1.32	2.07	Quality Must be	quality Critical quality
Nurses are never busy to respond	3.22	1.05	2.17	Quality	High quality
Feeling safe while in the treatment ward	4.67	0.78	3.89	Attractive Quality	attractive quality
Employees politeness and friendliness in serving elders	4.11	0.51	3.60	One Dimensional	High value-added quality High
Provision of prostheses and other medical aids	3.79	0.24	3.55	Attractive Quality	attractive quality High
Development of gerontology units	3.31	1.03	2.28	Attractive Quality	attractive quality
Doctors ability to accurately diagnose patient disease	3.87	1.3	2.57	Must be Quality	Critical quality
Good communication among doctors, staff, and patients	3.43	1.57	1.86	Indifferent Quality	Care-free quality

Doctors and nurses are careful about treating and examining patient	0.99	1.84	-0.85	Must Quality	be	Critical quality High
Dedicated attention employees give patients and their family	3.55	1.11	2.44	Attractive Quality		attractive quality
Specialist being assigned to patient	3.11	1.38	1.73	Must Quality	be	Critical quality High
No social status discrimination towards patients	3.67	1.65	2.02	Attractive Quality		attractive quality
Physical facilities and medical instruments in place to assist elderly persons	3.23	1.92	1.31	Must Quality	be	Critical quality High
Suitable temperature at patient rooms	3.21	2.19	1.02	Attractive Quality		attractive quality
Adequate fresh water supply at the ward	3.65	2.46	1.19	Indifferent Quality		Care-free quality
Clean and adequate supplies for each ward	3.09	2.73	0.36	One Dimensional Indifferent Quality		High value-added quality
Clean and well maintained washroom	3.53	3.01	0.52	Indifferent Quality		Care-free quality
Neat hospital staff	3.97	3.27	0.70	Indifferent Quality		Care-free quality High
Specific needs of patients are met including various food and beverage	3.41	3.54	-0.13	Attractive Quality		attractive quality High
Frequent Community health nurses and other personnel visit at home	3.85	3.81	0.04	Attractive Quality		attractive quality
Cheaper Cost of Healthcare	3.29	2.08	1.21	Must Quality	be	Critical quality

Table 1.2 presents the results of the customer expectation, perception and for that matter perception gaps computed using the five point likert scale and the integrated Kano model and the RAND study questionnaire. In summary the table shows that out of the 32 items which the respondents were asked to indicate their expectation, the current level of services being offered for each of them fall short of their expectation leading to an expectation gap with the exception of one. In essence the responses suggest that apart from the ability of hospitals to meet specific needs of elderly patients including various food and beverage, they think that there is still room for improvement on the other elderly health service attributes. Using the Kano model also reveals that even though there is a general expectation gaps, the critical or urgency of them are not the same in the opinion of the respondents and this is an important information for policy direction considering the scarcity of resources that the health sector is always faced with in developing economies such as that of Ghana. Table 2 again summarises the criticality of the items as follows

Table 1.3

*Summary of Criticality of Medical Care Service for elderly*

Attribute	Item Number	Total
Must Be/Critical Quality	1, 2, 3, 6, 9, 10, 15, 17, 19, 21, 29 5, 7, 11, 13, 14, 18, 20, 22, 27, 28,	11
Attractive/Highly Attractive	31, 32	12
One Dimensional/High Value Added	4, 12, 24, 30	4
Indifferent/Carefree	8, 16, 23, 25, 26	5

In Table 1.3, eleven of the total 32 elderly health service quality attributes have been categorized as critical quality on the refined Kano model scale. These attributes are taken for granted when fulfilled but result in dissatisfaction when not fulfilled. Further twelve of the elderly health service quality attributes have been categorized as highly attractive on the refined Kano model scale and refers to those service requirements which provide satisfaction when achieved fully, but do not cause dissatisfaction when not fulfilled. These are attributes that are not normally expected. The table also shows that. However, there are no elderly health service quality attribute can be categorized as reverse and questionable. This observation is consistent with earlier claims by Tan & Pawitra (2001) and Pawitra & Kay (2003) whose studies found that none of their nineteen service quality attributes took a place in these categories. Further evaluation of the information also shows that as many as four of the items falls under the elderly health categories considered as one dimensional or high value added. These are the attributes that result in satisfaction when fulfilled and dissatisfaction when not fulfilled. Finally five of the attributes suggest that elders are indifferent to the provision of certain services at the hospitals. These are services that are neither good nor bad, and they do not result in either patient satisfaction or customer dissatisfaction.

### Discussion and Conclusions

The results demonstrate areas in which the healthcare sector in Ghana especially elderly care services is close to meeting elder's expectations, and areas in which it falls far short of expectations. As government redesigns the elderly health service management strategy in the new policy, it has to pay close attention to quality improvement which mentions in the must be attributes or critical attributes. In these case the Ghana Health Service and other health providers have to focus on first only being able to offer quick and appropriate staff response for patient, efficiency of service procedures and appointment system, well scheduled medical treatment and doctor visitation, quick medical treatment response, availability of immunization services. Nurses that are never busy to respond, doctors ability to accurately diagnose patient disease, specialist being assigned to patient Physical facilities and medical instruments in place to assist elderly persons and cheaper cost of healthcare. In this way the healthcare management can improve its level of quality in those areas which impact on patient perceptions of service quality. This case study illustrates also how an existing approach international health quality and service quality approaches (RAND study and Kano Model) which were developed within different cultural context can be applied to the management of elderly healthcare services.

This work among the first attempt to applying this integrative approach to a different sector and thus offering practical and applied information, it will be useful for both academicians and practitioners. Through such integration, elder's service quality position of the hospital

service management was evaluated. Then, service quality attributes of the RAND study were assigned to Kano categories in order to see which attributes of service quality have a strategic significance on patient satisfaction.

From a methodological perspective, the ability to design elderly healthcare services based upon patient satisfaction makes this approach a powerful tool for health service managers. There are two main reasons explaining why this integrative approach can create expected benefits for the elderly health service delivery sector. First of all, the globalization on the world commerce and fundamental progresses on information, communication and transportation technologies have increased not only patient/ patient standard of quality service but also strategic significance of the healthcare management. This phenomenon has introduced a competency issue which did not exist before. In order to stay competitive, designing their services in accordance with patients expectations has become an increasingly important necessity.

In this context, this approach provides healthcare service providers a deep understanding of their service quality levels from patient satisfaction perspective. Also, highlighting the most important service attributes which are highly attractive for their patients, it helps the management to develop innovative ideas in both strategic and tactical levels. Secondly, using two methods in a complementary way creates some methodological and practical benefits. Integrating Kano to RAND eliminates the linearity assumption which is the main criticism of most service health quality measurement indices and offers researchers to an opportunity of identifying specific patient expectations which can be very profitable.

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