Original Research Article

Perceived Service Quality and Satisfaction in Delivering Free Health Services to Elders in Dodoma, Tanzania: Using the SERVQUAL Approach

ABSTRACT

Aims: This study aimed at assessing the perceived quality of free health services and satisfaction amongst elderly people.

Study design: Cross-sectional research design was employed.

Place and Duration of Study: Study was conducted in Dodoma District, Tanzania from September – November 2023.

Methodology: A cross-sectional design was adopted in the study. Purposive and simple random sampling techniques were used to select 134 elderly from the study area. Data was collected using questionnaires through interviews. The SERVQUAL model was employed, looking at the gap score of five dimensions (tangible, reliability, responsiveness, assurance, and empathy). Data were analysed using IBM Statistical Package for Social Sciences Statistics software.

Results: Majority (57.5%) of elders are aware of free health services and 66.4% of them accessed services. Elderly's perceptions were lower than their expectations (gap = -1.70). Gaps for five dimensions of SERVQUAL model were: Tangibles (−2.21), reliability (−1.96), responsiveness (-1.76), assurance (-1.31) and empathy (-1.37).

Conclusion: Due to a negative overall mean score and the negative scores from all dimensions, it implies that the quality of free health services for elderly people in Dodoma district has not been satisfying to patients and needs to be improved.

1. INTRODUCTION

Globally, people are living longer. Nowadays, the majority of people anticipate living into their sixties and beyond. Every country in the world is seeing an increase in the proportion of older citizens as well as their overall number. By 2030, one in six (16.7%) people on the planet will be 60 years of age or older. The proportion of the population that is 60 years of age or older will rise to 1.4 billion at this point from 1 billion in 2020. The number of people in the world who are 60 years of age or older is expected to double by 2050 [1].

Aging is a dynamic biological process. The World Health Organization (WHO) defines old age as the time when a person reaches the age of 60 years and above[2]. Help Age International (HelpAge) [3] defines aging as a state of dependence or incapacity thought to begin at the point when a person can no longer work efficiently due to aging. In Tanzania, the National Aging Policy of 2003, states that old age starts at 60 years, which is the retirement point, especially in formal employment [4]. For those who are not employed in the formal sector, aging is determined by their advanced age, which limits them from doing active work. Thus, aging is a process that does not occur unexpectedly.

The United Nations Decade of Healthy Ageing (2021–2030) aims to improve the health and well-being of older adults, their families, and their communities by working together in four areas: transforming the way we perceive, feel, and behave toward aging and ageism; creating communities that support older adults' abilities; providing person-centred integrated care and primary health services that are age-responsive; and giving older adults who require it access to high-quality long-term care [1].

Patients are the primary consumers of all healthcare services, so a health facility's main duty is to provide patients with quality services. Since health is important for a healthy lifestyle and a better standard of living, its quality should be objectively assessed in order to bring policymakers, healthcare professionals, and other stakeholders' attention to the advantages that health service users can receive [5]. What makes a product or service's quality of service are all of its constituent parts, including those that help a prospective customer be satisfied. The best standards must be met at all service levels in the provision of human health care. Taking into account the World Health Organisation (WHO) definitions of medical

service quality, Opolski et al. [6] claim that the quality of medical services provided should be determined by the highest professional competence and dedication that meets the patient's expectations.

Because of its intangibility and inseparability, service quality is both an abstract and exclusive concept [6]. Service quality has been characterized in the literature on service marketing as the responses to what and how inquiries. According to Parasuraman et al. [7], service quality is specifically defined as the quality of the services that customers receive from providers during their interactions with them. This includes technical, physical, and outcome quality as well as technical quality delivery methods that are functional, interactive, and process quality. Service quality is a comparison of expectations of the customer with performance & the differencebetween what customer expectations are and their perceptions [7].

Shahin [8] asserts that measuring service quality is critical because it facilitates comparisons, pinpoints issues related to quality, and aids in the establishment of precise guidelines for service delivery. Therefore, healthcare service quality has to be addressed in a comprehensive model that incorporates all dimensions of value to patients.

Parasuraman et al. [9] undertook a series of research which gave birth to the service quality model (SERVEQUAL model). The model is based on five dimensions of service quality: tangibles, reliability, responsiveness, empathy, and assurance. The model assesses what clients believe and expect from a service that a company offers. The gap for each dimensional element is computed based on the respondents' perception and expectation scores, in order to evaluate the quality of the services. When the gap score is positive, it indicates that customers' expectations have been met or surpassed; when it is negative, the opposite is true. The financial services, healthcare, and education sectors appear to be the most successful in using SERVEQUAL dimensions [7, 10].

In Tanzania there have been a few attempts to use empirical research to examine elderly people's expectations and perceptions of the health services they receive, in order to gauge the quality of those services. Hence, the purpose of this study was to ascertain whether elderly residents of Tanzania's Dodoma District have access to both free and quality health services.

2. METHODOLOGY

2.1 Study area, Research design and sampling

The study was conducted in Dodoma city. This study employed a cross-sectional design. A cross-sectional study involves looking at people who differ on one key characteristic at one specific point in time.

According to Bartlett et al. [11], sample size determination is the act of choosing the number of observations or replicates to include in a statistical sample. Hence, the study consists of 134 elderly people of 60 years and above.

2.2 Data analysis

Statistical Package for Social Sciences (IBM SPSS v 20) software was used to analyse collected data. In order to examine the quality of health services received by the elderly and its relationship with free health services, the study used the SERVQUAL model employed by Parasuraman et al. [7] to compare service quality performance with customer service needs. It is used to do a gap analysis of an organization's service quality performance against the service quality needs of its customers. That's why it is also called the Gap model.

SQ = P- E

Whereby;

SQ is service quality

P is the individual's perceptions of given service

E is the individual's expectations of a given service

This model was able to calculate the gap between the respondent's expectation and perception scores, where the positive gap score indicated that the respondents' expectations indicate, and the negative gap

score proves that the respondents' expectations on the quality of free health services provided were not fulfilled. It takes into account the perceptions of respondents on the relative importance of service attributes. This allowed the respondents to prioritize.

> Tangibles – physical facilities, equipment, staff appearance, etc.

> Reliability – ability to perform service dependably and accurately.

> Responsiveness – willingness to help and respond to customer needs.

> Assurance – ability of staff to inspire confidence and trust.

> Empathy – the extent to which caring individualized service is given.

Perceptions and expectations were measured by using following scale:

1=Very low, 2= Low, 3= Moderate, 4= High, 5= Very high

2.3 Reliability Test

For reliability test,Cronbach' alpha or internal consistency was used [12]. Alpha estimates the limit inferior of the reliability coefficient. For this study,analysis givesa result of 0.812 reliability coefficient. For this reason the measuring instrument used in this research is reliable.

Table 1: Reliability Statistics

Cronbach's Alpha	Cronbach's alpha based on elements represented	Number of Items
0.812	0.786	15

2.4 Ethical considerations

Permission and approval to conduct the study was also obtained by local government authorities. In addition, the purpose of the study was explained to the participants and their consent obtained before the questionnaire was administered.

3. RESULTS AND DISCUSSION

3.1 Socio-demographic Characteristics of Respondents

Table 2 presents the socio-demographic characteristics of the respondents. Findings revealed that 54.5% of the elderly were males and 45.5% were females. In addition, the findings show that the majority (60.4%) of them are living with families. According to Tannistha et al. [13], in India, people who live with their spouses, grown children, and small grandchildren benefit the most from all of them. The health benefit is reduced when elderly people live alone with their spouses and adult children, and it is further reduced when they live alone with their spouses. The greatest risk of short-term morbidity is linked to living alone. In addition, results show that 32.8% of respondents had primary education, 29.1% had informal education, 26.1% attained secondary education, and only 11.9% attended colleges. This implies that most elderly people are literate. This finding differs from that of Amani et al. [14, who reported most of elderly people had low education. Education plays a significant role in health matters because it increases one's likelihood of knowing how to prevent and treat diseases as well as maintain a clean environment. Most (45.5%) elderly are aged between 60 and 65 years, and there are a few (14.2%) aged above 75 years. Jakobsson et al. [15] reported that an increase in age reduces physical abilities, which undermines health and so calls for an increase in demand for access to health services. This implies that, as the elderly become older, they become more seekers of health services. The situation also might be explained that the more one becomes older; he/she may be treated for free due to inability to pay for the services.

Table 2: Respondents Socio Demographics Characteristics

Characteristics	Frequency	Percent (%)
Sex		
Male	73	54.5
Female	61	45.5
Education level		
Informal	39	29.1
Primary	44	32.8
Secondary	35	26.1
College	16	11.9
Living arrangement		
Living alone	46	34.3
Cohabiting	7	5.2
Living with family	81	60.4
Age of respondents (Years)		
60-65	61	45.5
66 – 70	31	23.1
71-75	23	17.2
>75	19	14.2

3.2 Awareness of free health services by older adults

The results in Table 3 show that the majority (57.5%) of the elderly are aware that they are eligible for free health services. However, HelpAge [16] and Mubyazi[17] reported low awareness among elders in relation to health services available to them. The elders also reported that they got information from the media (51.9%), community leaders (85.7%), medical professionals and facilities (68.8%), friends and neighbours (87.0).

3.3 Accessibility of Free Health Services

According to the results, the majority (66.4%) of the elders accessed free health services, and the remaining (33.6%) did not access. These findings are contrary to Spiltzer et al. [18], who reported that, despite the policy directions on free health service provision for elderly people aged 60 years and older, 22% of the elderly people who attended various public health facilities received free medical treatments.

Table 3: Awareness of free health services, source of information and accessibility to health services

Variable	Frequency	Percent
Awareness		
Aware	77	57.5
Not aware	57	42.5
Source of information*		
Media	40	51.9
Community leaders	66	85.7
Medical Professionals and facilities	53	68.8
Friends and neighbours	67	87.0
Accessibility		
Access	89	66.4
Do not access	45	33.6

*Multiple responses

3.4 Perceived and Expected Quality of Health Services received by the Elders

The perceived quality of the free health services received was determined using the SERVIQUAL model [7]. It examines five dimensions of service quality, which are tangibility, reliability, responsibility, assistance and empathy for each dimension of service quality. It simply measures the perception and expectation on a scale. Through gap analysis, gap scores are then calculated by subtracting expectations from perception.

A positive gap score means that the respondents' expectations will be fulfilled, and the negative gap score proves that the respondents' expectations of the quality of free health services provided will not be fulfilled.

3.4.1 Elderly scores on the importance of SERVQUALdimensions

Table 4 presents the results, which show that the respondents considered all five SERVQUAL dimensions important; however, the importance scores differed among the dimensions. The respondents gave high importance to empathy (40.3%) and very importance (42.5%) out of all five dimensions. Tangibility, which received scores of 38.1% for importance and 40.3% for very important, came in a close second. The findings suggest that the SERVQUAL dimensions adapted for this research can measure the health services offered to older adults in health services. This suggests that the most crucial element for older adults is the availability of adequate equipment for health services in medical facilities.Similar results were reported by Narang [19]; Sharma*et al.* [20],Suki and Lian [21] and,Alheshim*et al*. [22].

Table 4: Elderly mean score on the importance of SERVQUAL dimensions (n = 134)

Dimension	Slightly important	Moderately Important	Important	Very important	No opinion
Tangibility	11 (8.2%)	13 (9.7%)	51 (38.1%)	54 (40.3%)	5 (3.7%)
Reliability	13 (9.7%)	15 (12.7%)	32 (35.1%)	38 (35.8%)	7 (6.7%)
Responsiveness	7 (5.2%)	25 (18.7%)	52 (38.8%)	47 (35.1%)	3 (2.2%)
Assurance	9 (6.7%)	15 (11.2%)	49 (36.6%)	54 (40.3%)	7 (5.2%)
Empathy	8(6.0%)	12 (9.0%)	55 (40.3%)	57 (42.5%)	3 (2.2%)

3.4.2 Respondents' perceptions and expectations on health services

The respondents' expectations and perceptions (Table5) were both measured using the 5-point scale whereby the higher numbers indicate higher level of expectation or perception. In general, the respondents' expectation exceeded the perceived level of health service. It was found that the respondents' overall mean score expectation on a scale of 1 to 5 was 3.6. This is high and implies that the elderly expect a lot from the health service providers. The respondents' overall perception on the scale was 1.90which gives score of -1.7. Implying that the health services they received was generally of low quality relative to their expectation.

Table 5: Descriptive statistics and gaps between Perceptions and Expectations (P-E)

Quality Dimension	Perceptions Mean (SD)	Expected Mean (SD)	Gap (P-E)
Tangibility	1.60 (0.43)	3.81 (0.63)	-2.21
Reliability	1.88 (0.88)	3.84 (0.61)	-1.96
Responsiveness	2.02 (0.96)	3.78 (0.59)	-1.76
Assurance	2.02 (0.93)	3.33 (0.71)	-1.31
Empathy	1.96 (0.87)	3.33 (0.67)	-1.37

3.4.1 Tangibility

Thisincludes the visual appeal, physical facilities, and equipment, employees and communication materials. The study looks at the tangibles as one of the dimensions of service quality, whereby adequacy

of equipment, health workers' neatness and appearance of service rooms were considered. These elements were measured by looking at the gap score (that is, taking perception minus expectation) of the elderly people. The results (Table 6) shows that the gap scores for adequacy of service equipment (-2.67), health worker's neatness (-1.86) and the appearance of service rooms (-2.09) were all negative. This implies that the elderly's expectations were not fulfilled in the situations observed. In the same vein, Teshnizi et al. [23] and Irfan et al. [24]reported in their studies that respondents were dissatisfied with tangibility elements. However, findings from current study disagree with Umoke et al. [25], Odetola[26] and Ibreheem et al. [27].

Table 6: Perception and Expectation on Tangibility

TangibilityElements	Perception	Expectation	Gap (P-E)
	Mean (SD)	Mean (SD)	
Appearance of services room	1.81 (0. 96)	3.90 (0.692)	-2.09
Health workers neatness	1.74 (0.693)	3.60 (0.684)	-1.86
Adequacy of services equipment	1.25 (0.597)	3.92 (0.521)	-2.67

3.4.2 Reliability

Reliability is the ability to execute the promised services consistently and accurately, that is, when something is promised, it is done and provision of services at the time promised. Findings in Table 7 show that, gap scores were negative for providing services to the elderly as promised (-1.73), dependability on service provided (-1.98) and keeping old patients informed (-2.17). This means that the elderly's expectations were not met through all three elements of reliability. Similar results were reported by Narang [19]; Sharma et al. [20] and Suki and Lian [21] in India and Alheshim et al. [22] in Kuwait. However, this is contrary with the findings of Mendoza et al. [28] in Bangladesh and Umoke et al. [25] in Nigeria.

Table 7: Perception and Expectation on Reliability

ReliabilityElements	Perception	Expectation	Gap (P-E)

	Mean (SD)	Mean (SD)	
Keeping old patients informed	1.93 (0.898)	4.10 (0.536)	-2.17
Providing services to the elders as promised	1.86 (0.868)	3.59 (0.663)	-1.73
Dependability on service provided	1.86 (0.868)	3.84 (0.616)	-1.98

3.4.3 Responsiveness

Responsiveness is the prompt attention to requests and questions, willingness to sort the problem and help, organization; it should provide the problem solution on demand, providing a better complaint handling service, providing a flexible service to the customers. In this study, the quality of the free health services was measured through the three elements of responsiveness. The findings in Table 8 reveal the following scores: readiness of medical personnel to promptly provide health services (-1.64), willingness of medical personnel to assist the elderly (-1.66), and the readiness of medical personnel to respond to the elderly's needs (-1.96). The negative scores imply that elders had higher expectations than whatbecome apparent. These findings concur with de Jager and Plooy [29] in South Africa; Sadigh [30] and Shahin [8] in Iran, who found elderly people's expectations being higher than their actual expectations, suggesting that the quality of the health services they received fell short of their expectations. Other studies [31, 32] reported that in most cases the elderly's expectations might be higher due to an increased demand for health services.Furthermore, in their study, Peprah and Atarah[33] noted that health professionals in the public sector had a poor response rate. Moreover, responsiveness has no bearing on patient satisfaction [34].

Table 8: Perception and Expectation on Responsiveness of Free Health Services

ResponsivenessElements	Perception	Expectation	Gap (P-E)
	Mean (SD)	Mean (SD)	
Readiness of medical personnel to promptly provide health services	2.14 (0.877)	3.78 (0.593)	-1.64
Willingness of medical personnel to assist the elders	1.98 (1.007)	3.64 (0.642)	-1.66
Readiness of medical personnel to respond to the elderly health needs	1.95 (0.991)	3.91 (0.541)	-1.96

3.4.4 Assurance

Assurance is about knowledge, skills, and expertise of the health workers involved in delivering services and the ability to create trust and confidence among their patients. Findings in Table 9 revealed that patients were not satisfied with the consistency of health workers in service delivery (-1.08), they do not feel safe during health service delivery (-1.12) and do not confidence with health workers (-1.71). Similarly, Khamis and Njau [34] reported patients' dissatisfaction with assurance. On contrary, Teshhnizi et al. [23], Ghosh [35] and Babić-Banaszak et al. [36] found that patients were satisfied in assurance of quality of health services received.

Table 9: Perception and Expectation on Assurance of Free Health Services

Assurance Elements	Perception	Expectation	Gap (P-E)
	Mean (SD)	Mean (SD)	
Making elderly patients feel safe during service delivery	2.04 (0.875)	3.16 (0.959)	-1.12
Confidence from health workers	2.01 (0.785)	3.72 (0.621)	-1.71
Consistency of workers on service delivery	2.02 (0.854)	3.10(0.559)	-1.08

3.4.5 Empathy

Empathy is about the individual attention and careprovided to the customers by the service provider and itshuman resource.

In this study, the empathy was measured in three elements. Findings in Table 10 show the scores from each element as follows: health workers pay attention to the elderly patients (-1.63), health workers understand the needs of elderly patients (1.04), and health workers caring for elderly patients (-1.43). This implies that elderly people's expectations were not fulfilled in terms of all elements studied. Similarly, Vukmir [37]; Saravanan and Rao [38]; Sharma et al. [22] and Yesilada and Direktor [39]reported that the majority of the elderly become reluctant to attend health care services due to various aspects such as low attention, lack of care by health workers, and long waiting time. All these may affect their perception of health services. This is supported by Ghosh [35], Imam et al. [40] and Hutchinson et al. [41].

Table 10: Perception and Expectation on Empathy towards Free Health Services provision

EmpathyElements	Perception	Expectation	Gap (P-E)
	Mean (SD)	Mean (SD)	
Health workers understanding on the needs of elderly patients	1.85 (0.809)	2.89(0.633)	-1.04
Health workers caring for the elderly patients	2.06(0.979)	3.49 (0.598)	-1.43
Health workers pays attention to the elderly patients	1.97 (0.822)	3.60(0.776)	-1.63

4. CONCLUSION

Our findings suggest that elderly patients in Dodoma are not entirely satisfied with the quality of healthcare services, as the mean scores for expectations and perceptions differed negatively across all five SERVQUAL dimensions. Initiatives are required promptly by public health facilities through the help

from government and other health stakeholders for quality improvement. Emphasis on addressing the weak points under these dimensions should be carefully taken into consideration.

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