Original Research Article

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

Comment [DO1]: Proposed title : *Assessing Perceived Service Quality and Satisfaction Among Elderly Recipients of Free Health Services in Dodoma, Tanzania: A SERVQUAL Approach*

UNDER PEER REVIEW

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.

Keywords: Aging, Expectation, Health care service quality, Perception, Satisfaction, SERVQUAL model

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

UNDER PEER REVIEW

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.

UNDER PEER REVIEW

2. METHODOLOGY

2.1 Study area, Research design and sampling

The study was conducted in Dodoma city. This study employed a cross-sectional design. TheA cross-sectional study involveds 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 client service needs. It is used to do a gap analysis of an organization's service quality performance against the service quality needs of its customersClients. 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 usedto calculate the differencegap between the respondent's expectation and perception scores, where the positive gap score indicated that the respondents' expectations indicate,

Comment [DO2]: Incomplete statement please review and add what the positive Gap score signifies.

UNDER PEER

and the negative gap score ~~proves~~ shows 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

2.4Ethical considerations

UNDER PEER REVIEW

Permission and approval to conduct the study was ~~also~~ obtained from the ~~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.

UNDER PEER REVIEW

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).

UNDER PEER REVIEW

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.

Comment [DO3]: Is it possible to correlate the access to the free health services with awareness? Can any inferences be drawn ?

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

UNDER PEER REVIEW

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].

UNDER PEER REVIEW

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

UNDER PEER REVIEW

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

UNDER PEER REVIEW

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

UNDER PEER REVIEW

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

UNDER PEER REVIEW

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

The author(s)'~~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

UNDER PEER REVIEW

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.

UNDER PEER REVIEW

REFERENCES

1. World Health Organisation (WHO). Aging and Health. 2022 (Accessed 11 April, 2024). https://www.who.int/news-room/fact-sheets/detail/ageing-and-health.

2. World Health Organisation (WHO. (2018). Why Population Ageing matters: A Global Perspective. National Institute on Ageing, Bethesda. 34pp.Yates,

3. HelpAge. Ageing in the Twenty-First century: A Celebration and a Challenge. Help Age International, London. 2014. 228pp.

4. United Republic of Tanzania (URT). National Ageing Policy. Government Printers, Dar es Salaam. 2003:18pp.

5. Tazreen S. An Empirical study of SERVQUAL as a tool for service quality measurement. Journal of Business and Management. 2012:1(5): 9 -19.

6. Opolski K., Dykowska G., Możdżonek M. ZarządzaniePrzezJakość w UsługachZdrowotnychl. CeDeWu; Warszawa, Poland: 2003. Teoria ipraktyka; p. 23. [Google Scholar] [Ref list]

7. Parasuraman A, Zeithaml VA, Berry ll. A conceptual model of service Quality and its implications for future research. Journal of Marketing.1985:49:41- 50.

8. Shahin A. SERVQUAL and Model of Service Quality Gaps: A Framework for Determining and Prioritizing Critical Factors. In: *Delivering Quality Services, Service Quality: An Introduction*, ICFAI University Press, Andhra Pradesh, 2006:117-131.

UNDER PEER REVIEW

9. Parasuraman A, Zeithaml VA, Berry ll. Refinement and reassessment of the servqual scale. *Journal of Retailing* 1991:67(4): 420 - 450.

10. Dursun Y, Cerci M. Perceived Quality: A study on patient Satisfaction and behavioral factors. ErciyesUniversitesiIktisadiveIdariBilimlerFakiltesiDergisi, Bulletin. 2004:23: 1- 16.

11. Bartlett JE, Kotrlik JW, Higgins C C Organizational Research: Determining appropriate sample size in survey research. *Information Technology, Learning, and Performance Journal 2001*:19(1): 43-50.

12. Carmines EG, Zeller RA. Reliability and validity assessment. Beverly Hills, CA. Sage Publications Inc. Series: Quantitative Applications in the Social Sciences, 1979:Vol. 17

13. Tannistha S, Feinian C, Reeve V. Living Arrangements and Health of Older Adults in India. *The Journal of Gerontology: 2015:* 70(6): 937–947, https://doi.org/10.1093/geronb/gbu164

14. Amani PJ, Tungu M, Hurtig A, Kiwara DA, Frumence G, San Sebastián M. Responsiveness of health care services towards the elderly in Tanzania: does health insurance make a difference? A cross-sectional study. *Int J Equity Health. 2020:* 19:179. https://doi.org/10.1186/s12939-020-01270-9

15. Jakobsson U, Hallberg IR, Westergren A. Exploring determinants for quality of life among older people in pain and in need of help for daily living. J Clin Nurs. 2007:16(3A):95-104.

16. HelpAge. Improved access to basic services by older people, HelpAge International, Technical brief. 2015

17. Mubyazi GM. The Tanzanian policy on health-care fee waivers and exemptions in practice as compared with other developing countries: evidence from recent local studies and international literature. East Afr J Public Health. 2004;1(1):11–7.

18. Spitzer H, Rwegoshora H, Mabeyo Z M. The (Missing) Social Protection for Older People in Tanzania. A Comparative Study in Rural and Urban Areas. 2009: 61pp.

19. Narang P. Determining quality of public health care services in rural India. Clin G.2011:16(1):35–49. https://doi.org/10.1108/14777271111104574

20. Sharma R, Sharma M, Sharma RK. The elderly patients' satisfaction study in a multispecialty tertiary level hospital, PGIMER, India. Journal of Leadership in Health Services. 2011:24(1): 64 – 73.

21. Suki NM, Lian JC, Suki NM. Do patients' perceptions exceed their expectations in private healthcare settings? *Int J Health Care Qual Assur*. 2011; 24(1):42-56. doi: 10.1108/09526861111098238. PMID: 21456497

22. Alhashem AM, Alquraini B, Chowdhury RI. Factors influencing elderly patients' satisfaction in primary healthcare clinics in Kuwait. *Int J Health Care Qual Assur*. 2011:24(3):249-262.

23. Teshnizi SH, Aghamolaei T, Kahnouji, K, Teshnizi, SMH, Ghani J. Assessing quality of health services with the SERVQUAL model in Iran. A systematic review and meta-analysis. *Qual Assur Health Care*2018:30(2):82–89. https://doi.org/10.1093/intqhc/mzx200

24. Irfan SM, Aamir I, Farooq MM. Patient satisfaction and service quality of public hospital in Pakistan: an empirical assessment. *Middle East J Sci Res* 2012; 12(6): 870–877.

Formatted: Danish (Denmark)

Formatted: Danish (Denmark)

UNDER PEER REVIEW

25. Umoke M, Umoke PCI, Nwimo IO, Nwalieji AC, Onwe RN, Ifeanyi EN et al. Patients' satisfaction with quality of care in general hospitals in Ebonyi State, Nigeria, using SERVQUAL theory. *SAGE Open Medicine*. 2020;8. doi:10.1177/2050312120945129

26. Odetola TD. Health care utilization among rural women of child-bearing age: a Nigerian experience. *Pan Afr Med J* 2015: 20: 151.doi: 10.11604/pamj.2015.20.151.5845. PMID: 27386027; PMCID: PMC4919699

27. Ibraheem WA, Ibraheem AB, Bekibele CO. Sociodemographic predictors of patients' satisfaction. *Afr J Health Sci* 2013: 12: 87–90.

28. Mendoza Aldana J, Piechulek H and al-Sabir A. Client satisfaction and quality of health care in rural Bangladesh. *Bull World Health Orga*. 2001; 79(6): 512–517.

29. de Jager J, du Plooy T. Are public hospitals responding to tangible and reliable service- Related needs of patients in the new South Africa? *Journal of Management Policy and Practice*. 2011:12: 103 - 122.

30. Sadigh SM. Service quality in hospitals: More favourable than you might think. *Management of Service Quality Journal* 2003:13(3): 197 - 206.

31. Farid MF. Development of a Model for Healthcare Service Quality: An Application to the Private Healthcare Sector in Egypt. Maastricht School of Management, Maastricht. 2008:211pp.

32. Zarei A, Arab M, Froushani AR, Rashidian A, Tabatabaei SM. Service quality of private hospitals: The Iranian Patients' perspective. BMC Health Serv Res. 2012:12-31. https://doi.org/10.1186/1472-6963-12-31

33. Peprah AA, Atarah BA. Assessing patient's satisfaction using SERVQUAL model: a case of Sunyani Regional Hospital. Ghana. Int J Bus Soc Res. 2014; 4(2): 133–143.

UNDER PEER REVIEW

34. Khamis K, Njau B. Patients' level of satisfaction on quality of health care at Mwananyamala hospital in Dar es Salaam, Tanzania. *BMC Health Serv Res* 2014: 14: 400.

34. Rehaman B and Husnain M. The impact of service quality dimensions on patient satisfaction in the private healthcare industry in Pakistan. J Hosp Med Manage. 2018: 4(1): 1-8.

35. Ghosh S. An analytical study on patients' satisfaction and medical facilities provided by public hospital: with special

36. Babić-Banaszak A, Kovačič L, Mastilica M, Babić S,Ivanković D, Budak A. The Croatian health survey—patient's satisfaction with medical. *Coll. Antropol*. 25 (2001) 2: 449–458

37. Vukmir RB. Consumers' satisfaction. *Int J Health Care Qual Assur*. 2006:19(1): 8 - 31.

38. Saravanan R, Rao KS. Measurement of service quality from the customer's perspective: An empirical study. *Total Quality Management & Business Excellence* 2007:18(4):435-449. https://doi.org/10.1080/14783360701231872

39. Yesilada F, Direktor E. Health care service quality: A comparison of public and private hospitals. *African Journal of Business Management*. 2010):4: 962–71.

40. Imam SZ, Syed KS, Ali SA, et al. Patients' satisfaction and opinions of their experiences during admission in a tertiary care hospital in Pakistan—a cross sectional study *SAGE Open Medicine*. *BMC Health Serv Res* 2007: 7: 161.

UNDER PEER REVIEW

41. Hutchinson PL, Do M, Agha S. Measuring client satisfaction and the quality of family planning services: a comparative analysis of public and private health facilities in Tanzania, Kenya and Ghana. *BMC Health Serv Res* 2011: 11: 203.

UNDER PEER REVIEW