INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES

14, Issue 12, (2024) E-ISSN: 2222-6990

Factors Influencing Customer Satisfaction at University Health Centre

Lim Xin Yun and Mazilah Abdullah

Faculty of Management, Universiti Teknologi Malaysia, 81300 Skudai, Johor, Malaysia

Corresponding Author Email: lxinyun@gmail.com

To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v14-i12/24189 DOI:10.6007/IJARBSS/v14-i12/24189

Published Date: 18 December 2024

Abstract

In the past two decades, Malaysia's health industry has substantially transitioned. Customers demand high-quality services from healthcare providers. Customer satisfaction is acknowledged as one of the preferred outcomes of healthcare and is directly related to health services utilisation. This research examines factors influencing customer satisfaction at university health centres against evolving healthcare demands in Malaysia. Through a mixed-method approach, including qualitative problem identification and quantitative analysis using Statistical Package for the Social Science (SPSS), 139 surveys were conducted via Google Forms. The findings indicate that staff, physicians, administrative procedures, and waiting time positively and significantly influence customer satisfaction, with waiting time being the most dominant factor. However, facilities did not significantly influence customer satisfaction. The findings highlight the importance of addressing key factors to enhance service quality and meet evolving healthcare needs. Specifically, leveraging insights from the Pareto Theory can aid health centres in prioritising improvements for optimal customer satisfaction and service delivery. This research helps to refine existing models and propose new frameworks that incorporate variables unique to university health centres. These contributions help create a supportive environment for health service within universities and promote better health outcomes.

Keywords: Staff, Facilities, Physicians, Administrative Procedures, Waiting Time

Introduction

In the past two decades, Malaysia's health industry has substantially transitioned. Today, Malaysians are more aware of their health, demanding better healthcare services and seeking high-quality health services from healthcare providers (Tan et al., 2019). Consequently, healthcare management shifts towards a patient-centred attitude and raises the concern of enhancing the overall efficiency of the system to raise customer retention and satisfaction, so patient perspectives are essential to include (Chandra et al., 2019). Thus, customer

satisfaction needs to be considered as it is acknowledged as one of the preferred outcomes of healthcare and is directly related to the utilisation of health services (Hussain et al., 2019).

The university health centre serves as a store window and the initial point of contact with the community (Melesse et al., 2022). However, an individual who is not satisfied with the services provided by a health centre causes negative word-of-mouth and negatively affects the reputation of the health centre and the institution (Pauli et al., 2023). In April 2023, there were 5.18 billion people, or 64.6% of the population globally that were Internet users (Statista, 2023). Nowadays, Internet users are easily accessible to available online information, and this can influence customer health decisions (Thapa et al., 2021). Customers who are dissatisfied will vent their dissatisfaction on social media in the connected world of the twenty-first century through social media, especially regarding service quality. Negative reviews have a stronger impact than positive reviews, and it causes negative word-of-mouth (Pauli et al., 2023). As a result of negative word of mouth, organisations in the market will suffer a bad reputation, and the customers will switch to another healthcare provider (Gerdt et al., 2019). While the health centre follows a quality management system with a customer focus at its core, the challenges persist in providing satisfactory services to different customers. This can be demonstrated by customer dissatisfaction in online reviews and the preliminary study conducted by the researchers, citing concerns ranging from staff behaviour, facility constraints, physician availability, administrative inefficiencies, and prolonged waiting times.

Despite the increasing role that online reviews play in customer opinions, therefore patient satisfaction surveys should emerge as indispensable tools for assessing service quality and identifying areas for improvement within healthcare centres (Ng & Luk, 2019). By incorporating patient feedback into quality improvement strategies, healthcare providers can drive meaningful process modifications and enhance patient experiences (Chandra et al., 2019).

Few studies measure customer satisfaction for university health centres. While quantitative surveys are common, there is a lack of qualitative studies that capture in-depth customers' perspectives on healthcare services. To address these gaps, this research involves both quantitative surveys and qualitative interviews to gain comprehensive insights into factors influencing customer satisfaction in university health centres. In this research, the researchers address the common challenge for university health centres in evaluating customer satisfaction. Consequently, it is imperative to implement a comprehensive and standardised evaluation framework that includes staff, facilities, physicians, administrative procedures, and waiting time, which influence customer satisfaction. By examining real-world practices and outcomes, the research aims to provide insights into the practical applications in helping the organisation create a more accessible and informative customer satisfaction assessment.

Literature Review

Service Quality (SERVQUAL) Model

The construction of service quality measures is crucial for service marketing. Customers are satisfied when they evaluate the service that meets their quality expectations after using it (Manzoor et al., 2019). To assess service quality, the SERVQUAL model was developed by

Parasuraman et al. (1998) and it was discovered to be a widely used tool to measure service quality in various sectors. There are five elements, which are tangibility, reliability, responsiveness, assurance, and empathy that make up the SERVQUAL methodology for classifying service quality (Parasuraman et al., 1988).

SERVQUAL was established and is now frequently employed to examine the effects of service quality from the viewpoint of the customers (AlOmari, 2021). SERVQUAL has stated that it is also appropriate for gauging the quality of healthcare services; nevertheless, its applicability must be assessed in various situations. Not all service businesses can be generalised to using SERVQUAL characteristics of quality as it is not suitable to fit all usages due to unique traits such as intangibility, heterogeneity, and simultaneity in the healthcare sector (Amporfro et al., 2021). Therefore, there are different service quality dimensions to be adapted for patient evaluations of the quality of healthcare services (Endeshaw, 2020).

Customer Satisfaction

Customer satisfaction is an excellent indicator of the calibre of healthcare. Studying customer experience might undoubtedly assist providers in better incorporating customer points of view in service delivery and enhancing customer satisfaction (Ng & Luk, 2019).

According to Manzoor et al. (2019), the customer perspective has gained importance in improving healthcare systems. Since the quality of health services impacts people's lives and health, it is crucial to offer services that satisfy the customer's needs by evaluating quality through customer satisfaction (Melesse et al., 2022). One of the indicators used to gauge the effectiveness and efficiency of the health centre is its ability to deliver high-quality care and services by knowing customer satisfaction (Manzoor et al., 2019).

According to Duggirala et al. (2008), patient satisfaction was more significantly predicted by the service quality dimensions of the patient-perceived Total Quality Service (TQS), including infrastructure, personal quality, clinical care process, administrative process, safety indicators, overall experience of medical care and social responsibility. The views of all relevant parties, including patients, healthcare workers, managers, and support staff, must be considered to suggest a suitable framework to determine the quality of healthcare services (Endeshaw, 2020).

Staff

The staff represents the companies that offer the goods or services to the customers (Pei et al., 2020). Employee-customer interactions are taken into account with responsiveness or supportiveness when staff provides services (Berraies et al., 2020). Since the health centre provides services at multiple points of contact between staff and patients, this might affect customer satisfaction (Swain, 2019). Due to the intangibility and interdependence of services, the effectiveness of interpersonal interactions can significantly impact how people perceive the quality of the services they receive (Berraies et al., 2020). The quality of services provided by polite and well-trained staff can raise customer satisfaction, and customers are pleased with the organisation's overall image because the service is approachable and attentive to the customers' needs (Thakkar et al., 2022). Therefore, it is hypothesised that:

H1: Staff has a positive and significant influence on customer satisfaction.

Facilities

Facilities are a concrete aspect of the healthcare experience that gives the service a roundness through amenities and the physical setting. Although services are intangible, facilities can significantly affect how customers perceive the quality of service because customers are frequently present during the process (Upadhyai et al., 2020). Customer satisfaction is significantly affected by healthcare facilities' aesthetic, sensory, and physical features (Bellio & Buccoliero, 2021). The study found that the most modern and cutting-edge medical facilities are available to fulfil the needs of various patients and continually improve customer needs (Thakkar et al., 2022). Customer satisfaction increases when physical facilities, such as cleanliness, modern technology, and the general environment in a health centre, are in good condition (Amankwah et al., 2019). Therefore, it is hypothesised that:

H2: Facilities has a positive and significant influence on customer satisfaction.

Physicians

Today, medical consultations are more frequently based on reciprocity, meaning patients have more influence over that connection (Bellio & Buccoliero, 2021). Some authors have recognised the relationship between physicians and patients as a critical component of the quality of medical care through excellent doctor-patient interaction; therefore, it is essential to prioritise this relationship to ensure high-quality care and increase customer satisfaction (Habibi et al., 2018). The doctor needs to handle patient problems with proper communication and guidance (Hussain et al., 2019). Thus, the doctor, who is kind and welcoming, and provides appropriate information on customers' ailments, is technically competent by upholding professional standards and being truthful in all professional interactions. The doctor needs to handle patient problems with proper communication and guidance. Therefore, customer satisfaction was typically inversely correlated with the doctor's level of patient care (Manzoor et al., 2019). Therefore, it is hypothesised that:

H3: Physicians has a positive and significant influence on customer satisfaction.

Administrative Procedures

Administrative procedures are a system that controls administrative processes in healthcare settings, including admission, discharge, stay, and doctor appointments (Amankwah et al., 2019). If health centres are effective in their administrative procedures, customers value the services delivered by the health centres. Conversely, Hussain et al. (2019) noted that when administrative processes are inefficient and lead to delays, patients may experience frustration and dissatisfaction. Customer satisfaction is higher when the simple registration and administrative processes (Swain, 2019). Therefore, it is hypothesised that:

H4: Administrative procedures has a positive and significant influence on customer satisfaction.

Waiting Time

Waiting time is when a patient waits at a health centre to obtain medical care before seeing the primary healthcare provider. Waiting time influences primary healthcare efficiency and

efficacy and creates experiences for most patients (Aburayya et al., 2020). The study by Chandra et al. (2019) proved that waiting time was the most dominant factor influencing customer satisfaction in health centres. Waiting time is an essential element influencing customer satisfaction throughout service delivery, and customers' pleasure can be significantly impacted by the length of time they must wait (Xie & Or, 2017). If there are unnecessary delays, the customers become less convenient; thus, leading to dissatisfaction in the evaluation of services. However, the customers would experience less annoyance if access to health services were offered promptly. Most people would be satisfied if they received an excellent consultation and waited less (Chandra et al., 2019). Therefore, it is hypothesised that:

H5: Waiting time has a positive and significant influence on customer satisfaction.

Research Methodology

A descriptive and cross-sectional design was used in this research. The population of this research includes patrons of the university health centre in Malaysia, which are university staff, students and the public as they experienced the services at the university health centre. Non-probability sampling, which was purposive sampling was employed with a sample size of 139 respondents, including 126 samples, according to Cohen (1992), with an additional 10% of the sample size (Suresh & Chandrashekara, 2012). Both qualitative and quantitative methods were employed in this research. The researchers applied qualitative methods through semi-structured interview sessions to gain comprehensive insights, including open-ended questions and follow-up probe questions, that allow for flexibility and in-depth exploration by knowing the unique insights from the respondents (Adeoye-Olatunde & Olenik, 2021). The researchers conducted semi-structured interviews with 15 patrons of the university health centre for the preliminary study (Naz et al., 2022). Thus, content analysis was also used in this research to analyse customer feedback on online platforms by grouping text into related categories and aims to gain a holistic understanding of how the factors influence customer satisfaction (Kleinheksel et al., 2020). Then, the researchers used the results of preliminary studies for problem identification. After that, the researchers conducted a quantitative method via an online survey in Google Form to investigate whether staff, facilities, physicians, administrative procedures, and waiting time influence customer satisfaction, as Google Form provides an efficient way to collect data for performance (Adelia et al., 2021).

There are four sections for the questionnaire, which are sections A, B, C, and D. Section A covers the qualifying questions, demographic profile of the respondents, measurement items for all five independent variables that are the factors influencing customer satisfaction, and the measurement items for the dependent variable, which is customer satisfaction. The questionnaire for this research was derived from the articles of Raposo et al. (2009), Swain (2019), and Nunkoo et al. (2020). The measurement items were then adapted from these studies, which include five items for Staff (S), six items for Facilities (F), four items for Physicians (P), five items for Administrative Procedures (AP), five items for Waiting Time (WT) and five items for Customer Satisfaction (CS).

In this research, the researchers utilized 10-point Likert Scale which was “very dissatisfied”, “dissatisfied”, “slightly dissatisfied”, “neutral”, “slightly satisfied”, “satisfied”,

"very satisfied", "extremely satisfied", "exceptionally satisfied" and "completely satisfied" (Dawer, 2023).

A Proposed Conceptual Model/Framework

The research framework of the studies has five independent variables: staff, facilities, physicians, administrative procedures, and waiting time. The dependent variable is customer satisfaction. The framework in Figure 1 was adapted from Raposo et al. (2009), who emphasised that staff, facilities, and physicians influence customer satisfaction in the health centre. The researchers then modified the framework by adding the variables of administrative procedures and waiting time that referred to the research of Hussain et al. (2019), as these variables are found in the preliminary study of the qualitative method conducted by the researchers. The hypotheses development is then developed as the conceptual framework shown in the figure below:

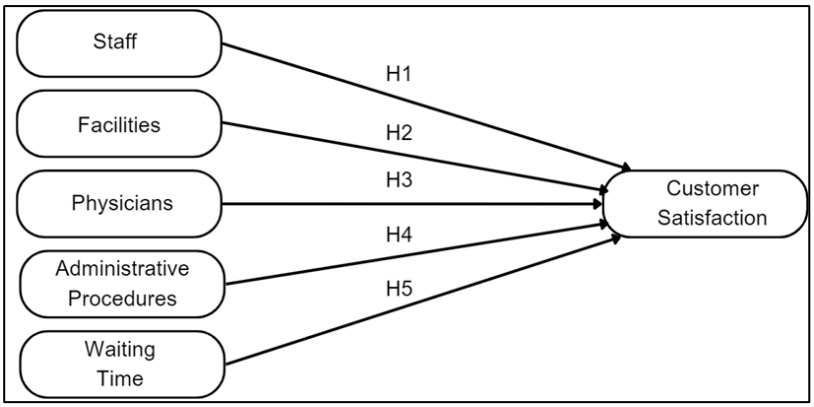

Figure 1. The Proposed Conceptual Model/Framework

Results

The demographic characteristics of the participants in this research included gender, category of user, and average visit per year, as shown in Table 1. Most respondents were female (57.60%) compared to male (42.40%). Besides, most of the respondents were students (86.30%), followed by staff (7.90%) and other category of users (5.80%). Among the respondents, most of the respondents visit 1 to 2 times per year (62.60%), followed by 3 to 5 times (29.50%) and 5 times and above (7.90%).

Table 1
Demographic Profile of Respondents

Factors		Frequency (n)	Percentage (%)
Gender	Male	59	42.40
	Female	80	57.60
Category of User	Staff	11	7.90
	Student	120	86.30
	Other	8	5.80
Average Visit Per Year	1-2 times	87	62.60
	3-5 times	41	29.50
	5 times and above	11	7.90

Statistical Package for Social Science (SPSS) was used to analyse the data. Melchers and Beck (2018) assert that reliability is a measuring tool to determine whether the variables are consistent and dependable to prevent biased results. All Cronbach's Alpha values above 0.7 are required to ensure sufficient or adequate internal consistency (Hair et al., 2016). The present study illustrated that all variables had a reliability coefficient (staff = 0.893, facilities = 0.893, physicians = 0.869, administrative procedures = 0.890, waiting time = 0.865, and customer satisfaction = 0.836) that more than 0.7 of value and has a very good strength of association. The correlations among all the variables by conducting Pearson's Correlation Analysis are represented in Table 2. All variables are positively correlated, with a value of 0 to 1 (Schober & Schwarte, 2018).

Table 2
Pearson's Correlation Analysis

Correlations							
		S	**F**	**P**	**AP**	**WT**	**CS**
Staff (S)	Pearson Correlation	1	.565**	.597**	.560**	.530**	.517**
	Sig. (2-tailed)		0.001	<0.001	0.001	0.003	0.003
	N	30	30	30	30	30	30
Facilities (F)	Pearson Correlation	.565**	1	.749**	.853**	.604**	.532**
	Sig. (2-tailed)	0.001		<0.001	<0.001	<0.001	0.002
	N	30	30	30	30	30	30
Physicians (P)	Pearson Correlation	.597**	.749**	1	.821**	.738**	.596**
	Sig. (2-tailed)	<0.001	<0.001		<0.001	<0.001	0.001
	N	30	30	30	30	30	30
Administrative Procedures (AP)	Pearson Correlation	.560**	.853**	.821**	1	.778**	.648**
	Sig. (2-tailed)	0.001	<0.001	<0.001		<0.001	<0.001
	N	30	30	30	30	30	30
Waiting Time (WT)	Pearson Correlation	.530**	.604**	.738**	.778**	1	.755**
	Sig. (2-tailed)	0.003	<0.001	<0.001	<0.001		<0.001
	N	30	30	30	30	30	30
Customer Satisfaction (CS)	Pearson Correlation	.517**	.532**	.596**	.648**	.755**	1
	Sig. (2-tailed)	0.003	0.002	0.001	<0.001	<0.001	
	N	30	30	30	30	30	30
****. Correlation is significant at the 0.01 level (2-tailed).**							

According to Garson (2012), the result for the skewness and kurtosis value must be between the range of -2 to +2 to indicate that the data is normally distributed. All variables are normally distributed in this research. Both a univariate and multivariate analysis are performed for the outlier analysis. Z scores were obtained for the univariate outlier, and the result must be between -4 and 4 (Hair et al., 2010). All Z scores in this research were within the range of ±4. For multivariate analysis, it is considered acceptable if the Mahalanobis value is below the maximum value of 20.515 for 5 independent variables. The results show that the maximum Mahalanobis distance (D^2) value is 15.188. Thus, no outliers exist in this research.

Multiple regression assesses the importance of the independent variable to the dependent variable and its significance with other factors (Keith, 2019). As shown in Table 3, the findings show that the p-value of staff is 0.012 ($p<0.05$), physicians is 0.009 ($p<0.01$), administrative procedures is 0.004 ($p<0.01$), and the p-value of waiting time is less than 0.001. These statistical indicators show that staff, physicians, administrative procedures, and waiting time significantly influence and positively affect customer satisfaction with a positive β value. However, the p-value of facilities is 0.056, which is more than 0.05, indicating that it does not significantly influence customer satisfaction at university health centres.

Table 3
Multiple Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	**Std. Error**	**Beta**	**t**	**Sig.**
1	(Constant)	-0.939	0.747		1.256	0.211
	Staff	0.188	0.074	0.166	2.544	0.012
	Facilities	0.137	0.071	0.111	1.925	0.056
	Physicians	0.231	0.087	0.183	2.660	0.009
	Administrative Procedures	0.263	0.089	0.214	2.964	0.004
	Waiting Time	0.295	0.058	0.369	5.100	0.000
Dependent Variable: Customer Satisfaction						

Discussion of the Findings

This research found that the first hypothesis is supported as the staff positively and significantly influenced customer satisfaction. This result is homogenous to past studies from Siripipatthanakul and Bhandar (2021). One possible explanation may be that administrative staff serves as the initial point of contact, shapes the patient's first impression, and emphasises the importance of individualised attention, guaranteed timely service and awareness of patient needs from the university health centre staff. The study highlights the necessity of staff training to foster a welcoming atmosphere and ensure quality care.

Although the researchers proposed five hypotheses, there were only four that had a significant influence on customer satisfaction. Remarkably, this research found that the facilities did not significantly influence customer satisfaction, similar to a noteworthy study conducted by Perera and Dabney (2020), which revealed that facilities, such as the physical environment or the layout of the waiting area, had minimal influence on customer satisfaction. This suggests that other elements, such as treatment quality, patient-provider communication, and administrative efficiency, were more crucial in determining customer satisfaction. This research recommends that university health centres consider a more holistic way by focusing on various aspects beyond facilities to increase customer satisfaction.

This research discovered that physicians positively and significantly influenced customer satisfaction. Physicians' competence, patient orientation, and dedication through patient interactions significantly impact customer satisfaction with healthcare services, as emphasised in a recent study by Bidmon et al. (2020). In the researchers' view, this demonstrates the tremendous impact that a doctor's ability and attentiveness have on patient experiences, which should be prioritised when assessing customer satisfaction. This

research emphasises the crucial role of physicians in influencing patient experience and emphasises the need to prioritise training for physicians.

This research has yielded compelling evidence supporting the hypothesis that administrative procedures positively and significantly influenced customer satisfaction, homogenous to past studies from Situmorang (2022). The research results support that accuracy, ease of registration, and fewer appointment cancellations influence customers' overall perceptions of health centres. This research strongly demonstrates that streamlined administrative procedures significantly impact customer satisfaction and emphasises the need for continual development in administrative procedures for efficient and accurate registration.

Waiting time was also a significant factor influencing patient satisfaction during therapy delivery, as previously reported by Swain (2019). One probable explanation is that patients had an acceptable wait time for medical testing, consultations, and examinations. The researchers highlight the critical role of quick procedures and reasonable waiting times in keeping customers satisfied, particularly in a university health centre, where many staff and students have busy schedules. Effective resource allocation is essential to maximise results when resources are few. Pareto analysis facilitates the identification of the main causes of patient dissatisfaction and enables the execution of focused interventions (Blanchet et al., 2022). The dominant factor, waiting time, was proved to be the calibre of medical service that is reliable in influencing customer satisfaction in this research and needs to be prioritised.

Research Implications

Healthcare services that meet customer satisfaction are offered when customers receive effective and well-managed healthcare services (Hussain et al., 2019). This research provides insights to health centres on how to take corrective measures to improve further service delivery of health centres by improving the quality of staff, physicians, and registration procedures, as well as reducing wait times to increase customer satisfaction. The model used in this research can help health centres measure different aspects of healthcare delivery effectively and increase service quality.

It is essential to prioritise service quality and get positive word-of-mouth, as trust is vital for patrons continually using healthcare services. The most dominant factor, waiting time, indicates that customers prioritise the time that they wait in the health centre. Optimising this aspect will likely solve most challenges and increase customer satisfaction. The findings also suggest that the facilities may be less critical in university health centres than in hospitals involving large communities.

Based on the findings of this research, a holistic approach to enhance customer satisfaction in healthcare settings is essential. While administrative procedures and waiting time play significant roles, the influence of physicians and staff demeanour should not be underestimated. Fostering an environment where patients receive efficient services, minimal wait times, and compassionate care from both administrative and medical staff can lead to a more satisfying healthcare experience.

Limitations and Suggestions for Future Studies

The researchers discovered some limitations in this research. First, this research only covered the health centre in the university. The findings and implications of this cannot be generalised to other service industries. Secondly, the researchers were unable to collect data from the patients who received care other than outpatient care within the timeframe to get a more holistic understanding due to time constraints.

The recommendation for future research is that the future researcher can conduct further study for a broader level, incorporating customer satisfaction other than university health centres. In future research, the data should be collected in outpatient departments and in various specialities such as dental, pharmacy, and emergency. Investigating the influence of additional variables on customer satisfaction would be valuable. One promising area to explore could be the impact of digital healthcare solutions, such as online appointment booking systems and telemedicine services. Studies like those conducted by Samadbeik et al. (2021) and Hoque et al. (2021) have shown that the integration of digital technology in healthcare can significantly affect patient satisfaction and provide insights into enhancing the patient experience and optimising healthcare service delivery in the digital age.

Conclusion

The survey findings align with the open-ended feedback from respondents that highlighted the improvements in healthcare services. The present research recommends that establishing or improving an online or phone appointment system to reduce waiting times, rewarding doctors who arrive on time, and improving consultation quality of service delivery and the information given to the patient during the examination procedure can all be valuable tactics for health centre management to boost customer satisfaction. The registration process should be simplified, and the staff needs to receive thorough training in customer service. Hiring more hospital administrators with formal training is possible so the staff and physicians can better assist the patients by solving limited staffing problems and providing better customer care. These insights indicate the need for a health centre to respond with staff, physicians, administrative procedures, and waiting time to increase patients' favourable perception and thus increase customer satisfaction and par or exceed the industry benchmark.

Acknowledgements

The researchers would like to express utmost gratitude to Dr. Mohamad Rohieszan bin Ramdan, Assoc. Prof. Dr. Thoo Ai Chin and Dr. Norzaidahwati Binti Zaidin, for their expert validation and guidance in methodology. The researchers also highly appreciated the commitment and opportunity the healthcare centre staff gave and the respondents' involvement and cooperation in this research.

References

Aburayya, A., Alshurideh, M., Albqaeen, A., Alawadhi, D., & Al A'yadeh, I. (2020). An investigation of factors affecting patients waiting time in primary health care centers: An assessment study in Dubai. *Management Science Letters*, 10(6), 1265-1276.

Adelia, A., Miftahurrahmah, M., Nurpathonah, N., Zaindanu, Y., & Ihsan, M. T. (2021). The role of google form as an assessment tool in ELT: Critical review of the literature. ETDC: *Indonesian Journal of Research and Educational Review*, 1(1), 58-66.

Adeoye-Olatunde, O. A., & Olenik, N. L. (2021). Research and scholarly methods: Semi-structured interviews. *Journal of the American College of Clinical Pharmacy*, 4(10), 1358-1367.

AlOmari, F. (2021). Measuring gaps in healthcare quality using SERVQUAL model: Challenges and opportunities in developing countries. *Measuring Business Excellence*, 25(4), 407-420.

Amankwah, O., Choong, W. W., & Mohammed, A. H. (2019). Modelling the influence of healthcare facilities management service quality on patients satisfaction. *Journal of Facilities Management*, 17(3), 267–283.

Amporfro, D. A., Boah, M., Yingqi, S., Cheteu Wabo, T. M., Zhao, M., Ngo Nkondjock, V. R., & Wu, Q. (2021). Patients satisfaction with healthcare delivery in Ghana. *BMC Health Services Research*, 21, 1-13.

Bellio, E., & Buccoliero, L. (2021). Main factors affecting perceived quality in healthcare: A patient perspective approach. *The TQM Journal*, 33(7), 176–192

Berraies, S., Chtioui, R., & Chaher, M. (2020). Customer-contact employees' empowerment and customer performance: The CRM effectiveness as a mediator. *International Journal of Productivity and Performance Management*, 69(9), 1833–1859.

Bidmon, S., Elshiewy, O., Terlutter, R., & Boztug, Y. (2020). What patients value in physicians: Analyzing drivers of patient satisfaction using physician-rating website data. *Journal of Medical Internet Research*, 22(2), e13830.

Blanchet, T., Fournier, J., & Piketty, T. (2022). Generalized Pareto curves: Theory and applications. *Review of Income and Wealth*, 68(1), 263-288.

Chandra, S., Ward, P., & Mohammadnezhad, M. (2019). Factors associated with patient satisfaction in outpatient department of suva sub-divisional health center, Fiji, 2018: A mixed method study. *Frontiers in Public Health*, 7,445025.

Cohen, J. (1992). Statistical power analysis. *Current Directions in Psychological Science*, 1(3), 98-101.

Dawer, N. (2023). *Collecting feedback with 1 to 10 opinion scale surveys*. Zonka Feedback. Retrieved from https://www.zonkafeedback.com/blog/collecting-feedback-with-1-to-10-opinion-survey-scale

Duggirala, M., Rajendran, C., & Anantharaman, R. N. (2008). Patient-perceived dimensions of total quality service in healthcare. *Benchmarking: An International Journal*, 15(5), 560–583.

Endeshaw, B. (2020). Healthcare service quality-measurement models: A review. *Journal of Health Research*, 35(2), 106-117.

Garson, G. D. (2012). *Testing statistical assumptions*. Asheboro, NC USA: Statistical Associates Publishing.

Gerdt, S. O., Wagner, E., & Schewe, G. (2019). The relationship between sustainability and customer satisfaction in hospitality: An explorative investigation using eWOM as a data source. *Tourism Management*, 74, 155–172.

Habibi, M. R. M., Abadi, F. M., Tabesh, H., Vakili-Arki, H., Abu-Hanna, A., & Eslami, S. (2018). Evaluation of patient satisfaction of the status of appointment scheduling systems in outpatient clinics: Identifying patients' needs. *Journal of Advanced Pharmaceutical Technology & Research*, 9(2), 51-55.

Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS SEM).* Sage Publications.

Hair, J. F., Black, w. c., babin, b. j., & anderson, r. e. (2010). *multivariate data analysis: International version.* New Jersey, Pearson.

Hoque, S. I., Karim, A. M., Hossen, M. R., & Arjumand, D. (2021). Evaluation of patients' satisfaction in telemedicine service quality: A case study on Maizbhanderi Foundation, Fatikchari, Bangladesh. *American Economic & Social Review*, 8(1), 1-10.

Hussain, A., Asif, M., Jameel, A., & Hwang, J. (2019). Measuring OPD patient satisfaction with different service delivery aspects at public hospitals in Pakistan. *International Journal of Environmental Research and Public Health*, 16(13), 2340.

Keith, T. Z. (2019). *Multiple regression and beyond: an introduction to multiple regression and structural equation modeling.* Routledge.

Kleinheksel, A. J., Rockich-Winston, N., Tawfik, H., & Wyatt, T. R. (2020). Demystifying content analysis. *American Journal of Pharmaceutical Education*, 84(1), 7113.

Manzoor, F., Wei, L., Hussain, A., Asif, M., & Shah, S. I. A. (2019). Patient satisfaction with health care services: An application of physician's behavior as a moderator. *International Journal of Environmental Research and Public Health*, 16(18).

Melchers, R. E., & Beck, A. T. (2018). *Structural reliability analysis and prediction*. John Wiley & Sons.

Melesse, D., Tesfu, M., & Mantefard, B. (2022). Level of clients' satisfaction and associated factors with the service of out-patient department in Dilla University Referral Hospital, Southern Ethiopia, 2021. *Advances in Public Health*, 2022.

Naz, N., Gulab, F., & Aslam, M. (2022). Development of qualitative semi-structured interview guide for case study research. *Competitive Social Science Research Journal*, 3(2), 42-52.

Ng, J. H., & Luk, B. H. (2019). Patient satisfaction: Concept analysis in the healthcare context. *Patient Education and Counseling*, 102(4), 790-796.

Nunkoo, R., Teeroovengadum, V., Ringle, C. M., & Sunnassee, V. (2020). Service quality and customer satisfaction: The moderating effects of hotel star rating. *International Journal of Hospitality Management*, 91, 102414.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988) SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64, 12-40.

Pauli, G., Martin, S., & Greiling, D. (2023). The current state of research of word-of-mouth in the health care sector. *International Review on Public and Nonprofit Marketing*, 20(1), 125-148.

Pei, X. L., Guo, J. N., Wu, T. J., Zhou, W. X., & Yeh, S. P. (2020). Does the effect of customer experience on customer satisfaction create a sustainable competitive advantage? A comparative study of different shopping situations. *Sustainability*, 12(18), 7436.

Perera, S., & Dabney, B. W. (2020). Case management service quality and patient-centered care. *Journal of Health Organization and Management*, 34(5), 551-568.

Raposo, M. L., Alves, H. M., & Duarte, P. A. (2009). Dimensions of service quality and satisfaction in healthcare: A patient's satisfaction index. *Service Business*, 3(1), 85–100.

Samadbeik, M., Saremian, M., Garavand, A., Hasanvandi, N., Sanaeinasab, S., & Tahmasebi, H. (2018). Assessing the online outpatient booking system. *Shiraz E-Medical Journal*, 19(4).

Schober, P., & Schwarte, L. A. (2018). Correlation coefficients: Appropriate use and interpretation. *Anesthesia and Analgesia*, 126(5), 1763–1768.

Siripipatthanakul, S., & Bhandar, M. (2021). A qualitative research factors affecting patient satisfaction and loyalty: A case study of smile family dental. *International Journal of Trend in Scientific Research and Development (IJTSRD)*, 5, 877-896.

Situmorang, B. (2022). Influence of outpatient registration services on patient satisfaction in FL Tobing Hospital City of Sibolga in 2021-A Cross-Sectional Study of Tertiary Hospitals in Sibolga. *Science Midwifery*, 10(2), 1048-1053.

Statista. (2023). *Internet and social media users in the World 2023*. https://www.statista.com/statistics/617136/digital-population- worldwide/

Suresh, K., & Chandrashekara, S. (2012). Sample size estimation and power analysis for clinical research studies. *Journal of Human Reproductive Sciences*, 5(1), 7-13.

Swain, S. (2019). Do patients really perceive better quality of service in private hospitals than public hospitals in India? *Benchmarking: An International Journal*, 26(2), 590–613.

Tan, C. N. L., Ojo, A. O., Cheah, J. H., & Ramayah, T. (2019). Measuring the influence of service quality on patient satisfaction in Malaysia. *Quality Management Journal*, 26(3), 129–143.

Thakkar, J. J., Thanki, S., & Guru, S. (2022). A quantitative framework for health care service quality assessment in India. *Journal of Modelling in Management*, 18(4), 1064-1092.

Thapa, D. K., Visentin, D. C., Kornhaber, R., West, S., & Cleary, M. (2021). The influence of online health information on health decisions: A systematic review*. Patient Education and Counseling*, 104(4), 770-784.

Upadhyai, R., Upadhyai, N., Jain, A. K., Roy, H., & Pant, V. (2020). Health care service quality: A journey so far. *Benchmarking: An International Journal*, 27(6), 1893-1927.

Xie, Z., & Or, C. (2017). Associations between waiting times, service times, and patient satisfaction in an endocrinology outpatient department: A time study and questionnaire survey. Inquiry. *The Journal of Health Care Organization, Provision, and Financing*, 54, 0046958017739527.