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Quality of Health Services as a Determinant of Patient Satisfaction in Specialist Outpatient Clinics

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ABSTRACT

Patient satisfaction at specialist clinics is an important indicator in ensuring the quality of healthcare services. The level of patient satisfaction also determines the competitiveness and sustainability of healthcare institutions. The purpose of this study was to analyze the influence of healthcare service quality on patient satisfaction at specialist clinics. This study was conducted using a cross-sectional design, involving 177 outpatients selected using purposive sampling. Data were collected through questionnaires, then analyzed descriptively, using the Chi-Square test, and finally using multiple logistic regression. The results showed that variables that significantly influenced patient satisfaction were dignity (p = 0.040), confidentiality (p = 0.034), communication (p = 0.026), autonomy (p = 0.029), prompt attention (p = 0.005), quality of basic facilities (p = 0.001), and access to social support (p = 0.011). Meanwhile, choice of service provider did not show a significant influence (p = 0.208). Of all these variables, the quality of basic facilities had the greatest influence on patient satisfaction (odds ratio = 3.406). Furthermore, it was concluded that the quality of healthcare services is a determinant of patient satisfaction in specialist clinics. Management is expected to improve the quality of communication and education between healthcare workers and patients through training, educational media, and an empathetic approach to enhance patient satisfaction.
Keywords: quality of healthcare services; patient satisfaction; specialist clinics

INTRODUCTION

Patient satisfaction is defined as the degree of a patient's contentment or disappointment after comparing the performance of healthcare services received with their expectations. As one of the key indicators of healthcare quality, patient satisfaction plays a crucial role in determining hospital performance and sustainability. The hospitals can survive not only because of complete physical facilities but also because of high patient satisfaction, which contributes to a positive institutional image. Satisfied patients tend to return for future services and recommend the hospital to others, thus increasing the hospital's competitiveness and trust within the community. Conversely, dissatisfied patients may switch to other healthcare providers, share negative feedback, and consequently threaten the hospital's operational sustainability and reputation.[1]

Globally, patient satisfaction with healthcare services varies widely across countries. A recent survey in the United Kingdom found that public satisfaction with primary care under the National Health Service (NHS) reached its lowest point, with only 21% of respondents expressing satisfaction with their general practitioner (GP) services. This decline is attributed to the reduced frequency of face-to-face consultations and the increase in remote consultations over the past few years. For instance, the proportion of telephone appointments rose from 13.4% in 2019 to 25.4% in 2025, indicating that changes in service delivery models significantly influence perceptions of quality and patient satisfaction.[2]

In Indonesia, the quality of healthcare services remains a major challenge in achieving optimal patient satisfaction. A study conducted at Mohammad Natsir Regional General Hospital in Solok reported that approximately 86% of patients were satisfied with neurology outpatient services, with the responsiveness dimension (speed and responsiveness of service) having the most significant influence on satisfaction (OR = 73.6). This finding demonstrates that promptness in service delivery is one of the most decisive factors affecting patient satisfaction.[3] Similarly, research at Dr. Loekmonohadi Regional General Hospital in Kudus found that several performance factors—such as competence, communication, service speed, initiative, and work environment affect patient satisfaction. Among these, the work environment of medical specialists, including facilities and workplace atmosphere, had the greatest impact on outpatient satisfaction.[1] Moreover, a comparison between public and private hospitals in Medan City revealed that private hospitals tend to achieve higher satisfaction scores, particularly in the SERVQUAL dimensions of tangibles, reliability, responsiveness, assurance, and empathy.[5] These findings confirm that improvements in healthcare quality directly correlate with higher levels of patient satisfaction across diverse contexts.

Patient satisfaction is influenced by many aspects, both medical and non-medical. The factors such as administrative procedures, healthcare provider communication, staff behavior and explains that administrative efficiency, communication effectiveness, staff empathy, environmental cleanliness, comfort of facilities, service speed, accessibility, and emotional support collectively shape patients' perceptions and experiences.[6] Positive patient experiences such as comfort in healthcare facilities, willingness to revisit for follow-ups, and likelihood of recommending services to others are strong indicators of successful service delivery.[7] Therefore, hospital

management must proactively innovate and implement continuous quality improvement programs across all service lines to maintain high satisfaction levels and ensure long-term institutional sustainability.

As a conceptual framework, this study refers to the Health System Responsiveness (HSR) theory developed by the World Health Organization (WHO) in 2000. The HSR concept emphasizes eight main domains of patient experience in interacting with the healthcare system. These eight non-clinical dimensions include: 1) dignity (respectful treatment without discrimination); 2) autonomy (patient involvement in medical decision-making); 3) confidentiality (guarantee of privacy and confidentiality of patient health information); 4) communication (delivery of clear, understandable, and complete medical information); 5) prompt attention (speed of staff in responding and providing services without delay); 6) quality of basic amenities (physical comfort of the facility, including cleanliness, availability of facilities, privacy, and comfort of the waiting room); 7) access to social support (ease of patient access to support from family/community or access to social support services during treatment); and 8) choice of provider (patient's freedom to choose a service provider or healthcare professional. WHO emphasizes that fulfilling these aspects will shape positive patient perceptions of the quality of services received, which ultimately increases overall patient satisfaction).[8]

Pertamina Hospital Pangkalan Brandan, as an accredited Class C hospital in Langkat Regency, continues to strengthen its commitment to quality improvement amidst increasing competition with other healthcare facilities. Preliminary observations by the researcher on 30 outpatients at the specialist polyclinic identified several indications of patient dissatisfaction with service quality. Some complaints included inadequate explanations from doctors and nurses regarding examinations, treatments, and procedures; delayed arrival of doctors without clear communication; limited staff communication leading to incomplete information about conditions and medications; inconsistent doctor schedules; inexperienced or less-skilled nurses; discomfort in the waiting room due to poor ventilation and the absence of air conditioning; untidy nurse appearances; unfriendly or discriminatory attitudes from some staff; slow responses to patient complaints; and difficulties in contacting healthcare personnel when needed. These findings highlight a clear gap between patient expectations and the actual quality of services delivered, potentially leading to dissatisfaction and decreased trust.

Given these challenges, hospitals are expected to systematically evaluate the quality of healthcare services from the perspective of patients to identify weaknesses that require improvement. Patient-centered evaluation is essential not only for improving satisfaction but also for achieving service excellence and operational sustainability. Therefore, the purpose of this study is to analyze the influence of healthcare service quality on patient satisfaction at the specialist polyclinic of Pertamina Hospital Pangkalan Brandan in 2025, by examining the eight dimensions of Health System Responsiveness (dignity, autonomy, confidentiality, communication, prompt attention, facility quality, social support, and provider choice), and identifying the most dominant factors influencing patient satisfaction. It is expected that the findings of this study will provide valuable insights and recommendations for improving hospital service quality based on dimensions that have the greatest impact on patient satisfaction.

METHODS

This research was a quantitative study with an explanatory research design (*causal explanation*) using a cross-sectional approach. The study was conducted at Pertamina Hospital Pangkalan Brandan, Langkat Regency, in 2025. The study population consisted of all outpatients at the specialist doctor's polyclinic of the hospital. Based on medical record data, the average number of outpatient visits to the specialist polyclinic was 2,061 patients per month; this figure served as the reference population for this study. The sample size was determined to be 177 patients, selected using a purposive sampling method. The inclusion criteria included outpatients at the specialist polyclinic who were willing to participate and had received services for at least one full visit. Each respondent provided written consent before completing the research questionnaire as a form of voluntary participation and compliance with research ethics principles.

The quality of healthcare services was measured using the eight dimensions of Health System Responsiveness (HSR) developed by the World Health Organization (WHO), which evaluate non-clinical aspects of service quality, including dignity, autonomy, confidentiality, communication, prompt attention, quality of basic amenities, access to social support, and choice of provider. Data were collected using a structured questionnaire consisting of three main sections: (1) demographic characteristics of respondents such as age, gender, and education level; (2) assessment statements for each dimension of service quality based on the WHO HSR framework; and (3) overall patient satisfaction statements. Each item was measured using a four- to five-point Likert scale to assess the level of agreement or satisfaction of respondents. The collected data were then analyzed through several stages, including descriptive analysis and multivariate analyses, to identify the relationships between variables and determine the most dominant dimension influencing patient satisfaction.

This study, which involves respondents as questionnaire participants, has fully complied with research ethics requirements. All procedures were conducted with respect for participants' rights, including informed consent, confidentiality, and voluntary participation, in accordance with applicable ethical standards and institutional guidelines.

RESULTS

Table 1 shows that most respondents were in the middle adulthood age range (41–60 years), namely 39.0%. In terms of gender, the majority of respondents were female (54.2%). Based on the last level of education, most respondents completed senior high school (50.3%). In terms of marital status, the majority of respondents were married (89.3%). Furthermore, based on the type of work they do daily, more than half of the respondents were unemployed (52.5%).

Table 1. The distribution of demographic characteristics of patients at the specialist doctor's polyclinic of Pertamina Hospital Pangkalan Brandan in 2025

Demographic variable	Category	Frequency	Percentage
Age	Early adulthood	51	28.8
	Middle adult	69	39.0
	Late adulthood	57	32.2
Gender	Male	81	54.2
	Female	96	45.8
Education	Junior high school (SMP)	57	32.2
	Senior high school (SMA)	89	50.3
	Higher education (diploma/bachelor)	31	17.5
Marital status	Married	158	89.3
	Not Married	19	10.7
Work	Work	84	47.5
	Doesn't work	93	52.5

Table 2. The distribution of healtcare service quality and patient satisfaction at the specialist doctor's polyclinic of Pertamina Hospital, Pangkalan Brandan in 2025

Variable	Category	Frequency	Percentage
Dignity	Good	86	48.6
	Not enough	91	51.4
Confidentiality	Good	79	44.6
	Not enough	98	55.4
Communication	Good	103	58.2
	Not enough	74	41.8
Autonomy	Good	88	49.7
	Not enough	89	50.3
Prompt attention	Good	109	61.6
	Not enough	68	38.4
Quality of basic facilities (quality of basic amenities)	Good	91	51.4
	Not enough	86	48.6
Access to social support	Good	90	50.8
	Not enough	87	49.2
Choice of service provider	Good	80	45.2
	Not enough	97	54.8
Patient satisfaction	Satisfied	111	62.7
	Not satisfied	66	37.3

Table 2 shows that the majority of respondents (51.4%) rated the dignity aspect as being in the poor category. In terms of confidentiality, the majority of respondents (55.4%) rated this aspect as lacking. In contrast to the two previous aspects, in the communication aspect, the majority of respondents (58.2%) gave a good rating. In regarding the autonomy aspect, the majority of respondents (50.3%) gave a rating in the poor category. Regarding the prompt attention aspect, the majority of respondents (61.6%) rated it in the good category. Regarding the quality of basic amenities, 91 respondents (51.4%) gave a good rating. In regarding access to social support, the majority of respondents (50.8%) stated that the access they received was in the good category. Furthermore, in terms of choice of service provider, 97 respondents (54.8%) gave a poor rating. Finally, regarding patient satisfaction with specialist doctor polyclinic services, the majority of respondents (62.7%) stated that they were satisfied.

Based on the results of research data processing, the influence of dignity on patient satisfaction at specialist doctor's polyclinics can be seen in the following table.

Table 3. The influence of healthcare service quality on patient satisfaction at the specialist doctors' polyclinic at Pertamina Hospital, Pangkalan Brandan, Langkat Regency in 2025

Healthcare service quality	Category	Patient satisfaction				p-value	OR
		Not satisfied		Satisfied			
		Frequency	Percentage	Frequency	Percentage		
Dignity	Not enough	44	48.4	47	51.6	0.002	2,723
	Good	22	25.6	64	74.4		
Confidentiality	Not enough	44	44.9	54	55.1	0.020	2,111
	Good	22	27.8	57	72.2		
Autonomy	Not enough	40	44.9	49	55.1	0.034	1,947
	Good	26	29.5	62	70.5		
Quick attention	Not enough	35	51.5	33	48.5	0.002	2,669
	Good	31	28.4	78	71.6		
Quality of basic facilities	Not enough	42	48.8	44	51.2	0.002	2,665
	Good	24	26.4	67	73.6		
Access to social support	Not enough	45	47.1	46	52.9	0.008	2,317
	Good	21	27.8	65	72.2		
Choice of service provider	Not enough	44	45.4	53	54.6	0.014	2,189
	Good	22	27.5	58	72.5		

Based on the p-values presented in the Table 3, all dimensions of healthcare service quality namely dignity, confidentiality, autonomy, quick attention, quality of basic facilities, access to social support, and choice of service provider showed statistically significant associations with patient satisfaction. Each dimension had a p-value

below the conventional threshold of 0.05, indicating that variations in these service quality factors significantly influence patient satisfaction levels at the facility.

Table 4. The influence of healthcare service quality on patient satisfaction at the specialist doctors' polyclinic at Pertamina Hospital, Pangkalan Brandan, Langkat Regency in 2025

Stage	Variables	B	p value	Exp(B)	95%CI for Exp(B)
First	Dignity	0.730	0.056	2,075	0.982-4.384
	Confidentiality	0.810	0.032	2,248	1,073-4,707
	Communication	0.864	0.020	2,372	1,142-4,923
	Autonomy	0.788	0.034	2,199	1,061-4,559
	Quick attention	1,057	0.007	2,877	1,337-6,190
	Quality of basic facilities	1,187	0.002	3,278	1,561-6,882
	Access to social support	0.892	0.017	2,441	1,171-5,088
	Choice of service provider	0.475	0.208	1,608	0.768-3.366
	Constant	-2,856	0,000	0.057	
Second	Dignity	0.778	0.040	2,178	1,036-4,579
	Confidentiality	0.796	0.034	2,216	1,061-4,628
	Communication	0.819	0.026	2,267	1,102-4,663
	Autonomy	0.808	0.029	2,244	1,085-4,643
	Quick attention	1,103	0.005	3,014	1,407-6,457
	Quality of basic facilities	1,226	0.001	3,406	1,629-7,120
	Access to social support	0.943	0.011	2,568	1,241-5,313
	Constant	-2,726	0,000	0.065	

The Table 4 shows that of the eight variables tested in the first stage multiple logistic regression, two had p-values >0.05, the largest of which was choice of provider (p=0.208). The choice of provider variable was subsequently removed from the first-stage logistic regression model. Based on the results of second stage multiple logistic regression test, the p-value of the model together was obtained at 0.000 < 0.05, which means that the seven variables used as a model in this study have a significant influence on patient satisfaction at the specialist doctor's polyclinic. The variables with the greatest influence in this study are the quality of basic amenities, the prompt attention variable, the access to social support variable, the communication variable, the autonomy variable, the confidentiality variable, and the dignity variable.

DISCUSSION

The results of this study generally support the hypothesis that improved healthcare quality will increase patient satisfaction. The WHO's seven non-clinical service dimensions were shown to be positively associated with patient satisfaction, in line with the Health System Responsiveness conceptual framework. This finding is consistent with previous studies. In neurology outpatient clinics, responsiveness (which corresponds to the prompt attention dimension in this study) significantly influenced patient satisfaction.[9] In Kudus hospital, the facility environment and physician performance (similar to the facility and speed of service dimensions) significantly influence patient satisfaction. This underscores the importance of maintaining the quality of service interactions and infrastructure to achieve optimal user satisfaction.[10]

Specifically, the dimensions of dignity, autonomy, confidentiality, and communication are elements related to respect for persons. This study found that these four aspects have a significant impact: when patients are treated with respect and kindness, involved in decision-making regarding their health, medical information is conveyed clearly, and privacy is guaranteed, patients tend to feel more satisfied. These results align with the principle that humane treatment and effective communication build trust and satisfaction. The good interpersonal communication between doctors and patients significantly improves patient compliance and satisfaction.[11] Previous study showed that nurses in Indonesia view maintaining patient dignity (e.g., not belittling patient complaints and respecting patient rights) as an essential part of nursing practice to achieve better patient satisfaction.[10] Therefore, efforts to improve service quality need to include communication training for healthcare workers, strengthening a culture of patient-centered care, and upholding patient confidentiality ethics at every level of service.

The prompt attention dimension relates to responsiveness and service waiting times. This study confirms that prompt and responsive service significantly contributes to satisfaction. Polyclinic patients value time, so doctor delays or long waits for medication can lower their assessment of the service. This finding is consistent with the WHO's concept of responsiveness and reinforces a report by Susanty et al. (2023),[3] that found service delays lead to dissatisfaction. Therefore, hospitals must ensure that queue systems and practice schedules are well-managed. The use of information technology (e.g., appointment systems or digital notifications) can be considered to shorten waiting times and increase patient certainty.

The quality of basic facilities emerged as the most dominant factor influencing patient satisfaction in this study. This illustrates that the condition of the hospital's physical facilities (comfortable waiting rooms, cleanliness, availability of supporting facilities such as toilets, parking areas, etc.) is directly perceived by patients and influences their experience. Patients seeking treatment naturally expect a clean, safe, and comfortable environment; when these expectations are met, satisfaction increases. These results align with SERVQUAL theory, where tangibles are a component of service quality that influences customer perceptions (Parasuraman, 1988 in Parasuraman, 2018). A local study by Dharmawan (2020),[13] also showed that facilities significantly influence patient satisfaction in the clinic. Interestingly, also reported that the work environment/facilities were the largest factor influencing satisfaction.[14-18] Therefore, improving the quality of facilities for example, maintaining room cleanliness, providing adequate seating, air conditioning, clean water, and clear directional

signs is an important strategy for improving patient satisfaction. Investments in improving physical facilities tend to have a direct positive impact on the patient experience.

Social support has also been shown to influence satisfaction in bivariate analysis. Patients who receive family support or easy access to support facilities (e.g., helpful staff, support groups, easy procedures for caregivers) tend to be more satisfied. Social support plays a role in providing a sense of emotional security and comfort for patients during the treatment process. This is especially relevant for patients with chronic illnesses or the elderly, who often come with family. Hospital services that accommodate the needs of patients' families (e.g., patient companion policies, appropriate family waiting rooms) will be more valuable in patient assessments. Ilkafah (2022)[6] emphasized that family involvement in care can improve the overall patient experience. Therefore, hospitals should consider facilities and policies that support the role of families in accompanying patients.

It's interesting to note that provider choice did not significantly impact patient satisfaction in the context of this study. This may be due to the limited real-world options available to patients in specialist polyclinics: typically, each specialty at Pertamina Hospital Pangkalan Brandan has only 1–2 doctors, leaving patients with few alternative providers. Patients tend to accept the doctor available on schedule without the expectation of being able to choose another doctor. Furthermore, culturally, patients in the region may have a submissive attitude toward medical authority, feeling that the most important thing is to receive care regardless of the doctor, so provider choice does not significantly impact their satisfaction. This phenomenon is supported by literature suggesting that in systems with gatekeepers or limited resources, patient choice is indeed limited and has little impact on satisfaction.[12] Therefore, improving satisfaction in hospitals like this is more effective by focusing on other factors (communication, responsiveness, facilities) rather than on provider choice, which is beyond the patient's control.

Overall, the findings of this study reinforce the importance of a comprehensive approach to improving the quality of healthcare services. WHO (2000) has emphasized that increasing the responsiveness of a health system must include improvements in various non-medical domains to better focus services on patient needs and experiences. Our study findings demonstrate that when aspects such as patient respect, communication, privacy, speed of service, and facility comfort are well-met, patient satisfaction is high. This supports view that a positive patient experience (comfort, feeling valued, and receiving prompt service) will lead to patient loyalty and impact hospital sustainability. Conversely, if one or more of these quality aspects are weak, patient satisfaction decreases and the potential for patients to complain or switch to other facilities increases.[19-21]

This study only assessed non-clinical service quality factors as determinants of satisfaction. Clinical factors such as treatment outcomes, the quality of medical interventions, or the clinical competence of staff were not directly measured. Furthermore, the cross-sectional design limits causal inference; patient satisfaction was measured at a single point in time and influenced by recent experiences, thus not examining long-term changes in satisfaction. Patient socio-demographic variables (e.g., age, education, economic status) may also influence satisfaction ratings but were not examined in depth in this study. Nevertheless, these results provide valuable insights into areas of care that need improvement. Future research is recommended to use qualitative or mixed-methods approaches to further explore the reasons behind patient ratings, including psychological, cultural, and clinical factors, for a more comprehensive understanding of patient satisfaction.

CONCLUSION

This study concluded that the quality of healthcare services significantly impacted patient satisfaction at the specialist clinic at Pertamina Hospital in Pangkalan Brandan. Seven of the eight dimensions of WHO health system responsiveness including dignity, autonomy, confidentiality, communication, prompt attention, quality of basic facilities, and access to social support were positively correlated with patient satisfaction These findings indicate that efforts to improve patient satisfaction need to focus on improving non-medical aspects of service directly experienced by patients, particularly improving the quality of infrastructure, speed of service, communication, and staff attitudes that respect patients.

REFERENCES

1. Um KH, Lau AK. Healthcare service failure: how dissatisfied patients respond to poor service quality. International Journal of Operations & Production Management. 2018 Apr 27;38(5):1245-70.
2. Holmgren AJ, Apathy NC, Crews J, Shanafelt T. National trends in oncology specialists' EHR inbox work, 2019-2022. JNCI: Journal of the National Cancer Institute. 2025 Jun;117(6):1253-9.
3. Salsabila TA, Purwanda E, Yuliaty F. Kualitas pelayanan sebagai faktor penentu kepuasan dan loyalitas pasien di rumah sakit. EKOMA: Jurnal Ekonomi, Manajemen, Akuntansi. 2024 Nov 4;4(1):1105-20.
4. Yakim AL, Suryoputro A, Widagdo L. The effect of specialist performance factors on outpatient satisfaction at RSUD dr. Loekmonohadi Kudus. VISIKES: Jurnal Kesehatan Masyarakat. 2019;18(2):12-18.
5. Ayura B, Nasution SW, Ginting R. Comparative analysis of service quality on patient satisfaction levels in government and private hospitals in Medan City in 2022. International Journal of Health and Pharmaceutical (IJHP). 2024;4(1):11–18.
6. Ilkafah. Kepuasan pasien sebagai indikator mutu dalam pelayanan kesehatan. Surabaya: UNAIR; 2022.
7. Bertawati. Profil pelayanan kefarmasian dan kepuasan konsumen apotik di Kecamatan Adiwerna Kota Tegal. Jurnal Penelitian Universitas Jambi Seri Humaniora. 2013;17(2):1–8.
8. Ramz MK. Level of burnout in staff, sustainable quality service and patient satisfaction in healthcare institutions during healthcare crisis. Report. 2022;8(2):82-88.

9. Yakim AL, Suryoputro A, Widagdo L. The effect of specialist performance factors on outpatient satisfaction at RSUD dr. Loekmonohadi Kudus. VISIKES: Jurnal Kesehatan Masyarakat. 2019;18(2):12-18.
10. Asmaningrum N, Tsai Y. Nurse perspectives of maintaining patient dignity in Indonesian clinical care settings: A multicenter qualitative study. Journal of Nursing Scholarship. 2020;50(5):482–491.
11. Dewi DKS, Jafar N, Ahri RA. Pengaruh hubungan komunikasi interpersonal dokter dengan kepatuhan pasien terhadap anjuran medis dan kepuasan layanan instalasi rawat inap Rumah Sakit Bhayangkara Makassar. Jurnal Kesehatan Tambusai. 2023;4(3):4386–4397.
12. Birk HO, Gut R, Henriksen LO. Patients' experience of choosing an outpatient clinic in one county in Denmark: results of a patient survey. BMC Health Serv Res. 2021;11(1):262.
13. Dharmawan BD. Pengaruh kualitas pelayanan dan fasilitas terhadap kepuasan pasien/konsumen Gadjahmada Medical Center (GMC) health center. Report. 2020;18(2):112-118.
14. Amankwah O, Choong WW, Boakye-Agyeman NA. The relationship between facilities management service quality and patients' health-care experience: the mediating effect of adequacy of health-care resource. Facilities. 2023 Jan 23;41(1/2):108-25.
15. Mbazor DN, Ajayi MA, Ige VO. Staff satisfaction with workplace facilities in the school of environmental technology, Federal University of Technology, Akure, Nigeria. Journal of Environmental Sciences and Technology (NIJEST). 2018 Mar;2(1):69-77.
16. Badawi AM, Rizal S. The influence of workload, work environment, and facilities on the performance of healthcare workers at the Bintuni Public Health Center in Bintuni District, Teluk Bintuni. Eduvest-Journal of Universal Studies. 2024 Aug 20;4(8):7434-45.
17. Subaedah S, Badawi AM, Rizal S. The influence of workload, work environment, and infrastructure facilities on the performance of health workers at the Bintuni Health Center In Bintuni Bay District. Eduvest: Journal of Universal Studies. 2024 Aug 1;4(8).
18. Abdullahi I, Wan Yusoff WZ. Influence of facilities performance on student's satisfaction in Northern Nigerian universities: results from interim study. Facilities. 2019 Feb 21;37(3/4):168-81.
19. Nguyen NX, Tran K, Nguyen TA. Impact of service quality on in-patients' satisfaction, perceived value, and customer loyalty: A mixed-methods study from a developing country. Patient Preference and Adherence. 2021 Nov 17:2523-38.
20. Fatima T, Malik SA, Shabbir A. Hospital healthcare service quality, patient satisfaction and loyalty: An investigation in context of private healthcare systems. International Journal of Quality & Reliability Management. 2018 Jun 4;35(6):1195-214.
21. Chen LH, Chen CH, Loverio JP, Wang MJ, Lee LH, Hou YP. Examining soft and hard attributes of health care service quality and their impacts on patient satisfaction and loyalty. Quality Management in Healthcare. 2024 Jul 1;33(3):176-91.