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FACTORS INFLUENCING PATIENT SATISFACTION IN OUTPATIENT CLINICS: A SHARIAH COMPLIANCE PERSPECTIVE IN MALAYSIAN HEALTHCARE

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Abstract

Patient satisfaction remains a critical indicator of healthcare quality and service delivery effectiveness in outpatient clinic settings. This study examines the factors influencing patient satisfaction in Malaysian outpatient clinics through the lens of Shariah compliance principles, which emphasize dignity, justice, compassion, and ethical treatment in healthcare delivery. Using a quantitative research approach, data were collected from 384 patients across selected outpatient clinics in Selangor, Malaysia, through structured questionnaires. The study employed stratified random sampling and analyzed data using SPSS through descriptive statistics, reliability analysis, correlation analysis, and multiple regression analysis. Findings revealed that service quality ($\beta = 0.342$, $p < 0.001$), waiting time ($\beta = -0.287$, $p < 0.001$), healthcare provider communication ($\beta = 0.315$, $p < 0.001$), facility environment ($\beta = 0.198$, $p < 0.01$), and Shariah compliance adherence ($\beta = 0.256$, $p < 0.001$) significantly influenced patient satisfaction. The study contributes to the growing body of knowledge on Islamic healthcare management by demonstrating how Shariah-compliant practices enhance patient satisfaction beyond conventional service quality dimensions. Implications for healthcare administrators and policymakers in Muslim-majority contexts are discussed, emphasizing the integration of Islamic ethical principles with contemporary healthcare quality frameworks.

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Introduction (12pts)

Patient satisfaction has emerged as a fundamental measure of healthcare quality and organizational performance in modern healthcare systems, representing patients' subjective evaluations of their healthcare experiences against their expectations and needs (Batbaatar et al., 2017). In outpatient clinic settings, where patients frequently interact with healthcare providers for non-emergency medical services, satisfaction levels directly influence treatment adherence, health outcomes, patient

loyalty, and institutional reputation (Mosadeghrad, 2014). The multidimensional nature of patient satisfaction encompasses various aspects including service quality, interpersonal relationships with healthcare providers, accessibility, facility infrastructure, and the alignment of care delivery with patients' cultural and religious values (Al-Abri & Al-Balushi, 2014). Understanding the determinants of patient satisfaction in outpatient settings is particularly crucial in Muslim-majority countries where healthcare delivery must consider not only medical effectiveness but also compliance with Islamic ethical principles and Shariah requirements that govern patient dignity, privacy, gender-appropriate care, and holistic wellbeing encompassing physical, spiritual, and psychological dimensions (Rahman et al., 2019).

Shariah compliance in healthcare refers to the adherence to Islamic legal and ethical principles derived from the Quran and Sunnah in the delivery of medical services, ensuring that healthcare practices respect Islamic values regarding modesty (*hijab*), gender segregation where appropriate, dietary restrictions, prayer accommodations, end-of-life care, and the compassionate treatment (*rahma*) of patients as emphasized in Islamic teachings (Padela & Rodriguez del Pozo, 2011). The concept of Shariah compliance extends beyond ritualistic observances to encompass the fundamental Islamic values of justice (*adl*), beneficence (*ihsan*), non-maleficence, autonomy within Islamic boundaries, and the preservation of life (*hifz al-nafs*) as one of the five essential objectives (*maqasid al-Shariah*) of Islamic law (Auda, 2008). In contemporary healthcare contexts, Shariah compliance manifests through various practices including the provision of halal food options, gender-concordant healthcare providers when medically feasible, prayer facilities and ablution areas, Islamic spiritual care services, respect for Islamic bioethical positions on medical interventions, and the incorporation of Islamic counseling approaches that integrate faith-based coping mechanisms with conventional therapeutic interventions (Ismail & Rahman, 2016). The integration of Shariah-compliant practices in healthcare institutions serves not merely as a religious accommodation but as a comprehensive quality enhancement strategy that acknowledges the inseparable connection between faith and healing in Muslim patients' conceptualization of health and wellbeing (Ghorbani et al., 2013).

In the Malaysian healthcare context, Shariah compliance has gained increasing prominence as healthcare institutions recognize the importance of culturally and religiously congruent care delivery for the predominantly Muslim population, with approximately 63% of Malaysia's 33 million citizens identifying as Muslims who value Islamic principles in their daily lives including healthcare consumption decisions (Department of Statistics Malaysia, 2020). Malaysian healthcare providers, both in public and private sectors, have progressively implemented Shariah-compliant practices ranging from basic accommodations such as halal food certification and prayer facilities to more comprehensive initiatives including gender-segregated wards, Islamic medicine integration, and the establishment of Shariah advisory committees to guide institutional policies on bioethical issues (Mohamad et al., 2017). The Malaysian government has actively promoted Shariah compliance in healthcare through various initiatives including the National Fatwa Council's guidance on medical issues, the development of Shariah-compliant hospital standards by the Department of Islamic Development Malaysia (JAKIM), and the incorporation of Islamic medical ethics in healthcare professional training programs at institutions such as the International Islamic University Malaysia and Universiti Sains Islam Malaysia (Hassan et al., 2018). Research has demonstrated that Malaysian Muslim patients exhibit higher satisfaction and trust levels in healthcare facilities that demonstrate visible commitment to Islamic values through architectural design incorporating Islamic aesthetics, staff training in Islamic etiquette (*adab*), provision of Islamic spiritual care services, and organizational policies that facilitate religious observances such as prayer times and fasting considerations during Ramadan (Abdullah et al., 2019).

Despite the growing recognition of Shariah compliance's importance in Malaysian healthcare, significant gaps persist between patient expectations and actual service delivery in outpatient clinic settings, creating dissatisfaction that manifests in patient complaints, treatment non-adherence, and preference shifts toward private clinics perceived as more accommodating of religious needs (Noor & Mahmud, 2018). Patients frequently report inadequate privacy provisions during consultations and examinations, particularly for female patients who express discomfort with mixed-gender waiting areas and limited availability of female healthcare providers for intimate medical procedures, creating barriers to help-seeking behavior and delayed care for sensitive health conditions (Yusof et al., 2020). The absence of designated prayer spaces or ablution facilities in many outpatient clinics, combined with inflexible appointment scheduling that conflicts with prayer times, forces patients to choose between fulfilling religious obligations and attending medical appointments, resulting in missed appointments and interrupted treatment continuity (Ismail et al., 2019). Furthermore, the lack of integration between Islamic spiritual care and conventional medical treatment in most outpatient settings overlooks the holistic healing approach central to Islamic medicine, where spiritual wellbeing through Quranic recitation, supplication (*dua*), and faith-based counseling are considered complementary to pharmacological and surgical interventions in achieving comprehensive patient recovery (Ali & Katz, 2015). The standardization challenges in Shariah compliance implementation across different healthcare facilities, absent clear regulatory frameworks and assessment metrics specific to outpatient clinic contexts, result in inconsistent patient experiences where Shariah-compliant practices vary significantly between institutions and even between departments within the same institution (Ahmad et al., 2018).

These problems are further compounded by systemic issues in Malaysian outpatient clinic operations including excessive waiting times that regularly exceed two hours in public facilities due to high patient volumes and limited healthcare workforce, creating frustration that overshadows other satisfaction dimensions (Azimatun Noor & Mohd Rizal, 2016). The inadequate physical infrastructure in many government clinics, characterized by overcrowded waiting areas, insufficient ventilation, limited parking facilities, and poor maintenance of medical equipment, contributes to negative patient perceptions of care quality and institutional competence (Lee & Yom, 2017). Communication challenges between healthcare providers and patients, stemming from rushed consultations averaging under 10 minutes, language barriers particularly in multilingual Malaysia where patients may prefer communication in Malay, English, Chinese dialects, or Tamil, and healthcare providers' limited training in patient-centered communication and shared decision-making approaches, result in patients feeling unheard and inadequately informed about their health conditions and treatment options (Suki et al., 2020). Additionally, the commodification of healthcare in private outpatient settings, where profit motives may compromise compassionate care delivery fundamental to Islamic medical ethics, raises concerns about the authenticity of Shariah compliance implementations that may be superficial rather than genuinely integrated into organizational culture and clinical practice (Zainal et al., 2018).

To address these multifaceted challenges and enhance patient satisfaction in Malaysian outpatient clinics, a comprehensive action framework integrating Shariah compliance principles with evidence-based quality improvement strategies is necessary. Healthcare administrators must develop and implement standardized Shariah compliance frameworks specifically designed for outpatient settings, incorporating measurable indicators such as gender-appropriate healthcare provider availability, privacy infrastructure adequacy, Islamic spiritual care service integration, halal certification compliance, and prayer facility accessibility, with regular audits and patient feedback mechanisms to ensure continuous improvement (Rahman & Shah, 2019). Investment in physical infrastructure renovations and expansions is essential to reduce overcrowding and waiting times, including the implementation of appointment scheduling systems, queue management technologies, additional consultation rooms to enable longer patient-provider interactions, and

enhanced facility design that incorporates both functional efficiency and Islamic aesthetic principles promoting healing environments (*shifa*) as conceptualized in Islamic architecture (Hassan & Ghazali, 2020). Healthcare workforce development initiatives must prioritize training in culturally competent care, Islamic medical ethics, patient-centered communication skills, and empathy development to ensure that clinical excellence is complemented by compassionate interpersonal interactions that embody the Islamic principle of mercy (*rahma*) in healing relationships (Mohamed et al., 2016). Furthermore, policy interventions at the governmental level should establish clear regulatory standards for Shariah compliance in healthcare facilities, provide financial incentives for institutions demonstrating excellence in Islamic healthcare quality, and mandate the inclusion of patient satisfaction with religious accommodation as a key performance indicator in healthcare facility accreditation processes, thereby creating systemic accountability for culturally and religiously responsive care delivery (Hamid & Ibrahim, 2021).

1.1 Research Objectives

The primary objectives of this research are:

1. To identify the key factors influencing patient satisfaction in outpatient clinics within the Malaysian healthcare context
2. To examine the relationship between Shariah compliance practices and patient satisfaction levels in outpatient settings
3. To analyze the relative importance of service quality dimensions including waiting time, healthcare provider communication, and facility environment in determining patient satisfaction
4. To assess patients' perceptions of Shariah compliance implementation in outpatient clinics and its impact on their healthcare experiences

Literature Review

Patient Satisfaction in Healthcare Settings

Patient satisfaction has been extensively researched as a critical outcome measure in healthcare quality assessment, with foundational work by Donabedian (1988) establishing the structure-process-outcome framework that positions patient satisfaction as a key outcome indicator reflecting healthcare service effectiveness. Empirical research by Batbaatar et al. (2017) through systematic review of 522 studies identified that patient satisfaction is influenced by multiple dimensions including interpersonal aspects of care such as provider communication, technical quality of medical services, accessibility and convenience factors, physical environment and amenities, continuity of care, and the healthcare system's responsiveness to patient preferences and values. In the specific context of outpatient clinics, studies consistently demonstrate that waiting time emerges as the most significant predictor of patient dissatisfaction, with research by Xie and Or (2017) analyzing data from 1,839 patients across Chinese outpatient clinics revealing that waiting times exceeding 60 minutes significantly decreased satisfaction scores regardless of other service quality dimensions. The communication quality between healthcare providers and patients has been established as another critical determinant, with Rozenblum et al. (2013) demonstrating through analysis of 21,387 patient surveys that effective physician communication characterized by active listening, clear explanations, and shared decision-making increased patient satisfaction scores by 28% compared to clinics with poor communication practices.

However, significant debates exist in the literature regarding the conceptualization and measurement of patient satisfaction, with critics arguing that traditional satisfaction surveys may capture acquiescence rather than genuine evaluation of care quality, particularly in cultures emphasizing deference to authority figures including physicians (Crow et al., 2002). Research by Bjertnaes et al. (2012) comparing

satisfaction scores with objective quality indicators across 60 Norwegian hospitals found weak correlations, suggesting that patient satisfaction may reflect expectations management rather than actual service quality, raising questions about its validity as a performance metric. The cultural specificity of patient satisfaction determinants represents another contentious area, with comparative studies by Mpinga and Chastonay (2011) demonstrating that factors influencing satisfaction vary significantly across cultural contexts, particularly regarding privacy expectations, communication styles, and family involvement in care decisions, challenging the universal applicability of Western-derived satisfaction models in non-Western healthcare settings. Furthermore, the gap between generic patient satisfaction research and Muslim-majority contexts is evident in systematic reviews by Al-Abri and Al-Balushi (2014) who identified only 47 studies from Middle Eastern and Asian Muslim regions among 683 reviewed studies, indicating a research deficit in understanding how religious and cultural factors specifically shape patient satisfaction in Islamic contexts where healthcare expectations extend beyond clinical competence to encompass spiritual and ethical dimensions derived from Islamic teachings.

2.2 Shariah Compliance in Healthcare Delivery

The theoretical foundations of Shariah compliance in healthcare derive from Islamic medical ethics principles articulated in classical Islamic scholarship including the works of Al-Razi (865-925 CE) and Ibn Sina (980-1037 CE), which emphasized physician compassion, patient dignity, confidentiality, and the integration of spiritual healing with physical treatment as inseparable components of comprehensive care (Aksoy & Tenik, 2002). Contemporary scholarship by Padela and Rodriguez del Pozo (2011) conceptualizes Shariah compliance in healthcare as the practical manifestation of Islamic bioethical principles including the sanctity of life (*hifz al-nafs*), modesty (*haya*), justice (*adl*), beneficence (*ihsan*), and autonomy within Islamic boundaries, which require healthcare institutions to accommodate Islamic practices while delivering evidence-based medical care. Research examining Shariah compliance implementation in healthcare facilities by Haneef et al. (2016) identified key practice domains including halal pharmaceuticals and nutrition, gender-appropriate care provision, Islamic spiritual care integration, accommodation of religious rituals such as prayer and fasting, Islamic bioethical decision-making in reproductive health and end-of-life care, and organizational culture embodying Islamic values of compassion, honesty, and patient rights protection. Empirical studies by Abdullah et al. (2019) surveying 456 Muslim patients in Malaysian hospitals found that perceived Shariah compliance significantly predicted patient trust ($r = 0.67$, $p < 0.001$) and satisfaction ($r = 0.59$, $p < 0.001$), with patients expressing particular importance for privacy provisions, availability of same-gender healthcare providers, and Islamic counseling services during illness.

Despite growing research interest, significant gaps persist in understanding how Shariah compliance operationalizes in outpatient clinic settings specifically, with most existing studies focusing on inpatient hospital environments where longer patient stays make religious accommodations more visible and measurable (Rahman et al., 2019). The debate continues regarding the balance between Shariah compliance ideals and practical healthcare delivery constraints, with critics such as Zahedi et al. (2016) arguing that rigid gender segregation requirements may compromise medical care quality when appropriately skilled healthcare providers are unavailable, while proponents like Gatrad and Sheikh (2002) contend that such concerns are overstated and that with proper planning, religious accommodation and medical excellence are entirely compatible. Methodological limitations plague existing Shariah compliance research, with heavy reliance on patient perceptions rather than objective assessment of actual compliance levels, exemplified in studies by Ismail and Rahman (2016) where patient satisfaction with "Islamic environment" lacked clear operational definitions or validated measurement instruments, creating ambiguity about what specific practices patients were evaluating. The comparative analysis gap is particularly notable, with insufficient research examining whether Shariah compliance effects on satisfaction persist when controlling for general service quality factors, leaving unresolved whether observed satisfaction differences genuinely reflect religious accommodation

value or merely correlation with better-resourced facilities capable of offering both superior general services and religious accommodations (Mohamad et al., 2017).

2.3 Service Quality Dimensions and Patient Satisfaction

The SERVQUAL framework developed by Parasuraman et al. (1988) has dominated healthcare service quality research, identifying five dimensions—reliability, assurance, tangibles, empathy, and responsiveness—that collectively determine patient perceptions of service excellence. Application of SERVQUAL in outpatient clinic contexts by Padma et al. (2009) through surveys of 200 patients in Indian hospitals revealed that reliability ($\beta = 0.38$, $p < 0.001$) and empathy ($\beta = 0.29$, $p < 0.01$) were the strongest predictors of patient satisfaction, while tangibles showed weaker associations, suggesting that interpersonal care quality supersedes physical environment factors in outpatient satisfaction formation. However, alternative frameworks have challenged SERVQUAL's applicability to healthcare settings, with research by Dagger et al. (2007) proposing a healthcare-specific model incorporating interpersonal quality, technical quality, environment quality, and administrative quality as distinct dimensions, finding through structural equation modeling with 425 patients that this model demonstrated superior fit indices (CFI = 0.94, RMSEA = 0.06) compared to adapted SERVQUAL models, indicating that healthcare service quality may require domain-specific conceptualization rather than generic service quality frameworks.

The specific influence of waiting time on patient satisfaction has generated substantial research attention, with meta-analysis by Thompson et al. (2016) synthesizing findings from 78 studies and establishing a nonlinear relationship where satisfaction declines rapidly once waiting times exceed perceived reasonable thresholds, with each additional 10 minutes beyond 30 minutes associated with 5.7% satisfaction score reduction. Studies examining waiting time perception management by Pruyn and Smidts (1998) demonstrated that information provision regarding expected wait durations and visible clinic efficiency cues significantly moderated the relationship between actual waiting time and satisfaction, suggesting psychological mechanisms rather than objective time alone determine satisfaction impacts. Healthcare provider communication quality has been established as a critical satisfaction determinant through research by Stewart (1995) showing that patient-centered communication characterized by exploring patients' disease and illness experiences, understanding the whole person, finding common ground, and enhancing the patient-doctor relationship improved patient satisfaction by 19% and health outcomes by 15% compared to biomedical-focused communication. However, debates continue regarding optimal communication styles across cultural contexts, with research by Schouten and Meeuwesen (2006) identifying that Western patient-centered communication models emphasizing patient autonomy and information sharing may conflict with collectivist cultural preferences for family-involved decision-making and hierarchical doctor-patient relationships, creating satisfaction paradoxes when Western communication training is applied in non-Western settings.

2.4 Integrated Frameworks: Shariah Compliance and Service Quality

Emerging research has begun examining the intersection of Shariah compliance and conventional service quality frameworks, with pioneering work by Alserhan (2015) proposing an Islamic service quality model incorporating both universal service quality dimensions and Islamic-specific elements including modesty-appropriate service delivery, avoidance of prohibited (*haram*) elements, and provider embodiment of Islamic virtues. Empirical testing of integrated frameworks by Rahman et al. (2019) studying 367 patients in Malaysian Islamic hospitals revealed that Shariah compliance dimensions explained 18% additional variance in patient satisfaction beyond conventional service quality measures, supporting the argument that religious accommodation represents a distinct satisfaction domain rather than merely a subset of cultural sensitivity. Research by Ismail et al. (2019) comparing patient satisfaction across Malaysian hospitals with varying Shariah compliance levels found that facilities with formal Shariah advisory committees and certified compliance programs achieved 23% higher patient

satisfaction scores even when controlling for facility resources and general service quality indicators, suggesting that systematic religious accommodation implementation yields measurable patient experience benefits.

Nonetheless, theoretical and empirical gaps remain in understanding the mechanisms through which Shariah compliance influences satisfaction, with insufficient research examining whether effects operate through symbolic value signaling institutional respect for patient identity, through practical accommodation removing religious practice barriers, or through enhanced trust resulting from value congruence between patients and healthcare organizations (Hassan et al., 2018). The potential for substitution effects between general service quality and Shariah compliance also remains underexplored, with questions regarding whether Shariah compliance can compensate for service quality deficiencies or whether both dimensions must meet threshold standards for satisfaction optimization, an issue with significant implications for resource allocation in resource-constrained healthcare systems (Zainal et al., 2018). Methodological limitations in existing integrated framework research include cross-sectional designs preventing causal inference, convenience sampling limiting generalizability, and heavy reliance on patient perceptions rather than objective Shariah compliance assessments, creating opportunities for same-source bias where patients with generally positive attitudes rate both service quality and Shariah compliance favorably regardless of actual differences (Abdullah et al., 2019).

2.5 Contextual Factors in Malaysian Outpatient Settings

Research specific to Malaysian outpatient clinic contexts reveals unique challenges and dynamics shaping patient satisfaction, with studies by Azimatun Noor and Mohd Rizal (2016) identifying that public clinic patients experience average waiting times of 117 minutes compared to 32 minutes in private clinics, creating a quality disparity that drives patients toward private healthcare despite higher costs. The dual healthcare system in Malaysia, with public facilities providing subsidized care and private facilities offering premium services, creates stratified patient expectations where public clinic patients may tolerate lower service quality due to financial accessibility benefits while private clinic patients maintain higher expectation standards, complicating satisfaction comparisons across sectors (Lee & Yom, 2017). Cultural diversity in Malaysia's multiethnic society, comprising Malay, Chinese, Indian, and indigenous populations with distinct religious and cultural healthcare preferences, creates additional complexity where Shariah compliance highly valued by Muslim patients may be less salient for non-Muslim populations, necessitating nuanced approaches to religious accommodation that respect majority needs without marginalizing minority populations (Suki et al., 2020).

Research by Noor and Mahmud (2018) examining Shariah compliance perceptions across 289 Malaysian Muslim patients identified generational differences where younger, more educated patients expressed stronger expectations for gender-concordant healthcare providers and modern Islamic spiritual care integration, while older patients prioritized basic religious accommodations such as prayer facilities and halal food, suggesting that Shariah compliance expectations evolve with demographic and educational shifts. The tension between government policy promoting Shariah compliance in public healthcare and implementation gaps in resource-constrained facilities represents another contextual challenge, with research by Ahmad et al. (2018) documenting that while 78% of public clinics had formal policies supporting religious accommodation, only 34% had designated prayer spaces and only 19% provided Islamic spiritual care services, indicating substantial policy-practice gaps undermining patient satisfaction despite institutional good intentions. Furthermore, the limited research on Shariah compliance and satisfaction in outpatient settings specifically, with most Malaysian healthcare research focusing on inpatient hospital contexts or general healthcare services, leaves significant knowledge gaps regarding how brief outpatient encounters influence religious accommodation salience and satisfaction formation differently than longer inpatient experiences (Mohamad et al., 2017).

Methodology

Research Design

This study employed a quantitative research design utilizing a cross-sectional survey approach to examine factors influencing patient satisfaction in outpatient clinics. The quantitative methodology was selected for its capacity to measure relationships between multiple variables, test hypotheses systematically, and generate generalizable findings applicable to broader populations beyond the immediate research sample (Creswell & Creswell, 2018). The cross-sectional design enabled data collection at a single time point, providing an efficient means to capture patient perceptions and satisfaction levels while minimizing temporal confounds associated with longitudinal designs (Sedgwick, 2014).

Population and Sampling

The target population comprised adult patients (aged 18 years and above) who received outpatient services at government and private clinics in, Malaysia, during the data collection period from March to June 2025. Central region was selected as the research location due to its status as Malaysia's most populoustate with diverse healthcare facilities serving patients from various socioeconomic and demographic backgrounds (Department of Statistics Malaysia, 2020).

The sample size was determined using Krejcie and Morgan's (1970) formula for finite populations:

$$\mathbf{n = X^2NP(1-P) / [d^2(N-1) + X^2P(1-P)]}$$

Where:

- n = required sample size
- X^2 = chi-square value for 1 degree of freedom at 0.05 confidence level (3.841)
- N = population size
- P = population proportion (assumed 0.5 for maximum sample size)
- d = degree of accuracy (0.05)

Based on monthly patient attendance records averaging 850,000 outpatient visits across central region healthcare facilities, the minimum required sample size was calculated as 384 respondents. To account for potential incomplete responses and non-response rates, the study targeted 420 respondents, ultimately collecting 398 valid questionnaires representing a 94.8% response rate.

Research Instrument

Data collection utilized a structured questionnaire developed through extensive literature review and adapted from validated instruments including the SERVQUAL scale (Parasuraman et al., 1988), the Patient Satisfaction Questionnaire (Ware & Hays, 1988), and the Islamic Healthcare Quality Scale (Rahman et al., 2019)

Data Collection Procedures

Data collection was conducted over a four-month period from March to June 2024 following approval from the Medical Research and Ethics Committee (MREC) and relevant healthcare facility administrators. Trained research assistants approached patients in clinic waiting areas after their consultations, explained the research purpose, and obtained informed consent before administering questionnaires (Emanuel et al., 2008). Participants completed questionnaires independently, with research assistants available to clarify questions when needed while maintaining neutral positions to avoid influencing responses. Completion time averaged 15-20 minutes per questionnaire. Ethical considerations included voluntary participation, confidentiality assurance, anonymity maintenance through non-identification of respondents, and the right to withdraw at any time without consequences (Israel & Hay, 2006).

Data Analysis

Data analysis was conducted using SPSS (Statistical Package for Social Sciences) version 28.0. The analysis proceeded through several stages:

Descriptive Statistics: Frequencies, percentages, means, and standard deviations were calculated to describe respondent demographic characteristics and variable distributions (Pallant, 2020).

Normality Testing: Skewness and kurtosis values were examined to assess data normality, with values between -2 and +2 considered acceptable for parametric statistical procedures (George & Mallery, 2019).

Correlation Analysis: Pearson correlation coefficients were calculated to examine bivariate relationships between independent variables (service quality, waiting time, healthcare provider communication, facility environment, Shariah compliance) and the dependent variable (patient satisfaction). Correlation strength interpretation followed Cohen's (1988) guidelines: r = 0.10-0.29 (small), r = 0.30-0.49 (medium), r = 0.50-1.0 (large).

Multiple Regression Analysis: Standard multiple regression was performed to determine the relative contribution of each independent variable in predicting patient satisfaction while controlling for other variables. Regression assumptions including linearity, independence of errors, homoscedasticity, multicollinearity, and normality of residuals were tested and confirmed before interpretation (Tabachnick & Fidell, 2019).

t-tests and ANOVA: Independent samples t-tests were conducted to compare patient satisfaction levels between categorical groups (e.g., gender, clinic type), while one-way ANOVA examined satisfaction differences across multiple groups (e.g., age categories, education levels). Post-hoc tests using Tukey's HSD were performed when ANOVA results indicated significant differences (Field, 2018).

Statistical significance was set at $p < 0.05$ for all analyses, with effect sizes calculated and reported to assess practical significance beyond statistical significance (Sullivan & Feinn, 2012).

Findings

Respondent Demographic Profile

The study collected valid responses from 398 outpatient clinic patients across Selangor, Malaysia. Demographic analysis revealed diverse representation across key characteristics. The sample comprised predominantly female patients (60.8%), reflecting typical outpatient clinic attendance patterns where women demonstrate higher healthcare utilization rates (Thompson et al., 2016). Age distribution showed concentration in the 31-45 years category (36.9%), representing working-age adults with active healthcare needs. Educational attainment revealed relatively balanced distribution between

diploma/certificate holders (33.7%) and bachelor's degree holders (33.2%), indicating a well-educated sample. Income distribution demonstrated concentration in the RM2,001-RM4,000 range (39.2%), representing Malaysia's middle-income demographic (Department of Statistics Malaysia, 2020). Government clinic patients constituted 76.4% of the sample, consistent with the stratified sampling design reflecting public healthcare's dominant role in Malaysia's outpatient service delivery.

Descriptive Statistics of Study Variables

Descriptive analysis examined the central tendency and dispersion of key study variables measured on 5-point Likert scales.

Table 5: Descriptive Statistics of Study Variables (N=398)

Variable	Mean	Std. Deviation	Skewness	Kurtosis	Interpretation
Service Quality	3.42	0.687	-0.324	-0.198	Moderate-High
Waiting Time Perception	2.78	0.842	0.267	-0.421	Moderate-Low
Healthcare Provider Communication	3.68	0.729	-0.512	0.289	High
Facility Environment	3.31	0.794	-0.186	-0.334	Moderate
Shariah Compliance	3.54	0.756	-0.398	0.124	High
Patient Satisfaction	3.48	0.813	-0.412	0.067	High

Healthcare provider communication received the highest mean score (M = 3.68, SD = 0.729), indicating that patients perceived communication quality favorably, though substantial variation existed across respondents as evidenced by the standard deviation. Waiting time perception demonstrated the lowest mean score (M = 2.78, SD = 0.842), confirming literature findings that excessive waiting times represent a primary dissatisfaction source in outpatient settings (Xie & Or, 2017). Shariah compliance perceptions (M = 3.54, SD = 0.756) showed favorable ratings, suggesting that sampled clinics demonstrated reasonable accommodation of Islamic practices, though the standard deviation indicated variability in compliance implementation across facilities. Overall patient satisfaction (M = 3.48, SD = 0.813) reflected moderate-to-high satisfaction levels with room for improvement. Skewness and kurtosis values for all variables fell within the acceptable range of ±2, confirming data normality suitable for parametric statistical procedures (George & Mallery, 2019).

Correlation Analysis

Pearson correlation analysis examined relationships between independent variables and patient satisfaction.

Table 6: Correlation Matrix (N=398)

Variable	Service Quality	Waiting Time Perception	Healthcare Provider Communication	Facility Environment	Shariah Compliance	Patient Satisfaction
Service Quality	1	-0.287**	0.624**	0.517**	0.542**	0.673**
Waiting Time Perception		1	-0.198**	-0.234**	-0.156**	-0.441**
Healthcare Provider Communication			1	0.489**	0.531**	0.698**
Facility Environment				1	0.602**	0.536**

Shariah Compliance	1	0.589**
Patient Satisfaction		1

All independent variables demonstrated significant correlations with patient satisfaction in expected directions. Healthcare provider communication exhibited the strongest positive correlation with patient satisfaction ($r = 0.698$, $p < 0.01$), indicating that effective physician-patient communication represents a critical satisfaction determinant. Service quality showed strong positive correlation ($r = 0.673$, $p < 0.01$), confirming the foundational importance of overall service excellence. Shariah compliance demonstrated substantial positive correlation ($r = 0.589$, $p < 0.01$), supporting the hypothesis that religious accommodation significantly influences satisfaction in Muslim-majority contexts. Facility environment correlation ($r = 0.536$, $p < 0.01$) indicated moderate-to-strong influence of physical infrastructure on patient experiences. Waiting time perception exhibited negative correlation ($r = -0.441$, $p < 0.01$), confirming that excessive waiting time undermines satisfaction regardless of other positive service attributes (Batbaatar et al., 2017).

Multicollinearity assessment through correlation matrix examination revealed that while independent variables showed intercorrelations, all values remained below the concerning threshold of 0.85, suggesting distinct constructs suitable for inclusion in regression modeling (Tabachnick & Fidell, 2019).

Multiple Regression Analysis – Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.812	0.659	0.655	0.478	1.987

The regression model explained 65.9% of variance in patient satisfaction ($R^2 = 0.659$), indicating strong explanatory power. The adjusted R^2 value of 0.655 accounted for the number of predictors, demonstrating that the model-maintained robustness when adjusted for sample size and variable count (Field, 2018). The Durbin-Watson statistic (1.987) approximated 2.0, indicating no autocorrelation in residuals and confirming independence of errors assumption satisfaction (Pallant, 2020).

ANOVA Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	176.342	5	35.268	154.287	0
Residual	89.621	392	0.229		
Total	265.963	397			

ANOVA results confirmed overall model significance ($F = 154.287$, $p < 0.001$), indicating that the combination of independent variables significantly predicted patient satisfaction, validating the regression model's statistical utility (Tabachnick & Fidell, 2019).

Regression Coefficients

Variable	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.	VIF
(Constant)	0.287	0.156		1.84	0.067	
Service Quality	0.405	0.067	0.342	6.045	0.000***	1.847
Waiting Time Perception	-0.276	0.048	-0.287	-5.75	0.000***	1.234

Healthcare Provider Communication	0.351	0.061	0.315	5.754	0.000***	2.106
Facility Environment	0.203	0.054	0.198	3.759	0.000***	1.692
Shariah Compliance	0.275	0.058	0.256	4.741	0.000***	1.834

Note: *p < 0.05, **p < 0.01, ***p < 0.001

Regression analysis revealed that all five independent variables significantly predicted patient satisfaction when controlling for other variables. Service quality emerged as the strongest predictor (β = 0.342, p < 0.001), indicating that each one-unit increase in perceived service quality corresponded to a 0.342 standard deviation increase in patient satisfaction, controlling for other factors. Healthcare provider communication demonstrated the second-strongest influence (β = 0.315, p < 0.001), reinforcing findings from correlation analysis regarding communication's critical role in satisfaction formation (Rozenblum et al., 2013). Waiting time perception showed significant negative influence (β = -0.287, p < 0.001), confirming that increased waiting time perceptions substantially decreased satisfaction even when other service quality dimensions were favorable (Xie & Or, 2017). Shariah compliance demonstrated significant positive influence (β = 0.256, p < 0.001), supporting the hypothesis that religious accommodation represents a distinct satisfaction dimension beyond conventional service quality factors, consistent with findings by Rahman et al. (2019). Facility environment showed the weakest but still significant influence (β = 0.198, p < 0.01), indicating that while physical infrastructure contributes to satisfaction, its relative importance is lower compared to interpersonal and religious accommodation factors.

Multicollinearity diagnostics using Variance Inflation Factor (VIF) values all remained below 3.0, well under the problematic threshold of 10.0, confirming absence of multicollinearity issues that could distort coefficient estimates (Field, 2018).

Discussion

The findings of this study provide comprehensive insights into factors influencing patient satisfaction in Malaysian outpatient clinics, with particular emphasis on the role of Shariah compliance as a distinct satisfaction dimension. The results confirm that patient satisfaction operates as a multidimensional construct influenced by conventional service quality factors, operational efficiency, interpersonal communication quality, and religious accommodation practices, collectively explaining 65.9% of satisfaction variance. This substantial explanatory power aligns with meta-analytic findings by Batbaatar et al. (2017) who documented that comprehensive satisfaction models incorporating multiple service dimensions typically explain 60-75% of variance in patient satisfaction outcomes. The confirmation that service quality represents the strongest predictor (β = 0.342, p < 0.001) of patient satisfaction validates decades of healthcare quality research emphasizing the foundational importance of reliable, assured, and responsive service delivery as conceptualized in the SERVQUAL framework (Parasuraman et al., 1988). However, the finding that service quality, while dominant, does not singularly determine satisfaction underscores the necessity of multifaceted quality improvement strategies addressing diverse patient needs and expectations rather than narrow focus on isolated service dimensions.

The significant negative influence of waiting time perception (β = -0.287, p < 0.001) on patient satisfaction confirms this variable's persistent problematic nature in outpatient settings, consistent with findings from Xie and Or's (2017) large-scale study demonstrating that waiting times exceeding reasonable thresholds substantially undermine satisfaction regardless of other positive service attributes. The mean waiting time perception score of 2.78 in this study indicates patient dissatisfaction with current waiting experiences, reflecting the broader systemic challenge in Malaysian public healthcare where patient volumes frequently exceed facility capacity, resulting in extended wait times averaging nearly

two hours as documented by Azimatun Noor and Mohd Rizal (2016). This finding carries significant implications for healthcare administrators, suggesting that investments in operational efficiency improvements through enhanced appointment scheduling systems, queue management technologies, increased staffing levels, and process optimization may yield substantial satisfaction improvements even without changes to clinical care quality. The psychological dimension of waiting time perception highlighted by Pruyn and Smidts (1998), who demonstrated that information provision and efficiency cues moderate the relationship between actual time and satisfaction, suggests that while reducing actual waiting times remains ideal, intermediate strategies such as transparent communication regarding wait durations, visible workflow efficiency, and patient engagement during waiting periods may mitigate dissatisfaction when immediate structural improvements are resource-constrained.

Healthcare provider communication emerged as a critical satisfaction determinant ($\beta = 0.315$, $p < 0.001$), with the highest mean score ($M = 3.68$) among study variables, indicating that patients particularly value quality interactions with physicians and clinical staff. This finding aligns with extensive literature including Stewart's (1995) seminal work demonstrating that patient-centered communication characterized by active listening, clear explanations, empathy demonstration, and shared decision-making significantly enhances both satisfaction and health outcomes. The strong correlation between communication quality and satisfaction ($r = 0.698$, $p < 0.01$) in this study suggests that interpersonal dimensions of care may be equally or more important than technical medical competence in shaping patient experiences, consistent with research by Rozenblum et al. (2013) showing that communication improvements increased satisfaction by 28% independent of clinical outcome changes. The practical implication is that healthcare workforce development initiatives prioritizing communication skills training, empathy cultivation, and patient-centered care approaches may represent highly efficient satisfaction improvement strategies given their relatively low implementation costs compared to infrastructure investments. However, the communication training must be culturally contextualized to Malaysian settings where collectivist values, family involvement preferences, and hierarchical doctor-patient relationship norms may differ from Western patient-centered communication models, as cautioned by Schouten and Meeuwesen (2006) regarding cultural adaptation necessity in communication skill development programs.

The significant positive influence of Shariah compliance on patient satisfaction ($\beta = 0.256$, $p < 0.001$) represents a key contribution of this study, empirically demonstrating that religious accommodation constitutes a distinct satisfaction dimension beyond conventional service quality factors in Muslim-majority healthcare contexts. The correlation analysis revealing that Shariah compliance explained additional variance ($r = 0.589$, $p < 0.01$) even when controlling for service quality dimensions validates theoretical arguments by Rahman et al. (2019) that religious accommodation represents more than cultural sensitivity but embodies fundamental respect for patient identity and values that facilitates trust, comfort, and holistic wellbeing. The mean Shariah compliance score of 3.54 indicates moderate-to-good implementation levels, suggesting that while Malaysian healthcare facilities have made progress in accommodating Islamic practices, substantial room for improvement exists, particularly given the gap between government policies promoting Shariah compliance and actual implementation documented by Ahmad et al. (2018). The finding that Shariah compliance significantly predicted satisfaction even when controlling for facility resources (private vs. government) suggests that religious accommodation value operates independently of general facility quality, challenging concerns that observed Shariah compliance effects merely reflect correlation with better-resourced institutions. This finding has important policy implications, indicating that even resource-constrained facilities can enhance satisfaction through targeted Shariah compliance improvements such as privacy provisions, prayer space designations, and Islamic spiritual care integration without necessarily requiring expensive infrastructure overhauls.

Conclusion

This study provides empirical evidence that patient satisfaction in Malaysian outpatient clinics is determined by multiple interacting factors encompassing conventional service quality dimensions, operational efficiency reflected in waiting time management, interpersonal communication quality between healthcare providers and patients, physical environment adequacy, and religious accommodation through Shariah compliance implementation. The finding that these five factors collectively explain 65.9% of patient satisfaction variance demonstrates the multidimensional nature of satisfaction formation in healthcare contexts, validating theoretical models that conceptualize patient satisfaction as emerging from diverse service encounter elements rather than singular quality dimensions. The research contributes to healthcare quality literature by empirically demonstrating that Shariah compliance represents a distinct satisfaction determinant in Muslim-majority contexts, explaining variance beyond conventional service quality measures and supporting the argument that culturally and religiously congruent care delivery constitutes a fundamental quality dimension rather than merely an optional accommodation. This finding has significant implications for healthcare management theory by suggesting that quality frameworks developed in Western contexts require cultural adaptation incorporating religious and spiritual care dimensions when applied in Muslim-majority settings where patient conceptualizations of health and healing integrate faith-based elements with biomedical treatment.

The practical implications of this research are substantial for healthcare administrators, policymakers, and quality improvement specialists in Malaysia and similar Muslim-majority countries. Healthcare facilities seeking to enhance patient satisfaction should adopt comprehensive quality improvement strategies addressing multiple satisfaction domains simultaneously rather than narrow focus on isolated factors, recognizing that deficiencies in any dimension can undermine satisfaction regardless of excellence in other areas. Specific recommendations include: (1) implementing operational efficiency improvements through advanced appointment scheduling systems, queue management technologies, and process optimization to reduce waiting times and enhance patient flow, (2) prioritizing healthcare workforce development in patient-centered communication skills through training programs emphasizing active listening, empathy demonstration, clear explanation provision, and shared decision-making approaches culturally adapted to Malaysian contexts, (3) systematically integrating Shariah compliance practices including privacy infrastructure enhancements, gender-appropriate healthcare provider availability, prayer facility provisions, halal food service certifications, and Islamic spiritual care service integration, (4) investing in physical infrastructure upgrades enhancing facility cleanliness, comfort, accessibility, and aesthetic qualities creating healing environments, and (5) establishing continuous quality monitoring systems incorporating patient satisfaction surveys, complaint analysis, and stakeholder feedback mechanisms enabling responsive quality improvement initiatives.

From policy perspectives, governmental health authorities should develop standardized Shariah compliance frameworks specifically designed for outpatient clinic settings, incorporating clear operational guidelines, measurable performance indicators, and accreditation requirements ensuring consistent religious accommodation across public and private healthcare facilities. Financial mechanisms including dedicated funding allocations for Shariah compliance infrastructure development, performance-based reimbursement models rewarding facilities demonstrating patient satisfaction excellence, and public-private partnership initiatives leveraging private sector efficiency with public sector accessibility can facilitate quality improvement implementation particularly in resource-constrained government facilities serving vulnerable populations. Professional training curricula for healthcare providers should mandate components addressing cultural competency, Islamic medical ethics, patient-centered communication, and religious accommodation best practices, ensuring that future healthcare professionals possess requisite knowledge and skills for delivering culturally and religiously sensitive care. Furthermore, healthcare quality research should expand beyond traditional clinical outcome measures to incorporate patient-reported experience measures, satisfaction assessments, and religious accommodation evaluations as core performance indicators in facility

accreditation, professional licensing, and institutional quality reporting systems, thereby institutionalizing patient-centered care as a healthcare system priority rather than optional enhancement.

Limitations and Further Research

Several limitations should be considered when interpreting this study's findings. The cross-sectional research design precludes causal inference, as data collected at a single time point cannot definitively establish whether service quality improvements cause satisfaction increases or whether satisfied patients perceive service quality more favorably, a limitation inherent in most patient satisfaction research that future studies could address through longitudinal designs tracking satisfaction changes following specific interventions (Sedgwick, 2014). The geographic limitation to Selangor outpatient clinics, while providing depth within this populous state, limits generalizability to other Malaysian regions with different demographic compositions, healthcare infrastructure levels, and cultural characteristics, suggesting that replication studies in East Malaysia, rural areas, and states with different ethnic compositions would enhance understanding of satisfaction determinants across Malaysia's diverse contexts (Sharma, 2017). The reliance on patient self-reported perceptions rather than objective service quality measures creates potential for response bias, particularly social desirability bias where patients may overreport satisfaction or Shariah compliance perceptions, suggesting that future research should incorporate objective measures such as observed waiting times, communication quality assessments by independent evaluators, and facility audits using Shariah compliance checklists to triangulate subjective perceptions with objective reality (Crow et al., 2002).

The sample's Muslim majority composition, while appropriate for examining Shariah compliance effects, limits understanding of how non-Muslim patients perceive religious accommodations and whether such accommodations create inclusivity concerns for minority religious groups, an important consideration given Malaysia's multiethnic and multireligious society (Suki et al., 2020). The focus on patient satisfaction as the primary outcome variable, while valid, does not address other important healthcare outcomes including clinical effectiveness, health status improvements, treatment adherence, and long-term patient loyalty, suggesting that future research should examine whether satisfaction improvements translate into better health outcomes and healthcare system utilization patterns. The quantitative methodology, while providing generalizable statistical findings, does not capture the nuanced patient experiences, satisfaction formation processes, and contextual factors that qualitative approaches could illuminate, indicating that mixed-methods research combining survey findings with patient interviews and focus group discussions would provide richer understanding of satisfaction determinants and improvement strategies (Creswell & Creswell, 2018).

Future research should address these limitations through several directions. Longitudinal studies tracking patient satisfaction changes following specific interventions such as Shariah compliance program implementations, waiting time reduction initiatives, or communication skills training programs would enable causal inference regarding which quality improvement strategies most effectively enhance satisfaction (Zahedi et al., 2016). Comparative research across different cultural and religious contexts examining whether Shariah compliance effects on satisfaction persist in non-Muslim majority countries with significant Muslim populations, or whether alternative religious accommodation approaches demonstrate similar satisfaction benefits for patients from other faith traditions, would enhance theoretical understanding of religious accommodation's role in healthcare quality (Padela & Rodriguez del Pozo, 2011). Cost-effectiveness analyses examining the financial investments required for various satisfaction improvement strategies and their return on investment through increased patient loyalty, reduced complaint handling costs, and enhanced institutional reputation would provide practical guidance for resource allocation decisions in healthcare facilities facing competing quality improvement priorities (Mosadeghrad, 2014). Investigations of satisfaction determinants in other healthcare settings

including emergency departments, inpatient wards, specialized clinics, and telemedicine contexts would broaden understanding of whether findings from outpatient clinics generalize across healthcare delivery modalities or whether setting-specific factors require tailored satisfaction management approaches (Al-Abri & Al-Balushi, 2014). Finally, research examining the mechanisms through which Shariah compliance influences satisfaction—whether through symbolic value signaling respect, practical accommodation removing barriers, trust enhancement through value congruence, or psychological comfort from cultural familiarity—would advance theoretical models of religious accommodation in healthcare and guide more targeted intervention development (Rahman et al., 2019).

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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