

**THE RELATIONSHIP BETWEEN PATIENT EXPERIENCE AND
PATIENT LOYALTY MEDIATED BY TRUSTWORTHINESS AND
OUTCOME QUALITY IN HEALTHCARE SERVICES: A CASE AT
PRIVATE CLINIC IN BATAM**

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ABSTRACT

This study explores the relationship between patient experience and patient loyalty, with trustworthiness and outcome quality as mediators. In Indonesia, health clinics have been segmented since introducing the national health insurance scheme called BPJS. While universal healthcare was achieved, some patients are willing to pay a premium for better care experiences. Understanding patient loyalty and its antecedents is crucial for maintaining a competitive advantage in private clinics. The study was conducted at a private clinic in Batam, involving 117 patients who visited between October and December 2023. Data were collected using a modified version of the GS-PEQ (Generic Short-Patient Experience Questionnaire) and further analyzed with Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS4® software. Ten relationships were explored between patient experience, trustworthiness, outcome quality, and patient loyalty. The findings reveal that patient experience positively impacts patient loyalty, which is mediated by trustworthiness. Outcome quality mediates the relationship between patient experience and trustworthiness but does not significantly mediate the relationship between patient experience and patient loyalty. This study highlights the importance of patient experience and trustworthiness in private clinics and suggests the use of GS-PEQ to measure patient experience and achieve competitive advantage.

Keywords: *Patient experience, Patient loyalty, Trustworthiness, Outcome quality, Healthcare Services, Healthcare Management.*

INTRODUCTION

The patient loyalty concept is crucial for the survival and success of healthcare ventures, through better quality of care.¹ A loyal patient may not only adhere to

medical treatment but will also recommend the clinics to others in need.² In recent years, patient experience has become a key quality indicator in quality of care alongside *patient safety* and *clinical*

effectiveness.³ In the era of consumerism, patients have transitioned from passive users to active participants in their health management, making their perspectives central to determining the quality of care, especially in clinics.⁴

Patient experience has gained significant attention in the last decade, often equated with patient satisfaction, engagement, centeredness, and activation.⁵ Patient experience is not an interchangeable concept (though complexly related to *patient satisfaction* in measuring quality of care, as satisfaction may reflect personal expectation, rather than the quality of care itself. ⁶ The Beryl Institute defines patient experience as the sum of all *interactions* shaped by an organization's *culture* that influence *patient perceptions* throughout their *care journey*⁷. It's the "what" and "hows" of happening in the episode of care.^{8,9}

Studies by Kondansani¹⁰, Lan *et al*¹¹, and Fatima *et al*¹² show that, patient loyalty had a common theme using service quality and satisfaction as its antecedent, using SERVQUAL as its framework. Goetz¹³ finding shows that Switzerland's patient loyalty is related to understanding patients' priorities in the context of general practices, and measuring it could provide feedback and improve quality in the practice. Though Patient Reported Experience Measures (PREM) were developed years ago, some do not differentiate well between the construct of patient experience and *patient satisfaction*, however contain nuance of both⁸. The main distinction between them is patient experience is likely to uncover differences in the quality of care of individual patients, while patient satisfaction is likely to be influenced by cultural differences in their respective expectations⁸.

Recent studies on patient experience have advanced towards its measurements. Efforts had been done in several developed countries in making patient experience a practical measurement. To assess the patient experience, PREM and Patient Reported Outcome Measure (PROM) could be used in conjunction. While PROM gathers aspects of treatment based on patient perception⁹, PREM gathers views of patient experience of care⁶, allowing feedback to providers on aspects that need to be improved or maintained. As of the writing of this study, there are only a few research combining PREM and PROM in various settings. Studies by Swain & Kar¹⁴ proposed a conceptual framework deriving from SERVQUAL¹⁵ in hospitals, but haven't been tested empirically. Studies by Benson & Benson¹⁶ develop a generic short-form survey, combining PREM and PROM called *HowRwe*. As a national effort in Norway, Sjetne¹⁷ constructed a generic PREM to approach different populations and settings called GS-PEQ. Studies by Friedel⁸, give better clarity on the usage of PREM across countries, whereas Scandinavian countries use it as a part of healthcare reforms, the USA uses it as a financial incentive, U.K and Germany on the other hand leave it to the public (doctors, and patients) to draw conclusions.

Still, a gap remains in capturing patient loyalty, with patient experience and outcome measurement as its core determinant, especially within private clinics context in Indonesia. Clinics are facing competitive challenges locally, and even nationally, as the distance between cities is cut short¹⁰. Moreover private clinics in Indonesia, had been segmented after the implementation of national social insurance scheme called *Badan Penyelenggaran Jaminan Sosial* (BPJS),

where it transform clinic to become capitation based clinics and the others focusing on Out of Pocket (OOP) payment scheme. Therefore the later model, need to formulate an effective strategy to survive and strive in these competitive environment, as patient loyalty concept are become crucial to survive and strive. This study aims to fill this gap by conducting a study on a private clinic in Batam, Indonesia to explore the interplay of these variables. Batam was chosen because geographically it's situated at Singapore Strait, making access internationally quite near, shaping a competitive landscape. Furthermore, because of its exposure to international waters, Batam ranks 4th in Indonesia's Human Development Index resulting in good economic growth in the region, having better education, health, and better living standards.¹⁸ The private clinics that is chosen were facing competitive challenges on acquiring new clients, retaining their loyalty.

Recent studies have used GS-PEQ in measuring patient experiences,¹⁹⁻²¹ GS-PEQ has good reliability and validity although it's a generic measurement. GS-PEQ has 10 short questions that represent seven domains of experience (Clinician Services, Information, Patients Involvement, Organization, accessibility, General Outcome, and Incorrect Treatment). With just 150 words, this instrument has a Flesch-Kincaid readability score 8.8 with a reading age of 13 years old.²² Making it suitable to be administered to wide range of respondent in clinical settings.

The novelty of this study lies in its complex interplay between patient experience and patient loyalty. Trustworthiness is a critical mediator, potentially enhancing the impact of patient

experience and outcome quality on patient loyalty. Previous literature has emphasized the importance of trustworthiness, noting that positive interactions and effective communication with providers significantly contribute to building trust^{23,24}. However, the specific mechanisms through which trustworthiness influences patient loyalty, especially in private clinics settings, require further exploration.

Outcome quality in healthcare is measured using PROM, which is commonly used to assess specific medical intervention outcomes. While traditional measures focus on adherence to specific clinical guidelines, they may not reflect the outcome perceived by patients². This study considers outcome quality regarding symptom improvement, recovery, and other patient-perceived benefits. It is particularly relevant in primary care clinics which mainly cover acute illnesses and chronic disease management.

The study focuses on the antecedents of patient loyalty, emphasizing how *patient's experience* in using healthcare services influences their future behavior. The conceptual framework of the study is based on the Theory of Planned Behavior (TPB)²⁵, which posits that attitude, subjective norm, and perceived behavioral control influence an individual's intention toward a certain behavior, subsequently determining the behavior itself. Behavioral intention and perceived behavioral control (PBC) play critical roles, with a positive attitude towards a behavior increasing the intention to perform it. A positive attitude toward patient experience predicts patients' intention to revisit healthcare providers.

Based on the description above, this study addresses the following research questions: Does patient experience and

outcome quality have a positive and significant influence on trustworthiness and patient loyalty? Does outcome quality mediate the relationship between patient experience and trustworthiness, and subsequently, patient loyalty? The research aims to determine the direct and indirect effects of patient experience on patient loyalty and provide actionable insights for clinic management to enhance patient experience and patient loyalty.

METHODS

This study employs a quantitative and cross-sectional survey design to examine the relationships between patient experience, trustworthiness, outcome quality, and patient loyalty. The research was conducted at a private clinic in Batam, which is located in the center of the city, though having a comprehensive facility such as a medical laboratory, pharmacy services, dental services, and vaccination services, they are struggling amidst the competition. A total of 117 respondents participated in the survey, selected based on criteria such as age above 18 years old, they are patients of this clinic or the family of the patient and have met with the doctor, not on chronic health checkup sessions, and good general health status between October to December 2023.

In this study, a power analysis was conducted using G*Power software to determine the adequate sample size to have a significant effect with high power. A number of values are determined first, namely the f^2 (*effect size*) in the medium category of 0.15 with a power of 90%, and α (α) of 0.05 with a total of 4 predictor variables. From the calculation results, the minimum sample size was 108 respondents. Before the questionnaires were distributed,

informed consent was given to respondents. This study had been ethically approved by an ethical committee from Pelita Harapan University (No. 026/MARS/EC-NOV/XI/2023). It was found that 117 respondents met the requirements, therefore data from all 117 respondents was used as the total sample in this study.

Respondents rated their experience on a Likert scale ranging from 1 to 6, where 1 represents "strongly disagree," and 6 represents "strongly agree." This scale allowed for nuanced responses and facilitated detailed analysis of the data.²⁶

PREM was collected using GS-PEQ (*Generic Short-Patient Experience Questionnaire*), translated and validated for the Indonesian context. The GS-PEQ covers seven domains: clinician services, information, patient involvement, organization, accessibility, clinical outcomes, and incorrect treatment.¹⁷ Trustworthiness measurements were adopted from Kim *et al.*²⁷ Outcome quality measurements were adopted from Pighin²⁹, while patient loyalty was modified from Zeithaml.¹⁵

The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS4® software. PLS-SEM was chosen due to its robustness in handling complex models with multiple constructs and its ability to provide reliable results even with smaller sample sizes. The analysis involved two main stages: assessing the measurement model for reliability and validity and evaluating the structural model for explanatory and predictive capabilities.²⁸

The reliability and validity of the measurement model were rigorously tested using composite reliability, Cronbach's alpha, average variance extracted (AVE), and discriminant validity. All constructs

achieved an AVE value greater than 0.5, indicating valid constructs.²⁹ Furthermore, the structural model was comprehensively evaluated based on path coefficients, R-squared values, and the significance of relationships between the constructs, providing a detailed understanding of the underlying relationships. This comprehensive evaluation confirmed the strength and suitability of the model for the research objectives, ensuring dependable and valid results that can be confidently interpreted and applied within the context of this study.

RESULT AND DISCUSSION

The respondent data for this research was obtained from questionnaires distributed in October - December 2023 to 117 respondents. The demographic profile is presented in Table 2. Based on the data collected, it is known that most respondents fall into the millennial group (28-43 years) (62%) and Generation Z (<27 years) (31%). This aligns with the 2020 population census³⁰, which shows that millennials and Generation Z dominate the current population. Both genders are equally represented in our study, with an equal number of male (50%) and female (50%) respondents. These respondents have a reasonably good educational level, with the majority achieving Bachelor's degrees (44%) and High School (43%). Their occupations are dominated by self-employed (50%), company employees (26%), housewives (14%), and others.

Sixty-seven percent of respondents have an income above the minimum yearly wage in Batam City (Rp. 56,220,600), and 24% have a pretty good income (above 120 million per year).

When patients enlist clinics as their first contact, it's a good sign they are loyal and have the clinic in mind. Most respondents (71%) are making this clinic their first contact when they needed health services. It can also be seen that on average they visit health facilities 2 to 4 times a year (62%), some even visit 5 to 8 times (21%), and some have their first experience seeking treatment at this clinic (13%). Most respondents returned to health facilities not because of chronic illnesses that required long-term monitoring, but rather acute illnesses that could be resolved in 1-2 visit sessions (91%).

In the initial stage, data analysis is carried out by measuring the outer model, or what is known as the measurement model. The outer model measurements in this study were obtained through analysis using SmartPLS4® software by running the calculate menu, namely the *PLS-Algorithm*. The indicators in this model are *reflective* of the construct, so the results of the outer model analysis of this research are compiled and reported in 4 sections sequentially, namely 1) *indicator reliability* (outer loading), 2) *construct reliability* (Cronbach's alpha and composite reliability), 3) *construct validity* (average variance extracted or AVE), and 4) *discriminant validity* (heterotrait-monotrait ratio).²⁴

Table 2: Respondent Profile

Description	Category	Amount (n)	Percentage (%)
Age	20-29	36	31
	30-39	48	41
	40-49	24	21

Description	Category	Amount (n)	Percentage (%)
Gender	50-59	7	6
	60-69	2	2
	Man	59	50
	Woman	58	50
Education Level	Elementary School	5	4
	Junior High School	7	6
	Senior High School	50	43
	Bachelor / S1	51	44
	Magister / S2	2	2
	Others	2	2
Occupation	Self-Employed	59	50
	Private Employed	30	26
	Civil Servant	1	1
	Housewife	16	14
	Pension	1	1
	Other	10	9
Income in the 1 last year	<60 million	39	33
	60-120 million	49	42
	120-250 million	25	21
	> 250 million	4	3
This Clinic is the first clinic to contact	Yes	83	71
	No	34	29
Visit in the last 1 year	Not yet	2	2
	1 visit	15	13
	2 s/d 4 visit	73	62
	5 s/d 8 visit	24	21
	8 s/d 12 visit	3	3
	Have chronic diseases (e.g. high blood pressure, diabetes, thyroid / other diseases that require long-term monitoring.	No	106
	Yes	11	9

The results of the PLS-SEM analysis provide insights into the relationships between patient experience, trustworthiness, outcome quality, and patient loyalty. The measurement model demonstrated strong reliability and validity, outlier loadings of all indicator are above 0.708 with composite reliability values exceeding 0.7 and AVE values above 0.5 for all constructs. These findings indicate that the constructs were reliable and valid by their respective indicators.

Subsequently, a discriminant validity test was conducted using HTMT Matrix to see if the variables had well-discriminated indicators. The results were that all construct had value below 0.9, meaning it is well discriminated between construct. Thus, the research model had been tested for its reliability and validity and could proceed with the structural model/inner model analysis and relationship testing.

At this stage, an evaluation is first carried out to assess if there's a colinearity

issue on the variables. The results showed a Variance Influence Factor (VIF) < 5 for the 6 paths in the model. This indicated that the

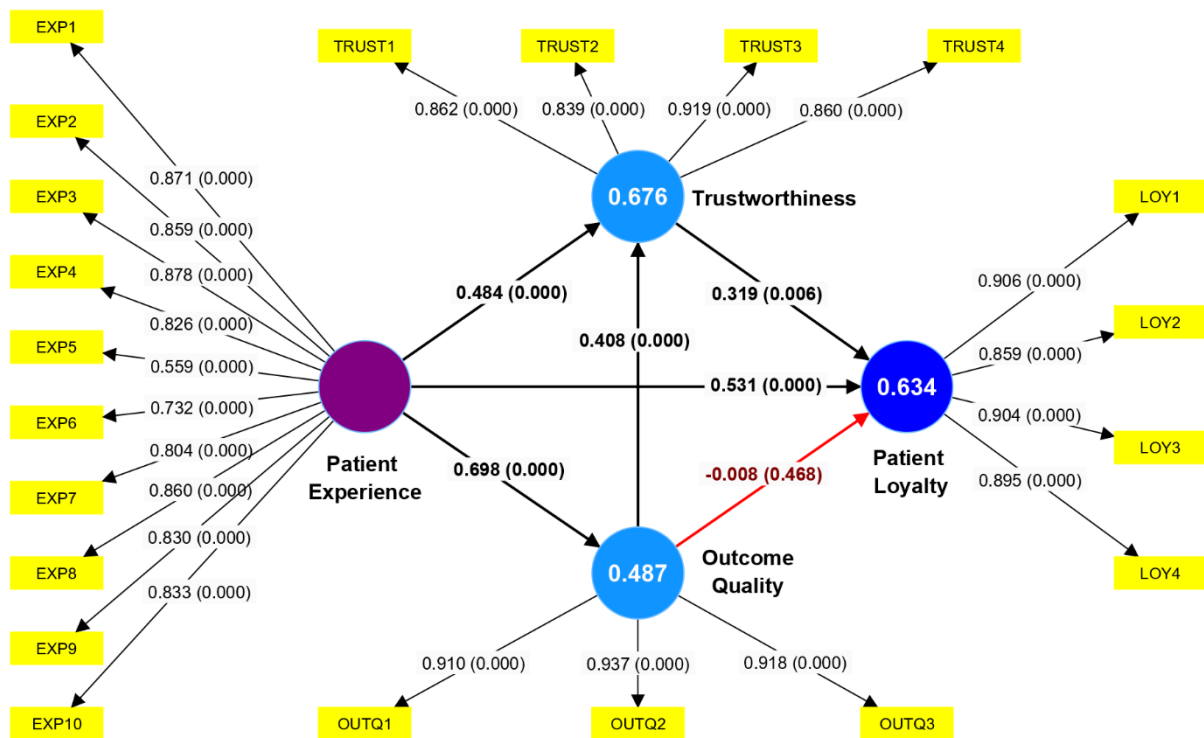
relationships among these variables did not have multicollinearity problems.

Table 2. *Effect Size (f^2) of the Model*

Path	f^2 Value	Effect Size
Patient experience → Trustworthiness	0.372	Large Effect Size
Patient experience → Outcome quality	0.948	Large Effect Size
Patient experience → Patient Loyalty	0.288	Medium Effect Size
Outcome quality → Trustworthiness	0.264	Medium Effect Size
Outcome quality → Patient Loyalty	0.000	No Significant Effect
Trustworthiness → Patient Loyalty	0.090	Small Effect Size

The *effect size (f^2)* values for the structural model show that patient experience has a medium-large effect size on all other variables. These findings show the importance of patient experience in a clinical setting. Trustworthiness has a small effect size on patient loyalty. The absence of significant effect sizes in the paths from outcome quality to patient loyalty suggests that other factors may affect these relationships.

Evaluation continued on the predictive ability of the model by the orientation of using PLS-SEM in the form of a predictive explanatory. In the inner model (figure 1), you can find the p-value for each path below 0.05 as a reference for the significance level limit. Thus, it can be seen that almost all paths in this research model have a significant relationship, these findings implicate that it can be generalized to the population level.



The structural model revealed that patient experience has a significant positive effect on trustworthiness ($\beta = 0.484$, $p < 0.001$), this suggests that enhancing patient experience can substantially increase the trustworthiness of the clinic. Trustworthiness, in turn, has a significant positive effect on patient loyalty ($\beta = 0.319$, $p < 0.001$). This highlights the positive mediation role of trustworthiness in fostering patient loyalty.

Outcome quality was found to partially mediate the relationship between patient experience and trustworthiness ($\beta = 0.284$, $p < 0.001$). This indicates that a good patient experience, coupled with high-quality outcomes, strengthens the trustworthiness of the clinic. However,

outcome quality did not significantly mediate the relationship between patient experience and patient loyalty ($\beta = -0.006$, $p = 0.469$). This suggests that while good outcomes enhance trustworthiness, they do not directly lead to patient loyalty without the trust factor.

The result also showed that patient experience directly impacts outcome quality ($\beta = 0.698$, $p < 0.001$) and patient loyalty ($\beta = 0.531$, $p < 0.001$). These findings underscore the importance of providing a positive patient experience to achieve better outcome quality and foster patient loyalty. This dual impact emphasizes the need for clinics to focus on patient-centric approaches. The following is a detailed summary of the results of Path Coefficients and its Significance:

Table 3. Summary of Path Coefficients

Relationship	Path Coefficient	p-values	Result
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1. Patient experience → Trustworthiness	0.484	0,000*	Supported
2. Patient experience → Outcome Quality → Trustworthiness	0.284	0,000*	Supported
3. Patient experience → Outcome quality	0.698	0,000*	Supported
4. Patient experience → Patient Loyalty	0.531	0,000*	Supported
5. Patient experience → Trustworthiness → Patient Loyalty	0.154	0,016*	Supported
6. Patient experience → Outcome Quality → Patient loyalty	-0.006	0,469	Unsupported
7. Outcome quality → Trustworthiness	0.408	0,000*	Supported
8. Trustworthiness → Patient loyalty	0.319	0,468	Supported
9. Outcome quality → Trustworthiness → Patient Loyalty	0.130	0,016*	Supported
10. Outcome quality → Patient Loyalty	-0.008	0,006*	Unsupported

*=significant at p-value= 0,05

The results of path analysis, can be observed that relationship between patient experience and trustworthiness have a direct and indirect effect. These results are inline with previous research.^{33, 34} Outcome quality has proven to be mediating the relationship between patient experience and trustworthiness. Outcome quality can be seen to also have been positively and significantly influences by patient experience. Previous research on outcome quality by Doyle *et al* and Kim *et al* also found that better patient experience will positively affect outcome quality.^{3,27}

The influence of patient experience on patient loyalty in this model has 3 main paths; (1) Direct effect of patient experience on patient loyalty; (2) indirect effect, which is mediated by (a) trustworthiness, (b) outcome quality. This research shows that the direct effect of the patient experience on patient loyalty has a significant relationship, and is supported by trustworthiness, while outcome quality has

a negative coefficient value, which means it has the opposite direction.

There is also an influence of outcome quality on trustworthiness. This is described by Pighin *et al*³¹, Lien *et al*²⁴ and Zhu & Cao.³² In this model, 2 paths connect outcome quality to patient loyalty; (1) direct effect shows non-significant results. However, the mediating role of trustworthiness between outcome quality and patient loyalty has a significant relationship. This shows that outcome quality alone does not have a significant effect on patient loyalty, but if it is mediated by trustworthiness, the relationship becomes statistically significant. This can be accepted because good outcome quality, consistently, over time will lead to trustworthiness and ultimately patient loyalty. Good outcomes may also be expected in private primary care settings with mostly acute diseases therefore respondents emphasize trustworthiness over outcome quality. There is also an

influence of trustworthiness on patient loyalty inline with previous research by Platonova *et al*³³, Zhou *et al*³⁴, Liu *et al*³⁵ and Huang *et al*³⁶.

Trustworthiness was found to mediate the relationship between outcome quality and patient loyalty ($\beta = 0.130$, $p < 0.01$). This highlights that trustworthiness plays a full mediating role in the relationship. The direct effect of outcome quality on patient loyalty was not significant ($\beta = -0.008$, $p = 0.468$). This reinforces the notion that trust plays a crucial mediating role in the relationship between outcome quality and patient loyalty.

The study's findings align with previous research, indicating that patient experience and trustworthiness are pivotal in shaping patient loyalty. Enhancing patient experience through effective communication, personalized care, and reducing waiting times can build trust and, consequently, loyalty. Clinics should focus on continuous patient experience evaluations and apply them as feedback for healthcare providers to stay relevant to the needs of the patient.

The theoretical and practical implications of these findings suggest that clinics should prioritize patient experience and trust-building strategies to foster long-term loyalty. The study contributes to the existing literature by providing empirical evidence on the mediating roles of trustworthiness and outcome quality in the relationship between patient experience and patient loyalty in a private primary care setting.

The results of this study provide insights into the complex relationships between patient experience, outcome quality, trustworthiness, and patient loyalty in a private primary healthcare setting. The

findings highlight the importance of patient experience in fostering trust and patient loyalty. Positive patient experiences lead to higher outcome quality and enhanced trustworthiness, which is crucial for building patient loyalty.

The mediation analyses reveal that trustworthiness is a better significant mediator than outcome quality in the relationship between patient experience and patient loyalty. This underscores the critical role of trustworthiness in the healthcare provider-patient relationship. While high-quality clinical outcomes are essential, they alone do not suffice to ensure patient loyalty. Instead, *trust* acts as the critical factor that bridges the gap between good clinical outcomes and sustained patient loyalty.

CONCLUSION

This study demonstrates that patient experience is a critical determinant of patient loyalty, mediated by trustworthiness. Outcome quality also plays a role to patient loyalty through building trust, and does not directly lead to patient loyalty without the trust factor. Underscoring the need for a patient-centered approach to care provided. The novelty of this study emphasizes the importance of improving patient experience in private clinic settings. Patient experience can be measured in Indonesia using GS-PEQ as a routine measurement. In order to better predict patient loyalty, PROM has also needed to be taken into account as clinical result is paramount on building trust through transparent communication and empathy as it is crucial for managing patient loyalty. By understanding and addressing these factors, clinics can grow and strive in the competitive environment, by managing patient loyalty.

These findings suggest that providers should prioritize improving patient experience and trustworthiness to build and maintain long-term loyalty. It is essential to acknowledge the study's limitations, such as the lack of a heterogeneous sample, and future research should expand the diversity of the sample and include multiple clinics to generalize the findings further. Additionally, exploring other potential variables can provide a deeper understanding of factors influencing patient loyalty.

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