

THE EFFECT OF BED OCCUPANCY RATE (BOR) ON PATIENT SATISFACTION AND ITS IMPLICATIONS FOR PATIENTS' REVISIT INTENTION AT SUMBER SENTOSA HOSPITAL MALANG



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Abstract

Bed Occupancy Rate (BOR) is an important indicator for assessing the efficiency of bed utilization and the operational workload of inpatient hospital services. At Sumber Sentosa Hospital Malang, BOR values have fluctuated and have not yet reached the ideal range, which in several periods was accompanied by a decline in patient satisfaction and repeat visit intention. This condition indicates weaknesses in inpatient capacity management that may affect service quality and patient loyalty. Therefore, this study aims to analyze the effect of BOR on patient satisfaction and its implications for inpatient repeat visit intention at Sumber Sentosa Hospital Malang. This study employed a quantitative method using descriptive and verificative approaches. The population consisted of inpatients at Sumber Sentosa Hospital Malang, with respondents selected through purposive sampling. Data were collected using questionnaires that had been tested for validity and reliability. The data were then analyzed using path analysis to examine direct and indirect effects among the research variables. The results indicate that BOR has a positive and significant effect on patient satisfaction. Patient satisfaction also has a positive and significant effect on repeat visit intention. In addition, BOR directly influences repeat visit intention and indirectly affects it through patient satisfaction as a mediating variable. These findings confirm BOR management is essential for sustained inpatient service quality.

Keywords: Bed Occupancy Rate, Patient Satisfaction, Repeat Visit Intention, Hospital

INTRODUCTION

Hospitals play a strategic role as providers of comprehensive individual healthcare services, including inpatient, outpatient, and emergency care, as regulated by Law No. 17 of 2023 on Health. With functions in treatment and recovery, hospitals serve as the backbone of the national referral system, ensuring accessibility and continuity of tiered healthcare services. Hospital classification and licensing are governed by Minister of Health Regulation No. 56 of 2014, emphasizing service standards and infrastructure requirements to ensure optimal and integrated operations within regional and national health systems.

Maintaining patient satisfaction remains a major challenge, especially in an era of rising expectations and competition among healthcare providers. Regulation No. 71 of 2013 highlights patients' rights to quality, fast, and safe services, as well as clear information regarding procedures and costs. However, implementation is often constrained by limited human resources, inadequate infrastructure, and inefficient queuing systems. Another challenge is sustaining patient loyalty, reflected in their willingness to revisit the same hospital. Studies show that data security, continuity of care, and loyalty programs contribute to long-term trust, though these efforts are often hindered by unintegrated information systems and inconsistent staffing policies.

A key operational factor affecting satisfaction and loyalty is the Bed Occupancy Rate (BOR). A BOR exceeding the ideal threshold ($>85\%$) may lead to overcrowding, increasing risks such as patient safety issues, hospital-acquired infections, and medical errors due to staff overload. Conversely, a low BOR ($<60\%$) indicates inefficiency, increasing fixed costs without corresponding revenue. Both extremes can negatively impact hospital reputation, as patients may avoid overcrowded hospitals or question the quality of underutilized ones. Therefore, proper BOR management is essential. Strategies such as dynamic scheduling, real-time capacity monitoring, and inter-unit coordination are needed to balance operational efficiency and service quality. BOR also directly influences patient experience, particularly waiting time and physical comfort. High BOR often leads to longer queues and reduced service responsiveness, while overcrowding may compromise cleanliness, privacy, and overall patient comfort.

Research consistently shows that patient satisfaction is a strong predictor of revisit intention. High satisfaction enhances trust, recommendations, and the likelihood of returning. However, sustained high BOR without service improvement can erode trust and reduce perceived reliability. In Indonesia, studies integrating BOR, patient satisfaction, and revisit intention remain limited. Most research examines only two variables, leaving a gap in understanding their combined effects. This study addresses that gap by examining: (1) the effect of BOR on inpatient satisfaction, and (2) the impact of satisfaction on revisit intention. The findings are expected to provide empirical support for hospital management, particularly Sumber Sentosa Hospital Malang, in optimizing bed capacity and improving service quality.

Sumber Sentosa Hospital Malang is a healthcare institution located in Malang, East Java. Established in 1997 (originating from a clinic in 1971), it operates as a Type D general hospital with 51 beds, providing inpatient, outpatient, emergency, and supporting medical services. The hospital is accredited and committed to continuous quality improvement. Its vision is to become a preferred hospital offering professional, high-quality, and patient-centered care, supported by values of compassion and professionalism. Data over the past five years show significant fluctuations in BOR. From very low levels in 2021 (16.67%) to a notable increase in 2024 (52.21%), utilization has improved but remains below the ideal

60–85% range. Patient satisfaction slightly declined from 85.02% (2021) to 81% (2024), while revisit rates dropped significantly from around 45–48% (2021–2023) to 25.55% in early 2025. This suggests a mismatch between increased occupancy and service quality. Operational issues during high BOR periods, such as longer waiting times, rapid bed turnover, and reduced continuity of care, likely contribute to declining satisfaction and loyalty. The data indicate a potential negative relationship between rising BOR and long-term patient outcomes.

REVIEW OF LITERATURE

Bed Occupancy Rate (BOR)

Bed Occupancy Rate (BOR) is a hospital performance metric established by the Ministry of Health of the Republic of Indonesia through Minister of Health Regulation No. 47 of 2021. It is defined as the ratio of occupied inpatient beds to the total number of available beds within a certain period, typically measured on a monthly basis. The regulation also outlines the Minimum Service Standards for hospitals, emphasizing that facility utilization must be carried out efficiently and effectively to support the continuity of healthcare services. This framework provides uniform guidelines for hospitals nationwide in terms of capacity planning and service quality evaluation.

Patient Satisfaction

Bed Occupancy Rate (BOR) is a hospital performance indicator established by the Ministry of Health of the Republic of Indonesia through Minister of Health Regulation No. 47 of 2021. BOR is defined as the ratio of occupied inpatient beds to the total number of available beds within a certain period, typically measured on a monthly basis. The regulation also sets out the Minimum Service Standards for hospitals, emphasizing that facility utilization must be carried out efficiently and effectively to ensure the sustainability of healthcare services. This framework provides uniform guidelines for hospitals across Indonesia in capacity planning and service quality evaluation.

Revisit Intention

Patients' revisit intention is defined as the willingness of patients to return and use healthcare services at the same institution in the future. Hossain and Leo (2021) further explain that revisit intention reflects patients' overall perception of the value of healthcare services. They state that this intention is influenced not only by medical outcomes, but also by emotional experiences and the trust developed during the treatment process. Based on their study, patients who positively evaluate medical communication, procedural safety, and non-medical support are twice as likely to return to the same hospital. Hossain and Leo emphasize that patients' revisit intention is an important strategic indicator for hospital management in designing patient retention programs.

Research Hypothesis

1. There is a positive and significant effect of BOR on patient satisfaction at Sumber Sentosa Hospital Malang.
2. Patient satisfaction has a positive and significant effect on patients' revisit intention at Sumber Sentosa Hospital Malang.
3. BOR has a direct positive and significant effect on patients' revisit intention at Sumber Sentosa Hospital Malang.
4. BOR also has an indirect positive and significant effect on patients' revisit intention through patient satisfaction at Sumber Sentosa Hospital Malang.

RESEARCH METHOD

In this study, the research objects are inpatients at Sumber Sentosa Hospital Malang and the hospital's BOR condition. Patients are the primary subjects to explore perceptions of the effect of Bed Occupancy Rate (BOR) on satisfaction during hospitalization and their intention to reuse hospital services. Efficient BOR management at Sumber Sentosa Hospital Malang is closely related to the quality of service perceived by patients. By using both patients and the hospital's BOR condition as research objects, this study aims to provide empirical insights into how bed occupancy levels influence patient perceptions and their preferences in choosing healthcare services in the future.

In this study, a quantitative method is employed. This approach is appropriate because the research focuses on examining the relationships among variables, namely the Bed Occupancy Rate (BOR), patient satisfaction, and patients' revisit intention, using data that can be statistically measured. Through the distribution of questionnaires to respondents (inpatients), the researcher obtains numerical data which are then analyzed using inferential statistical techniques. This approach enables the researcher to draw valid and objective conclusions regarding the extent to which BOR influences patient perceptions and their decision to return to the hospital for treatment.

Data analysis in this study is conducted using two main approaches: descriptive analysis and verificative analysis. Descriptive analysis is used to provide an overview of respondents' responses to each variable, namely the Bed Occupancy Rate (BOR), patient satisfaction, and patients' revisit intention at Sumber Sentosa Hospital Malang. This approach offers an initial understanding of respondents' perceptions. Meanwhile, verificative analysis is applied to statistically test the relationships among the variables studied. By combining these two approaches, the study is expected to produce a comprehensive, systematic, and in-depth understanding of the relationships and the strength of influence among BOR, patient satisfaction, and revisit intention, so that the findings can serve as a reliable basis for decision-making by hospital management.

RESULTS AND DISCUSSION

Table 1.
Validity Test BOR

Variable	No Item	r-stat	r-critical	P-value	Validity
BOR	1	0,586	0,300	0,001	Valid
	2	0,503	0,300	0,005	Valid
	3	0,671	0,300	0,000	Valid
	4	0,729	0,300	0,000	Valid
	5	0,802	0,300	0,000	Valid
	6	0,724	0,300	0,000	Valid
	7	0,714	0,300	0,000	Valid
	8	0,666	0,300	0,000	Valid
	9	0,786	0,300	0,000	Valid

Variable	No Item	r-stat	r-critical	P-value	Validity
	10	0,727	0,300	0,000	Valid
	11	0,568	0,300	0,001	Valid
	12	0,544	0,300	0,002	Valid
	13	0,613	0,300	0,000	Valid
	14	0,482	0,300	0,007	Valid
	15	0,525	0,300	0,003	Valid

Table 2.
Validity Test Patient Satisfaction

Variable	No Item	r-stat	r-critical	P-value	Validitas
Patient Satisfaction	1	0,654	0,300	0,000	Valid
	2	0,704	0,300	0,000	Valid
	3	0,772	0,300	0,000	Valid
	4	0,842	0,300	0,000	Valid
	5	0,738	0,300	0,000	Valid
	6	0,669	0,300	0,000	Valid
	7	0,585	0,300	0,001	Valid
	8	0,584	0,300	0,001	Valid
	9	0,858	0,300	0,000	Valid
	10	0,813	0,300	0,000	Valid
	11	0,642	0,300	0,000	Valid
	12	0,717	0,300	0,000	Valid
	13	0,855	0,300	0,000	Valid
	14	0,834	0,300	0,000	Valid
	15	0,803	0,300	0,000	Valid
	16	0,791	0,300	0,000	Valid
	17	0,667	0,300	0,000	Valid
	18	0,519	0,300	0,003	Valid
	19	0,748	0,300	0,000	Valid
	20	0,782	0,300	0,000	Valid

Table 3.
Validity Test Revisit Intention

Variabel	No Item	r-stat	r-critical	P-value	Validitas
Revisit Intention	1	0,627	0.300	0.000	Valid
	2	0,559	0.300	0.001	Valid
	3	0,562	0.300	0.001	Valid
	4	0,795	0.300	0.000	Valid
	5	0,874	0.300	0.000	Valid
	6	0,740	0.300	0.000	Valid
	7	0,640	0.300	0.000	Valid
	8	0,813	0.300	0.000	Valid
	9	0,678	0.300	0.000	Valid
	10	0,585	0.300	0.001	Valid
	11	0,640	0.300	0.000	Valid
	12	0,746	0.300	0.000	Valid
	13	0,701	0.300	0.000	Valid
	14	0,814	0.300	0.000	Valid
	15	0,747	0.300	0.000	Valid
	16	0,683	0.300	0.000	Valid
	17	0,633	0.300	0.000	Valid
	18	0,722	0.300	0.000	Valid

Table 4.
Reliability

Variabel	N of Item	Cronbach's Alpha	Kesimpulan
BOR	15	0.896	Reliable
Patient Satisfaction	20	0.953	Reliable
Revisit Intention	18	0.929	Reliable

Table 5.
Normality Test
One-Sample Kolmogorov-Smirnov Test

		<i>Unstandardized Residual</i>
N		92
<i>Normal Parameters^{a,b}</i>	<i>Mean</i>	.0000000
	<i>Std. Deviation</i>	6.69490279
<i>Most Extreme Differences</i>	<i>Absolute</i>	.096
	<i>Positive</i>	.066
	<i>Negative</i>	-.096
<i>Test Statistic</i>		.096
<i>Asymp. Sig. (2-tailed)</i>		.086a

- a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

Table 6.
Fit Model

Fit Index	Value	Criteria	Fit Conclusion	Relationship with the Study
Chi-Square (χ^2)	49.796 (p = 0.072)	p > 0.05	Fit	The model fits the data, confirming the relationships among BOR, patient satisfaction, and revisit intention.
RMSEA	0.025	≤ 0.08	Fit	The approximation error is very low, indicating that the BOR → satisfaction → revisit intention model is accurate.
CFI	1.00	≥ 0.90	Fit	The model is better than the independent model, supporting the mediating role of patient satisfaction.
GFI	1.00	≥ 0.90	Fit	The model explains the variance well, confirming a strong relationship among BOR, satisfaction, and revis

Bed Occupancy Rate (BOR)

The BOR at Sumber Sentosa Hospital is categorized as high, as reflected by the consistent availability of beds whenever needed. This condition ensures timely service delivery, builds patient trust, and encourages revisit intention due to the certainty and comfort experienced. High bed utilization indicates stable inpatient service capacity. However, it must still be carefully managed to avoid negatively affecting service quality. High BOR is also supported by proper management of length of stay, where patients receive treatment aligned with medical needs without unnecessary extensions or reductions. This

improves patient experience and satisfaction, while contributing to increased BOR. Additionally, consistent service delivery and reporting ensure that high BOR accurately reflects real operational conditions. Overall, bed availability, appropriate length of stay, and consistent service and reporting are key factors behind the high BOR, indicating efficient capacity utilization while requiring careful management to maintain service quality.

Patient Satisfaction

Patient satisfaction at Sumber Sentosa Hospital is categorized as very high. This is reflected in several dimensions, including environmental comfort, ease of access, communication, clarity of medical information, and respect for patient rights. Patients feel satisfied with cleanliness, comfort, ventilation, lighting, and overall hospital environment, which contribute to safety and reduce stress.

Ease of access, such as simple registration processes and clear service information, reduces waiting time and psychological burden. Effective communication from healthcare staff, including clear explanations and empathetic attitudes, enhances trust and patient involvement in treatment. Clear medical information ensures patients understand their condition and care plans, while respect for patient rights fosters a sense of dignity and security.

Overall, these factors create a comprehensive positive experience, showing that the hospital not only delivers quality medical care but also addresses non-medical aspects that influence patient satisfaction.

Revisit Intention

Patients' revisit intention at Sumber Sentosa Hospital is categorized as high. Patients demonstrate strong willingness to return, choose the hospital as their primary option, and recommend it to others. This reflects naturally developed loyalty based on positive experiences. Patients are motivated to return due to satisfaction, a sense of safety, and confidence in the effectiveness and efficiency of treatment. Emotional motivation and rational belief work together to strengthen revisit intention. Positive service experiences, combined with trust in consistent treatment outcomes, encourage patients to return and promote the hospital to others.

The Effect of BOR on Patient Satisfaction

The effect of BOR on patient satisfaction is positive and significant. Bed occupancy reflects facility availability, room readiness, and capacity stability, which provide certainty of access to services. Consistent bed availability reduces delays, shortens waiting times, and increases patients' sense of security, thereby improving their perception of service quality. Structured bed management supports continuity of care and minimizes administrative barriers, enhancing service effectiveness. Properly managed length of stay also increases satisfaction, as treatment duration aligns with medical needs, making discharge processes more efficient and balancing staff workload. In addition, consistent and accurate reporting strengthens operational reliability and supports better managerial decisions. Overall, effective BOR management significantly improves patient satisfaction, contributing to patient loyalty and a positive hospital reputation.

The Effect of Patient Satisfaction on Revisit Intention Patient satisfaction has a positive and significant effect on revisit intention.

Satisfaction arises from environmental comfort, ease of access, effective communication, clear medical information, and respect for patient rights. A clean, comfortable, and supportive environment builds trust and confidence in service quality. Satisfaction also shapes cognitive and motivational aspects, where clear information and

efficient service processes strengthen patients' belief in treatment effectiveness, encouraging them to return. Emotional (affective) and behavioral (conative) dimensions further reinforce this relationship, as positive experiences create emotional attachment and readiness to revisit. Overall, satisfaction across multiple dimensions leads to consistent and repeat patient behavior, increasing loyalty and recommendations.

The Effect of BOR on Revisit Intention BOR has a direct positive and significant effect on revisit intention.

Optimal bed occupancy ensures service availability, efficient care processes, and reduced waiting times, which encourage patients to return and recommend the hospital. BOR also influences cognitive perceptions, where stable capacity signals reliable and effective services. Additionally, BOR affects revisit intention indirectly through satisfaction, as good capacity management enhances patient experience. Effective managerial practices, such as maintaining BOR within the ideal range (60–85%), are essential to sustain service quality and patient loyalty.

The Indirect Effect of BOR on Revisit Intention

BOR also has a positive and significant indirect effect on revisit intention through patient satisfaction. Well-managed bed occupancy improves service flow, comfort, and communication, which increases satisfaction and motivates patients to return. This indirect relationship is strengthened through cognitive (perceived effectiveness), emotional (comfort and trust), and service experience factors. Thus, patient satisfaction acts as a key mediator linking BOR to revisit intention, confirming that effective capacity management enhances both patient experience and long-term loyalty.

CONCLUSION

Based on the research results, BOR at Sumber Sentosa Hospital Malang is high, indicating efficient bed utilization. Patient satisfaction is very high, and revisit intention is also high. BOR has a positive and significant effect on patient satisfaction, showing that well-managed bed occupancy improves patient experience and service quality. Patient satisfaction positively and significantly influences revisit intention, meaning satisfied patients are more likely to return. BOR directly has a positive and significant effect on revisit intention, as optimal bed occupancy ensures service availability and smoother care processes. BOR also indirectly affects revisit intention through patient satisfaction, indicating that good capacity management enhances satisfaction and encourages patients to revisit.

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