



THE INFLUENCE OF HUMAN RESOURCES ON SATISFACTION WITH NASIONAOL HEALTH INSURANCE SERVICES WITH SERVICE QUALITY AS A MEDIATING VARIABLE

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ABSTRACT

Service satisfaction is one of the key indicators of successful healthcare service delivery to the community. Community Health Centers (Puskesmas) serve as the backbone of primary healthcare services and are expected to maintain service quality consistently. This study aims to analyze the factors influencing the satisfaction of participants in the National Health Insurance (JKN) program with the services provided at primary care facilities (FKTP) in Puskesmas Balen, with service quality as a mediating variable. The research was conducted at Puskesmas Balen, Bojonegoro Regency, using a quantitative approach. The independent variables include JKN membership type, participant knowledge, physical facilities, equipment and supplies, and human resources (HR). The dependent variable is FKTP service satisfaction, with service quality as the mediating variable. A total of 324 respondents were selected using the Slovin formula and simple random sampling technique. Data were collected using a structured questionnaire based on Guttman and Likert scales, and analyzed using Structural Equation Modeling with the Partial Least Squares (SEM-PLS) approach. The model validity results using loading factor values greater than 0.7 are considered acceptable, with an R² value of 9.4% being considered weak. Meanwhile, the reliability test is seen from the Composite Reliability (CR) value of 0.946 more than or equal to 0.70 (very good), Cronbach's alpha (CA) 0.939 more than or equal to 0.90 (very good) and Average variance extracted (AVE) 0.647 more than or equal to 0.50 (Valid). The results showed that contribution assistance recipients (CAR) tended to have significantly lower satisfaction levels compared to non-PBI participants signifikan (P Value=0,000 <0,05 ; T statistics 5.082 >1,96). Knowledge (P Value=0,000; T statistics 5.082), physical facilities (P Value=0,000; T statistics 10,749), and HR (P Value=0,000; T statistics 10,539) had a positive and significant influence on service satisfaction. Equipment and supplies showed a negative and insignificant effect (P Value=0,077 > 0,05; T statistics -0,249 <1,96). Joint testing indicated that only human resources had a strong and significant positive influence on FKTP service satisfaction, both directly and indirectly through the mediating role of service quality. Service quality functioned as a partial mediator parsial (P Value=0,000, T statistics 0,336, VAF 26%). Therefore, improving human resources not only directly impacts satisfaction but also enhances the overall perception of service quality, ultimately increasing user satisfaction.

Keywords: level of satisfaction; human resources; service quality; service satisfaction

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INTRODUCTION

Community Health Centers (Puskesmas) are first-level health facilities (FKTP) that provide health services to the community and serve as a reference in health development (KEMENKES 2019). According to the 2015-2019 JKN Roadmap Targets and Statistical Indicator References, BPJS Kesehatan targets at least 85% of participants to be satisfied with the services provided by health facilities (Hapsari and Pujilestari 2024). In 2024, Bojonegoro has achieved UHC status in the JKN program, with the percentage of residents having health insurance reaching 99.92% (Bojonegoro 2019). The Balen Community Health Center has made a commitment agreement to complete a survey with the community to obtain feedback or impressions of participants' experiences after receiving services from the Health Facility. Balen Community Health Center has collected an average satisfaction survey rating of 4.07 in 2024, compared to 4.9 in Bojonegoro Regency (BPJS

Kesehatan Bojonegoro Branch Office, 2025). Google reviews have also shown a rating of 3 out of 63 participants. Poor reviews focused on the service counter and staff friendliness.

In the National Health Insurance (JKN) program, one measure of knowledge and understanding of primary health care services at community health centers (Puskesmas) can be seen. Physical facilities partially or simultaneously influence revisit intentions. Community health centers need to gradually improve the cleanliness and comfort of the environment (buildings, structures, rooms, including parking areas), improve sanitation and physical infrastructure, and improve the performance of staff in providing services (Sriatmi and Yoga Pramana 2022). Medical equipment and supplies are one of the factors that play a crucial role in providing health services to the community (Cahyono et al. 2023). Human Resources (HR) are human resources in the health sector who can be both subjects and objects within an institution. According to world health organization, health workers contribute up to 80% to the success of health development (Widianti, Noor, and Linggi 2018). The quality of services at community health centers is still a frequent complaint from the public, and HR issues can impact workloads, including the availability of health workers and competency issues (I Komang Budiasta 2020). Participant satisfaction is one indicator of the success of providing health services to the community and is achieved if what participants get exceeds their expectations (Utomo, Widjanarko, and Shaluhiah 2023). Good service quality at the Community Health Center has a positive impact on participant satisfaction. Several influencing factors are the accessibility of health facilities, communication and interaction between participants and medical staff, the capabilities of medical staff and the availability of medical facilities and equipment (Langi et al. 2023). Based on the above background, the researcher aims to conduct research with the title "Factors Influencing the Level of Satisfaction of JKN Participants in FKTP Services with the Mediating Variable of Service Quality at the Balen Community Health Center, Bojonegoro Regency".

METHOD

The study was conducted at the Balen Community Health Center (Puskesmas) in Bojonegoro Regency, by using a quantitative approach. The independent variables included JKN membership type, participant knowledge, physical facilities, equipment, and human resources (HR). The dependent variable was satisfaction with primary health care services, while service quality served as a mediating variable. The study sample consisted of 324 respondents, determined using the Slovin formula and simple random sampling techniques. Data were collected through questionnaires using the Guttman and Likert scales, then analyzed using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) method. The SEM analysis method is a continuation of path analysis and multiple regression. To test the significance of the indirect effect, the t-value of the coefficient is examined. Comparing the calculated t-value with the tabulated t-value, if the calculated t-value is greater than the tabulated value, a mediating effect can be concluded. This is to determine the nature of the relationship between the variables, whether they are perfect mediators, partial mediators, or not. The PLS SEM algorithm calculates the outer loading value greater than 0.7 as acceptable, while those less than 0.4 are eliminated, and those between 0.4 and 0.7 can be considered for elimination. The model validity results using loading factor values greater than 0.7 are considered acceptable, with an R² value of 9.4% being considered weak. Meanwhile, the reliability test is seen from the Composite Reliability (CR) value of 0.946 more than or equal to 0.70 (very good), Cronbach's alpha (CA) 0.939 more than or equal to 0.90 (very good) and Average variance extracted (AVE) 0.647 more than or equal to 0.50 (Valid).

RESULT

Factors that influence satisfaction with primary health care services (FKTP) are presented in the table below. Further details of the research results reviewed can be found in Table 1.

Table 1.
Factors that influence satisfaction with primary health care services

Variable	Total (n)	Percentae (%)
Types of Partnership		
NON Contribution Assistance Recipients	74	23
Contribution Assistance Recipients	255	78
Knowledge		
Not good	82	25
Good	246	75
Physical Facilities		
Good	191	58.2
Not Good	137	41.8
Equipment and Tools		
Complete equipment	129	39.3
Incomplete equipment	199	60.7
human Resources		
Positif	201	61.3
Negatif	127	38.7
Quality of Service		
Not Satisfied	110	33.5
Satisfied	218	66.5
FKTP Satisfaction Service		
Not Satisfied	132	40.2
Satisfied	196	59.8

Table 1, almost all respondents who visited the Balen Community Health Center were PBI participants (78%). Almost all respondents reported good knowledge (75%). Most respondents responded favorably to physical facilities (58.2%), most responded that equipment and supplies were incomplete (60.7%), most had positive perceptions of human resources (60.7%), and most were satisfied with the quality (66.5%) and satisfaction (59.8%) of primary health care services.

Tabel 2.

Results of the analysis of Factors Influencing Satisfaction with Primary Health Care Services

	Origin al Sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDE V)	P value
JKN Membership > FKTP Service Satisfactio	-0.733	-0.751	0.144	5.082	0.000
Knowledge > Satisfaction	0.690	0.739	0.157	4.389	0.000
Sarana Fisik > Kepuasan Pelayanan FKTP	0.877	0.889	0.082	10.749	0.000
Peralatan dan Perlengkapan > Kepuasan Pelayanan FKTP	0.249	-0.295	0.141	1.770	0.077
Human Resources > FKTP Service Satisfaction	0.778	0.785	0.074	10.539	0.000

Table 2. JKN membership and equipment and supplies have a negative impact. Meanwhile, knowledge, physical facilities, and human resources have a positive impact. All T-test results meet >1.96 and are significant ($p\text{-value} = 0.000$), except for the equipment and tools variable, which is not significant ($p\text{-value} = 0.077$). The Influence of JKN Participation Type, JKN Participant Knowledge, Physical Facilities, Equipment and Tools, and Human Resources on the Level of Satisfaction with Primary Health Care Services at the Balen Community Health Center.

Table 3, it is proven that the results of the model testing with Smart PLS are only significant for Human Resources. Table 4, the direct influence of human resources on FKTP service satisfaction through service quality is significant and positive (T Statistic: 4.910; $p\text{-value}$: 0.000; and O value: 0.336). This indicates that service quality significantly mediates the relationship between human resources and satisfaction. Testing the mediation effect by assessing VAF (Variance Accounted For) with the formula $VAF = (\text{Indirect Effect}) / (\text{Total Effect})$, the results obtained a significant

indirect effect and VAF of 26% (between 20%-80%), so the partial mediation category.

Tabel 3

The Influence of JKN Participation Type, JKN Participant Knowledge, Physical Facilities, Equipment and Tools, and Human Resources on the Level of Satisfaction with Primary Health Care Services

	Origin al Sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDE V)	P value
JKN Membership > FKTP Service Satisfactio	0.148	-0.143	0.098	01.502	0.133
Knowledge > Satisfaction	0.016	0.017	0.136	0.118	0.906
Sarana Fisik > Kepuasan Pelayanan FKTP	0.229	0.224	0.118	1.944	0.052
Peralatan dan Perlengkapan > Kepuasan Pelayanan FKTP	0.173	0.160	0.125	1.384	0.167
Human Resources > FKTP Service Satisfaction	0.709	0.720	0.101	7.042	0.000

Table 4.

Direct Effect of the Simultaneous Influence of Human Resources on the Level of Satisfaction of Primary Health Care Services with the Mediating Variable of Service Quality

	Origin al Sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDE V)	P value
Human Resources > FKTP Service Satisfaction	0.336	0.346	0.068	4.910	0.000

DISCUSSION

In this study, the majority of community health center users were PBI participants compared to non-PBI participants. PBI participants reported significantly lower satisfaction with primary health care services. This low utilization was attributed to PBI participants' lack of understanding of their rights to health services (Tari, Taufiq, and Prameswari 2025). Knowledge is also related to perceptions in assessing service satisfaction. Participants' positive perceptions of treatment reflect their experiences during treatment (Sukanto, Endarti, and Widayanti 2024). This aligns with research showing that higher participant knowledge leads to higher levels of satisfaction. Communication between doctors and patients about the services received will enhance JKN participants' understanding. This study significantly and positively indicates that physical facilities directly influence satisfaction levels with primary health care services at Balen Community Health Center. These results indicate that participants may appreciate physical facilities. Community health centers need to gradually improve the cleanliness and comfort of their environment (buildings, structures, rooms, including parking areas), improve sanitation and physical infrastructure, and improve staff performance in providing services (Sriatmi and Yoga Pramana 2022). Therefore, monitoring physical facilities according to standards is still necessary to support patient comfort.

The availability and condition of equipment and supplies at the Balen Community Health Center do not directly affect the level of satisfaction with primary health care services. While medical equipment is readily available, this does not guarantee that participants will be satisfied with the services they receive. This contradicts research by (Artikel 2024) which found that the primary factor influencing service quality is limited medical equipment. According to performance indicators, medical personnel are expected to deliver quality, which refers to the results of their work; quantity, which refers to speed in working; accurate or error-free task execution; and finally, responsibility for carrying out assigned tasks (SUTEDJO and MANGKUNEGARA 2018) This research shows that the better the human resources, the higher the level of service satisfaction. Fast, precise, ethical, accurate, friendly, communicative, timely service, and service provided by appropriate medical personnel are key to community satisfaction.

Satisfaction with FKTP services can be formed through satisfaction with overall services (overall satisfaction), expectations (expectation), and experience (Andreassen 2021). Meanwhile, according to Ramandhani's (Ramadhani 2020) literature review, factors influencing suboptimal services at Community Health Centers (Puskesmas) include human resources, standard operating procedures, completeness of medical equipment and facilities, types of medical indications, availability of drugs and consumables, and participant behavior. This study, after joint testing, found that human resources are a significant factor in assessing satisfaction with primary health care services. This means that the competence, friendliness, speed, and professionalism of medical and non-medical personnel are the dominant factors that increase JKN participant satisfaction at the Balen Community Health Center. Membership can influence perceptions of services, but does not always have a direct impact on satisfaction with primary health care services. JKN participant knowledge is only a supporting factor that needs to be optimized through education, but is not a determinant of satisfaction. The influence of physical facilities on satisfaction is almost significant (marginal significant). Physical facilities such as environmental comfort, waiting rooms, cleanliness, and spatial layout are starting to be perceived as quite important in increasing service satisfaction. The reason for the significant influence of human resources when tested together is because the independent variables are difficult to separate and highly correlated. Furthermore, the variables are not comparable, and only the strongest or most relevant variables remain significant.

This study concludes that human resources are a determining factor in primary health care service satisfaction, mediated by service quality. Service quality plays a role in channeling and strengthening the influence of human resources on primary health care service satisfaction. This aligns with the satisfaction assessment using the service quality (SerQual) model, which is used to measure service quality based on customer perceptions of the gap between expectations and the actual performance of the service they receive. Standard satisfaction assessments, such as service quality (SerQual), assess five dimensions, and human resources are included in each dimension. Satisfaction is the participant's perception that their expectations have been met by the service provided. In the tangibles dimension, the appearance of the staff is a determining factor in satisfaction. In the reliability dimension, human resources are required to provide the promised service promptly, accurately, and satisfactorily. Prompt but unhurried service falls within the responsiveness dimension. In the assurance dimension, human resources assessment includes the knowledge, ethics, abilities, and trustworthiness of employees to inspire participant trust and confidence, ensuring that participants are free from danger, risk, or doubt. Finally, the empathy dimension is concern for the capabilities and attention of human resources. Empathy encompasses ease of establishing relationships, good communication, personal attention, and understanding participants' needs (Rahayu and Nasrawati 2024). Thus, human resource development not only has a direct impact but also improves overall perceptions of quality, which in turn increases user satisfaction.

CONCLUSION

The research results show that Human Resources (HR) have a positive and significant influence on service quality, which in turn impacts the level of satisfaction of JKN participants at the Balen Community Health Center. Improving the competence, skills, and professionalism of healthcare workers has been shown to improve the quality of service perceived by patients. Furthermore, service quality has been shown to act as a mediating variable in the relationship between HR and JKN service satisfaction. This means that the better the quality of service provided, the greater the contribution of HR to improving patient satisfaction. In other words, service quality is a crucial bridge connecting the role of HR and JKN participant satisfaction. Overall, it can be concluded that strengthening HR capacity through increased competence, work ethic, and humane service will improve service quality, thus directly impacting JKN participant satisfaction at the Balen Community Health Center.

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