COMPARISON OF HEALTH SERVICE UTILIZATION BETWEEN PBI AND NON-PBI BPJS PARTICIPANTS

PERBANDINGAN PEMANFAATAN PELAYANAN KESEHATAN ANTARA PESERTA BPJS PBI DAN NON-PBI

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ABSTRACT

Health service utilization is an indicator in assessing the success of the healthcare system and equitable access to healthcare services in a country. Differences in socioeconomic status between Contribution Assistance Recipients (PBI) and Non-PBI participants are assumed to influence healthcare utilization patterns. This study aimed to analyze differences in health service utilization based on BPJS participation status at primary healthcare facilities in Brebes Regency, Central Java. This study used a cross-sectional quantitative study conducted at primary healthcare facilities in Brebes Regency, Central Java, Indonesia. The cross-sectional study was conducted from January to February 2026. The sample was selected using a disproportionate stratified random sampling approach supported by Slovin's method. A total of 100 respondents were selected, divided into 50 PBI participants and 50 non-PBI participants. Data were analyzed using univariate analysis and the Mann–Whitney U test. The majority of respondents demonstrated high health service utilization, accounting for 81.0% of the total respondents. The mean rank of health service utilization among PBI participants was 51.51, while among Non-PBI participants it was 49.49. The Mann–Whitney U test showed that there was no statistically significant difference in health service utilization between PBI and Non-PBI participants (U=1199.500; Z=-0.349; p=0.727). Implementation of the BPJS Health program has relatively supported equitable access to primary healthcare services among PBI and Non-PBI participants

Keywords: Health Service Utilization; BPJS Health Insurance; PBI and Non-PBI; Primary Health Care

ABSTRAK

Pemanfaatan layanan kesehatan merupakan indikator dalam menilai keberhasilan sistem kesehatan dan akses yang adil terhadap layanan kesehatan di suatu negara. Perbedaan status sosial ekonomi antara Penerima Bantuan Sosial (PBI) dan peserta Non-PBI diasumsikan memengaruhi pola pemanfaatan layanan kesehatan. Studi ini bertujuan untuk menganalisis perbedaan pemanfaatan layanan kesehatan berdasarkan status partisipasi BPJS di fasilitas kesehatan primer di Kabupaten Brebes, Jawa Tengah. Studi ini menggunakan studi kuantitatif cross-sectional yang dilakukan di fasilitas kesehatan tingkat pertama di Kabupaten Brebes, Jawa Tengah, Indonesia. Studi cross-sectional dilakukan dari Januari hingga Februari 2026. Sampel dipilih menggunakan pendekatan pengambilan sampel acak tidak proporsional (disproportionate stratified random sampling) yang didukung oleh metode Slovin. Sebanyak 100 responden dipilih, dibagi menjadi 50 peserta PBI dan 50 peserta non-PBI. Data dianalisis menggunakan analisis univariat dan analisis bivariat Mann–Whitney U. Mayoritas responden menunjukkan pemanfaatan layanan kesehatan yang tinggi, yaitu sebesar 81,0% dari total responden. Rata-rata peringkat pemanfaatan layanan kesehatan di antara peserta PBI adalah 51,51, sedangkan di antara peserta Non-PBI adalah 49,49. Uji Mann–Whitney U menunjukkan bahwa tidak ada perbedaan yang signifikan secara statistik dalam pemanfaatan layanan kesehatan antara peserta PBI dan Non-PBI (U=1199,500; Z=-0,349; p=0,727). Maka implementasi program Kesehatan BPJS relatif mendukung akses yang adil terhadap layanan kesehatan primer di antara peserta PBI dan Non-PBI.

Kata kunci: Pemanfaatan Layanan Kesehatan; BPJS Kesehatan; PBI dan Non-PBI; Faskes Tingkat Pertama

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Background

Health is a basic human need that can improve people's quality of life. Good health impacts individual productivity and also influences a country's social and economic development [1]. Every citizen has the right to access safe, high-quality, and accessible health services without discrimination [2]. The right to health has become part of national and global health development goals through the concept of *Universal Health Coverage* (UHC), which guarantees that all citizens can access the health services they need without experiencing financial hardship. The government should ensure equitable distribution of health services. Therefore, with this responsibility, the government is obligated to provide fair and equitable access to health services for all levels of society [3]. Good access to health services is expected to improve public health and reduce health disparities between community groups.

An indicator that can assess the success of the government's public health care system is public utilization of health services. Health care utilization describes how people use health care facilities to obtain promotive, preventive, curative, and rehabilitative services [4]. In Indonesia itself there are institutions, namely The National Health Insurance (NHI) is a planned effort by the government aimed at ensuring that at establishing an equitable, high-quality, and sustainable health insurance system for all citizens [5]. BPJS Health (Social Security Agency for Health) is one of the Indonesian government's policies aimed at creating equal access to healthcare services. BPJS Health enables both premium assistance recipients (PBI) and Non-PBI recipients to access healthcare services tailored to their medical needs. In addition to providing healthcare financing, the BPJS Health program also aims to reduce disparities in access to healthcare services among community groups, those with low socioeconomic status [6,7].

Primary healthcare services are the spearhead of healthcare delivery for the community. Primary Healthcare Facilities (FKTP) consist of community health centers (Puskesmas), primary clinics, private physician practices, dental practices, and other healthcare facilities that collaborate with BPJS Health. FKTPs serve as the first point of contact for JKN participants in obtaining basic promotive, preventive, curative, and rehabilitative services.

Based on the Health Social Security Program Management Report as of March 31, 2026 (Figure 1), the number of primary health care facilities (FKTP) collaborating with BPJS Health reached 23,552. Community health centers (Puskesmas) accounted for the largest proportion, at 43.2%, followed by primary clinics (28.4%) and individual physician practices (18.3%). These data indicate that community health centers remain the backbone of primary health care services in the implementation of the JKN program. The large number of FKTPs is expected to increase access to and utilization of public health services equitably.

Several studies have also explained that there are many factors that can influence the level of utilization of health facilities, namely economic conditions, education level, ownership of health insurance, availability of health facilities, public perception of the services provided, and biological factors such as disability and chronic illness [9-11]. Of the several factors that can influence the use of health facilities, there are economic factors which are factors that have a major influence on people's decisions in utilizing health services.

People with better economic conditions have greater access to healthcare, including medical costs, transportation, and access to adequate healthcare facilities. Conversely, people with lower economic conditions often face financial barriers, leading them to delay or even avoid seeking needed healthcare [12-13]. Therefore, the contrasting economic differences led the government to create incentives through the National Health Insurance (JKN), which divides BPJS participants into several categories, including Contribution Assistance Recipients (PBI) and Non-PBI. PBI participants are poor and disadvantaged individuals whose contributions are paid by the government, while Non-PBI participants pay their contributions

independently or through their employers. These differences in participant status indicate differences in socioeconomic conditions among BPJS Health participants (Farhansyah and Suardy, 2026). However, primary healthcare services still face various challenges, including limitations in human resources, infrastructure, and variations in service quality that may affect service effectiveness [14-15]. The better the access and affordability of health services, the higher the public's utilization of health services.

It was recorded that 42.3% of the Indonesian population or around 120,571,740 people are PBI participants [16]. Therefore, the number of BPJS Health (PBI) participants still dominates. The high number of PBI participants indicates that the majority of Indonesians still rely on government assistance to access healthcare services. This condition can affect patterns of healthcare utilization, as participants with different economic conditions tend to have different needs, access, and healthcare-seeking behaviors. A similar phenomenon is also seen in Brebes Regency. According to BPS data, the number of PBI BPJS Health participants in Brebes Regency in 2025 was recorded at 1,416,287, while Non-PBI participants were 618,212 [16]. This significant difference in membership numbers indicates the dominance of PBI participants in the health insurance system in Brebes Regency. This situation is important to examine further because BPJS membership status has the potential to influence the utilization of health services at primary healthcare facilities, including the frequency of visits, access to services, and patterns of service use.

Research on the utilization of health services at first-level health facilities (FKTP) has been widely conducted in Indonesia. Research by Wulandari et al [17], shows disparities in the utilization of primary healthcare services between regions on the island of Java, where regional differences and sociodemographic factors influence healthcare utilization, such as age, education, economic status, and health insurance ownership. The results indicate that there are disparities in healthcare utilization between provinces in Java. Research by Kurniawanto et al [18], analyzes factors influencing BPJS Health (Social Security Agency) membership and its impact on healthcare utilization. The results indicate that health insurance ownership influences the increase in healthcare visits. These two previous studies reveal a research gap, as previous studies have limitations because they have not compared healthcare utilization based on BPJS membership status, namely between PBI and Non-PBI participants, at primary healthcare facilities.

Based on this description, this study was conducted to analyze the comparison of healthcare utilization based on BPJS membership status at primary healthcare facilities in Brebes Regency.

Method

The observation analysis conducted in this study used a quantitative method based on a cross-sectional approach where the research was conducted with limitations at a certain time, January-February 2026. The study was conducted at primary health care facilities (FKTP) in Brebes Regency dengan tujuan compare health service utilization based on BPJS participation status among PBI and Non-PBI participants.

The target population of this study was all BPJS participants registered at primary health care facilities in Brebes Regency. It is known that the total population, namely the number of BPJS Health participants in Brebes Regency, Central Java, is 2,034,499 people. The accessible population consisted of BPJS participants who visited selected primary health care facilities during the study period. The study sample included BPJS participants categorized as PBI and Non-PBI who met the inclusion criteria. The sampling technique used in this study was disproportionate stratified random sampling. Disproportionate stratified random sampling

was used because the population consisted of two strata with unequal proportions, PBI (1.416.287) and Non-PBI (618.212) participants. This sampling technique enables the researcher to obtain a more balanced number of respondents from each stratum, thereby facilitating more effective comparisons between groups. Previous methodological studies by Mitani et al [19], have shown that disproportionate stratified sampling can improve the precision and efficiency of estimates for smaller subgroups within the population.

The population was divided into two strata based on BPJS participation status (PBI and Non-PBI participants). Equal numbers of respondents were selected from each group to facilitate comparison of health service utilization between the two groups. The sample size was determined using the Slovin formula with a margin of error of 10%. The use of a 10% margin of error was considered appropriate because the study involved a very large population and was conducted within limited time and resource constraints.

$$n = \frac{2.034.499}{1 + 2.034.499(0.1)^2} = 99{,}995 \approx 100$$

Based on the results of the Slovin calculation, the research sample was 100 respondents, who would later use a 1:1 system for PBI and Non-PBI, meaning that each group had 50 respondents.

The independent variable in this study was BPJS participation status, categorized into PBI and Non-PBI participants. The dependent variable was health service utilization at primary health care facilities.

Table 1. Operational Variables

Variable	Operational Definition	Indicator	Source
BPJS participation status	Classification of BPJS participants based on contribution payment mechanism	PBI and Non-PBI	Farhansyah and Suardy (2026) (20)
Health service utilization	The level of utilization of health services at primary health care facilities by BPJS participants	Continuity, comprehensiveness, accessibility, and intensity	Sari, Idris and Syakurah (2023) (21)

Data on BPJS participation status were obtained using a respondent identity questionnaire and classified into PBI and Non-PBI participants. Health service utilization was measured using a structured questionnaire developed by Sari et al [21] based on four dimensions of health service utilization, continuity, comprehensiveness, accessibility, and intensity. The questionnaire consisted of 12 statements measured using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The continuity dimension assessed the consistency of respondents in utilizing primary health care services. The comprehensiveness dimension measured the utilization of promotive, preventive, and curative health services. The accessibility dimension evaluated respondents' ease of accessing primary health care facilities. The intensity dimension measured the frequency and promptness of respondents in utilizing health services.

The prior data, also known as the primary data, for this study, were collected through questionnaires. Validity and reliability tests were conducted to verify the accuracy of the statement indicators in the variables, ensuring that the hypothesis test results are valid and accurate. Further explanation of the validity test will be conducted using SPSS in the correlation menu using Pearson product moment, and reliability will be conducted using Cronbach's alpha, the most common method for testing statistical reliability.

Data analysis was conducted using two forms of statistical analysis: univariate and bivariate. Univariate, as its name suggests, will describe the characteristics of respondents and the tendency of their use of first-level health facilities in Brebes Regency, presented in a table with frequencies and percentages. Health service utilization scores were obtained from respondents' answers to the questionnaire using a 5-point Likert scale. The 5-point Likert scale used was used to calculate the sum (total score) and to test for data normality. Data normality was intended to determine whether the data distribution tended to be normal or abnormal, which would later influence the decision to test the hypothesis. The total scores for all dimensions were summed without the need to classify them into each dimension. Data normality was also assessed using SPSS with the Kolmogorov-Smirnov method. Once the data distribution (normal vs. abnormal) was determined, a bivariate comparative analysis was conducted between PBI and Non-PBI regarding their utilization at first-level health facilities in Brebes Regency. If the data were normally distributed, the independent t-test was used. Otherwise, the Mann–Whitney U test was applied. Statistical significance was determined at $p < 0.05$ [22]. It should be noted that in the univariate test, socio-demographics are not taken into account as confounding variables in this analysis, so the pure univariate test is only carried out to describe the socio-demographic distribution of respondents.

Research ethical issues including informed consent, anonymity, confidentiality, and voluntary participation were carefully addressed throughout the study process. Prior to data collection, all respondents were informed about the objectives, procedures, benefits, and risks of the study. Respondents who agreed to participate were asked to provide informed consent. Participants' identities and personal information were kept confidential and were used solely for research purposes. The research ethical clearance approval was obtained from the Health Research Ethics Committee of the Faculty of Public Health, Universitas Negeri Semarang, Indonesia, with ethical clearance number No. 112/EC/FKM/2026, issued on January 15, 2026.

Result

Characteristics Respondents

Table 2 (See table 2 for characteristics respondent) presents the characteristics of respondents based on BPJS participation status, consisting of 50 PBI participants and 50 Non-PBI participants. Respondent characteristics included age, gender, educational level, occupation, and length of BPJS membership.

Table 2. Characteristics Respondents

Characteristics	PBI Participant		Non-PBI Participant	
	Frequency	Percentage	Frequency	Percentage
Age				
17–25 tahun	12	24%	15	30%
26–35 tahun	13	26%	32	64%
36–45 tahun	12	24%	3	6%
46–55 tahun	7	14%	0	0.00%
≥56 tahun	6	12%	0	0.00%
Total	50	100%	50	100%
Gender				
Man	15	30%	14	28%
Woman	35	70%	36	72%
Total	50	100%	50	100%
Last Education				
College	6	12%	36	72%

Senior high school	41	82%	14	28%
Junior high school	3	6%	0	0.00%
Total	**50**	**100%**	**50**	**100%**
Occupation				
Teacher	0	0.00%	6	12%
Housewife	13	26%	5	10%
Employee	0	0.00%	27	54%
Self-employed	37	74%	12	24%
Total	50	100%	50	100%
Length of time as BPJS Health Participant				
1-3 years	9	18%	7	14%
>3 years	41	82%	43	86%
Total	50	100%	50	100%

Based on age distribution, most PBI participants were aged 26–35 years (26%), followed by respondents aged 17–25 years and 36–45 years, each accounting for 24%. Meanwhile, the majority of Non-PBI participants were in the 26–35 years age group (64%), indicating that most respondents in this group were within productive age. There were no Non-PBI participants aged 46 years and above. Based on gender, the majority of respondents in both groups were women. Among PBI participants, 70% were women, while among Non-PBI participants, 72% were women. This finding indicates that female respondents dominated participation in this study. Regarding educational level, most PBI participants had completed senior high school education (82%), whereas the majority of Non-PBI participants had attained college education (72%). This finding suggests that Non-PBI participants tended to have higher educational attainment compared to PBI participants. In terms of occupation, most PBI participants were self-employed (74%), while the majority of Non-PBI participants worked as employees (54%). 26% of PBI participants were housewives, whereas among Non-PBI participants, teachers accounted for 12% of respondents. Based on the length of BPJS membership, most respondents in both groups had been registered as BPJS participants for more than three years, namely 82% among PBI participants and 86% among Non-PBI participants. This finding indicates that the majority of respondents had relatively long experience utilizing BPJS health services.

Univariat Analysis

The health service utilization variable was measured using 12 questionnaire items with a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The total score ranged from 12 to 60. To facilitate interpretation and comparative analysis, the total scores were categorized into three levels using interval class distribution, low (12–28), moderate (29–44), and high (45–60) health service utilization.

$$Interval = \frac{Max - Min}{Category} = \frac{60 - 12}{3} = 16$$

Then the interval range per category is 16, so the low category has a score range of 12-28, moderate 29-44, and high 45-60. Table 3 (see table 3 for distribution of health service utilization levels based on bpjs participation status) shows the distribution of health service utilization levels among PBI and Non-PBI participants.

Table 3. Distribution of health service utilization levels based on BPJS Health participation status

	Low		Moderate		High	
	N	**%**	**N**	**%**	**N**	**%**
PBI Participant	0	0	9	18.0	41	82.0
Non-PBI Participant	1	2.0	9	18.0	40	80.0
Total	1	1.0%	18	18.0%	81	81.0%

The majority of respondents had a high level of health service utilization, accounting for 81.0% of the total respondents. Meanwhile, 18.0% of respondents were categorized as having moderate utilization, and only 1.0% had low utilization. Among PBI participants, most respondents were categorized as having high health service utilization, with 41 respondents (82.0%), while 9 respondents (18.0%) had moderate utilization. No respondents in the PBI group were categorized as having low utilization. Similarly, among Non-PBI participants, the majority of respondents also demonstrated high health service utilization, accounting for 40 respondents (80.0%). Moderate utilization was observed in 9 respondents (18.0%), whereas only 1 respondent (2.0%) was categorized as having low health service utilization. These findings indicate that both PBI and Non-PBI participants generally demonstrated high utilization of health services at primary health care facilities in Brebes Regency.

Bivariate Analysis

In the first bivariate analysis, validity and reliability tests were carried out first on the BPJS health service utilization variable.

Table 4. Validity and reliability test result

Item	Pearson Correlation	Sig. (2-tailed)	Cronbach's Alpha	Interpretation
Item 1	0.598	<0.001		Valid Reliable
Item 2	0.562	<0.001		Valid Reliable
Item 3	0.631	<0.001		Valid Reliable
Item 4	0.707	<0.001		Valid Reliable
Item 5	0.468	<0.001		Valid Reliable
Item 6	0.353	<0.001	0.817	Valid Reliable
Item 7	0.646	<0.001		Valid Reliable
Item 8	0.656	<0.001		Valid Reliable
Item 9	0.495	<0.001		Valid Reliable
Item 10	0.584	<0.001		Valid Reliable
Item 11	0.674	<0.001		Valid Reliable
Item 12	0.599	<0.001		Valid Reliable

The validity test results showed in table 4 (see table 4 for validity and reliability test result) that all questionnaire items had Pearson correlation coefficients ranging from 0.353 to 0.707 with significance values less than 0.05, indicating that all items were valid. Furthermore, the reliability test showed a Cronbach's Alpha value of 0.817, indicating that the questionnaire had good reliability and internal consistency.

Table 5. Normality test result

	Kolmogorov-Smirnov		Shapiro-Wilk	
	Statistic	**Sig.**	**Statistic**	**Sig.**
Health Service Utilization	0.162	0.002	0.854	0.001

Note: normally distributed if the sig. value is above (>0.05)

Bivariate analysis as a benchmark of the results of the hypotheses test regarding the existence or absence of differences in the utilization of health services between PBI and Non-PBI participants, first conducted a data normality test. The results of the normality test using SPSS assistance that has been done with the Kolmogorov-Smirnov and Shapiro-Wilk methods indicate that the data is not normally distributed with the p-value obtained below the threshold of 0.05 where each Kolmogorov-Smirnov value is 0.002 and Shapiro-Wilk value is 0.001, meaning both do not meet the requirements for normality (see table 5 for normality test result).

Table 6. Results of comparative analysis of health service utilization based on bpjs participation status

BPJS Participation Status	N	Mean Rank	*p-value*
PBI	50	51.51	0.727
Non-PBI	50	49.49	

Because the assumption of normality was not fulfilled, parametric tests such as the independent t-test could not be applied. Therefore, the comparative analysis between PBI and Non-PBI participants was conducted using the Mann–Whitney U test as a non-parametric alternative to compare differences in health service utilization scores between the two independent groups.

After conducting the Mann-Whitney U hypothesis test (see table 6 for hypothesis result), the results were found he mean rank of health service utilization among PBI participants was 51.51, while among Non-PBI participants it was 49.49. The statistical analysis obtained a p-value of 0.727 ($p > 0.05$), indicating that there was no significant difference in health service utilization between PBI and Non-PBI participants. The null hypothesis (H0) was accepted, meaning that there was no difference in health service utilization based on BPJS participation status at primary health care facilities in Brebes Regency.

Discussion

The results of the Mann–Whitney U test showed a p-value of 0.727 ($p > 0.05$), indicating that there was no significant difference in health service utilization between PBI and Non-PBI participants in Brebes Regency. These findings suggest that BPJS participation status did not significantly affect the utilization of health services among respondents in this study. The findings of this study indicate that both PBI and Non-PBI participants had relatively similar levels of health service utilization. Most respondents in both groups were categorized as having high utilization of health services. This condition may reflect that the implementation of the National Health Insurance (JKN) program through BPJS Health has provided relatively equitable access to primary health care services regardless of participants' socioeconomic background. In the context of universal health coverage (UHC), equitable access to health services is one of the main goals of the health insurance system [23].

The absence of significant differences in health service utilization between PBI and Non-PBI participants may also indicate that financial barriers to accessing primary health care services have been reduced through the BPJS system. Previous studies have shown that health insurance coverage increases access to healthcare utilization because healthcare costs are partially or fully covered by insurance schemes. Kurniawanto et al. (18) found that insurance

ownership had a positive effect on healthcare utilization, although several other factors such as geographical access and out-of-pocket costs still influenced service utilization [24].

Economic factors were assumed to influence differences in healthcare utilization because PBI participants generally come from lower socioeconomic groups. However, the findings of this study showed that such differences were not statistically significant. One possible explanation is that both PBI and Non-PBI participants accessed the same primary health care facilities and received similar health service procedures under the BPJS referral system. Therefore, although socioeconomic conditions differ, the standardization of health services within the JKN system may minimize disparities in healthcare utilization. the majority of respondents in both groups had been BPJS participants for more than three years. Long-term participation may increase respondents' familiarity and confidence in using health services covered by BPJS. Previous studies by Hasibuan [25] reported that continuity of insurance participation and previous healthcare experiences influence healthcare-seeking behavior and utilization patterns. This finding is also supported by studies conducted by Wulandari et al [26] which explained that disparities in healthcare utilization are influenced not only by insurance status but also by regional access, healthcare facility availability, and sociodemographic characteristics. BPJS participation status alone may not be sufficient to create substantial differences in healthcare utilization if health facilities, service accessibility, and insurance coverage mechanisms are relatively similar among participants.

Indonesia's JKN program has increasingly emphasized equity in healthcare access as part of achieving universal health coverage. Recent studies by (Sujarwoto, Holipah and Maharani, 2026) have highlighted that the BPJS system has contributed to reducing inequalities in healthcare access, especially at the primary healthcare level. The absence of significant differences between PBI and Non-PBI participants in this study may reflect improvements in equitable healthcare access within the BPJS system.

This study still found that both groups demonstrated high health service utilization, indicating that BPJS participants, regardless of contribution status, actively utilized primary health care services in Brebes Regency. This finding is important because it suggests that primary health care facilities play a central role in supporting preventive, promotive, and curative healthcare services under the BPJS system. The findings of this study imply that the implementation of BPJS Health in primary health care facilities has relatively achieved equitable healthcare utilization between PBI and Non-PBI participants. Continuous improvements in healthcare quality, accessibility, and administrative efficiency are still needed to maintain equitable healthcare access and utilization among all BPJS participants.

Conclusion and Suggestions

The majority of respondents in both groups demonstrated high utilization of health services. The Mann–Whitney U test indicated there was no statistically significant difference in health service utilization between PBI and Non-PBI participants ($p = 0.727$). It can be conclude that BPJS participation status did not significantly influence the utilization of primary health care services among respondents in Brebes Regency. The implementation of the BPJS Health program through the National Health Insurance (JKN) system has relatively supported equitable access to health services regardless of participants' socioeconomic background.

Future studies are recommended to involve larger sample sizes and wider research areas to improve the generalizability of findings. Further research may also examine other factors influencing health service utilization, such as quality of healthcare services, waiting time, distance to health facilities, health literacy, and patient satisfaction. In addition, policy recommendations for Primary Health Care Facilities (FKTP) and BPJS Health may focus on improving service quality, reducing waiting time, strengthening health education, and

enhancing patient-centered care to optimize healthcare utilization among participants. Furthermore, future researchers are encouraged to consider mixed-methods approaches combining quantitative and qualitative methods to gain a deeper understanding of patients' experiences, perceptions, and barriers in utilizing BPJS Health services.

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