

Patient Satisfaction with National Health Insurance and Public Health Center Accreditation: Lessons Learnt from Majalengka Regency, Indonesia

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Abstract

Background: Perceptions of patient satisfaction influence the quality of the public health center (*Pusat Kesehatan Masyarakat*, Puskesmas) services. This study aimed to determine the differences in the level of patient satisfaction with national health insurance and the accreditation status of Puskesmas.

Methods: This quantitative analytical study using a cross-sectional method was conducted at four Puskesmas in Majalengka Regency, Indonesia from October to November 2021 using a purposive sampling technique. The instrument used was the community satisfaction instrument (*Instrumen Kepuasan Masyarakat*, IKM-29) questionnaire, with the variable measured being the level of satisfaction. Data was transformed into numerical form using Rasch modeling and analyzed using the Chi-Square, independent-t, and one-way ANOVA tests.

Results: A total of 273 respondents consisted of insured *Jaminan Kesehatan Nasional* (JKN) and non-insured (non-JKN) respondents, resulting in the satisfaction mean value between JKN and non-JKN patients of 2.50 and 2.51 (p -value=0.926). Satisfaction at Puskesmas levels 1 (*Dasar*), 2 (*Madya*), 3 (*Utama*), and 4 (*Paripurna*) was 2.15, 2.23, 2.56, 3.03, respectively (p -value=0.002), indicating an increase in the level of satisfaction at the Puskesmas accreditation level.

Conclusions: There is no difference in satisfaction between respondents using JKN and non-JKN. However, there is an increase in satisfaction related to the Puskesmas accreditation level. It is recommended for each Puskesmas to maintain the same service to all patients and improve the quality of service, especially in service dimensions that are considered inferior. Additionally, it is necessary to review the minimum standard value for accreditation programs.

Keywords: Accreditation, JKN, public health center, quality service, satisfaction

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Introduction

The quality of health services is the degree or level of service perfection according to established standards, and is the right of every patient.^{1,2} This is in line with one of the Sustainable Development Goals programs, namely achieving good health and well-being.³ The Indonesian government has implemented the national health insurance

(*Jaminan Kesehatan Nasional*, JKN) based on the Regulation of the Minister of Health of the Republic of Indonesia (*Peraturan Menteri Kesehatan*, Permenkes) Number 28/2014.² The JKN program helps reduce medical costs and is implemented through an insurance mechanism.⁴ This program collaborates with health facilities, including the public health center (*Pusat Kesehatan Masyarakat*, Puskesmas).²

The Puskesmas is one of the initial places of contact with patients in implementing health efforts in the community, and the accreditation system guarantees improvements in service quality.² There is a relationship between the accreditation status of the Puskesmas and the level of patient satisfaction.⁵⁻⁷ According to data from the West Java Provincial Health Office, there has been an increase in the quantity of Puskesmas each year, reaching 1,093 in 2020. Majalengka Regency is the only regency where all Puskesmas have accreditation levels. A total of 32 Puskesmas have been accredited, 3 are accredited level 1 (*Dasar*), 21 are accredited level 2 (*Madya*), 7 accredited level 3 (*Utama*), and 1 is accredited level 4 (*Paripurna*). The number of outpatient visits in 2016 was 462,298, in 2017 it was 411,636, in 2018 it was 405,306, and in 2019 it was 361,406.² The number of outpatient visits seems to have decreased. However, all of this has met the target of 15% of the population using health facilities. These results are influenced by the large population and the existence of free services in the JKN era which increased the use of health service facilities.

A study shows that JKN patients have a lower level of satisfaction than non-JKN patients as measured by patient safety, service effectiveness and efficiency, as well as patient-oriented service dimensions.⁸ Another study shows that Puskesmas with higher accreditation status have a higher mean level of patient satisfaction than Puskesmas with lower accreditation status as measured by the SERVQUAL dimension.⁹ These results indicate differences in the quality of service received by patients based on insurance type and accreditation status.^{8,9} Therefore, it is essential to find out more about the differences in satisfaction between JKN and non-JKN patients as well as between the accreditation status of Puskesmas and different indicators and analysis methods.

This study was conducted to determine the differences in satisfaction levels between JKN and non-JKN patients with the accreditation status of Puskesmas in Majalengka Regency, Indonesia.

Methods

This quantitative analytical study using a cross-sectional method was conducted in outpatient services at four Puskesmas in Majalengka Regency, West Java, Indonesia from October to November 2021. One Puskesmas was selected from each level of accreditation using

stratified simple random sampling using a computer, representing one of the four regions in Majalengka Regency. Primary data was obtained using a purposive sampling technique through a survey method, then the data was analyzed using Rasch analysis. The sample size was feasible in Rasch modelling with a confidence level of 95% and item calibration ± 1 logit, 30 respondents.¹⁰ The minimum sample required was 240 respondents, and the total sample of 273 respondents met the minimum samples requirements.¹⁰

The inclusion criteria were outpatients at the selected Puskesmas who were over 18 years old, had made an outpatient visit at the selected Puskesmas at least once, could read and write in Indonesian, and were willing to participate in the study. The exclusion criteria were patients treated in the emergency unit and respondents who did not complete the questionnaire thoroughly. The Research Ethics Committee of Universitas Padjadjaran approved this study with ethical clearance no 779/UN6.KEP/EC/2021. Respondents had received adequate information regarding the study and signed a consent form.

Variable characteristics of respondents as follow: 1) age which was divided into 18–20 years, 21–30 years, 31–40 years, 41–50 years, 51–60 years, and more than 60 years; 2) gender; 3) education, with lower or equivalent to junior high school, senior high school, and undergraduate or postgraduate); 4) job, divided into having a job and not having a job; 5) marital status, divided into unmarried and married; and 6) the number of visits, divided into the first time and more than once.

This study measured the level of respondents' satisfaction based on insurance status and the accreditation level of the Puskesmas used the community satisfaction instrument (*Instrumen Kepuasan Masyarakat*, IKM-29) as an alternative tool for measuring community satisfaction with primary and secondary health care facilities.¹¹ The questionnaire was modified from the service satisfaction questionnaire in the Regulation of the Minister of Administrative and Bureaucratic Reform of the Republic of Indonesia (*Peraturan Menteri Pendayagunaan Aparatur Negara dan Reformasi Birokrasi*, Permenpan RB) Number 14/2017, consisting of nine satisfaction dimensions with 29 question items using a Likert scale consisting of four answers starting from 1 (strongly disagree) up to 4 (strongly agree). The assessment of negative items was reversed to the value listed on the questionnaire. The validity of the questionnaire

concerning the raw variance obtained was 38%. Respondent reliability index was 0.89 with a separation of 2.89.⁸ The item reliability index was 0.97 with separation of 5.87.⁸ Thus, the questionnaire in the study was tested as valid and reliable. Determining the use of the IKM-29 questionnaire was based on weighing the advantages of the questionnaire item for each dimension in more detailed.¹¹

Data was processed using Microsoft Excel®. Rasch modeling was an analytical model that transformed data from an ordinal scale into a numerical one with logit units (logarithmic odds unit) using software Winstep® version 9.0.3.0.^{10,11} Satisfaction level categories were grouped into four categories based on the standard deviation of dissatisfied (less than SD -1), moderately satisfied (SD -1 to mean), satisfied (mean to SD +1), and very satisfied (more than SD +1).

The data analysis was preceded by the Shapiro-wilk normality test, which obtained a significance value (p-value) for the mean data satisfaction for each group as follow: JKN

(0.32) and Non-JKN (0.14); accreditations Level 1 (0.77), Level 2 (0.17), Level 3 (0.14), and Level 4 (0.14). It can be concluded that the mean satisfaction data for each category had a normal distribution (p-value >0.05). Further analysis was conducted using several statistical tests including Chi-Square 2 and K-samples, unpaired t-tests, and one-way ANOVA. Post Hoc test, Tukey was used to see whether there were differences in each accreditation status. This analysis used IBM® SPSS Statistics® version 25.

Results

Based on insurance status, there was a difference in the proportion between JKN and non-JKN respondents. The number of JKN respondents was more than non-JKN respondents (148 vs 125). In both groups, the majority of respondents were aged 21–30, female, senior high school graduates, not working, married, and the number of visits to Puskesmas was ≥ 2 times. The most

Table 1 Characteristics of Respondents Based on Patient Insurance Status

Characteristics	Patient Insurance Status		p-value*
	JKN (n=148) n(%)	Non-JKN (n=125) n(%)	
Age (years)			
18–20	15 (10.1)	20 (16.0)	
21–30	45 (30.4)	40 (32.0)	
31–40	26 (17.6)	30 (24.0)	0.00**
41–50	21 (14.2)	25 (20.0)	
51–60	26 (17.6)	8 (6.4)	
≥ 60	15 (10.1)	2 (1.6)	
Gender			
Male	54 (36.5)	30 (24.0)	0.02**
Female	94 (63.5)	95 (76.0)	
Education			
\leq Junior high school	65 (43.9)	56 (44.8)	0.86
Senior high school	71 (48.0)	61 (48.8)	
Undergraduate and postgraduate	12 (8.1)	8 (6.4)	
Job			
Have a job	64 (43.2)	48 (38.4)	0.42
No job	84 (56.8)	77 (61.6)	
Marital status			
Unmarried	32 (21.6)	32 (25.6)	0.44
Married	116 (78.4)	93 (74.4)	
Number of visits			
First time	15 (10.1)	28 (22.4)	0.00**
≥ 2 times	133 (89.9)	97 (77.6)	

Note: *Chi-Square test; **Significant if $p < 0.05$; National Health Insurance (*Jaminan Kesehatan Nasional*, JKN)

Table 1 Characteristics of Respondents Based on Patient Insurance Status

Characteristics	Puskesmas Accreditation Status				p-value*
	Level 1 (n=66) n(%)	Level 2 (n=65) n(%)	Level 3 (n=71) n(%)	Level 4 (n=71) n(%)	
Age (years)					
18–20	9 (13.6)	12 (18.5)	9 (12.7)	5 (7.0)	0.00**
21–30	25 (37.9)	29 (44.6)	12 (16.9)	19 (26.8)	
31–40	14 (21.1)	11 (16.9)	10 (14.1)	21 (29.6)	
41–50	8 (12.1)	8 (12.3)	19 (26.8)	11 (15.5)	
51–60	7 (10.6)	3 (4.6)	14 (19.7)	10 (14.7)	
≥ 60	3 (4.5)	2 (3.1)	7 (9.9)	5 (7.0)	
Gender					
Male	27 (40.9)	21 (32.2)	22 (31.0)	14 (19.7)	0.06
Female	39 (59.1)	44 (67.7)	49 (69.0)	57 (80.3)	
Education					
≤ Junior high school	25 (37.8)	19 (29.2)	38 (53.5)	39 (54.9)	0.00**
Senior high school	37 (56.1)	39 (60.0)	32 (45.1)	24 (33.8)	
Undergraduate and postgraduate	4 (6.1)	7 (10.8)	1 (1.4)	8 (11.3)	
Job					
Have a job	36 (54.5)	25 (38.5)	22 (31.0)	29 (40.8)	0.04**
No job	30 (45.5)	40 (61.5)	49 (69)	42 (59.2)	
Marital status					
Unmarried	19 (28.8)	22 (33.8)	15 (21.1)	8 (11.3)	0.01**
Married	47 (71.2)	43 (66.2)	56 (78.9)	63 (88.7)	
Number of visits					
First time	11 (16.7)	18 (27.7)	8 (11.3)	6 (8.5)	0.01**
≥ 2 times	55 (83.3)	47 (72.2)	63 (88.7)	65 (91.5)	

Note: *Chi-Square K-Sample test; **Significant if $p < 0.05$; Puskesmas= *Pusat Kesehatan Masyarakat* (Public Health Center), Level 1 (Dasar); Level 2 (Madya); Level 3 (Utama); Level 4 (Paripurna)

noticeable differences were based on age ($p=0.00$), gender ($p=0.02$), and number of visits ($p=0.00$) (Table 1). Meanwhile, based on the accreditation status of Puskesmas, the number of respondents at level 1 was 66 people, level 2 was 65 people, level 3 and level 4 were 71 people. At each level of Puskesmas accreditation status, respondents were dominated by female, married, and the number of visits to Puskesmas was ≥ 2 times. There were differences in the characteristics of age ($p=0.00$), education ($p=0.00$), job ($p=0.04$) marriage status ($p=0.01$), and number of visits ($p=0.01$) (Table 2).

Both the JKN and non-JKN groups had the same mean value and had satisfaction above the fairly satisfied category (Table 3). This indicated that the services provided by the Puskesmas to all patients were equal without distinction. In addition, there was no significant difference in the average satisfaction value per dimension of health care ($p > 0.05$).

Puskesmas with level 4 accreditation had

the highest mean satisfaction value, whereas Puskesmas with level 1 accreditation had the lowest mean satisfaction value (Table 4). This showed that there were differences in the services received by patients at different levels of accreditation, including the requirement dimension, systems, mechanisms, procedures, service time, implementer behavior, complaints processing, advice, and progress. A Comparison of patient satisfaction levels based on the accreditation status of the Puskesmas was presented in Table 4.

The levels of satisfaction per health care dimension were higher at higher levels of accreditation. These differences occurred in dimensions such as the requirements and sizes of systems, mechanisms, and procedures, service time, implementer behavior, and handling complaints, suggestions, and progress. This demonstrated that at the accreditation level, Puskesmas with higher satisfaction provided better services. This included requirements for access to more

Table 3 Comparison of Satisfaction Levels between JKN and Non-JKN Respondents

Satisfaction	JKN	Non-JKN	p-value*
Mean (Logit Unit)	2.50	2.51	0.93
Standard deviation (Logit units)	1.54	1.49	
Satisfaction level (n,%)			
Dissatisfied	15 (10.14)	12 (9.6)	0.84
Quite satisfied	58 (39.19)	54 (43.2)	
Satisfied	61 (41.22)	41 (32.8)	
Very satisfied	14 (9.46)	18 (14.40)	
Per dimension (mean, standard deviation), logit units			
Requirements	3.82 (3.25)	3.99 (3.40)	0.67
Systems, mechanisms, and procedures	4.13 (3.11)	4.00 (3.33)	0.73
Service time	2.17 (2.48)	2.04 (2.66)	0.68
Cost	3.39 (3.71)	3.50 (2.54)	0.80
Product specification type of service	4.62 (3.31)	4.64 (3.36)	0.96
Implementer competence	4.68 (3.82)	5.29 (3.64)	0.18
Implementer behaviour	6.05 (4.14)	6.01 (3.80)	0.93
Facilities and infrastructure	3.32 (2.79)	3.50 (2.55)	0.59
Handling complaints, suggestions, and advances	5.90 (3.91)	5.87 (3.54)	0.95

Note: *Independent-T test; **Significant if $p < 0.05$; JKN= *Jaminan Kesehatan Nasional* (National Health Insurance)

affordable health services, easy additional needs, simple care procedures, highly responsive health workers, faster waiting times, health service times, and consultation times with health workers and medical staff. In addition, health workers had a more patient, polite, and friendly attitude. Finally, procedures related to complaints, suggestions,

and advances were more informative and faster in overcoming respondents' problems.

Discussion

Quality is the features and characteristics of product that satisfy customer needs, while service is intangible and does not result

Table 4 Comparison of Satisfaction Levels Between Puskesmas Accreditation Status

Satisfaction	Level 1	Level 2	Level 3	Level 4	p-value*
Mean (logit unit)	2.15	2.23	2.56	3.03	0.00**
Standard deviation (Logit Units)	1.63	1.62	1.30	1.35	
Satisfaction level (n,%)					
Dissatisfied	8 (12.12)	12 (18.46)	4 (5.63)	3 (4.23)	0.00**
Quite satisfied	36 (54.55)	24 (36.92)	31 (43.66)	21 (29.58)	
Satisfied	16 (24.24)	25 (38.46)	31 (43.66)	31 (43.66)	
Very satisfied	6 (9.09)	4 (6.15)	5 (7.04)	16 (22.54)	
Per dimension (mean, standard deviation), Logit units					
Requirements	3.55 (3.06)	2.98 (3.60)	3.40 (3.01)	5.58 (2.99)	0.00**
Systems, mechanisms, and procedures	3.80 (3.28)	3.03 (3.22)	3.78 (2.57)	5.55 (3.24)	0.00**
Service time	1.46 (2, 32)	1.16 (2.71)	2.37 (2.17)	3.34 (2.50)	0.00**
Cost	2.93 (3.40)	3.46 (4.07)	3.13 (3.72)	4.20 (3.24)	0.18
Product specification type of service	4, 42 (3.36)	4.12 (3.62)	4.80 (3.27)	5.12 (3.05)	0.32
Implementer competence	4.40 (4.03)	5.08 (3.77)	5.25 (3.47)	5.09 (3.74)	0.56
Implementer behaviour	4.97 (3.67)	6.13 (4.13)	5.54 (3.68)	7.41 (4.08)	0.00**
Facilities and infrastructure	2.86 (2.65)	3.25 (2.91)	3.94 (2.39)	3.51 (2.71)	0.12
Handling complaints, suggestions, and advances	4.84 (4.00)	6.48 (3.70)	6.50 (3.18)	5.73 (3.89)	0.03**

Note: *One-Way ANOVA test and Post Hoc test (Tukey); **Significant if $p < 0.05$; Public Health Center (*Pusat Kesehatan Masyarakat*, Puskesmas); Level 1 (*Dasar*); Level 2 (*Madya*); Level 3 (*Utama*); Level 4 (*Paripurna*)

Table 5 Comparison of Satisfaction Levels Per Dimension between Puskesmas Accreditation Status

Dimensions	Puskesmas Accreditation Status	Puskesmas Accreditation Status	Mean Difference (Logit)	Confidence Interval 95%	p-value*
All dimensions	Level 4	Level 3	0.47	-0.17 – 1.12	0.23
		Level 2	0.78	0.14 – 1.46	0.01**
		Level 1	0.88	-1.12 – 1.54	0.00**
	Level 3	Level 2	0.32	-0.34 – 0.98	0.59
		Level 1	0.41	-0.25 – 1.07	0.38
		Level 1	0.09	-0.59 – 0.76	0.99
Requirements	Level 4	Level 3	2.18	0.80 – 3.55	0.00**
		Level 2	2.60	1.19 – 4.00	0.00**
		Level 1	2.03	0.63 – 3.43	0.00**
	Level 3	Level 2	0.42	-0.99 – 1.82	0.87
		Level 1	-0.15	-1.54 – 1.26	0.99
		Level 1	-0.57	-1.99 – 0.87	0.74
System, mechanisms, and procedures	Level 4	Level 3	1.77	0.43 – 3.11	0.00**
		Level 2	2.52	1.15 – 3.89	0.00**
		Level 1	1.75	0.39 – 3.11	0.00**
	Level 3	Level 2	0.75	-0.62 – 2.12	0.49
		Level 1	-0.02	-1.38 – 1.34	1.00
		Level 1	-0.77	-2.16 – 0.62	0.48
Service time	Level 4	Level 3	0.97	-0.08 – 2.03	0.08
		Level 2	2.18	1.10 – 3.26	0.00**
		Level 1	1.88	0.81 – 2.96	0.00**
	Level 3	Level 2	1.21	0.13 – 2.29	0.02**
		Level 1	0.91	-0.16 – 1.98	0.13
		Level 1	-0.30	-1.40 – 0.80	0.90
Cost	Level 4	Level 3	1.07	-0.50 – 2.64	0.29
		Level 2	0.74	-0.87 – 2.34	0.63
		Level 1	1.27	-0.33 – 2.87	0.17
	Level 3	Level 2	-0.33	-1.93 – 1.27	0.95
		Level 1	0.20	-1.39 – 1.80	0.99
		Level 1	0.53	-1.10 – 2.17	0.83
Product specification type of service	Level 4	Level 3	0.32	-1.13 – 1.75	0.94
		Level 2	1.00	-0.48 – 2.47	0.30
		Level 1	0.70	-0.78 – 2.16	0.61
	Level 3	Level 2	0.68	-0.79 – 2.16	0.63
		Level 1	0.38	-1.08 – 1.85	0.91
		Level 1	-0.30	-1.80 – 1.20	0.96
Implementer competence	Level 4	Level 3	-0.16	-1.79 – 1.47	0.99
		Level 2	0.01	-1.65 – 1.68	1.00
		Level 1	0.69	-0.97 – 2.35	0.70
	Level 3	Level 2	0.17	-1.50 – 1.83	0.99
		Level 1	0.85	-0.81 – 2.51	0.55
		Level 1	0.68	-1.01 – 2.38	0.73
Implementer behaviour	Level 4	Level 3	1.87	0.19 – 3.57	0.02**
		Level 2	1.28	-0.45 – 3.01	0.22
		Level 1	2.44	0.72 – 4.16	0.00**
	Level 3	Level 2	-0.59	-2.32 – 1.13	0.81
		Level 1	0.57	-1.16 – 2.29	0.83
		Level 1	1.16	-0.60 – 2.92	0.32
Facilities and infrastructure	Level 4	Level 3	-0.43	-1.59 – 0.73	0.77
		Level 2	0.26	-0.92 – 1.44	0.94
		Level 1	0.65	-0.53 – 1.83	0.48
	Level 3	Level 2	0.69	-0.49 – 1.87	0.44
		Level 1	1.08	-0.10 – 2.26	0.09
		Level 1	0.39	-0.81 – 1.60	0.84
Handling complaints, suggestions, and advances	Level 4	Level 3	-0.77	-2.37 – 0.84	0.60
		Level 2	-0.75	-2.39 – 0.89	0.64
		Level 1	0.89	-0.75 – 2.52	0.50
	Level 3	Level 2	0.02	-1.63 – 1.66	1.00
		Level 1	1.66	0.02 – 3.29	0.04**
		Level 1	1.64	-0.03 – 3.31	0.06

Note: *One-Way ANOVA test and Post Hoc test (Tukey); **Significant if $p < 0.05$; Public Health Center (*Pusat Kesehatan Masyarakat*, Puskesmas); Level 1 (*Dasar*); Level 2 (*Madya*); Level 3 (*Utama*); Level 4 (*Paripurna*)

in ownership.¹² Health services are efforts provided by the Puskesmas to the community, including planning, implementation, evaluation, recording, and reporting. Puskesmas is a first-level health facility and must provide quality health services to meet patient expectations. In the JKN program, Puskesmas must deliver quality services for all its users.²

The level of patient satisfaction in assessing service performance is a significant measurement estimate for underlying service quality. This is essential as an indicator of health outcomes, which will produce data on the achievement of services provided to patients and become the most helpful tool for predicting the utilization of services by patients.¹³ Thus, patient satisfaction can be the basis for measuring the success of service quality.¹

This study shows that there is no significant difference in the level of satisfaction between JKN and non-JKN patients, both of whom are satisfied with health service. This is because the health services provided by the Puskesmas to patients have met the patients' expectations, are fair, and do not differentiate between patients' insurance status, according to the quality dimension, specifically in fair or equity dimension.¹⁴ This study demonstrates that the quality of health services at the Puskesmas is good. The Puskesmas has implemented the regulation of law number 36/2009 that everyone has the same right to obtain quality health services. These results are relevant to research conducted in Bali and Yogyakarta, which reported no difference in satisfaction between JKN and non-JKN patients. The community satisfaction index for the quality of outpatient services at the Puskesmas is in the "Good" category.^{15,16} However, this study contradicts research in Surakarta and Bandung which shows that JKN patients have lower satisfaction than non-JKN patients. The majority expressed dissatisfaction with the service at the Puskesmas during the implementation of the JKN program.^{8,17}

Another study involving 60 participants consisting of 30 JKN patients and 30 non-JKN patients and studying three dimensions covering patient safety, efficacy and efficiency, and patient orientation has found that JKN patients reported lower satisfaction than non-JKN.⁸ Study conducted in Bandung involving 90 ex-health insurance and 90 non-health insurance patients reported that the majority (72.2% and 80%) expressed dissatisfaction with the level of Puskesmas

services. The biggest dissatisfaction lies in the dimensions of tangibles, reliability, responsiveness, assurance, and empathy. The quality of Puskesmas services at the time of JKN implementation was still low.¹⁷

The quality of service affects the level of patient satisfaction.⁵ The quality and performance of Puskesmas services must continue to be improved. Quality improvement is assessed through Puskesmas accreditation assessments. The primary purpose of Puskesmas accreditation is to foster quality improvement performance through continuous improvement of management system, quality management system, service delivery system and programs, risk application, and not just an assessment to obtain an accreditation certificate.²

This study has shown a significant difference in respondent satisfaction only between level 4 accredited Puskesmas and levels 1 and 2. This study shows that the service quality value for level 4 accredited Puskesmas is higher than level 1 and level 2. This study also shows that there is no significant difference in satisfaction between level 4 accredited Puskesmas compared to level 3, as well as between Puskesmas accredited at level 1, level 2, and level 3. These results indicate that the achievement of service quality value between these comparisons is almost the same.

The results of this study show that respondents who received health services at level 1 and level 2 accredited Puskesmas tend to feel dissatisfied compared to level 4 accredited Puskesmas. These results are relevant to research in Semarang which shows that, there is no difference in the level of satisfaction between level 4 accredited Puskesmas compared to level 3.⁹ In contrast, another study shows that respondents at level 4 accredited Puskesmas tend to be more satisfied than level 3 accredited Puskesmas.¹⁸ In addition, research in Karawang and Manado, shows that Puskesmas accredited at level 3 and level 2 are more satisfied than those at level 1.^{19,20}

The study in Karawang Regency involved four Puskesmas accredited level 1 (1,474 respondents) and four Puskesmas accredited level 3 (1,363 responden). Service satisfaction was measured using the social satisfaction index (*Indeks Kepuasan Masyarakat*, IKM), which consisted of nine dimensions of service. The score of the IKM Puskesmas accredited level 3 (80.89) was close to the maximum limit for the good performance category, while the score of IKM Puskesmas accredited

level 1 (76.80) was near the minimum limit.¹⁹ The research carried out in Manado City was conducted in two locations, namely Puskesmas accredited at level 1 (100 respondents) and Puskesmas accredited at level 2 (100 responden). The research obtained the results of the satisfaction levels of Puskesmas accredited at level 1, where 63% of patients were satisfied and 37% were less satisfied. Meanwhile, in Puskesmas accredited at level 2, 55% of patients were satisfied and 45% were less satisfied. Based on these results, there were differences in the patient satisfaction levels at level 1 and level 2 accredited Puskesmas in Manado City.²⁰

There is a difference in patient satisfaction between Puskesmas accredited at level 4 and Puskesmas accredited at level 1 and 2. This study indicates that Puskesmas with higher accreditation status tend to provide better quality service so that respondents feel satisfied with their services. In addition, the Puskesmas accreditation system can improve the quality of Puskesmas health services. This study has evidenced that the higher the accreditation status, Puskesmas has a higher mean level of satisfaction. The results are relevant to research in Karawang and Yogyakarta.^{9,19} These results follow the objectives and benefits of the accreditation system as stated in Indonesian Minister of Health Regulation Number 46/2015.²

There is no difference in satisfaction between Puskesmas accredited level 4 toward level 3 and between levels 3, 2, and 1. In the process of accreditation of Puskesmas, there is a score that determines the achievement of accreditation. The percentage limit values for achievement with various levels of accreditation are very narrow, namely 60%, 75%, and 80%. Furthermore, there are differences in the percentage scores in the chapters related to service quality.² The minimum percentages for these chapters at the accreditation level are 20%, 40%, 60%, and 80%, respectively. In addition, the involvement of health services dimensions has different levels of satisfaction between Puskesmas accreditation statuses. This result is suspected to be the cause of the absence of these differences.

Differences in levels of satisfaction in several dimensions of health care require that Puskesmas which have lower scores in related dimensions should improve these services to meet patient needs. These service improvements include the need for Puskesmas to apply health services registration criteria

that are more accessible and hassle-free, provide information related to service procedures that are easy to understand and clear, provide services quickly, the behaviour of health workers should be more patient, polite, friendly, and information regarding procedures for health services complaints that are precise and fast in dealing with respondent problems. These is in accordance with research in East Kotawaringin and Medan which shows that patient satisfaction is influenced by requirements that are easily accessible and uncomplicated, service procedures that are easy to understand, fast and precise, friendly behaviour of health workers, and quick responses to patient complaints.^{21,22}

Knowing whether there are differences in the level of service satisfaction is very important to know the advantages and disadvantages of the quality of health services. The results of this study can be used as material to improve the quality of health services and a reference for improving the accreditation status of Puskesmas.

This study experienced several limitations, including differences in patient characteristics based on the respondent's insurance status and Puskesmas accreditation status, as well as the small number of study locations for each level of the Puskesmas accreditation status due to the difficulty of research during the COVID-19 pandemic. Therefore, for future research it is hoped that research can be conducted with the same characteristics of respondents but with a larger number of Puskesmas at each level of Puskesmas accreditation to provide a broader picture.

In conclusions, there is no difference in satisfaction levels between JKN and non-JKN patients. However, there are differences in patient satisfaction between Puskesmas accreditation statuses. Level 4 accredited Puskesmas have a higher level of satisfaction than level 1 and level 2. Therefore, it is recommended for each Puskesmas to maintain the same service to all patients and improve the quality of service, especially in service dimension that are considered inferior in this study. Additionally, it is necessary to review the minimum value standard for accreditation programs.

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