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# **The effect of accreditation status and health insurance on satisfaction of community health centres service quality in Ngawi, East Java, Indonesia**

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**Abstract---**Indonesia's healthcare system is in progress, and has tried to make many improvements in its healthcare delivery system and has brought out many reforms. Several studies show the relationship between patient satisfaction and quality of health services, but none sufficiently analyze the association between accreditation status and health insurance with satisfaction among patients. This study aimed to investigate the effect of accreditation status and health insurance on satisfaction of quality in Community Health Care services (PUSKESMAS) in Ngawi, East Java. We conducted a cross-sectional study in all community health care

services in Ngawi, East Java. A total 200 outpatients selected by simple random sampling. We analyze the association of community health care accreditation status, and health insurance adjusted with age, education level, and income of respondents with the satisfaction of quality of care from community health care services using multivariate logistic regression by STATA 16. Respondents visited accredited community health care (aOR= 1.60; 95% CI= 1.13 to 2.27;  $p < 0.07$ ) have higher odds of satisfaction with the quality of care in community health care services compared to respondents visited non-accredited community health care and with age less than 35 years, respectively. Membership of national health insurance (aOR= 0.25; 95% CI= 0.11 to 0.57;  $p < 0.001$ ) have lower odd of satisfaction with quality of care in community health care services compared to not a members of national health insurance. This results were adjusted with other factors, such as age, level of education, and income. Accredited community health care influencing high satisfaction of community health care services quality. Meanwhile, membership in national health insurance are influencing low satisfaction with community health care.

**Keywords**---determinant, factors, community health care, quality, satisfactory.

## Introduction

Satisfaction is generally conceptualized as an attitude similar to judgment following the act of purchasing or based on a series of consumer-product interactions, and the conceptualization and measurement of satisfaction are changing with societal development (Fournier & Mick, 1999; Szymanski & Henard, 2001; Veenhoven, 1996). Service satisfaction with public policies is an important component of public service quality management, which is of great significance to the improvement of public service quality (Chen et al., 2021). Patient satisfaction with services is generally considered a key component of quality of care (Cleary & McNeil, 1988; Edlund et al., 2003). Patient satisfaction affects clinical outcomes, patient retention, and medical malpractice claims. It also affects the timely, efficient, and patient-centered delivery of care (Prakash, 2010). Measuring the level of patient satisfaction is a useful tool in delivering quality care that is responsive to consumer preferences. Various socio-demographic factors might be considered as potential predictors of patient satisfaction (Maślach et al., 2020).

There are a number of strategies available to encourage the use of quality of improvement in order to gain more satisfaction of the patients in community health care facilities. External assessment mechanisms such as accreditation are one of them (O'Beirne et al., 2013). Since 2014, accreditation has been expanded towards primary care facilities. The main provider of primary health services is the *Puskesmas* (community health centre), a category of public health facilities located at the sub-district level that deliver curative and preventive services and health promotion to the communities they serve (Menteri Kesehatan Republik Indonesia., 2015). Goetz et al., (2015) agreed with that by stating that the

European Practice Assessment for primary care practices implementation showed a significant improvement on health care quality services by focusing on the sustainable improvement of structural and organisational aspects to promote high quality of primary care (Goetz et al., 2015). However, Varkey argues that solely focusing on quality assurance and quality control through accreditation will not significantly improve the quality of services therefore it will also not improve health outcomes (Varkey et al., 2007).

Insurance is an indisputable instrument for healthcare funding. It has been utilized by most developed nations in its different structures to subsidize healthcare (Adebisi & Adeniji, 2021). National health insurance refers to an insurance scheme that covers the entire population and is usually established by national legislation. It is often mandatory for the citizens and the administration of the health care funds vary from country to country. It may be a public or private health insurance scheme or a combination of both (Wikipedia., n.d.). Different nations of the world have diverse levels of utilization of health insurance. Available literature shows that utilization levels are high in developed nations but are still low in developing nations including Indonesia (Smith et al., 2009). Several studies have shown patients' dissatisfaction with the use of health insurance cards (of health & social, 2015).

As a response from diverse results of previous study, we aimed to measure the patient's satisfaction over the service quality of Community Health Care services and also identified the most significant factors of service quality, which affect the patient's satisfaction on the Community Health Care services in Ngawi, East Java, Indonesia to help the policy makers improve the condition of community health care.

## **Method**

### **Study Design**

This was a cross-sectional, analytic observational study carried out from 1st October to 31st November 2018.

In 2018, there are total 25 community health centers existing in Ngawi, East Java. The population included all outpatients at Ngawi community health centers. We selected 200 outpatients visiting Ngawi Community Health Center by simple random sampling.

### **Variable of Study**

The dependent variable was patient satisfaction. Accreditation status and type of health financing were the independent variables.

Community health care accreditation status represented by accredited (if community health care have level of accreditation Dasar, Madya, and Utama) and non-accredited (if community health care do not accreditation status). The measurement scale was dichotomous, coded 0 for accredited and 1 for non-accredited. Health insurance is an indisputable instrument for healthcare funding. It has been utilized by most developed nations in its different structures

to subsidize healthcare. The measurement scale was categorical, with codes 0 for not having national health insurance and 1 for having national health insurance.

Patient satisfaction was defined as the patient's assessment of the health services received after comparing it to what the patient expected. The measurement scale was continuous and dichotomous, with 0 representing low satisfaction and 1 representing high satisfaction.

### **Study Instrument**

The information was gathered through a self administered questionnaire with basic characteristics questions such as age, gender, level of education, income, type of health insurance, etc and 20 questions about satisfaction regarding community health services. This questionnaire was modified and adopted from questionnaire with the purpose of measuring outpatients' opinion of quality of hospital by Mangelsdorff et al (1979) and Gasquet et al., (2004)(Gasquet et al., 2004; Mangelsdorff, 1979). We translated dependently the questionnaire from original language (English) to language used in local place of study (Bahasa Indonesia). The instrument reliability test was performed on 20 respondents visited community health center in Ngawi. Total item correlation with r value 0.20 and alpha Cronbach 0.60 were used to assess reliability. These findings indicate that the questionnaire was trustworthy.

### **Statistical analysis**

To determine sample characteristics by frequency and percentage, a univariate analysis was performed. Logistic regression was used for bivariate analysis. We used shapiro –Wilk for normality test. A multivariate logistic regression run on STATA 16 was used for multivariate analysis.

### **Ethical clearance**

This study's research ethics were obtained from the Research Ethics Committee, Faculty of Medicine, Universitas Sebelas Maret, Surakarta, Central Java, Indonesia, with the following numbers: 311/UN27.6/KEPK/2018.

### **Results**

We summarize the characteristic of respondents presented in total number and frequency (percentage) in table 1. Based on Shappiro-Wilk test for normality, our data was not distribute normally ( $z$  value= 0.006). However, multicollinearity test assumed that all of variables was free from multicollinear (mean VIF= 1.18).

Of this study, 89 patients were male (44.5%) and 111 patients were female (55.5). Age group labeling is based on the recommendation of WHO (2001) (Hornig et al., 2001) with the following criteria 8 patients were young (<15 years), 152 patients were adult (15-64), and 40 patients were old ( $\geq$  64 years). 134 patients were not graduating or finishing high school (67%) and 66 patients were finishing high school or more (33%). For patients income, we used the minimum wage in Ngawi on years 2018 (Rp 1,569,832). 84 patients had income less than minimum wage



Private	15	17.0	73	83.0	88	100.0	0.11	0.05	0.22	<0.0001
National Insurance	72	64.3	40	35.7	112	100.0				

Table 3. Analysis of multivariate the factors influencing satisfaction of community health care services quality

Variable	aOR	CI (95%)		p-value
		Lower	Upper	
Accreditation Status				
Non accredited	1.60	1.13	2.27	0.07
Accredited				
Health Insurance				
Private	0.25	0.11	0.57	<0.001
National Insurance				

\*adjusted with age, level education, and income.

## Discussion

This study aimed to investigate factors that influenced patients satisfaction in regarding the services of community health care (Widiyanto, 2022). Our study showed that there is association between accreditation status and health insurance with patients satisfaction on community health care services.

Accreditation status was associated with high patients satisfaction on community health care services (Mirshanti et al., 2017). However study by Sack et al., (2010) indicated that successful accreditation is not linked with measurable better quality of care as perceived by the patient and reflected by the recommendation rate of a given institution. Accreditation may represent a step towards quality management, but does not seem to improve overall patient satisfaction (Sack et al., 2010). Accreditation focuses on process and procedures, availability of written standards and compliance with standards, based on which recommendations are made by the surveyor (Poerwani, 2008; C Shaw, 2001; Charles Shaw, 2004). It is administered by an independent body and based on voluntary participation of the accredited institution, although few can afford to not participate as it is a prerequisite for being included in the universal health coverage insurance scheme. However, to improve quality, it also takes internal reviews and constantly seeking changes to ensure the standards and external review process are relevant (Scrivens, 1997).

This study's result suggested that factors affecting respondents' low satisfaction toward community health care services was membership in national health insurance. It was supported by Utami et al., (2017) in the study stated that quality of service at community health care is negatively associated being insured (Utami et al., 2017). The relationship between differences in financing membership status and patient care quality assessment is known to be significant. Patients who receive government contributions are generally satisfied with the current system. Complaints and many dissatisfied statements were made

by wage recipients and those whose contributions were paid independently because several participatory procedures were deemed complicated and there was a lack of socialization about the ongoing JKN (National Health Insurance) system. Furthermore, because they believe they have fulfilled their obligations by making monthly contributions, their expectations for better health care are higher(13).

Our study has some limitations. Data were collected from one specific region, which limited the diversity of the population for inclusion in our study. Both the limited racial/ethnic diversity in the sample and the fact that all patients and providers were operating within the same health system may limit generalizability of our results to other populations. Future research should explore whether the relationship we observed differs by certain patient characteristics, such as ethnic, religion, and race.

## Conclusion

Accredited community health care influencing high satisfaction of community health care services quality. Meanwhile, membership in national health insurance are influencing low satisfaction with community health care.

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