



ISSN 2621- 458X

Analysis of the Effect of Implementing Standard Operating Procedures (SOP) on the Quality of Patient Services at Ralla Community Health Center, Barru Regency

Wahyul.Az
ITBA Al Gazali Barru
wahyul@algazali.ac.id
Muliati
ITBA Al Gazali Barru
muliati@algazali.ac.id

ABSTRACT

Improving the quality of health services is a primary demand in the provision of public services, particularly at primary healthcare facilities. One of the efforts undertaken to enhance service quality is the consistent implementation of Standard Operating Procedures (SOP). This study aims to analyze the effect of SOP implementation on the quality of health services at the Ralla Community Health Center, Tanete Riaja District, Barru Regency. The study employed a quantitative approach with a total of 92 respondents who were users of the Community Health Center's services. Data were collected through questionnaires using a Likert scale and analyzed using validity tests, reliability tests, and simple linear regression analysis. The results indicate that SOP implementation has a positive and significant effect on the quality of health services. The coefficient of determination shows that SOP implementation makes a substantial contribution to improving service quality. Therefore, consistent and structured implementation of SOP is a crucial factor in realizing high-quality health services that are oriented toward community satisfaction.

Keywords: Standard Operating Procedures; Service Quality; Health; Community Health Center; Public Services



lisensi CC BY

A. INTRODUCTION

Standard Operating Procedures (SOPs) are managerial documents detailing work steps, responsibilities, and service flows to ensure consistency and quality of healthcare services (Ministry of Health of the Republic of Indonesia, 2019). In Community Health Centers (Puskesmas), SOPs are designed to ensure clinical and administrative services operate in

accordance with technical guidelines and national health regulations (Permenkes RI, 2014). Proper implementation of SOPs is expected to reduce variation in service practices, increase patient safety, and improve the user experience (Donabedian, 2003). The quality of patient care at the primary level depends heavily on adherence to SOPs, human resource capacity, and the availability of supporting facilities (Azwar, 2016). Furthermore, SOPs also serve as internal control tools and evaluation materials for continuous quality improvement within healthcare organizations (Sutrisno, 2018). Support from central and regional policies in the form of technical instructions and monitoring mechanisms is a crucial factor in the implementation of SOPs in Community Health Centers (Ministry of Health of the Republic of Indonesia, 2021). Therefore, assessing the impact of SOP implementation on service quality is a strategic step to strengthen primary care in Barru Regency. This statement is consistent with the regulatory directives and operational guidelines of the Ministry of Health (Kemenkes RI, 2020).

Healthcare quality is defined as the degree of service that increases the likelihood of desired health outcomes for individuals and populations and must be evidence-based and safe (World Health Organization, 2018). The WHO emphasizes that quality needs to be integrated into the primary care system to achieve Universal Health Coverage (UHC) (WHO, 2019). In practice, quality improvement encompasses clinical aspects, patient experience, accessibility, and the effectiveness and appropriateness of services to population needs (Donabedian, 2003). SOPs serve to enforce clinical and non-clinical standards that help achieve these quality dimensions (Sitorus, 2017). Without clear and adhered to SOPs, differences in practice between staff or units can diminish service quality and decrease patient satisfaction (Parasuraman et al., 1988). International research demonstrates a link between the implementation of standard procedures and improved clinical compliance and patient safety (Braithwaite et al., 2017). Therefore, empirical studies on the relationship between SOPs and service quality in community health centers (Puskesmas) are crucial for strengthening policy evidence. This idea aligns with the WHO's framework for improving the quality of primary care (WHO, 2020).

In Indonesia, Ministry of Health regulations and technical guidelines govern the development and implementation of SOPs in community health centers as part of healthcare quality governance (Kemenkes RI, 2019). Ministerial regulations and technical guidelines at the central and regional levels provide minimal guidelines regarding SOP content, verification

mechanisms, and monitoring of implementation (Permenkes RI, 2014). In the context of community health centers, SOPs cover registration, triage, clinical services, referrals, pharmacy, and medical record documentation (Kemenkes RI, 2020). Integration between clinical SOPs and administrative flows is crucial for smooth and measurable service processes (Azwar, 2016). However, implementation challenges often arise when SOPs are not optimally disseminated or adapted to the local capacity of Community Health Centers (Handayani, 2018). Evaluation of SOP implementation requires examining compliance, staff understanding, and operational barriers (Sutrisno, 2018). This type of analysis is relevant for providing recommendations for improving organizational capabilities and contextualizing SOP content. The national policy framework serves as the basis for interpreting and assessing SOP implementation in the field (Ministry of Health of the Republic of Indonesia, 2021).

The quality of patient care at Community Health Centers is also measured through patient experience indicators such as waiting times, communication with healthcare workers, and completeness of services (Parasuraman et al., 1988). Several studies in primary health care facilities in Indonesia have shown that adherence to SOPs contributes to patient satisfaction (Sari & Wulandari, 2020). Efficient SOP implementation can reduce waiting times and improve coordination between service units (Handayani, 2018). In addition to experience indicators, clinical outcomes and patient safety are also influenced by the accuracy of clinical SOP implementation (Donabedian, 2003). An evaluative approach that combines patient experience and procedural compliance audits provides a comprehensive picture of quality (WHO, 2020). Therefore, research on SOP implementation at Ralla Community Health Center is relevant both practically and policy-wise. Empirical findings are expected to support the formulation of strategies to improve regional service quality. Several quantitative studies and systematic reviews support the relationship between process quality and patient satisfaction (Braithwaite et al., 2017).

Measuring the impact of SOPs on service quality is necessary. incorporate the perspectives of healthcare workers, community health center management, and patients (WHO, 2018). A multidimensional approach allows for understanding of contextual factors such as workload and managerial support (Sutrisno, 2018). Compliance with SOPs is influenced by training, supervision, and organizational culture (Handayani, 2018). Adapting SOPs to local conditions is often necessary to make procedures more applicable (Ministry of Health of the Republic of Indonesia,

2020). Evaluations should also identify gaps between written SOPs and actual practice (Donabedian, 2003). By understanding these gaps, recommendations can be focused on capacity building and SOP revisions. This study uses a holistic approach to analyzing the relationship between SOPs and service quality. The evaluation framework refers to the principles of primary care quality governance (WHO, 2019).

Research in Indonesia shows that inconsistent SOP implementation results in incomplete record keeping and patient dissatisfaction (Sari & Wulandari, 2020). Another study found that standardizing service processes improves efficiency and user satisfaction (Handayani, 2018). Therefore, empirically measuring SOP compliance levels is crucial for evidence-based interventions (Azwar, 2016). Quantitative analysis needs to be complemented by qualitative studies to understand implementer behavioral factors (Braithwaite et al., 2017). This mixed approach yields more contextualized policy recommendations. This research aims to fill the evidence gap in the context of the Ralla Community Health Center in Barru Regency. The results will support data-driven decision-making at the regional level. Conceptual support comes from local and international studies (WHO, 2020).

Methodologically, this study assessed SOP implementation through document audits, service observations, and patient satisfaction surveys (Creswell, 2014). Compliance measures included the availability of written SOPs, staff training, and evidence of implementation (Ministry of Health of the Republic of Indonesia, 2019). The patient satisfaction survey used a standardized instrument to measure service quality dimensions (Parasuraman et al., 1988). Statistical analysis explained the influence of SOPs on patient satisfaction by considering confounding variables (Sugiyono, 2019). In-depth qualitative interviews were used to understand compliance factors and implementation barriers (Creswell, 2014). Data triangulation strengthened the validity of the research findings. This approach aligns with healthcare quality evaluation practices. The research addressed ethics and patient data protection (Ministry of Health of the Republic of Indonesia, 2021).

This research contributes both practically and academically, providing recommendations for improving SOPs and adding to the literature on primary care (WHO, 2019). Practical recommendations include SOP refinement, ongoing training, and strengthening internal monitoring (Ministry of Health of the Republic of Indonesia, 2020). At the regional level, the

findings support resource allocation based on actual needs (Azwar, 2016). Academically, this study adds to the empirical evidence in the context of Indonesian Community Health Centers (Puskesmas). This research can serve as a reference for developing service quality policies. Implementation of the recommendations is expected to improve patient experience and outcomes. The evaluation design can be replicated in other Puskesmas. The results support sustainable primary care quality improvement (WHO, 2020).

In conclusion, evaluating the impact of SOP implementation on the quality of patient care at the Ralla Community Health Center (Puskesmas) is a strategic study for strengthening primary care quality governance (Ministry of Health of the Republic of Indonesia, 2021). This study not only measures correlation but also explains the mechanisms of SOP implementation (Donabedian, 2003). The combination of SOP audits, patient surveys, observations, and interviews yields a comprehensive understanding (Creswell, 2014). The findings provide a basis for operational improvements and regional policies. This research contributes to the achievement of public health goals. The next stage is the development of a detailed methodology and valid instruments. Collaboration with the Community Health Center and the Health Office is key to success. With stakeholder support, the quality of patient care is expected to improve significantly (WHO, 2019).

B. RESEARCH METHOD

This study used a quantitative approach with an explanatory design. The aim was to analyze the effect of Standard Operating Procedure (SOP) implementation on the quality of patient care at the Ralla Community Health Center in Barru Regency. This approach was chosen because it can objectively explain the causal relationship between the independent and dependent variables through numerical measurements. The independent variable in this study was SOP Implementation (X), while the dependent variable was Patient Service Quality (Y). The study was conducted at the Ralla Community Health Center, involving patients as the primary respondents.

The study population consisted of all patients who received services at the Ralla Community Health Center during the study period. The sample was determined using a purposive sampling technique, with respondents being patients who had received services at least once and were willing to complete a questionnaire. Data were collected through a closed-ended questionnaire using a Likert scale, structured based on SOP implementation indicators and service

quality dimensions. The research instrument was tested through validity and reliability tests to ensure the accuracy and consistency of data measurement.

The collected data were analyzed using simple linear regression analysis to determine the extent of the effect of SOP implementation on patient care quality. Prior to the regression analysis, the data were tested for normality as a prerequisite for the analysis. The analysis results are presented in the form of regression coefficients, significance values, and coefficients of determination (R^2) to explain the contribution of SOP implementation to improving the quality of patient care. All analyses were conducted using statistical software.

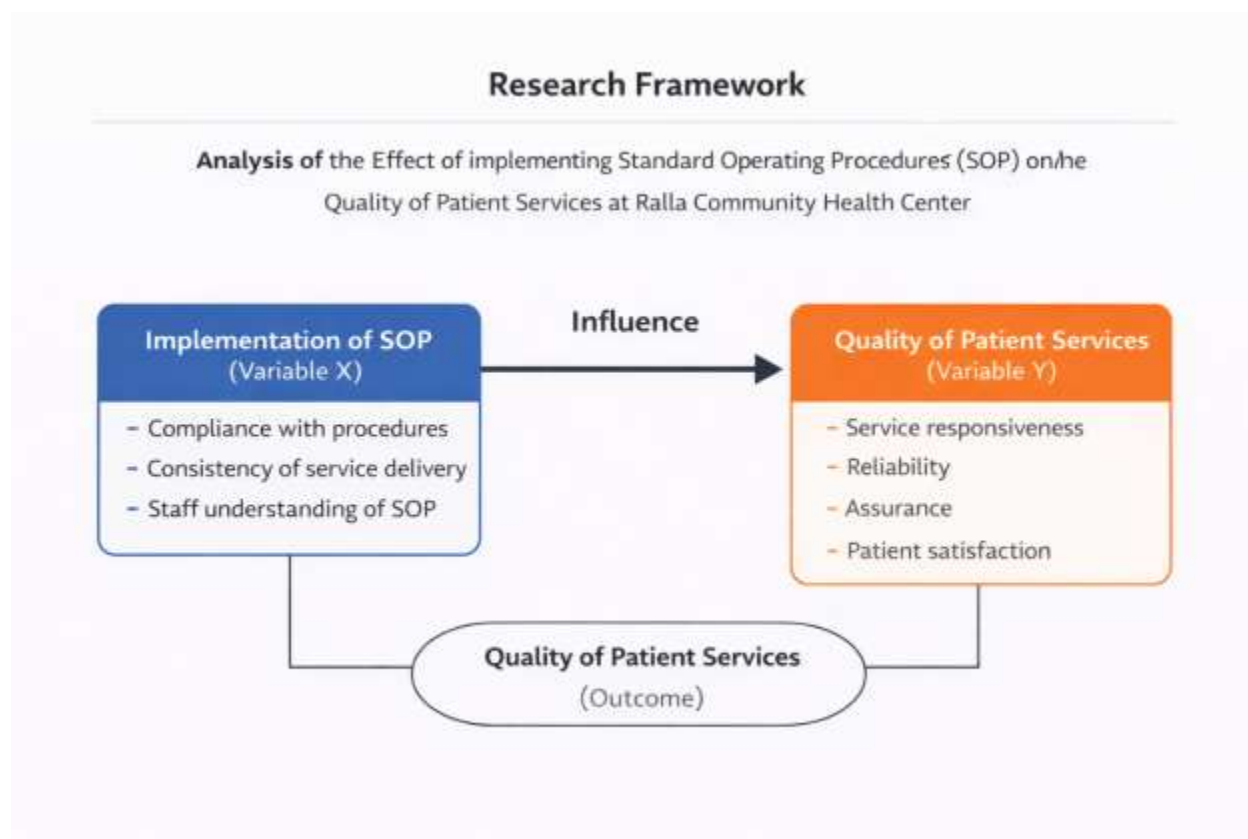


Figure 1 Research flow framework diagram

C. RESEARCH RESULTS AND DISCUSSION

➤ Research Results

The results indicate that respondents were predominantly productive-age patients, aged 26–45, who are the most active age group utilizing healthcare services at the Ralla Community Health Center. Of the 92 respondents studied, the majority had a secondary education, thus understanding the service procedures applied. This condition influenced the respondents' ability to objectively assess the implementation of Standard Operating Procedures (SOPs). Furthermore, most respondents were outpatients who interacted directly with service personnel. This intense interaction provided real-world experience of the quality of service received. Therefore, the data obtained were considered representative of the service conditions at the Ralla Community Health Center.

Based on the descriptive analysis, the SOP implementation variable was categorized as good with a relatively high average score. This indicates that most respondents assessed that the Community Health Center staff had implemented service procedures in accordance with applicable regulations. Indicators of compliance with SOPs, timeliness of service, and consistency of procedures received positive scores from respondents. Despite this, several aspects still need improvement, particularly the consistency of service delivery as patient numbers increase. This finding indicates that SOPs have been implemented, but their implementation has not been fully optimized.

The variable of health service quality also showed positive results based on respondents' perceptions. The service quality dimensions, including tangibles, reliability, responsiveness, assurance, and empathy, were generally considered satisfactory. Respondents assessed that the physical facilities at the Community Health Center were adequate and that the staff provided service with a friendly attitude. Furthermore, the staff's ability to provide clear and easy-to-understand information contributed to patient satisfaction. However, some respondents still complained about relatively long wait times during certain hours. This is an important consideration for future service quality improvement efforts.

Linear regression results indicate that the implementation of SOPs has a positive and significant impact on the quality of health services at the Ralla Community Health Center. A positive regression coefficient indicates that the better the SOP implementation, the higher the perceived quality of service by patients. The significance test showed a probability value less than 0.05, thus accepting the research hypothesis. These findings confirm that SOPs play a strategic role in establishing consistent service standards. With the disciplined implementation of SOPs, services become more focused and measurable.

The high coefficient of determination (R^2) indicates that SOP implementation significantly contributes to variations in service quality. This means that some changes in service quality can be explained by the extent to which SOPs are implemented by Community Health Center staff. However, there are other factors beyond SOPs that influence service quality, such as the availability of human resources and infrastructure. This suggests that improving service quality is not solely dependent on SOPs but also requires the support of other supporting factors. This finding is relevant to the multidimensional concept of public service.

Further analysis of SOP implementation indicators shows that staff adherence to the service flow has the most dominant influence. Respondents assessed that services carried out according to procedures provide a sense of security and trust. Furthermore, clarity of service stages makes it easier for patients to understand the process. This indicator is a crucial aspect in improving the overall perception of service quality. Therefore, internal monitoring of SOP implementation is necessary on an ongoing basis.

In terms of service quality, the dimensions of responsiveness and empathy show a strong relationship with SOP implementation. Fast and responsive service is perceived as a result of the implementation of clear work procedures. Furthermore, the staff's empathy, maintained despite working according to SOPs, demonstrates that standard procedures do not diminish the human touch in healthcare services. This demonstrates that SOPs can go hand in hand with patient-centered services. Thus, SOPs serve not only as administrative rules but also as guidelines for quality service delivery.

This research finding aligns with public service management theory, which states that clear operational standards can increase service effectiveness and efficiency. The implementation of SOPs at the Ralla Community Health Center has been shown to help staff work systematically and coordinated. Furthermore, SOPs also minimize errors. Service errors can impact patient dissatisfaction. Therefore, the existence of SOPs is a crucial instrument in achieving professional healthcare services. These results reinforce the urgency of implementing SOPs in primary healthcare facilities.

Although the results demonstrate a significant impact, several limitations warrant consideration. This study used only one independent variable, thus not fully describing other factors influencing service quality. Furthermore, the data were obtained based on respondents' subjective perceptions. Nevertheless, patient perceptions remain an important indicator in assessing the quality of public services. These limitations can provide opportunities for further research to develop a more comprehensive model.

Overall, the results confirm that the implementation of Standard Operating Procedures plays a crucial role in improving the quality of healthcare services at the Ralla Community Health Center. With 92 respondents, linear regression analysis provided strong empirical evidence regarding the relationship between variables. Improved service quality can be achieved through consistent SOP implementation supported by regular monitoring and evaluation. Therefore, Community Health Center management is expected to continue strengthening SOP implementation as an effort to improve the quality of services to the community.

➤ Results of Data Analysis

1. Instrument Validity Test

Table 1. Results of the Validity Test for the SOP Implementation Variable (X)

Item	Corrected Item–Total Correlation	r Table	Remark
X1	0,612	0,205	Valid
X2	0,587	0,205	Valid
X3	0,645	0,205	Valid

X4	0,671	0,205	Valid
X5	0,598	0,205	Valid

Table 2. Results of the Validity Test for the Service Quality Variable (Y)

Item	Corrected Item–Total Correlation	r Table	Remark
Y1	0,623	0,205	Valid
Y2	0,689	0,205	Valid
Y3	0,654	0,205	Valid
Y4	0,701	0,205	Valid
Y5	0,667	0,205	Valid

All statement items in the SOP implementation and service quality variables have a corrected item–total correlation value greater than the r table (0.205), so that all instruments are declared valid and suitable for use in further analysis.

2. Instrument Reliability Test

Table 3. Reliability Test Results

Variable	Cronbach's Alpha	Reliability Criteria	Remark
SOP Implementation (X)	0.821	> 0.70	Very Reliable
Service Quality (Y)	0.847	> 0.70	Very Reliable

The Cronbach's Alpha values for both variables exceed 0.70. This indicates that the instruments used in the study are highly consistent internally. Such a result demonstrates strong reliability of the measurement tools. Therefore, the research instruments are considered valid and dependable for further analysis.

3. Simple Linear Regression Analysis

Table 4. Model Summary

R	R Square	Adjusted R Square	Std. Error
0,742	0,551	0,546	2,134

Table 5. ANOVA

Model	F	Sig.
Regression	110,432	0,000

Table 6. Coefficients

Variabel	B	t	Sig.
(Constant)	8,214	4,126	0,000
Penerapan SOP (X)	0,687	10,512	0,000

The results of the linear regression analysis indicate that the implementation of SOPs has a positive and significant effect on the quality of health services at the Ralla Community Health Center. A significance value of 0.000 (<0.05) indicates that the research hypothesis is accepted. The R Square value of 0.551 indicates that 55.1% of the variation in service quality can be explained by the implementation of SOPs.

➤ Discussion

The results of this study demonstrate that the implementation of Standard Operating Procedures (SOPs) significantly impacts the quality of healthcare services at the Ralla Community Health Center. This finding reinforces public service management theory, which emphasizes the importance of work standards as a tool for controlling service quality. SOPs serve as operational guidelines that regulate the flow of services, the division of tasks, and the responsibilities of healthcare workers. With clear SOPs, the service process becomes more structured and measurable. This impacts the consistency of services received by the public. In the context of

healthcare, consistency is crucial because it directly relates to patient safety and satisfaction. Therefore, SOPs can be viewed as a primary foundation for achieving quality healthcare services.

A positive regression coefficient indicates that the better the SOP implementation, the higher the quality of service perceived by the public. This indicates a strong causal relationship between compliance with SOPs and improved service quality. SOPs serve not only as administrative rules but also as practical guidelines for staff in providing prompt, accurate, and standardized services. By following SOPs, staff can minimize procedural errors that could potentially lead to patient complaints. Furthermore, implementing SOPs helps staff work more efficiently and professionally. This ultimately increases public trust in Community Health Center services.

The significant contribution of SOP implementation, at 55.1%, indicates that SOPs are a dominant factor in determining the quality of health services at Ralla Community Health Center. This figure reflects that more than half of the variation in service quality can be explained by the extent to which SOPs are consistently implemented. However, research also indicates that other factors beyond SOPs influence service quality. These factors include human resource competency, the availability of facilities and infrastructure, and staff workload. Therefore, improving service quality cannot rely solely on SOPs. A comprehensive approach that considers other supporting factors is required.

Dimensions of service quality, such as reliability and responsiveness, have been shown to be significantly influenced by staff adherence to SOPs. Service reliability is reflected in staff's ability to provide services accurately and as promised, while responsiveness is reflected in the speed with which staff respond to patient needs. Good SOP implementation encourages staff to work according to established service procedures, thereby minimizing waiting times. Furthermore, SOPs provide clarity on the roles of each officer, resulting in better coordination of services. Fast and accurate service provides a sense of security for patients, contributing to increased positive public perception of the quality of healthcare services.

The results of this study align with various previous studies that suggest that consistent implementation of SOPs can improve the quality of public services, particularly in the healthcare

sector. Healthcare services demand a high level of accuracy, speed, and professionalism, making SOPs crucial. Consistent implementation of SOPs also reflects the organization's commitment to providing services that are oriented toward community needs. Thus, SOPs serve not only as an internal control tool but also as an instrument for enhancing public trust. These findings imply that strengthening SOP implementation needs to be carried out continuously. These efforts are expected to optimally improve the quality of healthcare services at the Ralla Community Health Center.

D. CONCLUSION

Based on the research results and data analysis, it can be concluded that the implementation of Standard Operating Procedures (SOPs) has a positive and significant impact on the quality of health services at the Ralla Community Health Center, Tanete Riaja District, Barru Regency. Statistical tests indicate that the better the level of SOP implementation by health workers, the higher the quality of service perceived by the public. This finding demonstrates that SOPs are an important instrument in achieving consistent, targeted, and professional health services.

Furthermore, the research results indicate that the implementation of SOPs makes a significant contribution to explaining variations in health service quality. However, service quality is not solely influenced by SOPs, but also by other factors such as human resource competency, availability of facilities and infrastructure, and workload management. Therefore, improving the quality of health services requires an integrated effort between the implementation of SOPs and strengthening other supporting factors.

Overall, this study confirms that the success of health services at Community Health Centers is largely determined by consistency and adherence to SOP implementation. SOPs serve not only as technical guidelines but also as a service quality control tool that directly impacts public satisfaction and trust. With the implementation of good SOPs, health services can be provided more effectively, efficiently, and oriented to patient needs. The results of this study also provide an empirical contribution to the development of public service management studies in the health sector, particularly in primary health care facilities. These findings are expected to serve as a reference for Community Health Center managers in formulating policies to improve service

quality. In addition, this study can serve as a basis for further research that wants to examine other factors that influence the quality of health services more comprehensively.

BIBLIOGRAPHY

- Azwar, A. (2016). *Pengantar administrasi kesehatan* (Edisi revisi). Binarupa Aksara.
- Braithwaite, J., Wears, R. L., & Hollnagel, E. (2017). Resilient health care: Turning patient safety on its head. *International Journal for Quality in Health Care*, 29(4), 418–420. <https://doi.org/10.1093/intqhc/mzx044>
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.
- Donabedian, A. (2003). *An introduction to quality assurance in health care*. Oxford University Press.
- Handayani, P. W. (2018). Evaluasi mutu pelayanan kesehatan di fasilitas pelayanan primer. *Jurnal Administrasi Kesehatan Indonesia*, 6(2), 101–110. <https://e-journal.unair.ac.id/JAKI/article/view/2018>
- Kementerian Kesehatan Republik Indonesia. (2019). *Petunjuk teknis penyusunan standar operasional prosedur (SOP) di Puskesmas*. Kemenkes RI. <https://www.kemkes.go.id>
- Kementerian Kesehatan Republik Indonesia. (2020). *Pedoman manajemen Puskesmas*. Kemenkes RI. <https://www.kemkes.go.id>
- Kementerian Kesehatan Republik Indonesia. (2021). *Kebijakan peningkatan mutu pelayanan kesehatan primer*. Kemenkes RI. <https://www.kemkes.go.id>
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40. <https://www.sciencedirect.com/science/article/pii/S0022435988701154>
- Permenkes Republik Indonesia. (2014). *Peraturan Menteri Kesehatan Republik Indonesia Nomor 75 Tahun 2014 tentang Pusat Kesehatan Masyarakat*. <https://peraturan.bpk.go.id>
- Sari, M., & Wulandari, W. (2020). Pengaruh standar operasional prosedur terhadap kepuasan pasien Puskesmas. *Jurnal Kesehatan Masyarakat*, 15(2), 145–153. <https://journal.universitaspahlawan.ac.id/index.php/jkm>

Sugiyono. (2019). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Alfabeta.

Sutrisno, E. (2018). *Manajemen sumber daya manusia*. Kencana.

World Health Organization. (2018). *Delivering quality health services: A global imperative*. WHO.
<https://www.who.int/publications/i/item/9789241513906>

World Health Organization. (2019). *Primary health care on the road to universal health coverage*. WHO.
<https://www.who.int/publications/i/item/WHO-HIS-HGF-19.1>

World Health Organization. (2020). *Quality of care in primary health care*. WHO.
<https://www.who.int/teams/integrated-health-services/quality-health-services>