

The Influence of Pharmaceutical Personnel on Prescription Waiting Time and Patient Satisfaction at Lingsar Public Health Center

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ABSTRACT

The quality of pharmaceutical services is closely linked to the availability of adequate human resources. Limited numbers of pharmaceutical personnel may lead to increased prescription waiting times and decreased patient satisfaction. This study aimed to determine the influence of the number of pharmaceutical personnel on prescription waiting time and patient satisfaction at Lingsar Public Health Center. A cross-sectional design was applied, involving 92 respondents selected through purposive sampling. Data were collected using prescription observation sheets and patient satisfaction questionnaires, and analyzed through linear regression. The results showed that the number of pharmaceutical personnel had a significant negative effect on waiting time ($\beta = -2.954$, $p = 0.011$), meaning that more personnel reduced prescription waiting duration. Additionally, a significant positive effect on patient satisfaction was observed ($\beta = 0.609$, $p = 0.001$). These findings highlight the importance of optimizing the number of pharmaceutical staff to improve efficiency and enhance service quality. Improving human resource allocation may thus contribute to achieving national health service standards and ensuring higher levels of patient satisfaction.

Keywords: Waiting time, prescription service, public health center

1. BACKGROUND

Public health centers (Puskesmas) serve as the frontline providers of primary health services in Indonesia. They are tasked with delivering comprehensive and integrated healthcare to the community, where the quality of service is influenced by available facilities, medicines, and healthcare personnel [1]. Efficient pharmaceutical services are an essential component, as they directly affect patients' access to medications and their perception of care quality.

Waiting time is considered a key indicator of service efficiency. According to the Indonesian Ministry of Health, the acceptable waiting time for non-compounded prescriptions is ≤ 15 minutes, and for compounded prescriptions is ≤ 30 minutes [2]. However, in practice, waiting time is often prolonged due to imbalances between

patient volume and the number of available pharmaceutical staff. Excessive waiting not only delays treatment but also contributes to reduced patient satisfaction [3].

Pharmaceutical personnel, comprising pharmacists and pharmacy technicians, play a vital role in minimizing service delays. Prior studies indicate that adequate human resources in pharmacy units correlate with reduced prescription waiting times and improved patient experiences [4]. Conversely, insufficient staffing may increase workload burdens, prolong service delivery, and negatively affect service quality.

Patient satisfaction represents an important dimension of healthcare quality, encompassing responsiveness, reliability, assurance, empathy, and tangibility [5]. Satisfaction levels are influenced by various factors, including waiting time, staff

competence, and communication. Thus, exploring the relationship between pharmaceutical staffing, waiting time, and satisfaction provides valuable insights for strengthening service standards at the primary healthcare level.

2. RESEARCH METHODS

This study employed a quantitative analytic approach with a cross-sectional design. The research was conducted at Lingsar Public Health Center in 2023. The population consisted of patients who received pharmacy services during the study period. Using purposive sampling, 92 respondents were included.

The independent variable was the number of pharmaceutical personnel, while the dependent variables were prescription waiting time and patient satisfaction. Data collection instruments consisted of:

- Prescription observation sheets to record waiting times for both compounded and non-compounded medicines.
- Patient satisfaction questionnaires, which assessed five dimensions of service quality (responsiveness, reliability, assurance, empathy, and tangibility).

Prior to use, the questionnaire underwent validity and reliability testing. Data were analyzed using linear regression, with significance set at $p < 0.05$. Ethical approval and informed consent were obtained from relevant authorities and participants.

3. RESULTS AND DISCUSSION

Key Findings

Statistical analysis demonstrated significant effects of pharmaceutical staffing on both outcomes:

Table 1.

Regression Analysis of Staffing Influence

Dependent Variable	β Coefficient	t-value	Sig. (p)	R ²	Interpretation
Waiting Time	-2.954	-2.603	0.011	0.070	More staff reduce waiting time
Patient Satisfaction	0.609	3.305	0.001	0.108	More staff increase satisfaction

Graphical representation shows the inverse relationship between number of staff and waiting time, and the direct positive relationship with satisfaction.

The findings confirm that adequate pharmaceutical staffing significantly shortens prescription waiting time, aligning with prior research by Amiruddin [1] and Pasaribu *et al.* [4], which found human resources as a determinant of service efficiency [4†Skripsi]. Conversely, limited staffing increases workload per individual, potentially causing service delays, particularly during peak hours.

Additionally, patient satisfaction significantly improved with higher staffing levels. This is consistent with Hutomo *et al.* [5] and Benita *et al.* [6], who reported strong positive associations between pharmacy services and patient satisfaction. Adequate staff not only expedites services but also allows personnel to communicate effectively, provide counseling, and demonstrate empathy, thereby enhancing patient trust and satisfaction.

These results underscore that optimizing the number of pharmaceutical personnel is not only a matter of efficiency but also a determinant of patient-centered care quality.

4. CONCLUSION

This study demonstrated that the number of pharmaceutical personnel

significantly influences prescription waiting time and patient satisfaction at Lingsar Public Health Center. Increased staffing reduces waiting duration and enhances patients' perceptions of service quality. These results emphasize the importance of allocating sufficient human resources to meet service standards and improve healthcare delivery outcomes.

5. THANKS

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