



Pharmaceutical Staff Behavior and Patient Satisfaction in Drug Information Services: A Cross-Sectional Study in Pekanbaru, Indonesia

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ABSTRACT: The provision of drug information by pharmaceutical staff in pharmaceutical services aims to prevent medication errors and affect patient satisfaction. Satisfaction results from a patient's assessment of health services by comparing the services received with what the patient expects. This study aims to investigate the effect of pharmaceutical staff behavior on patient satisfaction with drug information at pharmacies in Pekanbaru City. This study employs a descriptive-analytic observational/survey design with a cross-sectional approach. Data collection techniques were carried out simultaneously. The samples in this study consisted of 32 pharmaceutical staff members and 105 patients from 15 pharmacy branches. Sampling for pharmaceutical staff was conducted using the saturated sample method, while patient samples were collected using purposive sampling. A satisfaction questionnaire was prepared based on the satisfaction dimensions. Positive behavior was observed in 62% of cases, while harmful behavior was observed in 38%. The average percentage of the gap between expectations and services is 0.70. This indicates that the services provided to patients at the pharmacy exceed their perceived expectations. The Chi-Square test results yielded a p-value of 0.000, indicating a significant influence between the behavior of pharmaceutical staff and patient satisfaction in providing drug information at pharmacies in Pekanbaru City.

Keywords: Behavior; providing drug information; pharmaceutical staff; satisfaction

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INTRODUCTION

Drug information is a key activity in pharmaceutical services. Pharmaceutical services are the patient's responsibility and are carried out by pharmacists regulated by the Pharmaceutical Services Standards in Pharmacies. One of the services provided in this pharmaceutical setting is the provision of drug information, carried out by pharmacists and supported by pharmaceutical staff holding a Registration Certificate and a Practice License (Kemenkes RI, 2016).

One of the shortcomings in patient treatment services is the lack of information from doctors about drugs, side effects, and other topics related to medication use. Additionally, pharmacists and other healthcare workers directly involved in providing drug information have many areas for improvement, which ultimately affects the success of therapy. Therefore, it is important to provide objective, accurate, and up-to-date information as a foundation for informed decision-making at every stage of drug use, especially in pharmacy (Marwansyah, 2019).

The intended drug information includes dosage, dosage form, unique formulation, route and method of administration, pharmacokinetics, pharmacology, therapeutics and alternatives, efficacy, safety for use in pregnant and lactating women, side effects, interactions, stability, availability, price, physical properties or chemicals from drugs, and others (Kemenkes RI, 2016). Based on the components of information that must be conveyed in providing drug information above, another study conducted at Tikala District Pharmacies in Manado City identified several components of drug information; however, there is still a need for a higher percentage (Setia et al., 2018). From other research, it was concluded that drug information services about drug dosages (98%), how to use drugs (97.9%), dosage forms and drug indications (95.8%), drug side effects (37.9%), and drug interaction information services were realized by (12%), where the realization was still far from the target desired by patients (Adityawati et al., 2016).

A pharmacy is a facility for conducting pharmaceutical activities and providing pharmaceutical services to the public. It is also a place for pharmacists, who are staff members who assist in delivering these services (Kemenkes RI, 2016). Pharmaceutical staff working across several pharmacies in Indonesia are not performing optimally; 40% of pharmacies lack staff who provide drug information. Based on these findings, it is hoped that pharmaceutical staff will further improve their performance in providing drug information in pharmacies (Tuwongena et al., 2021).

The quality of providing drug information, a key competence of pharmacists, can be measured, with one aspect being patient satisfaction (Wateh, 2020). Patient satisfaction results from a patient's assessment of health services, comparing expectations with the reality of the experience. Therefore, patient satisfaction depends on how the pharmacist or pharmaceutical staff deliver the service (Kotler & Armstrong, 2015). However, drug information services must still align with the patient's needs and wants. According to other research, the results were obtained from respondents' assessments of their expectations and feelings regarding five dimensions: negative (-0.53), reliability (-0.53), tangible facilities (-0.41), responsiveness (-0.34), assurance (-0.41), and empathy (-0.3). These negative values indicate that the service the patient received is below the expected level (Wateh, 2020).

Research in Medan City, Indonesia, found that some patients believed the service from pharmaceutical staff could be improved because they had to wait too long, needed

explanations on how to use the medicine, and would have appreciated a friendlier approach (F. M. Sari & Suprianto, 2019). According to other research, as many as 43.80% of patients were dissatisfied with the drug information service due to waiting a long time for service (44.4%), being unhappy with the answers given by pharmacists, or pharmacists' lack of knowledge (59.82%). There are still pharmacists who lack a good understanding of drugs (39%), and patients experience inconvenience due to long wait times for medicine because of limited seating at the pharmacy (83.76%). Additionally, the pharmacy does not yet have a calling device, such as a speaker, so when patients are called, they often do not hear it (91.45%) (Wati, 2012). There is still information that needs to be conveyed in providing drug information, which leads to high rates of patient dissatisfaction (Adityawati et al., 2016). Dissatisfaction caused by a lack of understanding of drug information can hinder the effectiveness of treatment and may lead to adverse effects. In addition, the government is strengthening the health system by improving primary health care services, including providing information on medicines, particularly amid the rise in self-medication in Indonesia, which has reached 78.34% (Permenkes, 2025). Although various studies have evaluated the quality of drug information services and patient satisfaction levels separately, there is still limited empirical evidence assessing the relationship between the actual behavior of pharmacy staff observed directly and the level of patient satisfaction measured quantitatively and simultaneously in community pharmacies.

METHODS

This research is a descriptive-analytic observational study using a cross-sectional design, which allows for the assessment of associations between variables but does not permit causal inference. It was conducted from December 2022 to February 2023 at pharmacies across Pekanbaru City, Indonesia. The sampling method for pharmacy staff involved a total sampling of 32 staff members, covering 105 behaviors. Patient sampling was purposive, including 105 patients who met specific criteria. The pharmacy staff in this study were all those working at 15 pharmacy branches throughout Pekanbaru City. The patient participants were those willing to complete questionnaires, aged 17-55. Patients were excluded if they were unwilling to participate, unable to communicate effectively, or did not receive direct drug information services from pharmaceutical staff during the visit. These patients had their behavior assessed by the researchers. The study has obtained ethical approval with the number: B/003/UN19.5.1.1.8/UEPKK/2023.

The source of data in this research is primary data. Primary data are collected from research questionnaires completed directly by patient respondents and from data on pharmaceutical staff's behavior, which are recorded using checklists filled out by researchers in accordance with Standard Operating Procedures (SOP). The research instruments used were patient satisfaction questionnaire sheets and a pharmaceutical staff behavior checklist.

Researchers compiled the patient satisfaction questionnaire based on the dimensions of satisfaction: reliability, responsiveness, tangible facilities, empathy, assurance, and modified statement items from other research. The satisfaction questionnaire was validated with a minimum of 20 respondents (C. P. Sari et al., 2019) using IBM SPSS Statistics Version 26, and all items were confirmed to be valid based on

content validity assessment and suitable for further analysis. The validity test was conducted through content validity to ensure the instrument covered all necessary aspects. Data analysis was conducted in this study for a sample of pharmaceutical staff, based on their sociodemographics, including age, sex, highest level of education, work experience, and type of drug service (prescription or non-prescription). In contrast, data analysis of patient samples was based solely on sociodemographic variables. Patients were comprised of individuals of various ages, genders, education levels, working statuses, frequency of use, and types of drug services, which included prescription drug services and prescriptions. Assessment of the questionnaire is conducted using a scale-like approach, comparing the average percentage between the service received by the patient (performance) and the service expected by the patient (expectation). The value obtained represents the gap between performance and expectations. A positive difference value (>0) indicates that the perceived service performance exceeds patient expectations and is categorized as patient satisfaction, while a negative difference value (<0) indicates patient dissatisfaction. The assessment used a Guttman Scale, and observations were conducted using a standardized SOP-based checklist to minimize observer bias. Data analysis used the Chi-Square test, as both pharmaceutical staff behavior and patient satisfaction variables were categorical, and all expected cell counts met the assumptions required for this test.

RESULT AND DISCUSSION

Pharmaceutical Staff's Behavior Description Based on Sociodemography.

Based on the results presented in Table 1, positive behavior was observed more frequently in early adulthood than in late adolescence. This can be attributed to age influencing one's mindset, understanding, and knowledge, which directly affect employee behavior; the older a person is, the more positive their behavior tends to be. Another factor that makes age directly proportional to behavior is that older individuals tend to have more work experience, which makes them more comfortable with their tasks. There is a shortage of elderly and late-career pharmaceutical staff because pharmacies set restrictions, including a maximum age of 27 years and a preference for recent graduates. This may be because, at that age, individuals often seek other pharmaceutical jobs besides pharmacy (Kumbadewi et al., 2021). According to various studies, pharmaceutical staff in the early elderly stage may have entered the stabilization and maintenance phases, possessing sufficient experience, skills, and knowledge to contribute significantly to the company's progress (Li, 2024).

On the other hand, the abundance of experience and skills leads early elderly pharmaceutical staff to choose jobs that offer more security and stability, such as in the pharmaceutical industry or hospitals, rather than pharmacies. Various studies have shown that age and work experience positively influence the performance of hospital pharmaceutical staff (Tumbelaka & Lolo, 2017). Another study suggests that performance improves with age, as career development typically progresses linearly with age (Harahap et al., 2017).

Based on the research results in Table 1, it can be concluded that positive behavior is more prevalent among females than among males. This finding may indicate female pharmaceutical staff are better at communicating, tend to be more disciplined and meticulous, and thus demonstrate better behavior in both clinical work and the work environment in pharmacies, which are predominantly staffed by women, as shown in this

study, where 28 out of 32 pharmaceutical staff respondents were women. Female pharmaceutical staff tend to behave more professionally than their male counterparts in clinical work. Another study found that women in the pharmaceutical industry are more disciplined than men (Janzen et al., 2013). The other research suggests that the level of stress felt by women is lower when working in a female-dominated environment. This is because they feel safer and more comfortable in such environments (Harahap et al., 2017). Based on the research results in Table 1, the most positive behavior is observed in the Bachelor of Pharmacy program, followed by the Diploma program. Pharmaceutical staff competencies remain generalized, regardless of educational background (Schafheutle et al., 2011). According to other research, educational attainment has a positive effect on people's behavior, with higher education expected to influence knowledge, comprehension, information, and choices, leading to more effective behavior (Noviansyah & Zunaidah, 2011).

Table 1. Pharmaceutical Staff's Behavior Description Based on Sociodemography.

Respondent's Personal Data		Total		Behavior			
		n=10	%	Positive		Negative	
				n	%	n	%
Age	Late teens	66	63	37	56	29	44
	Early adulthood	39	37	28	72	11	28
	Late adulthood	0	0	0	0	0	0
	Elderly	0	0	0	0	0	0
Gender	Man	13	12	6	46	7	54
	Woman	92	88	59	64	33	36
Last education	Diploma degree	24	23	12	50	12	50
	Bachelor degree	81	77	53	65	28	35
Work experience	New	66	63	38	58	28	42
	Old	39	37	27	69	12	31

Based on the results in Table 1, the highest positive behavior is observed among pharmaceutical staff with extended work experience (more than 3 years) compared to those who have just started working (3 years or less). This may be due to increased knowledge with experience, as work experience makes a person wiser in decision-making. Additionally, the more frequently a person interacts with their work, the higher their productivity tends to be. According to other research, increasing work experience, employee knowledge, skills, and abilities will also lead to improvement. Someone who has worked longer can make wiser decisions than someone new to the field (Marwansyah, 2019). Employees with extensive work experience will have advantages in several ways, including detecting, understanding, and identifying causes of errors. The amount of work experience can make individuals wiser in their work actions and more psychologically mature. Other studies indicate that work experience has a positive, significant impact on employee performance and behavior (Alias & Serang, 2018).

Pharmaceutical Staff Behavior Based On Types Of Drug Services

Based on the research results in Figure 1, it can be concluded that the highest positive behavior was observed in prescription drug services compared to non-prescription drug services. This is because, in prescription drug services, the drug is

accompanied by information listed on the prescription, allowing pharmaceutical staff to convey more complete information than in non-prescription services. This is due to the possibility that pharmaceutical staff may hold limited details, so not all drug information is submitted, and they consider the patient to have repeatedly used the drug. Hence, they already have the drug information, but it must still be confirmed with the patient and conveyed to them.

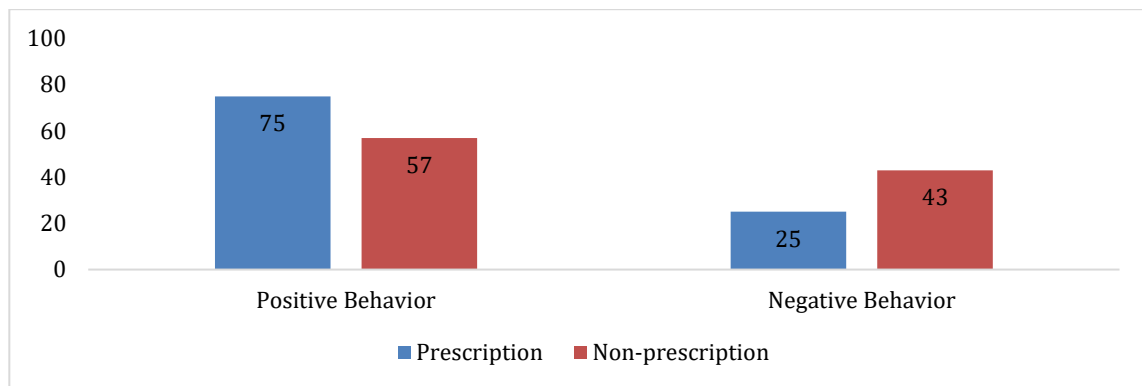


Figure 1. Percentage of Staff's Behavior Based On Types Of Drug Services

Results from other studies on the role of pharmaceutical staff in prescription services showed that 81% of respondents reported that prescription services provided by pharmaceutical staff at pharmacies in the Yogyakarta area were considered good and implemented according to established standards (Paramitha & Oktamianti, 2024). However, some relevant information was not requested by the pharmaceutical staff (Sari et al., 2019). According to other research, the low provision of drug information can be due to pharmacists' limited knowledge about drugs. This lack of understanding can lead pharmacists to feel unsure about sharing information, ultimately preventing them from doing so (Muharni et al., 2015). The information that must be communicated includes the drug name, indication, time of use, dosage, method of use, storage process, interactions, side effects, and disposal of expired medications, with behavioral assessment used to determine whether pharmaceutical staff perform according to SOP. The lowest percentage was found for information on side effects and drug interactions, which may increase the risk of medication errors and non-adherence if such information is not adequately communicated (Delli et al., 2022).

Patient Satisfaction Description Based on Sociodemography

The most common age groups are late teens (17-25 years), early adulthood (26-35 years), late adulthood (36-45 years), and elderly (46-55 years). Patient satisfaction was highest in the elderly group, followed by late adulthood, late teens, and early adulthood. Low satisfaction among those in their productive years (late teens, early and late adulthood) is due to this group having higher demands and expectations from pharmaceutical staff services. They tend to be more critical. Other research suggests that as people age, their service expectations decrease, making them more easily satisfied. Conversely, the productive age group (late teens, early adults, and late adults) tends to demand more, expect better service, and be more critical (Aeni et al., 2023). Late

adolescents generally have greater knowledge, resulting in a lower rate of dissatisfaction. The age group with the highest satisfaction score is the early elderly, indicating that people in this category are more sensitive to information, more knowledgeable, and more willing to express dissatisfaction. In contrast, older individuals tend to accept services more readily, are less informed, and are more resigned to the services they receive (Li, 2024).

Based on the study results in Table 2, there are more patients among women than among men. The other research showed that women are more likely to self-medicate than men because women care more about their health. The highest satisfaction was observed among men, whereas women were more thorough and critical when making treatment decisions and had better medical knowledge. Consequently, women tend to be more cautious when taking medication, making it more difficult to achieve satisfaction (Shafira et al., 2021). Most of the female respondents are mothers who play an essential role as decision-makers in health services, not only for themselves but also for their families. This is one of the reasons women are more critical in their assessments, which makes it harder to feel satisfied.

Table 2. Description of Patient Satisfaction Based on Sociodemography.

Respondent's Personal Data		Total		Satisfaction			
		n=105	%	Satisfied		Not satisfied	
				n	%	n	%
Age	Late teens	38	36	11	29	27	71
	Early adulthood	22	21	7	32	15	68
	Late adulthood	21	20	16	76	5	24
	Elderly	24	23	24	100	0	0
Gender	Man	46	44	35	76	11	24
	Woman	58	55	23	40	35	60
Level Education	Basic	6	6	6	100	0	0
	Secondary	47	45	38	81	9	19
	Tertiary	52	49	14	27	38	73
Working state	Work	59	56	19	32	40	68
	Unemployed	46	44	39	85	7	15
Frequency of getting at the pharmacy	Very rarely	10	10	9	90	1	10
	Seldom	40	38	34	85	6	15
	Often	43	41	13	30	30	70
	Always	12	11	2	17	10	83

Based on the study results in Table 2, patients with the highest level of education are those with secondary education (junior and senior high school), followed by those with tertiary education (undergraduate and postgraduate), and then primary education (elementary school). This occurs because basic education often lacks comprehensive knowledge, so individuals need to be aware of their health conditions. The other study found that patients with low or basic education levels do not use health services more frequently than those with higher levels of education (73.9% vs 73.9%). This is because patients with low levels of education tend to have limited health knowledge, which prevents them from understanding the conditions that affect them, necessitating immediate access to health services (Napirah et al., 2016). A person with high knowledge and education has higher expectations and standards for goods and services; these high

standards make it more difficult for them to feel satisfied if their expectations are not met. According to other studies, individuals with low educational attainment tend to think more practically. In contrast, highly educated individuals tend to fulfil their needs through their reasoning abilities, influenced by their level of education. Consequently, they are more likely to feel dissatisfied compared to those with lower levels of education (Sani et al., 2023).

The highest patient satisfaction was observed among those who were not working, compared with those who were employed (Table 2). This is because patients who do not work tend to have less knowledge and are less demanding, while those who work are usually more attentive to their health. Working patients also generally have better education, a more positive mindset, and more experience compared to non-working patients. Therefore, patients who do not work tend to work harder to satisfy (Sani et al., 2023). According to other studies, respondents with jobs typically have strong educational backgrounds and often interact with the outside world or coworkers. As a result, a series of activities can influence their mindset, ultimately impacting their treatment patterns and satisfaction levels. Other studies have shown that occupation affects satisfaction with health services (Widiasari et al., 2019).

Based on Table 2, the most satisfied respondents are those who rarely visit the pharmacy. In contrast, respondents with the lowest satisfaction levels are those who always visit the pharmacy. This is because patients who visit the pharmacy frequently tend to have a more comprehensive understanding of the services offered, leading to higher expectations for the services they receive. As a result, it takes them more effort to feel satisfied. The more often these patients receive service, the higher their standards for pharmacy services become, and the more comparisons they make, the more critical they become in evaluating the quality of service provided by pharmacists. Consequently, many patients who always receive service report lower satisfaction.

Patient Satisfaction Based on Types of Drug Services

Based on the study results in Figure 2, patients who used non-prescription or self-medication had the highest numbers and percentages compared to those with prescriptions.

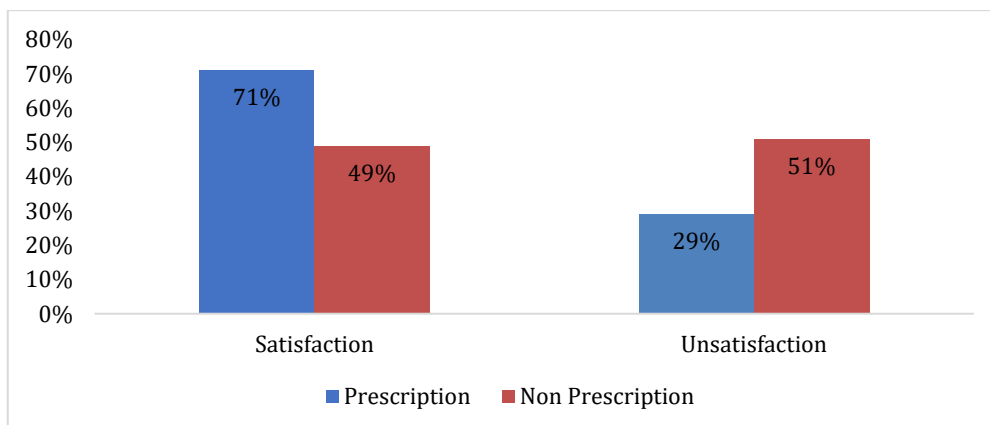


Figure 2. Percentage of Patient Satisfaction Based on Types of Drug Services

This is due to various limitations, such as the high cost of doctor visits and patients' limited time, so self-medication or non-prescription medications remain the preferred choice for most people to treat minor illnesses. This aligns with data from the Central Statistics Office, which shows that 87.48% of patients in Riau take medication without a prescription. This is because treatment with a doctor's prescription provides more complete information. Prescriptions already include details about the drug, conveyed by pharmaceutical staff, such as the drug's name, the amount to be consumed, the quantity received, instructions for use, timing, drug type, dosage, and frequency of use, according to pharmacy SOP.

Having a complete information allows patients to receive proper treatment, which can increase satisfaction and boost confidence that the doctor's prescribed medication is more reliable than relying solely on the pharmaceutical staff's knowledge. Patients are satisfied with the prescription services provided by Cilacap Farma (85% across all satisfaction dimensions). This is due to the limited knowledge and understanding of the public about drugs, leading many to prefer consulting a doctor for prescriptions (Juwita et al., 2023).

Pharmaceutical Staff's Behavior Levels And Patient Satisfaction.

Based on Figure 3, 62% of 105 samples showed positive behavior, while 38% showed negative behavior. Additionally, 52% of respondents were satisfied, and 48% were dissatisfied. Overall, the patient satisfaction level is satisfactory, as demonstrated by the average gap between expectations and performance, which results in positive outcomes and indicates that the service provided exceeds expectations. Nonetheless, some respondents are still seeking more. According to other studies, a positive gap value is observed, suggesting that the services offered have surpassed community expectations (Mahendro et al., 2022).

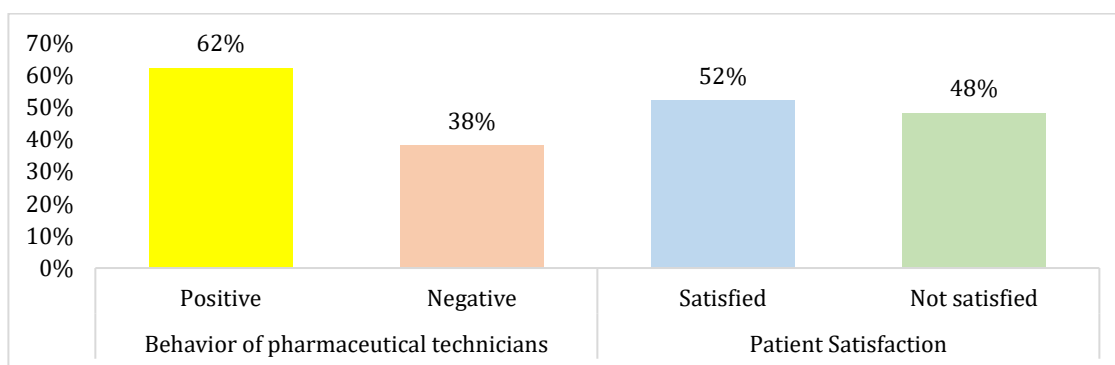


Figure 3. Percentage of Pharmaceutical Staff's Behavior Levels And Patient Satisfaction.

The checklist lists 15 components of drug information that pharmaceutical staff must convey in accordance with the applicable SOP. The study found that the statements with the highest percentages pertained to how to use the drug, the timing of administration, the type of drug, and the drug's name. The statements with the lowest percentage were side effects and how to deal with side effects, drug storage, how to dispose of drugs when they have run out or finished being used, and drug interactions.

This lack of information may stem from pharmaceutical workers' limited knowledge of the subject, leading to a lack of confidence when conveying drug information and ultimately to no information being shared. Additionally, pharmaceutical workers believe that patients already understand and can read the drug information on the packaging or look it up online. If the information provided is incomplete, the patient might not receive appropriate treatment due to insufficient knowledge, which could even lead to medication errors. Drug information should still be provided, even if the pharmacy is busy and the patient has already used the drug, because not all patients receive accurate information (Brown et al., 2017).

Table 3. Bivariate Analysis

		Satisfaction		Total	<i>p value</i>
		Satisfied	Not satisfied		
Behavior	Negative Behavior	0	40	40	0,000*
	Positive Behavior	55	10	65	
Total		55	50	105	

**chi-square test*

Based on these results, the highest level of satisfaction is found in the empathy dimension. This is because the pharmacy staff can understand the patient's feelings, provide genuine attention, and do not consider the patient's social status when giving drug information. This makes patients feel more comfortable and positively influences patient satisfaction. When patients feel comfortable with the services, they are more likely to want to return. Additionally, friendly pharmaceutical staff can make it easier for patients to receive information and follow recommendations, especially on how to use drugs correctly. Other studies have reported that the empathy dimension yields the highest satisfaction (92.23%). Empathy can impact patient satisfaction by fostering a sense of comfort and increasing patients' likelihood of accepting the provided drug information (Mahendro et al., 2022). Based on Table 3, the p-value is 0.000 ($p < 0.05$). These results indicate a significant relationship between the behavior of pharmaceutical staff and patient satisfaction with the provision of drug information in pharmacies in Pekanbaru City. Other studies suggest that consumer behavior influences customer satisfaction, with better behavior leading to greater increases in satisfaction (Aryani & Firmansyah, 2023).

LIMITATIONS

This study has several limitations. First, the cross-sectional design limits the ability to establish a causal relationship between pharmacy staff behavior and patient satisfaction. Second, behavior assessment was conducted through direct observation, which may introduce observer bias despite the use of a standardized checklist. Third, patient sampling depended on participants' willingness to participate, potentially introducing selection bias. Finally, these findings are limited to community pharmacies in Pekanbaru City and may not apply to other regions.

CONCLUSION

This study concludes that the behavior of pharmaceutical staff influences patient satisfaction with the provision of drug information in pharmacies in Pekanbaru City ($p = 0.000$).

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AUTHOR CONTRIBUTION

SPR drafted the first version of this manuscript. FA and H contributed to the research design. SPR and H performed data analysis and interpretation. FA and SPR worked together to revise the manuscript. All authors approved the final version.

ETHICS APPROVAL

The research received approval from the Ethics Commission of the Faculty of Medicine, Universitas Riau, with the number B/003/UN19.5.1.1.8/UEPKK/2023.

CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest related to this study.

REFERENCES

- Adityawati, R., Latifah, E., & Hapsari, W. S. (2016). Evaluation of Drug Information Services for Outpatients at Grabag I Community Health Center Pharmacy. *Journal of Pharmaceutical Science and Practice*, 1(2), 6–10. <https://doi.org/10.31603/PHARMACY.V1I2.302>
- Aeni, W. N., Musthofa, A., Virgiani, B. N., & Nisrina, R. A. (2023). *Patient Satisfaction In The Inpatient Room Of Indramayu Hospital*. 252–262.
- Alias, & Serang, S. (2018). Pengaruh Pengetahuan, Sikap Kerja dan Pengalaman Kerja Terhadap Kinerja Karyawan. *Paradoks: Jurnal Ilmu Ekonomi*, 1(1), 82–97. <https://doi.org/10.57178/PARADOKS.V1I1.177>
- Aryani, F., & Firmansyah, M. R. (2023). Analisis Tingkat Kepuasan Responden Terhadap Kualitas Pemberian Informasi Obat Di UPT Puskesmas Bengkalis Kecamatan Bengkalis Provinsi Riau. *PHARMACY: Jurnal Farmasi Indonesia (Pharmaceutical Journal of Indonesia)*, 20(1), 45–49. <https://doi.org/10.30595/PHARMACY.V0I0.9228>
- Delli, R. M., Kaur, J., Lai, P. S. M., & Dumanig, F. P. (2022). Self-Repair Practices in Pharmacist-Patient Interaction and their Role in Preventing Misunderstanding and Maintaining Medication Safety. *Respectus Philologicus*, 41(46), 53–66.
- Harahap, N. A., Khairunnisa, K., & Tanuwijaya, J. (2017). Patient knowledge and rationality of self-medication in three pharmacies of Panyabungan City, Indonesia. *Jurnal Sains Farmasi & Klinis*, 3(2), 186–192. <https://doi.org/10.29208/JSFK.2017.3.2.124>
- Janzen, D., Fitzpatrick, K., Jensen, K., & Suveges, L. (2013). Women in pharmacy: A preliminary study of the attitudes and beliefs of pharmacy students. *Canadian Pharmacists Journal / Revue Des Pharmaciens Du Canada*, 146(2), 109–116. <https://doi.org/10.1177/1715163513481323;WGROUPE:STRING:PUBLICATION>
- Kemenkes RI. (2016). *Permenkes No. 73 Tahun 2016 tentang Standar Pelayanan Kefarmasian di Apotek*. Kementerian Kesehatan RI.
- Kotler, G., & Armstrong, P. (2015). *EBOOK : Marketing: An Introduction, 12th edition* (12 th). Pearson Education.
- Kumbadewi, L. S., Suwendra, I. W., & Susila, G. P. A. J. (2021). The Effect of Age, Work Experience, Wages, Technology, and Work Environment on Employee Productivity. *Indonesian Management Journal*, 9(1), 1–9.
- Li, L. (2024). Reskilling and Upskilling the Future-ready Workforce for Industry 4.0 and Beyond. *Information Systems Frontiers*, 26(5), 1697–1712. <https://doi.org/10.1007/S10796-022-10308-Y/METRICS>
- Mahendro, U. J., Ningsih, D., & Handayani, S. R. (2022). Analisis Tingkat Kepuasan Pasien Terhadap

- Pelayanan Kefarmasian di Instalasi Farmasi Rawat Jalan Puskesmas Pracimantoro I Wonogiri. *Journal of Islamic Pharmacy*, 7(2), 86–93. <https://doi.org/10.18860/JIP.V7I2.17455>
- Marwansyah. (2019). *Manajemen Sumber Daya Manusia*. Alfabeta. <https://inlislite.uin-suska.ac.id/opac/detail-opac?id=22111>
- Muharni, S. (Septi), Aryani, F. (Fina), & Mizanni, M. (Maysharah). (2015). An Overview of Pharmaceutical Personnel in Providing Information to Self-Medicators at Pharmacies in Tampan District, Pekanbaru. *Journal of Pharmaceutical and Clinical Sciences*, 2(1), 47–53. <https://www.neliti.com/publications/128604/>
- Napirah, M., Napirah, M. R., Rahman, A., & Tony, A. (2016). Faktor-Faktor Yang Berhubungan Dengan Pemanfaatan Pelayanan Kesehatan Di Wilayah Kerja Puskesmas Tambarana Kecamatan Poso Pesisir Utara Kabupaten Poso. *Jurnal Pengembangan Kota*, 4(1), 29–39. <https://doi.org/10.14710/jpk.4.1.29-39>
- Noviansyah, N., & Zunaidah, Z. (2011). Pengaruh Stres Kerja Dan Motivasi Kerja Terhadap Kinerja Karyawan PT. Perkebunan Minanga Ogan Baturaja. *Jurnal Manajemen Dan Bisnis Sriwijaya*, 9(18), 71–86.
- Paramitha, N. C., & Oktamiarti, P. (2024). Analysis Of Support Management In Drug Management In The Pharmaceutical Installation Of Permata Serdang Hospital. *Eduhealth*, 15(4), 2024. <https://doi.org/10.54209/eduhealth.v15i04>
- Permenkes, 2025. (2025). *PMK No. 12 Th 2025 ttg Rencana Strategis Kementerian Kesehatan*. Kementerian Kesehatan RI.
- Sani, A. A., Zainal, V. R., & Hakim, A. (2023). Directorate General of Teachers and Educational Personnel Ministry of Education, Culture, Research and Technology. *Journal of Economics and Business UBS*, 12(6), 3477–3487. <https://doi.org/10.52644/JOEB.V2I6.687>
- Sari, C. P., Mafruhah, O. R., Fajria, R. N., & Meta, A. (2019). Evaluasi Pelayanan Resep Berdasarkan Pelaksanaan Standar Kefarmasian di Apotek Tempat Praktik Kerja Profesi Apoteker (PKPA) Kota Yogyakarta. *Jurnal Pharmascience*, 6(1), 18. <https://doi.org/10.20527/JPS.V6I1.6071>
- Sari, F. M., & Suprianto, U. (2019). Tingkat Kepuasan Pasien terhadap Pelayanan Kefarmasian di Apotek Global Medan. *Jurnal Dunia Farmasi*, 1(3), 91–100. <https://doi.org/10.33085/JDF.V1I3.4371>
- Schafheutle, E. I., Seston, E. M., & Hassell, K. (2011). Factors influencing pharmacist performance: A review of the peer-reviewed literature. *Health Policy*, 102(2–3), 178–192. <https://doi.org/10.1016/j.healthpol.2011.06.004>
- Setia, R. (Resa), Datu, O. (Olvie), Mongi, J. (Jeane), & Tapehe, Y. (Yusuf). (2018). Evaluasi Pelayanan Informasi Obat di Potek Kecamatan Tikala Kota Manado. *Jurnal Biofarmasetikal Tropi*, 1(1), 9–12.
- Tumbelaka, N., & Lolo, W. A. (2017). Factors Affecting Employee Performance at the Pharmacy Installation of Prof. Dr. R. D Kandou General Hospital, Manado. *PHARMACON*, 6(4). <https://doi.org/10.35799/PHA.6.2017.17774>
- Tuwongena, M., Karauwan, F. A., Lumy, D. R., & Saroinsong, Y. F. (2021). Penerapan Standar Pelayanan Kefarmasian di Apotek di Kecamatan Tobelo Kota Kabupaten Halmahera Utara. *Jurnal Biofarmasetikal Tropi*, 4(2), 15–24. <https://doi.org/10.55724/J.BIOFAR.TROP.V4I2.340>
- Wateh, A. (2020). *Kepuasan Pasien Terhadap Pelayanan Informasi Obat pada Swamedikasi di Apotek Merjosari Kota Malang*. Universitas Islam Negeri Maulana Malik Ibrahim.
- Wati, F. (2012). *Hubungan Kualitas Pelayanan Informasi Obat Terhadap Kepuasan Konsumen Di Perusa Aneka Usaha Unit Apotek Sidowayah Farma Klaten*. (Stikes Muhammadiyah Klaten).
- Widiasari, W., Handiyani, H., & Novieastari, E. (2019). Kepuasan Pasiten terhadap Penerapan Keselamatan Pasien di Rumah Sakit. *Jurnal Keperawatan Indonesia*, 22(1), 43–52. <https://doi.org/10.7454/JKI.V22I1.615>