

Knowledge and Application of Pharmacist Ethical Practices in Surakarta City

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Abstract

This study aims to determine the knowledge and application of pharmacist ethical practices in the city of Surakarta. This research is a type of descriptive research. This research was conducted in all pharmacies and hospitals in the Surakarta City area. Data collection will take place in November 2023-January 2024. The population in this study was 489 and the error rate was 5%, so the sample taken was 205 people. The selection of respondents in this study was carried out by non-probability sampling techniques with a sampling technique, namely purposive sampling. The instrument used in this study was a questionnaire. Data analysis of this study was carried out by descriptive analysis on SPSS software. Based on the results of the study, pharmacists were dominated by good knowledge as many as 132 respondents (64%) while for the application of pharmacist ethical practices in Surakarta City was dominated by the application of ethics as many as 122 respondents (60%). This study concludes that pharmacists in Surakarta City have good knowledge of ethical practices and sufficient application of ethical practices.

Introduction

Pharmaceutical practice plays a pivotal role within Indonesia's healthcare system. The pharmacist's role within pharmaceutical practice encompasses delivering Pharmaceutical Care, aimed at enhancing patients' quality of life (Wahyuddin & Nufus, 2022). Pharmacies serve as venues for pharmacists to provide these services. In this regard, pharmacists assume a broader role than merely dispensing medication. Their duties entail counseling patients, furnishing information about medications, and engaging in education to support appropriate and rational drug use (Dominica et al., 2016). Consequently, the relationship between pharmacist and patient assumes paramount importance (Delpasand et al., 2018). Thus, in delivering pharmaceutical services, pharmacists necessitate ethical knowledge and application. Augmenting ethical knowledge and practice can consequently impact the improvement of patients' quality of life (Delpasand et al., 2020).

In executing their duties, pharmacists frequently encounter increasingly complex challenges, including escalating regulations, financial pressures, and heightened competition. Simultaneously, there's a continual surge in demand for healthcare services. Economic and legal constraints, alongside high patient expectations, challenge the professional autonomy of healthcare providers in making optimal decisions for patients (Kruijtbosch et al., 2018). Pharmacists often grapple with ethical dilemmas stemming from conflicting individual, professional, institutional, or social values among involved stakeholders. They navigate situations where decisions must consider diverse perspectives and interests. Pharmacists must

balance adherence to regulations governing pharmaceutical practice while contending with financial pressures and business competition (Kruijtbosch et al., 2018). They're also confronted with demands to deliver high-quality healthcare services to patients. In such scenarios, pharmacists must adhere to ethical principles and professionalism in making optimal decisions.

The principles of Beneficence, Non-maleficence, Autonomy, and Justice serve as the bedrock of contemporary healthcare ethics standards. These principles are reflected in most pharmaceutical professional codes of ethics worldwide (Orayj et al., 2022). Beneficence emphasizes not only avoiding harm but also conferring benefits and enhancing patients' well-being (Varkey, 2021). Non-maleficence underscores the necessity to shield patients from harm or injury in the treatment and care provided. Autonomy grants patients the right to choose or refuse treatment. Justice emphasizes the fair distribution of healthcare resources and decisions regarding who receives care and the type of treatment provided (Iranmanesh et al., 2020).

As healthcare professionals within the pharmaceutical service sector, pharmacists execute their duties by referencing ethical codes as the moral foundation of their professional work. Nevertheless, at times, these professional codes receive insufficient attention. Consequently, the characteristics of the pharmaceutical profession as a provider of drug services focused on community needs may become blurred, transitioning into commercial transactions emphasizing pharmaceutical product profitability (Komalawati, 2020).

Given the aforementioned context, the significance of pharmacists' knowledge and application of ethical practices becomes imperative. Therefore, this study aims to conduct an analysis of pharmacists' knowledge and application of ethical practices in the city of Surakarta. Considering the rarity of research on pharmacist ethics in Indonesia and the absence thereof in Surakarta, this research endeavors to provide deeper insights into pharmacists' ethical principles' understanding and application. Additionally, it aims to offer valuable insights for pharmacists to enhance the quality of pharmaceutical service provision.

Methods

Research Design

The research design employed in this study is descriptive observational research. Ethical approval for this study was obtained from the Research Ethics Commission of Dr. Moewardi Hospital with approval number 1.798/X/HREC/2023.

Research Variables and Operational Definitions

The research variables encompass ethical knowledge and the application of ethical practices among pharmacists. Ethical knowledge is defined as the understanding pharmacists possess regarding ethical principles in pharmaceutical services. Meanwhile, the application of ethical practices is defined as the implementation of ethical principles by pharmacists in pharmaceutical services.

Instruments and Materials

This study was conducted across all pharmacies and hospitals within the Surakarta City area. Data collection took place from November 2023 to January 2024. The instrument utilized in this research was a questionnaire tailored to the conditions prevailing in Surakarta City. The questionnaire comprised closed-ended questions, which elicit concise responses from participants. The questionnaire encompassed 14 items related to the level of knowledge and 10 items related to the application, covering four domains of ethical principles: Autonomy, Beneficence, Non-maleficence, and Justice. The questionnaire underwent validation and reliability testing involving 59 individuals as questionnaire evaluators. The obtained correlation coefficient (r-value) exceeded the tabulated critical value (0.254), thus confirming the validity of the questionnaire. Furthermore, the Cronbach's Alpha values for knowledge-

related questions (0.721) and application-related questions (0.725) indicated reliability (> 0.60).

Population and Sample

The population for this study comprised clinical pharmacists practicing in pharmacies and hospitals in Surakarta City, totaling 489 individuals. Based on calculations utilizing the Isaac and Michael table as referenced in Sugiyono's book (2013) with a confidence level of 5%, the minimum required sample size was determined to be 205 respondents. A total of 205 individuals were sampled for this study, meeting the minimum sample size requirement. Respondent selection was conducted through non-probability purposive sampling technique.

Data Analysis Technique or Model

Characteristics data of respondents' levels of knowledge and application of ethical practices were analyzed descriptively. Assessment of knowledge levels in the questionnaire utilized a Guttman scale, where correct answers were scored as 1 and incorrect answers as 0. Knowledge assessment involved calculating the total correct answers provided by respondents relative to the maximum score. Knowledge levels were categorized into three tiers: good (76-100%), fair (56-75%), and poor ($\leq 55\%$) based on Arikunto (2013). Evaluation of application was based on a Likert scale ranging from "Never" = 1 to "Very Often" = 5. Application assessment involved summarizing respondents' total scores and determining maximum, minimum, first quartile, and third quartile scores. Application levels were categorized as good (> third quartile – maximum score), fair (first quartile-third quartile), and poor (minimum score-first quartile) based on Setiawan (2020). Thus, application categories in this study were divided into good (78-100%), fair (62-77%), and poor (48-61%). Data analysis was performed using descriptive analysis in SPSS software.

Result and Discussion

The findings of this study explore the knowledge and application of pharmacist ethics practices in the city of Surakarta. Data collection was conducted through the dissemination of a questionnaire via Google Forms, yielding responses from 205 participants, all of whom are pharmacists practicing in pharmacies or hospitals within the Surakarta area.

Table 1. Characteristics of Respondents

Characteristic	n	%
Gender		
Male	87	42
Female	118	58
Total	205	100
Age		
<30	28	14
30-40	102	50
40-50	75	36
Total	205	100
Highest Education		
Pharmacist Profession	188	92
Pharmacist Profession and Master's Degree	17	8
Total	205	100
Institution		
Hospital	123	60
Pharmacy	82	40
Total	205	100

Length of Work		
<1-5 years	45	22
6-10 years	96	47
> 10 years	64	31
Total	205	100

Table 1 presents an overview of the characteristics of respondents involved in this study, focusing on several key variables. With regards to gender, the majority of respondents are female (58%), which aligns with the general profile of pharmacists in Indonesia, predominantly dominated by females (Aditama et al., 2018). In terms of age categories, respondents fall within the age range of 30-40 years (50%). It is observed that with increasing age, an individual's level of ability and maturity in processing information tends to improve (Widyaningrum et al., 2023). Regarding the highest educational attainment category, the highest number of respondents are in the category of pharmacy profession (92%), while respondents with pharmacy profession and Master's degree constitute only (8%). It is noted that higher education correlates with a broader scope of knowledge (Dharmawati & Wirata, 2016). On the other hand, all respondents in this study are pharmacists, thus indicating that both respondents with a professional pharmacy background and those who have pursued Master's degrees possess equal authority in pharmaceutical practice (Presiden R.I., 2009). Based on the category of workplace institutions, the majority of respondents work in hospitals (60%), while the rest work in pharmacies (40%). Regarding the tenure category, the results indicate that the majority of respondents have work experience ranging from 6 to 10 years (47%). It is observed that the longer one works, the more experience and higher knowledge and skills are acquired (Dadiani et al., 2020).

Table 2. Description of the Level of Ethical Practice Knowledge of Respondents

Knowledge	n	%
Good	132	64
Fair	64	31
Poor	9	4
Total	205	100

Table 2 presents a description of the level of pharmacist knowledge in the city of Surakarta based on the categories "Good," "Sufficient," and "Poor." Out of a total of 205 respondents, 132 pharmacists (64%) exhibited a good level of knowledge, 64 pharmacists (31%) were categorized as having a sufficient level of knowledge, and 9 pharmacists (4%) were classified as having a poor level of knowledge. This research suggests that the majority of respondents possess a good level of knowledge. Factors influencing pharmacist knowledge levels include age, length of employment, and educational attainment.

Table 3. Percentage of Respondents' Knowledge of Ethical Practice

Domain	No.	Question	Number of Respondents Answering Correctly (n=205)	Percentage
Autonomy	1	Pharmacists discuss the therapy plan with the patient	185 (90.2%)	0.902
	2	Gives patients the right to choose their own treatment	165 (80.5%)	0.805
	3	Respecting the patient's choice of therapy	178 (86.8%)	0.868
Beneficence	4	Ensure that the patient's treatment benefits outweigh the risks	173 (84.4%)	0.844

	5	Ensure that the patient finishes the antibiotics given	180 (87.8%)	0.878
Non-Maleficence	6	Ensure that patients take their medication regularly	185 (90.2%)	0.902
	7	Educate patients about drug interactions	170 (82.9%)	0.829
	8	Do not give expired drugs to patients	193 (94.1%)	0.941
	9	Consider the patient's allergies to therapy	189 (92.2%)	0.922
	10	Identify the risk of errors in drug preparation	178 (86.8%)	0.868
Justice	11	Consider the differences in health needs between urban and rural areas in Indonesia when planning appropriate therapy	181 (88.3%)	0.883
	12	Ensure that information about medicines and their instructions for use is accessible to all patients	157 (76.5%)	0.765
	13	Ensure that patients with special needs or marginalized groups receive equal pharmacy services	160 (78%)	0.78
	14	Collaborate with other organizations or institutions to ensure that quality pharmacy services are available to all individuals in the community	182 (88.7%)	0.887

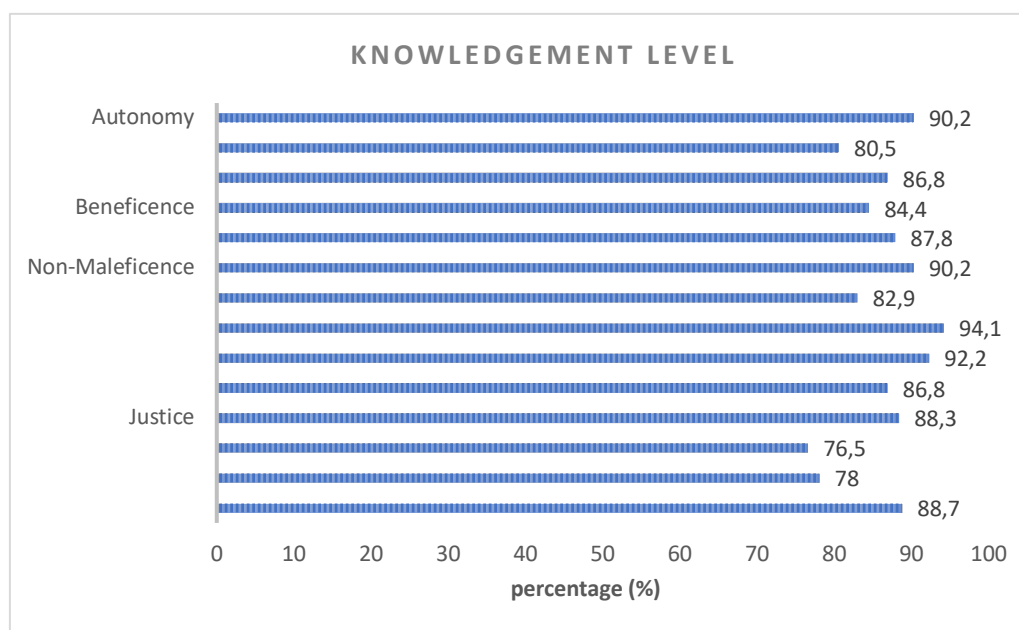


Figure 1. Based on the results of research on the level of knowledge of respondents on each item of ethical principles which include autonomy, beneficence, non-maleficence, and justice including the good category (76-100%) (Arikunto, 2013)

Based on Table 3 and figure 1, the elucidation of pharmacist ethical practice knowledge in Surakarta City is detailed across the domains of autonomy, beneficence, non-maleficence, and justice. It is discernible that respondents exhibit the highest level of knowledge in ethical practice within the domain of Non-Maleficence, indicating that pharmacists consistently endeavor to avoid actions that may jeopardize patients by prioritizing patient safety and well-being. Conversely, respondents demonstrate the lowest level of knowledge concerning ethical

practice within the domain of Justice, signifying a deficiency in pharmacist attention towards fairness and responsiveness to patient needs.

Table 4. Description of the Level of Ethical Practice Implementation

Implementation	n	%
Good	62	30
Fair	122	60
Poor	21	10
Total	205	100

Table 4 provides an overview of the level of ethical practice implementation among pharmacists in Surakarta City, with results categorized into three levels: "Good," "Satisfactory," and "Poor." Out of a total of 205 respondents, 62 pharmacists (30%) were assessed to have a commendable adherence to ethical practices. The majority, comprising 122 pharmacists (60%), were categorized as having a satisfactory level of implementation. Meanwhile, 21 pharmacists (10%) were deemed to have inadequate adherence to ethical practices. Various factors, such as respondents' age and educational attainment, as well as the nature of their employing institutions, may influence pharmacists' adherence to ethical practice standards.

Table 5. Percentage of Application of Ethical Practices by Respondents

Domain	No.	Question	Never	Rarely	Occasionally	Often	Very Often
Autonomy	1	Pharmacists can handle situations where patients request to conceal or alter information that is true.	26 (12.7%)	69 (33.7%)	40 (19.5%)	50 (24.4%)	20 (9.8%)
	2	Pharmacists can manage situations where patients are unable to provide fully informed consent.	10 (4.9%)	15 (7.3%)	40 (19.5%)	98 (47.8%)	42 (20.5%)
	3	Pharmacists discuss with patients the possible risks, benefits, and alternatives of recommended treatment or intervention before seeking their consent.	10 (4.9%)	20 (9.8%)	35 (17.1%)	80 (39.0%)	60 (29.3%)
Beneficence	4	Pharmacists follow protocols or written guidelines to ensure that actions taken always aim to improve the health and well-being of patients or customers.	0 (0%)	20 (9.8%)	41 (20.0%)	94 (45.9%)	50 (24.4%)
	5	Pharmacists evaluate patient needs by listening to complaints, gathering	5 (2.4%)	25 (12.2%)	65 (31.7%)	40 (19.5%)	70 (34.1%)

		medical information and previous treatment history, and understanding the patient's overall health condition.					
Non-Maleficence	6	Pharmacists handle situations where patients experience unexpected side effects after using recommended medication.	5 (2.4%)	25 (12.2%)	50 (24.4%)	45 (22.0%)	80 (39%)
	7	Pharmacists ensure that patients receive medication with the appropriate dosage suitable for their health conditions.	5 (2.4%)	25 (12.2%)	40 (19.5%)	50 (24.4%)	85 (41.5%)
Justice	8	Pharmacists ensure that every patient has the opportunity to express concerns or complaints regarding pharmacy services, and provide fair and appropriate responses.	5 (2.4%)	20 (9.8%)	64 (31.2%)	56 (27.3%)	60 (29.3%)
	9	Pharmacists collaborate with relevant parties, such as the government or non-profit organizations, to improve accessibility of pharmacy services in underdeveloped areas.	20 (9.8%)	14 (6.8%)	36 (17.6%)	55 (26.8%)	80 (39.0%)
	10	Pharmacists assist BPJS patients in understanding and accessing pharmacy benefits in accordance with their rights.	15 (7.3%)	21 (10.2%)	40 (19.5%)	64 (31.2%)	65 (31.7%)

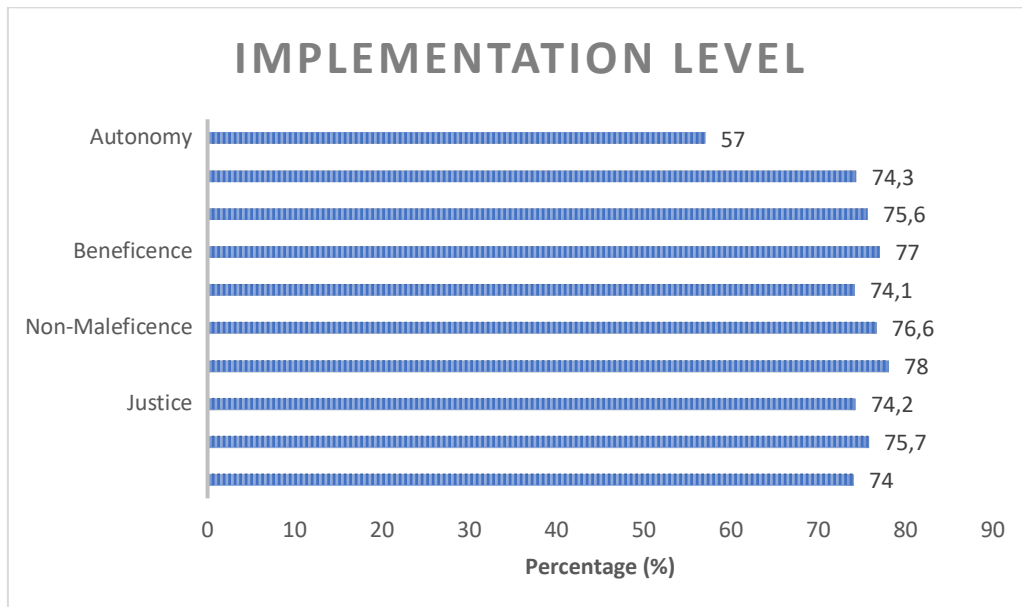


Figure 2. Based on the results of the study, the level of application of respondents to ethical principle question items which include autonomy, beneficence, non-maleficence, and justice is dominated by the sufficient category (62-77%)

Based on Table 5 and figure 2, the presented data depict responses regarding the level of ethical practices among pharmacists in the city of Surakarta across four primary domains. It is evident that within the domain of Non-Maleficence, the highest outcomes are observed, indicating that pharmacists consistently deliver optimal pharmaceutical interventions without causing harm to patients. Conversely, respondents exhibit a lesser degree of ethical practice within the Autonomy domain, signifying a deficiency in respecting patients' autonomy in choosing and determining their own treatments during pharmaceutical service delivery.

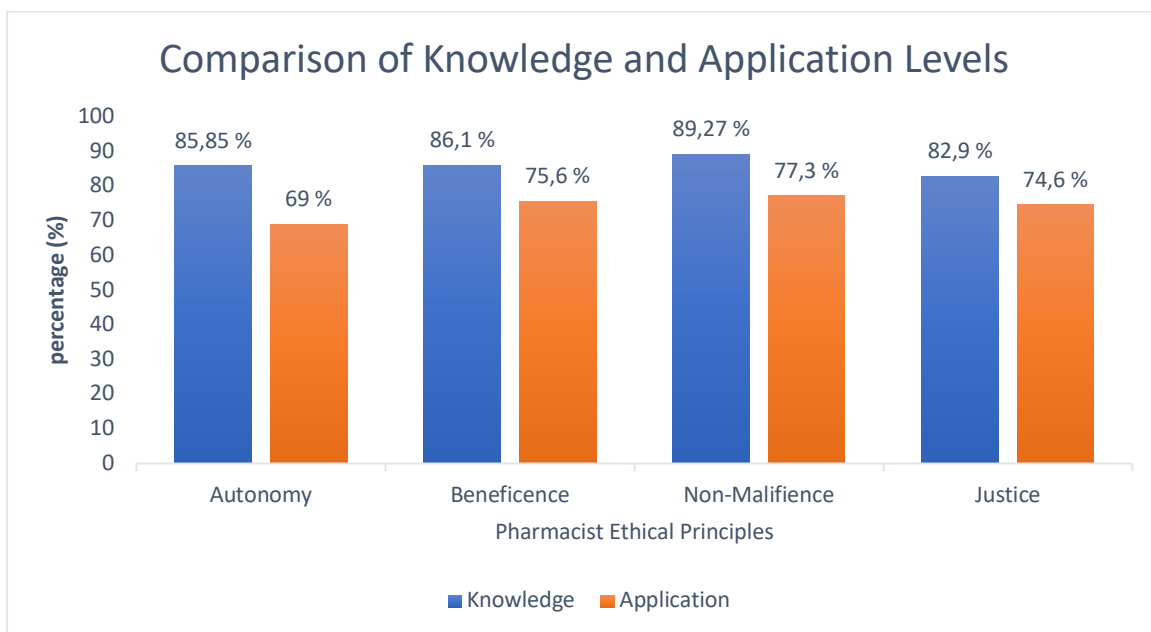


Figure 3. Based on the results of the study, there is a difference between the level of knowledge and the application of respondents' ethical principles. This difference is very visible in the ethical principles of autonomy and non-maleficence

Pharmacists maintain a close relationship with patients through pharmaceutical services (Fathoni et al., 2021), thereby necessitating a high level of knowledge and ethical practice application within the pharmacy profession. The interrelation between pharmacists' knowledge

and ethical practice is evident, where ethical practice knowledge aids pharmacists in delivering pharmaceutical services aligned with ethical standards. Meanwhile, the application of ethical practice by pharmacists plays a pivotal role in advancing pharmacist knowledge to align with patient needs and advancements in the pharmaceutical field.

In this study, it was found that the level of knowledge regarding ethical practice among pharmacists in Surakarta City is deemed satisfactory, whereas the level of ethical practice application is considered adequate. Notably, there exists a significant disparity between the levels of knowledge and application concerning Autonomy and Non-maleficence aspects. This discrepancy arises due to various challenges encountered by pharmacists in delivering pharmaceutical services, including communication challenges with patients, issues related to professionalism and professional practice, as well as regulatory and policy challenges (Esmalipour et al., 2021). Furthermore, there is a possibility that pharmacists may not consistently adhere to ethical principles in decision-making due to a lack of professional ethics education and insufficient examples of behavior considering relevant situational factors not fully covered by these principles (Javadi et al., 2018).

Several factors contribute to the disparity between pharmacists' knowledge and practice, including lack of support, resources, motivation, and feedback from the work environment; mismatch between academic curricula and clinical needs; and insufficient critical competencies or skills (Ajani & Moez, 2011). Numerous studies have demonstrated differences between the levels of knowledge and practice among pharmacists across various aspects. For instance, a study by Sari et al. (2022) found that pharmacists in community health centers possess high knowledge and positive attitudes but exhibit insufficient practices in managing COVID-19 patients. Similarly, research by Rustanti and Kusuma (2014) identified that hospital pharmacists in Banyumas have good knowledge of prescription screening but are inconsistent in its application. Moreover, a study conducted by Khotimah et al. (2022) revealed that pharmacists in Surabaya's community health centers exhibit high knowledge and positive attitudes but lack proficiency in assessing diabetic patient compliance. The disparity between knowledge and practice can be depicted as a disconnect between acquired knowledge, learned skills, and skills required for practice (Gassas, 2021), potentially resulting in negative impacts on patient well-being, pharmacy profession integrity, and overall societal welfare. Such disparities can lead to ethical issues like privacy breaches, medication provisioning errors, prescription inaccuracies, and conflicts of interest, consequently tarnishing pharmacists' reputation, diminishing their performance motivation, and undermining public trust in their professionalism.

Pharmacists' performance significantly impacts patient safety, trust, and well-being, as well as the reputation, professionalism, and credibility of the pharmacy profession (Schafheutle et al., 2011). Enhancing pharmacists' performance in delivering pharmaceutical services necessitates effective communication between pharmacists and patients. Effective pharmacist-patient communication can enhance patient satisfaction, medication usage, and treatment outcomes (Olsson et al., 2014). As pharmacists, it is imperative to receive professional ethics education to acquire knowledge, communication skills, and the ability to adapt ethical principles in delivering pharmaceutical services. Pharmacy ethics education should not only encompass theoretical ethics but also provide pharmacists with training on sourcing information and applying it so they can make informed recommendations and provide information to patients (Al-Qudah et al., 2019). Additionally, supporting policy enforcement and ethical regulations is crucial to bolster pharmacists' performance. At times, pharmacists face conflicts between legal considerations and professional ethics, underpinning their non-compliance with existing ethical regulations and policies. Providing adequate policy and regulation support aids pharmacists in fulfilling their professional roles towards pharmaceutical standards (Mercer et al., 2020). Modification of regulations and policies is expected to motivate pharmacist performance and

provide legal protection for pharmacists to practice in accordance with government-established standards. Collaborative support from organizations such as the Indonesian Pharmacists Association (IAI), government, and other stakeholders is essential to provide guidance, supervision, and evaluation for pharmacists to deliver quality pharmaceutical services (Parera et al., 2021)

This study emphasizes the vital role of pharmacists in patient survival. Every pharmacist profession must possess good knowledge and application of ethical principles, which should serve as guidelines and standards for delivering moral and quality pharmaceutical services. However, ethical principles encounter challenges due to factors such as lack of knowledge, skills, and ethical attitudes among pharmacists; inadequate awareness and societal support regarding pharmacists' roles; insufficient regulation and oversight of pharmaceutical practices; and conflicts of interest among pharmacists, patients, physicians, and the pharmaceutical industry (Delpasand et al., 2019). Therefore, improvement efforts are necessary to enhance pharmacists' professional education and training, particularly in clinical, management, and communication skills. Additionally, enhancing cooperation and coordination among pharmacists, government bodies, professional associations, and other stakeholders is crucial to develop and implement pharmacy service standards and guidelines. These efforts are indispensable to achieve good knowledge and application of ethical practice among pharmacists in Surakarta City, thus creating a professional, moral, and high-quality pharmaceutical service environment.

Conclusion

Based on the research findings, it is evident that the majority of pharmacists in the city of Surakarta possess a commendable level of knowledge, with 132 respondents (64%) exhibiting a robust understanding. Regarding the implementation of ethical practices among pharmacists in Surakarta, it is noteworthy that a significant proportion, namely 122 respondents (60%), adhere to ethical principles adequately. The conclusion drawn from this study underscores that pharmacists in Surakarta exhibit a commendable level of knowledge regarding ethical practices, accompanied by a satisfactory application thereof. The author advocates for initiatives aimed at enhancing the professional education and training of pharmacists, fostering collaborative efforts and coordination among pharmacists, governmental bodies, professional associations, and other stakeholders, as well as the development of tailored ethical guidelines.

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References

- Aditama H., Saputri A., Fadhilah D., Mayningrum K., Sawitri A., Pratiwi W.A., and Pristhifani I.N. (2018). Description of Professional Fee for Pharmacists in Sleman. *Journal of Management and Pharmacy Practice*, 8(2), 51. <https://doi.org/10.22146/jmpf.34062>
- Ajani, K., & Moez, S. (2011). Gap between knowledge and practice in nursing. *Procedia-Social and Behavioral Sciences*, 15, 3927-3931. <http://dx.doi.org/10.1016/j.sbspro.2011.04.396>.
- Al-Qudah, R. A., Tuza, O., Tawfiek, H., Chaar, B., & Basheti, I. A. (2019). Community pharmacy ethical practice in Jordan: assessing attitude, needs and barriers. *Pharmacy Practice (Granada)*, 17(1). <https://pubmed.ncbi.nlm.nih.gov/31015876/>
- Arikunto, S. (2013). *Prosedur Penelitian Suatu Pendekatan Praktik*. Revised Edition. Jakarta:

PT. Rineka Cipta.

- Dadiani, N. M., Lolo, W. A., & Antasionasti, I. (2020). Persepsi Perawat Terhadap Peran Apoteker Dalam Pelayanan Kefarmasian Di Rumah Sakit Robert Wolter Mongisidi Manado. *Pharmacon*, 9(2), 310-317. <https://doi.org/10.35799/pha.9.2020.29287>
- Delpasand, K., Afshar, L., & Tavakkoli, S. N. (2019). The Ethical Principles in Pharmacist-Patient Relationship. *Journal of Clinical & Diagnostic Research*, 13(3). <https://doi.org/10.7860/JCDR/2019/39812.12692>
- Delpasand, K., Nazari Tavakkoli, S., Kiani, M., Abbasi, M., & Afshar, L. (2020). Ethical challenges in the relationship between the pharmacist and patient in Iran. *International Journal of Human Rights in Healthcare*, 13(4), 317-323. <https://doi.org/10.1108/IJHRH-01-2020-0001>
- Dharmawati, I.G.A.A., & Wirata, I.N. (2016). Relationship Between Education Level, Age, and Length of Service with Oral Health Knowledge Levels Among Elementary School Physical Education Teachers in the Tampak Siring Gianyar District. *Jurnal Kesehatan Gigi*, 4(1), 1-5.
- Dominica, D., Putra, D. P., & Yulihastri, Y. (2016). Pengaruh Kehadiran Apoteker Terhadap Pelayanan Kefarmasian di Apotek di Kota Padang. *JSFK (Jurnal Sains Farmasi & Klinis)*, 3(1), 99-107.
- Esmalipour, R., Larijani, B., Mehrdad, N., Ebadi, A., & Salari, P. (2021). The ethical challenges in pharmacy practice in community Pharmacies: A qualitative study. *Saudi Pharmaceutical Journal*, 29(12), 1441-1448. <https://doi.org/10.1016/j.jsps.2021.11.003>
- Fathoni, M. M. A., Fitriani, R., Lestari, F. D., Angembani, V. M. A., Tusholecha, A., Fatmasari, W., ... & Zairina, E. (2021). Pelayanan Kefarmasian Di Beberapa Apotek Di Indonesia Pada Era Pandemi Covid-19. *Jurnal Farmasi Komunitas*, 8(2), 45.
- Gassas, R. (2021). Sources of the knowledge-practice gap in nursing: Lessons from an integrative review. *Nurse education today*, 106, 105095.
- Iranmanesh, M., Yazdi-Feyzabadi, V., & Mehrolohasani, M. H. (2020). The Challenges of Ethical Behaviors for Drug Supply in Pharmacies in Iran: A Principle-Based Approach. *BMC Medical Ethics*, 21(1), 1-15. <https://doi.org/10.1186/s12910-020-00531-0>
- Javadi, M., Ashrafi, N., & Salari, P. (2018). Assessment of pharmacists experiences and attitudes toward professionalism and its challenges in pharmacy practice. *Iranian Journal of Pharmaceutical Research: IJPR*, 17(Suppl), 168.
- Khotimah, K., Rahem, A., & Aditama, L. (2022). Pengetahuan, Sikap, dan Praktik Apoteker dalam Penilaian Kepatuhan Pasien Diabetes di Puskesmas Kota Surabaya. *Media Pharmaceutica Indonesiana*, 4(1), 84-93.
- Komalasari, V. (2020). Tanggung Jawab Apoteker Dalam Pelayanan Obat Dengan Resep Dokter. *Jurnal Poros Hukum Padjadjaran*, 1(2), 226-245. <https://doi.org/10.23920/jphp>
- Kruijtbosch, M., Göttgens-Jansen, W., Floor-Schreudering, A., van Leeuwen, E., & Bouvy, M. L. (2018). Moral dilemmas of community pharmacists: a narrative study. *International journal of clinical pharmacy*, 40, 74-83.
- Mercer, K., Neiterman, E., Guirguis, L., Burns, C., & Grindrod, K. (2020). "My pharmacist": Creating and maintaining relationship between physicians and pharmacists in primary care settings. *Research in Social and Administrative Pharmacy*, 16(1), 102-107.

<https://doi.org/10.1016/j.sapharm.2019.03.144>

- Olsson, E., Ingman, P., Ahmed, B., & Sporrang, S. K. (2014). Pharmacist–patient communication in Swedish community pharmacies. *Research in Social and Administrative Pharmacy*, *10*(1), 149-155.
- Orayj, K., Alahmari, K., & Alasiri, M. (2022). The Concept of Pharmacy Ethics and the Examples of Ethical Dilemmas Encountered by Pharmacists in the Asir Region, Saudi Arabia: A Qualitative Study. *International Journal of General Medicine*, 4985-4996.
- Parera, M. M. W., Yasin, N. M., & Kristina, S. A. (2021). Implementasi Standar Pelayanan Kefarmasian di Apotek Kota Kupang. *Jurnal Manajemen Dan Pelayanan Farmasi (Journal of Management and Pharmacy Practice)*, *11*(3), 185-200.
- Presiden R.I. (2009). Presiden, R. I. (2009). Peraturan pemerintah Republik Indonesia nomor 51 tentang Pekerjaan Kefarmasian.
- Rustanti, Y. A., & Kusuma, A. M. (2014). Pengetahuan, Sikap dan Perilaku Apoteker dalam Pekerjaan Kefarmasian di Rumah Sakit di Wilayah Karesidenan Banyumas. *Sainteks*, *11*(2). <https://doi.org/10.30595/sainteks.v11i2.139>
- Sari, Y. O., Prabandasari, G. I., & Almahdy, A. (2022). Tingkat Pengetahuan, Sikap, dan Praktik Apoteker Puskesmas di Provinsi Jambi terhadap COVID-19. *JSFK (Jurnal Sains Farmasi & Klinis)*, *9*(1), 24-33.
- 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.
- Setiawan, S. (2020). *Designing Questionnaires for Research*. Jakarta.
- Sugiyono, S. (2013). *Qualitative research methods*. Bandung: Alfabeta.
- Varkey, B. (2021). Principles of clinical ethics and their application to practice. *Medical Principles and Practice*, *30*(1), 17-28.
- Wahyudin, W., & Nufus, L. S. (2022). Kebijakan Hukum Pelayanan Kefarmasian Di Indonesia (Suatu Tinjauan Penguatan Dan Perlindungan Hukum Apoteker Dan Pasien Pada Layanan Kefarmasian). *Jurnal Risalah Kenotariatan*, *3*(1). <https://doi.org/10.29303/risalahkenotariatan.v3i1.62>
- Widyaningrum, E. A., Fadrian, M. F., & Admaja, W. (2023). Pengaruh Pelayanan Informasi Swamedikasi Online Berbasis Whatsapp Bot terhadap Pengetahuan Masyarakat. *Majalah Farmasetika*, *8*(3), 235-249. <https://doi.org/10.24198/mfarmasetika.v8i3.43683>