Knowledge and Application of Pharmacist Ethics Practices in Pekalongan Regency

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Article Info

Abstract

This study aims to determine the knowledge and application of pharmacist ethical practices in Pekalongan Regency. This study is a type of observational descriptive study, the population in this study is pharmacists who practice in Pekalongan Regency as many as 129 using purposive sampling, the sample in this study was obtained as many as 100 respondents. The instrument used in this study was a questionnaire. This research will be conducted in Pekalongan district from October to December 2023. Data analysis of this study was carried out by descriptive analysis on SPSS software. The results showed that out of 100 respondents, 97 respondents (97%) had good knowledge about pharmacist ethical practices. However, out of 100 respondents, 52 respondents (52%) dominated the application of pharmacy ethical practices in the less category. It can be concluded that although pharmacists have good knowledge in pharmacist ethical practices, in the application of pharmacist ethical practices compared to the best, which is less.

Introduction

One of the professions in the pharmaceutical field is that of a pharmacist. The role of pharmacists has evolved over time from compounding medications to providing pharmaceutical services. Pharmacies, as facilities for pharmaceutical services led by pharmacists, offer services to patients, particularly in the transactions of buying and selling medications. In addition to serving prescription medications, pharmacies also provide self-medication services, which greatly assist patients with mild symptoms. Therefore, the implementation of community services in pharmacies and hospitals must be carried out while ensuring patient safety. Pharmacists and pharmaceutical technical personnel (TTP) working in pharmacies must perform their duties with a constant commitment to ethics and professionalism, as pharmacists face various ethical challenges and issues requiring ethical decision-making due to their direct interaction with patients and other healthcare professionals. Therefore, pharmacists need to be familiar with ethical principles and apply them in pharmaceutical practice. Pharmacists often encounter ethical dilemmas as they have a greater responsibility to patients. Enhancing pharmacists' knowledge of ethics is crucial to ensure higher practice standards and improve the quality of patients' lives (Salari & Abdollahi, 2017)

Ethical principles encompass four elements: beneficence, nonmaleficence, autonomy, and justice. Beneficence involves not only avoiding harm to patients but also benefiting them and promoting their well-being. Nonmaleficence entails careful consideration of all interventions and treatments to ensure the best course of action for the patient. Autonomy grants patients the right to choose their treatment and supports informed consent, truth-telling, and confidentiality.

Justice refers to fair, equal, and appropriate distribution of healthcare in accordance with existing norms (Varkey, 2021). The ethical principles for pharmacists in Indonesia are compiled into the Indonesian Pharmacists Code of Ethics (KEAI), serving as a guide for pharmacists to act in accordance with moral, ethical, and legal values within society. Pharmacists must adhere to the code of ethics and practice guidelines set by the Indonesian Pharmacists Association (IAI), the professional organization for pharmacists in Indonesia (IAI, 2022)

Research conducted by Esmalipour et al. (2021) revealed ethical challenges in pharmaceutical practice, including challenges related to professionalism, professional communication, and regulatory and policy issues. The analysis indicated that most ethical challenges are associated with the relationships between pharmacists, patients, and doctors. Pharmacists often face dilemmas when their professional authority is challenged by patients and other healthcare professionals (Kruijtbosch et al., 2018). In a study in Croatia, pharmacists frequently defended their decisions to provide medication, citing that they acted in the best interest of the patient. Ethical issues often arose concerning financial or business situations influencing their practice based on ethical values. Other ethical issues were related to organizational structure and the pharmacy profession, involving pharmacist values. Administrative tasks often force pharmacists to choose between serving customers and performing administrative and care duties. According to another study, administrative tasks hinder pharmacists from focusing more on patient care. Ethical issues assessed by EISP (Krajnovic et al., 2021) are related to values such as patient health, collaboration with other healthcare professionals, compliance with rules and regulations, confidentiality, and capability. Pharmacists need moral motivation, awareness that ethical principles are more critical than biases, economic factors, and personal interests, and the moral courage to implement ethical decisions in practice, even if they conflict with other healthcare professionals. Ethical values of pharmacists can serve as motivational factors to improve the quality of pharmaceutical practice, enhance communication with other healthcare professionals, and improve patient outcomes.

The misuse of narcotics, psychotropic substances, and pharmaceutical precursors remains prevalent. This occurs due to the ease of obtaining these drugs (Wulandari & Mustarichie, 2017). Issues regarding the rise of antibiotic resistance are partly attributed to the inappropriate use of antibiotics, such as obtaining them without a doctor's prescription. Antibiotics are classified as prescription-only medicines that require a doctor's prescription for use and administration (Zulfa & Yunitasari, 2020). A study in Pakistan also stated that the dispensing of antibiotics without a prescription is often due to the lack of knowledge among pharmacy staff (Asghar et al., 2020). In a study on pharmaceutical practices in hospitals by Herman et al. (2013), pharmacists demonstrated proficiency in medication management and administration, as well as storage, distribution, and quality control of drugs. However, there is still room for improvement in clinical pharmacy, particularly in drug-related problems, drug interactions, clinical pharmacokinetics, therapeutic drug monitoring, total parenteral nutrition, data analysis, and drug safety. In a study in Puskesmas Betung Kota Kabupaten Banyuasin by Sriwijaya (2022), pharmaceutical services were deemed insufficient, especially in Drug Information Service (PIO), Monitoring of Drug Side Effects (MESO), and Drug Therapy Monitoring (PTO), and visits were not yet conducted. The lack of knowledge and application of ethical principles is identified as one of the factors contributing to these problems. In a study in Nigeria, it was found that the level of knowledge among pharmacists regarding ethical principles is very low, and ethical practices are also deemed poor (Okoro et al., 2022). Similarly, research in Saudi Arabia emphasized the importance of applying ethical principles. Pharmacists need education and training on ethical principles to make informed decisions before providing recommendations and information to patients (Al-Arifi, 2014)

Based on the aforementioned research, there is a need for a study that analyzes the knowledge and application of ethical practices among pharmacists. Therefore, the researcher is interested in conducting a study on the knowledge and application of ethical practices among pharmacists. This research is conducted in Kabupaten Pekalongan because there has been no previous research on the knowledge and application of ethical practices among pharmacists in this area. This study is expected to be beneficial in enhancing the quality of pharmaceutical services by considering ethical principles in pharmacist practice. The introduction section contains an introduction to the research topic, the background of the issue, a description of the problem, the research objectives, and a summary of theoretical studies related to the researched problem. This section may also express expectations regarding the results and benefits of the research.

Methods

This study is a type of descriptive observational research, utilizing a questionnaire distributed to pharmacists practicing in hospitals and pharmacies in the Pekalongan Regency. The variable in this research is a single variable. Ethical knowledge is defined as an understanding related to ethical principles in pharmaceutical services. Meanwhile, the application of ethical practices is defined as the implementation related to ethical principles in pharmaceutical services. The population in this study is pharmacists practicing in the Pekalongan Regency, totaling 129 respondents, who were then selected through purposive sampling, resulting in 100 respondents as the research sample. The instrument used in this study is a questionnaire that has been adapted to measure the level of knowledge and ethical practices of pharmacists in the Pekalongan Regency. The level of knowledge is divided into three categories: good category based on the formula ($X >$ mean + 1.SD), sufficient category based on the formula (mean – 1.SD $\leq X \leq$ mean + 1.SD), and insufficient category based on the formula ($X <$ Mean – 1.SD) (Riwidikdo, 2012). In the criteria for assessing application, respondent scores will be grouped into three criteria: "good," "sufficient," and "insufficient" (Azwar, 2016). The data analysis for this research is conducted through descriptive analysis using SPSS software.

Result and Discussion

This research discusses the level of knowledge and implementation of ethical practices among pharmacists in the Pekalongan Regency, utilizing a questionnaire distributed to 100 pharmacists practicing in pharmacies and hospitals.

Table 1. Respondent Characteristics

Respondent Characteristics	N	%
Sex		
Male	18	18%
Female	82	82%
Total	**100**	**100%**
Age		
<30	15	15%
30-40	74	74%
40-50	11	11%
Total	**100**	**100%**
Highest Education Attained		
Pharmacist (Bachelor)	95	95%
Pharmacist (Master)	5	5%
Total	**100**	**100%**
Workplace		
Hospital	31	31%
Pharmacy	69	69%

Total	**100**	**100%**
Years of Experience		
<1-5 years	21	21%
6-10 years	36	36%
10 Years	43	43%
Total	**100**	**100%**

Based on the description of respondent characteristics, it is evident that the respondents are predominantly female, with 82 respondents (82%), as shown in Table 1. This is correlated with pharmacy education, where the majority of pharmacy students and pharmacists are female (Diana et al., 2019). The age group of 30-40 years dominates, comprising 74 respondents (74%). According to Selifani et al. (2022), individuals in their productive age can work optimally. The highest education level is a bachelor's degree in pharmacy (S1), with 95 respondents (95%). One's knowledge increases with higher education (Dharmawati & Wirata, 2016). The workplace is predominantly pharmacies, with 69 respondents (69%), while the majority have more than 10 years of experience, totaling 43 respondents (43%). Experience is essential for providing responses and forming attitudes (Azwar, 2016).

Table 2. Description of the Level of Knowledge on Ethical Practices

Knowledge	**N**	**%**
Godd	97	97%
Enough	3	3%
Less	0	0%
Total	**100**	**100%**

Table 2 provides an overview of the level of knowledge regarding ethical practices among pharmacists in Pekalongan Regency. The majority of respondents have a good level of knowledge, with 97 respondents (97%), while 3 respondents (3%) have a satisfactory level of knowledge. The pharmacist's knowledge level on ethical practices in the good category can be influenced by factors such as age, education, and experience.

Table 3. Percentage of Respondents' Knowledge on Ethical Practices

Questions	Correct N (%)	Incorrect N (%)
Autonomy		
Pharmacists engage in therapeutic plan discussions with patients.	83%	17%
Granting patients the right to choose their own treatment.	82%	18%
Respecting the patient's therapy choices.	94%	6%
Beneficence		
Ensuring that the patient's treatment is more beneficial than its risks.	96%	4%
Ensuring patients complete the prescribed course of antibiotics	94%	6%
Non-malefience		
Ensuring patients take medication regularly.	94%	6%
Educating patients about potential drug interactions.	93%	7%
Avoiding the dispensing of expired medications to patients.	87%	13%
Considering the patient's allergies in therapy.	81%	19%
Identifying the risks of errors in drug dispensing.	91%	9%
Justice		
Taking into account the differing healthcare needs between urban and rural areas in Indonesia when planning appropriate therapy.	93%	7%

266

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Ensuring that information about drugs and their usage instructions is accessible to all patients.	84%	16%
Ensuring that patients with special needs or marginalized groups receive equivalent pharmacy services.	83%	17%
Collaborating with other organizations or institutions to ensure that quality pharmacy services are available to all individuals in society.	72%	28%
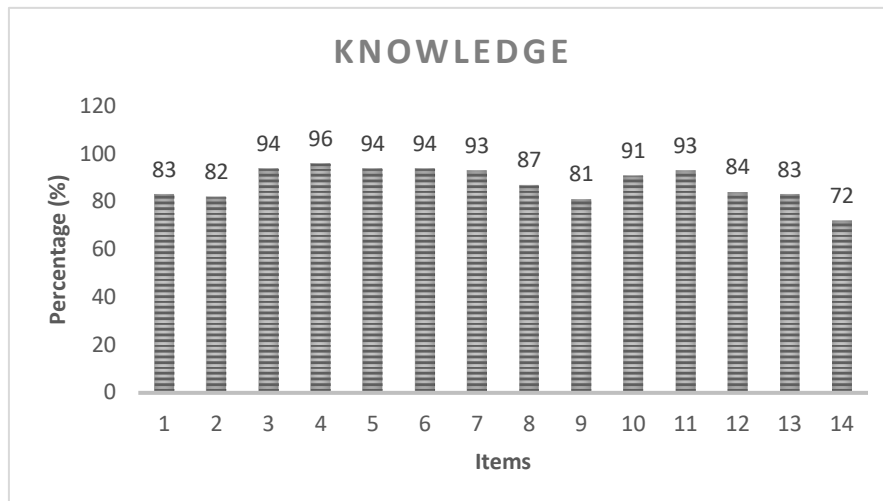
Figure 1. Percentage of Knowledge of Respondents' Ethical Practices

From the data presented in Table 3 and Figure 1, it can be observed that pharmacists have a high understanding of the beneficence ethical principle, meaning they always strive to prevent harm and provide the best care for patients by considering the benefits and risks of each action. However, pharmacists have the lowest understanding of the justice principle, indicating a less active role in collaborating with other organizations or institutions and paying less attention to justice and equality aspects in providing pharmacy services to all individuals in society, regardless of social, economic, or cultural status.

Table 4. Description of the Level of Implementation of Ethical Practices

Impelemenation	N	%
Good	40	40%
Enough	8	8%
Less	52	52%
Total	**100**	**100%**

The Table 4 above provides an overview of the level of implementation regarding ethical practices among pharmacists in the Pekalongan Regency. The majority of respondents are dominated by a level of implementation in the less category, comprising 52 respondents (52%). Meanwhile, 40 respondents (40%) have a level of implementation in the good category, and 8 respondents have a level of implementation in the sufficient category. The implementation level of pharmacists regarding ethical practices can be influenced by several factors such as age, education, experience, and the workplace of the respondents.

Table 5. Percentage of Implementation of Respondents' Ethical Practices

| Question	Never N (%)	Seldom N (%)	Sometimes N (%)	Often N (%)	Very often N (%)
Autonomy					
Pharmacists are capable of handling situations where patients request to conceal or alter true information.	0%	47%	11%	23%	19%
Pharmacists can manage situations where patients are unable to provide full consent based on a clear understanding.	8%	16%	23%	16%	37%
Pharmacists engage in discussions with patients regarding the potential risks, benefits, and alternatives of the recommended treatment or intervention before seeking their approval.	71%	11%	18%	0%	0%
Beneficence					
Pharmacists adhere to protocols or written guidelines to ensure that actions taken always aim to improve the health and well-being of patients or customers.	32%	23%	0%	21%	24%
Pharmacists evaluate patient needs by listening to complaints, gathering medical information and previous treatment history, and understanding the overall health conditions of patients.	29%	12%	11%	21%	27%
Non-malefience					
Pharmacists address situations where patients experience unexpected side effects after using the recommended medication.	0%	26%	15%	21%	38%
Pharmacists ensure that patients receive medication at the appropriate dosage and in accordance with their health conditions.	11%	33%	11%	18%	27%
Justice					
Pharmacists ensure that every patient has the opportunity to express concerns or complaints regarding pharmacy services, providing fair and appropriate responses.	0%	23%	0%	43%	34%
Pharmacists collaborate with relevant parties, such as government or non-profit organizations, to enhance the accessibility of pharmacy services in underdeveloped areas.	11%	12%	24%	18%	35%
Pharmacists assist BPJS patients in understanding and accessing pharmacy benefits in line with their rights.	58%	24%	18%	0%	0%
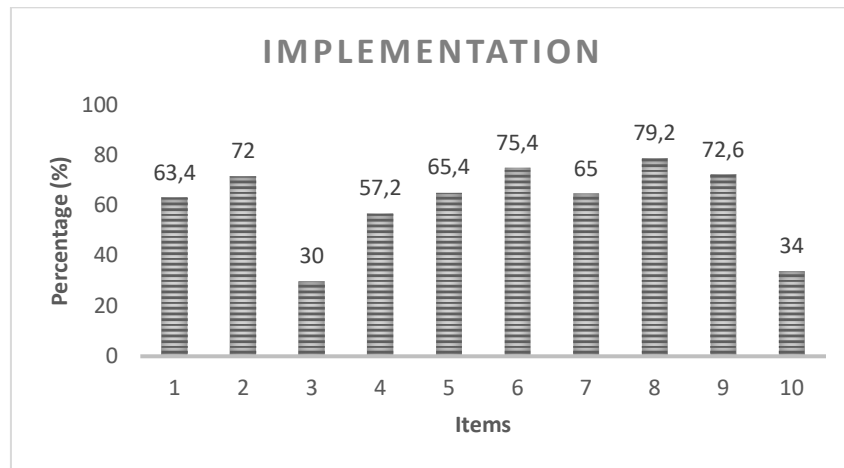
Figure 2. Percentage of Implementation of Respondents' Ethical Practices

From the data presented in Table 5 and Figure 2, it can be observed that pharmacists have a good level of implementation regarding the principle of non-maleficence ethics. This means that pharmacists always strive to provide the best actions for patients without causing harm. However, pharmacists have the least implementation on the autonomy principle, indicating a lack of respect and appreciation for patients' choices and preferences in terms of treatment, pharmaceutical services, and insufficient support for informed consent, truth-telling, and confidentiality.
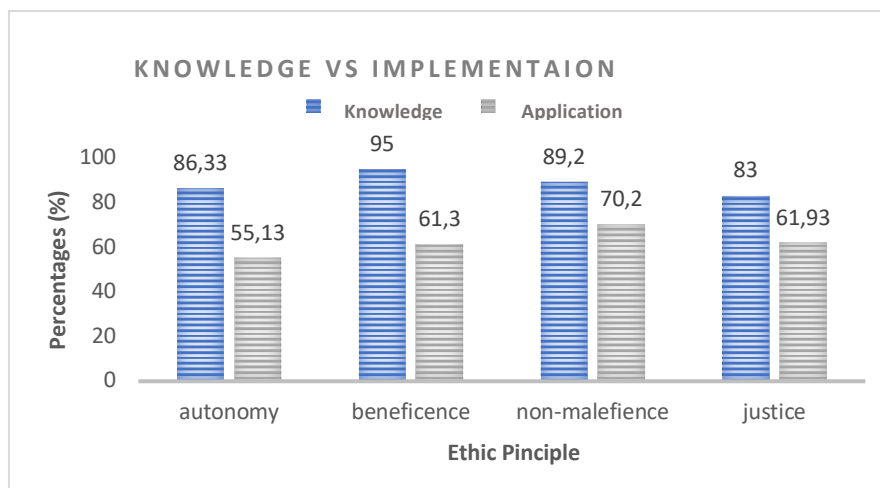

Figure 3. Percentage of Knowledge vs. Implementation of Respondents' Ethical Practices

Knowledge and implementation of pharmacists' ethical practices are interconnected and mutually influence each other. Knowledge about pharmacists' ethical practices can assist pharmacists in understanding and applying the moral standards applicable to the pharmacy profession. The implementation of pharmacists' ethical practices can help pharmacists develop and enhance knowledge relevant to patient needs and pharmaceutical science developments.

The research findings indicate an imbalance between knowledge and the implementation of pharmacists' ethical practices in the Pekalongan Regency. The level of knowledge of ethical principles is assessed as high among the research respondents, while the level of implementation of ethical practices is considered sufficient. Figure 3 reveals a considerable imbalance between knowledge and the implementation of pharmacists' ethical practices in the Pekalongan Regency, especially regarding the autonomy and beneficence ethical principles. Reasons for the imbalance between theory and practice are categorized into three main themes: challenges related to professionalism and professional practice, challenges related to professional communication, and challenges related to regulations and policies (Safazadeh et

269

al., 2018). There is a possibility that they do not apply ethical principles in decision-making due to a lack of behavioral models that consider relevant situational factors not captured by these principles (Page, 2012). There may also be gaps in the ethical development process, preventing ethical knowledge from evolving into ethical behavior (Fauzihardani et al., 2019). Some factors causing the disparity between theory and practice include a lack of support, resources, motivation, and feedback from the work environment; a mismatch between academic curricula and clinical needs; and a lack of critical competence and skills (Ajani & Moez, 2011).

Several studies have shown an imbalance between knowledge and the implementation of pharmacists' ethical practices in various contexts. For example, a study by Targanski et al. (2022) found that the majority of community pharmacists in Indonesia have high knowledge and awareness of the COVID-19 outbreak but only a small percentage consistently follows health protocols while providing healthcare services to the public. Another study by Khotimah et al. (2022) found that pharmacists in health centers have high knowledge and positive attitudes but lack practical adherence to assessing compliance in diabetic patients. Additionally, a study by Al-Tameemi & Sarriff (2019) found that most pharmacists have good knowledge and attitudes toward pharmaceutical care, but only a small percentage routinely practices pharmaceutical care. Factors influencing pharmaceutical care practices include age, education, experience, workplace, training, and potential barriers affecting the implementation of pharmaceutical care practices. The imbalance between knowledge and the implementation of ethical principles among pharmacists can negatively impact patient well-being, the pharmacy profession, and society. This imbalance can lead to ethical problems such as privacy violations, conflicts of interest, drug misuse, prescription errors, and injustice. It can also damage the reputation and public trust in pharmacists, reduce satisfaction, and diminish pharmacists' work motivation.

Pharmacist performance can impact patient safety, trust, and well-being, as well as the reputation, professionalism, and credibility of the pharmacy profession (Schafheutle et al., 2011). Some recommendations to enhance pharmacists' capacity in providing pharmaceutical services include improving education and professional training for pharmacists, especially in clinical, management, and communication skills; enhancing the quality and quantity of equipment and facilities supporting pharmaceutical services; improving collaboration and coordination among pharmacists, the government, professional associations, and other stakeholders in developing and implementing pharmaceutical service standards and guidelines (Meng & Wang, 2022). Recommendations to close the gap between ethical theory and practice include providing effective education to change attitudes and behavior; considering motivational and emotional factors; reconstructing regulations and processes to facilitate ethical practices; and conducting comprehensive and systematic studies (Madani et al., 2020).

These ethical principles have significant implications for pharmacists in providing quality, professional, and moral pharmaceutical services. However, these ethical principles also face ethical challenges caused by factors such as a lack of knowledge, skills, and ethical attitudes among pharmacists, lack of public awareness and support for the pharmacist's role, lack of regulation and supervision of pharmaceutical practices, and conflicts of interest among pharmacists, patients, doctors, and the pharmaceutical industry (Delpasand et al., 2019). In conclusion, these ethical principles should serve as guidelines and standards for pharmacists in conducting pharmaceutical practices. Therefore, there is a need for professional ethics education and training for pharmacists, as well as the development of ethical codes and practical guidelines to achieve good ethical knowledge and support the implementation of good ethical practices by pharmacists.

Conclusion

The research findings indicate that out of 100 respondents, 97 respondents (97%) demonstrated a good understanding of pharmacist ethical practices. However, among the same 100 respondents, 52 respondents (52%) showed a deficiency in the actual implementation of pharmacy ethical practices. This leads to the conclusion that while pharmacists possess a solid knowledge base in ethical practices, the application of these principles is lacking. The researcher recommends enhancing education and training in the ethical aspects of the pharmacy profession, as well as developing ethical codes and practical guidelines that are appropriate.

Acknowledgment

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