International Journal of Community Medicine and Public Health
Salem KY et al. Int J Community Med Public Health. 2020 Dec;7(12):4760-4765
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20205147

Original Research Article

The influence of professional pharmacist services on pharmacy service quality of pharmacies in Kupang city, East Nusa Tenggara province, Indonesia

Krista Yunita Salem[1]*, Muntasir[2], Jacob M. Ratu[2], Frans Salesman[2], Andrieas Umbu Roga[2]

[1]Public Health Sciences in Administration and Health Policy, Postgraduate School of Graduate Program, University of Nusa Cendana, East Nusa Tenggara Province Indonesia
[2]Public Health Sciences, University of Nusa Cendana, Indonesia

Received: 16 September 2020
Revised: 30 October 2020
Accepted: 03 November 2020

***Correspondence:**
Dr. Krista Yunita Salem,
E-mail: yunita.christa@gmail.com

ABSTRACT

Background: Changes in the orientation of pharmaceutical services from drug management to comprehensive patient care, demands optimization of the role of pharmacists in the Kupang City Pharmacy. This study aims to analyze the effect of professional pharmacist services on the quality of pharmacy services in the city of Kupang.
Methods: The research design used was cross sectional. The population of this study were all patients who received services at private pharmacies in Kupang City. The population was divided into 2 clusters with 3-5 and 6-10 patients per day. The sample consisted of a sample of pharmacies and patients who brought prescriptions for each cluster. Retrieval of data by distributing questionnaires. Data analysis was performed by univariate, bivariate and mutivariate.
Results: Univariate analysis showed a difference in the frequency of the variables for each cluster. Cluster visits 6-10 patients per day, the value of the variable was higher than the cluster visits 3-5 patients per day. Bivariate analysis showed that there was a relationship between the knowledge, attitudes, skills, presence and responsibility of pharmacists and the quality of pharmaceutical services, with a significance of each p=1.000; 0.133; 0.003; 0.003; 0.000. However, simultaneously it does not have a significant effect because it has sig>0.05.
Conclusions: There is an influence of pharmacist services in the aspects of knowledge, attitude, skills, presence and responsibility on the quality of pharmaceutical services at pharmacies in Kupang city, but it does not affect it simultaneously.

Keywords: Kupang City, Pharmacist, Pharmacy

INTRODUCTION

The development of science in the field of pharmacy is a support for the quality of prospective health services, influencing the process to achieve the desired public health condition or to be achieved in a sustainable manner.[1] The quality of health that is achieved in a sustainable manner is inseparable from the management and technical aspects held by pharmacists in the field of pharmacy, providing educational information as a form of optimal service to the community.[2] Optimal service quality in accordance with the expectations of society as consumers.[3] There has been a shift in the orientation of pharmaceutical services from initially only managing drugs to providing comprehensive patient care. Pharmaceutical service is a form of optimizing the role of pharmacists for patients in conducting treatment so that it can improve the patient's health status. This is also due to

the increasingly diverse demands of patients and society for the quality of service.[4] Pharmacists as pharmacists are required to improve knowledge, skills, and behaviour so that they can interact directly with patients. Quality pharmaceutical services are services that are directly oriented in the process of using drugs, aiming to ensure the safety, effectiveness and rationality of drug use by applying science and function in patient care, monitoring drug use to determine the ultimate goal and the possibility of medication errors.[5] Pharmacists are obliged to provide managerial services in the form of drug services and clinical services. Drug services include quality assurance of pharmaceutical preparations, security, procurement, storage, distribution and management of drugs.[6] Clinical services include prescription assessment, dispensing, drug information services, counselling, home pharmacy care, monitoring drug therapy and monitoring.

Pharmacy service standards at pharmacies are run by pharmacists to optimize health services according to pharmacist competency standards including promotive, preventive and effective communication services to the public. Pharmacists are expected to be able to search for information and provide accurate, relevant and up-to-date information related to medicine and professional health services to the public.[7] Pharmacist services are related to the quality of pharmacy services at the Pharmacy.

Haris's research in 2014 showed that the role of pharmacists through the form of attitude, reliable knowledge, responsiveness in providing information, active response, service assurance, and attention to commitment had a significant effect on the quality of pharmaceutical services in Bangkalan Regency pharmacies. The role of Pharmacists in the quality of pharmaceutical services is 94.5%.[8] Novianita's research in 2015 showed that the level of attendance, motivation, status of pharmacists and pharmacy ownership in Denpasar City are related to the quality of pharmaceutical services. The results showed that 48.5% (33 pharmacies) had poor pharmaceutical services and 51.5% (35 pharmacies) had good pharmaceutical services.[9] Research by Suhartono et al shows that knowledge, attitudes and practices are active behaviours that demonstrate the practice of pharmaceutical services, starting from the stages of receiving prescriptions, preparing drugs and administering drugs to patients.[10]

The results of the above research indicate that there is a relationship between professional pharmacist services and the quality of pharmacy services in pharmacies. This was the reason researchers were interested in conducting this research. In addition, the results of a survey conducted by 86 members of the Kupang and Kupang Branch of the Indonesian Pharmacist Association on September 29 2018 in commemoration of World Pharmacist Day at Car Free Day on Jalan El Tari, show that the people of Kupang city do not have adequate understanding of the principles drug use, storage and disposal (DAGUSIBU).

Preliminary survey results show that the real problem is the complaints from patients related to pharmaceutical services in pharmacies. Pharmacists often do not immediately serve patients, and drug services tend to be slow. This complaint is suspected to be due to a lack of responsibility for professional drug information services from pharmacists, and this will have an impact on drug services. On the other hand, information related to professional pharmacist services in Kupang city and its relation to the quality of pharmaceutical services is still limited. This reason underlies this research. The purpose of this study was to analyse the effect of professional pharmacist services on the service quality of pharmacies in Kupang city either partially or simultaneously.

METHODS

This research was conducted in Kupang city for 2 months, from June to August 2020. The research method used was observational analysis, quantitative type, with a cross sectional approach.[11,12] The population in this study is the number of patients/consumers who visit and receive services in all private pharmacies in Kupang city. The population was divided into 2 clusters with a visit rate of 3-5 patients per day and 6-10 patients per day. The sample consisted of a sample of pharmacies and patients carrying prescriptions for each cluster. The determination of the sample of pharmacies purposively considers: (1) pharmacies that have pharmacist practices with reference to the list according to the Kupang Branch of the Indonesian Pharmacists Association, (2) private pharmacies that have doctor practices, (3) pharmacies that have received at least 3 patient/consumer visits per day. Furthermore, the number of patient samples was 60 patients. Withdrawing 30 patients each for each cluster referring to the minimum requirement for Roscoe's sample size, that a sample size of 30-500 is sufficient for most studies.[13]

The criteria for the sample of patients in this study included inclusion and exclusion criteria, namely:

Inclusion criteria

Inclusion criteria included patients who were served directly by a pharmacist; patients who have bought drugs and received drug services at the pharmacy; willing to be a respondent; and respondents who were cooperative, can read, listen and speak.

Exclusion criteria

Exclusion criteria excluded patients/consumers who do not bring prescriptions when visiting the pharmacy which is the research location and patients/consumers whose drug components are not available at the pharmacy.

The variables in this study consisted of independent variables and dependent variables.[14] The independent

variable was pharmacist professional services in the dimensions of pharmacist knowledge (X1), pharmacist attitude (X2), pharmacist skills (X3), the presence of pharmacists (X4) and pharmacist responsibility (X5), while the dependent variable was the quality of pharmacy service in Kupang City (Y). Retrieval of data by distributing questionnaires to respondents.[15] Data analysis was univariate, bivariate and multivariate.[16] Univariate analysis aims to describe the factors of each variable, both the dependent variable and the independent variable.[17] Bivariate analysis is used to see the relationship between variables and multivariate analysis to see the relationship between more than one independent variable and the dependent variable. In this case, to see which variable has the most dominant influence on the dependent variable. Multivariate analysis used multiple logistic regression tests at a significance level of 95% (α=0.05). Data analysis tools using the SPSS for windows program.[18]

RESULTS

Respondent characteristics

The characteristics of the respondents in clusters 1 and 2 are shown in the table 1.

Univariate analysis

The results of the univariate analysis can be seen in the following table 2.

Bivariate analysis

The results of the bivariate analysis can be seen in the following table 3.

Multivariate analysis

Multivariate analysis using logistic regression test was carried out to see the most dominant influence of several independent variables on one dependent variable and tested at the same time.

Bivariate selection stage

In this stage, a selection of each independent variable was carried out, where the variables included in the multivariate test were variables that had a significant level (sig) or p value <0.25.

Based on the results of bivariate simple logistic regression analysis, the results were obtained. That the variable attitudes, skills, attendance and responsibility of Pharmacists have a p value <0.25, meaning that these variables are continued in the multivariate analysis. Which can be shown in table 4.

Table 1: Characteristics of respondents.

Respondent characteristics	Cluster 1		Cluster 2	
	N	%	N	%
Gender				
Male	11	36.7	12	40
Girls	19	63.3	18	60
Age (years)				
1-19			3	10
20-29	15	50	15	50
30-39	6	20	6	20
40-49	1	3.3	1	3.3
50 and over	1	3.3	3	10
Not known	7	23.3	2	6.7
Number of visit				
Under 5 visits	17	56.7	9	30
Over 5 visits	10	33.3	18	60
Not known	3	10.0	3	10
Purpose of the recipe				
Self	13	43.3	12	40
Family	6	20.0	11	36.7
Other people	3	10.0	1	3.3
Self and family	6	20.0	3	10
Yourself and others	2	6.7	3	10
Level of education				
Primary school			1	3.3
Junior high school	5	6.7	1	3.3
High school	10	33.3	9	30
Diploma three	5	16.7	6	20
Bachelor	10	33.3	11	36.7
Masters			1	3.3
Not known			1	3.3
Profession				
State civil apparatus	2	6.7	5	16.7
Privat	14	46.7	9	30
Housewife	3	10	1	3.3
Honorary			1	3.3
Entrepreneur			2	6.7
Student			3	10
Pharmaceutical technical staff	2	6.7		
Midwife	1	3.3		
Not known	8	26.7	9	30

Table 2: Result of univariate analysis.

Variable		Categorization (%)	
X1	Knowledge	Good=96.7	Not good=3.3
X2	Attitude	Friendly=96.7	Less friendly=3.3
X3	Skills	Height=91.7	Low=8.3
X4	Presence	Always there=60	Not always there=40
X5	Responsible	Meeting needs=91.7	Not fulfilled=8.3
Y	Service quality	Good quality=90	Poor quality=10

Table 3: Result of bivariate analysis.

Variable	Quality categorization %		P value
X1 Knowledge	Good=98.3	Less=1.7	0.002
X2 Attitude	Friendly=96.7	Less friendly=3.3	0.055
X3 Skills	Height=91.7	Low=8.3	0.000
X4 Presence	Always there=80	Not always there=20	0.000
X5 Responsible	Good quality=91.7	Does not meet=8.3	0.000

Table 4: Bivariate selection results.

Variable	Sig (p)
Knowledge	1.000
Attitude	0.113*
Skills	0.003*
Presence	0.003*
Responsible	0.000*

Note: the sign (*) of the variable passes the selection <0.25

Table 5: Results of the logistic regression test of the attitudes, skills, attendance and responsibilities of pharmacists together on the quality of pharmacy services of pharmacies in Kupang city.

Variables in the Equation								
95.0% C.I. for EXP (B)								
Step 1[a]	**B**	**S.E.**	**Wald**	**Df**	**Sig.**	**Exp (B)**	**Lower**	**Upper**
Attitude	-39.381	2.427E4	0.000	1	0.999	0.000	0.000	.
Skills	36.356	6.747E3	0.000	1	0.996	6.156E15	0.000	.
Presence	18.021	5.333E3	0.000	1	0.997	6.706E7	0.000	.
Responsible	40.231	2.377E4	0.000	1	0.999	2.966E17	0.000	.
Constant	-92.277	1.799E4	0.000	1	0.996	0.000		

a. Variable (s) entered on step 1: Attitude, Skills, Presence, Responsible.

Logistic regression test result

Based on the test results in the table above, it shows that the attitude variable has significance=0.999, skills=0.996, presence=0.997, and responsibility=0.999 with a constant value of these variables=0.996. The test results show that the p value is not significant, which is greater than 0.05. It can be concluded that the variables simultaneously have no effect for the final model and are not continued for multivariate modeling.

DISCUSSION

The influence of knowledge aspect of professional pharmacist services on quality of pharmacy services at pharmacies in Kupang city

The results of this study are in line with the research of Baga et al in 2016, that the respondent's knowledge influences the assessment of the quality of pharmaceutical services in pharmacies.[19] The pharmacist profession has received recognition from the public, which is greatly influenced by its knowledge in providing professional services to the community as consumers/patients. Pharmacist knowledge has implications for professional and ethical pharmaceutical practice.[19] Therefore, the professionalism of pharmacists as a commitment to improve their professional abilities needs to be continuously developed in terms of the strategies they use to provide optimal service. Pharmacists apply professional judgment with the highest priority of patient health and safety in pharmaceutical services, providing accurate, clear information to the public as a consumer/patient. This is in line with Suhartono at al research in 2015, showing that knowledge, attitudes and practices are active behaviours that demonstrate pharmaceutical care practices, starting from the stages of receiving prescriptions, preparing drugs and delivering drugs to patients.

The influence of professional service of pharmacists in attitude aspects of quality of pharmacy services at pharmacies in Kupang city

The results of this study are in line with Haris's research in 2014 which shows that partially the role of pharmacists through attitudes has a significant effect on the quality of pharmaceutical services at pharmacies. It is also in line with Putri, at al research in 2018, that the attitude and empathy of officers have a positive effect on the quality of pharmaceutical services. Pharmacy service is one of the health services that has changed its orientation from drug-oriented to patient-oriented.[20] Pharmacy service activities that initially focused on managing drugs as a commodity should be transformed into comprehensive services aimed at improving the quality of life of patients. A patient's recovery of 25% is expected to be obtained from the convenience and good service of the pharmacy, while 75% comes from the drugs used by the patient.[21]

The influence of professional service of pharmacists in skills aspects of the quality of pharmacy services at pharmacies in Kupang city

The results of this study are in line with Haris research in 2014 which shows that partially the role of pharmacists

through the ability to provide information, active response, service assurance, and attention has a significant effect on the quality of pharmaceutical services at pharmacies.[8] This research is also in line with Prabandari's research in 2018 which shows that prescription services and drug delivery based on doctor's prescription are carried out by pharmacists. In providing prescription services, pharmacists can be assisted by accompanying pharmacists and pharmaceutical technical personnel.[22] Prescription services consist of prescription screening, drug preparation, and drug delivery. Prescription screening is a process of checking prescriptions. Prescription screening is carried out to analyze drug-related problems, and if there are errors or irregularities, it can be consulted with the prescribing doctor, so that patients avoid the risk of medication errors.

The influence of professional service pharmacist's attendance aspects of the quality of pharmacy services at pharmacies in Kupang city

The results of this study are in line with Dominica's research in 2016 that there is a relationship between the presence of pharmacists and professional pharmaceutical services for drug services.[23] The presence of a pharmacist is a form of professionalism, so pharmacists should always be present and provide time to provide pharmaceutical services to patients/consumers.[24] This research is also in line with Prabandari's research in 2018 which showed that a pharmacy is a place to do pharmacy work by pharmacists, so that pharmacists should always be at the pharmacy, present one hundred percent according to the attendance schedule.

The influence of professional services of pharmacists in responsibility aspects of the quality of pharmacy services at pharmacies in Kupang city

The pharmacist's responsibility is a simple measure of attitude and behaviour to carry out his duties and obligations. This is in line with Wiryanto's research in 2014, that pharmacists complete all tasks that are their responsibility, by referring to standard operational procedures to meet the needs of patients/consumers.[24] This is important because medicine is an important component in health services. Like Erwansani et al research in 2016 which showed that medicine as an important component in health services is managed as well as possible to create an optimal health degree.[25] Inefficiencies in drug management can have negative impacts, both medically and economically.

The effect of pharmacist professional services simultaneous to the quality of pharmacy services at pharmacies in Kupang city

The strength of this research is to reveal the effect of professional pharmacist services in the dimensions of knowledge, attitudes, skills, presence and responsibility on the quality of pharmaceutical services for pharmacy patients in Kupang city. Specifically, the results showed that the cluster with a visit rate of 6-10 patients/day at the pharmacy showed a higher variable value than the cluster with a visit rate of 3-5 patients/day. This shows that pharmacists in pharmacies with higher visit rates have better quality of pharmacy services which tend to be considered better in terms of knowledge, attitude, skills, attendance and responsibility than pharmacists in pharmacies with lower levels of patient visits/days. This condition also informs the need for optimal improvement of pharmaceutical services by pharmacists in pharmacies with a visit rate of 3-5 patients/day. Especially the skills, attendance and responsibility of Pharmacists because they have a positive effect.

The limitation of the problem in this study is that it only analyses the relationship between professional pharmacist services to the quality of pharmaceutical services at private pharmacies in Kupang city. Pharmacist professional services include knowledge, attitude, skills, attendance and responsibilities related to drug and clinical service management. The next limitation is the number of research samples because it coincides with the COVID-19 pandemic, the specified sample size only meets the minimum scale of the Pharmacy and Patient population. Therefore, further research is needed to comprehensively compare the quality of pharmaceutical services at private pharmacies and state-owned enterprises, so that they can provide comprehensive information about the professionalism of pharmacists in Kupang city.

CONCLUSION

Based on the results of research and discussion, it can be concluded that there is a partial relationship between professional pharmacist services from the aspects of knowledge, attitudes, skills, dimensions of attendance and responsibility with the quality of pharmacist services at pharmacies in Kupang city. However, simultaneously and consistently it does not have a significant effect on the quality of pharmaceutical services at pharmacies in Kupang city.

ACKNOWLEDGEMENTS

The author would like to thank Dr. Muntasir, S. Si, Apt., M. Si and Dr. Jacob M. Ratu, M. Kes. Prof. Dr. Frans Salesman, SE, M. Kes and Dr. Andreas Umbu Roga, M. Kes, Health Research Ethics Commission of the Faculty of Medicine, University of Nusa Cendana Kupang, the Ministry of Education and Culture for agreeing to hold this research, the person in charge of the pharmacy who was the research sample who helped provide data for this study. All parties who have contributed actively and supported both morally and materially in completing this research.

Funding: No funding sources
Conflict of interest: None declared

Ethical approval: Study was approved by the Health Research Ethics Commission, Faculty of Medicine, University of Nusa Cendana Kupang, Ministry of Education and Culture

REFERENCES

1. Mariam I. Anthropology and Sociology of Socio-Cultural Health, 2015. Available at: https://www.slideshare.net. Accessed on 1 September 2020.
2. Law of the Republic of Indonesia Number 36 of 2014 concerning Health Workers.
3. Harianto PA, Supardi S. Factors related to implementation of draft standard for pharmaceutical services at pharmacies in DKI Jakarta. Jakarta: Pharmacy FMIPA-University of Indonesia; 2008.
4. Surahman EM, Husen IR. Basic concepts of pharmaceutical services based on pharmaceutical care. Bandung: Widya Padjajaran; 2011.
5. Putri RD. The influence of pharmacy service quality on pharmacy customer satisfaction, trust, and loyalty. Indonesian J Health Sci. 2017;1(1):23-9.
6. Regulation of the Minister of Health of the Republic of Indonesia Number 73 Year 2016 Concerning Pharmaceutical Service Standards in Pharmacy. Jakarta: Ministry of Health Republic of Indonesia; 2016.
7. Indonesian Pharmacist Association, Competency Standards for Indonesian Pharmacists. Indonesian Pharmacy Higher Education Association. Jakarta; 2016.
8. Haris SM. the influence of pharmacists managing pharmacy (APA) on quality of pharmacy services in Bangkalan Regency Pharmacy. J Public Adminis. 2014;12(1):19-26.
9. Novianita M. The influence of pharmacists who manage pharmacies on the quality of pharmacy services in denpasar city pharmacy. Masters Program in Public Health Studies Program, Postgraduate Program at Udayana University Denpasar; 2015.
10. Suhartono UA, Wahyu U. Analysis of the relationship between pharmacist professionalism and pharmaceutical care practice: case study on diabetic therapy in Sidoarjo Regency Pharmacy. Indonesian J Pharm Sci. 2015;13(2):166-73.
11. Nazir M. Research Methods. Jakarta: Ghalia Indonesia; 2005.
12. Sugiyono. Quantitative Research Methods, Qualitative and R & D. Bandung: Alfabeta; 2010.
13. Sugiyono, Policy Research Methods, Quantitative Approaches, Qualitative, Combination, R & D and Evaluation Research. Bandung: Alfabeta; 2017.
14. Rizki MR, Namangwulan S. Health Research Methods. Surabaya: Indomedia Pustaka; 2018.
15. Sujarweni VW. Research Methods, Complete Practical and Easy to Understand. Yogyakarta: New Library Press; 2014.
16. Notoatmodjo. Health Research Methodology. Jakarta: Rineka Cipta; 2005.
17. Siegel S. Non Parametric Statistics for Social Sciences. Jakarta: Gramedia; 1986.
18. Notoatmodjo. Health Research Methodology. Jakarta: Rineka Cipta; 2012.
19. Yulia PR, Baga LM, Djohar S. Customer satisfaction towards physical services and consumer knowledge of applicable pharmacy services standards (case study in Depok City). J Business Manage Appl. 2016;2(3):312-22.
20. Putri EL, Dachriyanus, Putri NT. The influence of quality of pharmaceutical services on satisfaction of inpatient Dr. M. Djamil Padang West Sumatra. Indonesia. J Indust Sys Optimiz. 2018;17(2):152-61.
21. Handayani RS, Raharni R, Gitawati R. Consumers' Perception in Pharmacy Services in Three Cities in Indonesia. Makara J Health Res. 2016:22-6.
22. Prabandari S. Overview of standard management of pharmaceutical services at the Permata city pharmacy, Tegal. Tegal Polytechnic Pharmacy DIII Study Prgram. J Thinkers. 2018;7(1):202-8.
23. Dwi D. The influence of the presence of pharmacists on pharmacy services at the pharmacy in Padang City. J Pharm Clin Sci. 2016;3(1):2442-5435.
24. Wiryanto. Conceptual model of revitalization of community pharmacy practices in Indonesia. Medan: Doctoral Study Program in Pharmacy Science, Faculty of Pharmacy, University of North Sumatra; 2014.
25. Enggy E, Ahmad M, Surahman E. Evaluation of drug management and its relationship with the quality of outpatient pharmacy services in a Pontianak City Hospital. Indonesian J Clin Pharm. 2016;5(1):56-66.

Cite this article as: Salem KY, Muntasir, Ratu JM. The influence of professional pharmacist services on pharmacy service quality of pharmacies in Kupang city, East Nusa Tenggara province, Indonesia. Int J Community Med Public Health 2020;7:4760-5.