

Pharmacist's Performance: Organization And Environment, Social Order, Resources, Characteristics Of Psychology, And Regulations, In Hospital In The Region Of Yogyakarta

Dona Muin, Satibi, Yaii Suryo Prabandari, Susi Ari Kristina

Abstract: Pharmaceutical care is a form of service and direct responsibility of pharmacists in performing pharmaceutical jobs to improve the life quality of patients and the distribution of medicines and medical devices. To achieve success, a search was done regarding the results or success of pharmacists in entirety for a certain period in carrying out their (clinical and managerial) duties and responsibilities compared to various possibilities, including work standards, targets or goals, or any criteria that have been predetermined and agreed upon. To identify the factors used as influencing variables of the performance of pharmacists and find out about the effect of these variables on the performance of pharmacists in hospitals in Yogyakarta. A mixed-method study was used to assess the relationship between the influencing variables of pharmacist performance based on the perception of pharmacist respondents who worked in public hospitals. The assessment was done using closed questionnaires that had been proven to be valid and reliable. Data were analyzed descriptively and used multivariate data analysis. Multiple Regression Analysis that was carried out resulted in a regression equation; $\text{Performance} = 0.634 + 0.243 \text{ Organization and Environment} + 0.041 \text{ Social Structure} - 0.122 \text{ Resources} + 0.194 \text{ Pharmacist Characteristics} + 0.324 \text{ Psychological Characteristics} + 0.219 \text{ Regulation} + e$. This study showed that there are six variables that influence the pharmacist performance, namely organization and environment, social structure, resources, pharmacist character, psychological character, and regulation.

Index Terms: performance, pharmacist, variables.

1 INTRODUCTION

Systematic reviews were done by reviewing competence motivation theory (1), resulting in five variables that influence performance, namely: 1) organization and environment, 2) social structure, 3) resources, 4) pharmacist characteristics, 5) regulation/policies (2)); (3)); (4); (5); (6); (7); (8)). Employee performance, including pharmacists, is inseparable from the competencies that an employee has. These competencies consist of five types of characteristics, namely: 1) knowledge factors which include technical, administrative, humanitarian and systemic issues, 2) skills, which refer to someone's ability to do an activity, 3) self-concept and values, which refer to someone's attitudes, values, and image, including someone's belief that she/he can achieve success in a particular situation, 4) personal characters, which refer to physical characteristics and consistency in responses to situations or information, for examples self-control and the ability to remain calm under pressure, 5) motives, which are emotions, desires, psychological needs or other impulses that trigger action. These five competence factors have been covered by the five variables obtained from the systematic review, as described by Muin et al., (2019).

Still, the pharmacist characteristics only include pharmacist demography (age, gender, ethnicity), health demography, and personality (expectation, intention to be outstanding, tenure, etc.), thus excluding employees' psychological characters. Therefore, the researcher added the sixth variable i.e., mental aspects, Psychological characters are habits. According to psychologists, the character is a system of beliefs and practices which direct someone's actions (9). This way, if knowledge about someone's style can be known, then how he/she will react in a particular condition can also be identified. Character is also learned at schools through character building. According to (10), someone's noble character is to know her/his potentials, characterized by values such as self-confident, rational, creative and innovative, responsible, patient, honest, fair, loyal, hard-working, diligent, thorough, disciplined, orderly (11).

2 METHODS

2.2 Study Design

This study was a mixed-method study comprising the following stages: 1) The first stage, i.e., searching for the factors which affect pharmacist performance in hospitals in Special Region of Yogyakarta using a quantitative method. Data were collected using observations and literature reviews; 2) The second stage, i.e., designing questionnaires based on the variables found. 3) The third stage, i.e., conducting multivariate analysis to determine the relationship of all the variables which affect performance, using questionnaires. Inclusion criteria were pharmacists who worked in hospitals and were willing to become respondents, while the exclusion criteria were pharmacists who were on leave or absent from work with probability sampling. The participate consent was

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obtained after the pharmacists were presented with a cover letter explaining the purpose of the study. A total of 192 out of 250 community pharmacists (76.8% response rate) agreed to participate in the study.

2.3 Data Collection

During data collection, pharmacists who were willing to be involved as the research respondents were explained the purpose of this study. Next, these pharmacists were provided with an informed consent form and a questionnaire containing statements related to their perception of pharmacist performance working in hospitals.

2.4 Copyright Form

The data were analyzed both multivariate analyses. Rate and proportions were used to describe pharmacists' responses in this study. Test for normality of the data was Kolmogorov Smirnov's before classification. The dimensions for the categorical variables were calculated by the median of the data. The correlation was used to analyze the association among the variables of the research, using Statistical Package for Social Sciences (SPSS) version 17.0. A p-value of under than 0.05 was considered statistically significant. In this study, the relationship of each variable was tested using questionnaires filled out by 192 respondents.

2.5 Ethnical Consideration

This research was approved by the Medical and Health Research Ethics Committee of Faculty of Medicine Gadjah Mada University, Yogyakarta, Indonesia, with decree number (SK) Ref: KE / FK / 1383 / EC / 2018.

3 RESULTS

To design an instrument, the researcher had conducted a theoretical literature review and formulated a systematic review to obtain domains as the research variables and indicators, as described in Table 1. The dependent variable, i.e., performance, was adapted from Hendrartini (2010), Hafizurrahman (13) and (14), of which the respondents were doctors and nurses. Thus modification was made to the questionnaires of the present study by adjusting to the conditions of pharmacists. Similarly, change was also done during the systematic review to the independent variables, i.e., organization and environment, social structure, resources, pharmacist character, psychological character, and regulation to determine the five independent variables which affect performance, namely: the statements in these questionnaires were modified and adjusted to the conditions of pharmacists in Indonesia. The sixth variable used was the psychological character (15). Once the questionnaire had been designed, validity assay was carried out in the form of face validity and content validity before the distribution to the respondents (valid = index range >0.8). The questionnaires collected from the respondents (N = 192) were then tested once again in terms of validity and reliability. In fact, according to the rules of carrying out multiple regression analysis, a regression equation shall have data that are typically distributed and have neither heteroscedasticity nor multicollinearity to obtain a functional and unbiased regression equation. The results of the normality test that had been done showed that the data in this regression equation were customarily distributed (Kolmogorov Smirnov's statistical analysis, resulting in a significance of 0.089 (> 0.05) and a kHz of 1.247 (<from z

TABLE 1
RESEARCH VARIABLE AND INDICATORS TO DESIGN
QUESTIONNAIRE INSTRUMENT

No	Dependent variables	Independent variables	Indicators
1	Pharmacist performance	-	- According to predetermined targets - Complying with procedures - Being initiative during work - Completing main duties - Being able to work in a team - Carrying out standard operating procedures of pharmaceutical care in hospitals - Having the potential to solve problems - Being quick in action
2	-	Organization and environment	- Having self competencies and dynamic strength - Organizational structure and the number of staffs - Workload and time - Opportunity for development or training - Work-life quality (relationship with colleagues, justice, openness, and trust)
3	-	Social structure	- Status among society - Professional support
4	-	Resources	- Professional position - Human resources - Equipment - Facilities
5	-	Pharmacist characters	- Pharmacist demography (age, gender, ethnicity, tenure, education) - Health demography - Expectation and willingness to be an outstanding pharmacist
6	-	Psychological characters	- Self-confident - Rational - Creative and innovative - Responsible - Patient - Honest - Fair - Loyal - Hard-working - Diligent - Thorough - Disciplined - Orderly
7	-	Regulation/policies	- Payment method - Pharmacist authority - Organizational policies - Government Regulation

TABLE 2
CORRELATION RESULTS FOR EACH VARIABLE

No	Relationship between variables	R (count)	significance
1	Organization and environment → Social order	0.669	0.000
2	Organization and environment → Resource	0.549	0.000
3	Organization and environment → Pharmacist Characteristics	0.657	0.000
4	Organization and environment → Psychological Characteristics	0.632	0.000
5	Organization and environment → Regulation	0.662	0.000
6	Organization and environment → Performance	0.675	0.000
7	Social order → Organization and environment	0.669	0.000
8	Social order → Resource	0.557	0.000
9	Social order → Pharmacist Characteristics	0.486	0.000
10	Social order → Psychological Characteristics	0.543	0.000
11	Social order → Regulation	0.717	0.000
12	Social order → Performance	0.551	0.000
13	Resource → Organization and environment	0.549	0.000
14	Resource → Social order	0.557	0.000
15	Resource → Pharmacist Characteristics	0.539	0.000
16	Resource → Psychological Characteristics	0.319	0.000
17	Resource → Regulation	0.677	0.000
18	Resource → Performance	0.336	0.000
19	Pharmacist Characteristics → Organization and environment	0.657	0.000
20	Pharmacist Characteristics → Social order	0.486	0.000
21	Pharmacist Characteristics → Resource	0.539	0.000
22	Pharmacist Characteristics → Psychological Characteristics	0.562	0.000
23	Pharmacist Characteristics → Regulation	0.691	0.000
24	Pharmacist Characteristics → Performance	0.624	0.000
25	Psychological Characteristics → Organization, and environment	0.632	0.000
26	Psychological Characteristics → Social order	0.543	0.000
27	Psychological Characteristics → Resource	0.319	0.000
28	Psychological Characteristics → Pharmacist Characteristics	0.562	0.000
29	Psychological Characteristics → Regulation	0.604	0.000
30	Psychological Characteristics → Performance	0.710	0.000
31	Regulation → Organization and environment	0.662	0.000
32	Regulation → Social order	0.717	0.000
33	Regulation → Resource	0.677	0.000
34	Regulation → Pharmacist Characteristics	0.691	0.000
35	Regulation → Psychological Characteristics	0.604	0.000
36	Regulation → Performance	0.637	0.000
37	Performance → Organization and environment	0.675	0.000
38	Performance → Social order	0.551	0.000
39	Performance → Resource	0.336	0.000
40	Performance → Pharmacist Characteristics	0.624	0.000
41	Performance → Psychological Characteristics	0.710	0.000
42	Performance → Regulation	0.637	0.000

count: 1.960)), had no heteroscedasticity (spread above and below 0 and did not form a specific pattern) and had no

multicollinearity (the tolerance value of all the variables > 0.1 and VIF values <10), thus these data met the requirements for multiple regression analysis. To answer the research

TABLE 3
SIMULTANEOUS MULTIPLE REGRESSION ANALYSIS

Variabel	Standard error	t	Significance
Organization and environment	0.067	3.633	0.000
Social order	0.065	0.632	0.528
Resource	0.39	-3.129	0.002
Pharmacist Characteristics	0.71	2.726	0.007
Psychological Characteristics	0.61	5.323	0.000
Regulation	0.79	2.761	0.006

problems, achieve the objectives, prove the hypothesis, and determine whether the explanatory variables partially had a significant effect on the dependent variable, it is necessary to conduct a t-test. The correlation for each of the variables can be seen in Table 2. Based on the correlation table above, it can be said that there is a relationship between each of the variables ($r_{count} > r_{table}$, and a significance value <0.05), followed by Multiple Regression Analysis which can be seen in Table 3. Table 3 describes that the relationship of the variables can be formulated in the following regression equation: Performance = 0.634 + 0.243 Organization and Environment + 0.041 Social Structure – 0.122 Resources + 0.194 Pharmacist Character + 0.324 Psychological Character + 0.219 Regulation + e.

4 DISCUSSION

In this study, the researcher searched for the factors that influence pharmacist performance, which is the result or success of pharmacists in a certain period in carrying out their (clinical and managerial) duties and responsibilities compared to various possibilities, such as work standards, targets or goals, or criteria that have been predetermined and agreed upon, and also analyzed the relationship of these variables with pharmacist performance (1). Based on the literature review, theoretical reviews, and systematic reviews that had been done, the researcher linked these factors to the motivation performance theories. Employee performance, including pharmacists, is inseparable from the competencies that an employee has. Skill is an underlying characteristic that an individual has, and it is causally related to fulfilling specific criteria required to occupy a particular position. This way, competency is considered as an underlying characteristic that is deeply rooted and inherent in someone's personality, and it can be used to predict or can predict behavior and performance and affect employee performance (16); (15) (9); (17). In an empirical evaluation of Alderfer's theory, particularly in investigating the relationships between the elements of the theory and work behaviour (18);, it is known that the responsibility for motivating employees is to develop a motivational package intended for specific individuals or groups of employees. Based on this review and the systematic review, six principal variables were obtained; namely, 1) organization and environment are a part of hospitals which surround pharmacists, namely management, pharmaceutical installation, either inside or outside hospitals which have a common goal about pharmaceutical jobs that affect the quality of work in the hospitals for patients, colleagues, and supervisors; 2) social structure is the community surrounding pharmacists in hospitals who interact with each other based on their status and roles which affect pharmacists in carrying out

their duties and responsibilities; 3) resources are both tangible and intangible potentials that hospitals have that could support pharmacist performance and quality; 4) pharmacist character is the lifestyle of pharmacists both their personality and health to make their behavior more consistent, including health factor and demography; 5) psychological aspect is the style developed inside pharmacists which are physically visible, consisting of self-confident, rational, creative, innovative, responsible, patient, honest, fair, loyal, hard working, diligent, thorough, disciplined, orderly; 6) regulation/policies are guidelines in carrying out pharmaceutical jobs which are applied in hospitals, including payment methods, pharmacist authority, organizational systems, and government regulations. Pharmacist performance served as the dependent variable, which represents the work of pharmacists in entirety concerning their duties compared with work standards, targets, or goals between pharmacists and hospitals as measured by questionnaire development (1). Based on the results after the collection of the questionnaires from the respondents with the help of the SPSS statistical program, it is known that the variables of organization and environment, social structure, pharmacist character, the psychological aspect had a positive regression coefficient on performance. This shows that these variables had a positive effect on performance. Meanwhile, the variable of resources had a negative factor in performance, indicating that the variable of resources had a negative impact on performance. This study has several limitations: only tracing and testing the variables that affect pharmacist performance, and the data collection method was limited to pharmacist respondents who worked in hospitals; the results cannot be generalized to all pharmacist communities. The data collection method was a self-managed survey; a bias on social desirability might have occurred and inflated the expected outcomes.

5 CONCLUSION

Pharmacists who work in hospitals in the Special Region of Yogyakarta Province, Indonesia, have the potential to improve their performance to support the success of hospitals in providing health services to the community. The Relationship between Pharmacist Performance with Organization and Environment, Social Structure, Resources, Pharmacist Character, Psychological Character, and Regulation can be used as considerations for hospitals to design the development of their employee performance, one of which is a pharmacist.

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DECLARATION OF CONFLICTING OF INTEREST

The authors declare there is no conflict of interest.

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