

DETERMINANT FACTORS OF PATIENT SATISFACTION AND TRUST IN PHARMACY STAFF AMONG PEOPLE WITH NON-COMMUNICABLE DISEASES: A PATIENT-CENTER CARE APPROACH

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ABSTRACT

Patient satisfaction and trust are the main focus in the context of health care. Patient satisfaction is influenced by medication service factors, handling patient complaints and listening to patient needs. Important to develop and test a patient-centered care model as a tool to monitor, measure, analyze, and increase patient satisfaction and trust among people with non-communicable diseases in Public Health Center service setting. This study attempts to ascertain the effect of care on patient satisfaction and trust in pharmacy staff at the Magelang City Public Health Center. Cross-sectional quantitative research is used in this field. 212 people participated as the sample. Non-probability sampling using a purposive sample strategy was used as the sampling technique in this investigation. Structural Equation Modeling-Partial Least Square (SEM-PLS) is used for hypothesis testing. According to the study's findings, patient satisfaction is positively impacted by pharmacy staffs' participative behavior and interpersonal communication ($p < 0.05$). Interpersonal communication and pharmacy staff participation do not affect the trust in pharmacy staff ($p > 0.05$). Patient satisfaction plays a moderating role in the association between pharmacy staff participation and trust in pharmacy staff ($p < 0.05$). Likewise, the association between interpersonal communication and trust in pharmacy staff is mediated by patient satisfaction ($p < 0.05$).

Keywords: Patient-Centered Care; Non-Communicable Diseases; Public Health Center; Satisfaction; Trust

1. INTRODUCTION

A significant portion of the world's fatalities—nearly 70%—are caused by chronic diseases (Kemenkes RI, 2016). Globally, chronic diseases were responsible for 36 million fatalities in 2008, or 36% of all deaths (Rosdiana et al., 2017). Hypertension is a disease that has a very high incidence rate, doubling from 1995 to 2005, and is predicted to increase by 24% from 2000 to 2025 in both developing and developed countries (Athiyah et al., 2019). According to RISKESDAS's 2018 results, chronic diseases have become more prevalent and are now the leading cause of mortality in Indonesia (Kemenkes RI, 2018). The health profile of Central Java Province in 2015 stated that hypertension continues to account for the biggest share of all non-Communicable diseases reported, totaling 57.87%, with Diabetes Mellitus coming in at 18.33%. These two diseases are the top priority for Non-Communicable Diseases in Central Java (Rosdiana et al., 2017).

Prolanis is an integrated health care system and proactive approach for health BPJS members with chronic diseases (BPJS, 2015). Prolanis is implemented at the First Level Health Facility (Abdullah et al., 2017). Public Health Center (PHC) is the main unit of health care center that serves as the First Level Health Facility for health services in Indonesia (Ratnasari, 2017). PHC

as a gatekeeper is supposed to be able to address health issues in accordance with the proficiency required by First Level Health Facilities (Rosdiana et al., 2017).

The quality of health services in PHC, particularly pharmacy services, can be improved by applying Patient-Centered Care (PCC). PCC is a new paradigm in health care (Riskiyah et al., 2017). PCC is a form of service that prioritizes the needs and wants of patients (Rosa, 2018). Pharmacists' participative behavior, patients' participative behavior and interpersonal communication are components of the PCC (Pribadi et al., 2019; Wang et al., 2018). According to Stewart et al, Patient Centered Care is beneficial for reducing malpractice and increase of medication adherence (Stewart et al., 2000). Moreover, PCC can also increase satisfaction and reduce the severity of disease symptoms in patients (Hudon et al., 2011).

Several studies related to PCC have been conducted. Pharmacist participative behavior and interpersonal communication can improve the relationship quality between patients and pharmacist (Pribadi et al., 2019; Wang et al., 2018). Therefore, patients can feel satisfied with pharmacy services (Pribadi et al., 2019; Wang et al., 2018). Based on Worley's research, pharmacist participative behavior and interpersonal communication can build commitment through relationship quality (Worley, 2006). However, most of these studies used outpatients of hospital as research subjects. Therefore, it is important to develop and test a patient-centered care model as a tool to monitor, measure, analyze, and increase patient satisfaction and trust among people with non-communicable diseases in PHC service setting.

Recently, patient satisfaction and trust are the main focus in the context of health care. Patient satisfaction is influenced by medication service factors, handling patient complaints and listening to patient needs (Kurniasih et al., 2015). Patient satisfaction is an important thing to consider in building patient trust (Wididana, 2016). Based on the description above and the limitations of previous research in the development of concepts, the purpose of this study was to investigate the effect of the pharmacy staffs' participative behavior and interpersonal communication on patient satisfaction and trust in pharmacy staff among Non-Communicable Diseases patients in PHC.

2. METHODS

This research is a quantitative correlational study with a cross-sectional approach. The study was conducted in November-December 2019 at Public Health Center (PHC) in Magelang Region with 212 respondents. Purposive sampling was the method of sampling technique. The criteria of respondents are hypertension and diabetes mellitus patients who take part in Prolanis program at PHC, willingness to become research respondents, receiving at least 3 times of pharmacy service, and age 17-65 years old.

The questionnaires consist of 4 constructs, namely pharmacy staffs' participative behavior and interpersonal communication consisting of 17 items adapted from Worley, 7 items of patient satisfaction adapted from Wang et al., and 3 items of trust in pharmacy staff adapted from Castaldo et al (Castaldo et al., 2016; Wang et al., 2018; Worley, 2006). Each question in this questionnaire used a 4-point Likert scale. The first stage is to require a linguist to translate the text into Indonesian and make suggestions for content revision. Then, 2 academic experts were involved to review the simplicity and clarity. Before being used, a pilot study was conducted on 30 respondents to verify the validity and reliability of the questionnaire. The validity testing of the questionnaire used the Item-Total Correlation Correction method with a valid criterion $r > 0.361$ and the reliability test with reliable criteria used the Cronbach Alpha with a value > 0.6 . The results of the validity testing showed three invalid items and therefore were removed from the questionnaire. The reliability testing declared that all variables were reliable. Finally, a total of 24 items were selected and considered on the final field study.

The data was then analyzed by using the PLS-SEM (Partial Least Square - Structural Equation Modeling) method with SMART-PLS computer program. The parameters measured in PLS-SEM are the outer model and the inner model. Three parameters in outer model are

convergent validity, discriminant validity, and composite reliability (CR). The inner model is utilized to check the relationship between variables, through the bootstrapping process.

3. RESULTS AND DISCUSSION

3.1. Characteristics of respondents

The profile of respondent's characteristics in this study can be described as follows. The majority of respondents, 50%, were elderly. Most of respondents were women with percentage of 67%. Most of the education level of respondents was senior high school with percentage of 44%. Housewives made up the bulk of the workforce (76.4%), followed by civil servants (10.4%). 49% of respondents had average monthly income <1,500,000 (Indonesian rupiah). Types of non-communicable disease of respondents in this study were hypertension with percentage of 55.2% and diabetes mellitus by 44.8%. The majority of respondents' illnesses lasted more than three years, with an average rate of 84.4%. Most of respondents have visited PHC > 3 times.

3.2. Outer Model Evaluation

3.2.1. Convergent Validity

The total questions were 24 items. However, ten items are declared invalid (BI1, BI2, BI3, PT2, HB1, HB2, HB4, HB5, KI4, and KP2), therefore dropped from the model. **Table 1** indicates that the fourteen items meet the requirements of convergent validity with a loading factor value of more than 0.5 and the AVE value of all latent variables greater than 0.5 (Henseler et al., 2009). The reliability test is used to measure the internal consistency of the measuring instrument. The results show that all latent variables in this study have a composite reliability (CR) value of more than 0.70 (Meilita et al., 2016). Thus, the items' validity and construct reliability of all variables are confirmed.

Table 1. Convergent validity

Variables	Item Code	Factor Loadings	AVE	CR
Pharmacy staffs' participative behavior	PT4	0.817	0.502	0.873
	PT1	0.756		
	PT3	0.633		
	HB3	0.605		
Interpersonal communication	KI5	0.825	0.556	0.855
	KI1	0.729		
	KI3	0.675		
Patient Satisfaction	KP7	0.857	0.597	0.789
	KP6	0.789		
	KP1	0.756		
	KP5	0.678		
Trust In Pharmacy Staff	TR1	0.925	0.701	0.799
	TR3	0.923		
	TR2	0.630		

3.2.2. Discriminant validity

The discriminant validity test was obtained by comparing the correlation value of latent variables with the roots of AVE as shown in **Table 2**. According to Adil et al., the AVE root values are should be greater than the correlation value between latent variables to indicate that the latent variable has a high discriminant validity (Adil et al., 2016).

Table 2. Discriminant validity

	Trust in pharmacy staff	Patient satisfaction	Interpersonal communication	Pharmacy staffs' participative behavior
Trust in pharmacy staff	0.837			
Patient satisfaction	0.773	0.776		
Interpersonal communication	0.206	0.265	0.746	
Pharmacy staffs' participative behavior	0.221	0.263	0.497	0.708

Table 3. Results of path coefficient and t-statistic

Hypothesis	Relationship	t-statistic	P-values	Conclusion	R Square
1	Pharmacy staff s' participative behavior → Patient satisfaction	2.036	0.042	Accepted	0.603
2	Interpersonal communication → Patient satisfaction	2.283	0.023	Accepted	
3	Pharmacy staffs' participative behavior → Trust in pharmacy staff	0.384	0.701	Rejected	0.093
4	Interpersonal communication → Trust in pharmacy staff	0.197	0.844	Rejected	
5	Patient satisfaction → Trust in pharmacy staff	19.683	0.000	Accepted	

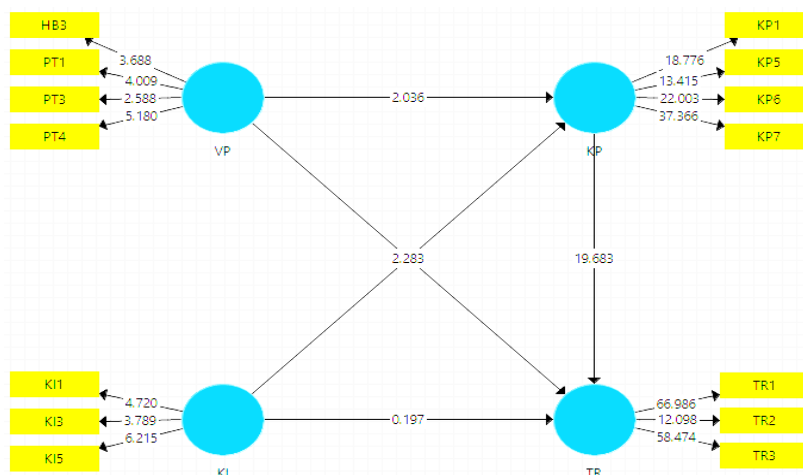


Figure 1. Output of Inner Model

As shown in **Table 3**, the R Square value to predict patient satisfaction is 0.603 and to predict the trust in pharmacy staff is 0.093. This shows that the variable of pharmacy staffs' participative behavior and interpersonal communication are able to explain patient satisfaction in a moderate manner that is equal to 60.3% and the remaining 39.7% is explained by other variables outside the model. While the variable of pharmacy staffs' participative behavior and interpersonal communication can only explain trust in pharmacy staff of 9.3%, the remaining 90.7% is explained by other variables outside the model. Output of inner model shown in **Figure 1**.

The first result is that pharmacy staffs' participative behavior influences patient satisfaction ($p < 0.05$). This is consistent with research by [Mayefis et al \(2017\)](#) which shows that drug information services had a significant effect on patient satisfaction. Another study by [Worley](#) stated that the pharmacy staff participation can improve treatment satisfaction and compliance in patients ([Worley, 2006](#)). Moreover, patient-centered care proves as an important predictor of the development of patient-pharmacy relationship quality ([Wang et al., 2018](#)). The 62nd congress of the FIP states that the role of pharmacists is currently focused on developing pharmaceutical practices and focusing on patient care ([Panfilova et al., 2019](#)). The pharmacy staff is responsible for assessing, monitoring, planning, and modifying the patient's treatment ([Wijayanti et al., 2020](#)). Thus, the quality of life of the patient can be enhanced and received the optimum therapeutic outcome ([Wijayanti et al., 2020](#)). According to [Mayefis et al \(2017\)](#), drugs are special products that require high safety for users. As a consequence, patients as drug users really need to be equipped with adequate information about the drugs they consume. Moreover, drug information services can be used to identify, solve, and prevent drug-related problems, enabling the goals of patient therapy can be achieved ([Mayefis et al., 2017](#)).

Interpersonal communication influences patient satisfaction ($p < 0.05$). This is in line with [Sari's et al.](#) study that found the influence of interpersonal communication on patient satisfaction in the Orthopedic Hospital context ([Sari et al., 2016](#)). [Weningtyas & Ni's \(2012\)](#) research suggests

that interpersonal communication and service quality significantly affect consumer satisfaction. Moreover, Das and Begum stated that there was a significant positive relationship between communication patterns and patient satisfaction levels (Das et al., 2015). In addition, Otogara et al (2017) stated that the application of communication skills in six domains namely speaking, body language, listening, eye contact, patient privacy and patient participation significantly influence patient satisfaction. Similarly, therapeutic communication is used to provide information and obtain information from patients (Yas & Mohammed, 2017). Communication requires empathy, in an effort to help patients and understand patient needs (Pribadi et al., 2019). Respect for patients is the attitude expected in communicating with patients (Pribadi et al., 2019). Effective communication is based on being fair while giving services without considering the patient's socioeconomic status. (Pribadi et al., 2019).

The next result is that pharmacy staffs' participative behavior has no effect on trust in pharmacy staff ($p>0.05$). It contradicts the study by Putri (2017) that found the participation of pharmacists or pharmacist assistants has a positive influence on consumer trust in pharmacies. This situation might explain that there was a good understanding of drug information, such as drug names, indications, and usage guidelines. It is also because people with chronic diseases for a long time believe that the participation behavior by pharmacists is less important because they are familiar with how to manage their condition (Worley, 2006). Moreover, the results of this study indicate that patient satisfaction totally mediates the relationship between the pharmacy staffs' participative behavior and trust in pharmacy staff, which means that the patients will trust pharmacy staff if they are content with the pharmacy staff's involvement. Another fact is that most of respondents in this study were BPJS members, meaning that they do not need to pay for the medicines. Athiyah et al (2019) discovered that even when patients do not pay for the medications, there is no assurance that patients would take their prescription and comply with the instructions. According to Layqah et al (2018), greater effort is needed to ensure effective information services in certain sub-populations, such as the elderly.

The results of this study also show that interpersonal communication has no effect on trust in pharmacy staff ($p>0.05$). This result contrasts with Umudy's study, which found that patient trust is significantly influenced by the interpersonal interactions of health workers (Umudy, 2016). This surprising finding can be explained by the fact that non-communicable disease patients consult doctors more frequently. According to Gidman et al., patients trust doctors more than pharmacy staffs. This is because doctors' interactions with patients are higher than with pharmacy staffs. This interaction causes patients to be more open and honest about treatment therapy to doctors (Gidman et al., 2012). Moreover, this study demonstrates that patient satisfaction fully mediates. It means that the patient will have faith in the pharmacy staff if the patient is satisfied with the interpersonal communication. Rehin and Raveendran (2014) claim that the foundation for a trustworthy connection is laid by empathetic interaction at the psychological level. When a relationship of trust is built, communication barriers will be less of an issue since the patient will feel free to discuss his ailment openly (Rehin & Raveendran, 2014). This can help diagnose patients more accurately, which will lead to higher-quality care (Rehin & Raveendran, 2014).

Another result is that patient satisfaction influences trust ($p<0.05$). This result is consistent with Putri's study which states that pharmaceutical consumer satisfaction has a positive influence on consumer trust in pharmacy (Putri, 2017). Castaldo et al. study also found that community trust in pharmacy has a strong impact on satisfaction (Castaldo et al., 2016). Satisfaction is the psychological state that results from confirmation or disconfirmation of expectations with reality (Yasodha, 2011). According to Islahudin and Hasan (2019) treatment satisfaction has been proven to affect the patient's willingness to adjust to long-term therapy. Patients who are less satisfied with treatment show a reduced desire to undergo therapy (Islahudin & Hasan, 2019). Consumer trust is formed by the company's ability in fulfilling its promises to meet customer expectations.

Good quality pharmaceutical services can create patient trust. In this case, the value of consumers' confidence will naturally increase if the pharmacist or pharmacist assistant is able to provide more services and match consumer expectations (Putri, 2017).

However, several limitations were found in this study. This research only involves five PHC institutions in Magelang, Indonesia. In addition, because there were a smaller number of respondents, this model cannot be generalized. Future research needs to increase the number of samples and involve more PHC institutions. Moreover, the number of invalid question items in this study shows the instability of the measuring instrument. The measurement model ideally not only fulfills the criteria of discriminant validity, convergent validity, and reliability, but also should be stable when tested on various socio-demographic backgrounds (Rakhmawati et al., 2013).

4. CONCLUSION

Pharmacy staffs' participative behavior and interpersonal communication affect patient satisfaction. Patient satisfaction influences trust in pharmacy staff. The pharmacy staffs' participative behavior and interpersonal communication, however, has no effect on trust in pharmacy staff. Patient satisfaction becomes a total mediator of the relationship between pharmacy staffs' participative behavior and trust in pharmacy staff as well as the association between interpersonal communication and trust in pharmacy staff among non-communicable disease patients in PHC. Thus, future research needs to test the stability of the measurement model toward differences in socio-demographic profiles.

5. CONFLICT OF INTEREST

The author declares that there are no competing conflicts of interest.

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