Is the Therapeutic Adherence of Hypertensive Patients Closely Related to the Pharmacist-Patient Communication?

Setiyo Budi Santoso[1*], Nurkholis Ashari[2], Ika Mulyono Putri Wibowo[3]

[1]*Department of Community and Clinical Pharmacy, Faculty of Health Science, Universitas Muhammadiyah Magelang*
[2]*Pharmacy Undergraduate Program, Faculty of Pharmacy, Universitas Muhammadiyah Magelang*
[3]*Department of Center Medication Information and Pharmaceutical Care, Faculty of Pharmacy, Universitas Surabaya*
Corresponding author's email: Sb@unimma.ac.id

ABSTRACT
Two-thirds of hypertensive patients are spread in developing countries. In Indonesia, hypertension, nowadays, ranks second nationally and becomes a priority in non-communicable disease control. Pharmacist-patient communication is presumably related to therapy adherence of hypertensive patients. However, no research focuses on presenting this data. this article is aimed to present the readers with the correlation between the level of adherence to therapy of hypertensive patients and the communication behaviour of pharmaceutical personnel. We took the observations by recording the communication between pharmacists and hypertensive patients. We placed the research in two different Community Health Centers (Puskesmas), namely Puskesmas Muntilan 2 and Puskesmas Tempuran (Magelang Regency-Indonesia). The cross-sectional study in March 2020 collected data. The records were analysed using the Roter Interaction Analysis System (RIAS) instrument. Simultaneously, the medication adherence item was measured by the Medication Adherence Report Scale (MARS-5) instrument. The results showed that the pharmaceutical personnel providing drug information services to hypertensive patients have carried out two communication functions; task-focused (199 utterances) and socio-emotional (130 utterances). The hypertensive patients in this research had a relatively high mean adherence score of 24.1. The findings of the research demonstrated that task-focused communication was not related to overall items of therapy adherence. On the other hand, socio-emotional communication is closely related to the frequency of stop drug consumption for a while (0.265). The researchers underlined that the high frequency of socio-emotional communication was closely related to patient adherence to not stop drug consumption as being prescribed.

Keywords: *Roter Interaction Analysis System; Socio-emotional, Task Focused; Medication Adherence Report Scale; Puskesmas*

1. INTRODUCTION

A record of 1.13 billion people in the world is suffering from hypertension. Two-thirds of them are spread in developing countries. The national second spread of this disease is 9,365,000 people. Hypertensive patients are the top priority of non-communicable disease control through the Chronic Disease Management Program (*Prolanis*).

The success of *Prolanis* is influenced by optimal counselling and drug information services. These support services are proven to have a significant effect on symptoms of disease refinement, motivation, adherence to therapy, and satisfaction towards services [1]–[3]. Patients through these services can solve problems faced during therapy. For the implication, the patient gained a positive impression and became more regular in carrying out therapeutic instructions [4], [5].

The quality of drug information and counselling services is closely related to pharmacist skills in managing interactions [6], [7]. While good interaction is oriented for patient needs fulfilment (patient-centeredness). The success of managing interactions reflects in the skill to combine knowledge of drugs and

Z. B. Pambuko et al. (Eds.): BIS-HSS 2021, ASSEHR 667, pp. 34–39, 2023.
https://doi.org/10.2991/978-2-494069-49-7_7

interpersonal sensitivity [8], [9]. However, recent findings suggest that pharmacist-patient interaction practices are pharmacist-centred and fully controlled by service providers [10]. So that patients tend to hesitate in asking questions to pharmaceutical personnel.

Hypertension participants of *Prolanis* in Indonesia increase every year. The drug information services and counselling are part of *Prolanis* therapy management strategies. Pharmacist skills to interact with patients affect the success of therapy. However, pharmacist-patient interaction practices do not reflect patient-centeredness efforts that focus on therapy adherence. Based on our previous research, chronic disease patients require specific approaches to solve drug therapy problems and optimize their health clinic indicators. [11]–[14].

In the researchers' review, research exploring pharmaceutical communication exchange to hypertensive patients is available in tiny numbers. Therefore, this article is aimed to present the readers with the correlation between the level of adherence to therapy of hypertensive patients and the communication behaviour of pharmaceutical personnel.

2. METHOD

2.1. Subject

This study is a non-experimental study with a descriptive design (observational) of the communication between the pharmacists and hypertensive patients undergoing Prolanis at Puskesmas Muntilan 2 and Puskesmas Tempuran, and the convenience techniques use the sampling method. The time of the research was in March 2020 besides there were 48 subjects involved in this research.

2.2. Methods

We researched by recording the conversations of pharmacists and hypertensive patients (the research subjects). After all records of the pharmacist-patient conversations have been collected, it transcribed by the researchers. The first three authors coded manually according to RIAS category lists, while this coding activity was under the supervision of the fourth author. The records have been verified and approved by the fourth author as the fourth author is a person who has published research using this method before [10]. We obtained hypertensive patients' adherence to medication through the Medication Adherence Report Scale (MARS-5) questionnaire.

2.3. Data Analysis

The characteristic of research subjects, interaction coding, and therapy adherence measurement were analysed descriptively. Additionally, the researchers analysed the correlation of interaction coding results with therapy adherence results in Spearman's rho through the IBM SPSS Statistic-26 application.

3. RESULT AND DISCUSSION

An overview of respondent characteristics involved in this research is shown in Table 1. The amount of woman respondents is slightly dominant over the man. Half of the respondents are college alumni. Additionally, most respondents are covered by the Social Insurance Administration Organization (BPJS). As this research being carried out, a significant proportion of respondents have controlled their blood pressure in pre-hypertension and stage 1 hypertension. The adherence of these research subjects in taking the medication showed a relatively high mean score of 24.1 (Table 2).

Table 1 Characteristic of the respondents

Characteristics		Total (Percentage)	
Gender	Woman	28	(58.33%)
Age	26 – 45 years	2	(4.16%)
	46 – 65 years	26	(54.16%)
	>65 years	20	(41.66%)
Level of education	Primary School	16	(33.33%)
	Secondary School	6	(12.5%)
	University	24	(50%)
Financial status coverage	Independent	1	(2.08%)
	BPJS Premium	19	(39.58)
	BPJS Non-Premium	20	(41.66%)
	Other insurance	8	(16.66%)
Hypertension status (examination during the research)	Optimal	2	(4.16%)
	Normotensive	9	(18.75%)
	Prehypertension	16	(33.33%)
	Stage 1 hypertension	15	(31.25%)
	Stage 2 hypertension	5	(10.41%)
	Hypertense stage 3	1	(2.08%)

Table 2 Medication Adherence Report Scale (MARS-5) result of Hypertensive Patients

	Content	Mean Score
1.	Forget to take	4.60
2.	Change dosage	4.85
3.	Stop taking for a while	4.85
4.	Skip one of the dosages	4.90
5	Take less than prescribed	4.90
	Mean score total of MARS-5	24.1

Table 3 Socio-emotional Communication Exchange between The Pharmacist and The Hypertensive Patient

Domain	Frequency	
	Pharmacist/s	Patient/s
Personal remarks	64	2
Show agreement or understanding	34	60
Shows approval-direct	30	54
Laughs or tells jokes	1	5
Shows disapproval-direct	1	0
Backchannel responses	0	2
Total	**130**	**123**

This study indicates that the pharmacist has limited interest in the patient's personal experiences (Table 3). The pharmacist can improve the quality of communication by harmonizing or balancing task-focused and socio-emotional communication. Generally, task-focused communication becomes more dominant than another one (Table 4). It happens because of the pharmacist's masters in the drug explanation skill, rather than the patient's personality [15]. Frequently, pharmacists' interactions do not consider patients' background but only focus on drug explanations [16].

Table 4 Task -focused Communication Exchange of the Pharmacist with The Hypertensive Patient

Domain	Frequency	
	Pharmacist/s	Patient/s
Give information on another therapeutic regimen	152	7
Give information on a therapeutic regimen	32	1
Give Orientation/Instruction	5	0
Ask for understanding	4	1
Ask for permission	2	0
Ask a closed-ended question on another therapeutic regimen	2	37
Ask an open-ended question on another therapeutic regimen	1	16
Ask for opinion	1	3
Ask an open-ended question on a therapeutic regimen	0	3
Ask a closed-ended question on a therapeutic regimen	0	3
Bid for repetition	0	3
Total	**199**	**74**

On the other hand, the communication in the study occurs differently than the previous explanation. Probably it happens because the pharmacist focuses more on the patient's problems than on the healing process. However, another argument states, that the tendency to explain or provide more in-depth information to patients, may not be effective without the adequate exploration of the patient's attention, beliefs, attitudes, and behaviour at the beginning of the consultation. This phenomenon frequently happens in Asian countries [15].

From the researcher's note, the pharmacist's socio-emotional conversations are more dominant in instructing administrative activities. This communication includes expressions of concern, empathy, legitimacy, partnership, and motivation in a small number. Meanwhile, the patients in this study already practised the socio-emotional items and tended to initiate discussions about social issues. The pharmaceutical counselling process should ideally pay more attention to the patient and regard it as not just a medical problem to be diagnosed and treated indifferently [17].

Table 5 Correlation between The Communication Functions of Pharmaceutical Personnel and The Level of Adherence to Therapy of Hypertensive Patients

No	Communication functions	M1	M2	M3	M4	M5	T
1.	Task-Focused	.172	.036	.129	-.109	.012	.159
2.	Socio-emotional	.240	.075	.265*	-.010	.231	.221

Where: M1: Forget to take, M2: Change dosage, M3: Stop taking for a while, M4: Skip one of the dosages, M5: Take less than prescribed, T: Mean score total of adherence

**Correlation is significant at the 0.05 level (1-tailed)*

The task-focused communication in this study did not significantly correlate to the medication adherence of hypertensive patients. According to [18], this communication focuses on pharmaceutical services as technical-based skills used in solving problems acquired through education. From the communication perspective, the pharmacist's task-focused communication includes communication relating to the performance of medical functions, such as data collection, tests and procedures, physical examinations, and patient education and counselling [10].

Based on the results from Table 5, social-emotional communication is closely related to patient activity to stop drug consumption for a while (0.265). It showed that the high frequency of socio-emotional communication is related to patients' high adherence not to stop drug consumption rules. This phenomenon has been highlighted by two previous papers, [19] and [20] which states that everyone needs the support of empathy and sympathy love, trust, and respect. The pharmacist and the patients' concern can alleviate the problems and even help solve the problems faced.

The partnership communication style has a significant positive correlation to patient satisfaction and treatment. However, in this study, the researchers found that patients did not convey their concerns to the pharmacist as a whole. It showed that pharmacists also did not optimize the partnership counselling style. In contrast, interpersonal communication quality affects patient adherence and satisfaction [21] [22].

In another study, utterances related to consent were sometimes not a reflection of agreement, since patients only said 'Yes' but did not indicate their true understanding. Although most patients in the study volunteered for counselling, some patients appeared to speed up the counselling process by saying 'Yes' to the pharmacist's additional questions, particularly, when pharmacist had already answered their questions. This trend also shows that communication is not yet completely patient-centred [23].

4. CONCLUSION

The pharmaceutical personnel providing drug information services to the hypertensive patients have carried out two communication functions; task-focused (199 utterances) and socio-emotional (130 utterances). The hypertensive patients in this research subject had a relatively high mean adherence score of 24.1.

The researchers' findings demonstrated that task-focused communication was not correlated to overall items of the therapy adherence. On the other hand, social-emotional communication is closely related to the frequency of activity to stop drug consumption for a while (0.265).

The researchers underlined that the high frequency of social-emotional communication was closely related to patient adherence to not stop drug consumption as being prescribed.

ACKNOWLEDGMENT

This research received funding from Universitas Muhammadiyah Magelang through a research funding scheme to revitalize the basic research category's institutional vision in 2020.

REFERENCES

[1] A. Kurniapuri and W. Supadmi, 'Pengaruh Pemberian Informasi Obat Antihipertensi Terhadap Kepatuhan Pasien Hipertensi di Puskesmas Umbulharjo I Yogyakarta Periode November 2014', *Maj. Farm.*, vol. 11, no. 1, pp. 268–274, 2015.

[2] G. W. Pratama and N. L. P. Ariastuti, 'Faktor – Faktor yang Mempengaruhi Kepatuhan Pengobatan Hipertensi pada Lansia Binaan Puskesmas Klungkung 1', *E-J. Med. Udayana*, vol. 5, no. 1, pp. 1–13, 2016.

[3] P. R. Yulia, L. M. Baga, and S. Djohar, 'Kepuasan Konsumen Terhadap Pelayanan Apotek dan Tingkat Pengetahuan Konsumen Mengenai Standar Pelayanan Kefarmasian yang Berlaku (studi Kasus Di Kota Depok)', *J. Apl. Bisnis Dan Manaj.*, vol. 2, no. 3, pp. 312–322, 2016, doi: 10.17358/JABM.2.3.312.

[4] G. Fadhila, 'Pengaruh Konseling Terhadap Kepatuhan Pasien Hipertensi di Salah Satu Puskesmas di Kota Bandung', *Farm. Bahari*, vol. 10, no. 1, pp. 1–8, 2019.

[5] H. E. Septiar and P. Utami, 'Pengaruh Konseling

Farmasis Terhadap Kualitas Hidup dan Kadar Gula Darah pada Pasien Diabetes Mellitus Tipe 2 di Puskesmas Gedong Tengen Periode Maret-Mei 2014', *J. Farm. Sains Dan Prakt.*, vol. 1, no. 1, pp. 29–35, 2015.

[6] S. B. Santoso, M. H. N. Majid, A. A. Suryaningtyas, R. Faizah, and I. M. P. Wibowo, 'Interaction Exchange in Dispensaries: An Observation on the Chronic Disease Management Program', presented at the Proceedings of the 2nd Borobudur International Symposium on Humanities and Social Sciences, BIS-HSS 2020. doi: 10.4108/eai.18-11-2020.2311623.

[7] A. A. Suryaningtyas, A. N. Vianto, M. B. Octaviano, and S. B. Santoso, 'The Pharmacist-Patient Communication Model in the Chronic Disease Management Program', presented at the Proceedings of the 2nd Borobudur International Symposium on Humanities and Social Sciences, BIS-HSS 2020. doi: 10.4108/eai.18-11-2020.2311746.

[8] A. Cavaco and D. Roter, 'Pharmaceutical Consultations in Community Pharmacies: Utility of the Roter Interaction Analysis System to Study Pharmacist-Patient Communication.', *Int. J. Pharm. Pract.*, vol. 18, no. 3, pp. 141–148, 2010.

[9] S. R. Hahn, 'Patient-Centered Communication to Assess and Enhance Patient Adherence to Glaucoma Medication', *Ophthalmology*, vol. 116, no. 11, pp. S37–S42, Nov. 2009, doi: 10.1016/j.ophtha.2009.06.023.

[10] I. Mulyono, S. Irawati, A. P. Susilo, and M. Claramita, 'Pharmacist-Patient Communication in Indonesia: The Roter Interaction Analysis System (RIAS) in a Socio- Hierarchical Context', *Pharm. Educ.*, vol. 19, no. 1, pp. 359–369, 2019.

[11] H. Lutfiyati, S. B. Santoso, P. Pribadi, and S. Ratnafuri, 'The use of antiretroviral therapy (ARV) in HIV/AIDS patients', *Technol. Rep. Kansai Univ.*, vol. 62, no. 03, p. 6, 2020.

[12] D. A. Perwitasari, S. B. Santosa, I. N. Faridah, and A. A. Kaptein, 'Illness Perceptions and Quality of Life in Patients with Diabetes Mellitus Type 2', *Indones. J. Clin. Pharm.*, vol. 6, no. 3, pp. 190–199, 2017, doi: 10.15416/ijcp.2017.6.3.190.

[13] S. B. Santoso, D. A. Perwitasari, I. N. Faridah, and A. A. Kaptein, 'Hubungan Kualitas Hidup Dan Persepsi Pasien Tentang Penyakit Diabetes Mellitus Tipe 2 Dengan Komplikasi', *Pharmaciana*, vol. 7, no. 1, p. 33, 2017, doi: 10.12928/pharmaciana.v7i1.4699.

[14] S. B. Santoso, H. Lutfiyati, R. I. Prasidha, S. Ratnafuri, and K. A. Azzahra, 'What do patients with HIV-infection perceive and know regarding to antiretrovirals? An exploration among participants undergoing controlled-therapy', *Technol. Rep. Kansai Univ.*, vol. 62, no. 04, p. 7, 2020.

[15] C. A. Naughton, 'Patient-Centered Communication', 2018.

[16] C. Nakayama, S. Kimata, T. Oshima, A. Kato, and A. Nitta, 'Analysis of Pharmacist–Patient Communication Using the Roter Method of Interaction Process Analysis System', *Res. Soc. Adm. Pharm.*, vol. 12, no. 2, pp. 319–326, Mar. 2016, doi: 10.1016/j.sapharm.2015.05.007.

[17] E. Hawes, 'Patient Education on Oral Anticoagulation', *Pharmacy*, vol. 6, no. 2, p. 34, 2018, doi: 10.3390/pharmacy6020034.

[18] A. Cavaco and D. Roter, 'Pharmaceutical consultations in community pharmacies: utility of the Roter Interaction Analysis System to study pharmacist-patient communication.', *Int. J. Pharm. Pract.*, vol. 18, no. 3, pp. 141–8, 2010, doi: 10.1211/ijpp/18.03.0003.

[19] Y. P. Saputri1, Thohirun, and N. Luthviatin, 'Hubungan antara Dukungan Sosial Keluarga dengan Kepatuhan Minum Obat Penderita Kusta (Studi di Kecamatan Puger dan Balung Kabupaten Jember) The Relationship between Family Social Support with Medicine Compliance of Leprosy Patients (Study in Puger and Bal', *E-J. Pustaka Kesehat.*, vol. 5, no. 3, pp. 549–556, 2017.

[20] T. A. Kusumoningrum, N. Susanto, V. U. Marlinawati, and T. Puspitawati, 'Hubungan Dukungan Keluarga Dan Kepatuhan Minum Obat Terhadap Kesembuhan Penderita Tuberkulosis (Tb) Di Kabupaten Bantul', *J. Formil Forum Ilm. Kesmas Respati*, vol. 5, no. 1, p. 29, 2020, doi: 10.35842/formil.v5i1.299.

[21] D. T. Ajayi, B. O. Adedokun, D. O. Owoeye, and O. M. Akpa, 'Treatment Satisfaction and Medication Adherence Among Hypertensive Patients Seeking Care in Selected Hospitals in Ibadan, Nigeria D.T.', *Physiol. Behav.*, vol. 176, no. 12, pp. 139–148, 2017, doi: 10.1016/j.physbeh.2017.03.040.

[22] M. Akbolat, F. Karakaya, Ç. Uğan, And A. Durmuġ, 'The Effect Of Trust Communication In Patient- Physician Relationship On Satisfaction And Compliance To Treatment Assoc.', *Int. J. Health Med. Curr. Res.-Ijhmcr*, vol. 2, no. 4, pp. 610–619, 2017, doi: 10.22301/IJHMCR.2528-3189.610.

[23] M. Claramita, J. Van Dalen, and C. P. M. Van Der Vleuten, 'Doctors in a Southeast Asian country communicate sub-optimally regardless of patients' educational background', *Patient Educ. Couns.*, vol. 85, no. 3, pp. e169–e174, 2011.