

Barriers to Treatment Adherence to Hypertension: A Comparison Between Members and Non-Members of *BPJS Kesehatan* at Pharmacy in Surabaya

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Abstract: Non-adherence to hypertension treatment is reported as a major problem, leading to the increased incidence of cardiovascular diseases. A qualitative exploratory multi-case study was designed to identify the factors influencing treatment non-adherence for members and non-members of *BPJS Kesehatan* with hypertension patients at two selected community pharmacies (*pharmacy*) in Surabaya. Semi-structured interviews were conducted with three members (participants of the referring back program [PRB]) and three non-members of *BPJS Kesehatan* who were purposively selected based on their prescribed medicines and the frequency of visits to the selected pharmacy. Thematic analysis showed that the barriers to non-adherence identified by *PRB* patients were their busy schedules and the common use of herbal medicines. Not only did the members report both factors; non-members of *BPJS Kesehatan* also reported factors related to medicine (availability and price), health provider (lack of information and two-way interaction), and the unavailability of the health system to improve adherence. Moreover, non-members of *BPJS Kesehatan* were identified to have other patient-related factors (misperception and poor knowledge about hypertension). Despite having more barriers, the non-members of *BPJS Kesehatan* indicated unwillingness to participate as members due to their understanding of the impracticability of the services. Therefore, *BPJS Kesehatan* needs to re-arrange their programs to increase participation and to offer benefits for the hypertensive patients.

1 INTRODUCTION

It has been suggested in the literature that primary health care is the most proper setting to address challenges of chronic disease management (Beaglehole, et al., 2008). Similar to other middle-income contries, Indonesia has implemented the development of a community health centre (*Puskemas*) in each district as a public health care facility (WHO, 2008). Such a facility requires support services either incorporated within the facility or available independently, including clinical laboratory and pharmacy units to allow for provision of comprehensive health services (Indonesia Ministry of Health, 2013a).

In terms of pharmacy, the number of private community pharmacies (*pharmacy*) far out-weighed that of public pharmacies within *Puskemas* (Kementerian Kesehatan RI, 2013b). As the number of patients receiving health services from *pharmacy* was more significant than those in the public sector,

there is a clear need for best quality pharmacy services in *pharmacy*.

To enable improvement of access to health care services and to reduce out-of-pocket health expenditure, since January 2014 the Indonesian government has set universal health coverage organized by *Badan Penyelenggaraan Jaminan Sosial Kesehatan (BPJS Kesehatan)* (WHO, 2014). In the management of chronic diseases *BPJS Health* has provided programs, such as *PROLANIS (Program Pengelolaan Penyakit Kronis)* and *PRB (Program Rujuk Balik)* for its members (Kementerian Kesehatan RI, 2014). *PRB* is provided for patients with chronic diseases who had received treatments from specialists in the hospital setting to obtain a stable condition but still requires continuity of care in the community setting. Among chronic conditions, hypertension has become a priority in the *BPJS Kesehatan* programs because its prevalence has been increasing.

Although the government has set a target to reach participation of all Indonesians in the *BPJS Kesehatan* by 2019, the current participation was suboptimal (CNN Indonesia, 2017). In addition to participation in the *BPJS Kesehatan* to all family members, regular involvement of patients with hypertension in treatments was stated by the Ministry of Health as healthy family indicators (Kementerian Kesehatan RI, 2016). However, based on our unpublished work, nonadherence to hypertension treatments was found among patients who received pharmacy services in *pharmacy* either members or non-members of *BPJS Kesehatan*. Our findings also indicated that patients with hypertension who were not members of *BPJS Kesehatan* were unlikely to visit *pharmacy* for regular treatments, in comparison to their counterparts. It was unclear whether nonadherence among patients with hypertension in *pharmacy* was associated with factors related to patient, the disease, medicine, health provider, health-system, and socio-culture, as published earlier (WHO, 2003; Tsiantou, et al., 2010; Albrecht, 2011; Osamor and Owumi, 2011). Thus, a study was designed to identify barriers to adhere to hypertension treatments for either members or non-members of *BPJS Kesehatan* in *pharmacy*.

2 METHODS

A qualitative multi-case study was applied to explore factors influencing treatment nonadherence for patients with hypertension. Patient data were collected retrospectively (from March to August 2016) from one *pharmacy* with *BPJS Kesehatan* network using an existing software for *PRB* patients (Group A) and one *pharmacy* without *BPJS Kesehatan* network using prescription files (Group B). Potential patients for the study were then selected based on criteria: 1) having frequency of *pharmacy* visits five times or less during the study period, 2) full home address was recorded in the prescription files, and 3) willing to participate in the study. Each selected patient was provided verbal and written information about the study. Once a patient had agreed, an arrangement of a date and time for a face-to-face, semistructure interview was made at the patient's convenience, and a consent form was completed. An interview protocol was used during interviews, which was developed based on a literature review of published articles (WHO, 2003; Tsiantou, et al., 2010; Albrecht, 2011; Osamor and Owumi, 2011) on factors related to nonadherence.

All interviews were audio-recorded and transcribed *ad verbatim*. After coding the data using thematic analysis, the researchers verified themes.

3 RESULTS

GROUP A: A total of 449 patients with hypertension were recorded in the *PRB* software, 104 of them (23,2%) were identified as adherent patients to visit *pharmacy* to get medicines. In addition to the above selection criteria, an auxiliary step was needed to select three out of 335 patients, based on types of prescribed medicines received. Patients receiving Angiotensin Converting Enzyme Inhibitor agents, either alone or in combination with other antihypertensive agents were a priority. A list of priority participants was prepared prior to home visits to finally interview three informants.

Case 1: A 51-year old female who was diagnosed with hypertension since she was 42 years old. She had family history of hypertension. Initially, she had been prescribed with a brand name of lisinopril 10mg tablets, that was replaced with a generic name of lisinopril 10mg tablets since she became a *PRB* patient. Although the number of prescribed medicines received (30) facilitated her to make regular visits to her family doctor and *pharmacy*, she sometimes felt lazy to take her medicines. Despite that, she understood that hypertension could only be controlled by taking regular medicines and adopting a healthier lifestyle. When she felt an increased blood pressure and thought that her prescribed medicines was unable to give a rapid reduction, she made and took herbal medicines in addition to consumption of prescribed medicines. Since she was a staff member of a hospital, she had an easy access for blood pressure checking at her workplace. She was unaware of *PROLANIS*.

Case 2: A 52-year old female who was diagnosed with hypertension since she was 47 years old as well as diabetes mellitus and hyperlipidaemia. She had family history of hypertension. A generic name of lisinopril 5mg tablets that had been initially prescribed for her hypertension were replaced with a brand name of nifedipin 30mg tablets. Although the number of prescribed medicines received (30) facilitated her to make regular visits to her family doctor and *pharmacy*, she sometimes visited other *pharmacies* to get medicines without prescription. She understood that hypertension could be controlled with regular consumption of medicines, supported by having a healthier lifestyle. She was unaware of *PROLANIS*.

Case 3: A 51-year old male who lived with hypertension in the last 15 years. A brand name of lisinopril 10mg tablets that had been initially prescribed were replaced with a generic name of lisinopril 10mg tablets. He worked as a staff member in a hospital so he had an easy access for blood pressure checking at his workplace. The number of prescribed medicines received (30) facilitated him to make regular visits to his family doctor and pharmacy. He sometimes stopped taking his prescribed medicines to check whether or not he could reduce his dependence on the medicines. He also often substituted prescribed medicines with individually made herbal medicines. She was unaware of PROLANIS.

GROUP B: During six months of the study period, six prescription files for patients with hypertension were found to meet selection criteria. A list of priority participants was prepared prior to home visits. As three patients could not be contacted, interviews were finally conducted with the remainders.

Case 4: A 50-year old female who was diagnosed with hypertension two years ago, as well as hypercholesterolaemia and hyperurecemia. She had been prescribed with propranolol 20mg tablets, hydrochlorothiazide 25mg tablets, isosorbide dinitrate 5mg tablets, simvastatin 10mg tablets and allopurinol 10mg tablets for a 30-day treatment. She frequently could not afford to pay for her doctor service and prescribed medicines, leading to nonadherence to make routine visit and take medicines. Despite that, she was reluctant to be a member of *BPJS Kesehatan* because she had observed that the services were unsatisfactory. When her prescribed medicines were running out, she preferred to get her medicines from any pharmacy without prescription despite receiving no medicine information from the pharmacist. Alternatively, she took individually made herbal medicines. She was unaware of unhealthy food that triggers high blood pressure.

Case 5: A 60-year old female who lived with hypertension in the last 10 years, after being diagnosed with stroke and diabetes mellitus. She had been prescribed with amlodipin 10mg tablets and furosemid 10mg tablets for a 30-day treatment. She believed that antihypertension agents should not be taken when blood pressure readings were normal. Although she was a member of *BPJS Kesehatan*, she never took its benefits for her regular hypertension treatment due to its long queue for getting services and its long distance from home. She preferred to get her medicines without prescription at a reachable

pharmacy although she was unlikely to receive information about medicines from the pharmacist.

Case 6: A 53-year old female who lived with hypertension in the last 13 years. She sometimes missed to take her medicines but did not think to be a problem because she believed that antihypertensive medicines should only be taken when needed, i.e. if she got dizziness. She had been prescribed with a generic name of amlodipin 5mg tablets, so the price of medicines was not a cause of nonadherence. Therefore, being a member of *BPJS Kesehatan* was not believed to be important, especially because there was a near pharmacy to get medicines without prescription. When the medicines were running out, she sometimes consumed individually made herbal medicines.

4 DISCUSSION

The findings of this study indicated that six barriers to treatment adherence as published earlier (WHO, 2003; Tsiantou, et al., 2010; Albrecht, 2011; Osamor and Owumi, 2011) were also reported by our informants either members or non-members of *BPJS Kesehatan* who visited *pharmacy* for pharmacy services. Interestingly, factors related patient and socio-culture were found to be predominant for both groups, while factors related to medicines, health provider and health-system only seemed to influence non-members of *BPJS Kesehatan*.

Barriers to adherence that were related to patient reported by our informants in both groups included their laziness, busyness, forgetfulness and boredom to take medicines for a long period of time, as commonly found in previous studies (WHO, 2003; Tsiantou, et al., 2010; Albrecht, 2011; Osamor and Owumi, 2011). In addition, non-members of *BPJS Kesehatan* were likely to have poor knowledge and inaccurate perception of hypertension and its treatment. As reported by our informants who were members of *BPJS Kesehatan* that they received prescribed medicines for a 30-day treatment, they tended to have regular visits to their family doctor and pharmacy. This indicated that their frequent interactions with healthcare providers enable them to get more information related to the disease and its treatment. Moreover, monthly visits as regulated by *BPJS Kesehatan*, especially for *PRB* patients, allow health care providers to provide information and monitor patients' conditions.

It should also be noted that medicine and hypertension-related information was unlikely to be given to our informants who were non-members of *BPJS Kesehatan* when they visited *pharmacy* to get

medicines without prescription. A possible explanation for this was because the pharmacist or pharmacy staff may have perceived that patients collecting types of medicines for long-term treatment have already had a proper understanding about their medicines and condition. Similar to our informants in another study (BPJS, 2015) that patient knowledge was associated with interaction between health providers and patients.

As reported elsewhere (BPJS, 2015), the use of herbal medicines was common among patients with hypertension either those who regularly took prescribed medicines or those who were not. Health care providers should consider such a phenomenon in Indonesia (Pujianto, 2007) as inappropriate use of herbal medicines may lead to further health problems related to their potential interaction with prescribed medicines.

Another interesting finding was the high cost of prescribed medicines that were usually unaffordable for non-members of *BPJS Kesehatan*, preventing them to nonadhere to collect and take their medicines. Interestingly, although they understood that *BPJS Kesehatan* would cover their medicine costs, they were not interested to join *BPJS Kesehatan* as they directly or indirectly observed its unsatisfactory services. *BPJS Kesehatan* may have developed strategies to improve their services (BPJS, 2016), but they would fail without convincing evidence that all members of *BPJS Kesehatan* would get the most benefits from *BPJS Kesehatan*, in comparison to those who have not joined.

5 CONCLUSION

Barriers to hypertension treatment adherence among patients who were non-members of *BPJS Kesehatan* widely varied, in comparison to their counterparts members of *BPJS Kesehatan*. This may indicate that programs offered by *BPJS Kesehatan* seemed to enhance patient adherence to treatment for chronic diseases. Despite that, strategies for improvements are urgently required to offer great benefits for their members. Similarly, flexibility and simplification of services should be taken into consideration to increase memberships of *BPJS Kesehatan* in order to achieve universal health coverage by 2019.

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