

## Adherence to Outpatient Visit of Persons with Schizophrenia at The Primary Care Units in The Northeastern of Thailand

Panupan Thanapathomsinchai<sup>1,2</sup>, Jiraporn Chompikul<sup>1</sup>, Somsak Wongsawass<sup>1</sup>,  
Tunyapat Tongmoon<sup>2</sup> and, Orapin Laosee<sup>1,\*</sup>

<sup>1</sup>ASEAN Institute for Health Development, Mahidol University, Nakhon Pathom 73170, Thailand

<sup>2</sup>Kho Wang Hospital, Kho Wang, Yasothorn province

\*Corresponding author, Email: Orapin.lao@mahidol.edu

### Abstract

Schizophrenia is one of the disability conditions affecting people around the world. It is commonly associated with impairments in social and occupational functioning. Although the incidence is low, the prevalence of schizophrenia is high as it is a long-term chronic illness. This study aims to describe the level of visit adherence in persons with schizophrenia and compare the difference of perception on medical care among high and low adherence. A cross-sectional study was conducted during March to May 2014. Two-stage cluster sampling was used to identify the schizophrenia patients at three community hospitals in a northeastern province. A total of 280 subjects was recruited and interviewed at psychiatric unit during their visit. Data were analyzed using descriptive statistics and t-test. The study revealed that 69.6% of schizophrenia patients had adhered to psychiatric outpatient visits. There were significantly statistical difference in the perception of cost of care and barriers to care ( $p < 0.05$ ). Higher score of perception in cost and barrier to care were more likely to discontinue doctor's appointment or had low adherence. To improve visit adherence in persons with schizophrenia, health system should identify and refocus the issues on cost and barriers to care. In addition, set up the reminder system to increase visit adherence should be considered.

**Keywords:** Perceptions, schizophrenia, primary care, hospital, Thailand

### บทคัดย่อ

โรคจิตเภทเป็นหนึ่งในสภาวะความบกพร่องที่เกิดกับคนทั่วโลก โดยทั่วไปสัมพันธ์กับความผิดปกติทางสังคมและการทำงาน แม้ว่าอุบัติการณ์ในการเกิดโรคจิตเภทจะต่ำ แต่ความชุกในการเกิดโรคสูง เนื่องจากเป็นโรคเรื้อรัง การศึกษานี้มีวัตถุประสงค์เพื่อจำแนกการมาตามนัดของผู้ป่วยจิตเภทและเปรียบเทียบความแตกต่างของการรับรู้ในกลุ่มที่มีมาตามนัดและไม่มาตามนัด การดำเนินการวิจัยโดยการวิจัยแบบตัดขวางดำเนินการเก็บข้อมูลระหว่างเดือนมีนาคมถึงพฤษภาคม พ.ศ. 2558 โดย การสุ่มตัวอย่างแบบหลายขั้นตอนเพื่อเลือกผู้รับบริการในคลินิกจิตเวชโรงพยาบาลชุมชน 3 แห่งในจังหวัดทางภาคตะวันออกเฉียงเหนือจำนวน 280 ด้วยการสัมภาษณ์ระหว่างรับบริการ วิเคราะห์ข้อมูลใช้สถิติพรรณนาและการทดสอบค่าที่ข้อมูลจากการวิเคราะห์พบว่ากลุ่มตัวอย่างร้อยละ 69.6 สามารถมาตามนัดได้ จากการเปรียบเทียบคะแนนการรับรู้ในการรักษาโดยใช้สถิติพบว่าผู้รับบริการที่ไม่ค่อยมาตามนัดมีการคะแนนการรับรู้ค่าใช้จ่ายและอุปสรรคในการมาตามนัดสูงกว่ากลุ่มที่มาตามนัดอย่างต่อเนื่องอย่างมีนัยสำคัญทางสถิติ เพื่อให้ผู้รับบริการมาตามนัดอย่างต่อเนื่อง การพัฒนาระบบบริการ ควรคำนึงถึงค่าใช้จ่ายและอุปสรรคที่เกิดขึ้น ในการมาตามนัด และการพัฒนาระบบการเตือนเพื่อให้ผู้รับบริการมาตามนัดอย่างต่อเนื่องเป็นสิ่งสำคัญที่ควรนำมาพิจารณาเพิ่มเติม

**คำสำคัญ:** การรับรู้ จิตเภท บริการปฐมภูมิ โรงพยาบาล ประเทศไทย

### 1. Introduction

Schizophrenia is a chronic and disability mental illness with serious physical, social, and economic consequences (World Health Organization, 2014). It is among the most disabling and economically catastrophic medical disorders, ranked by the World Health Organization (WHO) as one of the top ten illnesses contributing to the global burden of disease (Murray CJL, 1996). It was estimated that there were 21 million schizophrenia patients worldwide (World Health Organization, 2014). Though the incidence is low (3-10,000), the prevalence is high due to chronicity (Weiden & Olfson, 1995). In Southeast Asian population, the prevalence in schizophrenia patients was 3.69 per 1,000 (World Health Organization, 2004). A prevalence in Thailand was 8.8 per 1,000 (95% CI: 7.2, 10.6) with a male-to-female ratio of 1.1-to-1.0 (Phanthunane, Vos, Whiteford, Bertram, & Udomratn, 2010).

The causation of schizophrenia are unknown, however, research suggested that a combination of physical, genetic, psychological, and environmental factors can make people more likely to develop the

condition. Currently, people may be prone to schizophrenia because of a stressful or emotional life events that might trigger a psychotic episode (National Health Service, 2014). The symptoms of schizophrenia are preceded by a 'prodromal' period. This is often characterized by some deterioration in personal functioning. Difficulties may include memory and concentration problems, social withdrawal, unusual and uncharacteristic behavior, disturbed communication and affect, bizarre ideas and perceptual experiences, poor personal hygiene, and reduced interest in and motivation for day-to-day activities. In addition, thought disorders are dysfunctional ways of thinking. One form of thought disorder is called "disorganized thinking". This is when a person has trouble organizing his or her thoughts or connecting them logically. These changes may well affect the person's ability to hold down a job, study, or relate to family and friends (National Collaborating Centre for Mental Health, 2010). In patients with psychopathological symptoms, antipsychotic drugs have proven effective in reducing relapse and rehospitalization rate (World Health Organization, 2003). Therefore, their perceptions are extremely important issue for persons with psychiatric symptoms.

Due to that schizophrenia is a chronic disease, adherence is an important factor that interferes with the success of treatment (Balýkcy, Erdem, Bolu, Bozkurt, & Uzun, 2013). Outpatient non-attendance is a serious problem in clinical and economic consequences. A study indicated a wide range of missed appointments in psychiatry from 12 to 60% (Sparr, Moffitt, & Ward, 1993). A study of non-attendance in a psychiatric hospital in Thailand identified 21.4% missed their appointments. Three key reasons of missed psychiatric appointment were psychiatric symptom exacerbation, time management, and accessibility (Chantararat, 2011). Killape et al showed that follow-up patients who missed an appointment were at a high risk of dropout and readmission within 12 month period (Killaspy, Banerjee, King, & Lloyd, 2000).

Several studies reported that perceptions on medical care in schizophrenia patients is the key factor of visit adherence (Jung et al., 2011; Mitchell & Selmes, 2007). Negative attitude toward the treatment, negative subject's response to treatment, perceived minor benefits of treatment, and stigmatization were identified as risk factor for non-adherence by patients with schizophrenia (Acosta, Hernández, Pereira, Herrera, & Rodríguez, 2012). Perkins identified predictors of noncompliance in patients with schizophrenia included patients' belief about their illness and the benefits of treatment, perceived cost of treatment, and barriers to treatment (Perkins, 2002). However, little is known about the perceptions to medical care of people with psychiatric problem in Thailand which may not be similar to others due to the context.

## **2. Objectives**

This study aims to describe the perceptions of persons with schizophrenia who visit primary care units in a northeastern province, and identify the difference of perception to medical care of those who had difference of adherence to OPD visit.

## **3. Materials and methods**

A cross sectional study was conducted in three community hospitals in a province in northeastern region of Thailand. The director of each community hospital in three areas; north, central, and south was asked to collaborate for data collection. A list of patient from hospital record was reviewed to obtain a total number of schizophrenia patients each hospital. Simple random sampling was used to identify schizophrenia patients who have been treated schizophrenia for at least 12 months prior to the data collection. A total of 280 schizophrenia patients at out-patient department were recruited from March to May 2015 during their OPD visit. Patients with severe symptoms, for example, hallucination, delusion, thought disorder, behavioral disorganization, and catatonia were excluded. The questionnaire was developed based on the literature review the previous studies (Perkins, 2002; Phanthunane et al., 2010; Samanwongthai, 2001; Sparr et al., 1993; Supavee Tanausavanon, Ekachai lumree, Taratip utat, Prompan Kumnate, & Ponmak, 2011; Susan Dorr Goold, 1999; World Health Organization, 2014). It consisted of two parts: demographic characteristics of the patients and perceptions to medical care. There were six variables in perceptions: 1) perceived benefits of care, 2) perceived costs, 3) barriers to care, 4) staff-patient relationship, 5) illness factors, and 6) cue to act. These questions were measured on a five-Likert scale with "strongly agree=5" to "strongly disagree=1". There were two questions asking for yes or no. In addition, medical record form was used to obtain the information of adherence in the last 12 months. The form was checked by nurses who work at the psychiatric clinic each selected hospital.

It was pretested with 30 schizophrenia persons in a community hospital and revised further for more understanding. Cronbach's alpha coefficient tests were performed and range was 0.78 - 0.80. In this study, patients who came to psychiatric clinic as appointed <80% of total visit would be categorized as low adherence. Univariate analysis was performed to describe demographic characteristics of the subjects. Perceptions on medical care were coded and computed before analysis. Each variable was compared with the mean scores. A  $p$ -value <0.05 was considered statistically significant.

The study was conducted in accordance with the Declaration of Helsinki, and was approved by the Committee for Research Ethics, Mahidol University (Social sciences: COA No. 2015/017.2001). All information of the study subjects was kept confidential and anonymous in order to protect their rights and confidentiality.

#### 4. Results

The majority of respondents were male (62.5%). Respondents age ranged between 18-77 years with the median age of 43 years (QD=7.5). Nearly two-thirds (61.8%) were single. Nearly one-third (29.3%) are married. Approximately two-thirds (63.9%) completed the primary school. Nearly two-thirds (63.2%) were farmers with median income of 1000 Baht per month. Approximately one-third had had drug side-effect and 7.5% had co-morbidity (Table 1).

**Table 1** Characteristics of the respondents (n=280)

Characteristics	Frequency	(%)
Sex: Male	175	(62.5)
Age in years	Median 43, QD. 7.5,	Range 18-77
Marital status: Single	173	(61.8)
Education: Primary school	179	(63.9)
Occupation: Farmer	177	(63.2)
Average income per month (Baht)	Median 1000, QD. 600,	Range 0- 10,964
Duration of illness (years)	Median 14, QD. 6,	Range 1- 55
History of drug side effect: Yes	97	(34.6)
Co-morbidity: Yes (DM, HT, depression)	21	(7.5)

QD Quartile Deviation, DM Diabetes, HT Hypertension

The results revealed that 69.6% of schizophrenia patients had high adherence to psychiatric outpatient visits. The three main reasons which made them missed doctor's appointment in low adherence group were busy with other tasks (38.8%), forgetting (24.7%), and no one accompany (10.6%) (Table 2).

**Table 2** Adherence and reasons of missing doctor's appointment in 12 months prior the study

	Low adherence (%)	High adherence (%)
Adherence of doctor's appointment	85 (30.4)	195 (69.6)
The reasons of missing doctor's appointment		
Forgetting	21 (24.7)	28 (14.4)
Busy with other tasks	33 (38.8)	117 (60.0)
No one accompany	9 (10.6)	13 (6.7)
Don't want to take medicine	8 (9.4)	3 (1.5)
Thought that they already cured	8 (9.4)	15 (7.7)
Others	6 (7.1)	19 (9.7)

In terms of perceptions on medical care, the findings identify significant differences of perceived cost of care and perceived barriers to care between low adherence and high adherence group. The schizophrenia patients with low score of perceived of cost and barriers to care were more likely to adhere to doctor's visit ( $p$ -value < 0.05; Table 3). There was a statistical significant of the proportion, the patients with low-adherence reported higher score of mean in terms of fear of drug side effect (perceived cost of care) and difficulties of the procedures during doctors' visit (barriers to care). Patients who had high adherence identified having high proportion of self-reminder (cues to act; data not shown).

**Table 3** Mean score of perceptions to medical care in low and high adherence persons

Perceptions to medical care	Low adherence	High adherence	t-test	p-value
Perceived benefits of care	8.22	8.30	0.76	0.44
Perceived cost of care	5.43	4.96	2.34	0.02
Barriers to care	7.21	6.39	3.61	< 0.01
Staff-patient relationship	7.74	7.88	2.22	0.22
Illness factors	16.41	16.27	0.87	0.38
Cues to act	5.06	5.05	0.07	0.94

## 5. Discussion

This study found that 69.6 % of schizophrenia patients had adherence to psychiatric outpatient visits in 12 months prior to study. Similar level of adherence had been reported in other studies which range from 44 to 80% (Chantararat, 2011). Non-adherence has been shown as predictors of missed medication, dropout, relapse, readmission, homicides, and suicide (Chen, 1991). Patients' non adherence to medication does not achieve the achievable benefits of treatment. Non-adherence patients are more likely to increase use of medical services, and are the source of additional costs as the consequences (Jung et al., 2011; Sparr et al., 1993). A study in England reported that unwell and more poorly socially functioning were more likely to miss their appointment and have a greater chance of drop-out from clinic contact and subsequent admission (Killaspy et al., 2000). However, our study found that three main reasons in low and high adherence group which made them missed doctor's appointment were busy with other tasks, forget, and thought that they are already cured. In many developed countries, if the patients could not visit as scheduled, they could call to postpone (Perkins, 2002). Therefore, health facilities could set up the reappointment system for those who could not visit as scheduled. The system might be useful to improve the adherence as well as the use of reminder aids included phone, text message, postcard, mail, etc.

This study revealed that patients who perceived fear of side effect were more likely to miss appointments. Fear of adverse effects was reported as one of the risk for non-adherence schizophrenia patients (Acosta et al., 2012). The side effect could cause patients distress and it is the most influential on willingness to take medication and there may be considerable individual differences in the patients tolerability of an antipsychotic (Perkins, 2002). Improving an understanding of long term treatment and medical side effect is recommended to improve adherence. Family members and friends have important role to evaluate medical side effect, they could support the patient adherence to prolong their quality of life (Kruse, Rohland, & Wu, 2002). It is an important role for health providers to monitor psychiatric symptoms and evaluate adverse effect of the medication.

High score of barriers has been found in low-adherence group, respondents reported difficulties and procedure during doctor's visit. Difficulty accessing health care services was identified as risk factors for low-adherence by patients with schizophrenia (Acosta et al., 2012). In fact, there were many steps of procedures to utilize the OPD service in a public hospital (e.g. registration, physical checkup, psychiatric evaluation by nurse, meet the physician, make next appointment, pay for treatment, and get the medicine). Those elderly, who has limited functional ability such as walking, might face difficulty to access the treatment. Based on this finding, it would be an opportunity to reconsider initiating the service by gathering all points of services into the same area (one stop service) to decrease the barriers and increase the adherences.

Moreover, even though this study could not find the difference of staff-patient relationship, almost all of them (95.7%) were satisfied with the information given by doctor or nurse, and 83.6% of respondents were satisfied that the staff understood of their illness. The study found that patient who have good relationship with doctor have higher adherence in 1.4 times than those who did not, which similar to the previous study (Susan Dorr Goold, 1999). In terms of promoting staff-patient relationship to increase adherence included: performing routine evaluations of adherence, promoting the effective communication by using necessary means for the patient to understand the relevant information, accepting that patient has the right to take medication, evaluating patient's beliefs and concern regarding the treatment, and offering the necessary information about the disorder and possible therapies (Acosta et al., 2012). Thus, improving the relationship between service providers and patients (good service mind, perceiving the problems from patients with compassion, supporting the patients to have treatment) would support the outcome of treatment.

## 6. Conclusion

This study demonstrated that over two-thirds (69.6%) of the respondents had high adherence. Perceived higher score in cost of care and barriers to care score were found in a group with low adherence. Medical side effect and complicated hospital procedures were reported as part of the barriers. Health education focusing on medical side effects to promote understanding and awareness of discontinuation of treatment could be addressed. Further, one stop service to reduce the hospital procedures is recommended to reduce barriers to care. The findings have important implications to highlight the need for reminder system to increase visit adherence, for example, phone, text message, postcard, and mail reminder. Further research could identify the best strategies to improve hospital procedures and determine the effective reminder method to improve adherence.

## 7. Acknowledgements

The authors would like to acknowledge the contributions made by psychiatric nurses at the hospitals for coordination and data collection. The study was partially funded by Thai National Health Security Office.

## 8. References

- Acosta, F. J., Hernández, J. L., Pereira, J., Herrera, J., & Rodríguez, C. J. (2012). Medication adherence in schizophrenia. *World Journal of Psychiatry*, 2(5), 74-82. doi: 10.5498/wjp.v2.i5.74.
- Balýkcy, A., Erdem, M., Bolu, A., Bozkurt, S. Z., & Uzun, Ö. (2013). Adherence with outpatient appointments and medication: a two-year prospective study of patients with schizophrenia. *BCP*, 23(1), 57-64.
- Chantararat, W. (2011). The reason and impact of missed psychiatric appointment. *Journal of mental health of thailand*, 19(3), 148-159.
- Chen, A. (1991). Noncompliance in community psychiatry: a review of clinical interventions. *Hosp Community Psychiatry*, 42(3), 282-287.
- Jung, S. H., Kim, W. H., Choi, H. J., Kang, M. L., Lee, J. S., Bae, J. N., & Kim, C. E. (2011). Factors affecting treatment discontinuation and treatment outcome in patients with Schizophrenia in Korea: 10-year follow-up study. *Psychiatry Investigation*, 8(1), 22-29.
- Killaspy, H., Banerjee, S., King, M., & Lloyd, M. (2000). Prospective controlled study of psychiatric out-patient non-attendance: Characteristics and outcome. *British Journal of Psychiatry*, 176(FEB.), 160-165.
- Kruse, G. R., Rohland, B. M., & Wu, X. (2002). Factors associated with missed first appointments at a psychiatric clinic. *Psychiatric Services*, 53(9), 1173-1176.
- Mitchell, A. J., & Selmes, T. (2007). Why don't patients attend their appointments? Maintaining engagement with psychiatric services. *Advances in Psychiatric Treatment*, 13(6), 423-434.
- Murray CJL, L. A. (1996). *The Global Burden of Disease*. Cambridge: Harvard University Press.
- National collaborating centre for mental health. (2010). *The NICE guideline on core interventions in the treatment and management of schizophrenia in adults in primary and secondary care*.
- National Health Service. (2014). Schizophrenia - cause. Retrieved 5 April 2014, from <http://www.nhs.uk/Conditions/Schizophrenia/Pages/Causes.aspx>.
- Perkins, D. O. (2002). Predictors of noncompliance in patients with schizophrenia. *Journal of Clinical Psychiatry*, 63(12), 1121-1128.
- Phanthunane, P., Vos, T., Whiteford, H., Bertram, M., & Udomratn, P. (2010). Schizophrenia in Thailand: Prevalence and burden of disease. *Population Health Metrics*, 8. doi: 10.1186/1478-7954-8-24.
- Samanwongthai, U. (2001). Factors influencing the continuity of receiving treatment services of schizophrenia patients in Srithunya hospital. *Journal of mental health of thailand*, 9(3), 128-139.
- Sparr, L. F., Moffitt, M. C., & Ward, M. F. (1993). Missed psychiatric appointments: who returns and who stays away. *Am J Psychiatry*, 150(5), 801-805.
- Supavee Tanausavanon, Ekachai lumree, Taratip utat, Prompan Kummate, & ponmak, V. (2011). Reasons of missed appointment of diabetes patient in diabetic clinic. *Journal of The Phrae Hospital*, 19(2), 85-95.
- Susan Dorr Goold, M., MHSA, MA and Mack Lipkin, Jr., MD. (1999). The Doctor–Patient Relationship Challenges, Opportunities, and Strategies. *Journal of General Internal Medicine*, 14(1), S26-S33.
- Weiden, P. J., & Olfson, M. (1995). Cost of relapse in schizophrenia. *Schizophrenia Bulletin*, 21(3), 419-429.
- World Health Organization. (2003). *Adherence to long-term therapies: evidence for action*.
- World Health Organization. (2004). Health statistics and information systems. Retrieved 3 April 2014, from [www.who.int/entity/healthinfo/global\\_burden\\_disease/PREV6%202004.xls?ua=1](http://www.who.int/entity/healthinfo/global_burden_disease/PREV6%202004.xls?ua=1).
- World Health Organization. (2014). WHO | Schizophrenia. Retrieved 3 April 2014, from [http://www.who.int/mental\\_health/management/schizophrenia/en/](http://www.who.int/mental_health/management/schizophrenia/en/).