

## The Effect of Islamic-Based Insight Enhancement Program (IBIEP) on Medication Adherence of Persons with Schizophrenia: A Pilot Study

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### Abstract

**Aim:** This pilot study examined the effect of Islamic-based insight enhancement program (IBIEP) on medication adherence of persons with schizophrenia.

**Background:** Medication adherence is a critical for persons diagnosed with schizophrenia. Islamic-based insight enhancement therapy is a religious intervention to help Muslim persons with schizophrenia adhere to medication administration.

**Method:** The IBIEP is a five week program comprised of nine sessions using several program protocols such as discussion, giving information, demonstration, and sharing of experiences. The focus of the program is enhancing the insight of the patients. The study used a quasi-experiment design to examine the effect of IBIEP on the medication adherence of Muslim patients with schizophrenia. Ten patients were randomly assigned to either the experimental group and the control group. Each group consisted of five persons. The Beck Cognitive Insight Scale was used to assess cognitive insight; The Birchwood Insight Scale was used to assess clinical insight, and The Medication Adherence Rating Scale was employed to determine medication adherence.

**Results:** The participants who received the IBIEP therapy had better medication adherence ( $U = 1.5$ ,  $p < 0.05$ ), cognitive insight ( $U = 1.0$ ,  $p < 0.05$ ), and clinical insight ( $U = 0.50$ ,  $p < 0.05$ ), as compared to the subject group who received routine care.

**Conclusions:** This pilot study showed that the Islamic-based insight enhancement program (IBIEP) has potential to enhance insight and should be further tested with a larger size of participants.

**Keywords:** insight; Islamic-based insight enhancement program (IBIEP); medication adherence; schizophrenia

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## Introduction

Schizophrenia is a serious and deteriorating mental disease related to neurological dysfunction. It has become a global burden to family and to society in general. Schizophrenia occurs in 1% of the population, and is rated as the 8th leading cause of disability-adjusted life years worldwide in the age group of 15–44 years<sup>1</sup>. It also has been highlighted that more than 40% of patients with schizophrenia need treatment in psychiatric hospitals<sup>2</sup>. Insight is a very important phenomenon in persons with schizophrenia. Insight is the most important characteristic of schizophrenia<sup>3</sup>. Insight refers to some aspects such as (1) awareness of having a mental illness, (2) awareness of the effects of medication, and (3) an understanding of the social consequences of the illness<sup>4</sup>. The common symptom that occurs in schizophrenia is lack of insight. Several factors can cause a lack of insight in schizophrenic persons. These factors include neuropsychological (brain) deficiency, part of the main psychiatric illness itself, and a coping strategy of defensive denial to protect the patient against the distress of the awareness of his or her illness<sup>5</sup>. Most schizophrenic persons are not aware of their illness because they lack insight. Poor insight in schizophrenia can be described as a lack of awareness of having an illness, the deficits caused by the illness, the consequences of the disorder, and the need for treatment<sup>6</sup>. Approximately, 50%–80% of persons with schizophrenia have poor insight<sup>7</sup>.

One of major issues in treating persons with schizophrenia is non-adherence to medication. Non-adherence to antipsychotic drug is a common reason for a relapse and rehospitalization of patients with schizophrenia thus contributing to the high cost of treating the patients, adverse events and lack of insight<sup>8</sup>. Non adherent patients have an average risk of relapse that is 3.7 times greater than that of adherent patients<sup>9</sup>. Adherence to or compliance with medication is defined as the extent to which patients take medications as prescribed by their health care providers<sup>10</sup>. It has been estimated that 50% of persons with schizophrenia adhere poorly to their medication procedures<sup>11</sup>. Non-adherence to antipsychotic drug among people with schizophrenia is related to relapse rates of almost 80% after one year and 96% after two years<sup>12</sup>. A number of studies have shown several factors influencing adherence to antipsychotic medication including: illness awareness, psychopathology, medication related aspects, therapeutic relation, environmental factors, and substance abuse<sup>13</sup>. Another qualitative study using concept mapping<sup>14</sup> found that five themes were identified as having an effect on adherence: medication efficacy, external factors (such as patient support and therapeutic relation), insight, side effects, and attitudes towards medication.

Numerous studies have investigated the relationship between insight and medication adherence. One study<sup>15</sup> studied compliance therapy in psychotic patients in a randomized controlled trial. They found that patients who received compliance therapy and motivational interviewing techniques showed significant improvements in their attitudes to medication treatment and in their insight into their illness. Another study<sup>16</sup> examined relationship between treatment adherence, insight,

and violence among schizophrenia inpatients in a training hospital sample. They found that treatment adherence was correlated positively with insight levels.

In addition, religion plays an important role to help the persons with schizophrenia to deal with their illness and medication. Religion is a basic fundamental element in people's lives. Religiosity has a major and important influence on human behavior and well-being<sup>17</sup>. Religion includes the affiliation and identification with a religious group, cognitive factor-beliefs, and emotional and experiential factors<sup>18</sup>. The Muslim population demonstrates religious beliefs by following religious practices everyday such as praying, reciting the Qur'an and zikr to release their anxiety and depression. Following these practices help followers to feel more peaceful and be able to cope with stressful events easily. In Indonesia, the studies which investigate the effects of religion on schizophrenia in the Muslim context are still rare. Hence, this study undertakes to examine and evaluate the effect of Islamic-based insight enhancement therapy on medication adherence in persons with schizophrenia.

### **Literature Review Regarding Insight Enhancement Based on Islamic Principles**

This study focused on salat (prayer) as the second pillar in Islamic principles and the Holy Qur'an that are relevant for enhancing the insight of schizophrenic persons. Salat is the five compulsory daily prayers. It is based on the belief that a person has a direct and deep relationship with God (Allah). Salat also plays an important role to increase the faith and tawakkul (trust in Allah). These components are necessary in Muslim belief. It can help the persons particularly with mental illness such as schizophrenic persons to enhance their insight of their illness. Muslims use the Islamic practice such as prayer as a way to deal with the frustration and challenges of life<sup>19</sup>. When Muslims perform salat they should prepare both physical aspects and mental aspects. Salat must be performed with humility in both a physical and mental manner. Salat involves the tongue, the heart, the mind and the whole body.

The most important factor in performing salat is mindfulness or concentration. Performing salat uses a variety of Quranic verses and duas (supplication) to achieve greater concentration and awareness<sup>20</sup>. The Holy Qur'an states: "Successful indeed are the believers, those who offer their salah (prayer) with all solemnity and full submissiveness" (surah Al-Mu'minoon (23: 1-2)). While performing salat, the whole brain focuses on Allah so that our mind is free from tension<sup>21</sup>. Moreover, being mindful in prayer can help Muslims to develop a positive state of mind and keep out unpleasant thoughts and feelings from the past. After achieving concentration or mindfulness in salat, Muslims will feel more calm and peaceful. Hence, following this mechanism is a very useful in helping the persons with schizophrenia to enhance their insight, both clinical insight and cognitive insight and will change the negative attitudes toward the illness and medication as well. They will find it easier to cope with their illness problems and adhere to the treatment.

The Holy Qur'an provides a lot of essential meaning for a Muslim's life particularly for healing and seeking treatment for illness. Al-Qur'an is the final divine revelation (message of Allah) communicated through His final messenger the Prophet Muhammad Salla-Allahu alayhi wa sallam. Muslims believe that the Holy Qur'an contains directions and a code of conduct for humanity. The Holy Qur'an also is a source of knowledge which deals with thousands of subjects. There are three rights of the Qur'an upon the Muslims<sup>22</sup> (1) to recite the Qur'an correctly in the manner it was revealed to the Prophet Muhammad Salla-Allahu alayhi wa sallam as he recited it, (2) try to understand it and to comprehend its truths and knowledge, and (3) to act on its teachings and guidance. Therefore, the Holy Qur'an can be used as the intervention to enhance insight and medication adherence in persons with schizophrenia.

Furthermore, few studies have been conducted to examine the effects of religious practices in enhancing insight and medication adherence in schizophrenia. Mostafa Amr et al. studied adherence in Egyptian patients with schizophrenia: The role of insight, medication beliefs and spirituality<sup>23</sup>. The results showed that patients with higher daily spirituality had lower side effects of medication, more insight and adherence to medication. Borrás et al. examined religious beliefs in schizophrenia and their relevance for adherence to treatment<sup>24</sup>. The participants were schizophrenic patients with a variety of religions. The findings revealed that religious beliefs and religious practices such as prayer, meditation, and reading religious materials are useful in shaping the representations of illness and attitude toward medical treatment in patients with schizophrenia. Grover et al. investigated religion, spirituality, and schizophrenia: A review<sup>25</sup>. They found that religion and spirituality were effective methods of coping with the illness and influenced the insight and treatment compliance and outcome in patients with schizophrenia.

### **Study aims**

The aim of this pilot study is to compare medication adherence scores of persons with schizophrenia who receive Islamic-based insight enhancement program (IBIEP) and those who receive routine care.

### **Sample and Setting**

The participants in this study were 10 Muslim patients with schizophrenia who were living in the community and attended the OPD of the Community Health Center in Blang Bintang, Aceh Besar District, Indonesia. The inclusion criteria of the participants consisted of (1) patients who were living in the community in Aceh Besar District, Indonesia, (2) patients who have been diagnosed with schizophrenia based on DSM-TR-2000 criteria, (3) aged between<sup>18</sup> and 60 years-old, (4) no history or presence of an organic brain disorder, concurrent substance abuse or dependency, or severe mental retardation, (5) have been diagnosed with schizophrenia for

at least six months, (6) able to communicate verbally in Indonesian language, (7) able to read or write in Indonesian language and (8) had low insight and low adherence to medication. 10 participants were randomized after obtaining their approval. There were 5 participants in the experimental group and another 5 in the control group. The study was undertaken in the meeting room of the Community Health Center in Aceh Besar District, Indonesia.

### **The Islamic-Based Insight Enhancement Program (IBIEP)**

The Islamic-based insight enhancement program (IBIEP) refers to a group intervention, which was developed based on Islamic principles, particularly salat (prayer) and recitation of the Holy Qur'an, the concept of insight, the concept of medication adherence, and the nursing concept. The intervention was developed by the researcher to enhance medication adherence through enhancing the insight of persons with schizophrenia. The duration of the program is 5 weeks and is comprised of 9-sessions of group training which includes: (1) establishing a relationship between the researcher and the participant, (2) introduction of insight and medication adherence and the importance of religious practices related to enhancing insight, and (3) practicing mindfulness (khusu') in performing salat and reciting the selected Quranic verses (surah Al-Isra: 82 and surah Yunus: 57) related to enhancing insight. The program will be held twice weekly in the community setting. Each session takes 60 minutes.

Routine care program refers to the regular treatment that is provided by community mental health nurses for the persons with schizophrenia. The services include giving information about the illness and medication to the patient and family, monitoring the signs and symptoms of the illness and the side effects of medication.

### **Ethical Considerations**

The assessment of 10 participants was conducted after obtaining approval from the Ethics Committee, Institutional Review Board (IRB) of the Faculty of Nursing, Prince of Songkla University, Thailand and the Department of Health of Aceh Province and the Department of Health of Aceh Besar District, Indonesia. In this study, all participants met inclusion criteria and written informed consent form was obtained from them.

### **Data Collection**

The 5-week intervention was conducted according to the protocol. The intervention was divided into 9 sessions: introduction phase (session 1), working phase (session 2-8) and termination phase (session 9). In the program nurses has to demonstrate an educator, collaborator and counsellor role in each phase. Insight, medication adherence and religious practice were included in the content of the program. Salat and reciting the Qur'an related to enhancing insight

were focused in working phase.

## Measurements

The instruments for data collection were as follows:

*The Demographic Data Questionnaire (DDQ).* The Demographic Data Questionnaire consists of age, gender, marital status, educational level, occupation, number of hospitalization, duration of illness, types of medication and effects of medication.

*The Brief Psychiatric Rating Scale (BPRS).* The Brief Psychiatric Rating Scale (BPRS) was originally developed by Overall and Gorham (1962) and modified by Leucht et al<sup>26</sup>. The BPRS is a clinician-rated tool designed to assess the change in severity of psychopathology. The scale includes 18 items focusing on symptoms that are common in patients with psychotic disorders, for instance hallucinations, delusions, and disorganization, as well as mood disorders. The BPRS is a 7-point Likert-like type measure, with scores 0 = not assessed, 1 = not present, 2 = very mild, 3 = mild, 4 = moderate, 5 = moderately severe, 6 = severe, and 7 = extremely severe. The total score is the sum score from the 18 items, which equal 126. The categories of the BPRS include extremely ill (86-126), severely ill (67-85), markedly ill (53-66), moderately ill (41-65) and mildly ill (less than 31). A higher score implies a higher level of symptoms. Inter-rater reliabilities of the BPRS between 0.87 and 0.97. In this study, the researcher recruited the participants who have the BPRS scores less than 31 (mildly ill).

*The Birchwood Insight Scale (BIS).* The Birchwood Insight Scale (BIS) was developed by Birchwood et al.<sup>27</sup> The BIS scale is an eight-item self report insight measure. This scale is used to measure clinical insight for schizophrenia. The BIS is based on three dimensions consisting of awareness of illness (2 items), awareness of symptoms (2 items) and awareness of the need for the treatment (4 items). Each item is rated on a three-point Likert scale (agree, disagree, and unsure). The total score has a range from 0 to 12, with a score of 9 or more indicating good insight. The scale is quick and easy to administer to persons with schizophrenia. The BIS showed good internal consistency (Cronbach's alpha = 0.75) and test-retest reliability correlation coefficient was 0.90.

*The Beck Cognitive Insight Scale (BCIS).* The Beck Cognitive Insight Scale (BCIS) was developed by Beck et al<sup>28</sup>. The purpose of the scale is to evaluate patients' reflectiveness and their overconfidence in their interpretations of their experiences. The scale comprises of a 15-item self-report questionnaire which is divided into two sections: a 9-item self-reflectiveness subscale and a 6-item self-certainty subscale. The BCIS is a 4-point Likert scale that ranges from 0 = do not agree at all, 1 = agree slightly, 2 = agree a lot, and 3 = agree completely. A total score is calculated the self-reflectiveness minus the self-certainty. A higher score indicated good cognitive insight. The coefficient alpha for the self-reflectiveness scale was 0.68 and for

self-certainty was 0.60 for the original sample.

*The Medication Adherence Rating Scale (MARS).* The Medication Adherence Rating Scale (MARS) was developed by Thompson et al.<sup>29</sup> The aim of this scale is to measure the complexity of adherence and factors influencing adherence in schizophrenia patients. The scale consists of a 10 item self-report questionnaire that requires a yes or no answer. The items Q1, Q2, Q3, Q4, Q5, Q6, Q9, and Q10 are scored no = one and yes = zero. The remaining items (Q7 and Q8) are scored no = zero and yes = one. The scale score is obtained by summing the items values. The score ranges from 0 (low probability of adherence) to 10 (high probability of adherence). The reliability of MARS was 0.75. The MARS can be used not only in a clinical setting but also in many research study settings.

### Translation of Instruments and Intervention Guideline

The Demographic Data Questionnaire (DDQ), The Brief Psychiatric Rating Scale (BPRS), The Beck Cognitive Insight Scale (BCIS), The Birchwood Insight Scale (BIS), and The Medication Adherence Rating Scale (MARS) were translated by the back translation method after getting permission from the authors. The first, bilingual translator translated the questionnaires of the English version into an Indonesian version. The second, bilingual translator translated the Indonesian version back into the English version. The two bilingual translators work independently for the translation into the target languages. The third, the original and the English back translated questionnaires were evaluated by an English expert for discrepancies. The researcher revised the Indonesian version based on the experts' suggestions.

### Data Analysis

The data was analyzed using statistical program. Descriptive statistics were used to analyze the patient's characteristics such as age, gender, educational level, marital status, and occupation, duration of illness, and number of hospitalizations using frequency, percentage, mean and standard deviation. Chi-square and t-test were employed to examine the difference in demographic characteristics both in the experimental group and in the control group. Mann Whitney U test was used to analyze the mean rank differences between the experimental group and the control group.

### Results

The results of this study revealed that both in the experimental group ( $n = 5$ ) and in the control group ( $n = 5$ ) there were no significant differences in demographic characteristics (table 1). Mann-Whitney U test showed that no statistical differences in the mean rank of medication adherence ( $U = 7.0$ ,  $p < 0.05$ ,  $p = 0.21$ ), cognitive insight ( $U = 9.5$ ,  $p < 0.05$ ,  $p = 0.52$ ), and clinical insight ( $U = 11.5$ ,  $p < 0.05$ ,  $p = 0.82$ ) between the experimental group and the control group before receiving the intervention program (Table 3). In contrast, there were significant



differences in the mean rank of medication adherence ( $U = 1.5$ ,  $p < 0.05$ ,  $p = 0.01$ ), cognitive insight ( $U = 1.0$ ,  $p < 0.05$ ,  $p = 0.01$ ), and clinical insight ( $U = 0.50$ ,  $p < 0.05$ ,  $p = 0.01$ ) from pre intervention to 2 weeks after post intervention between the experimental and the control group (Table 4).

**Table 1** Frequency, Percentage, Mean, and Standard Deviation of the Demographic Characteristics of the Participants in the Experimental and the Control Group

Variables	Experimental group n = 5		Control group n = 5		Statistical value	p value
	n	(%)	n	(%)		
Age [years; mean (SD)]	38.0	(9.05)	33.60	(8.50)	-0.58 <sup>b</sup>	0.58
<b>Gender</b>						
Male	4	(80.0)	3	(60.0)	1.87 <sup>a</sup>	0.17
Female	1	(20.0)	2	(40.0)		
<b>Marital status</b>						
Single	3	(60.0)	3	(60.0)	2.22 <sup>a</sup>	0.32
Married	2	(40.0)	1	(20.0)		
Widow	1	(20.0)				
<b>Educational background</b>						
None	1	(20.0)	1	(20.0)	10.0 <sup>a</sup>	0.12
Elementary school	2	(40.0)	3	(60.0)		
Junior high school	1	(20.0)	1	(20.0)		
Senior high school	1	(20.0)				
<b>Occupation</b>						
Farmer	3	(60.0)	1	(20.0)	5.0 <sup>a</sup>	0.08
Unemployed	2	(40.0)	3	(60.0)		
Merchant	0	(0)	1	(20.0)		
<b>Number of hospitalizations</b>						
[times; mean (SD)]	1.0	(0.70)	1.60	(1.14)	-0.88 <sup>b</sup>	0.42
<b>Duration of illness</b>						
[years; mean (SD)]	5.20	(2.95)	4.20	(4.65)	-0.30 <sup>b</sup>	0.77
<b>Medication</b>						
<b>CPZ</b>						
No	1	(20.0)	3	(60.0)	1.87 <sup>a</sup>	0.17
Yes	4	(80.0)	2	(40.0)		
<b>Risperidone</b>						
No	2	(40.0)	4	(80.0)	1.87 <sup>a</sup>	0.17
Yes	3	(60.0)	1	(20.0)		
<b>Haldoperidol</b>						
No	1	(20.0)	3	(60.0)	0.83 <sup>a</sup>	0.36
Yes	4	(80.0)	2	(40.0)		

<sup>a</sup> = Chi-square, <sup>b</sup> = t-test



**Table 2** Frequency, Percentage, Mean, and Standard Deviation of the Demographic Characteristics of the Participants in the Experimental and the Control Group

Variables	Experimental group	Control group	Statistical value	p value
	n = 5	n = 5		
	n (%)	n (%)		
Side effects of medication				
Feel sleepy				
Yes	4 (80.0)	3 (60.0)	0.83 <sup>a</sup>	0.36
No	1 (20.0)	2 (40.0)		
Dry lips				
Yes	4 (80.0)	3 (60.0)	0.83 <sup>a</sup>	0.36
No	1 (20.0)	2 (40.0)		
Headache				
Yes	3 (60.0)	3 (60.0)	0.13 <sup>a</sup>	0.70
No	2 (40.0)	2 (40.0)		
Dizziness				
Yes	3 (60.0)	3 (60.0)	0.13 <sup>a</sup>	0.70
No	2 (40.0)	2 (40.0)		

<sup>a</sup> = Chi-square, <sup>b</sup> = t-test

**Table 3** Comparison of Mean Rank Differences of Medication Adherence, Cognitive Insight, and Clinical Insight between the Experimental and the Control Group before Intervention

	Experimental group		Control group		Mann-Whitney U test
	n = 5		n = 5		
	MR	SR	MR	SR	
Medication adherence	6.6	33.0	4.4	22.0	7.0*
Cognitive insight	4.9	24.5	6.1	30.5	9.5*
Clinical insight	5.7	28.5	5.3	26.5	11.5*

\*p < 0.05, MR: Mean Rank, SR: Sum of Rank

**Table 4** Comparison of Mean Rank Differences of Medication Adherence, Cognitive Insight, and Clinical Insight between the Experimental and the Control Group after Intervention

	Experimental group		Control group		Mann-Whitney U test
	n = 5		n = 5		
	MR	SR	MR	SR	
Medication adherence	7.7	38.5	3.3	16.5	1.5*
Cognitive insight	7.8	39.0	3.2	16.0	1.0*
Clinical Insight	7.9	39.5	3.1	15.5	0.50*

\*p < 0.05, MR: Mean Rank, SR: Sum of Rank

## Discussion

Islamic-based insight enhancement nursing program is one of the religious interventions that can help to enhance insight and medication adherence of persons with schizophrenia. From table 3 the mean rank differences of medication adherence ( $U = 7.0$ ,  $p < 0.05$ ), cognitive insight ( $U = 9.5$ ,  $p < 0.05$ ) and clinical insight ( $U = 11.5$ ,  $P < 0.05$ ) of persons with schizophrenia for both groups before receiving the intervention were not significantly different. However, after receiving an Islamic-based insight enhancement therapy, there were significant differences in the mean rank of medication adherence ( $U = 1.5$ ,  $p < 0.05$ ), cognitive insight ( $U = 1.0$ ,  $p < 0.05$ ) and clinical insight ( $U = 0.50$ ,  $p < 0.05$ ) for the experimental group and the control group (Table 4). This study indicates that Islamic-based insight enhancement nursing program was effective in enhancing medication adherence through enhancing insight both cognitive and clinical insight of schizophrenic persons.

In Islam, Muslims believe that there is a strong tendency to conceptualize illness as happening according to the will of God (Allah SWT), who is understood to be a higher power that cannot be perceived by the senses.<sup>30</sup> Central to this belief is the idea of Al-Qadar. Al-Qadar means that God (Allah SWT) has decreed everything that occurs in the world based on His prior knowledge. Muslims generally use religious interventions to heal. The methods include fasting (sawm), repentance (taubah) and regular recitation (zikr) of the Qur'an.

In this study, the Islamic-based insight enhancement therapy used religious practices consisted of salat (prayer) and the Holy Qur'an with the selected surah (verses), namely surah Al Isra 17:82 and surah Yunus 10:57 to enhance insight of Muslim persons with schizophrenia. The main activity of each session of the intervention program focused on practicing mindfulness (khusu') in salat and reciting the Holy Qur'an with the selected surah (verses). The researcher taught the participant how to practice ablution before performing salat, practice mindfulness (khushu') in salat and reciting the Holy Qur'an together in every session of the program. The researcher informed to the participant the importance of doing religious practices in increasing their self awareness of the illness and its impact on medication adherence.

Salat is the five compulsory daily prayers. Salat is not only a daily ritual for Muslim persons but it is based on the belief that a person has a direct and deep relationship with God (Allah SWT). Praying as the first value advice in Quranic verses plays an effective role to provide Muslims with health and calm life.<sup>31</sup> When Muslims perform salat they should prepare both physical aspects and mental aspects. Ablution before praying is one of the important parts. The Prophet Muhammad said (hadith): "Performing salat (prayer) without purification (ablution) is invalid". Salat must perform with humility both physical and mental manner. Salat involves the tongue, the heart, the mind and the whole body. Salat also plays an important role to increase the faith and tawakkul (trust in Allah SWT). A lot of benefits of salat not only for physical dimension but also for

psychological dimension. In line with persons with schizophrenia, salat can be the one of the therapy in improving cognitive impairment and increase self-awareness of the patient's illness. The Holy Qur'an (Mu'minoon 23:2) stated: "Those who offer their salat (prayer) with all solemnity and full submissiveness". The Prophet Muhammad said (hadith): "Perform your salat (prayer) in the same manner as you have seen me doing" (narrated by Al Bukhari).

With regard to this activity, a numerous studies have evaluated the effects of salat (prayer) and reciting the Holy Qur'an in improving mental health. The results were relevant with the previous studies. One study<sup>32</sup> studied salat and dhikir to dispel voices: The experience of Indonesian Muslim with chronic mental illness in an outpatient unit of the West Java Psychiatric Hospital. The method of the study is descriptive phenomenology with 24 participants. The results showed that the participants found a personal way to dispel voices by doing salat and dhikir everytime they heard voices. Even though the method of this study is not similar to the recent study, the findings showed that religious practices such as salat and dhikir play an important role to help the persons with schizophrenia. Another study<sup>33</sup> examined the effect of familiarity with Qur'an on mental health. The results showed that familiarity with Qur'an was effective in improving the mental health status of the participants. Javeed<sup>21</sup> studied the effect of Muslims in those who practiced regular namaz (salat) and tilawat -e- Quran and Muslims e who did not practice regular namaz (salat) and tilawat -e- Quran in respect to mental health and self concept. The results showed that firstly, Muslims who practiced regular namaz (salat) and tilawat -e- Quran had a significant increase in mental health than Muslims who did not practice regular namaz (salat) and tilawat -e- Quran. Secondly, Muslims who practiced regular namaz (salat) and tilawat -e- Quran had a significant increase in self concept compared to those Muslim who did not practice regular namaz salat) and tilawat -e- Quran.

Moreover, the most important factor in performing salat is mindfulness (khushu') or concentration. In this study, the researcher explained the importance of mindfulness in performing salat and its benefits to enhance insight of the participant. The researcher and participant practiced mindfulness in performing salat in each session of the intervention program. Mindfulness (khushu') in salat refers to submissiveness and humility. Being mindful in prayer can help Muslims to develop a positive state of mind and keep unpleasant thoughts and feelings from the past. After achieving full concentration or mindfulness (khushu') in salat, Muslims feel more calm and peaceful in their life. Hence, following this mechanism is a very useful to help the persons with schizophrenia to enhance their insight, both clinical insight and cognitive insight. The persons with schizophrenia can understand about their illness and changed the negative attitude toward the illness and medication as well. They were able to cope with their illness problems easily and adhere to the treatment.

Several studies have conducted to examine the effects of mindfulness in praying on mental health. The findings were relevant with the recent study. Khusu' or being in a good state

of mind while performing salat will make Muslims feel cheerful, more productive, and more fulfilling in life<sup>34</sup>. Aldahadha<sup>35</sup> studied the effects of Muslims praying meditation and transcendental meditation program on mindfulness. The results showed that there was a relationship between Muslim praying meditation and mindfulness skills in improving mental health. Keng et al.<sup>36</sup> reported that mindfulness has a lot of positive effects on psychological aspect including increased subjective well-being, reduce psychological symptoms and emotional reactivity, and improved behavioral regulation.

With regard to the Holy Qur'an as one of the religious practices that had been used in this program has contributed to enhance medication adherence through enhancing both cognitive and clinical insight of persons with schizophrenia. The Holy Qur'an is the Holy Book for Muslim people. It provides a lot of essential meaning for a Muslim's life particularly for healing and seeking treatment for illness. This study used two selected Quranic verses, surah Al Isra 17:82 and surah Yunus 10:57. The Holy Qur'an (Al-Isra 17:82) stated: "And we send down from the Qur'an that which is a healing and a mercy to those who believe". The Holy Qur'an (Yunus 10:57) stated: "O mankind there has come to you a direction from your Lord and a healing for the (diseases) in your hearts and for those who believe a guidance and a mercy". The Prophet Muhammad said (hadith): "The best of you is he who learnt the Holy Qur'an and teaches it to others" (narrated by Bukhari).

## Conclusions

The results from this pilot study suggest that the Islamic-based insight enhancement program (IBIEP) on medication adherence has a potential to enhance insight of persons with schizophrenia with some limitations.

## Limitations

The limitation of this study is the questionnaires that were delivered to the participants which were a little difficult for them to understand particularly in regards to the Beck Cognitive Insight Scale (BCIS). Since this study used all existing instruments that had been developed in Western society, they may not really fit with the culture and Muslim context.

## Implications

This study provides evidence that Islamic-based insight enhancement program (IBIEP) has a potential to enhance medication adherence of Muslims persons with schizophrenia as well as enhancing their cognitive and clinical insight. The intervention comprises of a clear instruction that can be applied by the nurses who work in the Community Health Center. The nurse can teach the participant to practice mindfulness (khusu') technique in doing salat (prayer) and

recitation the selected Quranic verses to enhance insight of persons with schizophrenia.

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# ผลของโปรแกรมเพิ่มการรู้ตนเองบนพื้นฐานหลักศาสนาอิสลามต่อภาวะยึดมั่นต่อการใช้จ่ายของผู้เป็นจิตเภท: การศึกษานำร่อง

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## บทคัดย่อ

**วัตถุประสงค์:** การศึกษานำร่องครั้งนี้ มีวัตถุประสงค์ เพื่อประเมินผลของโปรแกรมเพิ่มการรู้ตนเอง บนพื้นฐานหลักศาสนาอิสลามต่อภาวะยึดมั่นต่อการใช้จ่ายของผู้เป็นจิตเภท

**ความเป็นมา:** ภาวะยึดมั่นต่อการใช้จ่ายเป็นสิ่งสำคัญสำหรับผู้เป็นจิตเภท การบำบัดบนพื้นฐานหลักอิสลามเพื่อเสริมสร้างการรู้ตนเองเป็นการบำบัดที่เน้นการปฏิบัติทางศาสนา จะช่วยให้ผู้เป็นจิตเภทมุสลิมยึดมั่นกับการรับประทานยามากขึ้นได้

**วิธีการ:** โปรแกรมเพิ่มการรู้ตนเอง บนพื้นฐานหลักศาสนาอิสลาม (IBIEP) เป็นโปรแกรมการบำบัด ใช้เวลา 5 สัปดาห์ ประกอบด้วย 9 ครั้ง กิจกรรมมีหลายลักษณะ เช่น การอภิปราย การให้ข้อมูล การทำเป็นตัวอย่าง และการแลกเปลี่ยนประสบการณ์ จุดเน้นของโปรแกรมอยู่ที่การเพิ่มการรู้ตนเอง วิธีการศึกษาครั้งนี้ เป็นการวิจัยกึ่งทดลอง เพื่อประเมินผลของโปรแกรมต่อภาวะยึดมั่นในการใช้จ่าย ของผู้เป็นจิตเภทมุสลิม จำนวน 10 คน ซึ่งได้รับการสุ่มเข้าอยู่ในกลุ่มทดลอง และกลุ่มควบคุมอย่างละ 5 คน แบบประเมินที่ใช้คือ แบบประเมินการรู้ตนเองทางความคิดของ เบค การประเมินการรู้ตนเองทางคลินิกของ เบิร์ทวูด และการประเมินภาวะยึดมั่นในการใช้จ่าย

**ผลการวิจัย:** เมื่อเปรียบเทียบสองกลุ่มพบว่า กลุ่มผู้เข้าร่วมในโปรแกรม IBIEP มีภาวะยึดมั่นในการใช้จ่าย ( $U = 1.5$ ,  $p < 0.05$ ) การรู้ตนเองด้านการรู้จัก ( $U = 1.0$ ,  $p < 0.05$ ) และการรู้ตนเองทางคลินิก ( $U = 0.50$ ,  $p < 0.05$ ) ดีกว่า กลุ่มควบคุมซึ่งที่ได้รับการดูแลตามปกติ

**สรุป:** การศึกษานำร่องครั้งนี้แสดงให้เห็นว่า โปรแกรม IBIEP น่าจะสามารถเพิ่มภาวะยึดมั่นในการใช้จ่ายของผู้เป็นจิตเภทได้ จึงควรนำไปทดลองในกลุ่มผู้เป็นจิตเภทที่มีจำนวนมากกว่านี้

**คำสำคัญ:** การรู้ตนเอง; โปรแกรมเพิ่มการรู้ตนเอง; บนพื้นฐานหลักศาสนาอิสลาม (IBIEP); ภาวะยึดมั่นในการใช้จ่าย; ผู้เป็นจิตเภท

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