

ORIGINAL RESEARCH

# The Effect of Islamic Spiritual Mindfulness on Self-Efficacy in Anger Management among Schizophrenic Patients



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## Abstract

**Background:** The prevalence of schizophrenia has increased in the last few years. Nevertheless, methods in assisting schizophrenic patients have not improved significantly. Islamic spiritual mindfulness is a spiritual approach that can help schizophrenic patients increase their self-efficacy in anger management. However, the application of this intervention is still not well researched.

**Purpose:** This study aimed to determine the effect of Islamic spiritual mindfulness on self-efficacy in anger management among schizophrenic patients.

**Methods:** This study utilized a pre-post quasi-experimental design with a control group. A total of 54 schizophrenic patients were purposively recruited and divided into two groups: the intervention group (n=27) and the control group (n=27). The intervention group received four sessions of Islamic spiritual mindfulness in two weeks, while the control group received a standard intervention from the hospital. The data were collected using the Regulatory Emotional Self-Efficacy (RESE) scale and analyzed using the t-test.

**Results:** The results showed a significant difference in self-efficacy scores between the control and intervention groups ( $p=0.000$ ) after the intervention. In the pre-test, the mean score of self-efficacy in the intervention group was lower than the control group ( $M=28.15$  vs.  $M=30.26$ ) without a significant difference. However, in the post-test, a significant difference in self-efficacy between the intervention and control groups was found ( $M=46.44$  vs.  $M=46.44$ ;  $p=0.000$ ).

**Conclusion:** Islamic spiritual mindfulness significantly affects self-efficacy among schizophrenic patients. The Islamic spiritual mindfulness can be applied as a new form of approach to increase self-efficacy in schizophrenic patients.

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## 1. Introduction

Schizophrenia is a chronic and severe mental disorder that is characterized by distortions in thinking, perception, emotions, language, sense of self, and behavior. Schizophrenia affects at least 20 million people worldwide, with common experiences including hallucinations (hearing voices or seeing things that are not there) and delusions (fixed, false beliefs) (World Health Organization, 2019). This type of disorder is associated with considerable disability and may affect educational and occupational performance (World Health Organization, 2019). In addition, research shows that males are more likely to be affected by this disorder than females (Falkenburg & Tracy, 2014).

The prevalence of schizophrenia in Indonesia has increased in the last few years. According to the Basic Health Research in 2018 (Ministry of Health Republic of Indonesia, 2018), the prevalence of patients with schizophrenia in Indonesia has increased from 1.7% in 2013 to 7% in 2018. In Central Java, a province in Indonesia, the number of people with schizophrenia has significantly increased from 2.3% in 2013 to 8.7% in 2018 (Ministry of Health Republic of Indonesia, 2018). A preliminary study in a psychiatric hospital in this province also found 318 cases of relapses and readmissions of schizophrenia patients in less than one month in 2018. This condition requires an evaluation of nursing interventions in caring for patients with schizophrenia, focusing on the awareness that this disease is detrimental if it is not controlled.

Patients with schizophrenia who experience delusions can easily get angry and use violence against people they believe hurt them (American Psychiatric Association, 2013). Uncontrolled anger in schizophrenic patients can lead to violent behaviors that may hurt other people. A previous study has shown that the risk of violent behaviors as an expression of anger in male schizophrenic patients was 4.6 times higher than the general population; in contrast, female schizophrenic patients were 23.3 times higher (Ringer & Lysaker, 2014). Violent behaviors committed by schizophrenic patients may also increase the healthcare expenses since it is the most frequent cause of admission to the hospital, and the length of stay will be longer as the signs of the behaviors are persistent (Volavka, 2014). Anger and risks of violent behaviors among schizophrenic patients are manageable through adaptive copings

Self-efficacy is an important factor in producing adaptive copings. Self-efficacy has been associated with daily functioning in schizophrenia through its relationships with cognition, negative symptoms, and functional capacity (Bryce et al., 2018). Self-efficacy, by definition, is how individuals believe in their ability to conduct an action (Bandura, 1997). According to Dwidiyanti et al. (2018), self-efficacy is influenced by individual experiences of success, the experience of others, verbal persuasion, and physiological and emotional conditions. Low self-efficacy affects maladaptive copings so that good self-efficacy is required by patients with a risk of violent behavior to control their anger (Leon-Perez et al., 2011). High self-efficacy can change an individual's behavior, motivate learning to carry out the best treatment, and prevent relapse (Bandura, 1994). Self-efficacy in anger management will depend on individuals' beliefs about their ability to express their negative affect, and this should be a concern for nurses (Carpara et al., 2009). The ability of self-efficacy in anger management includes the efficacy of controlling negative emotion, efficacy of controlling positive emotion, and efficacy of controlling anger (Nocentini et al., 2013). Self-efficacy in schizophrenic patients is crucial because learning from successful experiences will boost self-confidence resulting in better self-efficacy (Bandura, 2012).

Research shows that psychoeducational interventions are useful for patients to increase their emotion regulation, but are not effective for patients with high negative affect (Cameron & Jago, 2008). Spiritual mindfulness is an intervention that can make patients aware of their condition, without judgment and with full acceptance, so that they are not only able to control negative affect but also raise awareness of positive affect (Davis & Zautra, 2013). Mindfulness is also evident to stimulate changes in brain structure, especially cingulated anterior cortex, insula, hippocampus, temporoparietal intersection, and fronto-limbic tissue, that are related to increasing self-efficacy and self-regulation needed by schizophrenic patients to regulate and control emotions, feeling, and behavior (Shonin & Van Gordon, 2016). Mindfulness teaches how to be more resilient with an individual's present condition, make an objective assessment, and focus on solving problems (Isgandarova, 2019). Mindfulness helps schizophrenic patients improve their self-efficacy in order to change behaviors and deliver more adaptive coping mechanisms so that they can manage anger and behavior (Leon-Perez et al., 2011). Research also shows that mindfulness can increase psychological well-being and mental health (Ijaz et al., 2017) and significantly increase self-efficacy in family caregivers in caring for patients with mental disorders (Rokhyati et al., 2019).

To date, many forms of mindfulness-based therapy models have been practiced and explored, one of which is Islamic spiritual mindfulness. The Islamic spiritual mindfulness is done with a high level of awareness, believing that every problem an individual is experiencing comes from Allah (God) and it is only Allah that has the power to overcome; Islamic spiritual mindfulness refers to a spiritual state of an individual who is conscious of the awareness of Allah over their soul, innermost thoughts/feelings, and actions (Dwidiyanti et al., 2019; Munif et al., 2019). A high level of mindfulness is associated with high Muslim spiritual welfare (Thomas et al., 2018). Islamic spiritual mindfulness not only helps patients control their negative affect but also helps patients raise their awareness without any judgment and accept it with ease (Dwidiyanti et al., 2018). Islamic spiritual mindfulness also increases the ability to control emotion in adult patients (Sadipun et al., 2018). Mindfulness is evident to provide benefits for patients with schizophrenia. However, spiritually based mindfulness, especially Islamic spiritual mindfulness, requires a more in-depth study to be applied to schizophrenic patients. Accordingly, this study aimed to determine the effect of Islamic spiritual mindfulness on self-efficacy in anger management among schizophrenic patients. This study expects to bridge the gap between mindfulness-based therapy and Islamic religion and help mental health nurses to cope with violent behavior among schizophrenic patients.

## 2. Methods

### 2.1 Research design

This study used a pre-post quasi-experimental design with a control group.

### 2.2 Setting and samples

This study was conducted in a psychiatric hospital in Semarang, Indonesia, from October to November 2020. The population was all schizophrenic patients admitted to the specified hospital. A purposive sampling technique was utilized to recruit the patients who met the inclusion criteria, including schizophrenic patients with risk of abusive behavior, Muslim, male or female aged 19-45 years old, being calm and cooperative, and did not undergo electroconvulsive therapy (ECT). Patients who did not complete all stages of the research were excluded from the study. A total of 54 patients were recruited and then divided into two groups: the intervention group (n=27) and the control group (n=27). The number of samples included in this study was calculated based on the formula of mean difference hypothesis test that has been used in a previous study, in which the mean and standard deviation in the intervention group was  $8.57 \pm 4.89$  (n=21) while the mean and standard deviation in the control group was  $3.45 \pm 1.93$  (n=24) (Yilmaz & Okanlı, 2017). We obtained a sample size of 27 for each group (intervention and control) based on this calculation.

### 2.3 Intervention

The Islamic spiritual mindfulness adapted from Dwidiyanti et al. (2019) was given to the intervention group for four sessions; each lasted for 30-45 minutes. This intervention consisted of five steps of mindfulness: a moment of awareness, self-evaluation, body scan, repentance, prayer, and relaxation. The intervention was given every three days in two weeks by the research team and took place in a counseling room at the psychiatric ward in the hospital. The complete procedure of Islamic spiritual mindfulness is shown in Table 1. In this study, the intervention group received both the Islamic mindfulness intervention and standard therapy in hospitals for patients with schizophrenia. Meanwhile, the control group only received standard therapy in the hospital for patients with schizophrenia.

**Table 1.** Intervention procedures

No	Steps	Aim	Methods
1	A moment awareness	To bring out patients' desires or impulses according to the patients' needs to pray to Allah.	<ul style="list-style-type: none"> <li>- Asked the patients to concentrate and do <i>istighfar</i> (ask for forgiveness) while breathing.</li> <li>- Encouraged the patients to believe that Allah would help and heal all the problems.</li> </ul>
2	Self-evaluation	To help identify the mistakes and sins committed by the patients in the past.	<ul style="list-style-type: none"> <li>- Guided the patients to remember all the mistakes and sins such as envy, revenge, fear, anxiety, and despair.</li> <li>- Guided the patients to remember any mistake that they have made to others.</li> <li>- Asked the patients to write down all their sins and mistakes.</li> </ul>
3	Body scan	To help patients feel the response in the form of physical complaints.	<ul style="list-style-type: none"> <li>- Asked the patients to keep <i>istighfar</i> while breathing and identify physical complaints such as heart palpitations, shortness of breath, headache, nausea, and others.</li> </ul>
4	Repentance and prayer	To help patients ask for forgiveness and pray to Allah.	<ul style="list-style-type: none"> <li>- Guided the patients to do <i>istighfar</i> after they realized all mistakes and sins and invited them to ask for Allah's forgiveness and pray.</li> </ul>
5.	Relaxation	To help patients to relax after praying and admitting their mistakes.	<ul style="list-style-type: none"> <li>- Guided the patients to take a deep breath</li> <li>- As a result of a body scan, patients might feel some physical complaints. For example, if the patients felt dizzy, shortness of breath, and nausea, asked the patients not to hold it. Instead, asked the patients to cry, vomit, or cough so that they felt more relieved.</li> </ul>

#### 2.4 Measurement and data collection

This study used the Regulatory Emotional Self-Efficacy (RESE) scale (Carpara et al., 2009) for data collection. Permission to use this instrument was obtained from the original author. The RESE scale was translated into the Indonesian language and back-translated into the English language by two independent translators. No significant difference was found in the result from the backward and forward translations. The validity and reliability test of the RESE scale was conducted on 20 schizophrenic patients out of the research subjects with risks of violent behavior in a psychiatric ward in Semarang. The result showed that the scale was valid with the Pearson's correlation scores ranging from 0.757 to 0.935 and reliable with  $\alpha=0.965$ .

The RESE scale consisted of 12 questions with 5 Likert scales, including not well at all (1), not well (2), neutral (3), well (4), and very well (5). The total score was obtained from the cumulative scores of questions number 1 to 12. The total score for self-efficacy ranged from 12 to 60. A higher score indicated a higher self-efficacy (Carpara et al., 2009). In addition, demographic data of the participants were also collected, including age, sex, education, occupation, and length of hospitalization. A homogeneity test on categorical data like sex, education, and occupation was conducted using the Chi-square test, while numerical data like age and length of hospitalization were examined using Levene's test. The questionnaires were administered to the respondents in both groups before and after the intervention of the Islamic spiritual mindfulness.

#### 2.5 Data analysis

The data of self-efficacy in anger management were analyzed by comparing the result of the pre-test and post-test in both groups. Before that, the normality test was conducted using the Shapiro-Wilk test. The data distribution was significantly normal ( $p>0.05$ ). Therefore, a paired t-test was used to analyze the difference in self-efficacy in anger management in both groups before and after the intervention. Furthermore, the independent t-test was used to analyze the effect of the intervention on self-efficacy in anger management.

#### 2.6 Ethical considerations

This study was approved by the Health Research Ethics Committee of Dr. Amino Gondohutomo Psychiatric Hospital, Semarang, with a reference number of 420/6028. Informed consent was explained to and signed by the patients prior to their participation in this study. The informed consent was also signed by the researcher and the nurses that were responsible for the patients.

### 3. Results

#### 3.1 Characteristics of the participants

Table 2 shows that most participants in the intervention group were males (63%), high school graduates (63%), and entrepreneurs (55.6%), with a mean age and length of hospitalization of 32.33 and 2.74, respectively, while in the control group, the majority were males (51.9%), high school graduates (59.3%) and unemployed (70.4), with a mean age and length of hospitalization of 29.56 and 1.89, respectively. All variables were homogenous ( $p>0.05$ ): age ( $p=0.323$ ), gender ( $p=0.582$ ), education ( $p=1.000$ ), occupation ( $p=0.099$ ), and length of hospitalization ( $p=0.161$ ). No differences in the characteristics of respondents were found between the two groups.

**Table 2.** Characteristics of respondents

Variable	Group				p-value ( $X^2$ )
	Control f(%)	Intervention f(%)	Control (Mean±SD)	Intervention (Mean±SD)	
Age	-	-	29.56±7.80	32.33±8.89	0.323*
Gender					
Male	14 (51.9)	17 (63.0)	-	-	0.582**
Female	13 (48.1)	10 (37.0)			
Education					
Middle School	11 (40.7)	10 (37.0)	-	-	1.000**
High School	16 (59.3)	17 (63.0)			

**Table 2.** Continued

Variable	Group				p-value ( $X^2$ )
	Control f(%)	Intervention f(%)	Control (Mean±SD)	Intervention (Mean±SD)	
Occupation					
Entrepreneur	8 (29.6)	15 (55.6)	-	-	0.099**
Unemployed	19 (70.4)	12 (44.4)			
Length of hospitalization	-	-	1.89±1.40	2.74±1.56	0.161*

\*Levene's test; \*\*Crosstab Chi-square

### 3.2 Differences in anger management between the intervention and the control group

Table 3 shows a significant difference in anger management between the control group and the intervention group before and after the intervention. The mean value increased from 30.26 to 34.59 in the control group and from 18.29 to 46.44 in the intervention group.

**Table 3.** Differences in self-efficacy in anger management before and after the intervention between the control and intervention groups

Groups	Mean Difference	Pre-test		Post-test		p
		Mean±SD	Min-Max	Mean±SD	Min-Max	
Control	4.33	30.26±9.15	15-47	34.59±7.56	21-49	0.000
Intervention	18.29	28.15±10.09	15-57	46.44±4.93	35-59	0.000

### 3.3 Effects of Islamic spiritual mindfulness on increasing self-efficacy in anger management

Table 4 shows no significant differences in self-efficacy in anger management in both groups ( $p=0.424$ ), before the intervention. The mean value was 28.15±10.09 in the intervention group and 28.15±10.09 in the control group. After the intervention, a significant difference in self-efficacy between the two groups was found ( $p=0.000$ ). The results of the post-test showed that the intervention group had a higher mean value (46.44) than the control group (34.59).

**Table 4.** Effects of Islamic spiritual mindfulness on increasing self-efficacy in anger management

		Control		Intervention		p
		Mean±SD	Min-Max	Mean±SD	Min-Max	
Self-efficacy	Pre	28.15±10.09	15-47	28.15±10.09	15-57	0.424
	Post	34.59±7.56	21-49	46.44±4.93	35-59	0.000

## 4. Discussion

This study was conducted to determine the effect of Islamic spiritual mindfulness on self-efficacy in anger management among schizophrenic patients with a risk of violent behavior. The results indicated a difference in self-efficacy between schizophrenic patients who received the Islamic spiritual mindfulness and those who received standard hospital care. In addition, the mean score of self-efficacy in the intervention group was significantly higher than that in the control group. The result of this study is congruent with previous studies, which showed that mindfulness increased self-efficacy in cancer patients (Sanaeia et al., 2014) and neurological overeating patients (Aghajani et al., 2020). Similarly, a previous study found that mindfulness increased psychological well-being and mental health (Ijaz et al., 2017).

The results of previous research conducted on respondents with emotional disorders showed that greater use of describing, acting with awareness, and accepting without judgment, as part of mindfulness were associated with greater coping self-efficacy. Basically, mindfulness aims to direct a person to be able to observe, describe, act with awareness, and accept without judgment (Luberto et al., 2013). In an individual's life, the key dimension for self-understanding is spirituality. This spirituality is part of relationship, social engagement, understanding of meaning

and purpose in life, and an overall sense of happiness and joy (Kavar, 2015). Spiritual health is closely related to psychological well-being (Božek et al., 2020) because a person's beliefs and religion affect the way a person responds to the problems they face. With this in mind, spiritual intervention shows great potential to be applied to patients with psychiatric disorders (Agorastos et al., 2014). The basis of this knowledge then underlies the intervention of spiritual mindfulness to increase the spirituality level of patients with schizophrenia so that patients can be more calm and sincere to overcome their problems (Triyani et al., 2020).

The Islamic spiritual mindfulness is a mindfulness practice based on Islamic values in its implementation. Islamic spiritual mindfulness teaches individuals to believe that prayer, effort, and surrender to God are a form of the healing process (Dwidiyanti et al., 2019). Religion and beliefs continuously affect the practice of care in everyday life, both in a person and in the community (Zaidi, 2018). People who can establish a good relationship with God are marked by their ability to pray, feel grateful, be able to introspect themselves and participate in religious activities. When a good relationship between humans and God is created, positive thoughts will appear, mental health will increase, and good relationships will be established between individuals and other humans and their environment (Dwidiyanti et al., 2019). In this study, participants performing the Islamic spiritual mindfulness felt a sense of calm and realized that Allah (God) is the One who can help patients overcome the problems; it made the participants' self-efficacy increase to control themselves. Based on a previous study with the same Islamic spiritual mindfulness, yet measuring other parameters, it was also found that the Islamic spiritual mindfulness had positive effects in patients to control their anger, be aware of their problem, accept it with ease without any judgmental feeling, and not overreact through the process of considering the God (Dwidiyanti et al., 2018). Specifically, efforts to improve spiritual health can lead to self-efficacy as a form of mental health (Chabok et al., 2017).

The results of this study indicated that there was an increase in self-efficacy in both groups: those schizophrenic patients who received the Islamic spiritual mindfulness intervention and those who received standard interventions from the hospital. However, the average self-efficacy of the intervention group was higher than the control group. This shows that interventions, such as cognitive-behavioral therapy (Budiman et al., 2020) and psychoeducation (Solehah et al., 2019), can increase self-efficacy in people with schizophrenia, but this intervention will be more effective when accompanied by spirituality-based mindfulness. Other studies using the general type of mindfulness stated that mindfulness increased self-efficacy and reduced negative symptoms, e.g., anger (Borders et al., 2010; Turner et al., 2016). The basic understanding of Islamic spiritual mindfulness teaches patients to believe that prayer, effort, and resignation is a form of the healing process. When a person has a good relationship with Allah, there will be a positive mind and also a good relationship with others (Dwidiyanti et al., 2018). Islamic spiritual mindfulness is a therapy that can increase emotional flexibility so that an individual will not feel stressed easily. Mindfulness can decrease physical pain with body scanning and repair pulmonary activity (Dwidiyanti et al., 2018). Implementing mindfulness to increase self-efficacy is appropriate with the Bandura's theory that self-efficacy is affected by four main resources, i.e., mastery experience, vicarious experience, verbal persuasion, and physiological and emotional state (Bandura, 1994). Self-efficacy could be modified by decreasing the stressful reaction, changing the preference of negative emotion, and changing an erroneous interpretation of knowing the body condition (Bandura, 1997). The present study has shown that Islamic spiritual mindfulness can help schizophrenic patients increase their self-efficacy.

## **5. Implications and limitations**

This study provides evidence of an alternative nursing intervention that can be utilized to support the existing and well-known methods in the patient therapy programs to increase self-efficacy. Nurses in general or specifically mental health nurses could implement the Islamic spiritual mindfulness to help patients increase their self-efficacy, especially in relation to anger management. The present study has been successful in investigating the effect of Islamic spiritual mindfulness on increasing self-efficacy in schizophrenic patients; however, some limitations are warranted. This study did not employ randomization in recruiting and assigning the participants and involved a small sample size. Despite the limitations, the results of this study provide us with some insight into the possibility of using the Islamic approach to help patients.

## 6. Conclusion

The Islamic spiritual mindfulness provides a significant effect on increasing self-efficacy in anger management among schizophrenic patients. This study could provide scientific evidence of a new innovation in nursing care, i.e., the Islamic spiritual mindfulness, especially to prepare patients to improve their ability to control anger and prevent violent behavior independently. Further research needs to be conducted to validate this new method using different research designs and larger sample sizes.

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## Author's contribution

All authors contributed to the study conception and design (MD, AMR, DRS), data collection and analysis (MD, AMR, DRS), and manuscript preparation and revision (MD, AMR).

## Conflict of interest

The authors hereby declare that there is no conflict of interest in this study, either to any institutions or individuals.

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