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Effects of Mindfulness on Stimulating Hope and Recovery among People with Schizophrenia

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ABSTRACT

Background: Hope has an essential role in the recovery journey for people with schizophrenia. Current studies showed that people with schizophrenia reported having low hope. There is growing evidence that mindfulness has favorable effects on mental health in populations with chronic illness, including people with schizophrenia. However, the studies evaluating effects of mindfulness on hope and recovery for people with schizophrenia are limited.
Purpose: This study aimed to examine the effects of mindfulness on hope and recovery among people with schizophrenia.
Methods: This quasi-experimental study was carried out on 54 patients with schizophrenia based on purposive sampling in a psychiatric hospital in Indonesia. The respondents were divided into two groups with 27 patients each in the intervention and the control group. The intervention group received 2-session mindfulness, while the control group received standard care. The data were collected using the demographic questionnaire, the Schizophrenia Hope Scale (SHS-9), and Recovery Assessment Scale (RAS), and analyzed using the Chi-Square and Mann-Whitney tests.
Results: After mindfulness therapy, the intervention group showed a higher mean score of hope than the control group (14.30±2.50 and 9.04±2.15, respectively) as well as in the mean of recovery (86.78±4.00 and 73.56±6.04, respectively). There were significant differences in hope and recovery levels between the two groups with p-value <0.001.
Conclusion: This study showed that mindfulness is an effective strategy to stimulate hope and recovery among people with schizophrenia. Nurses can apply mindfulness as one of the nursing interventions for helping the recovery process among this population.

Keywords: Hope; mindfulness; recovery; schizophrenia

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BACKGROUND

Schizophrenia is one of the chronic brain disorders. This illness could manifest through several symptoms, such as hallucinations, delusions, difficulty in thinking and concentrating, and lack of motivation (Parekh, 2017). Schizophrenia affects at least 24 million people around the globe and commonly occurs in ages between 15 and 35 years old (World Health Organization, 2018). Studies show that males are more likely to be affected by this disorder when compared to females (Falkenburg & Tracy, 2014).

People with schizophrenia tend to experience stigma and discrimination that influence their hope during recovery. Recovery is an ongoing process of change that enables individuals to improve their health, well-being, and live independently along the journey of reaching their potential (Substance Abuse and Mental Health Services Administration [SAMHSA], 2012). Many factors influence individuals' recovery, and one of them is hope, which is mentioned to speed up the process for change, and playing a role in influencing other factors (Acharya & Agius, 2017).

Hope is described as the individual ability in obtaining ideas and driving oneself to achieve the goals (Snyder, 2002). Hope is also found to be a protective factor of attempted suicide among psychotic patients (Libman-Sokolowska & Nasierowski, 2013) and has a positive correlation with functional recovery (Coşkun & Altun, 2017). However, previous studies reported that people with schizophrenia showed a lower level of hope when compared to a healthy population (Coşkun & Altun, 2017; Hayes, 2014). Hence, this condition could contribute to depression (Sari, Dwidiyanti, Wijayanti, & Sarjana, 2017) and lower the quality of life (Vrbova et al., 2017).

Previous studies suggested hope-promoting interventions and psychological counseling services to increase the level of hope among people with schizophrenia. Mindfulness-based intervention is known to promote well-being by reducing behavioral inhibition, increasing adaptive emotion regulation, and providing detachment from dysfunctional attitudes (Ganguly, 2018). Several studies showed the positive impacts of mindfulness-based therapy on schizophrenia, such as increasing positive outcomes, psychosocial functioning, awareness of the illness, the need for treatment (Chien & Thompson, 2014), and lowering the level of negative symptoms (Lee, 2019). Furthermore, meta-analysis studies also showed the significant effect of mindfulness for people with schizophrenia in promoting recovery, including reduces stress, depression (Khoury et al., 2013; Louise, Fitzpatrick, Strauss, Rossell, & Thomas, 2018), as well as increasing functional recovery (Yılmaz & Okanlı, 2017).

Even though evidence showed that mindfulness is an effective strategy for people with schizophrenia, such study is rarely implemented in Indonesia. A recent study showed that mindfulness can reduce the anxiety level among nursing students (Munif, Poeranto, & Utami, 2019). Another study indicated that mindfulness therapy could reduce the risk of violence and control the emotion among patients with schizophrenia (Sari & Dwidiyanti, 2014). However, this previous study was only a case study which could not explore the effectiveness of the intervention; and therefore, had not investigated the application of mindfulness therapy to enhance hope and recovery yet.

PURPOSE

This study aimed to investigate the effects of mindfulness on hope and recovery among people with schizophrenia.

METHODS

Design and samples

This quasi-experimental study was conducted among people with schizophrenia in a psychiatric hospital in Central Java Province, Indonesia using the pre-test and post-test control group design. The respondents were recruited through random sampling. A total of 54 patients determined based on medium effect size were assigned into the control group (n=27) and the intervention group (n=27). The inclusion criteria of respondents were (1) aged more than 18 years old, (2) had no verbal impairment, (3) voluntarily took part in the study, and (4) able to participate from the beginning until the end of the study. The respondents who were discharged, being uncooperative, and experienced delusion and relapse during the study were excluded.

Research instrument and data collection

The data were collected in May 2018 using the socio-demographic questionnaire, the Schizophrenia Hope Scale-9 (SHS-9), and the Recovery Assessment Scale (RAS). The socio-demographic questionnaire was used to report the respondents' characteristics. The SHS-9 questionnaire was originally in English and developed by Choe (2014). The Indonesian version of this instrument in this study showed r=0.04 and alpha coefficient of 0.75, and was used to assess positive hopes of the future, patients' confidence in the present moment and the future, and their value in life. The Likert scales from 0 (disagree) to 2 (strongly agree) were utilized. The total score ranged from 0 to 18, in which a higher score indicated a higher level of hope.

The 20-items of RAS questionnaire was developed by Hancock, Scanlan, Honey, Bundy, and O'Shea (2015), and was already translated into Bahasa Indonesia by Nada, Kusumawardhani, Wiguna, and Elvira (2018). This instrument was used to test recovery based on patients' evaluation and scored using Likert Scales, ranging from score 1 (strongly disagree) to score 5 (strongly agree). The total score ranged from 20 to 100 where higher scores indicated better personal recovery. The Indonesian version of SHS-9 in this study showed r=0.000 and alpha coefficient of 0.76.

Intervention

The intervention in this study was a group-based mindfulness therapy. Participants received two sessions of mindfulness therapy for roughly 30 minutes. The intervention included relaxation or calming technique – deep breathing, in which participants were encouraged to be relaxed; self-awareness – to be aware of their surroundings including time, place, and the reason why they were hospitalized; self-compassion – to reduce the negative self-judgment; and acceptance – to accept their current condition including the illness and believe that God could take away the illness. The sessions took place once a week. The brief intervention was conducted because the length of stay in a psychiatric hospital in Indonesia is approximately three weeks. Therefore, the patients' eligibility and baseline data were checked in the first week. The intervention was delivered in the second and third week followed by the data collection after the therapy. The participants

both in the intervention group and the control group also obtained standard care to patients in the psychiatric hospital.

Data analysis

Descriptive statistics, such as frequency and percentage of each group were compared, and the Chi-Square test was performed to test the group difference in the baseline characteristics, while the Mann-Whitney test was conducted to analyze the effects of mindfulness on stimulating hope and recovery among people with schizophrenia. The analysis in this study was performed using the IBM SPSS version 23.0 for Windows.

Ethical considerations

This study received ethical approval from the Research Ethics Committee, Faculty of Medicine, Diponegoro University, Indonesia (No. 158/EC/FK-RSDK/IV/2017). Prior to the study, the respondents were informed of the purpose of the study, the intervention, the benefits, and that the participation was voluntary; hence, all of them had the right to withdraw from the study at any time during the study period. All respondents signed an informed consent to participate in this study.

RESULTS

Demographic characteristics of respondents

Table 1 shows the comparison of demographic characteristics between the intervention group and the control group. The majority of respondents from the invention group and the control group were adults, males, single, obtained senior secondary education and were employed. Chi-square test showed that there was no significant correlation in age, marital status, educational status, and employment status with the intervention group and control group, except for gender (X^2=4.1, p=.043).

Table 1. Demographic characteristics of respondents in the intervention and the control groups

Demographic characteristics	Intervention Group (*n*=27)		Control Group (*n*=27)		*p*
	f	%	*f*	%	
Age					0.830
Adolescent	12	44.4	13	48.1	
Adult	13	48.1	13	48.1	
Elderly	2	7.4	1	3.7	
Gender					0.043
Male	21	77.8	26	96.3	
Female	6	22.2	1	3.7	
Marital status					0.820
Single	20	74.1	18	66.7	
Married	5	18.5	6	22.2	
Divorced	2	7.4	3	11.1	
Educational status					0.196
No formal education	1	3.7	0	0	
Did not finish elementary school	1	3.7	5	18.5	
Elementary school	4	14.8	8	29.6	

Demographic characteristics	Intervention Group (*n*=27)		Control Group (*n*=27)		*p*
	f	%	*f*	%	
Junior high school	7	25.9	5	18.5	
Senior high school	10	37.0	8	29.6	
University	4	14.8	1	3.7	
Employment status					0.161
Unemployed	11	40.7	12	44.4	
Employed	16	59.3	15	55.6	

Clinical features of respondents in the intervention and the control group

Table 2 showed that the majority of respondents in both groups experienced schizophrenia in their adolescence (12-25 years old), the length of illness for 1-5 years, hospitalized for 5 times or less, currently being hospitalized for 8-14 days, and diagnosed with paranoid schizophrenia. Furthermore, the nursing diagnoses in the intervention group was dominated by hallucination, and in the control group was dominated by the risk of violence. Chi-square test showed no significant difference on the clinical features between the intervention group and the control group.

Table 2. Clinical features of respondents in the intervention and the control group

Clinical features	Intervention Group *n*=27		Control Group *n*=27		*p-value*
	f	%	*f*	%	
Age onset					0.692
Childhood (5-11 years old)	1	3.7	0	0	
Teenage (12-25 years old)	15	55.6	17	63.0	
Adult (26-45 years old)	9	33.3	9	33.3	
Elderly (46-65 years old)	2	7.4	1	3.7	
Length of illness					0.107
1-5 years	18	66.7	23	85.2	
6-10 years	3	11.1	1	3.7	
11-15 years	1	3.7	3	11.1	
16-20 years	4	14.8	0	0	
21-25 years	1	3.7	0	0	
Frequency of hospital stay					0.386
≤ 5 times	25	92.5	23	85.1	
≥ 6 times	2	7.5	4	14.9	
Length of hospital stay					
1-7 days	7	25.9	6	22.2	
8-14 days	15	55.6	12	44.5	
15-21 days	5	18.5	9	33.3	
Mental disorder diagnoses					0.256
Paranoid schizophrenia	14	51.9	15	52.6	
Hebephrenic schizophrenia	1	3.7	2	7.4	
Catatonic schizophrenia	5	18.5	3	11.1	
Unspecified schizophrenia	7	25.9	7	25.9	
Nursing diagnoses					0.833
Hallucination	13	48.1	6	22.2	
Risk of violence	10	37.0	20	74.1	

Clinical features	Intervention Group *n*=27		Control Group *n*=27		*p-value*
	f	%	*f*	%	
Suicidal risk	2	7.45	0	0	
Delusion	2	7.45	1	3.7	

Levels of hope and recovery before and after the intervention in both groups

Further results in Table 3 revealed that a majority of respondents had a high level of hope and recovery after the implementation of mindfulness therapy, as well as the mean score.

Table 3. The comparison between the level of hope and recovery before and after mindfulness therapy in both groups

Variable	Intervention Group				Control Group			
	Pre		Post		Pre		Post	
	f	%	*f*	%	*f*	%	*f*	%
Hope	*Mean* = 10.85		*Mean* = 11.67		*Mean* = 8.93		*Mean* = 9.03	
Low	10	37.0	2	7.4	17	63.0	17	63.0
High	17	63.0	25	92.6	10	37.0	10	37.0
Recovery	*Mean* = 75.74		*Mean* = 85.78		*Mean* = 73.26		*Mean* = 73.56	
Low	8	29.6	6	22.2	12	44.4	12	44.4
High	19	70.4	21	77.8	15	55.6	15	55.6

Table 4 shows that there was a significant difference in the level of hope and recovery between the intervention group and the control group with p=0.00. It means that there was a significant effect of mindfulness therapy on hope and recovery among people with schizophrenia.

Table 4. The comparison between hope and recovery from the two groups after the intervention

Variable	Intervention Group *Mean*±SD	Control Group *Mean*±SD	*p-value*
Hope	14.30±2.50	9.04±2.15	0.000
Recovery	86.78±4.00	73.56±6.04	0.000

DISCUSSION

This study aimed to investigate the effects of mindfulness on hope and recovery from illness among people with schizophrenia. Mindfulness therapies used in this study included several steps, focusing on calming techniques, enhancing self-awareness and self-compassion, and self-acceptance. The results of this study showed that there is a significant difference in the level of hope and recovery from illness after mindfulness therapy between the intervention group and the control group. This means that mindfulness therapy increases hopefulness and enhance recovery from illness among people with schizophrenia. Our findings support the previous evidence that mindfulness has positive impacts on recovery (Ganguly, 2018; Hayes, Herman, Castle, & Harvey, 2017; Lam & Chien, 2016; Soundy et al., 2015; Yılmaz & Okanlı, 2017).

Similar to the methods used in the study by Knight et al. (2014), the mindfulness intervention was provided three times on various days – approximately 30 minutes in each session. In this study, the participants were also asked to describe their 'present moment' and what they felt at the moment, along with focusing on their breathing during the therapy. Much like Knight et al.'s (2014) study, more than 90% of the participants reported increased awareness and acceptance. Furthermore, another study found that six weeks of Mindful Self-Compassion (MSC) therapy was effective in enhancing the patients' compassion and happiness after their rehabilitation. This therapy was conducted for 75 minutes each week with the addition of relaxation music and exercise led by a respective trainer (Gaiswinkler et al., 2020). This study confirmed that mindfulness-based therapy positively influences patients' treatments particularly among those people who were diagnosed with schizophrenia.

Mindfulness is a state of being attentive and aware of the present time, thoughts, and feelings non-judgmentally (Black, 2011). Acting mindfully and non-judgmentally were both correlated with lower defeatist beliefs and a lower need for approval in patients with schizophrenia. Mindfulness also associates with more adaptive emotion regulation and lower behavioral inhibition, which indicates a lower drive to move away from aversive stimuli (Tabak, Horan, & Green, 2015). Mindfulness therapy with a calming technique could increase the patients' awareness of their breathing, circulation, and lead them to focus in the present moment (Sari & Dwidiyanti, 2014). Mindfulness could positively improve psychiatric symptoms, psychosocial functioning, and cognitive changes that increase the awareness and insight of the illness (Chien, Cheng, McMaster, Yip, & Wong, 2019; Chien & Thompson, 2014). Psychiatric symptoms are related to hope and the presence of negative symptoms and hopelessness could challenge the process of recovery (Hayes et al., 2017; Soundy et al., 2015). A study by Yılmaz and Okanlı (2017) found that mindfulness-based therapy increased the patients' functional recovery as well as cognitive insight. Mindfulness is also found to promote composure and contributes to mood regulation, which leads to improvement of recovery factors, such as hope and life purpose (Ganguly, 2018; Lam & Chien, 2016). This study confirmed that mindfulness-based therapy positively influences patients' treatments particularly among those who were diagnosed with schizophrenia.

The findings from this study and the previous studies indicate that giving mindfulness therapy for a minimum of 30 minutes for at least 2 sessions is effective to gain its positive impacts. This therapy can also be integrated with other relaxation therapies, such as breathing exercises, music therapy, progressive muscle relaxation, mental imagery (Gaiswinkler et al., 2020), and so on, which are proven to reduce the negative symptoms, level of depression (Kavak, Unal, & Yilmaz, 2016), and promote good clinical outcomes. A recent study by Hodann-Caudevilla, Diaz-Silveira, Burgos-Julian, and Santed (2020) found that mindfulness-based interventions were effective therapies for people with schizophrenia as an adjuvant treatment. The combination of mindfulness therapy and psychosocial skills interventions could significantly improve the patients' insight and functional level (Yüksel & Bahadır-Yılmaz, 2020). However, the calming technique and assertiveness training used in this study could be more effective if the patients have good awareness and able to properly express their thoughts (Lin et al.,

2008). Hence, the role of the nurse practitioners and therapists is needed to help the patients in exploring themselves mindfully.

This study has some limitations. First, the baseline characteristic was different on gender between the two groups. Numerous studies showed that the incidence of schizophrenia in male was higher than female due to earlier age of onset (Falkenburg & Tracy, 2014; Li, Ma, Wang, Yang, & Wang, 2016; Sommer, Tiihonen, Van Mourik, Tanskanen, & Taipale, 2020). Gender differences also pointed out on better social functioning among females compared to males (Falkenburg & Tracy, 2014; Riecher-Rössler, Butler, & Kulkarni, 2018). Hence, this might influence the process of recovery. Second, this study was conducted among inpatients, where treatments and medications were ongoing. Extraneous variables such as socialization through visits from relatives was quite difficult to control. Third, this study measured the effect immediately after the intervention, hence long-term effects may not be inferred. Therefore, further study is needed to investigate the longitudinal effects of mindfulness as an intervention.

CONCLUSION

This study revealed a significant positive impact of mindfulness therapy in stimulating hope and recovery among people with schizophrenia. Therefore, it is encouraged for mental health professionals to apply mindfulness therapy as one of the interventions to promote hope and recovery. This study only measures hope and recovery outcomes. Therefore, future studies in exploring other outcomes of this intervention on other symptoms of schizophrenia, such as positive and negative symptoms, are needed. Furthermore, since this intervention is brief because of patients' length of stay, hence, conducting similar study among outpatients with a longer duration is needed.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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