

## THE DEVELOPMENT AND VALIDITY OF MINDFULNESS DHIKR BREATHING THERAPY FOR INSOMNIA

Setiyo Purwanto<sup>1,2</sup>, Mahadir Ahmad<sup>1\*</sup>, Zaini Said<sup>1</sup>, Nisa Rachmah Nur Anganthi<sup>2</sup>, Mutalazimah<sup>3</sup>, Siti Zulaekah<sup>3</sup>

<sup>1</sup>Department of Clinical Psychology, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia

<sup>2</sup>Department of Psychology, Universitas Muhammadiyah Surakarta, Sukoharjo, Indonesia

<sup>3</sup>Department of Nutrition Science, Universitas Muhammadiyah Surakarta, Sukoharjo, Indonesia

\*Correspondence Address: Mahadir Ahmad

Email: mahadir@ukm.edu.my

### ABSTRACT

**Introduction:** The prevalence of insomnia in Indonesia is still quite high around 10% to 38.5%. Mindfulness is one of the therapeutic models that can overcome the weaknesses of previous therapeutic for insomnia. Muslims need therapy that uses elements of Islam to feel the benefits. **Aim:** to develop mindfulness dhikr breathing therapy for insomnia. In this study, we assess the face validity, content validity, and acceptability of the module and audio recording of the mindfulness dhikr breathing therapy. **Methods:** This research is part of a research and development model of mindfulness dhikr breathing therapy for insomniacs. Participant for the validity test was five experts in psychology. Participants for the acceptability test were 13 adults who suffered from insomnia. The object assessed was the module and audio recording of the therapeutical model. Analysis of face validity was using the subjective valuation by the rater. Analysis of content validity used Aiken's V coefficient. **Result:** From the rater's subjective assessment of the therapy module and audio recording of the therapy several suggestions were obtained. The content validity based on the average Aiken V coefficient was 0.99 (>0.84, p=0.021). The acceptability obtained average rating for all aspects of the acceptance assessment was 4,30 (>3). **Conclusion:** The mindfulness dhikr breathing therapy is worthy of use and acceptable as a therapeutic for insomnia. Researchers hope that the development of the module and audio recording of mindfulness dhikr breathing therapy can help the implementation of therapy so that it can be more optimal in overcoming insomnia.

**Keywords:** Acceptability, Development, Insomnia, Mindfulness Dhikr Breathing, Validity

### INTRODUCTION

Getting enough sleep at night provides the body with energy for daytime activities. Adequate quantity and quality of sleep will give healthier conditions and prevent the body from various diseases (Buysse, 2014). However, many people now do not have enough time to sleep. Most people today have a short sleep of 4 - 6 hours per day. Usually, the duration of sleep is short because a person still has activities at night that should be used as bedtime and shows workers go against their circadian rhythms because the night is a time for sleep and rest (Hastoro, 2022).

The most common health problems that society complains about and that become an economic burden today are

sometimes caused by sleep disorders (Bollu and Kaur, 2019). Some commonly reported complaints related to sleep deprivation at night are difficulties falling and maintaining sleep or insomnia (Hubbling et al., 2014). Based on data from the American Academy of Sleep Medicine (AASM) in 2008 states that about 30% of adults have insomnia symptoms, about 10% of adults have severe enough insomnia, and less than 10% of adults have chronic insomnia (American Academy of Sleep Medicine, 2008). The prevalence of Indonesian insomnia is around 10%. Insomniacs are about 28 million out of 238 million people in Indonesia (Rimbawan and Ratep, 2016).

The main factors that cause insomnia are age, physiology, environment, and circadian rhythm (Taylor

**Cite this as:** Purwanto,S., Ahmad, M., Said, Z., Anganthi, N.R.N., Mutalazimah and Zulaekah, S. (2023). The Development and Validity of Mindfulness Dhikr Breathing Therapy for Insomnia. The Indonesian Journal of Public Health, 18(3), 382-394. <https://doi.org/10.20473/ijph.v18i3.2023.382-394>

©2023 IJPH. Open access under CC BY NC-SA. License doi: 10.20473/ijph.v18i3.2023.382-394  
Received 10 March 2023, received in revised form 5 August 2023, Accepted 9 August 2023, Published online:  
December 2023. Publisher by Universitas Airlangga

et al., 2014). Some theories emphasize the idea of arousal dysregulation as the etiology of prolonged sleep disorders and daytime dysfunction (Ong and Smith, 2017). Attempts to get more sleep and avoid daytime fatigue make chronic insomniacs fall into a vicious circle (Kim, 2021). Insomnia causes negative impacts such as decreased work performance (Yazdi et al., 2014), academic performance (Maheshwari and Shaukat, 2019) and the quality of life (Ishak et al., 2012).

Cognitive behavior therapy for insomnia (CBTI) is a prelude to psychological treatment and has been commonly used to treat insomnia (Carney and Edinger, 2010; Ong et al., 2014). But this intervention took a long time and experienced coaches (Friedrich and Schlarb, 2017). In addition, those who are curable from insomnia after this treatment are only about 30% to 40% of patients. Most patients re-suffer from insomnia due to having increased arousal before bedtime at the end of treatment (Ong and Smith, 2017). Therefore, an alternative approach that directly addresses the dysregulation of arousal in insomnia is urgently needed. Mindfulness-based intervention is one of the treatments that overcome barriers to accessing and correcting sequential cognitive behavioral therapy (Kim, 2021).

The principles and practice of mindfulness can provide metacognitive skills to work with insomnia problems. Mindfulness-based treatments can overcome stressful problems that arise because of the inability to sleep. Mindfulness in the treatment of insomnia is divided into three principles. First by raising awareness of the mental and physical states that appear when experiencing insomnia symptoms. Second, shifting mental processes to reduce sleep-related arousal. The third is to regenerate a conscious attitude to respond when insomnia symptoms appear (Ong and Smith, 2017). Several randomized controlled trials support the efficacy of mindfulness-based therapy (MBT) to

improve sleep quality and reduce sleep disorders (Gross et al., 2011; Ong et al., 2014; Perini et al., 2021) suggesting that this intervention may serve as a viable alternative to CBT-I and pharmacotherapy for insomnia (Ong and Smith, 2017).

Belief factors can increase the feeling of well-being of cancer patients who have insomnia (Carmody et al., 2008). According to de Diego-Cordero et al. (2020), techniques involving spirituality and religiosity such as yoga, prayer/meditation, training and psycho-religious interventions have a promising role in better sleep. Islam is a religion that has a belief system that can be an additional element of therapy. Some studies using Islamic beliefs impact the therapeutic process (Soliman and Mohamed, 2013; Fandiani, Wantiyah and Juliningrum, 2017; Vitaliati, 2018). Research (Atiyaningsih and Wulandari, 2017) has proven that dhikr therapy can improve the quality of sleep of post-surgery patients. A study by Purwanto (2016) demonstrates the effect of Dhikr breathing therapy on sleep latency. Dhikr combined with breath causes a feeling of relaxation faster when going to sleep.

Researchers are interested in developing insomnia therapy that combines psychological methods with believe system, namely mindfulness dhikr breathing. This therapy combines mindfulness which has been proven to overcome insomnia (Ong and Smith, 2017) with dhikr breathing meditation because most Indonesians are Muslims and they need psychological therapy that involves religious or spiritual elements in this case the Islamic religion. The model of mindfulness dhikr breathing therapy for insomniacs was made based on the result preliminary survey related to the prevalence rate of insomnia is still high in Surakarta of 38.5% (Purwanto et al., 2023). This is the first step to developing the therapy for insomniacs with a mindfulness method combined with dhikr breathing meditation.

The feasibility of a tool and instrument depends on how exactly the identified variable is measured or what is more commonly known as validity. According to Kusumawati, Widyawati, and Dewi (2021), the validity of the instrument needs to be done because it is an important factor of instrument implementation. The types of validity in educational research are face validity, content validity, construct validity, and criteria validity (Oluwatayo, 2012). The appropriate validation formulation to perform the content validity against the media is very important. An acceptance test is also important to see how acceptable all components in the therapeutic model are to the target (Moore et al., 2021), which in this study the target was insomniacs. This study aims to develop mindfulness dhikr breathing therapy for insomniacs. In this study, we assess the face validity, content validity, and acceptability of the mindfulness dhikr breathing therapy.

## **METHODS**

### **Study Design**

This study is part of a research and development of mindfulness dhikr breathing (MDB) therapy for insomniacs. This research has been ethically approved by the Research Ethics Committee of The National University of Malaysia No. UKM.FSK.800-2/27/9(NN-2020-036). This research was conducted at the Faculty of Psychology, Universitas Muhammadiyah Surakarta.

### **Raters**

The raters in this study are divided into two purposes. Based on Table V (Aiken, 1985), theoretically the minimum limit to determine the number of raters is two people. The rater for validity was five experts in psychology with a minimum education in S2 Psychology and had filled in informed consent. According to Mutalazimah, Azwar and Murti (2014), the use of expert judgment is intended to

minimize bias and improve the accuracy of research results. Experts in psychology have a role as a rater who provides an assessment related to the concepts, principles, and techniques of mindfulness dhikr breathing therapy, identifying weaknesses and advantages of the therapeutic. The raters for assessment of acceptability were 13 adults who suffer from insomnia.

### **Objects**

The media as a therapeutic aid designed are modules and audio recordings. The purpose of visual media and audio media therapy is as a tool in carrying out the therapeutic process. The validity and acceptability assessment includes all content of the module and the audio recording of therapy. The content of the module includes an introduction, and the four script materials, which are Mindfulness Body Scan, Mindfulness Breathing, Meditation Dhikr Breathing, and Mindfulness Dhikr This recording is divided into four recordings: the mindfulness body scan session (10 min 49 sec), the mindfulness breathing (8 min 39 sec), the meditation dhikr breathing session (7 min 46 sec), and the mindfulness dhikr breathing session (8 min 27 sec).

### **Procedures**

The procedure to create a mindfulness dhikr breathing therapy model refers to the 4-D mode (defining, designing, developing, and disseminating). A preliminary survey was conducted to analyze insomnia problems that occur in society. The results of a preliminary survey found that insomniacs in Surakarta in 2020 are still quite high both among workers and students (Purwanto et al., 2023). Insomnia treatment is still limited to pharmacology and psychological therapy and the treatment has not been able to be maximized in overcoming insomnia.

The design of therapeutic methods and media of therapeutic aids is carried out

to ensure that the therapy methods developed are in accordance with those needed by the community. The therapy developed to overcome insomnia in this study is mindfulness dhikr breathing. Mindfulness dhikr breathing therapy can only be used by people with the Islamic religion or Muslims because there is an additional Islamic belief, namely dhikr. Islamic elements are added in this therapy to meet the needs of Indonesians who are predominantly Muslim to overcome insomnia. In the implementation of therapy, therapeutic aids are needed, namely modules and audio recordings of therapy.

In the process of developing a mindfulness dhikr breathing therapy model, validation tests are carried out by psychologists to obtain a therapeutic model that corresponds to the objectives of the therapeutic model, targets, and psychological scientific material. The validation assessment is carried out by asking the experts to read the module and listen to the audio recording then assess the face validity and content validity of this therapy. The therapeutic acceptance test is carried out by insomniacs. The stage for this acceptance test begins with insomniacs following the four sessions of mindfulness dhikr breath therapies and reading the module. Trainers who train this therapy are pre-trained by developers. After completing therapy, insomniacs are asked to fill out a questionnaire for acceptance assessment. In this study, it did not discuss the process of disseminating modules and audio recordings of the mindfulness dhikr breathing therapy.

## **Assessments**

### ***Face validity***

Face validity is performed to find out whether the instrument (module and audio recordings) in the mindfulness dhikr breathing therapy model is relevant, reasonable, clear, and unambiguous. In this study, the five experts in the field of psychology were asked to give a subjective

assessment of the presentation and relevance of the module and audio recordings of each session in the mindfulness dhikr breathing therapy. Assessment criteria for face validity include module display and recorded audio display, grammatical suitability, clarity of therapeutic model, correct spelling of words, proper sentence structure, suitability of font size, well-thought-out construction and format of instrument structure, and clarity of sound in recorded audio (Oluwatayo, 2012).

### ***Content Validity***

The content validity in this study refers to whether the content in the module and audio recording of mindfulness dhikr breathing therapy is representative and adequate when tested for insomnia therapy. The assessment of the contents validity in this study used an instrument in the form of a validity assessment questionnaire with a Likert scale of 1-4. "Highly Incompatible": 1, "Non-Appropriate": 2, "Appropriate" : 3, and "Very Appropriate": 4. The aspects assessed by the rater include the overall content (3 items); module introduction (3 items); The module script material has four sessions, namely Mindfulness Body Scan (4 items), Mindfulness Breath (4 items), Meditation Dhikr Breath (4 items) and Mindfulness Dhikr Breath (4 items); process/stage of therapy (3 items) and audio media recording (2 items). The content validity in this study was proven using Aiken's V coefficient as in the research by Sukmawati et al. (2022).

### ***Acceptability***

This acceptance assessment aims to find out how acceptable the mindfulness dhikr breathing therapy is by insomniacs. Acceptability is measured by filling out an acceptance questionnaire by insomniac subjects (Moore et al., 2021). This acceptance questionnaire contains 17 items from the overall aspect of the therapy

process (3 items), modules of therapy (4 items), trainers (6 items), and audio recordings of therapy (4 items). The answer to each item was a Likert scale, ranging from 1 to 5 (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, and 5=strongly agree).

### Data Analysis

There are two types of data in this study, namely qualitative and quantitative data. The qualitative data included comments and suggestions from raters (experts) obtained from the face validity test. The quantitative data include the rating results of all items for content validity and acceptability assessment from both raters (experts and insomniacs). The content validity of the therapeutic model was analyzed using Aiken's V coefficients. Aiken's V coefficient formula:  $[V = \sum S / (n(c-1))]$ ,  $S = r - l_0$ ,  $l_0$  is the lowest validity assessment number (1),  $c$  is the highest validity assessment number (5),  $n$  is the number of raters, and  $r$  is the number

given by the rater (Aiken's, 1985). The interpretation of Aiken's V coefficient values is influenced by the number of raters and the rating scale used. Based on the Aiken table, the number of raters ( $m$ ) = 5 and the number of assessment options = 4, Aiken's standard V coefficient is valid when the V value reaches 0.84 with a probability of 0.021. The acceptability was analyzed using an average rating of each item. This average is used as an indicator of the agreement that the therapy model of mindfulness dhikr breathing was acceptable by insomniacs. Overall the mindfulness dhikr breathing therapy model is agreed to be acceptable if the rating per item is  $>3$  (Moore et al., 2021).

### RESULT

#### Face Validity of Mindfulness Dhikr Breathing Therapy

The face validity assessment obtained several comments and suggestions are shown in Table 1.

**Table 1.** Comments and Suggestions from experts on the Mindfulness Dhikr Breathing Therapy

Aspect	Raters (Experts)	Comments and Suggestions
	1,2,3,4, and 5	The module material is clear and appropriate for sleep therapy
Module	1 and 5	Improve writing, foreign words, and typeface consistency
	2,3 and 4	Improve synopsis authorship systematics and complete synopsis
	2 and 3	Write specifics of training objectives and targets to be more concrete
	2 and 3	Give a description or definition of unfamiliar terms
	1	Highlights differences between training sessions
	1 and 4	Provide a training flow framework
	4	Clarify the steps of each training session
Audio Recording	1,2,3,4, and 5	Clear recorded sound
	1	Recorded sound can create a sense of relaxation
	2 and 3	The title of the recording file needs to be added

**Table 2.** Aiken's V Coefficient

Aspect	Item	V	Category
Overall content	Covers for sleep therapy	1	Valid
	Suitable for sleep therapy	1	Valid
	The material presented is the scientific truth of psychology	0.93	Valid
<b>Mean</b>		<b>0.98</b>	
Introduction	Clarity of synopsis	0.93	Valid
	Clarity of purpose	1	Valid
	Target clarity	1	Valid
<b>Mean</b>		<b>0.98</b>	
Module script materials			
a. Mindfulness body scan	Easy to understand	1	Valid
	Clarity of the material	1	Valid
	How the material is delivered	1	Valid
	Word selection and phrasing	1	Valid
<b>Mean</b>		<b>1</b>	
b. Mindfulness breathing	Easy to understand	1	Valid
	Clarity of the material	1	Valid
	How the material is delivered	1	Valid
	Wording and phrasing	1	Valid
<b>Mean</b>		<b>1</b>	
c. Dhikr breathing meditation	Easy to understand	1	Valid
	Clarity of the material	1	Valid
	How the material is delivered	1	Valid
	Word selection and phrasing	1	Valid
<b>Mean</b>		<b>1</b>	
d. Mindfulness dhikr breathing	Easy to understand	1	Valid
	Clarity of the material	0.93	Valid
	How the material is delivered	1	Valid
	Word selection and phrasing	1	Valid
<b>Mean</b>		<b>0.98</b>	
Stage of therapy	Therapeutic activities according to the process of the therapeutic sequence	0.93	Valid
	The activity of the therapist following the therapeutic process	1	Valid
	The activity of participants following the therapeutic process	1	Valid
<b>Mean</b>		<b>0.98</b>	
Audio recording	Clear sound	1	Valid
	Able to usher in a state of sleep	0.93	Valid
<b>Mean</b>		<b>0.97</b>	
<b>Overall average</b>		<b>0.99</b>	<b>Valid</b>

V= Aiken's V Coefficient

Based on the subjective assessment of the module and audio recording therapy from the experts, several suggestions were obtained related to the alignment of writing

and consistency of typefaces, the addition of less general definitions, the systematics of writing synopses, specifying the goals and target of therapy, the additional

therapeutic flow framework, highlighting the differences of each therapy session and the addition of a recording title to the recording file for easy use.

### Aiken's V Coefficient of Mindfulness Dhikr Breathing Therapy

The results of the content validity of the mindfulness dhikr breathing therapy analyzed by Aiken's V coefficients are shown in Table 2. Aiken's V coefficient values in 22 of 27 assessment items were 1.00. Five other items were 0.93, and the overall average was 0.99. The mean of Aiken's coefficient in the overall content aspect was 0.98, the introductory was 0.98, the material scripts of the mindfulness body scan session was 1.00, the

mindfulness breathing session was 1.00, the meditation dhikr breathing session was 1.00, the mindfulness dhikr breathing session was 0.98, the stage of therapy was 0.98, and the audio recording was 0.97.

All averages of Aiken's V coefficient are higher than the standard Aiken's coefficient up to 0.84 ( $p=0.021$ ). It concludes that the modules and audio recordings on the mindfulness dhikr breathing therapy model are valid, so they are worthy of use as insomnia therapy.

### Acceptability of Mindfulness Dhikr Breathing Therapy

The results of the acceptability assessment by insomniacs are shown in Table 3.

**Table 3.** Acceptability

Aspect	Item	Raters (Insomniacs)													Average
		1	2	3	4	5	6	7	8	9	10	11	12	13	
Therapy	Appropriate for insomniac	4	4	4	4	4	5	4	5	4	4	4	5	4	4.23
	Be able to implement well later in the research	5	4	4	4	5	4	4	5	3	4	5	5	4	4.31
	May influence the decrease in insomnia disorders	4	5	4	5	5	4	4	4	3	4	5	5	4	4.31
Module	Allotted time allocation accordingly	5	4	4	5	5	4	3	5	3	4	4	5	4	4.23
	Easy to understand	5	4	4	4	5	4	4	5	4	4	5	5	4	4.38
	Step-by-step clarity on therapy modules	5	4	4	4	5	4	4	5	4	4	5	5	4	4.38
	Contains complete material for the application of the therapy	5	4	4	5	4	4	5	5	3	3	4	5	4	4.23
Trainer	Mastering training materials	5	4	4	4	5	5	5	4	4	4	5	5	4	4.46
	Easy-to-understand delivery	5	4	4	5	5	4	5	5	4	4	5	5	4	4.54
	Body language supports the delivery of material	4	5	4	4	5	4	4	5	4	4	5	5	3	4.31
	Intonation and rate of delivery can be followed	4	5	4	4	5	4	4	5	4	4	4	5	4	4.31
	Attractive appearance	4	5	4	5	4	4	4	4	4	4	5	5	3	4.23
	Delivery Interactively	5	5	4	5	5	5	4	5	5	4	4	5	3	4.54
Audio Recording	Sound clear fairly	4	5	4	4	5	4	4	4	4	4	4	5	4	4.23
	Clear Narrative	4	5	4	4	5	4	4	5	4	4	4	5	2	4.15
	Intonation appropriate	3	5	4	4	4	3	4	4	4	4	4	4	3	3.85
	Easy to use	4	5	4	5	5	4	4	5	4	4	5	5	4	4.46
<b>Overall Average</b>														<b>4.30</b>	

Aspects assessed for the acceptability test are the overall therapy process, the module of therapy, the audio recording of therapy, and the trainer. The range of mean rating for the therapy aspect was 4.23 to 4.31, the module therapy aspect was 4.23 to 4.38, the trainer aspect was 4.23 to 4.54, and the audio recording was 3.85 to 4.46. All over average of acceptability assessment was 4.30. This average rating is higher than a priori set criteria ( $>3$ ) or has met the agreed limits regarding acceptance assessments. Therefore, the mindfulness dhikr breathing therapy model can be used as insomnia therapy because all aspects assessed have been declared acceptable to insomniacs.

## DISCUSSION

This study is the first to develop mindfulness dhikr breathing for the treatment of insomniacs. Before being applied to insomniacs, the mindfulness dhikr breathing therapy model must go through several stages to determine the feasibility of this therapy for insomniacs. The main objective of this study was to validate in terms of appearance and content through face validity and content validity by five experts in the field of psychology and test the acceptability of this therapy by 13 insomniacs. Face validity and content validity assessment aim to find out how feasible and relevant the appearance and content of the material in the mindfulness dhikr breathing therapy for insomnia therapy are.

From the content validity results, we found that the average Aiken's V coefficient (V) analysis of the mindfulness dhikr breathing therapy was 0.99 ( $>0.84$ ). The results were also higher than the study by Andas, Effendi and Setyarini (2020) which obtained Aiken's V coefficient of 0.976 on the Sleep Quality Scale instrument. This average has exceeded the limit values for the analyses so the mindfulness dhikr breathing therapy model is stated to be very relevant and feasible to

use as insomnia therapy, both module and audio recording. We also obtained qualitative feedback from the mindfulness dhikr breathing therapy model. Feedback from five experts in psychology will later be used as material to improve the appearance and content of mindfulness dhikr breathing therapy both modules and audio recordings of therapy.

Previous study by Purwanto, Anganthi and Yahman (2022) regarding the validation of insomnia therapy models with the dhikr breathing relaxation method shows that the model therapy is very suitable and can be applied to insomniacs. The study proved that dhikr breathing relaxation therapy can improve sleep quality. According to de Diego-Cordero et al. (2020) the addition of religious and spiritual techniques in the treatment of insomnia has a positive effect on improving insomnia. This research has similarities with the method used in the previous study by Purwanto, Anganthi and Yahman (2022), namely the Islamic method with the addition of elements of dhikr breathing meditation. The difference with the study is that the insomnia therapy model tested for validation in this study has the addition of an element of consciousness or mindfulness.

The mechanism of mindfulness can overcome insomnia beginning with building metacognitive awareness (Ong and Smith, 2017). Metacognitive awareness helps insomniacs to be aware of their thoughts and experiences while feeling trapped in the vicious cycle of insomnia, thus being able to disconnect to the next step (Kim, 2021). Then, insomniacs are also trained to maintain attention to breathing and direct attention to breathing whenever their mind wanders. Furthermore, insomniacs are trained to reduce automatic thoughts and negative self-referential thinking so that it can help reduce negative thoughts such as regarding daily problems due to lack of sleep (primary arousal) and metacognitive judgments such as why he does this to



make them feel bad and irritated (secondary arousal) (Ong and Smith, 2017). In addition, insomniacs are also trained to accept without judging any of their current thoughts and experiences. This reception reduces the pain of metacognitive judgment (secondary arousal), perception as well as distorted thoughts and continuous biases that occur in insomniacs. The increased acceptance of thoughts, emotions and difficult physical sensations makes insomniacs let go of the desires and desperate actions already carried out to put them to sleep (Kim, 2021).

The overall implementation of mindfulness dhikr breathing therapy is very suitable for sleep therapy. Mindfulness-based interventions have been proven effective in improving insomnia by several randomized controlled trial studies (Gross et al., 2011; Ong et al., 2014; 2018; Perini et al., 2021). According to research by Hubbling et al. (2014), the benefits of mindfulness therapy on improving sleep quality include easier sleep initiation, shorter nighttime awakenings, fewer morning awakenings and more satisfying sleep quality, has a direct impact on the ability to sleep and has a great ability to calm the mind and induce relaxation. In addition, the benefits of mindfulness methods in insomnia treatment may also motivate to adopt a healthy sleep lifestyle by making behavioral changes that include meditation practice and following sleep hygiene recommendations such as not picking up the phone at bedtime, not watching TV at night, not eating and drinking too much closer to bedtime (Hubbling et al., 2014).

The addition of dhikr and breath elements in this therapy is to focus the mind of insomniacs. Dhikr is an activity of worship for Muslims who connect their mind with their bodies. The relaxing effect of dhikr stimulates the hypothalamus to affect the pineal gland in producing melatonin so that it is easy to fall asleep. Evidence shows that dhikr therapy affects

sleep quality and decreases insomnia levels (Fandiani, Wantiyah and Juliningrum, 2017; Vitaliati, 2018). Mindfulness in this therapy is to realize that what happens to the self either in the mind, feelings or body of insomniacs is fate from Allah and must be accepted with redha. Dhikr breathing can elicit the relaxation response needed by insomniacs. The state of sleeplessness is often stressful. This is because insomniacs cannot accept what is happening to them. The perception that not being able to sleep is Allah's fate and accepting the fate of Allah's will strengthen insomniacs to be more accepting. The more accepting the situation, the faster a person will get a relaxed state (Purwanto, Anganthi and Yahman, 2022).

Psychotherapy requires a manual book to guide participants and trainers in the implementation of therapy. Similar to CBT for anxiety (Heriansyah et al., 2021), mindfulness dhikr breathing therapy also requires a module or guidebook to guide the implementation of mindfulness dhikr breathing therapy. According to the expert judgment, the material in this module or manual book of mindfulness dhikr breathing therapy is suitable for sleep therapy and the material presented is also according to psychological science. In term of the insomniac's assessment, this therapy module has detailed therapy materials, easy-to-understand language, and sequential and clear steps.

The audio recording serves as a therapeutic aid to direct participants in the implementation of therapy in each session. According to insomniacs, this audio recording has a clear voice, appropriate intonation, and clear narration thus making this audio recording easy to use. Audio recordings of this therapy have a clear sound and can cause a relaxed state. Soothing sounds are those with a slow tempo and slow steady rhythm such as the sounds of Murottal Al-Qur'an, Dhikr and Nature Sounds. These sounds have been studied and shown to have a positive effect

in improving insomnia and improving sleep quality (Fitri and Andhini, 2016; Imardiani, Sari and Ningrum, 2019; Khayati, Adriani and Khasanah, 2022).

The average assessment of acceptance by insomnia sufferers of the implementation of therapy, modules, trainers, and audio recordings is over the predetermined cut-off score of  $>3$  (Moore et al., 2021). Therefore, the mindfulness model of breathing therapy is very acceptable among patients with insomnia. Patients with insomnia assessed that the trainer who trained this therapy had a good mastery of the training material, an attractive appearance, the material was delivered interactively, body language supported the delivery of the material, intonation and speed of delivery could be followed so it was easy to understand. Research by Jernelöv et al. (2012) showed that brief structured guidance from a therapist can improve treatment outcomes, treatment gains and is likely to help large groups of individuals with insomnia including those with comorbid problems.

### **Implications**

Theoretically, the therapeutic methods developed in this study have been in accordance with existing theories regarding mindfulness methods that are beneficial for insomnia therapy by letting go, accepting, and not trying to fall asleep immediately. By combining with dhikr breathing, it can speed up relaxation so that insomniacs can fall asleep immediately. Through this research, it is hoped that it can encourage other therapists to develop therapeutic methods that not only focus on the patient's recovery goals but also involve spiritual aspects so that the benefits of therapy can be more felt by patients who are Muslim. The therapeutic model produced in this study can be used for insomnia therapy in Muslims, by practicing dhikr derived from Islamic values.

### **The Strength and Weakness of the Study**

The strengths of this study are, first, it is the first to successfully develop psychotherapy modules and audio recordings for insomnia using mindfulness-based intervention with the addition of Islamic meditation methods, namely dhikr breathing. Second, the validation method used in this study, namely face validity, is subjective and content validity is objective which is judged by experts as recommended by Taherdoost (2016) to assess validation. Therefore, the validity results can be appropriate and relevant. This study also has some limitations; first, the number of subjects willing to participate in the acceptance test is small because this study was conducted during the COVID-19 pandemic, so the acceptance test results obtained are quite invalid. Second, the age of the subjects who participated in the acceptance test was productive adults, so the acceptance test results are not suitable if interpreted for old age or the elderly. Third, the occupations of the subjects who participated in the acceptance test were students, so the interpretation of the acceptance test results is not suitable for other professions.

### **CONCLUSIONS**

In conclusion, the module and audio recording of the mindfulness dhikr breathing therapy is declared worthy of use and acceptable as insomnia therapy. Some suggestions that has been given will be followed up as material for improving the therapy model of both module and audio recording of this therapy. Researchers hope that the development of the module and audio recording of mindfulness dhikr breathing therapy can help the implementation of therapy so that it can be more optimal in overcoming insomnia. Furthermore, there should be further research on the effectiveness of the mindfulness dhikr breathing therapy

related to sleep quality and addressing the severity of insomnia.

## REFERENCES

- Aiken, L.R. (1985) 'Three Coefficients For Analyzing The Reliability And Validity Of Ratings', *Educational and Psychological Measurement*, 45, pp. 131–141. <https://doi.org/10.1177/0013164485451012>
- American Academy of Sleep Medicine (2008) 'Insomnia'.
- Andas, A.M., Effendi, C. and Setyarini, S. (2020) 'Validity and Reliability Test on Sleep Quality Scale ( SQS ) Instruments in Indonesia Version on Cancer Patients', *International Journal of Research in Pharmaceutical Sciences*, 11(4), pp. 7275–7280. <https://doi.org/10.26452/ijrps.v11i4.3865>
- Atiyaningsih, N. and Wulandari, I. (2017) 'Dhikr Therapy to Improving Sleep Quality for Post Surgery Patient at Banten Indonesia', *ASEAN/Asian Academic Society International Conference Proceeding Series* [Preprint].
- Bollu, P.C. and Kaur, H. (2019) 'Sleep Medicine: Insomnia and Sleep', *Missouri Medicine*, 116(1), pp. 68–75.
- Buysse, D.J. (2014) 'Sleep health: can we define It? does it matter?' *Sleep*, 37(1), pp. 9–17. <https://doi.org/10.5665/sleep.3298>
- Carmody, J. *et al.* (2008) 'Mindfulness, spirituality, and health-related symptoms', *Journal of Psychosomatic Research*, 64(4), pp. 393–403. <https://doi.org/10.1016/j.jpsychores.2007.06.015>
- Carney, C.E. and Edinger, J.D. (2010) *Insomnia and Anxiety*. London: Springer. <https://doi.org/10.1007/978-1-4419-1434-7>
- de Diego-Cordero, R. *et al.* (2020) 'The Use of Spiritual and Religious Interventions for the Treatment for Insomnia: A Scoping Review', *Journal of Religion and Health*, 61(1), pp. 507–523. <https://doi.org/10.1007/s10943-020-01067-8>
- Fandiani, Y.M., Wantiyah and Juliningrum, P.P. (2017) 'Pengaruh Terapi Dzikir Terhadap Kualitas Tidur Mahasiswa Program Studi Ilmu Keperawatan Universitas Jember', *NurseLine Journal*, 2(1), pp. 52–60. <https://doi.org/10.19184/nlj.v2i1.5196>
- Fitri, E.Y.Y. and Andhini, D. (2016) 'Pengaruh Terapi Nature Sounds Terhadap Kualitas Tidur Pada Pasien Dengan Sindroma Koronaria Akut', *Jurnal Keperawatan Sriwijaya*, 3(1), pp. 30–39.
- Friedrich, A. and Schlarb, A.A. (2017) 'Let's talk about sleep: a systematic review of psychological interventions to improve sleep in college students', *Journal of Sleep Research*, 27(1), pp. 1–19. <https://doi.org/10.1111/jsr.12568>
- Gross, C.R. *et al.* (2011) 'Mindfulness-based stress reduction versus pharmacotherapy for chronic primary insomnia: A randomized controlled clinical trial', *Explore: The Journal of Science and Healing*, 7(2), pp. 76–87. <https://doi.org/10.1016/j.explore.2010.12.003>
- Hastoro, M.F.R. (2022) 'Relationship Between Physical Workload, Sleep Quality, Work Climate, and Noise Level With Work Fatigue in Rolling Mill Workers in Sidoarjo Steel Industry', *The Indonesian Journal of Public Health*, 17(2), pp. 319–330. <https://doi.org/10.20473/ijph.v17i2.4419-1434-7>

- 2022.319-330
- Heriansyah, M. et al. (2021) *Pengembangan Modul Praktik Konseling Individu Kognitif Behavior Terapi (CBT) Untuk Menurunkan Gangguan Kecemasan Akademik Mahasiswa*. Samarinda: Program Studi Bimbingan dan Konseling. Fakultas Keguruan dan Ilmu Pendidikan. Universitas Mulawarman.
- Hubbling, A. et al. (2014) 'How mindfulness changed my sleep: Focus groups with chronic insomnia patients', *BMC Complementary and Alternative Medicine*, 14(1), pp. 1–11. <https://doi.org/10.1186/1472-6882-14-50>
- Imardiani, Sari, A.N. and Ningrum, W.A.C. (2019) 'Pengaruh Terapi Dzikir Asmaul-Husna Terhadap Kualitas Tidur Pada Pasien Intensif di Rumah Sakit Islam Siti Khadijah Palembang', *Masker Medika*, 7(2), pp. 535–542.
- Ishak, W.W. et al. (2012) 'Quality of Life in Patients Suffering from Insomnia', *Innovations in Clinical Neuroscience*, 9(10), pp. 13–26. <https://doi.org/10.5772/52277>
- Jernelöv, S. et al. (2012) 'Efficacy of a behavioral self-help treatment with or without therapist guidance for co-morbid and primary insomnia -a randomized controlled trial', *BMC Psychiatry*, 12(5), pp. 1–13. <https://doi.org/10.1186/1471-244X-12-5>
- Khayati, C.D.N., Adriani, P. and Khasanah, S. (2022) 'Pengaruh Terapi Murotal Terhadap Kualitas Tidur Pada Lansia', *Journal of Nursing & Health (JNH)*, 7(2), pp. 91–100.
- Kim, H.-G. (2021) 'Effects and mechanisms of a mindfulness-based intervention on insomnia', *Yeungnam University Journal of Medicine*, 38(4), pp. 282–288. <https://doi.org/10.12701/yujm.2020.00850>
- Kusumawati, Y., Widyawati, W. and Dewi, F.S.T. (2021) 'Development and validation of a survey to evaluate mental health knowledge: The case of Indonesian pregnant women', *Open Access Macedonian Journal of Medical Sciences*, 9(E), pp. 346–355. <https://doi.org/10.3889/oamjms.2021.5844>
- Maheshwari, G. and Shaukat, F. (2019) 'Impact of Poor Sleep Quality on the Academic Performance of Medical Students', *Cureus*, 11(4), pp. 9–13. <https://doi.org/10.7759/cureus.4357>
- Moore, T. et al. (2021) 'Acceptability, feasibility, and usability of a manualized cognitive behavioural programme for treatment of insomnia in children who sustained traumatic brain injury: A service providers' perspective.', *Neuropsychological Rehabilitation*, 31(4), pp. 583–600. <https://doi.org/10.1080/09602011.2020.1717969>
- Mutalazimah, Azwar, S. and Murti, B. (2014) 'Penskalaan Thurstone pada Aitem Thyroid Dysfunction Questionnaire (TDQ) Berbasis Gejala Biopsikosial', *Jurnal Psikologi*, 41(2), p. 135. <https://doi.org/10.22146/jpsi.6945>
- Oluwatayo, J.A. (2012) 'Validity and Reliability Issues in Educational Research', *Journal of Educational and Social Research*, 2(May), pp. 391–400. <https://doi.org/10.5901/jesr.2012.v2n2.391>
- Ong, J.C. et al. (2014) 'A Randomized Controlled Trial of Mindfulness Meditation for Chronic Insomnia', *Sleep*, 37(9), pp. 1553–1563. <https://doi.org/10.1007/s12671-018-0911-6>

- Ong, J.C. *et al.* (2018) 'A Randomized Controlled Trial of Mindfulness Meditation for Chronic Insomnia: Effects on Daytime Symptoms and Cognitive-Emotional Arousal', *Mindfulness*, 9(6), pp. 1702–1712. <https://doi.org/10.1007/s12671-018-0911-6>
- Ong, J.C. and Smith, C. E. (2017) 'Using Mindfulness for the Treatment of Insomnia', *Current Sleep Medicine Reports*, 3(2), pp. 57–65. <https://doi.org/10.1007/s40675-017-0068-1>
- Perini, F. *et al.* (2021) 'Mindfulness-based therapy for insomnia for older adults with sleep difficulties: A randomized clinical trial', *Psychological Medicine* [Preprint]. <https://doi.org/10.1017/S0033291721002476>
- Purwanto, S. (2016) 'Hubungan Antara Intensitas Menjalankan Dzikir Nafas dengan Latensi Tidur', *Jurnal Indigenous*, 1(1), pp. 32–38. <https://doi.org/10.23917/indigenous.v1i1.3713>
- Purwanto, S. *et al.* (2023) 'Prevalence of Insomnia at Before and During the COVID-19 Pandemic', *Sleep Medicine Research*, 14(2), pp. 80–87. <https://doi.org/10.17241/smr.2023.01613>
- Purwanto, S., Anganthi, N.R.N. and Yahman, S.A. (2022) 'Validity and effectiveness of dhikr breathing relaxation model therapy on insomnia disorders', *Indigenous: Jurnal Ilmiah Psikologi*, 7(2), pp. 119–129. <https://doi.org/10.23917/indigenous.v7i2.17241>
- Rimbawan, P. and Ratep, N. (2016) 'Prevalensi Dan Korelasi Insomnia Terhadap Kemampuan Kognitif Remaja Usia 15-18 Tahun Di Panti Asuhan Widhya Asih 1 Denpasar', *E-Jurnal Medika Udayana*, 5(5), pp. 1–8.
- Soliman, H. and Mohamed, S. (2013) 'Effects of Zikr Meditation and Jaw Relaxation on Postoperative Pain, Anxiety and Physiologic Response of Patients Undergoing Abdominal Surgery', *Journal of Biology, Agriculture and Healthcare*, 3(2), pp. 23–39.
- Sukmawati, F. *et al.* (2022) 'Muslim Spiritual Happiness Scale: The Instrument Development and Validation', *Islamic Guidance and Counseling Journal*, 5(2), pp. 135–151. <https://doi.org/10.25217/igcj.v5i2.2754>
- Taherdoost, H. (2016) 'Validity and Reliability of the Research Instrument; How to Test the Validation of a Questionnaire/Survey in a Research', *International Journal of Academic Research in Management (IJARM)*, 5(3), pp. 28–36. <https://doi.org/10.2139/ssrn.3205040>
- Taylor, D. *et al.* (2014) *Handbook of Insomnia*. London: Springer Healthcare. <https://doi.org/10.1007/978-1-907673-73-3>
- Vitaliati, T. (2018) 'Pengaruh Relaksasi Religius terhadap Penurunan Tingkat Insomnia pada Lansia Di PSLU Bondowoso', *Jurnal Persatuan Perawat Nasional Indonesia (JPPNI)*, 2(1), p. 26. <https://doi.org/10.32419/jppni.v2i1.80>
- Yazdi, Z. *et al.* (2014) 'Prevalence of sleep disorders and their impacts on occupational performance: A comparison between shift workers and nonshift workers', *Sleep Disorders*, 2014, pp. 10–15. <https://doi.org/10.1155/2014/870320>