

Self-help online psychoeducation to overcome anxiety during covid-19 outbreak

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Abstract

This study aims to compare the effectiveness of mindfulness and relaxation techniques with self-help methods through web tutorials to overcome anxiety during the Covid-19 outbreak. Random control trial experiment performed by invite 418 Balinese Community (Age 15 years and above) to preliminary screening on anxiety sub-scale of 21-DASS. A total of 129 participants who met the random assignment criteria were then grouped into three groups, namely experimental group 1 who will take self-help mindfulness exercises, experimental group 2 who will participate in self-help relaxation exercises, and waiting-list control group. The results of study shows that web-based self-help mindfulness and relaxation tutorials are effective for reducing anxiety levels. The comparison of the two also shows that mindfulness techniques are more effective than relaxation techniques. The results of this study have theoretical and practical implications in efforts to overcome anxiety disorders experienced during the Covid-19 outbreak.

Keywords: Online psycho education, mindfulness, relaxation, anxiety, covid-19 outbreak.

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Introduction

The COVID-19 pandemic has become a public health emergency that has attracted worldwide attention since it was first announced by WHO in early 2020. This pandemic situation then had a wide impact on the lives of almost most people, from health, socioeconomic, and also education (Nicola et al., 2020; Noda, 2020; Troutman-Jordan & Kazemi, 2020)

In addition to threatening physical health due to exposure to the virus, Covid-19 also has a serious impact on people's mental health (Harlianty et al., 2020; Mehrosafar et al., 2020; Ransing et al., 2020; Yan et al., 2020). Various psychological disorders have been reported during the pandemic, both at the individual, community and global levels (Salari et al., 2020). At the individual level, during the pandemic, several studies have reported a high tendency for people who experience excessive fear and anxiety to be exposed to viruses, stress, and even become at risk of depression (Fardin, 2020; J. Li et al., 2020; Salari et al., 2020).

The threat of the Covid-19 pandemic on people's mental health also occurs in Indonesia. The survey results of the Association of Indonesian Psychiatrist (PSDKJI) reported three psychological problems with a fairly high prevalence experienced by the community, namely anxiety, depression, and psychological trauma (PDSKJI, 2020). This pandemic has also triggered a decline in the level of life satisfaction and psychological well-being of the community (Lee, 2020; S. Li et al., 2020). Psychological problems due to the

Covid-19 pandemic are not only at risk for adults but also threaten the mental health and psychological well-being of children and adolescents (UNICEF, 2021).

Anxiety is one of the psychological and emotional impacts experienced by most people due to the Covid-19 pandemic (Roy et al., 2020). At least 1 in 5 adults in Indonesia reported experiencing anxiety and psychological stress (Ifdil et al., 2021; Ifdil, Yuca, et al., 2020). The study of Brooks et al., (2020) showed that people who were isolated and quarantined due to social distancing during pandemic experienced significant levels of anxiety.

Empirical evidence related to the high level of anxiety experienced by the community due to the Covid-19 pandemic shows the need for psychological assistance for the community in reducing the anxiety experienced, so that they are able to have good mental health in order to function optimally. One of the efforts that can be done is through online-based psychoeducation and counseling (Fathiyah et al., 2021; Ifdil, Fadli, et al., 2020).

This study aims to compare online self-help psychoeducation in overcoming the level of anxiety experienced by the community due to the Covid-19 pandemic. Online psychoeducation is packaged in an online self-help method through website tutorials, so that people can get psychological assistance through certain technique exercises independently without having to come to the counselor's place (Suranata et al., 2020). There are two techniques involved in this study, namely meditation mindfulness and simple relaxations. Relaxation is a therapy technique that developed on a cognitive behavioral approach aimed to overcoming emotional disorders, including anxiety, depression, stress, angry disorders, by creating relaxation in all parts of the body (Deffenbacher et al., 1987)). In this study, relaxation techniques will be compared with Mindfulness, which also develops in the Cognitive behavioral tradition, oriented towards self-awareness and self-discovery (Bäuerle, 2020; Ge, 2019; Nell, 2016)

Method

Research Procedure

This study followed a randomized control trial (RCT) experimental design involving three groups of respondents who had previously attended an initial screening (pre-test) by measuring the level of anxiety. Then a random sampling procedure was performed to obtain two experimental groups and one control group. The experimental group 1 will participate in self-help mindfulness, while the experimental group 2 will participate in self-help relaxation. Both method will conducted online, while the control group (waiting list control) did not follow any self-help method. After the self-help procedure was completed, the three groups of subjects would attend the post-test.

Research Subject

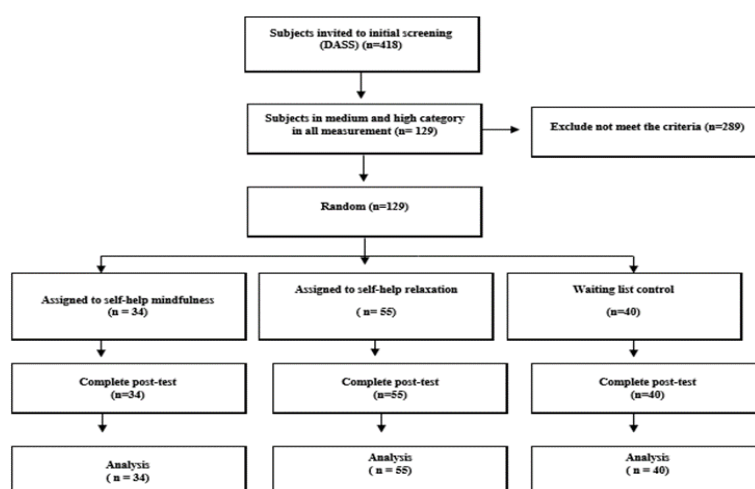


Figure 1. Sample Selection and Redention of Study

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Through the RCT procedure, a total of 418 Balinese aged 15 years and over were invited to take part in the initial screening through an online survey with 7 items Anxiety sub-scales of Indonesian version of DASS-21. Only 129 (75 men, 54 women, mean of age 26.7 years) met the criteria, namely experiencing anxiety disorders in the moderate to very high category based on the results of anxiety measurements. The procedure for selecting subjects in this study is described in Figure 1

Research Instrument

The instrument for measuring anxiety levels in this study used 7 items Anxiety subscales of Indonesian version DASS-21. DASS-21 is an abbreviated version of DASS-42 as a scale for measuring symptoms of depression, anxiety and stress that has been used worldwide (Scholten, Velten, Bieda, Zhang, & Margraf, 2017), including in Asia and Indonesia (Bibi, Lin, Zhang, & Margraf, 2020; Danamik, 2007; Ratanasiripong et al., 2016; Wah, 2013). DASS-21 has also been used from children to adults (Patrick, Dyck, & Bramston, 2010). The DASS-21 anxiety subscale consists of 7 items designed to measure anxiety symptoms (Lovibond & Lovibond, 1995). The anxiety subscale from DASS-21 is a self-report questionnaire method based on a four-point rating scale, ranging from 0 (not happen to me at all) to 3 (very often happens to me). Participants rated each statement on the DASS-21 anxiety subscale that they experienced during the past week. The level of anxiety is obtained by adding up the ratings for each item on the DASS-21 anxiety subscale. The internal reliability of the DASS-21 scale in the Indonesian population was reported by (Onie Kirana, A. C., Mustika, N. P., Adesla, V., & Ibrahim, R., 2020) with an MCDONALD'S value in the anxiety subcategory of 0.78. In this study, the internal reliability of Cronbach's alpha for the anxiety subcategory is 0.80, with the internal reliability of each item based on the item-rest correlation ranging from .30 to .86 which indicates that the items on the anxiety subscale DASS-21 have very good internal reliability.

Treatment Protocol

The procedure for self-help mindfulness and relaxation exercises is carried out online through SI-Konseling, a web-based psychoeducation and counseling system. To access the system, participants in the experimental group 1 and experiment 2 login using the username and password that have been provided on the <https://sikonseling.com/>. After logging in, both groups of experiments accessed the dashboard page for general instructions for participating in the self-help exercise. Furthermore, the experimental group 1 will access the mindfulness exercise menu, while the experimental group 2 will access the relaxation exercise menu. There is a discussion box in each exercise menu to facilitate if participants experience problems or want to discuss with the facilitator (counselor). At the end of the exercise menu, there is a exercise form that aims to reveal the progress of each participant's exercise achievements. The appearance of SI-Konseling can be seen in Figure 2.

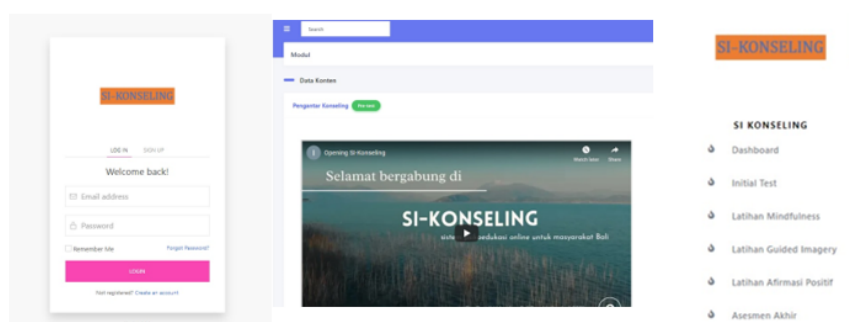


Figure 2. The appearance of SI-Konseling
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Ethical Consideration

This study was approved by the Research and Community services Review Board of the researcher's Universitas Pendidikan Ganesha, Singaraja, Bali, Indonesia (No 952/UN48.16/LT/2021). All Subjects involved in this study were given a full explanation of the study purpose and procedures, including issues of

privacy, and possible benefits and inconveniences of taking part. Subjects were informed that they could withdraw at any time, and all gave informed consent.

Data Analysis Procedure

The statistical program JASP version 0.13 for Mac was used in data analysis related to the presentation of descriptive data and ANCOVA. Although in this study a random assignment procedure for sample selection was carried out, to avoid bias caused by the inequality of initial conditions in each group of participants in the study, the data analyzed in ANCOVA was the data gains score in each group. The normalized gains score is the value of the difference between the post-test and pre-test which is normalized through the measurement ideal score. Datasets and statistical analysis results for the ANCOVA can be accessed at <https://osf.io/58td7/>.

Results and Discussions

The descriptive data showing anxiety conditions in the pre-test and post-test of experimental group 1 (mindfulness), experiment 2 (relaxation), and the waiting list control group, as presented in table 1.

Table 1. Pretest-Posttest Gains Score Anxiety Among Groups

	Pre-anxiety		Post-anxiety		Gains-anxiety				
	Mindfulness	Relaxation WL control	Mindfulness	Relaxation WL control	Mindfulness	Relaxation WL control			
Mean	16.529	14.909	14.875	12.971	14.418	16.825	-0.203	-0.030	0.088
Sd	1.674	1.898	2.151	0.627	2.149	2.147	0.124	0.120	0.136

The descriptive data in table 1 shows that the average anxiety scores in the three groups are not equal, so the decision to use the gain score for decision making and hypothesis testing in this study is correct. From the descriptive data, it can be seen that the group of subjects who participated in the self-help mindfulness exercise showed the most significant decrease in anxiety scores between the pre-test and post-test. The group of subjects who took the relaxation self-help exercise also showed a decrease in anxiety, but lower than the group that took the mindfulness self-help exercise. While the waiting-list control group actually showed an increase in anxiety. Figure 3 shows how the tendency of anxiety in each group changed from pre-test to post-test.

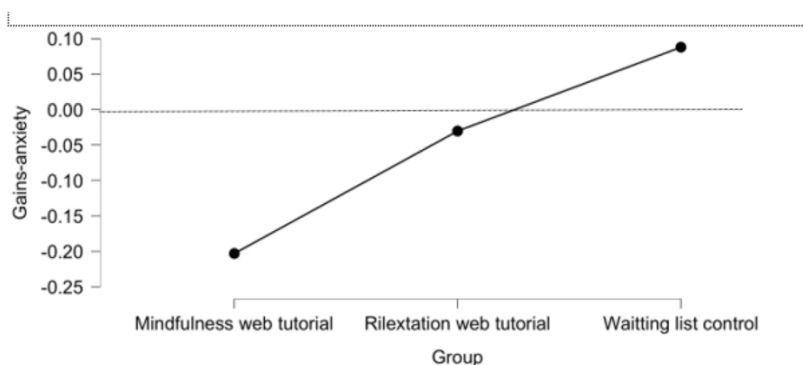


Figure 3. Gains Score Anxiety Among Groups
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Figure 2 shows how the pretest and posttest anxiety scores change based on the gain score in each group. The group that took self-help mindfulness exercises and relaxation self-help exercises showed a decrease in anxiety scores which was indicated by a negative gain score or below zero. Meanwhile, the pretest and posttest anxiety scores of the waiting-list control group were above zero, indicating that

participants in this group experienced an increase in anxiety scores. From this plot, it can also be seen that the group that followed the self-help mindfulness exercise showed a greater reduction in anxiety than the group that took the relaxation self-help exercise.

The ANACOVA test was conducted to examine the effect of interventions (self-help mindfulness and self-help relaxation exercises) on anxiety by controlling for age and gender variables. The results of the ANACOVA analysis are shown in table 2.

Table 2. The ANACOVA of Gains score Anxiety between groups of study control by Age and Gender

Cases	Sum of Squares	df	Mean Square	F	p	η^2
Group	1.563	2	0.781	48.800	< .001	0.439
AGE	0.014	1	0.014	0.860	0.355	0.004
Gender	9.647e -4	1	9.647e -4	0.060	0.807	2.708e -4
Residuals	1.985	124	0.016			

Note. Type III Sum of Squares

The ANACOVA results in table 2 show that there is a significant difference in anxiety between the three intervention groups $F(2,124) = 48.80$, $p < .001$, and the effect size on η^2 is .439 (moderate effect). Meanwhile, both age and gender variables have no significant effect. These results indicate that the influence of the intervention involved in this study (mindfulness and relaxation) affects all age groups as well as in both male and female groups.

Table 3. Tukey Post-Hoc Comparasions of Anxiety Among Groups

		Mean Difference	SE	t	p _{Tukey}
self-help mindfulness	self-help relaxation	-0.172	0.028	-6.188	< .001
	Waiting list control	-0.291	0.030	-9.860	< .001
self-help relaxation	Waiting list control	-0.120	0.026	-4.533	< .001

Note. P-value adjusted for comparing a family of 3

The post-hoc comparison in table 3 shows that the difference in gain scores in each group is significant. The group that took the self-help mindfulness exercise showed a higher reduction in anxiety than the group that took the relaxation self-help exercise and the waiting-list control group, while the group that took the relaxation self-help exercise significantly also experienced a higher reduction in anxiety than the waiting-list group. control list. The results of this analysis basically show that self-help mindfulness and relaxation self-help exercises based on web tutorials are effective methods to reduce anxiety levels. When both compared, self-help mindfulness exercises achieved more effective results.

This study supports the evidence from previous studies on the use of relaxation techniques in CBT or other approaches (Chol, 2010; Dehghan-nayeri & Adib-Hajbaghery, 2011; Hayes-Skelton, S. A., Roemer et al., 2013; Klainin-Yobas et al., 2015; Li, Y. et al., 2015; Liu et al., 2020) as well as Mindfulness (Abbasi, Shariati, & Tajikzade, 2018; Keye & Pidgeon, 2013; Moir et al., 2016; Jones et al., 2014) to overcome anxiety and other emotional disorders such as worry, angry disorder, depression, and stress.

The results of this study support empirical evidence that online-based psychoeducation methods are effective interventions to reduce anxiety (Jeffrey et al., 2020; Taylor-Rodgers & Batterham, 2014). The results of this study also show that online psychoeducation and counseling methods are effectively used to improve mental health and psychological well-being (Ardi & Ifdil, 2013; Hastuti & Tyas, 2021; K Suranata et al., 2020).

The results of this study contributed positively to the provision of psychological assistance to the community after the Covid-19 pandemic. The online self-help method in this study can be considered as a solution in dealing with anxiety disorders in the community due to the Covid-19 outbreak.

Conclusions

Based on the results of this study, it was found that online and web based tutorial self-help mindfulness and relaxation exercises were effective in reducing the anxiety experienced by people during the Covid-19 outbreak. The comparison between the two techniques shows that the mindfulness meditation technique has a higher effect on reducing anxiety. The findings in this study have implications for efforts to help people improve their mental and emotional health during the Covid-19 outbreak.

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