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Effect of emotional freedom techniques on anxiety, depression and insomnia among COVID-19 patients

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ABSTRACT

The COVID-19 pandemic has had a massive impact on various aspects, including mental health, especially for people confirmed positive for COVID-19. People who are positively confirmed for COVID-19 tend to experience decreased immunity caused by feelings of anxiety, depression, and insomnia. emotional freedom technology (EFT) therapy has been proven to reduce mental health disorders but has never been applied to people who are positively confirmed for COVID-19. This study aimed to examine the effect of EFT therapy on mental health disorders (anxiety, depression, and insomnia) in COVID-19 patients in Pontianak City. This research method is quantitative with a quasi-experimental design in the COVID-19 isolation area provided by the Pontianak City government, namely Upelkes and Rusunawa in June 2021. The total sampling was employed consisting of 42 people. A validated questionnaire on anxiety, depression, and insomnia was employed as a research instrument. A repeated ANOVA test was used to analyze research data. The results showed that EFT therapy was effective in reducing anxiety, depression, and insomnia scores in positively confirmed people for COVID-19 (p-value <0.05). EFT therapy can overcome mental health disorders experienced by people who are positively confirmed for COVID-19 and as an alternative therapy to speed up the healing process.

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1. INTRODUCTION

At the end of 2019, the discovery of a new virus originating from Wuhan, China, later known as the COVID-19 virus disease (WHO) emerged as a life-threatening disease in many countries around the globe unexceptionally Indonesia. Many residents have been infected, confirmed positive for COVID-19, and many had lost their livelihoods and loved ones [1]. The COVID-19 pandemic has created an impact on various aspects, such as mental health [2], especially for positively confirmed people for COVID-19. Patients who are positively confirmed for COVID-19 are likely to be prone to experience mental disorders such as anxiety [3], stress, and even depression especially patients with low exposure to prevention behaviour [4]. The high prevalence of cases of anxiety, depression, and insomnia affects psychological well-being and mental health condition, especially in patients who have been quarantined [5], [6]. Therefore, appropriate interventions are needed to cope with these problems. The emotional freedom technique (EFT) could be an alternative treatment for reducing mental health disorders and accelerating the healing of COVID-19. Prior studies on the emotional freedom technique (EFT) focused more on nurses' stress and anxiety involved in the therapy process of COVID-19 patients [7], and the anxiety of childbirth fear of pregnant women during labour [8]. Besides, many

studies were conducted on psychological distress with COVID-19 related impact in different contexts all around the world such as on the impact of Event Scale-Revised as a self-administered scale in post-traumatic stress disorder assessment (IES-R) [9] and unresolved emotional issues on patients with chronic disease [10], and the development and validation of COVID-19 psychological distress scale as a promising property to help healthcare professionals to assist COVID-19 patients to cope with psychological distress [11], but no studies have yet been conducted in EFT effect therapy on mental health disorders particularly on anxiety, depression, and insomnia disorders in the COVID-19 patients in the isolation condition both in quarantine and independent isolation.

Emotional freedom technique (EFT) is an emotional therapy of acupuncture without using needles, just tapping with two fingers to energize the body's meridian points which aims to balance the blocked energy system of the body which can lead to changes in thoughts, behaviours, and emotions by tapping at specific points on the body. This therapy has been developed since 1995 and has been carried out in more than 100 studies [12] which proves EFT therapy is effective such as people suffering from anxiety, depression [13], post-traumatic stress disorder (PTSD) [14], post-stroke patient [15], and cancer patients [16]. However, it has never been applied to COVID-19 patients. Emotional freedom technique (EFT) therapy is a psychophysiological intervention which involves both cognitive and somatic stimuli [16] so that it can amplify the flow of blood to the brain and the immunity of the human body which can accelerate the healing process for patients with COVID-19.

This study has threefold contributions. First, the benefits of this research are finding innovation in alternative medicine, reducing anxiety in positively confirmed people for COVID-19, and accelerating healing from both clinical and psychological symptoms. Second, the results can be used as additional therapy in accelerating healing in people who are positively confirmed for COVID-19. The results of this study are urgent as an alternative therapeutic intervention innovation in overcoming mental health problems in the community, especially during the ongoing pandemic. It has been proven that the efficacy of EFT is arguable as an evidence-based therapeutic method in many different contexts of studies [14]; the therapy contributes an effective impact to reduce depressive symptoms in a range of settings [17]. The efficacy of tapping-based EFT can reduce anxiety symptoms and impact neural emotion regulation [18]. In addition, considering the healing period and symptomatic and psychological complaints are quite long, intervention is needed to overcome these problems as an alternative therapy. The energy psychology of cognitive and exposure techniques of acupoints combination can produce rapid, effective, and beneficial outcomes in anxiety and depression treatment [19]. Third, this research also enriches the knowledge of preventive strategies and alternative health promotion in the fields of public health and psychology. It is hoped that in the future, the results of this research will promote emotional freedom technique (EFT) therapy to be widely applied in dealing with COVID-19 patients to overcome mental health problems and to stimulate the recovery of COVID-19 positive patients. The efficacy and practicality of EFT can necessarily contribute significant advantages to the mental health disorders treatments as it has effectiveness, riskless, and economic value to present situation [20].

The present study sought to identify the effect of EFT (emotional freedom technique) therapy as an alternate treatment y to lessen anxiety and accelerate recovery in positively confirmed people for COVID-19 in Pontianak City. The objective was to underpin the effect of EFT therapy on the anxiety, depression, and insomnia of COVID-19 confirmed patients in isolation conditions both in quarantine and independent isolation. The specific research questions were: i) what is the effect of EFT to reduce the anxiety of COVID-19 patients; ii) what is the effect of EFT to reduce depression in COVID-19 patients; and iii) what is the effect of EFT to reduce insomnia of COVID-19 patients.

2. RESEARCH METHOD

2.1. Design

The methodological stance of this study is quantitative descriptive with a cross-sectional design. A cross-sectional study was employed as this study analyzed the data from a single point time of population and measured the prevalence of health outcomes in mental disorders of COVID-19 patients [21]. The cross-sectional study was relevant as the underlying design was observational in nature.

2.2. Study setting

The setting of the study was the isolation place for confirmed COVID-19 people provided by the Pontianak Municipality government, namely the health service unit (Upelkes) and Rusunawa in June 2021. The population in this study consisted of all isolated people in Upelkes and Rusunawa. This population is the research foci of a scientific inquiry to examine the effect of EFT on a set of variables in this study.

2.3. Sampling

This study was conducted among the confirmed COVID-19 patients isolated in two isolation places provided by the Pontianak City government. Using a total sampling, 42 patients were involved in the study. The study covered all patients in the selected isolation places as the population of interest to obtain deep insights into the psychological distress of COVID-19 patients. The patients incurred psychological distress such as anxiety, depression, and insomnia.

2.4. Research procedures

To answer the research questions systematically, orderly procedures were established. The stages and procedures of the research consisted of i) administering a proper research ethic permit; ii) coordinating with Pontianak City Health Office related to the research process; iii) creating intervention media about EFT videos and measurement instruments; iv) measuring anxiety before intervention in both the experimental and control groups; v) providing intervention through offline and online EFT therapy to respondents for five times of therapy; vi) measuring anxiety and recovery time after the intervention was carried out; vii) finalizing data entry of initial and final measurement results, and viii) conducting data analysis. The stages provide chronological steps to answer the formulated research questions. These ensure compliance of the research processes.

2.5. Ethical statement

The research was conducted by following strict health protocols based on stipulated provisions issued by government No: 004/KEPK-FIKES/ UM PONTIANAK/ 2021. This research was conducted offline (at the first intervention) and online (using video for four treatments). Table 1 describes a scheme of intervention activities carried out.

Table 1. Scheme of intervention activities

		Post 1	Post 2	Post 3	Post 4
Intervention Group (Upelkes)	PRE	X_1 V	X_2 V	X_3 V	X_4 V
Control Group	PRE	-	-	-	-

The anxiety questionnaire used the generalized anxiety disorder scale (GAD-7). Total scores ranged from 0 to 21, with higher scores reflecting higher anxiety severity. Boundary points 5, 10, and 15 were interpreted to represent mild, moderate, and severe anxiety levels on GAD-7 [22]. The depression questionnaire uses the patient health questionnaire-9 (PHQ-9), 11 which is made up of 9 items with a score between 0 and 27 [23].

2.6. Study variables and measurement

As the fundamental unit of information examined and interpreted in this study, variables were determined. The variables of this study consisted of symptoms experienced, anxiety, depression, and insomnia. The data obtained were analyzed univariately in the form of percentages with a computer program.

2.7. Statistical analysis

The analysis used in this research is univariate and bivariate. To establish the effect of the EFT method on anxiety and the length of recovery from COVID-19, a paired t-test was used if the distribution was normal, if not normal, the Wilcoxon test in the intervention group was used. Meanwhile, to compare the intervention and control groups, the study used the unpaired t-test if the data distribution is normal, if not normal then the Mann-Whitney test was used. Subsequently, the repeated ANOVA test was utilized to find out the difference between before, and after the 1st, 2nd, 3rd, and 4th interventions. This study uses an alpha (α) of 0.05 with a 95% confidence level. Decision-making and interpretation of data analysis are based on a p-value <0.05.

3. RESULTS AND DISCUSSION

As this study attempted to examine the effect of EFT to reduce anxiety, depression, and insomnia, this research was carried out in two groups: the experimental group (confirmed positive COVID-19 people who were isolated independently at Upelkes) with 22 people and the control group (confirmed COVID-19 positive people isolated in Rusunawa) with 20 people. The majority of the respondents in this study were male (57.1%), aged 18-37 years old, and worked in the private sector (38.1%). Most of the respondents who isolated themselves had not been immunized against COVID-19 (76.2%) and had no comorbidities (90.5%). This study also found that 50% of respondents had a history of contact with confirmed positive patients and only 9.5% had previously been confirmed positive for COVID-19 as presented in Table 2.

Table 2. Characteristics of research respondents

Characteristics	Frequency	Percentage
Age		
18-37 years	30	71.4
38-57 years	10	23.8
58-77 years	2	4.8
Gender		
Male	24	57.1
Female	18	42.9
Occupation		
Students	7	16.7
Private employed	16	38.1
Health workers	7	16.7
Non-Health workers	12	28.6
COVID-19 immunization status		
Not yet	32	76.2
Vaccine 1	3	7.1
Complete vaccine	7	16.7
History of comorbidities		
Yes	4	9.5
No	38	90.5
Contact history with confirmed positive people		
Yes	21	50.0
No	21	50.0
Previous history of suffering from COVID-19		
Yes	4	9.5
No	38	90.5

Given the importance of the demographic data, the subsequent step was to examine the symptoms experienced by the respondents. The findings found that respondents experienced symptoms of fever (33.3%), cough and/or flu (50.0%), sore throat (88.1%), dyspnea (95.2%), weakness (90, 5%), diarrhea (95.2%), and anosmia (95.2%) as shown in Table 3. These findings are supported by some previous research on the symptoms experienced by people who are positive for COVID-19 [24]–[26].

Table 3. Symptoms experienced by respondents

	Symptoms	Frequency	Percentage
Fever	Yes	14	33.3
	No	28	66.7
Cough and/or flu	Yes	21	50.0
	No	21	50.0
Sore throat	Yes	37	88.1
	No	5	11.9
Dyspnea	Yes	40	95.2
	No	2	4.8
Weak	Yes	38	90.5
	No	4	9.5
Diarrhea	Yes	40	95.2
	No	2	4.8
Anosmia	Yes	40	95.2
	No	2	4.8
Total		42	100.0

Respondents' answers to the anxiety questionnaire with the GAD-7 and PHQ-9 were analyzed. The findings indicated several psychological distresses of the respondents. The majority of the respondents have mental health disorders at respective levels, namely mild anxiety (66.7%), mild depression (59.5%), and insomnia on a moderate-severe scale of 76.2% as shown in Table 4.

These results are in the same vein as the findings of previous studies, people who are positively confirmed for COVID-19 are more likely to experience mental health problems, such as anxiety, depression, and insomnia [27]. Despite the fact to suggest that the effect of mental health disorders has raised on the general population during the pandemic of COVID-19 [27], [28]. The findings of this study demonstrate that individuals with COVID-19 are more likely than those without COVID-19 to experience mental health issues; this risk was also noticeable when compared to a historical control group. These results show that those who are proven COVID-19 positive may be more susceptible to these consequences.

After observing the level of anxiety, depression, and insomnia of the respondents, the differences in general anxiety disorder, depression symptoms, and insomnia symptoms, before, and after the 1st, 2nd, 3rd,

and 4th interventions were probed. Figure 1 shows the variations of differences between the intervention group and control group. This figure reveals that there was a decrease in general anxiety symptoms before, and after the 1st, 2nd, 3rd, and 4th EFT interventions in the group. The results of the repeated ANOVA test obtained a p-value=0.000 (>0.05). This means that the EFT intervention carried out for four times is effective in reducing general anxiety disorders in people who are confirmed to have COVID-19.

Table 4. Description of respondents' anxiety, depression, and insomnia

Variable	Frequency	Percentage
Anxiety		
Mild	28	66.7
Moderate	11	26.2
Severe	2	7.1
Depression		
Mild	25	59.5
Moderate	9	21.4
Severe	8	19.1
Insomnia		
No	10	23.8
Mild	16	38.1
Moderate-Severe	16	38.1

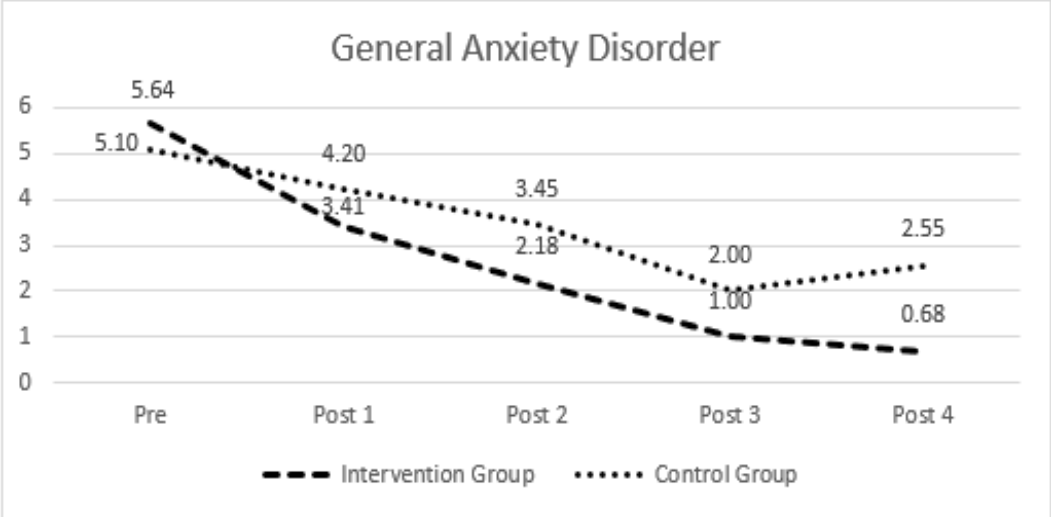

Figure 1. Differences in general anxiety disorders before and after the 1st, 2nd, 3rd, and 4th interventions

The findings of this study are in line with several similar studies, which state that EFT is significant in reducing anxiety [29], [30]. Meanwhile, in the control group, general anxiety disorder scores fluctuated. Anxiety during the COVID-19 pandemic is something that cannot be avoided by people who are confirmed positive for COVID-19. Many factors influence it, including information on the death of COVID-19 sufferers, a perceived biological condition that leads to anxiety [31], and various hoax information circulating in the community [32]. Stigma against COVID-19 is also a factor that causes anxiety [3], [20], [33]. Coping with this situation, EFT can be incorporated as an alternative therapy with elements of exposure, cognitive therapy, and acupressure treatment to reduce significant decreases in anxiety and other psychological stresses [34]. A previous study recommended the provision of appropriate psychological interventions to cope with anxiety, depression and quality of life during the COVID-19 pandemic; herewith EFT is worth considering as a therapeutic method [6].

Figure 2 describes that the EFT intervention reduced the score of depressive symptoms faster in people who were confirmed positive for COVID-19 in the intervention group compared to the control group. The results of the repeated ANOVA test obtained a p-value=0.000 (>0.05). This means that the EFT intervention carried out for 4 times is effective in reducing depressive disorders in people who are confirmed to be

COVID-19. In contrast with previous research, periodic EFT can overcome depression [7], in someone suffering from certain diseases, including COVID-19. Fear in people who are confirmed positive for COVID-19 correlates with depression [35]. The most significant effect of the COVID-19 pandemic, including mental health illnesses, is depression, a negative emotional state [36]. Numerous people are at an increased risk of developing depression due to the current COVID-19 pandemic [28].

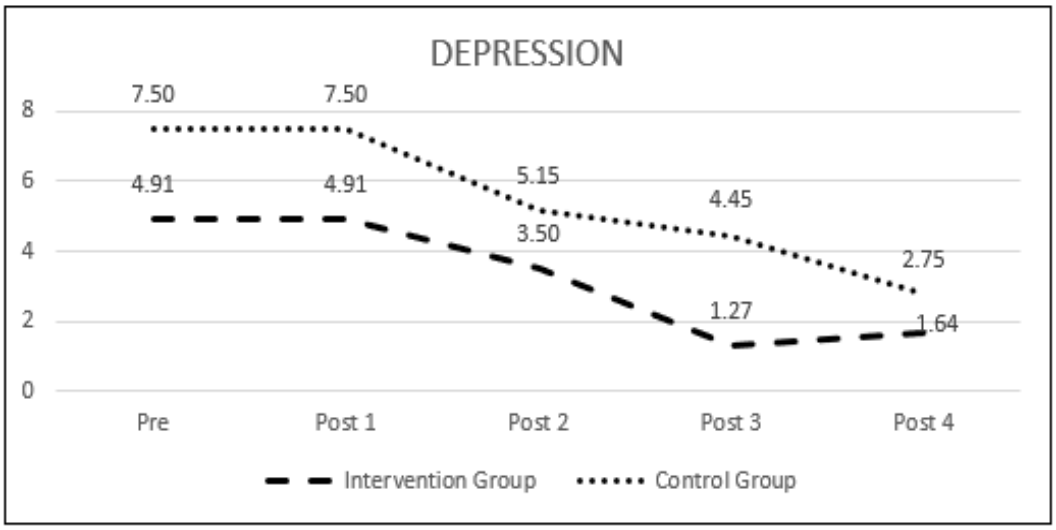

Figure 2. Differences in depression disorder before and after the 1st, 2nd, 3rd, and 4th interventions

Figure 3 reveals that the EFT intervention reduced the score of insomnia symptoms faster in people who were confirmed positive for COVID-19 in the intervention group compared to the control group. The results of the repeated ANOVA test obtained p-value =0.000 (>0.05). This means that the EFT intervention carried out for 4 times is effective in reducing insomnia symptoms in people who are confirmed to have COVID-19. Supported by several previous studies, EFT can overcome insomnia by doing it periodically [37], [38]. A similar study showed that EFT therapy adapted for insomnia can improve a good sleep quality [39].

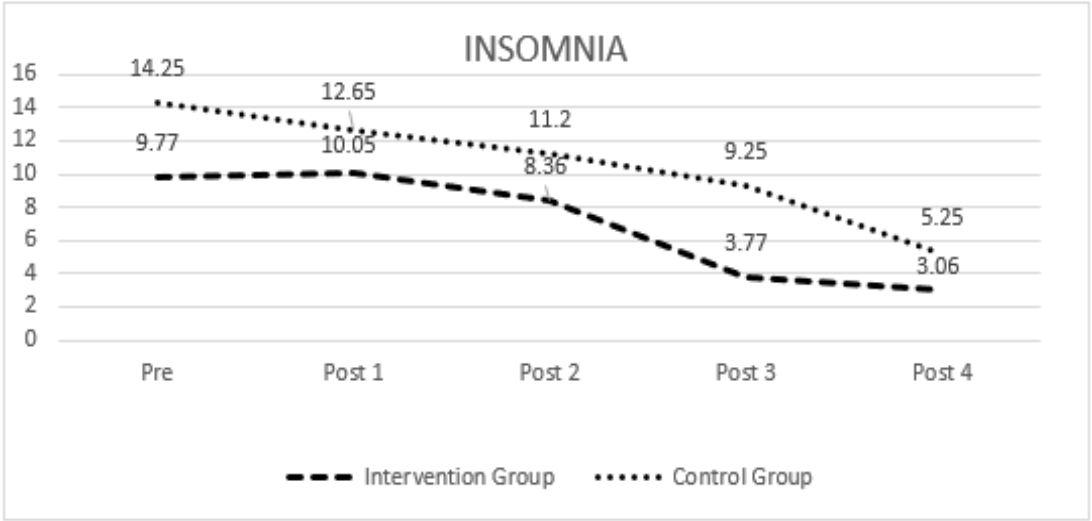

Figure 3. Differences in insomnia disorders before and after the 1st, 2nd, 3rd, and 4th interventions

This study has several strengths, namely comparing the intervention and control groups, and the intervention was repeated regularly for four times. This study compares the risk of the impact of mental health disorders in people whose COVID-19 positivity has been confirmed separately for people who are in isolation in places provided by the government. The findings addressed the theoretical contributions of the effectiveness of EFT for reducing psychological distresses (anxiety, depression, and insomnia) in COVID-10 patients in both quarantine and independent isolations as no studies have not yet been carried out in this population and the setting of the study. The practical contributions are the positive trends of reducing anxiety, depression, and insomnia in COVID-19 patients after EFT intervention. This study also has some limitations including that the demographic profile (mostly male than female, majority age 18-37 years) could make the study's findings less generalizable. The range of illness severity among individuals who were not hospitalized was also not included in this study's methodology (for example, with or without COVID-19 symptoms). Further research can establish the efficacy of EFT with larger data availability by considering the disease spectrum severity of COVID-19 patients. This study contributes scientific evidence that people who are proven positive for COVID-19 can utilize EFT to lessen their mental health conditions, such as anxiety, depression, and insomnia.

4. CONCLUSION

In health sciences, the efficacy of EFT is generally recognized as an alternative based therapeutic method in diverse range of studies that can cope with psychological distresses and symptoms. The present study clearly indicate that EFT can be used to reduce anxiety, depression, and insomnia for COVID-19 patients. This study showed that EFT treatment was effective as an alternate therapy to reduce anxiety, depression, and insomnia levels in patients who were confirmed positive for COVID-19 (p-value 0.05). People with confirmed COVID-19 positivity can use EFT treatment to address mental health illnesses and as an alternative therapy to hasten the healing process

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