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by Salma Salma

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Forgiveness Meditation as an Effort in Improving Mental Health among College Students

Amalia Rahmandani¹, Yohanis Franz La Kahija¹, Salma¹

¹Faculty of Psychology, Diponegoro University, Semarang, Indonesia

ABSTRACT

College students as emerging adulthood may experience both mental and physical health problems due to maladaptive adjustments. Both mental and physical health problems are mutually reinforcing that cause marked impairment in everyday life functioning. Efforts to deal with mental health problem are expected to promote general health. Either forgiveness or meditation is separately proven effective in improving mental and physical health, but the efficacy of forgiveness meditation has not been adequately researched. This study aims to examine the effect of forgiveness meditation toward mental health improvement among college students, as indicated by the declined of distress. This study used one-group pretest-and-posttest quasi-experimental design with follow-up measurements two weeks after treatment ended. Measurements were conducted using the short version of General Health Questionnaire (GHQ-12). Samples were obtained using purposive sampling techniques, as many as 9 college students from The Faculty of Public Health, Diponegoro University, Semarang, Indonesia. The analysis using statistical test of Wilcoxon T-test between pre-test and post-test, and pre-test and follow-up, showed significant decrease (respectively were $Z=-2.670$, $p=.008$; $Z=-2.675$, $p=.007$), while between post-test and follow-up did not ($Z=-.256$, $p=.798$). The result showed a significant decrease in distress after treatment ended. This result remained significant up to follow-up measurements, though the difference between post-test and follow-up was not significant. Forgiveness meditation may have sustainable and increasing effect if it is regularly practiced. A sustained decrease in distress, which indicates the improvement of mental health, is further expected to support the improvement of physical health, adaptive adjustment, and optimal functioning.

Keywords: emerging adulthood, distress, mental health, forgiveness meditation

INTRODUCTION

College students as emerging adult (approximately 18 to 25 years of age) are characterized by experimentation and exploration¹. While there is a development in cognitive abilities and awareness² that strengthens career path, identity formation, and lifestyle choices to be adopted, emerging adult remains at risk for psychological problems. Greater risk occurs in adolescents who experience accumulated adverse life

experience and psychological distress, due to differences in cognitive appraisal and emotion regulation³. The presence of diverse capabilities to modulate emotions^{4,5} makes the adjustment during transition to adulthood even more difficult and potentially problematic². As the result, they may become prone to both mental and physical problems.

Rumination and poor emotion regulation can lead to low distress tolerance, thus making psychological distress implicate in the emergence of psychopathology among college students. The preliminary research result showed that 45.7% of 495 undergraduate students in Diponegoro University, Semarang, Indonesia were at risk of having psychological distress⁶. Among university students, psychological distress has a direct effect on the emergence of depressive symptoms⁷. Low distress tolerance further mediates between depression and trauma, and the emergence of alcohol drinking problems in young adult⁸.

Corresponding Author:

Amalia Rahmandani
Faculty of Psychology, Diponegoro University,
Prof. Soedarto, S.H., Tembalang, Semarang, 50275,
Central Java, Indonesia
Email: amalia_rahmandani07@yahoo.co.id
a.rahmandani@live.undip.ac.id

A study that reviewed epidemiological papers for 15 years on psychiatric disorders showed a trend in psychopathology across the adolescent years to adulthood⁹. It mentioned that about one in 11 adolescent had a psychiatric disorder. There was an increase in rates of depression, panic disorder, agoraphobia, and substance use disorder from childhood to adolescence. While from adolescence to early adulthood there was a further increase in panic disorder, agoraphobia, substance use disorder.

Psychopathology may also be developed through the adoption process as a result of psychological distress against non-normative life events. The findings of several studies on left-behind children, for example, showed that the adolescents had higher scores in anxiety¹⁰, loneliness¹¹, fear, and self-blame¹². In addition to psychiatric disorders such as hyperactivity and conduct problems¹³, depression characterized by low self-esteem and increased risk for suicidal behaviors¹⁴, psychological distress in these adolescents were often leads to the adoption of maladaptive behavior, such as substance use disorder and internet addiction¹⁵ or engaging in illegal and criminal activity¹⁶.

Besides mental and behavioral problems, the psychological distress negatively impacts sleep¹⁷ and increases health risk behavior, ie through higher levels of physical inactivity and skipping breakfast¹⁵. A similar study indicates the impact of psychological distress on nutrition indicators (ie of fruit, vegetable, and takeaway food consumption), thus implicating health status¹⁸. Finally, psychological distress further increases the risk of occurrence of chronic diseases such as cardiovascular disease which is largely explained by behavioral processes, ie through the occurrence of health risk behavior¹⁹.

Mental health problem that develops as a result of maladaptive adjustment when encountering psychological distress is also followed by change in health status. Both mental and physical health issues are mutually reinforcing, causing marked impairment in everyday life functioning. As in the case of major depressive disorder²⁵ who were often reported to have functional deficits in domains of employment status, occupational productivity, interpersonal relationships, autonomy, and global functioning^{20,21,22}. Therefore efforts to improve the ability to deal with psychological distress are expected to promote general health.

Forgiveness meditation is one of the many psychological interventions developed to forgive through meditation, which emphasizes the intrapersonal process. Meditation is one of the professional deep relaxation which involves easily sustaining focus on a very simple stimulus²³. Meditation cultivates focused attention and moment-to-moment awareness of one's experience in order to heighten the capacity to bring conscious choices to responses and reactions²⁴. While forgiveness is freeing from a negative attachment to the source that has transgressed against a person²⁵. In an interpersonal context, it is defined as "a willingness to abandon one's right to resentment, negative judgment, and indifferent behavior toward one who unjustly hurt us, while fostering the undeserved qualities of compassion, generosity, and even love toward him or her"²⁶.

Meditation alone has been tested to reduce psychological distress²⁷ and perceived stress, as well as improve forgiveness²⁸. On the other hand, people who have higher levels of forgiveness are reported to have lower levels of anger and psychological distress, where the state anger largely mediates the association between forgiveness and psychological distress²⁹. Forgiveness itself is meant not only for others in the context of interpersonal transgression, but also for oneself as well as situations²⁵.

Forgiveness meditation has been developed^{30,31} but research on the efficacy of this intervention¹⁰ still limited. Similar research interventions are loving-kindness meditation and compassion meditation, ie exercises oriented toward enhancing unconditional, positive emotional states of kindness, and compassion³². The literature suggests that these two interventions²⁶ associated with various benefits, including those improving positive affect, reducing distress and negative affect such as anxiety and mood symptoms, and being useful for treating interpersonal problems.

Research on forgiveness meditation is expected to support the efficacy of this intervention, in this case, to alleviate the psychological distress, thereby reducing the risk of physical problems and further mental and behavior problems. The present study aimed to examine the effect of forgiveness meditation toward mental health improvement among college students, which was an emerging adult, as indicated by the declined of psychological distress. Specifically, it was hypothesized that there was a significant decrease in psychological distress in the group receiving forgiveness meditation intervention.

METHOD

This study used one-group pretest and posttest quasi-experimental design. Follow-up measurement were also conducted to see the effect of intervention up to two weeks after the end of treatment.

The selection of participants in this study was conducted using purposive sampling technique by considering some characteristics and initial measurement results. Participants in this study were 9 undergraduate students of The Faculty of Public Health, Diponegoro University in Indonesia. The inclusion criteria, namely (1) emerging adult (18-25 years), (2) experiencing psychological distress based on the measurement results (cut-off score 10/11), (3) had never been involved in psychological therapy and drug therapy for treatment of psychological problems, and (4) willing to engage in interventions completely and voluntarily, as indicated by the signing of informed consent.

Measurements of psychological distress were performed using the short version of General Health

Questionnaire (GHQ-12). GHQ-12 is a 12-item self-report which measures of psychological morbidity, both in community settings and non-psychiatric settings to detect psychiatric disorders³³. Not only was it widely used to perform unidimensional measurements, the GHQ-12 instead assesses psychological morbidity in two (positive and negative items) or three dimensions ("social dysfunction", "anxiety and depression", and "loss of confidence")³⁴. Respondents had to choose one of the four offered scales, that is 1) less than usual, 2) no more than usual, 3) rather more than usual, 4) much more than usual how frequently they experienced recently the different symptoms listed on the scale. Cronbach α in this study = .841.

The data were processed quantitatively by descriptive, and inferential statistical methods using the Wilcoxon t-test by means of the Statistical Package for the Social Sciences (SPSS) Windows Version 22. The tests were performed to see differences in measurements on pretest and posttest, pretest and follow-up, as well as posttest and follow-up, within group with limited subjects.

Table 1: Forgiveness meditation intervention procedures

Day (Total Duration in minutes)	Topic (Duration in Minutes)	General Objective	Activity	Methods
1 (150 minutes)	Opening (30 minutes)	Opening an intervention with a set of administrative procedures	Opening and introduction (research teams and participants)	Lecture, Q & A
			Explanations of the research and intervention, contracts, and informed consent	
	Facilitating negative emotions (45 minutes)	Increasing awareness of the importance of forgiveness meditation	Explanations of forgiveness meditation backgrounds: negative emotions and their impact on life	Lecture, Reflexion
			Relaxation and facilitation of negative emotions	Practice of relaxation, Worksheet
			Writing down negative emotional experiences	
	Practice of forgiveness meditation (60 minutes)	Practicing and evaluating forgiveness meditation	Ranking the negative emotions	
			Practicing forgiveness meditation	Practice
	Closing (15 minutes)	Increasing participant involvement up to the next meeting	Evaluation of practice	Reflexion, Q & A
			Assigning homework: Listening to the audio of forgiveness meditation Recording the evaluation of practice and self-monitoring	Lecture, Q & A
			Planning next meeting time and closing statement	Summarizing

Conted...

2 and 3 (90 minutes)	Opening (15 minutes)	Opening the 2 nd and 3 rd session of intervention	Opening and discussion of the practice experiences at home	Lecture, Q & A
	Practice of forgiveness meditation (60 minutes)	Practicing and evaluating forgiveness meditation	Practicing forgiveness meditation	Practice
			Evaluation of practice	Reflexion, Q & A
	Closing (15 minutes)	Increasing participant involvement up to the next meeting	Assigning homework (same as the assignment on the 1 st day)	Lecture, Q & A
			Planning next meeting time and closing statement	Summa- rizing
4 (90 minutes)	Opening (15 minutes)	Opening the 4 th session of intervention	Opening and discussion of the practice experiences at home	Lecture, Q & A
	Practice of forgiveness meditation (60 minutes)	Practicing and evaluating forgiveness meditation	Practicing forgiveness meditation	Practice
			Evaluation of practice	Reflexion, Q & A
	Termination of intervention (15 minutes)	Increasing participant involvement in the intervention independently	Encouraging participants to practice independently and on an ongoing basis Closing and termination of intervention.	Lecture, Summa- rizing

Forgiveness meditation was carried out in group, as many as four meetings in two weeks, with duration of 90-150 minutes. Forgiveness meditation was guided by a therapist that was a clinical psychologist who had had at least five years of practicing experience. Forgiveness meditation was began by evoking negative experiences through reflection and relaxation techniques, followed by practice of forgiveness meditation performed periodically. Participants were given the audio recording of forgiveness meditation instruction as a means to assist the daily practice before the subsequent meeting. Participants were also asked to complete a diary that aimed to self-monitor and evaluate each time the practice ended. Table 1 shows the overall procedure of forgiveness meditation in this study.

RESULTS AND DISCUSSIONS

Participants in this study consisted of 78% female (N=7; $M_{age} = 20.86$; $SD_{age} = .38$) and 22% male (N=2; $M_{age} = 20$; $SD_{age} = 0$). Descriptive statistics in Table 2 show a decrease in GHQ-12 mean score from pretest to posttest which also indicates a decrease in distress. The decrease

in distress is supported ³¹ the decreased of mean score in each dimension (ie social dysfunction, anxiety and depression, and loss of confidence). While a comparison between posttest and follow-up measurements indicates that the effect of the intervention can be maintained until two weeks after treatment ended.

The results of Wilcoxon t-test between pretest and posttest using SPSS 22, as listed in Table 3, shows a significant decrease in GHQ-12 mean score ($Z = -2.670$; $p = .008$), on the social dysfunction dimension ($Z = -2.533$ $p = .011$), and on the dimension of anxiety and depression ($Z = -2.446$; $p = .014$). Conversely, the decrease in the mean score on the dimensions of loss of confidence is not significant ($Z = -1.838$; $p = .066$). However, the decrease in the mean score from the pretest to the follow-up on all measurements is significant (GHQ-12 with $Z = -2.675$, $p = .007$; social dysfunction dimension with $Z = -2.694$, $p = .007$; dimension of anxiety & depression with $Z = -2.273$, $p = .023$, and dimension of loss of confidence with $Z = -2.716$, $p = .007$). Furthermore there is no significant difference between posttest and follow-up on any measurement.

Table 2: Descriptive statistics of measurement results

No.	Initial	Sex	Age	Total Score GHQ-12			Dimensions								
							Social Dysfunction			Anxiety & Depression			Loss of Confidence		
				Pre- ¹⁹	Post-	FU	Pre-	Post-	FU	Pre-	Post-	FU	Pre-	Post-	FU
1.	FI	F	21	12	9	7	6	6	4	5	2	3	1	1	0
2.	IS	F	21	14	6	8	8	1	3	2	4	4	4	1	1
3.	AL	F	21	18	10	7	10	3	4	6	3	3	2	4	0
4.	EL	F	20	13	3	1	6	3	1	5	0	0	2	0	0
5.	IN	F	21	17	11	10	8	7	6	6	3	3	3	1	1
6.	AR	F	21	11	1	4	7	0	4	2	0	0	2	1	0
7.	ME	F	21	13	6	6	10	6	5	2	0	1	1	0	0
8.	DI	M	20	19	3	3	9	3	3	6	0	0	4	0	0
9.	ZU	M	20	20	7	11	11	3	6	6	2	4	3	2	1
Mean				20.67	15.22	6.22	6.33	8.33	3.56	4.00	4.44	1.56	2.00	2.44	1.11
Std. Dev.				0.50	3.31	3.42	3.24	1.80	2.35	1.58	1.88	1.59	1.73	1.13	1.27
Minimum				20	11	1	1	6	0	1	2	0	0	1	0
Maximum				21	20	11	11	11	7	6	6	4	4	4	1

Table 3: Inferential statistics of measurement results

		Posttest-Pretest	Follow-Up-Pretest	Follow-Up-Posttest
Total Score GHQ-12	Z	-2.670 ^b	-2.675 ^b	-.256 ^c
	Asymp. Sig. (2-tailed)	.008	.007	.798
Social Dysfunction	Z	-2.533 ^b	-2.694 ^b	-.566 ^c
	Asymp. Sig. (2-tailed)	.011	.007	.572
Anxiety & Depression	Z	-2.446 ^b	-2.273 ^b	-1.633 ^c
	Asymp. Sig. (2-tailed)	.014	.023	.102
Loss of Confidence	Z	-1.838 ^b	-2.716 ^b	-1.890 ^b
	Asymp. Sig. (2-tailed)	.066	.007	.059
a. Wilcoxon Signed Ranks Test				
b. Based on positive ranks.				
c. Based on negative ranks.				

The result of this study supports the efficacy of forgiveness meditation intervention in reducing psychological distress, particularly in university students in their emerging adulthood, when research on this intervention is still quite limited. Explanation of the proven hypothesis that has been proposed in this study can be reviewed from various sides related to psychological distress.

Mastery of life stress, especially the adverse life event, has a protective effect that buffers the lack of adjustment to psychological distress³⁵. In contrast, psychological problems develop as a result of low level

of emotion regulation and distress tolerance³⁶. The emergence of internalizing problems (ie depression and anxiety) and externalizing problems (ie substance abuse), as well as the presence of worse coping strategies, are associated with poor emotion regulation³⁷. In times of adverse life experiences impacting low level of emotion regulation, concurrent cognitive processing in the form of expressive suppression and rumination also contributes to the emergence of psychological distress³. Psychological responses also influence physiological reactivity^{38,39}, so that decisions under distress becomes more difficult and not adaptive³⁹.

The function of factors associated with psychological distress above may seem to be improved through meditation practice. Previous researches have supported that meditation improves brain functioning by increasing brain integration and restoring working memory, improves positive affect and emotional functioning, improves self-regulation, as well as reduces stress reactivity and psychological distress^{27,40,41}. Changes that occur in terms of improvement of cognitive, emotional, and even physiological functioning further help improve coping strategies to be more adaptive⁴².

Meditation practice has also been shown to improve positive characteristics such as gratitude⁴⁰ and forgiveness²⁸. Forgiveness which is also a concern in intervention in this study, separately from meditation has also been widely studied, both as a form of intervention based on forgiveness and as a positive psychological construct. Beyond the general usage of this term in an interpersonal context, forgiveness is agreed as an intrapersonal process⁴³. The benefits of forgiveness extend beyond the dissipation of anger and hostility^{44,45}. Forgiveness is effective in reducing stress, distress, anxiety, and depression^{45,46}, promoting positive affect⁴⁵ and in turn improves mental health and well-being^{45,47,48}.

In addition, other studies also support forgiveness overcoming cognitive and behavioral problems. Forgiveness as a coping response for negative peer experiences in early adolescence, as example, is positively associated with concurrent self-esteem and negatively associated with social anxiety. Cognitively, this is associated with less rumination when experiencing an offense⁴⁹. Forgiveness also helps to overcome the feelings of shame and guilt that is often experienced by people with behavioral problems, as in the case of drug and/or alcohol problems, and are associated with better recovery⁵⁰.

The implications of forgiveness also appear in physical health as indicated by fewer physical symptoms. Fewer physical symptoms are presented as a result of changes in overall reductions in blood pressure level, heart rate, and may aid in cardiovascular recovery from stress associated with higher rates of forgiveness^{44,51}.

Finally, the benefits of forgiveness have been used extensively either in the scope or disposition of forgiveness of others in the context of interpersonal transgression, self-forgiveness against one's self mistake, and forgiveness of situation beyond one's control^{129,52}.

Forgiveness meditation in groups can be applied in educational settings, in this case for university students as emerging adult who are at high risk of experiencing psychological distress. Forgiveness meditation may have sustainable and increasing effect if it is regularly practiced. The audio recording of instruction is expected to facilitate the practice carried out independently. Self-evaluation and self-monitoring are also expected to raise awareness of perceived change as a result of intervention. A sustained decrease in distress, which indicates the improvement of mental health, is further expected to support the improvement of physical health, adaptive adjustment, and optimal functioning.

Limitation in this study is still less attention to the long-term impact. The limited subject also influences the expansion of the use of this intervention in similar populations. Future study is expected to see the long-term impact of intervention on the reduction of distress, ie by taking follow-up measurements in longer time range. In addition, further researchers are expected to examine the efficacy of forgiveness meditation in a larger group, as well as consider the design of a double pretest or assigning a control group to provide a higher significance level.

CONCLUSIONS

The result of this research showed a significant decrease in psychological distress after the treatment of forgiveness meditation ended, which indicated mental health improvement. The decrease in distress remained significant up to follow-up measurements, though the difference between posttest and follow-up was not significant. Additional results indicated a significant decrease in the dimensions of "social dysfunction" as well as the dimensions of "anxiety and depression" after treatment ended, up to follow-up measurement. While the mean decrease in the dimensions of "loss of confidence" was not significant after treatment ended, but then became significant in the follow-up measurements compared to pretest. Differences in posttest and follow-up on all dimensions were not significant.

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Conflict of Interest: We as the authors state that there is no conflict of interest in this article if published.

Ethical Clearance: Ethical clearance in this country is not commonly used in psychological intervention studies with minimal risk. Culturally speaking, meditation has become part of eastern people. This meditation technique is basically part of asian culture. There is no harm in this practice of forgiveness meditation. Conversely, the use of ethical clearance is generally carried out on research participants in the hospital to ensure that they are protected from the risk of harm. The participants in this study was willing to engage in interventions completely and voluntarily, as indicated by the signing of informed consent voluntarily. Preparation of the intervention module in this study was carried out carefully by involving expert judgment, trying it out to the similar participants, and paying attention to the therapist's qualifications.

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