



Life Review Therapy and Emotional Freedom Technique Therapy (LR-EFTT) as Combination Therapy for Depression in Elderly Undergoing Chemotherapy

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ABSTRACT

Background: Being old and experiencing chemotherapy can have a negative effect on mental well-being, causing expanded uneasiness and discouragement. Researchers have investigated various therapies as potential arrangements to address these mental challenges. Some studies showed that monotherapy utilizing either life review therapy or emotional freedom technique therapy is successful in lightening discouragement.

Purpose: To explore the effectiveness of combining life review therapy and emotional freedom technique therapy to ease or decrease the depression of an elderly person who took chemotherapy.

Methods: The design of our study was a quasi-experiment on an elderly person who took a chemotherapy regimen at Achmad Moechtar Bukittinggi District Hospital in Bukittinggi. We used accidental sampling and a sample size of 20 respondents. A total of six sessions of LR-EFTT, a combination therapy of life review therapy and emotional freedom technique therapy, were given to 10 people who met the criteria and were in the intervention group. Ten people who were in the control group did not receive any intervention. Data was collected by using the Geriatric Depression Scale-15 in order to assess the dependent variable, which met the validity and reliability (Cronbach $\alpha = 0.817$), and use an independent t-test to conclude this research.

Results: We found that there was a significant difference in depression between the two groups (p-value = 0.000). The mean of the control group (10.1) is higher than the intervention group (6.20).

Conclusion: It concludes that combined therapy of life review therapy and emotional freedom technique therapy (LR-EFTT) was effective in reducing depression in elderly patients undergoing chemotherapy

INTRODUCTION

Despite being a non-communicable disease, cancer is considered a terminal illness. Based on data, it is known that in 2024 there will be 2,002,240 new cancer cases and 611,720 deaths due to cancer in the US [1]. Meanwhile, in the Asian region, there were 9,826,539 new cancer cases and 5,464,451 deaths [2]. Chemotherapy treatment is needed by cancer sufferers in order to kill all remaining neoplasm cells that have metastasized through the blood vessels to other organs or tissues. The impact of this cancer on individuals is worst, especially elderly patients.

The elderly are characterized by decline in all aspects of body function and mental health. Elderly people who experience terminal illnesses such as cancer certainly easily become anxious and even depressed [3] and this can reduce their body's immunity [4] which can lead to a deterioration in their health both during pre-chemotherapy and post-chemotherapy. Pathophysiologically, stress can trigger the release of cortisol, catecholamines, and glucocorticoids, which have an effect on the distribution and function of the immune system, which in the long term inhibits leukocyte proliferation, prostaglandin synthesis, and cytokine production [5]. As we already know, the chemotherapy process will kill both neoplasm cells and healthy body cells, including white blood cells.

The body will have the same stress response whether due to illness or mental problems. This situation will certainly worsen the condition of elderly who are undergoing chemotherapy. The elderly will tend to be depressed and this will result in a further weakening of their body's immunity [6]. Experts also reveal that the immune system can also cause depression [7]. The risk of depression that can occur in elderly people undergoing chemotherapy is so great that this situation certainly requires a solution so that this risk can be prevented.

There are so many therapies developed by experts to prevent or treat depression in the elderly. One of them is LRT (Life Review Therapy) [8], [9], where the elderly will gain a deeper understanding of themselves and their life journey. In the work produced by researchers [8], the normal life review process is generated by awareness of destruction or death, which is getting closer and reflects on the meaning of life that has passed. Another therapy that can be a solution to the problem of depression risk is EFTT (Emotional Freedom Technique Therapy) [10], [11]. Emotional Freedom Technique Therapy combines Cognitive Behaviour Therapy, self-acceptance, and tapping acupuncture points. Studies showing the effectiveness of combining these two therapies still do not exist.

METHODS

This research method is a quasi-experiment with pre-and post-test and non-equivalent control group design. Data collection was held in September 2024. Population of this study are all the elderly who undergoing chemotherapy in Achmad Moechtar District of Hospital. The decision of sample size of this study is based on Roscoe suggestion for two group in simple experiment[12]. Twenty respondents fulfilled the inclusion criteria: an-elderly who took chemotherapy or chemotherapy control, not in severe consciousness condition. We used an incidental sampling technique to get the respondent. There were two groups in this research, one as the intervention group who got combined therapy of Life Review Therapy and Emotional Freedom Technique Therapy (LR-EFTT) for six sessions and the other group as the control group (vice versa, they didn't give any intervention of combination therapy). The interventions were divided into all of the respondent's life; assessment, childhood, adolescent, adulthood, elderhood, and reassessment as evaluation session and ended by tapping (for each session) in nine acupuncture spots while said words set affirmation. Each session of therapy has been done for about 45 minutes. Both of them were assessed for their depression score. Approval Ethical Clearance was obtained (with approval number 581/KEPK/UPNB/IX/2024) before we gave the intervention to respondents or collected data. The instrument of the dependent variable of this research used the Geriatric Depression Scale 15 (Cronbach $\alpha=0,817$). After data were collected, the statistic process was then carried out by using an independent T test.

RESULT AND DISCUSSION

This study conducted for almost two weeks on 20 respondents who was met the criteria. Their characteristic described in the table 1 below:

Table 1. Respondent Characteristics

Respondent Characteristics	Tendency Central	Amount of Respondent	Percentage
Age (Years)	Mean=60,95 Median= 62,5 SD=8,09 Min= 48 Max=75		
Gender			
Man		7	35
Woman		13	65
Illness/ Medical Diagnose			
Lymphadenopati Non Hodgkin		7	35
Ca. Mammae			
Skin Cancer		7	35
Ca. Paru		3	15
Ca. Ovarium		1	5
Sarcoma Capossi		1	5
Chemotherapy frequency that was done	Mean= 5,6 Median= 4,5 SD=5,195 Min=1 Max 23		
Start Chemotherapy (month)	Mean= 3,6 Median= 2 SD= 4,346 Min=0 Max= 18		
Education			
Not School		7	35
Elementary School		8	40
JHS		2	10
SHS		2	10
University		1	5
Spouse			
Still alive		6	30
Passed away		14	70
Health Insurance			
Yes		20	100
No		0	0
Occupation			
Jobless		4	20
Farmer		9	45
Merchant		3	15
Labourer		2	10
Honorary employee		1	5
Retirement civil servant (PNS)		1	5
Caregiver			
Yes		20	100
No		0	0

Based on the table of results of the study of the characteristics of respondents obtained, it is known that the average age of respondents is 60.95, or 61 years, and less than half of the respondents have non-Hodgkin's lymphadenopathy and Carcinoma Mammae, which is 35% of the total respondents. More than half of the respondents of this study were women. While the average length of time since the respondent started chemotherapy was 3.6 months ago, almost half of the respondents (40%) had a final education level of elementary school and worked in farming/gardening. All respondents in this study have health insurance and caregivers.

The result of this research showed that there is a significant differentiation depression score between two groups by the statistic analyze revealed that p value 0,000 ($\alpha=0,05$). The mean of intervention group is 6,2 out of 15, in the other hand control group is 10,1 out of 15. It seems that control group has higher depression score than intervention group. The result of this research could be seen in the table 2 below.

Table 2. Research Result

Analyze	Intervention Group	Control Group
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Mean	6,2	10,1
Minimum	4	8
Maximum	9	13
95% CI	5,26-7,12	9,01-11,19
Bivariate analyze: p value 0,000		

Based on the results of the study, it is known that H_0 of the study was rejected as proven by the analysis using the independent T Test with p value 0.000. This revealed that LR-EFTT combination therapy is effective in treating depression in elderly patients undergoing chemotherapy. Based on this result, we know that combines therapy of Life Review Therapy and Emotional Freedom Technique Therapy (LR-EFTT) effective to alleviate depression. In the process of collecting data of intervention group, we completed by an average of 2 days for 6 sessions.

This study shows that combined therapy of LR-EFTT is suitable with other evidence that shows monotherapy of each psychotherapy is effective to decrease depression [10], [13], [14], [15], [16]. From the systematic review research by Ng [17] who analyzed the systematic review results of 9 research articles related to Life Review Therapy using various databases from PubMed, ScienceDirect, PsychArticles, Scopus, Psychology and Behavioral Science Collection, Cochrane, EBSCO, and other databases, it revealed that Life Review Therapy is good therapy for people with cancer. In addition, the results of research from Bushra et al. [15], who conducted a systematic review and meta-analysis obtained through 11 electronic databases, showed that Life Review Therapy has an effect on depression in the elderly, stating that the group given life review therapy treatment had a large influence in reducing the level of depression compared to the control group in post-intervention and follow-up or in the elderly who were in primary care settings such as hospitals. In addition, Huang et. al. [18] who conducted a systematic review and meta-analysis on research articles related to the effects of Life Review Therapy on the quality of life of terminal patients showed that Life Review Therapy is appropriate and safe for terminal patients.

Leung et al. in Huang et. al. [18] stated that Life Review is considered an effective psychospiritual intervention for individuals who are facing death. Researchers Rubin et al. [19] who conducted RCT's (Randomized Controlled Trials) from systematic review and meta-analysis research articles that stated agreement on Life Review Therapy and Reminiscence Therapy interventions given to elderly people with depression showed that from 25 studies that met the criteria for this treatment had a moderate strength of relationship. From various results of systematic review or meta-analysis studies, it can be concluded that this Life Review Therapy is appropriate for elderly people undergoing chemotherapy due to cancer, where cancer is a terminal disease. Callahan in Curch et al. [20] stated that Emotional Freedom Technique (EFT) has been widely studied as an intervention that can be given as an intervention in various psychological conditions such as anxiety, depression, phobias, Post Traumatic Syndrome Disorder (PTSD). Curch [21] stated that there was a decrease in respondents' depression scores from 72.99 to 60.04 after being given 6 EFT sessions.

Bach et.al. [11] stated that giving Emotional Freedom Technique Therapy can reduce depression by 35%, happiness increases by 31%; $P=0.000$ with the conclusion that this therapy can improve mental well-being. Emotional Freedom Technique Therapy (EFTT) is a therapy that works on the energy pathways of the body system that was born from traditional Chinese science. Brain scans, including fMRI (functional MRI), have shown that stimulating acupuncture points with needles sends signals directly to the "survival" part of the brain where the "fight-or-flight" part is located. Words alone cannot reach this area of the brain, which has no direct neural connection to the rational language center. When we are stressed, the brain's prefrontal cortex goes "offline," and our bodies begin to flood with adrenaline and cortisol. EFT interventions can

help calm the amygdala, facilitate the release of calming chemicals, and bring us back to a more empowered state (14).

In accordance with the theory proposed by Korean researcher Kim Bong-han in the 1960s, recent research has revealed microscopic thread-like anatomical structures that appear to be connected to the meridian system. This is called the Primo Vascular System or PVS. PVS is involved with the human body's fascial network and may be the 'missing link' to understanding the physical mechanisms of acupuncture/acupressure and, therefore, EFT. Fascia is the body's connective tissue and, as such, surrounds and connects every muscle and organ in the body. The fascial system is known to transmit electrical signals throughout the body [22]. Based on this explanation, we can understand why EFTT is effective for individual depression. Meanwhile, Life Review Therapy will make the elderly recall their past experiences and be able to see life experiences as a whole and take positive meaning from the experiences they have gone through. That is why Life Review Therapy has a good effect in reducing depression.

Understandably, LR-EFTT is effective in reducing depression in elderly people undergoing chemotherapy, where 65% of respondents are women who need a friend to share emotions with. As we know, women are individuals who are dominant in feelings. Based on some study, it revealed that women express more emotionally than man. Men were more activated than women in the left amygdala for positive emotions, but women were more activated in the left amygdala for negative emotions [23]. Elderly patients who have taken chemotherapy and made community also concluded from Focus Group Discussion that they need mental support from their spouse, their children, and also nurses because they tend to feel stressed, depressed, and afraid of death.

CONCLUSION

This study showed that LR-EFTT is effective to decrease the depression of elderly who took chemotherapy. This therapy should be repetitive study by other researcher and also this combination therapy must be continued by nurse in chemotherapy unit, as we know there some mental issue to the patient who took chemotherapy.

AUTHOR CONTRIBUTION

This study has some processes, with each role ranging from conception and design of the work of study, finding the appropriate questionnaire, and conducting validity and reliability tests for the questionnaire to data collection, data analysis, and interpretation, drafting of the article, critical revision, and final approval of the version to be published. We, as a team, collaborated on each part of the process. The major research leader is the corresponding author who conducted this study from its start and ended by publishing this research article. Nike Puspita Alwi: conceptualization, conducted therapy, analyzed data by software, writing; Nandie Hayati: data collected, handled permitted letter legal research; Rita Gusmiati: data collected; Ismeldi: Permitted letter legal research from the chemotherapy department.

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REFERENCES

- [1] R. L. Siegel, A. N. Giaquinto, and A. Jemal, “Cancer statistics, 2024,” *CA Cancer J Clin*, vol. 74, no. 1, pp. 12–49, Jan. 2024, doi: 10.3322/CAAC.21820.
- [2] Ferlay J. *et al.*, “Global Cancer Observatory: Cancer Today,” France, 2024. Accessed: Mar. 30, 2024. [Online]. Available: <https://gco.iarc.who.int/media/globocan/factsheets/populations/935-asia-fact-sheet.pdf>
- [3] S. Silva, A. Bártolo, I. M. Santos, A. Pereira, and S. Monteiro, “Towards a Better Understanding of the Factors Associated with Distress in Elderly Cancer Patients: A Systematic Review,” *Int J Environ Res Public Health*, vol. 19, no. 6, Mar. 2022, doi: 10.3390/IJERPH19063424.
- [4] J. N. Morey, I. A. Boggero, A. B. Scott, and S. C. Segerstrom, “Current Directions in Stress and Human Immune Function,” 2015, doi: 10.1016/j.copsyc.2015.03.007.
- [5] F. S. Dhabhar, “Effects of stress on immune function: The good, the bad, and the beautiful,” 2014, *Humana Press Inc*. doi: 10.1007/s12026-014-8517-0.
- [6] W. Evilia, A. A. S. Wahyuni, and L. A. Aryani, “Literature Review: Immune System and Its Relation to Depression,” *Jurnal Psikiatri Surabaya*, vol. 10, no. 2, p. 46, Sep. 2021, doi: 10.20473/jps.v10i2.28416.
- [7] A. H. Miller and C. L. Raison, “Immune System Contributions to the Pathophysiology of Depression,” *Focus (Madison)*, vol. 6, no. 1, pp. 36–45, Jan. 2008, doi: 10.1176/FOC.6.1.FOC36.
- [8] N. P. Alwi, “Life Review Therapy,” in *Terapi Keluarga dan Kelompok dalam Keperawatan Jiwa*, T. H. Putri, Ed., Malang: Future Science, 2024, ch. 7, p. 93118.
- [9] G. Kleijn *et al.*, “The efficacy of Life Review Therapy combined with Memory Specificity Training (LRT-MST) targeting cancer patients in palliative care: A randomized controlled trial,” 2018, doi: 10.1371/journal.pone.0197277.
- [10] N. Robbins, K. Harvey, and M. D. Moller, “Emotional Freedom Techniques for Postpartum Depression, Perceived Stress, and Anxiety,” *Nurs Womens Health*, vol. 28, no. 1, pp. 41–49, Feb. 2024, doi: 10.1016/J.NWH.2023.09.005.
- [11] D. Bach, G. Groesbeck, P. Stapleton, R. Sims, K. Blickheuser, and D. Church, “Clinical EFT (Emotional Freedom Techniques) Improves Multiple Physiological Markers of Health,” *J Evid Based Integr Med*, vol. 24, pp. 1–12, Feb. 2019, doi: 10.1177/2515690X18823691.
- [12] Sugiyono, *Metode Penelitian Kuantitatif Kualitatif dan R&D*. Bandung: CV. Alfabeta, 2021.
- [13] M. B. Tambunan, L. Setiawati, L. Suwarni, and Mardjan, “EFT (Emotional Freedom Technique) As An Alternative Therapy To Reduce Anxiety Disorders and Depression in People Who Are Positive Covid-19,” *PSIKOSTUDIA: Jurnal Psikologi*, vol. 11, no. 1, pp. 59–68, Mar. 2022.
- [14] Ismonah And A. O. Sihana, “Pengaruh Life Review Therapy Terhadap Kualitas Hidup Pada Domain Psikologis Pasien Kanker Payudara Yang Menjalani Kemoterapi Di Rsi Sultan Agung Semarang,” *Adi Husada Nursing Journal*, Vol. 5, No. 2, Pp. 32–38, Dec. 2019.
- [15] B. R. Al-Ghafri, A. Al-Mahrezi, and M. F. Chan, “Effectiveness of life review on depression among elderly: A systematic review and meta-analysis,” Sep. 01, 2021, *African Field Epidemiology Network*. doi: 10.11604/pamj.2021.40.168.30040.
- [16] N. Güdücü and N. K. Özcan, “The effect of emotional freedom techniques (EFT) on postpartum depression: A randomized controlled trial,” *Explore*, vol. 19, no. 6, pp. 842–850, Nov. 2023, doi: 10.1016/j.explore.2023.04.012.
- [17] J. K. Q. Ng, P. Subramaniam, F. Ismail, M. Ahmad, and N. L. Shamsudin, “Life Review Intervention: A Systematic Review of Its Feasibility Among Persons With Cancer,” Nov. 01, 2022, *Elsevier Inc*. doi: 10.1016/j.jpainsymman.2022.07.016.

- [18] M.-H. Huang, R.-H. Wang, and H.-H. Wang, “Effect of Life Review on Quality of Life in Terminal Patients: A Systematic Review and Meta-Analysis,” 2019. [Online]. Available: <http://journals.lww.com/jnr-twna>
- [19] A. Rubin, D. E. Parrish, and C. E. Miyawaki, “Benchmarks for evaluating life review and reminiscence therapy in alleviating depression among older adults,” *Social Work (United States)*, vol. 64, no. 1, pp. 61–70, Jan. 2019, doi: 10.1093/sw/swy054.
- [20] D. Church, G. Yount, and A. J. Brooks, “The effect of emotional freedom techniques on stress biochemistry: A randomized controlled trial,” in *Journal of Nervous and Mental Disease*, Oct. 2012, pp. 891–896. doi: 10.1097/NMD.0b013e31826b9fc1.
- [21] D. Church, “Reductions in pain, depression, and anxiety symptoms after PTSD remediation in veterans,” *Explore (NY)*, vol. 10, no. 3, pp. 162–169, 2014, doi: 10.1016/J.EXPLORE.2014.02.005.
- [22] B. Moore-Hafter, J. Barbee, C. Zacharias-Miller, L. Shaner, S. Garfield, and S. G. Phd, “Free Tapping Manual A Comprehensive Introductory Guide to EFT (Emotional Freedom Techniques) The EFT International Free Tapping Manual A Comprehensive Introductory Guide to EFT (Emotional Freedom Techniques),” 2023.
- [23] I. Poláčková Šolcová and A. Lačev, “Differences in male and female subjective experience and physiological reactions to emotional stimuli,” *International Journal of Psychophysiology*, vol. 117, pp. 75–82, Jul. 2017, doi: 10.1016/J.IJPSYCHO.2017.04.009.