



Development of A Family Ecotherapy Model in Treating Family Members with Chronic Diseases in Mekon Indah, Kupang District

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Abstract: Interpretative Phenomenological Analysis on members of the Confucian Union Community of Charity show that ecotherapy make a sufficient contribution to curing cancer. The aim of this research is to apply the ecotherapy model experienced by participants through Healthy Life Guidance (BHS) or Love Configuration Union (SKK) in biological, psychological, sociological and spiritual therapy for families, implementation and evaluation of the implementation of family ecotherapy and conducting trials of a therapy model based on the results of the development of family ecotherapy on the quality level of the family in caring for family members, the model trial was carried out in the Mekon Indah area of Kupang City with a total sample of 71 respondents. This study used a quasy experimental design with non-equivalent group pretest and posttest design methods, because it was considered to have better internal and external validity. Researchers used two non-equivalent groups, one group functioning as a control group, and another group functioning as a treatment group. The instrument used was the DASS 42 questionnaire. The statistical test used was the Wilcoxon Signed Rank Test to see differences in patients before and after taking ecotherapy treatment through Healthy Life Guidance (BHS) in this Love Configuration Union. The results showed depression, anxiety and stress in patients with a P value <0.05 so it can be concluded that there are differences in the psychological burden of patients getting better after participating in ecotherapy treatment at Mekon Indah

Keywords: Family ecotherapy; model trials; non-equivalent group pretest; posttest design.

Introduction

According to Kahveci & Göker, (2019) ecotherapy is the term given to various treatment programs that aim to improve mental and physical well-being through outdoor activities in nature. Connecting with nature in this way has many positive health benefits. Early indications and the evidence found shows an astonishing picture of the effectiveness of its success also cannot be assessed using currently developing health research standards. World Health Organization (WHO) says mental health includes subjective well-being, perceptions of confidence in one's abilities, autonomy,

competence, feelings of intergenerational dependence, and self-actualization of one's intellectual potential and emotional state, a state of well-being includes the reality of their abilities (Magyar & Keyes, 2019).

Depression is a mental disorder characterized by the appearance of symptoms of decreased mood, loss of interest in something, feelings of guilt, sleep or appetite disturbances, loss of energy, and decreased concentration (Horwitz & Wakefield, 2007). While anxiety is an unpleasant emotional state in the form of psychophysiological responses that arise in anticipation of unreal or imaginary danger, it appears to be caused by intrapsychic conflicts that are not directly realized (Sunardi & others, 2022). If anxiety is left untreated, it

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will cause problems for patients. If viewed physically, anxiety can cause loss of appetite, weight loss, insomnia, hypersomnia, disturbed sleep patterns, physical fatigue, and discomfort, while the impact on psychosocial includes: worry, anxiety, feeling worthless, low self-esteem, irritability, feelings of guilt, hopelessness, self-blame, inability to concentrate, inattention, inability to make decisions, and most seriously the risk of suicide (Alexander et al., 2007).

Stress is a condition when there is mental pressure and anxiety caused by problems that occur in human life (Maslach & Jackson, 2013). Symptoms experienced by patients are irritable and angry, explosive and withdrawn from family and friends; neglecting responsibilities, reduced work efficiency or difficulty concentrating and experiencing emotional stress such as constantly feeling sad or crying (Klerman & Weissman, 1994). The effects of depression, anxiety and stress that arise as a result of the suffering experienced by patients. In short, the disease can affect the psychological condition of the patient. Generally, Diseases that can attack patients mentally are chronic diseases. This is due to various predisposing factors such as patients worrying about their declining or weakening physical condition, fear that the disease will not improve soon, length of time to undergo treatment and frequent in and out of hospital, costs to be used, how long the healing process takes, fear of death which causes sufferers to look restless, difficult to rest and decreased appetite (Mitia Eka Wati et al., 2020). This has an impact on psychology such as depression and changes in self-concept

Based on the results of the 2013 Basic Health Research (Riskesdas) from the Health Development Research Agency of the Ministry of Health of the Republic of Indonesia (Riskesdas, 2013), the prevalence of severe mental disorders in the Indonesian population is 1.7 per mil. Most severe mental disorders in DI Yogyakarta, Aceh, South Sulawesi, Bali and Central Java. Handling of mental disorders is not only about individuals, but also all individuals in the family. Even though it seems that the family shows good coping, there are psychological changes seen in the family when one of its members suffers from a mental disorder (Mislianti et al., 2021). According to Detach (2007) someone who has offspring with schizophrenia will feel an inner conflict within him. This is a consideration for someone to get therapy (Karon & VandenBos, 1977).

Through several studies it has been proven that psychoeducational therapy can improve general symptoms and reduce rejection and family burden. This therapy consists of the main program to provide education to families about mental disorders, and management of clients with family communication

patterns and problem solving. According to Lefley, (2009) Family psychoeducational therapy is evidence-based nursing practice. This therapy program is taught to the family and then the family teaches other family members about the disease experienced by one of the family members. Research conducted by Wijaya, (2014) regarding Family Psychoeducation in Schizophrenic Patients showed that the process of psychoeducation for families of schizophrenics can be successful when awareness and sensitivity of family members about the patient's condition so that the patient can return to optimal functioning. Another study was conducted by Dominguez-Martinez et al. (2017) concerning the effect of family psychoeducational therapy on the ability of families to care for family members with mental disorders with the results showing that family psychoeducational therapy was effective in increasing the cognitive and psychomotor abilities of families in caring for family members with mental disorders.

The results of Rinihapasari, (2011) found several family problems while caring for family members. Then management is given to overcome these problems using ecotherapy therapy for patients with common diseases with their families. In its implementation, aspects of fulfilling spiritual needs are included to strengthen the management of various family problems. The results obtained were that the level of family anxiety decreased after being given additional fulfillment of spiritual needs. The therapy is then referred to as family psychoeducational spiritual therapy. In order to perfect the therapy model, in the second year development and refinement were carried out through focus group discussions, so that a therapy model was prepared that was ready for use. Based on this background, then it is necessary to continue this research in the third year to conduct trials of therapeutic models in a wider area. To prove the effectiveness and efficiency of the model in reducing the level of family anxiety.

Method

This study used a quasy experimental design with non-equivalent group pretest and posttest design methods, because it was considered to have better internal and external validity (Singh, 2021). Researchers used two non-equivalent groups, one group functioning as a control group, and another group functioning as a treatment group. The instrument used was the DASS 42 questionnaire. The statistical test used was the Wilcoxon Signed Rank Test to see differences in patients before and after taking ecotherapy treatment through Healthy Living Guidance (BHS) in this Love Configuration Union.

Result and Discussion

Gender of Respondents

The distribution of respondents based on gender in this study showed that the frequency of male patients was more, namely 37 respondents, while 34 respondents were female. Chronic disease and complications affect more male respondents than female, namely 22 people with chronic disease and 15 people experiencing complications. While patients with depression, anxiety

and stress did not show a significant difference where the highest number of patients who experienced depression were women with 21 people, patients who experienced anxiety both men and women had the same number, namely 22 people and patients who experienced the highest stress in 19 patients with male sex.

Table 1. Data on the Number of Respondents Based on Gender with Chronic Diseases, Complications, Depression, Anxiety and Stress in Patients with Common Diseases in Mekon Indah in 2023

Gender	F	Chronicle	Complications	Depression	Worry	stress
Man	37	22	15	18	22	19
Woman	34	12	5	21	22	18
Total	71	34	20	39	44	37

Respondent Age

The table 2 shows that the respondents in this study were more in the range of 55-64 years with a total of 18 respondents. While the least number of respondents was in the age range 0-14 with no number of respondents. Patients who experience a lot of chronic diseases are patients with the age range of 55-64 years, while the lowest is in the age range 0-14 years and 25-34 years,

namely 0. Patients with the most complications are in the age range > 65 of 9 people, while those who the lowest was found in the age range 0-14 years and 25-34 years as well. Patients who experienced depression were highest in the age range of 25-34 years and 55-64 years, namely 9 patients.

Table 2. Respondent Age Data Based on Chronic Disease, Complications, Depression, Anxiety and Stress in Patients in Mekon Indah in 2023

Respondent Age	F	Chronicle	Complications	Depression	Worry	stress
0 - 14	0	0	0	0	0	0
14 - 24	10	1	1	5	6	6
25 - 34	16	0	0	9	8	7
35 - 44	12	4	1	5	7	5
45 - 54	8	5	1	4	5	4
55 - 64	18	15	8	9	10	8
> 65	7	9	9	7	8	7
Total	71	34	20	39	44	37

Respondent's Occupation

The table 3 shows that the majority of respondents work as housewives (IRT) of 20 people and the least number of respondents are carpenters, civil servants and lobster breeders, namely 1 respondent. The highest number of patients suffering from chronic diseases were housewives, namely 8 respondents, while the lowest were lobster breeders, namely 0. Patients who experienced complications mostly were housewives,

namely 4 people, and the lowest were patients with lobster breeders. . Patients with depression were more in the type of domestic work and the lowest was in driver and nun workers, which was 0. Meanwhile, patients who suffered from anxiety were highest in IRT workers, namely 12 people, then the lowest was in the jobs of drivers, farmers.

Table 3. Data on Frequency of Respondents' Occupational Types with Chronic Diseases, Complications, Depression, Anxiety and Stress in Patients in Mekon Indah in 2023

Respondent's occupation	F	Chronicle	Complications	Depression	Worry	stress
Self-employed	17	7	3	11	12	10
IRT	20	8	4	12	11	10
Lecturer	2	2	2	2	2	2
Student	7	1	1	4	5	5

Driver	3	2	1	0	1	0
Teacher	5	1	1	1	2	1
Farmer	4	3	2	1	1	1
Bricklayer	1	1	1	1	1	1
civil servant	1	2	1	1	1	0
Nun	2	2	0	0	1	0
Lobster Breeders	1	0	0	1	1	1
Retired	2	2	2	2	2	2
Don't have a job	6	3	2	3	4	4
Total	71	34	20	39	44	37

Distribution of Depression, Anxiety and Stress Levels

The table 4 shows that most of the patients did not experience depression (45.1%), anxiety (38.0%) or stress (47.9%) or were still at normal levels. Even so, the presence of several patients suffering from depression, anxiety and stress should not be underestimated because psychological problems greatly hinder the

patient's recovery process. Meanwhile, patients with depression had the lowest level of very severe depression (2.8%), patients with anxiety also had the lowest level of very severe depression (8.5%) and stress at a very severe level (4.2%).

Table 4 Data on Depression, Anxiety and Stress Levels in Patients at Mekon Indah in 2023

Level	Depression	Percentage (%)	Worry	Percentage (%)	stress	Percentage (%)
Normal	32	45.1	27	38.0	34	47.9
Light	15	21.1	13	18.3	8	11.3
Currently	12	16.9	16	22.5	20	28.2
Critical	10	14.1	9	12.7	6	8.5
Awfully	2	2.8	6	8.5	3	4.2
Total	71	100	71	100	71	100

Table 5. Data on the Number of Chronic Diseases and Complications Based on Levels of Depression, Anxiety and Stress in Patients in Mekon Indah in 2023

Level	Chronicle			Complications		
	Depression	Worry	stress	Depression	Worry	stress
Normal	16	11	16	7	3	6
Low	7	8	4	6	5	3
Currently	5	8	8	2	7	8
Critical	4	4	3	3	2	1
Awfully	2	3	3	2	3	2
Total	34	34	34	20	20	20

The explanation table 5 shows that patients in Mekon Indah who were interviewed who suffered from chronic diseases at most did not experience depression (16 people), stress (11 people) and anxiety (16 people), while the lowest was at a very severe level, namely depression by 2, anxiety by 3 people and stress of 3 people. Likewise in patients who experienced complications where the patient was at a normal level both depressed (7 people), while patients with

complications had anxiety at a moderate level of 7 people, while the lowest depressed patient was at a very severe level of 2 people and patients with the lowest anxiety at a severe level of 2 people. While patients with complications had the highest stress level at a moderate level, namely 8 people and the lowest at a severe level, namely 1 person.

Table 6. Comparison of patients before and after following ecotherapy treatment

Level	Depression	Worry	Before stress	Depression	Worry	After stress
Normal	32	27	34	71	71	71
Low	15	13	8	0	0	0
Currently	12	16	20	0	0	0
Critical	10	9	6	0	0	0
Awfully	2	6	3	0	0	0
Total	71	71	71	71	71	71

The table 6 is a comparison table for the patient's condition before and after taking ecotherapy treatment through Healthy Life Guidance while at Mekon Indah where it was found that all patients with problematic psychological conditions slowly experienced changes after taking the ecotherapy treatment. It can be seen that all patients experienced healing from a psychological perspective. Based on the results of interviews with patients, it was also found that almost all patients

experienced biological changes to the complaints they experienced, even though there was no medical check carried out by the patient himself. However, patients feel that their complaints about the symptoms of their illness are gradually decreasing or some have even been cured, besides that the patient's life is spiritually getting better.

Table 7. Wilcoxon Signed Rank Test Statistical Test Results

	Post-Pre Depression	Post-Pre anxiety	Post-Pre Stress
Z	-5,511	-5,837	-5,416
asympt. Sig. (2-tailed)	0.000	0.000	0.000

The test results above used the Wilcoxon test to see differences in patient conditions before taking ecotherapy treatment and after taking ecotherapy treatment. The table above shows the p value of Depression, Anxiety and stress <0.05 so it can be concluded that there is a significant difference between Depression, Anxiety and Stress in Mekon Patients before and after taking ecotherapy treatment.

In several studies related to the psychological condition of patients because they were diagnosed with certain diseases, for example; Patients with kidney failure experience problems of depression, anxiety and stress because the patient's condition cannot regulate himself and tends to depend on health professionals (Goh & Griva, 2018). This condition actually causes biological, psychological, social and spiritual changes or imbalances in patients such as rejection, anger, feelings of fear, anxiety, feelings of helplessness, hopelessness and even suicidal thoughts (Nurchayati, 2016). Other diseases such as stroke can actually cause paralysis and decreased ability to speak so that patients feel depressed about their condition.

According to Chemerinski & Robinson, (2000) depression is the most common neuropsychiatric disorder in post-stroke clients, around 35% experience depression. Nearly 50%-80% of cases of depression are underdiagnosed by non-psychiatrists and psychiatrists. Meanwhile, TB sufferers cause feelings of fear and guilt; fear of transmitting the disease to other family members, feelings of guilt because they feel they have troubled

family members (Furin et al., 2020). In research conducted by Peni et al., (2019) stated that TB patients also said they were worried that treatment would not be complete, because the treatment time was quite long and worried about their current condition, because currently some of them were experiencing complications such as complications with heart, stomach, liver disease and some had pleural effusion. In addition, they are very worried that they can transmit the disease to their family or to people who are around them and worry that they will be shunned or ostracized by their family, neighbors, co-workers and the community around them because they suffer from an infectious disease. These factors lead to psychological problems for sufferers such as stress, anxiety, helplessness, fear and depression (Polikandrioti et al., 2015).

The greater the number of chronic diseases suffered by respondents, the greater the risk of suffering from mental emotional disorders (Scott et al., 2016). Respondents who suffer from one chronic disease are 2.6 times more likely to experience mental-emotional disorders, those who suffer from two chronic diseases are 4.6 times more likely to suffer from three chronic diseases or more are 11 times more likely to suffer from chronic diseases (Widakdo & Besral, 2013). Thus the condition of the quality of life of the elderly tends to decrease as a result of experiencing psychological tension.

Research conducted by Strine et al., (2008) related to the relationship of anxiety in the elderly with quality

of life in the elderly diagnosed with chronic disease where the elderly who experience various kinds of chronic disease complaints cause anxiety. This is supported by several conditions in the elderly who live with their families where family members have not provided full support for the elderly. Some also said that the elderly felt less free because the decision was in the hands of powerful family members and some also said they felt lonely because family members had to work (Siregar, 2021). Psychological problems such as anxiety and depression are also the most common among heart patients (Rutledge et al., 2014). Meanwhile, in ecotherapy treatment this does not only refer to the patient's biological healing but also to mental and spiritual healing (Buzzell, 2020). So, there are several therapies that must be carried out in this ecotherapy including; religious therapy, therapy with cultivating the soil, therapy with bird sounds, therapy with exercise, therapy with organic food, social interaction therapy and drug therapy (Clinebell, 2013).

Conclusion

The conclusion of this study is that there are changes experienced by patients in terms of psychology including depression, anxiety and stress experienced by patients before taking ecotherapy treatment. The patient's biological condition includes the patient's complaints about the disease he is suffering from gradually improving and recovering based on the results of interviews with the patient. In addition, the patient's spiritual condition is also getting better.

Author Contribution

This article was prepared by three people, namely P.W, M.B, and A.S.L.K. All research members carried out each stage cooperatively until this article was completed.

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Conflicts of Interest

The authors declare no conflict of interest.

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