

Research Article

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HORTICULTURAL THERAPY REDUCES STRESS IN ELDERLY GRIEVING IN THE MUNA ISLANDS, INDONESIA

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Abstract

Background: Horticultural therapy is a process through planting, gardening activities, and closeness to nature used as a medium in therapy and rehabilitation programs. Data on the number of older adults in the Muna archipelago in 2018, there are 59 elderly where among them, there are 25 older adults who are suffering from the death of a life partner. Preliminary studies that have been conducted on grieving older people obtained information that they feel grieved because of the loss of a spouse or loss of children so that they think excessive loss causes no enthusiasm in continuing their life that it causes a lazy attitude to eating, lazy to move to hunt for mental tranquility. This study aimed to determine the effect of providing horticultural therapy to reduce stress in the elderly due to grieving in the Muna Islands.

Methods: This type of research is analytic, with a Quasi-experimental research design, with data collection methods using pre-test and post-test control group design techniques, with a total population of 25 people and a sample of 20 respondents consisting of 2 groups: the intervention group and the control group, then the data obtained were analyzed using the Paired T-test.

Results: The results showed a significant effect of using horticultural therapy on reducing the stress experienced by the elderly who were grieving, where statistical analysis showed a significance value of $0.001 < 0.05$, $t \text{ value} = 4.595 > 1,383$.

Conclusion: Horticultural therapy reduces the stress experienced by the elderly who are grieving. Through horticultural therapy, grieving elderly divert their sense of loss in farming activities or plant cultivation activities.

Key words: *Stress, Elderly Grieving, Horticultural Therapy*

INTRODUCTION

The aging process is a natural process faced by humans; in this stage, naturally, there is a decline or change in physical, psychological, and social conditions that interact with one another. The situation tends to potentially cause physical and mental health problems and even psychological health (1). Mental health problems that often arise in the elderly include anxiety, depression, insomnia, and dementia. One of the events that will be experienced by the elderly is the loss of friends and loved ones (2). The loss of someone close and loved by death is a harrowing event for someone left behind, both by those closest to and those around him. The end of someone we know first and foremost is a very close relative to our next life, especially if that person has an emotional bond that will cause a deep sense of sadness, which results in much loss, unhappiness, and less ability to live a good life (3).

Elderly who experience loss will cause emotional shock so that it appears weak, stressed, avoided, angry, feels guilty, confused, and other grieving resolution behavior. Besides that, they also experience symptoms of anxiety, easily distracted attention, disorganization, numbness, sadness, apathy, crying, stress, the need to talk about death, and psychological pain for quite a long time (4). Various losses and adverse life events are the main determinants of psychiatric diseases in the elderly. If the failure occurs in old age, the person has a risk of experiencing depression compared to younger individuals due to decreased resistance to conditions of difficulty, a higher incidence of chronic disease, and damage to social support networks. If this is not handled, there is a higher risk of experiencing physical and mental illness than younger individuals (4). Stress due to loss, especially in elderly grieving, needs to get individual attention and treatment so that they can return to their activities and foster a sense of self-ability to live without those

closest to them, thus preventing illness due to stress experienced through horticultural therapy, it is hoped that grieving older adults can suppress the feeling of loss experienced and can suppress the stress that disturbs his soul (5). Horticultural therapy is a process through planting, gardening activities, and closeness to nature used as a medium in therapy and rehabilitation programs. This gardening program offers an opportunity for relaxation and freeing yourself from the harsh social environment (6).

The benefits of horticulture have been reported to increase motoric behavior, coping with success or failure, increasing social ability in groups, being committed and responsible, building self-esteem, increasing cognitive skills, self-expression and creativity, and opportunities to get out of activities, and as recreation. The horticultural application can be implemented in various places, such as hospitals, psychiatric institutions, social institutions, rehabilitation centers, and even schools. Research conducted by Detweiler (7) Shows that horticulture therapy has proven to be effective in reducing the level of depression in the elderly who live in group homes. Furthermore, Yao (8). Mention that horticultural activities can also improve the psychology and well-being of the elderly, improve health according to the individual's judgment, and increase social interaction with the surrounding environment.

METHOD

This research was carried out in July-August 2018 in the Muna archipelago, with a total sample of 20 older adults who were experiencing sorrow. The research design used was Quasi Experiment with data collection methods using pre-test and post-test control group design techniques (9). Data obtained were analyzed using univariate and bivariate analysis with a Paired sample t-test (pre-test and post-test one-group design).

RESULTS

Table 1. Distribution of Elderly Stress Grief Before and After Horticultural Therapy in the Muna Islands

No	Pre Test	Category	Post Test	Category
1	100	Severe stress	114	mild stress
2	99	Severe stress	112	mild stress
3	96	Severe stress	119	mild stress
4	98	Severe stress	110	mild stress
5	97	Severe stress	113	mild stress
6	128	mild stress	128	mild stress
7	95	Severe stress	101	Severe stress
8	136	mild stress	140	mild stress
9	97	Severe stress	107	mild stress
10	101	Severe stress	104	Severe stress
Mean	104,70		114,80	

Table 2. Stress Distribution of Elderly Grieving Pre- and Post-Test in the Muna Islands

No	Pre Test	Category	Pos Test	Category
1	98	Severe stress	101	Severe stress
2	96	Severe stress	119	mild stress
3	98	Severe stress	101	mild stress
4	96	Severe stress	119	mild stress
5	121	mild stress	128	mild stress
6	95	Severe stress	113	mild stress
7	97	Severe stress	101	Severe stress
8	136	mild stress	142	mild stress
9	96	Severe stress	99	Severe stress
10	132	mild stress	136	mild stress
Mean	106,50		115,90	

Table 3. Effect of Horticultural Therapy on Stress Reduction in Elderly Grieving in the Muna Islands

No	Intervention Group				Control group		
	Elderly Stress Grieving	SD	t count	P-value	SD	t count	P-value
1.	Pre Test	14,622	4,595	.001	16,427	3,518	.007
2.	Post Tes	114,80			15,673		

DISCUSSION

Stress in the elderly who experience grief needs individual attention and treatment through horticultural therapy, namely through farming, gardening, and getting closer to the natural surroundings that can be used as a medium for therapy or rehabilitation. This horticultural therapy offers an opportunity for elderly patients experiencing grief to relax and free themselves from the social environment (10). The results of the univariate analysis conducted on a sample of older adults who experienced grief with an age range of 61 to 72 years, the average stress score of the elderly before the intervention was 104.70 and after being given treatment through horticultural therapy became 114.80, while in the elderly who experiencing grief before being given intervention through horticultural therapy is 106.50 and after being treated it becomes 115.90. Furthermore, the results of the bivariate analysis obtained a significance value of $0.001 < 0.05$ with a value of $t = 4.595 > 1.383$. This shows a significant effect of horticultural therapy on the level of anxiety in the elderly grieving in the Muna district. This study's decrease in stress levels is related to the horticultural treatment carried out on elderly individuals who experience grief. Through horticultural therapy, the elderly are more focused on cultivating or caring for plants and forgetting the problems they are experiencing. A decrease in stress evidences this after measurement.

Wang et al. (3) said that horticultural therapy was proven to reduce depression levels in the elderly, improve the psychology and welfare of the elderly, improve the health of elderly individuals, and increase social interaction with the surrounding environment. Furthermore, Chan et al. (11) say that horticultural therapy may offer a pleasant experience for the elderly, thereby providing intrinsic motivation. This is because older people will be self-motivated to appreciate nature and engage in gardening. Horticultural

therapy will increase their level of physical activity and their ability to cope more effectively with the challenges faced in everyday life. In addition, Nicholas et al. (12) said that horticultural therapy provides health services that are cost-effective and involve older adults in a more active and healthier lifestyle, and help reduce mental illness and the health, social and economic costs of society.

Horticultural therapy using plants through gardening activities can improve the quality of life of aging populations worldwide. Because this activity can improve very positive behavior, overcome failure, improve social skills in groups, commitment, and responsibility, build self-esteem, and improve cognitive skills and recreation (13). Horticultural applications can be applied in various places, such as hospitals, nursing homes, social homes, rehabilitation centers, and schools. The expected result of this horticultural therapy is the emergence of happiness and reduced stress levels experienced by the elderly.

CONCLUSION

Horticultural therapy has a significant effect on reducing stress in the elderly who are suffering from grief in this study that has been done in the Muna islands in Indonesia.

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