

Self-Esteem Optimization through Plant Therapy for Patients with Chronic Low Self-Esteem

Deden Dermawan¹ Luluk Ambarwati²

1 Politeknik Kesehatan Bhakti Mulia Sukoharjo

2 Politeknik Kesehatan Bhakti Mulia Sukoharjo

Correspondence: deden@poltekkesbhaktimulia.ac.id

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ABSTRACT

Background: Chronic low self-esteem is a psychiatric nursing problem that frequently leads to social isolation and an inability to self-actualize. Plant therapy emerges as a potential occupational intervention to enhance patients' self-efficacy and self-esteem.

Objective: This study aims to analyze the effectiveness of plant therapy in improving self-esteem among patients with chronic low self-esteem at the Larasati Ward of RSJD dr. Arif Zainudin Surakarta.

Methods: This study employed a pre-experimental design (one-group pre-test post-test design) involving 8 research subjects. The main participant inclusion criteria comprised patients aged 18–45 years (early adulthood) exhibiting clinical symptoms of chronic low self-esteem (such as self-criticism, denial of personal abilities, and low speech intonation) and demonstrating a cooperative attitude. The intervention was carried out across six structured meeting sessions with a duration of 30 to 45 minutes per session, covering education, gardening skills training using simple hydroponic media, and self-concept evaluation. Self-esteem measurements were conducted using the Rosenberg Self-Esteem Scale (RSES) before and after the intervention.

Results: The results showed an increase in RSES scores across all subjects (score ≥ 30) following the intervention, indicating a transition from low to high self-esteem. A total of 62.5% of respondents achieved "Fully Resolved" status, and 37.5% achieved "Partially Resolved" status. Plant therapy proved successful in breaking the cycle of negative thoughts through two mechanisms: the development of a sense of mastery from successfully caring for plants and cognitive distraction through nature-based mindfulness activities.

Conclusion: Plant therapy is an effective, applicable, and holistic psychiatric nursing modality for enhancing patient self-esteem.



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INTRODUCTION

Mental disorders are complex health conditions characterized by clinically significant symptoms that disrupt cognitive function, emotional regulation, and individual behavioral patterns. These conditions reflect dysfunctions in the psychological, biological, or developmental processes that underlie a person's mental function. Generally, mental disorders are associated with high stress levels and/or significant disability across various aspects of life, such as social relationships, employment, and other essential activities (Cockerham, 2020).

The global burden of mental disorders continues to show alarming figures. The latest report from the World Health Organization (2024) emphasizes that mental disorders remain one of the leading causes of disability worldwide. In line with this global trend, mental health issues at the regional level also demonstrate high urgency. Data from the Central Java Provincial Health Office in 2024 indicates that the number of individuals suffering from mental disorders reached 325,412, which indicates a significant increase compared to the 2023 report. These figures underscore the urgency of implementing sustainable interventions to reduce prevalence rates and improve the quality of life for patients in the region.

Among the various manifestations of mental disorders, chronic low self-esteem is a frequently encountered problem that requires serious intervention. This condition is defined as a negative self-evaluation or feelings of inadequacy regarding one's abilities that persist over a long period (Wijayati et al., 2020). Individuals with chronic low self-esteem tend to be trapped in negative emotions, such as low self-confidence, feelings of incompetence, hopelessness, sadness, guilt, and a lack of self-appreciation. If not addressed promptly, this condition can progress to

social isolation, where patients withdraw from their environment, which in turn increases the risk of violent behavior during social interactions (Kinasih et al., 2019).

Theoretically, low self-esteem is triggered by an interaction between predisposing and precipitating factors. Predisposing factors include unrealistic parenting patterns, a history of repeated failures, and excessive dependence on others. Meanwhile, precipitating factors can be triggered by physical changes, decreased productivity, or other traumatic events. Without adequate coping mechanisms, the accumulation of these factors will exacerbate the patient's psychological condition and hinder their rehabilitation process (Kinasih et al., 2019).

One effective non-pharmacological approach to rebuilding a patient's positive abilities is occupational therapy, specifically plant therapy. Plant therapy is a therapeutic intervention that utilizes gardening activities and direct interaction with plants as a means of rehabilitation. Through active involvement in caring for plants, patients are facilitated in achieving relaxation, enhancing personal responsibility, and reducing exposure to excessive social pressure (Efendi & Purbasari, 2021). Although conventional psychiatric hospitals routinely implement standard occupational therapies—such as drawing, handicrafts, and assembly tasks—these activities are often perceived by patients as abstract, repetitive, or disconnected from real-world functionality. Consequently, they may yield limited engagement in patients with severe, chronic self-evaluation deficits. This study addresses this gap by introducing plant therapy as a novel, nature-based occupational intervention. Unlike traditional crafts, plant therapy offers a living, dynamic medium where patients engage in tangible, biologically responsive tasks (such as managing growth, water, and nutrients). This provides immediate, empirical feedback of success (mastery experience), bridging the gap between abstract hospital crafts and functional self-efficacy restoration.

Based on the background mentioned, this study aims to evaluate the application of plant therapy as a form of occupational therapy in an effort to improve self-esteem in patients with chronic low self-esteem. This research is expected to provide an empirical contribution to the development of more holistic psychiatric nursing interventions focused on patient empowerment

RESEARCH METHODS

This study employs a pre-experimental design using a one-group pre-test post-test approach. Although the nursing care process is rooted in a case study tradition, the utilization of a standardized instrument the Rosenberg Self-Esteem Scale (RSES) alongside percentage analysis to measure outcomes renders this approach more accurately classified as a pre-experimental design or a simple mixed-methods design. This design enables the researcher to blend the depth of qualitative narrative data with the objective evaluation of quantitative score changes before and after the intervention.

The research was conducted at the Larasati Ward of the Regional Psychiatric Hospital (RSJD) dr. Arif Zainudin Surakarta, with data collection taking place from May 8 to May 13, 2024. The target population comprised 17 patients diagnosed with chronic low self-esteem who were undergoing inpatient care in the ward. Using purposive sampling based on strict inclusion and exclusion criteria, a total of 8 research subjects were selected.

The inclusion criteria for participants were: (1) patients aged 18 to 45 years (early adulthood); (2) exhibiting clinical signs and symptoms of chronic low self-esteem, such as a tendency toward self-criticism, denial of personal abilities, pessimistic thought patterns, and low speech intonation; and (3) demonstrating a cooperative attitude and adequate communication skills. Conversely, exclusion criteria were strictly applied to patients with a risk of suicide or a history of active violent behavior to ensure safety and security throughout the intervention period.

Data collection was carried out through a triangulation approach, combining participant observation to monitor changes in clinical behavior and subject attitudes directly, with in-depth interviews to explore subjective data regarding the patients' experiences. Additionally, the subjects' self-esteem levels were measured using the standardized Rosenberg Self-Esteem Scale (RSES) consisting of 10 items during the pre-test (prior to the intervention) and post-test (following the intervention) stages.

The main intervention, plant therapy, was implemented utilizing simple hydroponic media, including used plastic bottles, flannel wicks, clean water, nutrient solutions, and vegetable seeds (pak choi/mustard greens). The therapy program was systematically structured into six sessions conducted over five days, with each session lasting between 30 and 45 minutes. This duration was ideally determined to maintain the patients' cognitive focus and concentration without triggering mental fatigue.

Data analysis involved a dual approach integration. Qualitative data derived from in depth interviews and clinical observations were analyzed through narrative description and synthesized with relevant psychiatric nursing theories. Meanwhile, quantitative data in the form of RSES scores were comparatively analyzed by examining the pre-test and post-test values for each subject to measure the magnitude of the improvement in self-esteem.

RESULTS AND DISCUSSION

Results : Based on data collected from the 8 research respondents in the Larasati Ward at Dr. Arif Zainudin Regional Psychiatric Hospital in Surakarta, the characteristics of the respondents categorized by age, gender, employment status, and education level are presented in Table 1.1.

In terms of age, the majority of respondents were in the 26–35 age group, consisting of 4 individuals (50.0%), followed by the 36–45 age group with 3 individuals (37.5%), and the 18–25 age group with 1 individual (12.5%). This indicates that the research subjects were predominantly in the early to middle adulthood phase.

Regarding gender, all research respondents were male (100.0%). In terms of employment status, the majority of respondents were unemployed, totaling 6 individuals (75.0%), while the remaining 2 individuals (25.0%) were employed. This condition suggests that most research subjects were not engaged in economically productive activities during their treatment period.

Furthermore, based on formal educational background, the majority of respondents had a senior high school (SMA) level of education, totaling 6 individuals (75.0%), while the other 2 individuals (25.0%) had completed junior high school (SMP). There were no respondents with an elementary school (SD) level of education in this study. Overall, these data indicate that the majority of respondents possessed sufficient basic literacy skills to follow the instructions provided during the *plant therapy* intervention.

Table 1. Subject Characteristics at RSJD dr. Arif Zainuddin Surakarta

No	Characteristic	Category	Frequency (f)	Percentage (%)
1	Age	18–25 year	1	12,5
		26–35 year	4	50
		36–45 year	3	37,5
2	Gender	Male	8	100
		Female	0	0
3	Occupation	Employed	2	25
		Unemployed	6	75
4	Education	Elementary School	0	0
		Junior High School	2	25
		Senior High School	6	75
Total			8	100

The implementation of *plant therapy* over six sessions demonstrated a progressive psychological transformation in all eight research subjects. Initially, the subjects exhibited classic symptoms of chronic low self-esteem, such as negative verbalizations regarding their own abilities and a tendency to withdraw. However, through a systematic nursing process, significant shifts in thought patterns and behaviors occurred.

By the third to sixth sessions, subjects began to demonstrate independent initiative in plant care. Clinically, non-verbal improvements were observed: posture transitioned from slouched to upright, vocal volume increased, and eye contact became more sustained during communication. Cognitively, subjects who previously struggled with decision-making began to solve practical problems, such as determining the water and light requirements for their plants. This indicates that *plant therapy* serves not merely as a distraction, but as a medium for cognitive rehabilitation and the development of personal accountability.

Quantitatively, the *Rosenberg Self-Esteem Scale* (RSES) recorded a consistent increase in scores. Prior to the intervention, all eight subjects fell into the "Moderate Low Self-Esteem" category (scores 22–27). Post-intervention, all subjects achieved scores of ≥ 30 , signaling a transition to the "High Self-Esteem" category. The efficacy of the intervention is classified into two groups: (1) the "Fully Resolved" group (5 subjects), showing drastic improvements in daily behavior and RSES scores (33–37), and (2) the "Partially Resolved" group (3 subjects), who, despite reaching the high self-esteem category (scores 30–32), still exhibited residual symptoms such as occasional hesitation in decision-making.

The success of *plant therapy* is rooted in the therapeutic interaction with nature. The process of planting and nurturing plants serves as an analogy for the patient's recovery process. Successful plant growth acts as empirical proof of the subjects' capabilities. Positive reinforcement from the nurse assisted the subjects in internalizing these successes into their self-concept. Theoretically, this intervention was effective in addressing *self-care deficits* by enhancing *self-efficacy*. The therapeutic environment allowed subjects to explore new competencies, effectively breaking the cycle of social isolation and withdrawal that previously dominated their condition.

Discussion

The study of eight respondents revealed a prevalence of individuals in early adulthood (18–45 years old). This phase is a critical transition period characterized by significant demands, where individuals are at the peak of their productive years yet remain highly vulnerable to psychosocial stressors stemming from economic pressure and societal expectations. These findings align with Mawaddah et al. (2020), who emphasize that the complexity of responsibilities during early adulthood is a primary trigger for mental health vulnerability. Furthermore, the observation that the majority of respondents (75%) were unemployed underscores a strong correlation between economic status and self-esteem stability. A lack of productive activity often hinders self-actualization, which, according to recent literature, can exacerbate feelings of worthlessness and deepen mental dysfunction (Syahputra et al., 2021).

Regarding education and social support, the respondents' educational backgrounds (Junior and Senior High School) and the history of relapse observed in almost all subjects serve as critical indicators. Lower levels of education often correlate with less adaptive individual coping strategies when facing pressure (Rejeki, 2021). Moreover, the recurrent nature of mental disorders in this study highlights the crucial role of family support. Consistent with findings by Cahyani and Pratiwi (2023), a lack of family attention and inconsistency in medication adherence are primary risk factors for relapse, which directly undermine the foundation of a patient's self-esteem.

Assessment results indicated that life experiences specifically failure, rejection, and negative stigma—have internalized a distorted self-concept in all subjects. This was reflected in clinical signs such as slouched posture, minimal verbal communication, and persistent sad affect (Tim Pokja SDKI DPP PPNI, 2017). The maladaptive coping mechanisms of withdrawal and avoidance identified in all eight subjects serve as defensive responses to trauma and repeated environmental criticism (Rinawati & Alimansyur, 2019). This condition creates a "vicious cycle" in which a negative self-evaluation is continuously maintained by the subjects as a means to minimize shame and guilt (Arni & Annisa, 2021).

The *plant therapy* intervention applied to the eight respondents showed significant efficacy. Although recovery rates varied with 62.5% of respondents showing "Full Resolution" and the remainder showing "Partial Resolution" there was an overall consistent increase in Rosenberg Self-Esteem Scale (RSES) scores to the high self-esteem category (score ≥ 30). This success was

driven by two transformative mechanisms: 1. *Sense of Mastery*: Within the context of self-esteem optimization, *plant therapy* offers concrete and measurable tasks. Unlike conventional, abstract therapies, gardening provides empirical evidence of the subjects' capabilities. Each successful plant growth acts as a "mastery experience" that directly shatters the internal narrative of failure. In accordance with Bandura's concept of self-efficacy, the successful completion of small tasks in gardening rebuilds patients' confidence in their capacity to manage their own lives (Bandura, 1997; as cited in recent nursing literature). 2. *Cognitive Distraction and Mindfulness*: *Plant therapy* acts as a form of nature-based mindfulness. Focusing on external objects (plants) effectively disrupts the negative *self-focusing* cycle that traditionally dominates patients with low self-esteem. By channeling mental energy toward the needs of the plants such as water, nutrients, and light subjects exercise their cognitive functions and concentration (Egerer et al., 2022). This activity lowers cortisol levels and provides psychological tranquility, allowing subjects to shift from "survival mode" to a "thriving phase."

Theoretically, *plant therapy* successfully addresses *self-care deficits* by rebuilding individual dignity through meaningful activities. The therapeutic environment created allows subjects to experiment with new competencies without the fear of social judgment. This study confirms that nature-based, non-pharmacological interventions are vital rehabilitation modalities in modern psychiatric nursing for holistically enhancing patient self-esteem.

CONCLUSION

Based on the quantitative data analysis using the Rosenberg Self-Esteem Scale (RSES) and clinical behavioral observations of 8 respondents, it is concluded that plant therapy is proven effective in enhancing self-esteem in patients with chronic low self-esteem. Through six structured intervention sessions lasting 30 to 45 minutes per session, all subjects successfully transitioned out of the low self-esteem category and achieved a high self-esteem level with an RSES score ≥ 30 . This score improvement was consistently accompanied by observable clinical behavioral changes, including a more upright posture, increased vocal intonation, and the reduction of self-critical tendencies. The successful achievement of the primary research objectives was driven directly by the establishment of a sense of mastery through the completion of tangible gardening tasks and the effectiveness of cognitive distraction in breaking cycles of negative self-focusing.

RECOMMENDATIONS

Based on the research findings, it is recommended that the psychiatric hospital proactively develop and establish an official Standard Operating Procedure (SOP) along with a dedicated plant therapy guide module. This operational step is crucial so that plant-based occupational interventions can be easily replicated, consistently applied, and structured by nurses and other healthcare professionals within clinical settings. Furthermore, this therapy should be integrated into routine psychosocial rehabilitation programs as a dynamic alternative intervention focused on achieving mastery experiences. For future researchers, it is suggested to conduct follow-up studies using a longitudinal design to monitor the stability of patients' improved self-esteem periodically after they undergo social reintegration into the community, as well as to enrich evaluation instruments through more in-depth clinical behavioral observation methods to comprehensively capture the impact of the intervention.

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