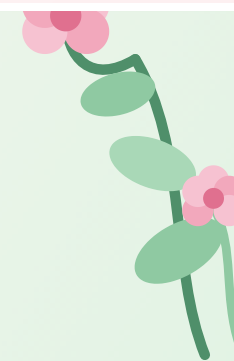


Horticulture Therapy as a Complementary Intervention in Palliative Care

Muhammad Bilal Nadeem · Esha Habib PRESENTER · Muhammad Hamayal

Federal Medical and Dental College (FMDC), Al-Farabi Center, Islamabad, Pakistan

Presenting author contact: esha.habib@fui.edu.pk



Introduction

Palliative care aims to ease symptoms and improve quality of life for people with serious, life-limiting illness rather than cure it. Horticultural therapy, using plants, gardens and nature-based activity, has emerged as a promising complementary option, though evidence specific to palliative populations remains limited.

Its therapeutic value comes from engaging patients through several channels at once:



SIGHT



SMELL



TOUCH



SOUND

Methodology

Narrative review of PubMed, Cochrane Library and ScienceDirect, limited to peer-reviewed studies from the past 10 years on palliative patients with advanced illness (dementia, Parkinson's, ALS, organ failure).

Records identified from databases n = 13,266

▼ 344 duplicates removed

Records screened n = 12,922

▼ 12,785 excluded on title/abstract

Assessed for eligibility n = 118

▼ 81 did not meet criteria

Studies included, 2014–2024 n = 37

Results: Six Thematic Domains Across 37 Studies (2014–2024)



Emotional & Psychological

Viewing and tending green plants lowers stress hormone levels and activates the body's relaxation response (Han et al., 2018). For patients facing advanced illness, caring for something living restores a sense of purpose at a time when so much feels out of their control (Blake & Mitchell, 2016).

Cortisol down, calm up



Symptom Management

Garden-based activity works as a gentle distraction from pain and discomfort, shifting attention away from illness (Marsh & Spinaze, 2016). Trials report meaningful drops in anxiety, depression and agitation, including among patients with dementia and psychiatric comorbidities (Joubert et al., 2024).

Anxiety & agitation down



Lifestyle

Patients become more engaged in daily routines and often shift toward healthier, home-grown diets (Yao & Chen, 2017). Repeated planting, digging and watering also help rebuild grip strength, balance and gait, particularly after stroke (Lee et al., 2018).

Mobility & sleep up



Social Well-being

Shared garden spaces give patients an easy, low-pressure reason to talk, cooperate and mark small wins together (Hall et al., 2018). For those who find it hard to discuss death directly, plants offer a gentler way to talk about loss and life cycles (Masel et al., 2018).

Connection & belonging up



Sensory Experience

Colour, scent, birdsong and the feel of soil and petals combine into a rich sensory experience that promotes calm and grounding (Wichrowski & Moscovici, 2024). Contact with soil has even been linked to higher serotonin levels and improved mood (Han et al., 2018).

All five senses engaged



Cognitive Function

Structured garden tasks sharpen attention and often bring back vivid, positive memories from earlier in life (Blaschke, 2017). Measurable increases in alpha brain waves and lower cortisol point to real physiological change, with benefits extending to people living with dementia (Joy et al., 2020).

Alpha waves up, cortisol down

Adaptive Strategies & Limitations

Adapting for functional decline

Raised beds, wheelchair-accessible paths and indoor herb or tabletop gardens allow patients to stay engaged despite limited mobility, cognition or home-based care, keeping the activity accessible wherever a patient happens to be receiving care.

Limitations & risks

Evidence remains largely indirect, with no standardized clinical protocols yet in place. Reported risks include fatigue, dehydration, sunburn and distress at losing a plant, though these are generally considered minor next to the overall benefits.

Conclusion

Horticultural therapy shows measurable benefits across emotional, physical, social, sensory and cognitive domains.

Low-cost, adaptable models make it feasible in hospices, hospitals and patients' own homes.

Findings support its place as a complementary option in palliative care, alongside a clear need for standardized protocols.

SELECTED REFERENCES

1. Han et al. (2018) *Complement Ther Med*, 38, 19–23. 2. Masel et al. (2018) *Support Care Cancer*, 26, 1799–1805. 3. Blaschke (2017) *BMC Cancer*, 17, 370. 4. Marsh & Spinaze (2016) *Int J Palliat Nurs*, 22, 214–219. 5. Joubert et al. (2024) *Sci Rep*, 14, 14378. 6. Hall et al. (2018) *Dementia*, 17, 611–620. 7. Lee et al. (2018) *HortScience*, 53, 110–119. 8. Joy et al. (2020) *Int J Environ Res Public Health*, 17, 1303. 9. Wichrowski & Moscovici (2024) *Healthcare*, 12, 832. Full list of 37 studies in the published manuscript.

ACKNOWLEDGMENTS

No conflicts of interest or specific funding declared. Published in *Journal of Social Work in End-of-Life & Palliative Care* (2025), DOI 10.1080/15524256.2025.2588573.



Federal Medical & Dental College
Al-Farabi Center, Islamabad