

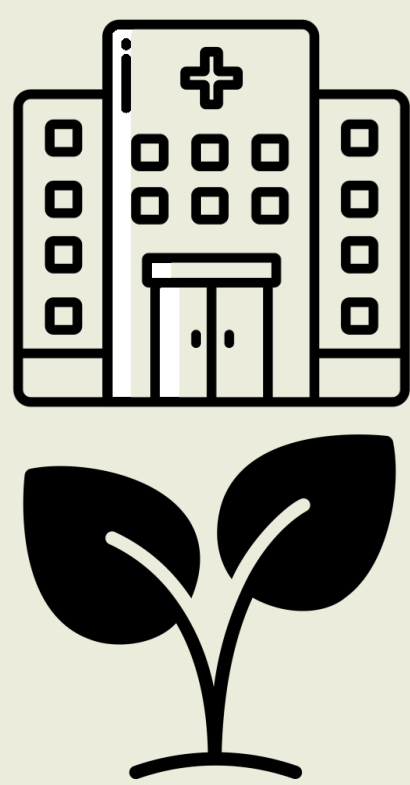
The Experience of Introducing “Green Care” in a Medical Center in Taiwan.

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Introduction

The European Union defines "Green Care" as nature-assisted health promotion and complementary therapy. Far Eastern Memorial Hospital (FEMH) in Banqiao, New Taipei, Taiwan, began incorporating Green Care into its psychiatric daycare centers to improve the health of patients and staff. Our first horticultural group therapy launched in 2009, and by 2016, we extended horticultural therapy to our Employee Assistance Programs. The Green Care model supports mental health, promotes overall well-being, and has since expanded into community health initiatives.

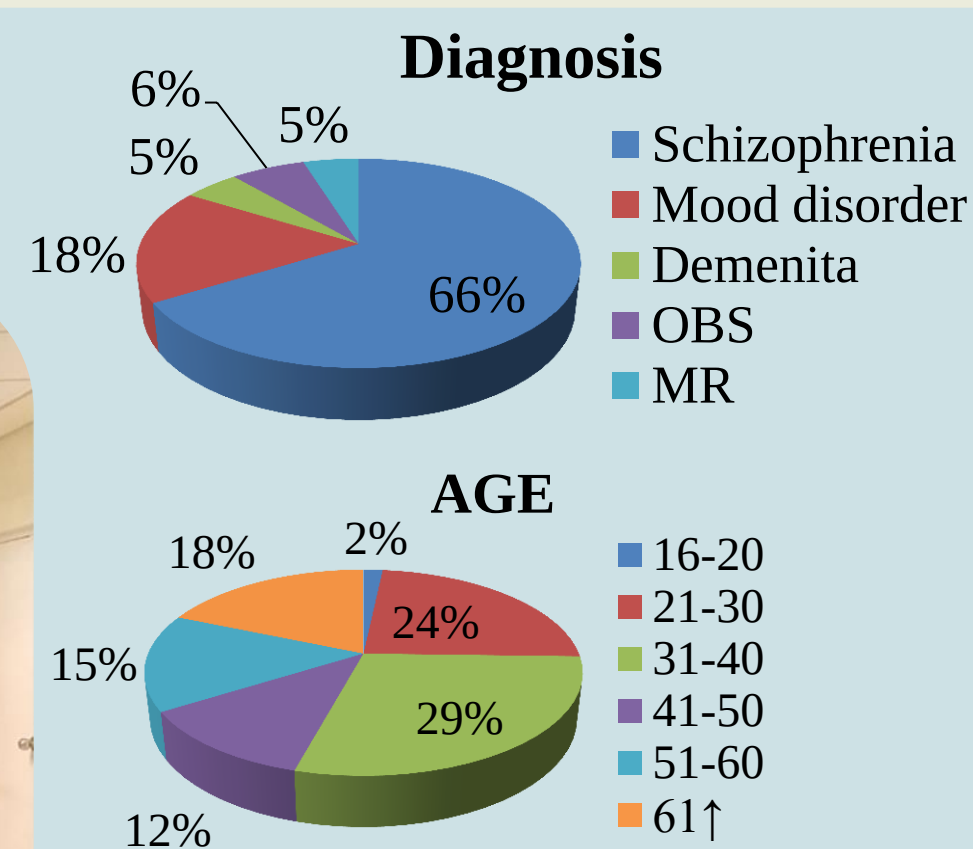


Methods

We introduced the Green Care model to the community, allowing residents to connect with plants, life, and culture, enhancing their bonds with others and their families. Horticultural therapy was offered both at the hospital and in the community to alleviate mental illness and stabilize well-being. Beyond patients, the program helped participants engage with plants and improve self-efficacy. We tracked the sessions, participant numbers, and satisfaction survey results.

Results

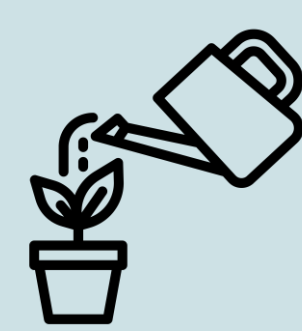
Daycare Center



- Characteristic of daycare members
 - Hospitalized for longer days (average of hospitalized days : 700-800 days)
 - Declined cognitive functions due to chronic diseases process (average of disease course : above 15 years)
 - Low variance of daily life
 - Loss of focuses in life
 - Moody
- Weekly horticultural group therapy sessions are held every Wednesday, led by a certified horticultural therapist.

The program includes activities such as

- Knowing about plants (enhancing knowledge)
- Planting seeds (implanting hope)
- Caring for plants (increasing self-efficacy, cultivating a sense of responsibility, and fostering a sense of accomplishment)
- We even select a member to be on duty for the day, responsible for daily watering tasks.
- Other activities include harvesting (experiencing the power of life and integrating life experiences), cooking with homegrown produce, and making related handicrafts.



- The cozy corner is the day ward of the psychiatric department of our hospital. It mainly goals helps chronic mental patients gradually stabilize their symptoms and return to society.
- Founded in December 2007
- Above 10,000 participants



Hospice & palliative care ward

- We created the Serenity Garden, a therapeutic space within the ward that offers healing and comfort to patients and their families during the final stages of life. This garden provides a place where they can simply be, embrace the present moment, and find rest.



Garden Design Considerations:

- Accessibility:** Designed for easy access by beds and wheelchairs, with nearby potted plants that patients can comfortably touch.
- Environmental Sustainability:** Features solar-powered water elements and recycled plants from other hospital units.
- Patient and Family Engagement:** Patients and families can choose their level of participation, from resting to gardening.
- Ward-to-Garden Connection:** Bulletin boards introduce garden plants to encourage exploration.
- Emotional Connection:** Families can bring or keep plants as mementos, fostering continuity.
- Promoting Self-Awareness:** A mood thermometer helps individuals reflect on their emotional state before and after visiting the garden.

Viewing Virtual Natural Landscapes (VR)



- Combined "forest therapy" with "Virtual Reality (VR)" technology.
- This approach helps improve mood and offers patients a chance to connect with nature at the end of life, enhancing spiritual care.
- VR can also fulfill personal wishes; for example, if a patient wants to visit their hometown but cannot, panoramic footage can recreate the experience, providing an immersive virtual connection.



Green Prescription: Animal-Assisted Therapy

- Our hospital is also a therapy dog-friendly hospital.
- It is the first hospital in Taiwan to display a sign at its entrance indicating that "guide dogs and therapy dogs" are allowed inside.
- Therapy dogs wear a work vest to make them easily recognizable to the public.



INPATIENTS

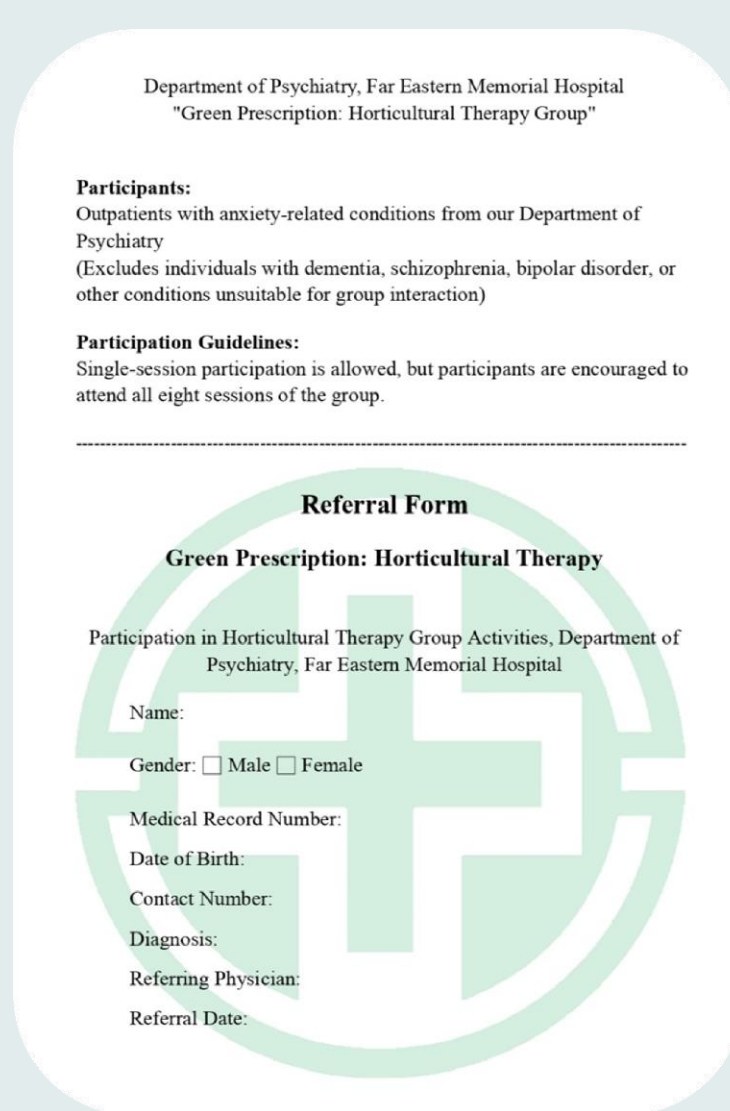
OUTPATIENTS

- According to Taiwan Ministry of Health and Welfare, approximately one-third of patients visiting psychiatric clinics have anxiety disorders, with a lifetime prevalence rate of 15–30%.
- Anxiety disorders are exhausting and overwhelming conditions.
- After the assessment by a psychiatrist, the outpatient with anxiety disorder is prescribed a "green prescription" and referred to participate in a horticultural therapy group. In the group, through sharing, sensory experiences, and feeling vitality, participants learn to use horticultural activities to alleviate anxiety in their daily lives.



Outpatients with anxiety disorders

- 2 hours per session
- Once a week
- 8 weeks in a row



Patients' Works



Starlit meditation

Guiding individuals into a meditative state through the night sky.

Leaf Puzzle

Combining two leaves to represent the current situation while simultaneously envisioning future aspirations. Explore and understand oneself through the leaf puzzle."

Floral Faces

Radiating with smiles, freely telling the life story of floral faces—unique, splendid, and touching!"

School



- The School Actualization Program (SAP) aims to strengthen the 12-year national education system and enhance the quality of education in Taiwan.
- Under this framework, our hospital collaborated with a high school in New Taipei City to conduct emotional screenings for all students.
- High-risk students willing to participate were invited to join an six-session horticultural therapy course designed to help adolescents improve self-awareness, boost self-efficacy, and provide an outlet for emotional relief.



Local site



- For elder or people with Mental Disorders
- Government-led public policies enable communities to offer local services through activity centers, fostering social participation among the elderly and vulnerable groups.
- This promotes sustainable, healthy communities and provides preventive care to delay deterioration for seniors and those with mental disabilities.



Employee

- Job stress is positively related to turnover intention and negatively related to job satisfaction (Bedeian & Armenaki, 1981).
- Stress can manifest in various ways, including coronary heart disease, psychological distress, job dissatisfaction, marital discord, excessive drinking, and substance use. Healthcare workers face high-pressure environments daily.
- To address this, our hospital has integrated horticultural therapy into our Employee Assistance Programs (EAPs) to foster a safe and harmonious workplace, improving employees' quality of life and job satisfaction.
- Our employees are invited to complete the Taiwanese version of the World Health Organization Quality of Life-BREF (WHOQOL-BREF) questionnaire, and a paired sample t-test analysis is conducted.

Domain	Item No.	Scale type	N	pre-test Mean ± SD	post-test Mean ± SD	t	p
Physical	1	Overall QOL	24	3.33 ±0.64	3.79 ±0.83	-2.88	0.008**
	2	Overall health	24	3.38 ±0.65	3.58 ±0.78	-1.55	0.135
	3	Pain and discomfort	23	3.78 ±0.95	4.08 ±0.67	1.50	0.148
	10	Energy and fatigue	23	3.13 ±0.76	3.65 ±0.93	-3.76	0.001**
	16	Sleep and rest	23	3.00 ±0.80	3.52 ±0.79	-4.22	0.000***
	15	Mobility	23	4.00 ±0.60	4.13 ±0.55	-1.00	0.328
	17	Activities of daily living	23	3.65 ±0.57	4.00 ±0.67	-2.01	0.057
	4	Dependence on medical substances and medical aids	24	4.54 ±0.51	4.50 ±0.51	-0.33	0.747
	18	Work capacity	23	3.65 ±0.65	3.83 ±0.65	-2.15	0.043*
	5	Positive feelings	24	3.04 ±0.69	3.29 ±1.00	-1.37	0.185
	7	Thinking, learning, memory, and concentration	24	3.25 ±0.53	3.79 ±0.72	-4.03	0.001**
	19	Self-esteem	23	3.65 ±0.65	3.74 ±0.69	-0.81	0.426
	11	Bodily image and appearance	23	3.39 ±0.72	3.65 ±0.78	-2.31	0.030*
	26	Negative feelings	22	3.18 ±0.66	3.50 ±0.60	-1.91	0.069
	6	Spirituality/ religion/personal beliefs	24	3.46 ±0.83	3.79 ±0.72	-2.56	0.017*
	20	Personal relationships	23	3.74 ±0.69	3.96 ±0.64	-2.01	0.057
	22	Practical social support	22	3.82 ±0.50	4.00 ±0.69	-1.70	0.104
Social relations	21	Sexual activity	22	3.41 ±0.59	3.77 ±0.69	-2.59	0.017*
	27	Being respected/ accepted	22	3.50 ±0.67	3.73 ±0.63	-1.56	0.135
	14	Participation in and opportunities for recreation/leisure activities	23	2.78 ±0.74	3.57 ±0.73	-4.41	0.000***
Environment	9	Physical environment: (pollution/noise/traffic/ climate)	23	2.65 ±0.88	3.13 ±1.01	-2.55	0.018*
	25	Transport	22	3.91 ±0.61	4.09 ±0.68	-1.70	0.104
	28	Eating/food	22	3.91 ±0.53	4.09 ±0.68	-1.45	0.162
	8	Freedom, physical safety, and security	23	3.26 ±0.69	3.96 ±0.77	-3.27	0.003**
	23	Home environment	22	3.50 ±0.91	3.82 ±0.80	-2.08	0.050*
	12	Financial resources	23	3.13 ±0.63	3.57 ±0.84	-2.87	0.009**
	24	Health and social care: accessibility and quality	22	4.05 ±0.58	4.05 ±0.65	0.00	1.000
	13	Opportunities for acquiring new information and skills	22	3.77 ±0.43	4.09 ±0.68	-2.31	0.031*
	14	Participation in and opportunities for recreation/leisure activities	23	2.78 ±0.74	3.57 ±0.73	-4.41	0.000***
	9	Physical environment: (pollution/noise/traffic/ climate)	23	2.65 ±0.88	3.13 ±1.01	-2.55	0.018*

* p<0.05, ** p<0.01, *** p<0.001



Conclusion

Horticultural therapy has been practiced in Taiwan for nearly twenty years, with our hospital implementing it for sixteen years. Today, medical prescriptions extend beyond medication to include rehabilitation, psychological treatment, lifestyle changes, and participation in health-promoting activities. Our hospital aims to fulfill its role as a medical center by fostering further collaboration between our healthcare system and green care initiatives.

Keywords Green care, green prescription, horticultural therapy



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