

Unexpected Encounters with Nature

How can green design be implemented into interior spaces in urban settings through typical home decor objects to improve the mental well-being of the inhabitants?

Lucinda Vandekieft



Photo: Jason Ingram, Gardens Illustrated

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Lucinda Vandekieft

Bachelor of Science in Horticulture

University of Cincinnati, School of Planning, Horticulture Department

HORT 4092: Horticulture Senior Capstone

Faculty Advisor: Stevie Famulari Gds

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Student Identification & Previous Experience



Photo taken by Michael Everett, 2025.

Lucinda Vandekieft
Lrvandekieft@gmail.com

*"I'm not as goal obsessed as I am process obsessed."
 -Lady Gaga*

Certificates:

Green Roofs- *University of Cincinnati*

Sustainable Landscape Design- *University of Cincinnati*

Urban Landscapes- *University of Cincinnati*

Urban Agriculture- *University of Cincinnati*

Cannabis Studies- *University of Cincinnati*

Certificate of Permaculture Design- *Permaculture Institute of North America*

Relevant Course Work:

HORT 3045: Urban Landscapes V: Interiors

Prof: Stevie Famulari

SPR 2025

PROJECT: Interior Greenspace Part

MEDS 2092: Intro to Nature Based Therapy

Prof: Barbara Walker, Ph.D.

SPR 2025

PROJECT: Weekly Nature Based Activities

HORT 3071: Landscape Graphics Illustration

Prof: Jane Bian

FALL 2024

PROJECT: UC Green Space Evaluation

HORT 4012: Plant Propagation

Prof: Brian Grubb

SPR 2024

PROJECT: Propagation of *Mimosa pudica*

HORT 3044: Urban Landscapes IV: Roofs and Facades

Prof: Rose Seeger, Wendy Ellis

SPR 2024

PROJECT: Cincinnati Museum Sedum Green Roof Design

HORT 3030: Edible Sustainable Landscapes

Prof: Stevie Famulari

SPR 2024

PROJECT: Interior Green Space

PLAN 5134: Sustainable Development Workshop

Prof: Carla Chifos

FALL 2023

PROJECT: Urban Climate Actions Case Studies for Temperate Climates

HORT 3050: Landscape History to 1900

Prof: Stevie Famulari

FALL 2023

PROJECT: Medieval Pleasure Garden

HORT 2033: Herbaceous Ornamentals II

Prof: Jim Hansel

SUM 2023

PROJECT: Annual Trials Garden Bed Design

HORT 2032: Herbaceous Ornamentals I

Prof: Brian Grubb

SPR 2023

PROJECT: CCM Garden Redesign

HORT 3010: Soil Science and Plant Nutrition

Prof: Tania D. Burgos Hernández

SPR 2023

PROJECT: Soil Health for Agriculture

Abstract

Throughout history plants have been used as decorations by adding visual interest within interior spaces. An important aspect of this is to help people connect with nature. In recent years, the utilization of plants has been used to enhance mental well-being and to reduce stress through interaction with plants (*Lucia Starbuck, NPR*). This is important for residents in urban environments who may have limited access to outdoor green spaces. The way plants have been utilized in interior spaces has shifted from stand-alone houseplants to incorporating them within functional aspects of the home. This can be seen in interior green walls, the rise of biophilic design, and indoor gardening.

The project expands how greenery can be used within home decor items that maintain functionality and promote interaction with natural elements to promote well-being. The plants being used have been proven to help promote psychological well-being by being in proximity. The maintenance of this project helps stimulate well-being since interaction with plants or natural elements can enhance cognitive function, reduce stress, and promote relaxation. The target audience is residents living in urban environments, who have the means to maintain, or are wanting to better their well-being.

Keywords

Apartment: A residential building containing separate living spaces.

Emotional well-being: a positive state of mind, feeling connected to oneself.

Furniture: movable objects that make an area suitable to live (Ex. Tables, chairs, beds).

Houseplant: plant growing indoors.

Home Decor: objects used to make spaces look nice and can help make an area feel comfortable.

Indoor Greenery: plants growing indoors (Ex. Houseplants, indoor gardens).

Indoor Spaces: area contained within a building.

Interiors: area contained within a building, indoors.

Living Space: A space where people live, sleep, and eat.

Mental Health: a person's overall emotional and psychological well-being.

Mental Well-being: a positive state of mind, shows positive emotional, psychological, and social health.

Nature: a physical world not created by humans.

Plants: living organisms containing chlorophyll.

Psychological: mental and emotional state of a person.

Residential Area: spaces where people live (made up of homes, apartments, townhouses, or mobile homes).

Urban Environment: a highly populated area, contains many human-built structures.

Understanding of Project

Project Statement

How can green design be implemented into interior spaces in urban settings through typical home decor objects to improve the mental well-being of the inhabitants?

Project Justification

Living in urban environments can lead to a negative psychological impact due to noise pollution, sensory overload, and limited access to green spaces. The integration of plants in interior spaces within urban environments can help combat these psychological stressors with the plant's innate calming nature (*Keniger*). The accumulation of studies conducted over the past years have indicated that plants can improve mental health by reducing stress, reducing depression, and improving cognitive function. The integration of plants within interior spaces as decorations has seen an uptick of users in the past years due to the COVID-19 pandemic (*Lucia Starbuck, NPR*). Using plants as interior decorations is not a new concept and dates to Ancient Egypt and has been present in different cultures around the world (*Hilder*).



Apartment decorated with houseplants, Photo: Sarah Crowley.

In recent years, there has been an expansion of how plants are utilized in interior spaces. This is partly due to the rise in popularity of biophilic design where the main purpose is to connect users with nature in built environments (*RMCAD*). Some of the usage of plants within interior environments is due to their therapeutic properties and enhancement of emotional well-being. The company, *Habitat Horticulture*, has helped with the expansion of how plants are used in interior spaces within urban environments and focus on human well-being. This can be seen in the “Living Table” and “GROWMEO” they created (seen in literature reviews, page 32). These

products help showcase the different potential for plants to be used in interiors to benefit emotional and mental well-being.



GROWMEO, photo: Habitat Horticulture



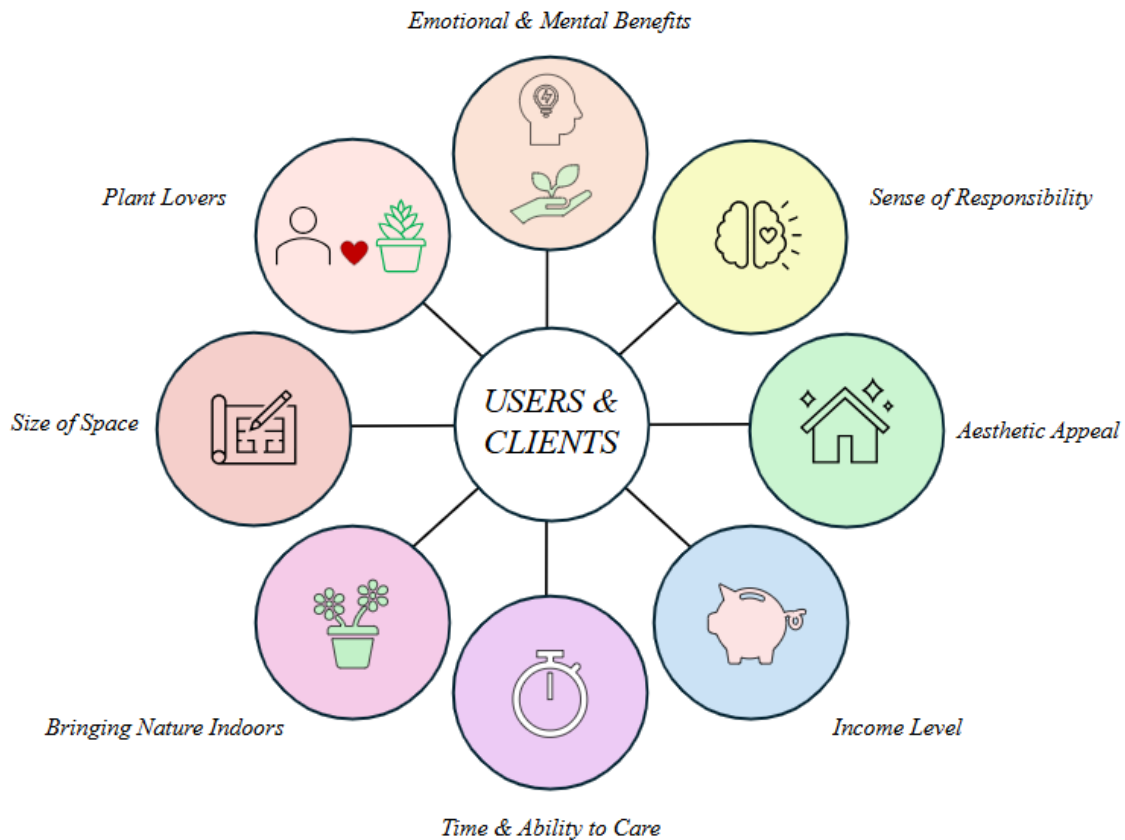
The Living Table, photo: Habitat Horticulture

As someone who lives in an urban environment and works within the horticultural field, I know a connection to nature or natural elements can lead to beneficial psychological impacts. I find it important to interact with nature or natural elements, but it can be hard to find these interactions within outdoor urban spaces. Moving natural elements indoors can help promote these types of interactions and I want to help contribute to the expansion of how plants are used in interior spaces to enhance emotional well-being. Part of the focus of this project is to incorporate plants into everyday home decor to promote interactions with plants within interior

spaces in urban areas. Through specific plant selection and overall aesthetics, the piece aims to promote emotional well-being specific to interior spaces.

The Proposal

User & Client Description



User/ client graphic. Created by Lucinda Vandekieft, 2025.

1. **Plant Lovers/ Hobbyists:** Users who like taking care of plants or enjoy having houseplants.
2. **Emotional/ Mental Benefits:** Plants can improve mental well-being through maintenance, visibility, or even close proximity.
3. **Aesthetic Appeal:** Adding plants as a focal point or statement piece to the interior space. In history houseplants were added to interior spaces for their range in shape, color, and growth habit for visual interest.
4. **Bringing Nature Indoors:** Plant can be brought indoors to feel better connected to nature especially if there are no accessible green spaces.
5. **Sense of Responsibility:** Taking care of plants can provide a sense of responsibility since the user will be taking care of a living thing. This can be seen through general plant maintenance (pruning, watering, pest/ disease inspection, fertilizing) to ensure that the plant lives.

6. **Time and Ability to Care:** The user has adequate time and the ability to properly care for the plants. This can either be the user themselves or help from an outside party to help care for the object.
7. **Income Level:** The user has the finances or financial support to care for the plants or have the object. Income level can be affected by tax rates, living costs, and debt levels. Usually, a higher income level can result in a higher disposable income level.
8. **Size of Space:** The effectiveness of the object's purpose can be determined by the size of the space it is in or the type of room it is in. A couple of medium-sized plants within a smaller space provides positive mental health benefits. In a larger room the number of medium-sized plants will have to increase to get the benefits.

Major Project Elements

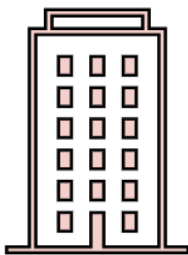
1. **Cost:** How much will this cost and the cost of maintaining it?
This is based off of how much time and upkeep the user wants to spend maintaining the plants and chair itself. This could include replacing plants, replacing lights, or the time itself spent taking care of the plants present.
2. **Size of Space:** How large will the space have to be for the desired effect of enhancing mental well-being?
The number of plants within an interior space is determined by the size of the space. For a general rule of thumb within a small room (10X10 ft) two medium sized plants can improve mental well-being by at least 50% (*McWhorter, 2022*).
3. **Plant Maintenance:** What is the timeline for maintaining plants? How will it look over months or years? How feasible is it going to be for someone who does not spend a lot of time with plants?
The maintenance plan for the design will be found under final solution (page 59). The maintenance plan is under the plant notes and details how each plant should be taken care of. It details the light needed, humidity, watering, and pruning. All of the plants selected are generally low-maintenance and easy for new plant owners to take care of.
4. **Mental Health Benefits:**
Sense of relaxation, decreases of anxiety and depression, improving concentration, and boosting creativity can come from being in close proximity to plants or having them within view.
5. **Plant Selection:**
Plants were selected based on their growth habit, color, and texture. Majority of the plants selected have green foliage or display a majority of the color green. Studies have shown that plants that have a majority of green foliage tend to lead to higher levels of productivity and reduce stress levels (*Jang, Gim, Jeong, Kim*).

Site & Topic Information

Inventory and Analysis: Quantitative

Type of Interior Space: Interactions with plants can be influenced by the type of interior space. Interactions with plants within a residential space might be more intimate compared to interactions with plants within commercial buildings. Even though this project is geared towards residential living it can be in a handful of other interior spaces.

Example:



Residential Properties
*Spaces where people live
(apartments, condos, houses)*



Commercial Buildings
Retail, offices, industrial buildings



Healthcare Facilities
*Areas that offer medical care
or treatments to patients*

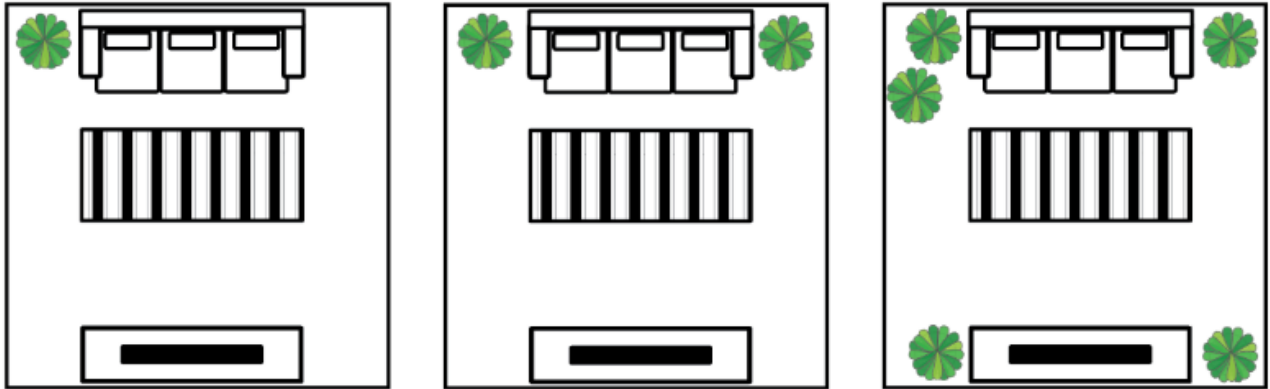
Types of buildings graphic. Created by Lucinda Vandekieft, 2025.

1. Residential Properties:
 - a. 56% of the world's population (4.4 billion people) live in urban areas and it is projected to double by 2050 (*World Bank Group*). By 2050, 7 out of 10 people will be considered living in an urban area.
2. Commercial Buildings:
 - a. Commercial buildings tend to concentrate their business in urban areas since it is more accessible for their customer base. Over 80% of commercial buildings are based in urban environments (*World Bank Group*).
3. Healthcare Facilities:
 - a. Due to the number of people living in urban areas many healthcare facilities are located there. 65% of healthcare facilities are located within urban environments (*World Bank Group*).

Size of Interior Space: The size of a space helps dictate how many plants are needed to have the desired effect of helping mental well-being

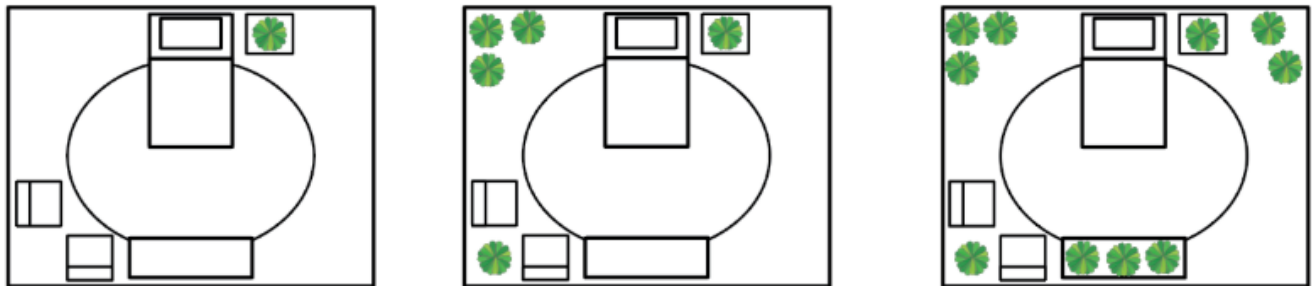
Examples: Using medium sized plants as a basis (*McWhorter, 2022*)

- a. Within a 10ft X 10ft room
- One houseplant improves mental well-being by 45%
 - Two houseplants improve mental well-being by 50%
 - Five houseplants can achieve maximum benefits



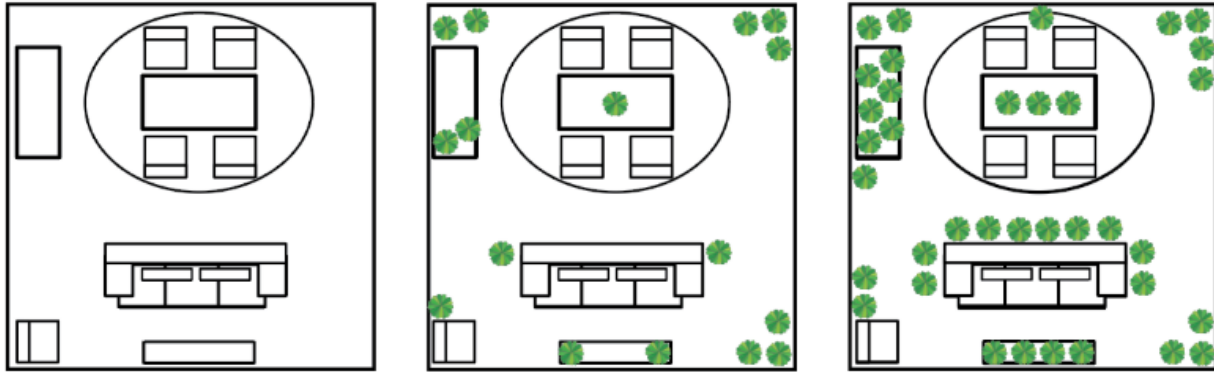
10x10ft room with various number of plants graphic. Created by Lucinda Vandekieft, 2025.

- b. Within a 13ft X 16.5ft room (around the size of an average of a master bedroom or living room)
- One houseplant helps very little with improving mental well-being
 - Five houseplants improve mental well-being by 60%
 - Ten houseplants can achieve maximum benefits



13X16.5ft room with various number of plants graphic. Created by Lucinda Vandekieft, 2025.

- c. Within a 26ft X 26ft room (around the size of two large box trucks side by side)
- 16 houseplants can improve mental well-being by 60%
 - 32 houseplants can achieve maximum benefits



26X26ft room with various number of plants graphic. Created by Lucinda Vandekieft, 2025.

Plants in Project: The plants for this project have the purpose of enhancing mental and emotional well-being while maintaining an appealing aesthetic to users. Being within a close proximity to plants can help enhance mental and emotional well-being.

Plant Selection for Design:

- a. Bronze Venus Maidenhair Fern- *Adiantum hispidulum* 'Bronze Venus'



Photo: FlorAccess

- b. Amy Dieffenbachia- *Dieffenbachia hybrida* 'Amy'



Photo: Pafe Plants Center

- c. Succulent Mix Pack- *Echeveria*/ *Sedum*



Photo: Easy to Grow Bulbs

- d. Pothos- *Epipremnum aureum*



Photo: Chansom Pantip, 2020.

- e. Ruby Red Nerve Plant- *Fittonia albivenis* 'Red Ruby'



Photo: My Plant My Taste

- f. Purple Passion Plant- *Gynura aurantiaca* 'Purple Passion'



Photo: Aquasabi

- g. Peace Lily- *Spathiphyllum* 'Petite'



Photo: Pafe Plants Center

Maintenance: Maintenance needed for the plants in the project and the object in general.

- a. Access to/ Draining the Drip Trays: The water out of the drip trays should be removed every two to three weeks to prevent the birth of pathogens (a bacteria or virus that can lead to diseased plants) and preventing anaerobic water (an absence of oxygen usually leading to an unpleasant or sulfur smelling odor). The planters in the chair can be easily lifted to gain access to the drip trays for cleaning.
- b. Plant Maintenance: any pruning that needs to be done on the plants or when nutrients should be added to the plants (*this is found under the maintenance in final solutions, page 59*).
- c. Monitoring: Monitoring the plants for abnormal growth, pest and disease checks, durability of object. Monitoring can also include checking if the plants are getting enough light and checking the water of the planters, so it doesn't dry out (*this is found under the maintenance in final solution, page 59*).

Price and Accessibility to Object: The price of the object can make it inaccessible to individuals depending on their income level or willingness to spend.

- a. Price: The final price will of what a piece like this would cost will be under the design documentation through the budget.
- b. Willingness to Spend: Includes disposable income or types of users that find this useful for their lifestyle.

Inventory and Analysis: Qualitative

The variety of plants chosen for their texture, growth habit, and color can make the project feel relaxing and create an eye-catching and intriguing look. The plants can provide a quality of life for the project with the live greenery it provides.

Feelings for the Quality of Life:

- a. Lush: The lush look for the piece is created by incorporating bushier plants that have larger foliage. This would include Amy Dieffenbachia (*Dieffenbachia hybrida* 'Amy'), Peace Lily (*Spathiphyllum* 'Petite'), and Bronze Venus Maidenhair Fern (*Adiantum hispidulum* 'Bronze Venus').



Photo: Pafe Plants Center



Photo: Pafe Plants Center



Photo: FlorAccess

- b. Visual Appeal: Seeing the plants grow over time and how the different growth habits interact with each other can provide visual appeal. The growth over time can provide different visuals or looks depending on how the plants interact with each other. The multiple different colors used can provide an eye-catching look as well as seeing how the different plant textures play with each other.



Gradient of plant selection dominant colors. Created by Lucinda Vandekieft, 2025.

- c. Relaxation: Being in a close proximity to plants or just having them within view can provide mental health benefits and can make a person feel relaxed. Some of the plants used (ex. Dieffenbachia, Peace Lily) have the abilities to remove toxins for the air and help the user breathe better which in turn help them feel more relaxed (Gawronska, Baerka, NIH).

Site & Topic Summary

The distribution of green spaces within urban environments can be uneven and can make it inaccessible to parts of the population. Living in urban spaces can cause psychological stressors like heightened stress or anxiety and depression due to noise pollution and sensory overload (*Keniger*). To help combat this problem some residents in urban areas take care of houseplants to have a connection with nature or for their therapeutic benefits. This research focuses on enhancing mental well-being for residential areas within urban environments. The project expands on how plants are used within interior spaces to promote interaction with nature and improve general well-being.

For the site used to build or showcase part of the project design is a small apartment in Clifton, Ohio. The apartment is located by two busy roads where there is an increase in traffic from automobiles and people.

Example of an average apartment living room:



Apartment living room. Photo taken by Lucinda Vandekieft, 2025.



Apartment living room. Photo taken by Lucinda Vandekieft, 2025.

This design focuses on how plants can be implemented in different home decor and furniture and how they can be showcased. The build for this project will be through a typical chair design and how plants can be used within the design to add plants into interior spaces. Other designs of the project will showcase how the chairs can look different and explore other decorative items (shelving, mirrors, wall hangings, and tables) can house greenery for the home.

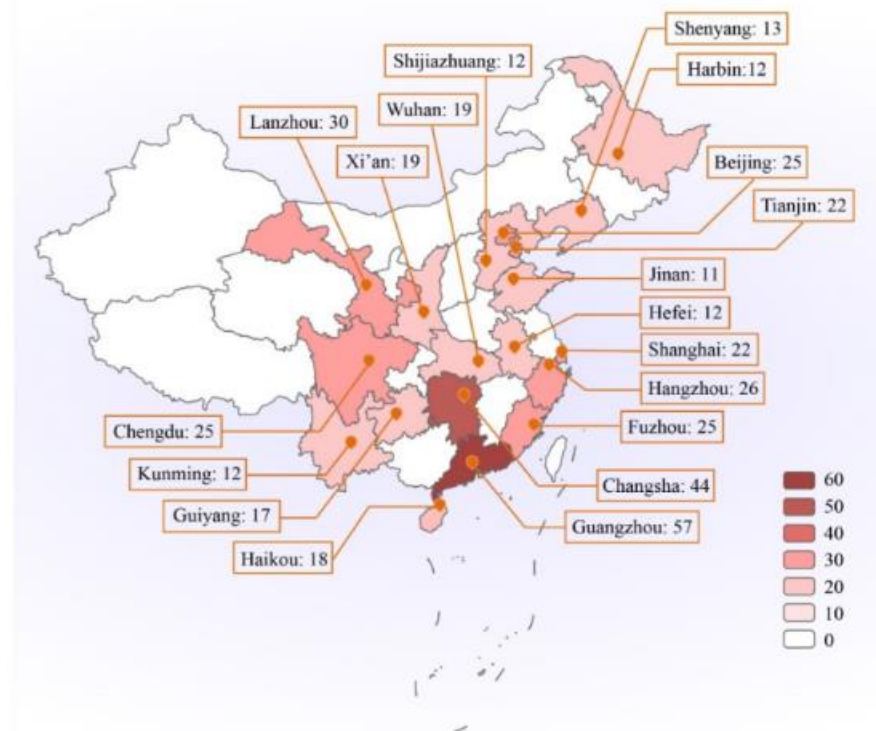
Case Studies & Summaries

Case Study #1: Interaction with Nature Indoor: Psychological Impacts of Houseplant Care Behavior on Mental Well-Being and Mindfulness in Chinese Adults

Author: Jingni Ma

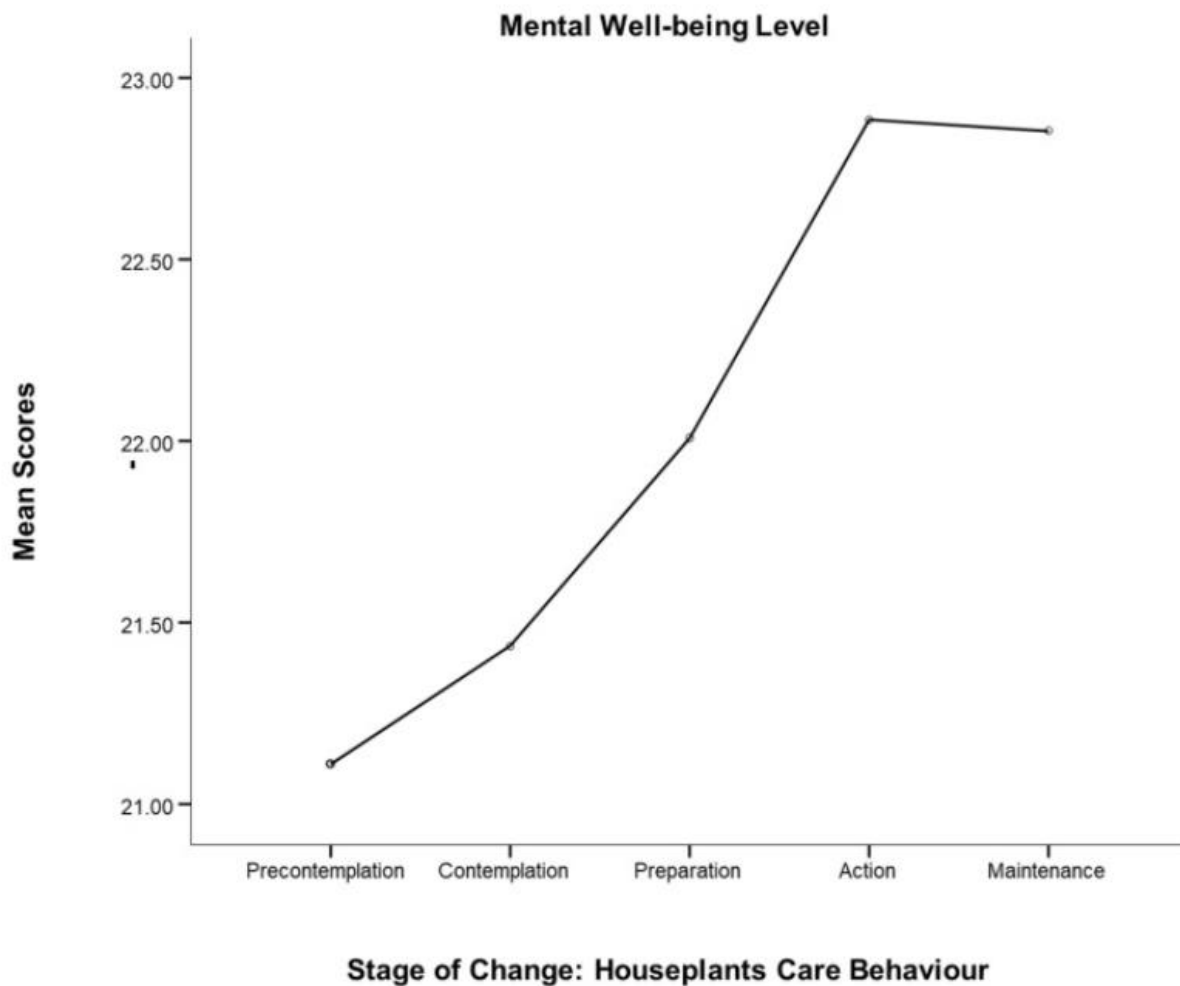
Published: November, 2022

The study “Interaction with Nature Indoor: Psychological Impacts of Houseplants care Behavior on Mental Well-Being and Mindfulness in Chinese Adults” by Jingni Ma focuses on the psychological benefits of taking care of houseplants in 19 highly urbanized areas. In China, the rapid urbanization has led to an increase in mental health concerns (*Jingni Ma*). The study follows the practice of ‘green prescription’ which encourages interaction with nature to improve mental well-being and mindfulness. They followed two groups ‘non-houseplant carers’ and ‘houseplant carers’ to find differences in mental well-being levels and mindfulness levels to understand how engaging with houseplants can lead to psychological benefits (*Jingni Ma*). The participants of the study engaged in self-report assessments to determine their mental well-being and mindfulness level to measure the psychological improvements.

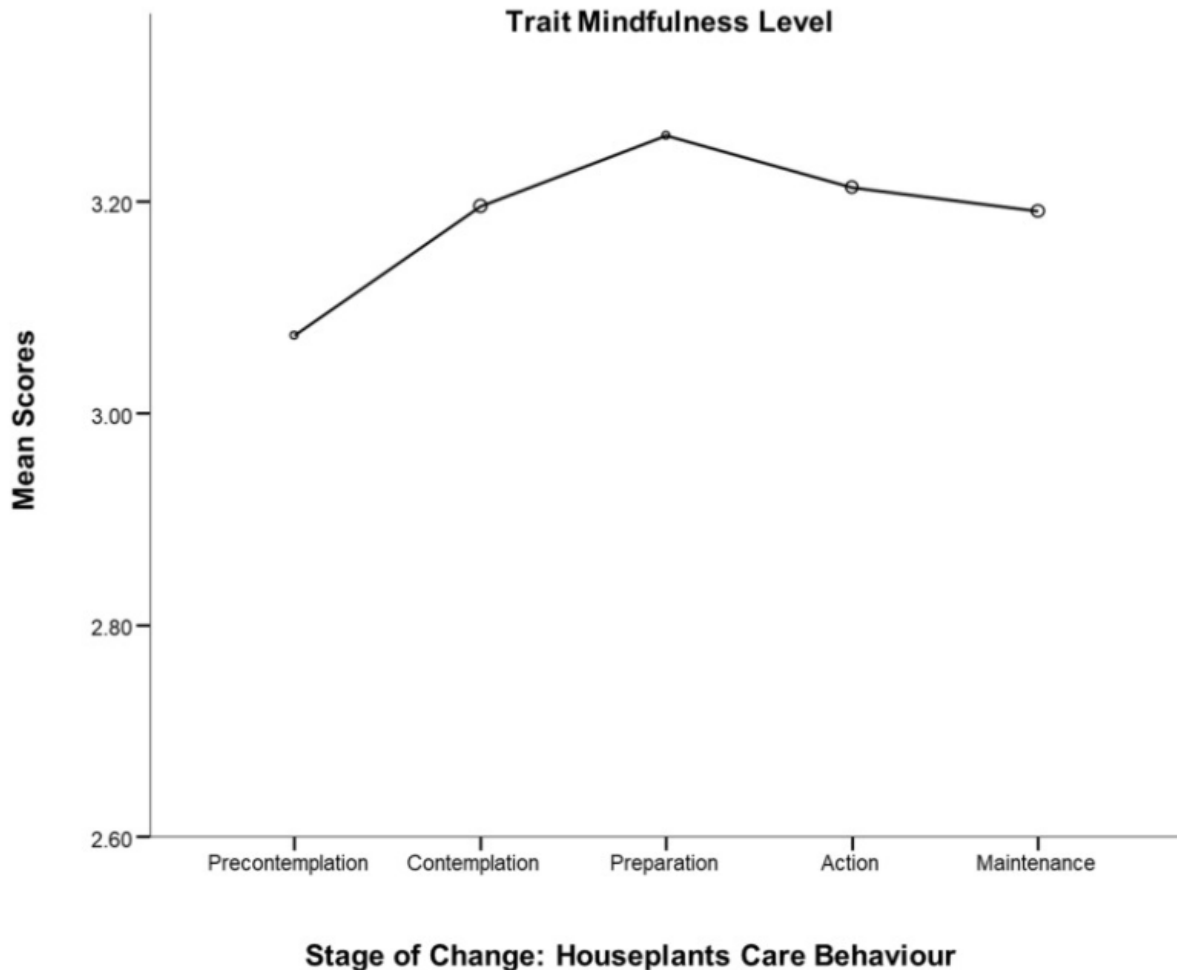


“The distribution of participants in mainland China. Note. The number of participants is indicated in the map, the city of the participants’ living is marked by orange icon. The darker color represents the greater numbers of participants” (*Jingni ma*).

Participants of this study are Chinese adults living in one of the 19 urban areas selected and are not involved in outdoor based activities on a regular basis. The 19 urban areas selected ranged geographically (western region, central region, eastern region, and municipalities) but have similar demographics and economies. At the beginning of the study, an ANOVA test was done to each of the 19 cities, and it was concluded that “there was no significant difference in mental well-being” (*Jingni Ma*) and “no statistically significant differences in mindfulness levels” (*Jingni Ma*) among residents. Of the 421 participants, 43% self-reported themselves ‘non-houseplant carers’ while 57% self-reported themselves as ‘houseplant carers.’ The self-report assessments were taken at each stage of change (precontemplation, contemplation, preparation, action, and maintenance) to compare both groups mental well-being and mindfulness while taking care of houseplants.



“Houseplants care behaviour and mental well-being” (*Jingni Ma*).



“Houseplants care behaviour and mindfulness” (Jingni Ma).

The study goes into depth to explore the association of interacting with houseplants to impacts on mental well-being. The model of the study was heavily influenced by the ‘green prescription’ and previous research conducted on the interaction with nature and the correlation to well-being. The results showed the different levels of mindfulness and well-being at the multiple stages of the study. It was shown that keeping and maintaining houseplants can help mental well-being by providing an outlet to destress and connect with nature in heavily urbanized areas. Since the participants of this study were Chinese urban residents, the author calls for more research to be done on how this can transfer over to other cultures or countries. Jingni Ma highlights how keeping houseplants within urbanized areas in China can provide advantages to improve mental health of the residents.

Summary: This case study is relevant to this project since it focuses on how people living within urban environments can benefit from interacting with plants. As the study progressed is showed

the rise of both mental well-being and mindfulness for both groups involved. It highlights how urbanism continues to rise it can have harmful psychological effects. This shows how bringing plants indoors and interacting with them can help to combat these harmful psychological effects and can be a real solution to this rising issue.

Case Study #2: Psychological Benefits of Indoor Plants in Workplaces: Putting Experimental Results into Context

Authors: Tina Bringslimark, Terry Hartig, Grete G. Patil

Published: June, 2007

The case study “Psychological Benefits of Indoor Plants in Workplaces: Putting Experimental Results into Context” the authors conducted a laboratory experiment in Norway to provide evidence that including plants into the workplace can deter psychological stress that comes from different workplace factors. The reviewed literature that the authors used for the study showed that having plants in workplaces can improve conductivity, reduce stress, and help reduce the number of sick leaves. When conducting the experiment the psychosocial workplace factors (which includes demands, controls, and social support) were out of their hands (*Bringslimark, Hartig, Patil*). The results of the experiment backed up and strengthened previous research on the benefits of indoor plants in the workplace.

The participants of this study were Norwegian workers in three different office buildings. The location of the office buildings they chose are located within large cities in Norway. The workplaces installed plants throughout the buildings “They were placed on shelves, the tops of filing cabinets, and on the floor, and they varied in size up to 1.5 m in height on installation” (*Bringslimark, Hartig, Patil*) and encouraged the decoration with plants in personal workspaces. The plants were strategically placed in locations where there would be visual access (distant or nearby) or there would be the presence of plants even if they were not readily visible (*Bringslimark, Hartig, Patil*).

To gauge and measure the response to the plants present they sent out an MM-questionnaire (a materials management form to assess functions in an organization). The questionnaire included questions about physical workplace factors and psychological workplace factors. The questions assessed noise levels, temperatures, and smells to help determine if there are changes to the physical environment. To assess the psychological factors the questions assessed job demands, control within the workplace, and if there is support from workplace superiors. Other factors that were included within the MM- questionnaire were perceived stress levels, sick leave, and productivity.

	Step 1: personal	Step 2: + physical	Step 3: + psychosocial	Step 4: + plants
Gender	0.21***	0.19***	0.20***	0.19***
Age	-0.10*	-0.10	-0.12**	-0.13**
Indoor environment		0.15**	0.07	0.07
Demands			0.08	0.08
Control			-0.14**	-0.13**
Support			-0.25***	-0.25***
Plants in view				-0.06
Own plants				-0.02
Plants nearby				0.08
R^2 adjusted (R^2)	0.05 (0.06)	0.07 (0.08)	0.18 (0.19)	0.18 (0.20)
F change	11.68***	9.01**	16.33***	0.71

Note. Cell values are standardized regression coefficients (β), except for the last two rows as indicated. ***Significant at $P < 0.05$, 0.01, or 0.001, respectively.

Hierarchical regression analysis examining associations between indoor plants in office workplaces and perceived stress of employees controlling for personal, physical, and psychosocial workplace factors (N = 367). (Bringslimark, Hartig, Patil).

Through the employee self-reports, it was observed that there were positive correlations between plants in the workplace and a non-stressful workplace environment. One notable result from the study showed observations of having too many plants within the workplace can hinder productivity (*Bringslimark, Hartig, Patil*). But the study also showed a positive correlation between having visible plants within the workplace and productivity. This can be associated with the standing psychological workplace factors (*Bringslimark, Hartig, Patil*). When discussing the results in the means of productivity the authors state “the plant in front of the participant's position had the greatest effect.” For the greatest effect of reducing stress within the workplace they found that placing plants in a breakroom and away from personal workspaces. There are positive correlations between having plants within the workplace, but the authors call for more research to be done on the placement and specific plants used due to employees' personal perception (*Bringslimark, Hartig, Patil*).

	Variables											
	1	2	3	4	5	6	7	8	9	10	11	12
1. Perceived stress												
2. Sick leave	0.19**											
3. Productivity	-0.34**	-0.08										
4. Gender	0.23**	0.18**	0.01									
5. Age	-0.12	-0.15**	0.08	-0.09								
6. Indoor environment	0.19**	0.07	-0.02	0.18**	-0.05							
7. Demand	0.12*	-0.06	0.00	-0.05	-0.03	0.13*						
8. Control	-0.26**	-0.11*	0.27**	-0.11*	-0.02	-0.22**	-0.07					
9. Support	-0.26**	-0.03	0.24**	0.06	-0.11*	-0.16**	-0.12*	0.33**				
10. Plants in view	-0.01	-0.09	0.09	0.13*	-0.05	-0.00	0.06	0.03	0.06			
11. Own plants	0.04	-0.07	0.01	0.22**	0.06	-0.06	-0.04	-0.07	0.04	0.41**		
12. Plants nearby	0.10*	0.03	-0.04	0.22**	-0.00	0.03	-0.01	-0.08	0.02	0.49**	0.61**	
Mean	2.43	3.85	4.15	—	43.12	2.24	3.19	3.63	3.97	2.99	1.94	1.64
Range	1.2–4.5	0–9+	2.8–5.0	—	24–66	1.0–4.2	1.8–4.5	1.3–5.0	1.2–5.0	0–9+	0–9+	0–8
Standard deviation	0.53	3.14	0.48	—	10.83	0.59	0.51	0.59	0.74	2.27	1.62	1.05

Note: Means and standard deviations are given for the untransformed sick leave and plant variables.

**Significant at $P < 0.05$ or < 0.01 , respectively.

Zero-order correlations, means, ranges, and standard deviations for the variables included in hierarchical regression analyses of relationships between the presence of indoor plants in office workplaces and the self-reported stress, sick leave, and productivity of employees.. (Bringslimark, Hartig, Patil).

The study was first introduced to investigate ways to combat the rise of stress within work settings (*Bringslimark, Hartig, Patil*). The results did show small positive correlations between the presence of greenery in the workplace through productivity levels and creating a less stressful space. Since this experiment was done in Norway there is a call to further research in other countries due to different cultures.

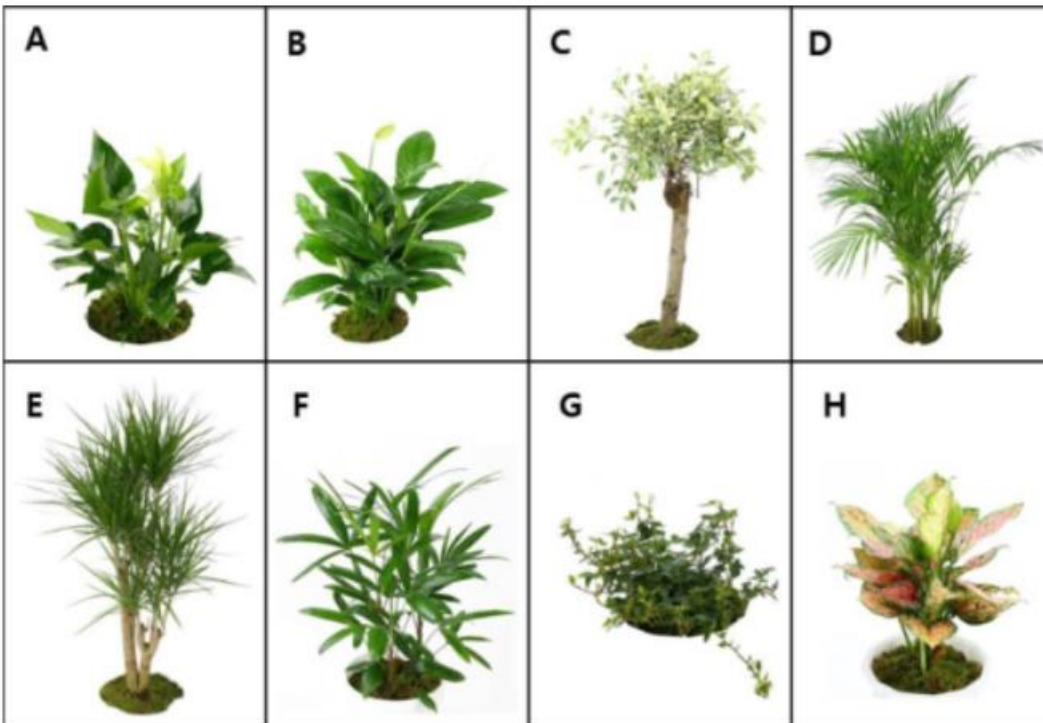
Summary: The introduction of plants within the workspace showed positive correlations to productivity levels and a non-stressful working environment. This specific study did make a point that too many plants within a space can have the opposite of the intended effect within a workplace environment. Part of the research for this project is to showcase how plants can have positive psychological impacts, and this case study gives insight on the number of plants can do more harm instead of good. Another aspect of this case study shows that the visibility and proximity to plants in interior spaces can have the benefits that would come from interacting with it.

Case Study #3: The Importance of Indoor Foliage Plants and Human Emotions to Indoor Foliage Plants

Authors: Hye Sook Jang, Gyung Mee Gim, Sun-Jin Jeong, Jae Soon Kim

Published: April, 2018

In the study “The Importance of Indoor Foliage Plants and Human Emotions to Indoor Foliage Plants” the authors discussed how the visual elements from foliage plants can contribute to emotional relaxation and stress relief. Since people have started spending more time in indoor spaces there are less chances to interact with nature. According to Edward O. Wilson, humans have an innate attraction to natural elements and connection to nature will promote connectiveness to oneself and the environment (*Jang, Gim, Jeong, Kim*). This study aims to answer how exposure to green foliage plants can help connect people to nature within indoor spaces to promote emotional well-being.



Eight Indoor foliage plants for the survey. A=*Anthurium andraeanum* cv.; B=*Spathiphyllum* spp.; C=*Ficus benjamina* 'Variegata'; D=*Dypsis lutescens*; E=*Dracaena marginata*; F=*Rhaps excelsa*; G=*Hedera helix*; H=*Aglaonema commutatum* 'Lady Valentine'. (*Jang, Gim, Jeong, Kim*).

There were eight different foliage plants ranging in color (greens, pinks, variegation) selected for this study. Part of the selection was based on the plant's air purifying qualities and the general habit of the plant (*Jang, Gim, Jeong, Kim*). To gather a basis for the study a questionnaire about general awareness of indoor plants was given to 216 workers and visitors of

public buildings. The first questionnaire found that 48.7% of the participants were aware of the environmental factors and 44.9% of the participants focused on the aesthetic of the plants (Jang, Gim, Jeong, Kim). Similarly to the first questionnaire, to gauge the emotions of the participants when viewing the eight foliage plants they answered the questions of how the plant made them feel through adjectives associated with basic emotions (Jang, Gim, Jeong, Kim). The results from the second questionnaire showed most participants felt “calm” or “comfortable” when viewing many of the plants. Their study did show a correlation between the overall aesthetic of the plant and what emotions it sparked.

Indoor foliage plant	Emotional reaction (ranked in order)			
	1	2	3	4
<i>Anthurium andraeanum</i> cv.	comfortable	simple	luxurious	pleasant
<i>Spathiphyllum</i> spp.	sharp	comfortable	sophisticated	pleasant
<i>Ficus benjamina</i> ‘Variegata’	bright	soft	warm	unique
<i>Dypsis lutescens</i>	bright	sharp	light	sophisticated
<i>Dracaena marginata</i>	sharp	warm	unique	sophisticated
<i>Rhapis excelsa</i>	sharp	calm	comfortable	pleasant
<i>Hedera helix</i>	sharp	pleasant	light	sophisticated
<i>Aglaonema commutatum</i> ‘Lady Valentine’	warm	unique	fancy	sharp

Representative emotional reactions to eight indoor foliage plants (Jang, Gim, Jeong, Kim).

	Color	n	M	SD	Scheffé's test $\alpha=0.05$			
					1	2	3	4
Preference	Gray	209	2.33	0.90	a ^x			
	Orange	212	3.03	0.87		b		
	Yellow	211	3.10	0.90		b	c	
	Red	210	3.19	1.01		b	c	
	Purple	212	3.22	0.99		b	c	
	Pattern	210	3.40	1.09			c	
	Green	213	4.47	1.04				d
F-value					98.224			
p-value					0.000***			

Note. Likert 5-point scale was used for preference, where 1=dislike very much; 5=like very much.

^xMean separation within columns by Scheffé's multiple range test, 5% level (N=216).

***Significant at $p < .001$.

Preference for leaf color of indoor foliage plants (Jang, Gim, Jeong, Kim).

Plant selection is an important factor when trying to promote emotional well-being (Jang, Gim, Jeong, Kim). Through the results of the study, they found that participants who are 40 years old or older the importance of environmental effects and emotional valuer are higher than other participants (Jang, Gim, Jeong, Kim). But all participants showed a positive correlation between indoor foliage plants and increasing emotional well-being. One of the most notable differences was the different emotions corresponding between the different plant habits or overall aesthetic.

The results showed that many of the participants have a preference for green foliage plants. All plants present in the study had correlations with stress relief and emotional stability (*Jang, Gim, Jeong, Kim*). This study supports past research done within the same topic and demonstrates how aesthetics of plants affects emotional well-being.

Summary: The case study highlights how different growth habits, foliage color, and size can affect people's emotions. The results signified that the majority of the participants preferred green colored foliage for the relaxing effect it had for them. This is important to this project since plant selection for the aesthetic appeal or the perception of the plant can determine how effective the project is at enhancing well-being. The case study highlighted that differentiating plant growth can help determine if the perception makes people feel relaxed, calm, happy or contrast to that and feel more negative emotions.

Literature Review



Habitat Horticulture, Living Table.

Created by: Habitat Horticulture

This table was designed for interiors in urban spaces to bring nature indoors. The table has little maintenance needed due to the irrigation system. This showcases how plants can be implemented into a functional piece of furniture.



Habitat Horticulture, GROWMEO.

Created by: Habitat Horticulture

The GROWMEO brings in a small form of a green wall for homes and offices. It was designed to promote people's connection to nature and enrich spaces for inhabitants.



Forest Farms, Moss Wall Hanging.

Created by: Forest Farms

This is a wall hanging made of living moss and different forest foliage. It was created to promote well-being and creativity through bringing in natural elements, textures, and incorporating calming shapes and colors. This moss wall hanging also naturally absorbs sound.



The University of Cornell, Cornell Library Lawn.

Created by: Cornell Council on Mental Health, the University of Cornell

During finals week of December 2012, the University of Cornell laid sod in the library to help ease the stressful nature of final exams. The university chose this based off previous research of nature improving moods and lowering stress levels. This spot was popular amongst students to study.



Pasona Urban Farms, Divided Seating Areas.



Pasona Urban Farms, Dining Area with Overhead Planters.

Created by: KonoDesigns

Pasona Urban Farms is an urban farming facility that was integrated into an office building in downtown Tokyo. The design of integrating plants within most aspects of the building have led to a promotion of social interaction and higher work efficiency.

Some notable features of the building include plant dividers between sections, seed starters underneath seating, and the overhead planters.



Guelph-Humber University, Plant Wall.

Created by: The University of Guelph-Humber, Alan Darlington, Air Quality Solutions Ltd.

This is a four-story tall green wall that was installed in 2003 within a library at Guelph-Humber University. It was designed to incorporate air purifying plants and help cool temperatures of the building. It has helped with research on how biofiltration systems work in interior spaces. The wall has made students and faculty feel productive.



Planted Design, Moss Walls and Columns.

Created by: Planted Design

This company has a focus of bringing nature indoors while creating a focal point for the space. Part of the goal is to help promote interaction with nature in unexpected places.



ParkHere, Indoor Pop-Up Park, NYC.

Created by: Openhouse Gallery, ParkHere

The interior pop-up park, ParkHere located in New York City, brought a park indoors in the middle of winter of 2011. This quickly became a popular place to visit and promoted interaction with nature during a season it may have been limited. Even though the plants used were plastic it still had the same effect as natural elements.



Truly Claire, Overhead Green Chandelier.

Created by: Truly Claire

Living chandeliers create unique overhead lighting. This piece mimics the growth of plants growing on a lighting system and focuses the eye above. Since it is on a lighting system it is out of the way but still visible to users.

Historical Context

The History of the Rise of Urbanism and Plants

Mid-18th Century
to the Early 19th
Century

*Industrial
Revolution*

1780-1840

- Rapid urbanization in cities led to overcrowding and housing crisis
- Planners started to address the negative impacts and advocated for improvements (Archova, 2014)



LEEMAGE/CORBIS VIA GETTY IMAGES

- Ebenezer Howard proposed the Garden City movement which incorporated green spaces to balance urban and rural areas (Archova, 2014)
- It was a popular practice for residents in urban areas to keep houseplants. Part of the reason for this was to be a form of escape from the harsh living conditions brought on by air pollution and overcrowding (TenneyPlants)
 - o Many of the popular houseplants at this time tolerated low light conditions (English ivy, cast iron plant)



Cast Iron Plant. The Spruce / Kara Riley.

Early 20th Century <i>Progressive Era/ Edwardian Era</i> 1900-1929	- Urban planning started to focus on efficiency, functionality, and integrating technology (Archova, 2014)  DETROIT PUBLISHING COMPANY/INTERIM ARCHIVES/GETTY IMAGES - The architect Le Corbusier proposed the “Radiant City” which focused on including open green spaces throughout urban environments to create a less polluted city (Archova, 2014) - Some residents in urban areas kept houseplants to connect with nature, for therapeutic benefits, or for their medicinal benefits. Specific plants started to turn into a status symbol to signify wealth (TenneyPlants) - o Terrariums, fern, palms, and other tropical/ exotic plants signified wealth by having access to global plant markets  <i>Two young women in a conservatory, 1850s (Photo by Roger Fenton via Getty)</i>
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		○ The houseplant, cast iron plant, became a sign of the middle-class and soon went out of style. It was a popular plant since it could survive with little maintenance or in drafty homes (TenneyPlants)
Mid- 20th Century <i>Post WWII Era</i> 1945-1970		- After WWII people started to move to suburbs. In the United States, the rise of automobile culture helped the expansion of suburban areas (Archova, 2014)  <i>Aerial view of Levittown, New York. Image courtesy Mark Mathosian.</i> - The popularity of houseplants skyrocketed because plants became widely available around the world and economic mobility (Hilder, 2023)



1970s, Photo: BETTER HOMES & GARDENS

- The shift in the plant market made it easier to obtain plants. The view of houseplants changed from a symbol of wealth to rather a hobby or symbol wellness (TenneyPlants)
- Houseplants provided an easy way to decorate suburban homes for aesthetic purposes, adding pops of color, and creating a natural environment (Hilder, 2023)
 - o Popular plants included snake plants, philodendron, African violets, and peace lilies due to their low maintenance



Grow bigger, handsomer *African-violets*

The African-violet has amazing charms. For millions of us, it's already top favorite among house plants. To grow still handsomer specimens has become a national game. Grow a plant or two well, and soon you'll have the best.

African Violet Poster, Photo: BETTER HOMES & GARDENS

Late 20th Century

New Urbanism

1970-2000

- Urban planning started to shift more towards sustainable practices due to pressing environmental issues. They started to address the negative impacts that urbanization has had on natural ecosystems (Archova, 2014)



Student environmental activists marching on Earth Day in Colorado by Rocky Mountain News, 1970, via Denver Public Library

- People sought out plants for their air- purifying qualities and psychological benefits (BalconyGarden, 2024)
- Within the late 20th century, the aesthetics for home design changed over the decades and that also changed how houseplants were displayed
 - o Minimalism: large foliage plants became popular. Large vibrant plants were chosen to add a focal point for interior spaces (BalconyGarden, 2024)
 - Bird of paradise, fiddle leaf fig, and large ferns



Minimalist Plant, Photo: BETTER HOMES & GARDENS

- Environmental concerns: Plants with air-purifying qualities became valued and there was an increase in the number of plants to connect with nature. Hanging planters paired within vining plants became popular (BalconyGardens, 2024)
-Pothos, hoya plant, spider plant



1970s hanging plants, Photo: BETTER HOMES & GARDENS

21st Century

Present

2001-Present

- Smart and green infrastructure are prioritized to promote sustainability within urban environments (Archova, 2014)
- Green infrastructure (ex. green roofs, living walls, accessible open green spaces) help address problems happening within urban environments. The focus of enhancing community health, stormwater management, improving air quality, and reducing energy usage



Green roofs can be implemented on top of residential, commercial and other types of buildings to help with stormwater and offset carbon emissions. Photo by Chuttersnap on Unsplash.

- The focus on mental well-being and sustainability along with the rise in biophilic design produced another boom within the houseplant market (BalconyGardens, 2024)
- During the COVID-19 pandemic individuals started caring for plants and houseplants as a way for emotional and mental well-being. Due to the rise of social media, it became easier to see and learn how to grow indoor gardens or care for plants within small spaces (BalconyGardens, 2024)
 - Popular plants include various succulents and cacti, Chinese money plant, elephant ears, and calatheas



Indoor plants/ garden, Photo: Max Burkhalter

Project Goals

The goal for this project is to explore how plants can be added into residential spaces within urban environments to improve the user's mental well-being. The overall vision of the project is to explain how incorporating plants into interior spaces can promote mental well-being and expand how they can be added into these spaces for the benefit of the users. The design and build focus being a chair is to explore how different home décor objects can still be functional even with incorporating plants. The review of the case studies helped to shape the plant selection, focusing on incorporating plants that have a majority of green foliage. The maintenance of the chair and the plants is provided but will have to be done by the users of the space.

Other pieces like couches, lights, and mirrors are explored on how to incorporate greenery and having the piece still be functional. Throughout the process different plant textures, colors, and growth are explored to make a green piece cohesive.

There are two main goals set for this project. The first being to expand on how plants are incorporated into interior spaces and branch out from the typical plant in a pot. The second goal is to have the object maintain functionality within the space.

Programmatic Requirements

There are five main programmatic requirements for this project to have a successful outcome.

1. Live Plants, Soil, Water, and Chair Maintenance:

Upkeeping the maintenance on each of these factors is important to ensure that the plants stay alive and keep the chair functional and safe. Learning the plant requirements and how to maintain them at ease so that it does not become a hassle to take care of.

Changing the water and learning the signs of healthy soil is important to keep the chair from being smelly or unusable.

2. Conditions of the Space:

Lighting conditions whether natural or artificial are crucial to keeping the plants alive.

This can be from placing the object by a window that has enough light for the plants (this would be a bright and indirect natural light) or using the artificial lights provided within the chair. Another key component would be to place it in a room that has air circulation so the plants can facilitate their functions properly (ex. Gas exchange for photosynthesis).

3. Physical Components of the Space:

The ideal physical components of the space would include access to a window for a light source, the room is well-ventilated, and would have easy access to clean any debris that may fall. Having the chair on hardwood would make it easier to move and make it easier

to cleanup any spillage (ex. Water, soil, plant matter) that may happen. The chair can be used within carpeted spaces, if the user is concerned about spillage happening a small tarp or plastic covering can be placed at the bottom, so the carpet is protected. The tarp would catch any debris or water that may drip or fall out and allow for easy cleaning.

4. Ability of the Users:

Users ideally would have the means to take care of the upkeep and maintenance of the object or have the ability for another person to take care of it for them. This can range from physically being able to care for it, financially being able to be responsible for it, or have the connections to have an outside hand help tend to the object.

5. Type of Space:

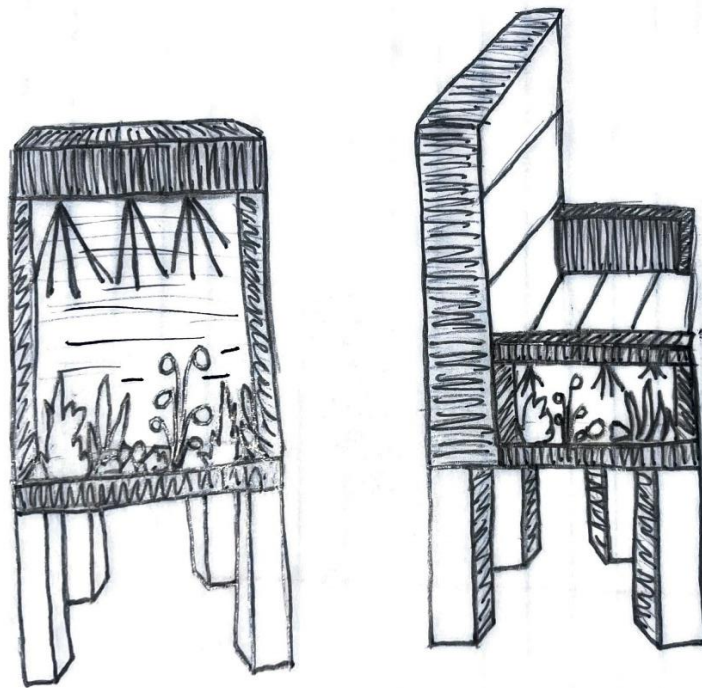
This project is geared towards residential living within urban environments, specifically apartments, condos, or smaller living areas. This is based on research that shows how many plants are needed within a space to improve the user's mental well-being. The ideal space for this project would be a living room or a frequently used space by the user. A frequently used room to house this project is important because it allows the users to have more interactions with the plants and allows more times for them to be in close proximity to them. The interaction with plants or proximity is a key factor for using greenery as a way to improve mental well-being.

Final Project Design Elements

Process Documentation

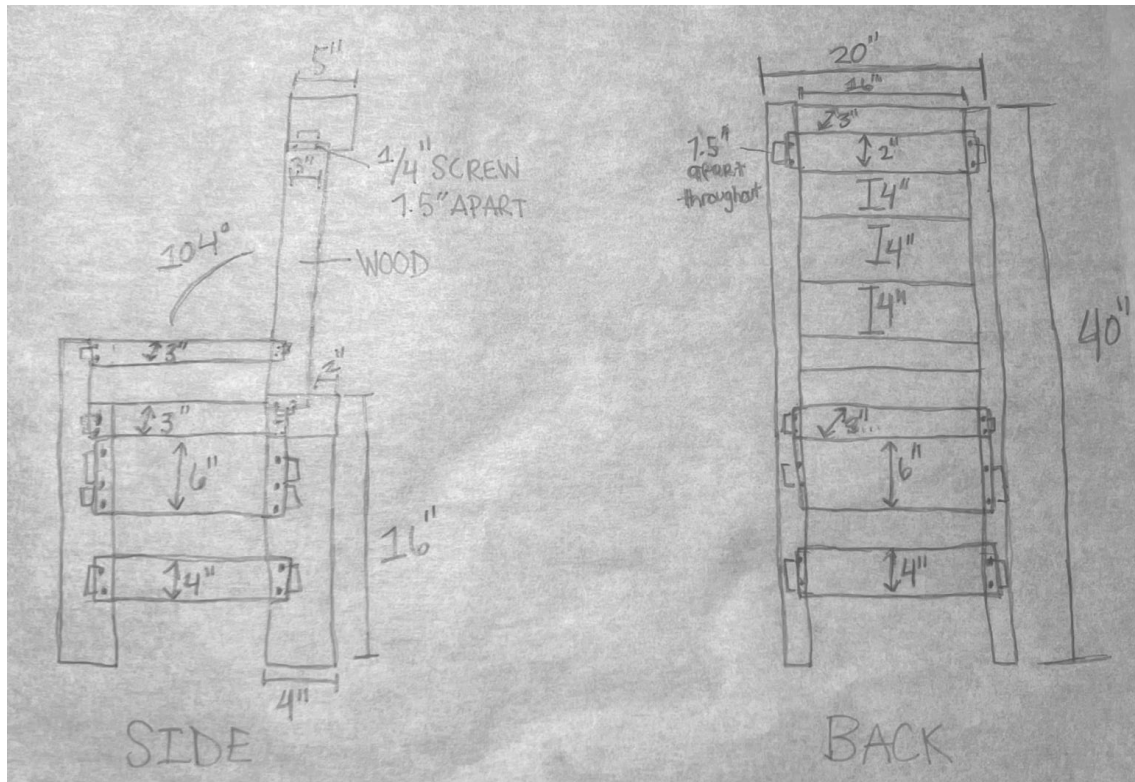
Design Concepts- *Chair Design*

- Concept design for a living chair that adds greenery to the space and retains functionality.



Drawn by Lucinda Vandekieft, 2025. Image not to scale.

- Proposed construction documents for the building process. Including measurements and angles.



Drawn by Lucinda Vandekieft, 2025.

Build Process for the Chair

Building the Base Frame:

The base frame of the chair was made from 2 in. X 4 in. X 96 in. wood planks. The planks were screwed together and mainly followed the concept designs of the chair. Wood supports were added to the legs of the chair for structural integrity.



Photo taken by Lucinda Vandekieft, 2025.



Photo taken by Lucinda Vandekieft, 2025.



Photo taken by Lucinda Vandekieft, 2025.

After building the base of the chair it was stained with a wood finish in the color “*Jacobean 2750*” from *MINWAX*.

Adding in the Planters-



Photo taken by Lucinda Vandekieft, 2025.



Photo taken by Lucinda Vandekieft, 2025.

There are three planters present on the chair (one on the back, one on either side). The planters are plastic mud pans (two 12” length mud pans, one 14” length mud pan). Holes were drilled into the bottom of the planters for drainage for the plants. The drip trays for the planters are made

from aluminum foil so it will catch any excess water. The wood box acts as a covering for the planters to make it blend better with the rest of the chair. Supports for the planters were placed underneath the chair and hold up the planters for viewing.



Photo taken by Lucinda Vandekieft, 2025.

The image above shows the final build of the chair without the planters. The backing of the chair was changed to be made of plexiglass so that users can have a better view of the plant growth and greenery. LED plant lights were added underneath the armrests and underneath the wood piece on the back of the chair.

Project Solution

Final Chair Images



Front seat and side planter view of chair. Photo taken by Lucinda Vandekieft, 2025.



Side view of both side and back planters. Photo taken by Lucinda Vandekieft, 2025.



The user sitting in chair with arms on the arm rests. Photo taken by Samantha Lorenc, 2025.

Final Chair Build Notes & Details

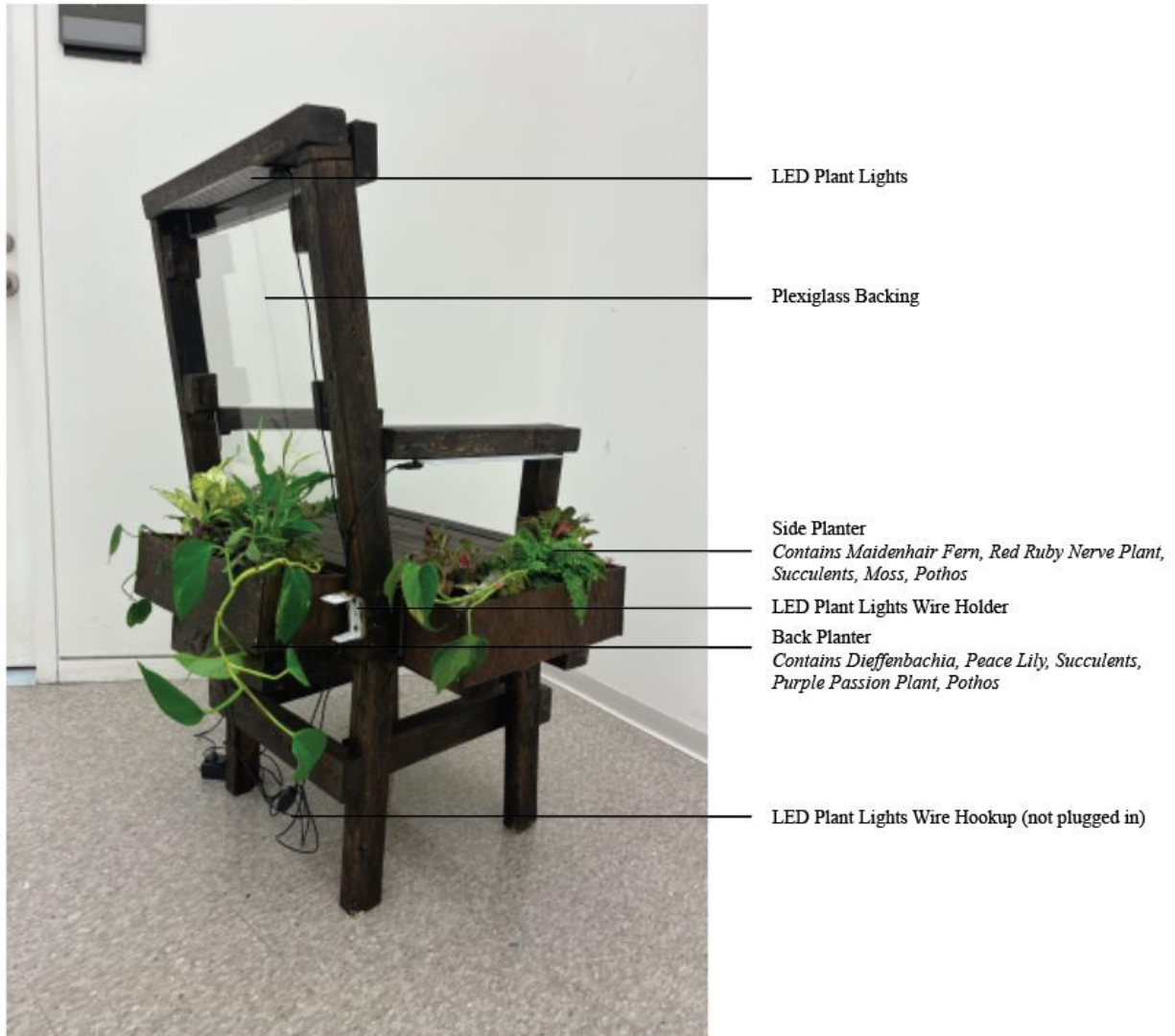


Photo taken by Lucinda Vandekieft, 2025.

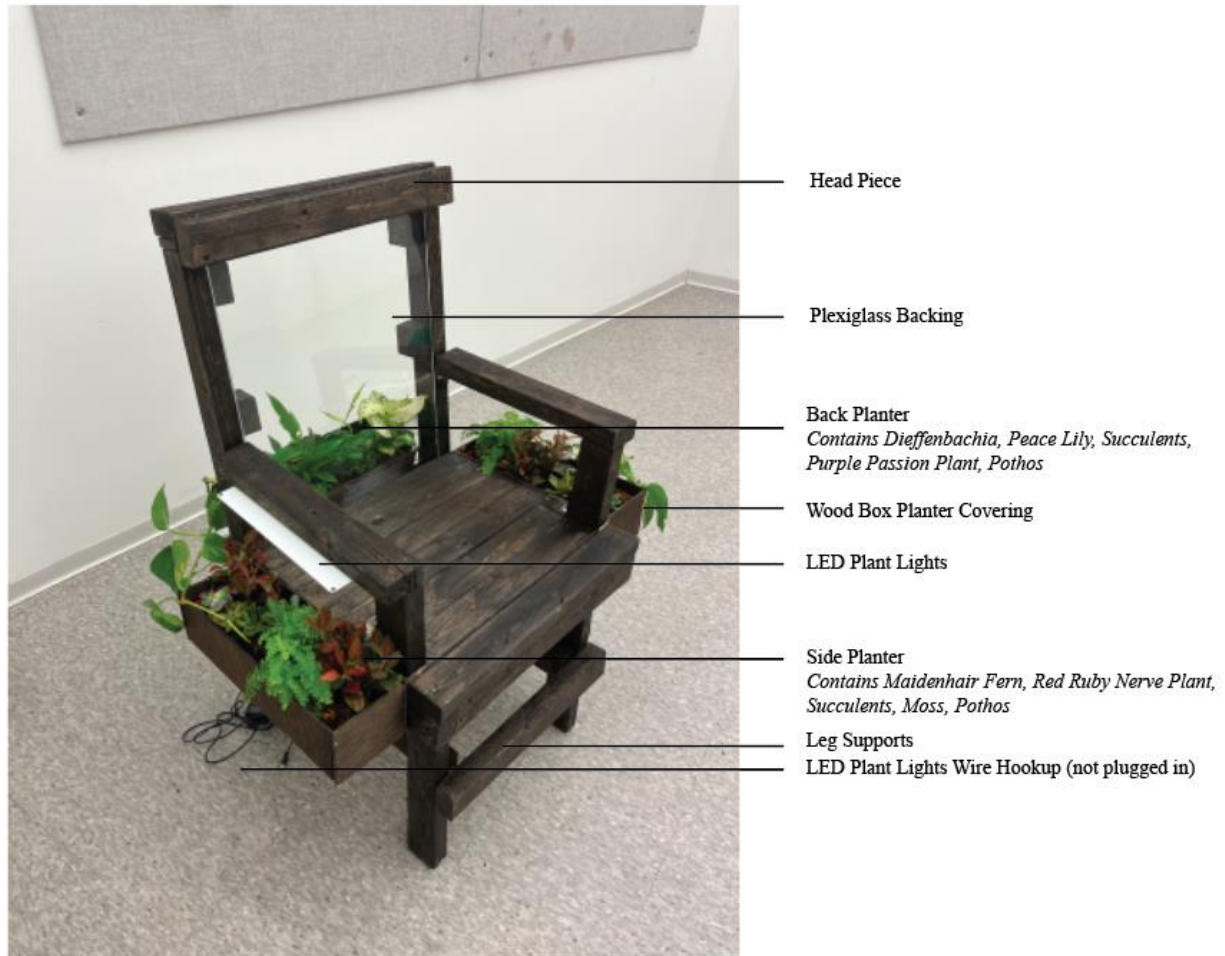


Photo taken by Lucinda Vandekieft, 2025.

Final Thoughts

The finished product is successful. The chair was tested in multiple locations that had a range of different site conditions. It worked well within an apartment setting that had low light conditions and is not well-ventilated except for a singular window. Within the apartment it was tested in, the chair was placed in an area that had the most foot traffic and an area that only had single occupancy. Both areas had little greenery in them before the chair was placed. The chair being in the space added greenery to both areas and maintained functionality. The users of the chair were able to interact with the plants and had greenery in their line of vision when present in the room. The other location used was within the school of DAAP and was kept in an office that had frequent users. This location has low lighting conditions and no access to a window. The chair had no issues thriving in both types of locations and site conditions. Using greenery within home décor objects and furniture can be a useful way for residents in urban areas that don't have

accessible outdoor greenspace to incorporate plants into their everyday lives to improve their mental and emotional well-being.

Plant Selection, Plant Maintenance, and Plant Reasoning

Photo	Scientific Name	Common Name	Height and Width	Notes	Why is it Used?
 <i>Photo by FlorAccess.</i>	<i>Adiantum hispidulum</i> 'Bronze Venus'	Bronze Venus Maidenhair Fern	H: 12-18 in W: 12-18 in <i>Mature</i>	-Indirect and bright light -Likes moist soil, water when soil is dry, constant moisture -Prefers high humidity (can be achieved through misting) -To keep small prune back dead or damaged leaves by snipping close to base, prune back to keep desired shape and size, prune in winter or spring when new growth is emerging Non-toxic: Safe for children and pets	-Delicate and lace-like leaves -Can make the space feel more jungle-like and lush -Air purification qualities -Symbolism: can symbolize a secret message (Victorian era), associated with healing (Ancient traditions)
 <i>Photo by Pafe Plants Center.</i>	<i>Dieffenbachia hybrida</i> 'Amy'	Amy Dieffenbachia	H: 2-3 ft W: 2-6 ft <i>Mature</i>	-Bright and indirect light (direct light will scorch the leaves), can tolerate low light conditions -Prefers high humidity (can be achieved by misting) -Water when the soil is dry (the top 2" are dry) -Prune back to maintain shape and desired size, prune off dead or damaged leaves TOXIC: keep out of reach of pets and children Poisonous- can cause skin irritation and throat irritation if ingested	-Large and eye-catching foliage -Air purification qualities -Low maintenance care -Symbolism: Can symbolize resilience and adaptability
 <i>Photo by Easy to Grow Bulbs.</i>	<i>Echeveria/ Sedum</i>	Succulent Mix Pack	H: 2-4 in W: 2-4 in <i>Mature</i>	-Bright light, can tolerate indirect light -Water when soil is dry (likes well-draining soil) -Prefers average humidity -Prune dead or damaged leaves, prune back leggy stems, prune off spent flowers, prune to keep desired shape and size TOXIC: keep out of reach from children and pets	-Low maintenance -Variety in shape, color, size -Providing visual contrast from the other plants -Symbolism: Can symbolize prosperity, wealth, and good fortune

				-can be toxic if ingested	
 <i>Photo by Chansom Pantip, 2020.</i>	<i>Epipremnum aureum</i>	Pothos	H: 20-40 ft W: 3-6 ft <i>Mature</i>	-Indirect and bright light can tolerate low lighting conditions -Likes well-drained soils, water when soil is dry -Prune off dead or damaged leaves, prune back runners, prune to keep desired size and shape -Prefers high humidity (can be achieved through misting) TOXIC: keep out of reach from children and pets -causes irritation when ingested, causes oral irritation	-Trailing nature -Glossy foliage to make the space feel lush -Air purification qualities -Low maintenance -Adds a new way for plants to be used- hanging, trellised, running -Can make a space feel more tropical -Symbolism: Associated with prosperity, resilience, and positive energy
 <i>Photo by My Plant My Taste.</i>	<i>Fittonia albivenis</i> 'Red Ruby'	Red Ruby Nerve Plant	H: 3-6 in W: 12-18 in <i>Mature</i>	-Bright and indirect light (East and west facing window) -Maintain moist soil (Yellowing leaves indicates overwatering) -Likes high humidity (can be achieved through misting) -Maintain a warm environment -To keep small pinch the top of the plant off (stems), this encourages the plant to grow bushier and prevent it from becoming leggy, remove dead or damaged leaves -Slow growing plant Non-Toxic- safe for children and pets	-Vibrant foliage -Thrives in indoor environments -Has air purification qualities -Low maintenance -Symbolism: Can bring wealth and stability to household

 <i>Photo by Aquasabi.</i>	<i>Gynura aurantiaca</i> 'Purple Passion'	Purple passion plant	H: 1-2 ft W: 2-5 ft <i>Mature</i>	-Indirect and bright light (direct light causes leaves to scorch) -Likes constant soil moisture, soil soggy or overwatering will lead to root rot -Prefers higher humidity (can be achieved through misting) -Prune during growing season, prune back to desired shape and size (removing flower heads will help) Non-toxic: safe for children and pets	-Velvety purple foliage -Low maintenance -Symbolism: can symbolize love and devotion
 <i>Photo by Aquasabi.</i>	<i>Leucobryum glaucum</i>	Pincushion Moss	H: 2-6 in W: 8-24 in <i>Mature</i>	-Indirect and bright light (avoid direct light), if the light is too bright the color will be drained -Prefers humidity (can be achieved through misting) -Keep the soil constantly moist but not waterlogged, water when the soil is dry -Minimal pruning required, prune to remove yellow parts, prune to maintain desired shape and size Non-Toxic: safe for children and pets	-Variety in texture -Moisture retention -Providing visual contrast from other plants present
 <i>Photo by Pafe Plants Center.</i>	<i>Spathiphyllum 'Petite'</i>	Peace lily	H: 12 in W: 12 in <i>Mature</i>	-Indirect and bright light, can tolerate low light conditions -Likes moist soils, does not tolerate soggy soils -Water when the soil is dry -Prune back to remove dead or damaged leaves and spent flowers, if growth becomes unruly the top of the plant can be pruned back, can be pruned to keep desired shape and size -Over pruning can cause stress to the plant TOXIC: keep out of reach of children and pets	-Air purification qualities -Low maintenance -Glossy green foliage, white blooms -Can add a touch of tranquility to the space

				-can cause oral irritation, and swelling of lips, tongue, and mouth, burning sensation	
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Other Home Décor Concept Images

Vibrant Flora Couch



Image created by Lucinda Vandekieft, 2025.

The couch above explores how different plant textures and foliage color interact with each other in a piece typically used for seating. Ferns and bright caladiums are a constant presence throughout the couch creating a colorful look to catch the eye.

Lush Table

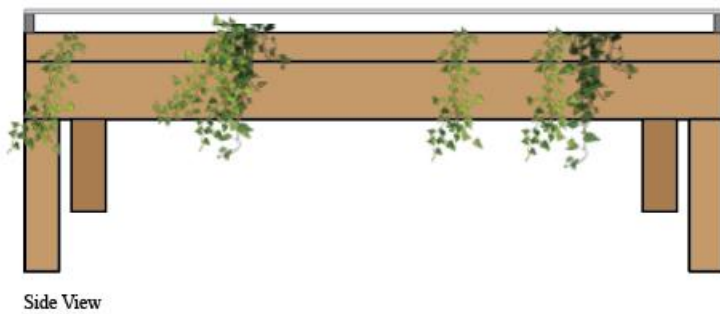


Image created by Lucinda Vandekieft, 2025.

The overgrown foliage of the table falls off the side of the table. The plant life is protected by the glass covering that allows light to penetrate through. The different succulents and moss placed throughout gives the user's eyes something to follow and focus on. The use of the green plants makes the table feel lush and alive.

Luxuriant Living Mirror



Image created by Lucinda Vandekieft, 2025.

The green foliage of the pothos and string of pearls hang off the top and bottom of the mirror allowing the piece to interact and respond within the space it is placed in. The use of a purple tradescantia catches the eye to move from place to place. Hanging plants were utilized within this piece to explore how different plant heights and growths can interact with the piece they are on and allow more liberty to the plants to respond to the area.

Overgrown Verdure Lighting



Image created by Lucinda Vandekieft, 2025.

The lights above utilize bushy and large foliage plants to hang down with the lights. The different hanging plants used allow for different colors of green and foliage to interact. The spider plants at the top and the tradescantia on the sides help make the lights feel lush and add a pop of color amongst all the greens present.

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