

Indoor Gardens for Climate Resilience

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Using greywater for indoor plants to increase mental health and grow fresh fruits and vegetables.

1. Project Scope

The five group members gathered; umami seeds (including mustard plants) that grow within 10- 14 days of planting, rope, and terracotta pots. The group then hosted a planting party for the rest of the class, who were interested in participating with a maximum of fourteen people.

The plants were monitored for two weeks by all participants, and data were collected every week on several different categories, including greywater use.

2. Importance & Objectives

Growing plants for mental health and sustenance can not only lower the carbon footprint of transporting food from around the world to America but can also increase the healthiness of one's lifestyle. Incorporating more fruits and vegetables into an individual's diet can increase lifespan and improve the quality of life. This can also cut down on the amount of water wasted in a home by watering your plants with water that would typically go to the cycling plant or evaporate, reducing the amount of energy needed to recycle the water and reduce the amount wear your draining appliances. The immediate benefits from the indoor garden are increased green space inside your home, the ability to reuse your greywater, and a feeling of self-accomplishment from having started your garden. This was followed shortly later by being able to harvest the fruit of your labor and add flavor to your current diet. The best part about this project can get your foot in the door with indoor gardening. This project demonstrates how easy it is to obtain fresh fruits and vegetables from your very own home and continue planting into the future. Since the basic supplies were provided, there's no reason that an individual can't continue to grow their produce.

3. Project Deliverables & Reflection

1. Implementation process

First, the indoor garden group provides an in-person meeting for the whole class to gather around and say hello to each other; it was an essential mental health process for everyone, especially in the pandemic.

(Taking care of the microgreen means a new responsibility for us, and it is also essential for us when we probably would feel useless in the self-isolation.) (Meeting people can make us feel connected, and it is a way to show we care and we are cared for by people.)

Then, the indoor garden group distributed soil, seeds, and pots to the participants and provided thoughtful notice of using greywater and planting suggestions. This group believes the process would be educational for a large group to get information and knowledge of water conservation.

Finally, the indoor garden group provided a 2-week questionnaire survey to understand the participants' use of recycled water and their psychological changes.

2. Application in sustainability

Environmental: This project first enhanced the participants' awareness of using recycled water. A small step for the whole journey. Then, this group participates in the use of recycled water through a two-week experiment with 14 participants. Through this project, participants are more environmentally friendly in terms of awareness and behavior.

Economic: Both the soil and pots are reusable. As long as there are seeds, there will be new plants in the home. Therefore, to a certain extent, the indoor garden is economically friendly.

Societal: Research shows that exposure to nature or just green plants can make people feel happy. The indoor garden increases our sense of need and also enhances our mental health.

4. Visuals

Responses



Participants Reactions:

- (1) “I was super pumped to see a sprout, even though I have been neglectful.” ,
- (2) “I feel responsible for our plants, then, I feel really happy seeing them growing” ,
- (3) “My microgreen didn't grow up for the first 4-5 days, and I was super depressed, then, the next day, I saw them grew!!! I feel very excited and hopeful.”
- (4) “I really enjoyed it. I was even inspired to start other crops that I plan on transplanting outdoors this spring.” ,
- (5) “I like it :) It feels positive and productive, lively. It's also interesting.”

Our group selected some of the comments we've received, and as you can see, most participants use "hopeful," "happy," "positive," and "interesting" to describe their feelings. Hopefully, we are achieving our goals to bring the notion of green plants into changing their way of seeing the world to make them feel positive and happy during the pandemic. And more importantly, our group hopes participants and the public could have a sense of water conservation and practice the idea in day-to-day life.