

JOURNAL BRIEF: Urban home gardening is associated with happiness

Sustainable Healthy Cities Journal Brief - 2020, No. 23 - Urban home gardening

This brief is adapted from a peer-reviewed journal article: Ambrose, G., Das, K., Fan, Y., & Ramaswami, A. (2020). Is gardening associated with greater happiness of urban residents? A multiactivity, dynamic assessment in the Twin-Cities region, USA? *Landscape and Urban Planning*, 198, 103776.

Study Intent and Research Question

As cities seek to become more livable and “green,” biking and walking routes are popular investments, but other avenues for wellness are sometimes overlooked. This study measured people’s **emotional well-being (EWB)** while engaged in **urban household gardening**. The researchers directly measured EWB of home gardeners and compared their reported emotional affect across different activities, finding that gardening is one of the top ranked activities associated with positive emotions.

Key Background Information

For cities looking to enhance livability and sustainability, questions arise about how best to improve quality of life through investments in bicycle paths, parks, and other amenities. However, few methods directly measure people’s emotions while using such amenities, making it difficult to determine how effective these investments are.

This research developed a method for directly measuring people’s EWB as they engaged in gardening and other activities. Using a cell phone app called Daynamica™, 370 people in the Minneapolis-St. Paul metropolitan area reported their emotional state while performing any of 15 daily activities over the course of one week (for a complete list of activities, see the paper). Participants assigned scores to a range of positive and negative emotions to indicate how they felt while engaged in these activities.

While past studies on urban green space have centered on green infrastructure, community

gardens, and nature in the city, this research is unique in its focus on home gardening and its direct measure of EWB. This study thus fills in an important gap in understanding how people engage with gardening in an urban environment, and what role it could play in wellness initiatives.

Key Findings

Of the 370 participants, 31% engaged in household gardening for approximately 90 minutes per week on average. Comparatively, 19% of participants biked at least once per week, averaging 30 minutes per week, and 85% walked at least once per week, with weekly walking time averaging 101 minutes.

Based on the scores participants reported, researchers computed different measures of EWB to more specifically elucidate the emotions associated with each activity. These measures included:

- ▶ **Average net affect:** The average of positive emotion scores minus the average of negative emotion scores (Kahneman & Kruger, 2006). A positive net affect score indicates that positive emotions (happy, meaningful) outweigh negative emotions (tired, stress, sad, pain).
- ▶ **Average happiness:** Average happiness scores reported by participants while engaged in the activity over the course of one week
- ▶ **Average meaningfulness:** Average meaningfulness scores reported by participants while engaged in the activity over the course of one week
- ▶ **Peak happiness:** Frequency of experiencing high levels of happiness

► **Peak meaningfulness:** Frequency of experiencing high levels of meaningfulness

In three key measures of EWB—average net affect, average happiness, and average meaningfulness—gardening ranked in the top five of the 15 activities, and was not statistically different from biking, walking, and eating out. Leisure/recreation ranked first, and the remaining 10 activities ranked lower, indicating that gardening is strongly associated with positive emotions

Participants reported that home gardening was one of the top five most meaningful activities they engaged in.

Average net affect during gardening was significantly higher for vegetable gardeners (in comparison with ornamental), for low-income gardeners (versus higher income), and for women.

Policy and Practice Implications

This study uniquely identified how much people engaged in home gardening, which may well

be more than expected. “People know where community gardeners garden, but it is hard to know who is gardening at home, which our group uniquely identified,” said first author Graham Ambrose.

Because gardening is associated with high levels of happiness, in the movement to make cities more livable, gardening might be a big part of improving quality-of-life. Gardening may have a particular association with the experience of meaningfulness and should be evaluated in further studies.

“The high levels of meaningfulness that respondents reported while gardening might be associated with producing one’s own food,” Ambrose said. “The boost to emotional well-being is comparable to other leisure activities that currently get the lion’s share of infrastructure investment. These findings suggest that, when choosing future well-being projects to fund, we should pay just as much attention to household gardening.”



Livability



Wellbeing



Urban Farming

Further Reading and References

- Daynamica™. Fan, Y., Wolfson, J., and Adomavicius, G. (2017). Travel and Activity Capturing. U.S. Patent and Trademark Office. Patent No. US9763055B2. Grant Date: September 12, 2017. <https://daynamica.com/>
- Ingraham, C. (2020). “Gardening boosts your mood as much as some types of exercise, study finds.” The Washington Post. <https://www.washingtonpost.com/business/2020/05/15/gardening-boosts-your-mood-much-some-types-exercise-study-finds/>
- Kahneman, D., & Krueger, A. B. (2006). Developments in the measurement of subjective well-being. *Journal of Economic Perspectives*, 20(1), 3–24.
- Kelly, M. (2020). “Sowing seeds of happiness.” High Meadows Environmental Institute News. <https://environment.princeton.edu/news/emotional-well-being-while-home-gardening-similar-to-other-popular-activities-study-finds/>
- University of Minnesota News Archive (2020). “Urban gardening promotes emotional wellbeing, new Humphrey School study says.” <https://www.hhh.umn.edu/news/urban-gardening-promotes-emotional-wellbeing-new-humphrey-school-study-says/>
- Tang, M. (2020). “By the numbers: emotional well-being while gardening at home.” High Meadows Environmental Institute News. <https://environment.princeton.edu/by-the-numbers-emotional-well-being-while-gardening-at-home/>

Corresponding Author: Anu Ramaswami (anu.ramaswami@princeton.edu)

About the Sustainable Healthy Cities Network

The Sustainable Healthy Cities Network is a U.S. National Science Foundation-supported sustainability research network focused on the scientific advancement of integrated urban infrastructure solutions for environmentally sustainable, healthy, and livable cities. We are a network of scientists, industry leaders, and policy partners committed to building better cities through innovations in infrastructure design, technology, and policy. SHCN connects nine research universities, major metropolitan cities in the U.S. and India, and infrastructure firms and policy groups to bridge research and education with concrete action in cities.