Community Gardens as a Pedagogical Tool

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Abstract

The goals of the current study were to explore the multifaceted dimensions of gardening through an interdisciplinary lens, incorporating insights from multiple disciplines, including humanities, psychology, human services, and history. By examining how gardening practices influence and are influenced by various fields as well as how to use gardening as a teaching and pedagogical tool, this research provides a better understanding of the holistic role that gardening can play in human experience and environmental sustainability. Based on the previous literature, the primary purpose of the current study was to determine if the benefits of gardening would be found in a population of neurodivergent students using a quantitative and qualitative research design. Student engagement, reactions, and gardening perceptions were measured over the course of the spring 2025 semester. The results of this study demonstrated that gardening positively impacted well-being, sense of belonging, and general gardening interests. Future research ideas and limitations were also discussed.

Keywords: community gardening, multidisciplinary, neurodivergent students, psychology, human services, humanities, history, pedagogy

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This study explores how gardening affects the mental health, academic engagement, and sense of belonging among neurodivergent students through both quantitative and qualitative methods, while integrating interdisciplinary perspectives from psychology, humanities, history, and human services. Gardening, traditionally regarded as a practical pursuit, includes complex and compelling benefits. A focus on growing plants (fruits, vegetables, and flowers) has been shown to nourish both body and soul. Community gardening increases access to fresh produce; offers physical activity and recreation; improves mental well-being, social connections, and environmental awareness; and provides opportunities to study its impact on participants (Staub et al., 2019). Until recently, little research has focused on the benefits of gardening in college-age students (Matias et al., 2023); even less is found regarding its effects on neurodivergent learners. This gap in literature calls for further investigation. Will working together in a community garden have similar results for non-neurotypical students? Our study investigates gardening as an educational methodology, using insights from diverse academic disciplines to examine its influence on social-emotional development and pedagogical practice in the educational experience of neurodivergent college students.

This study explores how gardening affects neurodivergent college students through the multidimensional perspectives of history, humanities, psychology, and human services. Employing an interdisciplinary framework, we examine how the benefits of gardening reflect cultural relevance and communal engagement; can serve as metaphors in literature and philosophy, and encourage thoughtful experiences in nature; reduce stress and support psychological well-being; and foster inclusion, accessibility, and support within an academic setting. The purpose of this study is to bridge the gap between existing research on the benefits

of community gardening and neurodivergent learning in college. Community gardening, as an educational tool, provides a valuable means to observe and assess a range of processes and outcomes. The insights gained from this study have significant implications for neurodivergent students, who may benefit from gardening through improved emotional regulation, increased engagement, and accessible, hands-on learning experiences.

Historical Perspective

The origins of gardening as a pedagogical tool trace back to the late 19th century and progressive reformers such as John Dewey. Inspired by European educators, especially those in Germany who had introduced gardening in their schools based on earlier French examples, American educators advocated for the practice in American schools (Kohlstedt, 2008). Henry Lincoln Clapp, headmaster of the Goerge Putnam School in Roxbury, Massachusetts, studied school gardens in Europe and, upon his return, became a vocal advocate for the development of school gardens by publishing articles and speaking at educational meetings (Trelstad, 1997). By the end of the century, the school gardening movement was in full swing.

School gardening was part of a larger response to the social, cultural, and political issues of the late 19th century. The Nature Study Movement informed the earliest gardens. The movement sought to teach children an appreciation for nature by bringing it into the classroom. Also influenced by the Country Life Movement, which aimed to demonstrate the benefits of rural living, supporters of school gardening imbued their efforts with “a general cultural rather than vocational aim” (Kohlstedt, 2008, p. 62) Rather than focus on strictly agricultural and technical issues, educators sought to teach children the value of rural living and the importance of nature as a defense against the negative effects of industrialization and urbanization. School

gardening also helped teach American values to the sons and daughters of the millions of European immigrants arriving on the nation's shores.

The School Garden Movement grew substantially in the early 20th century. Its popularity among educational theorists led to its becoming part of teacher training programs at prominent higher educational institutions such as the University of Chicago, Cornell, and Columbia University, as well as important regional schools that served African Americans, such as the Hampton Institute in Virginia and the Tuskegee Institute in Alabama. In addition, laws passed by progressive reformers that restricted child labor in the workforce and created mandatory school attendance significantly increased school enrollment (Trelstad, 1997). By the start of the First World War, gardens could be found on college- and public-school campuses around the country.

The decision by the United States to enter World War I increased significantly the number of school gardening projects around the country. While the Victory Garden is more closely associated with the Second World War, Americans also fully embraced the concept in the 1910s. As with the earlier Nature Study Movement, the goals had a strong social and cultural component. While the Victory Garden Movement had practical results regarding food production, it played an equally important role in strengthening support for the war effort by creating "common purpose among an increasingly diverse American public" (Hayden-Smith, 2017, p. 22). Students played an important part in these efforts. The Federal Bureau of Education created the United States School Garden Army (USSGA), which targeted urban and suburban youth. The USSGA "emphasized the importance of the producer ethic in American life," while the curriculum "reinforced school-based skills, including mathematics and reading" (Hayden-Smith, 2017, p. 23). College students, particularly women, played a key role in bringing in the nation's harvest. Instead of tending plots on campus, over 20,000 college-educated women were

placed by the Women's Land Army of America (WLAA) on farms around the country. Their efforts led women to "press for suffrage and fuller participation in the nation's cultural and political life" (Hayden-Smith, 2017, p. 23).

By the early 1920s, the role of gardening in education declined significantly. While school gardening had proved popular over the previous three decades, it usually served as a tool for other movements to achieve larger aims. While support for school gardening proved strong for a time, "educators . . . and other progressive reformers were fair-weather friends of the gardens," supporting them as far as they served a broader purpose (Trelstad, 1997, p. 171). Despite a brief resurgence during the Victory Garden campaign of World War II, school gardening as a pedagogical tool largely ended in the 1920s.

School gardening saw a resurgence starting in the 1960s. While it has yet to achieve the popularity it had during the early 20th century, its sustained existence over the past fifty years reflects the diverse reasons for people returning to gardening in educational settings. The Back to the Land Movement, born out of the counterculture's frustration with urban and suburban living, a commitment to self-sufficiency, and a dislike of capitalism, led to the creation of communal farms and community gardens around the country (Janovicek, 2016). These efforts focused not solely on agricultural production but also saw the relationship with the land in spiritual and cultural terms, similar to the movements from the early 20th century.

The environmental movement of the 1970s had a larger impact than the back-to-the-land movement on how Americans related to the earth, including school gardening. Books like Rachel Carson's *Silent Spring*, which highlighted the dangers of pesticides used in commercial agricultural production, led many people to begin gardening on a small scale for limited food production. More importantly, the environmental movement pushed for school curriculums to

include lessons on ecology, sustainability, and nutrition. As in earlier eras, school gardens served as a means for larger social movements to bring their campaigns into the classroom, while also teaching the nation's youth how to be more thoughtful stewards of the environment and better citizens.

Human Services Perspective

Human services supports vulnerable populations facing homelessness, mental health or medical challenges, and food insecurity by offering resources and assistance aimed at enhancing their overall well-being. Community gardening has shown significant potential in supporting vulnerable populations, offering benefits in areas such as social connection, health, education, and nutrition (Tracey et al., 2023). Individuals can develop a sense of accomplishment and empowerment, which not only alleviates stress and anxiety but also fosters skill-building and personal growth. Schools and community organizations can leverage community garden spaces to enhance wellness programs, offering therapeutic benefits and supporting resilience for individuals facing various challenges (Kairios et al., 2025).

The human services field engages advocacy to address and challenge systemic inequalities. Advocacy roles empower individuals to use their voices to represent those who may lack access to essential resources or influence in policy decisions. By stepping in where formal systems may fall short, advocates help address pressing social issues like food insecurity and mental health resources. College students are in a unique position to contribute meaningfully to advocacy and community-building efforts (Biang et al., 2024). With access to academic resources, faculty mentorship, and institutional support, students can bridge theory and practice by engaging in service-learning projects or leading community initiatives. Drawing on case studies and social movement theory, Nettle explored community gardens as sites of collective

action that foster food security, sustainability, and social connection (2014). Community gardens represent an intersection of social action, environmental justice, and public health (Dyg et al., 2020; Tracey et al., 2023).

Campus community gardens (CCGs) have been seen as an important initiative in higher education institutions that interconnects food security, mental wellness, and sustainability practices (Godoy-Henderson, 2025; Marsh et al., 2020). Campus agricultural projects (CAPs) are increasingly present across the United States (Biang et al., 2024). Through qualitative analysis of CAP mission statements, research reveals that CAPs foster student development, community and campus engagement, sustainability, and less-recognized values like cultural sharing, well-being, and inclusivity (Biang et al., 2024). Baur investigated how the restorative qualities of nature, paired with the unique benefits of public gardens, can enhance student mental health (2022). By bringing together these often-overlooked elements, the study offers innovative, nature-based strategies to address the escalating mental health crisis on college campuses, creating spaces that promote emotional well-being, resilience, and a stronger sense of community.

Researchers explored the use of a One Health approach to address food insecurity among college students and members of the local community served by a campus-based community health clinic in Saint Paul, Minnesota (Godoy-Henderson et al., 2025). Grounded in a multidisciplinary collaboration, the initiative integrates expertise from health sciences, agriculture, and social services to tackle the interconnected factors impacting overall well-being. By cultivating organic community gardens and maintaining campus beehives, the program supplies fresh produce and honey to the campus food shelf, creating a sustainable source of nutritious food for individuals experiencing food insecurity. Research findings suggest that

implementing a One Health framework on college campuses offers significant benefits for reducing food insecurity (Godoy-Henderson et al., 2025).

Vulnerable populations often face mental health challenges driven by factors like socioeconomic disparities and health inequities. These adverse conditions, often experienced as Adverse Childhood Experiences (ACEs), increase the risk of stress, anxiety, depression, and difficulties in maintaining relationships and practicing healthy self-care. Research has shown that growing plants and vegetables in shared spaces like community gardens has been shown to improve mental health by reducing stress, anxiety, and depression (Kairios et al., 2025). These gardens provide inclusive, therapeutic environments that foster social connections, boost physical health, and encourage healthier lifestyles, which enhance nutrition and overall well-being. For those facing mental health challenges, gardening offers therapeutic benefits such as lowered stress and anxiety, improved mood, and increased mindfulness. Additionally, individuals with physical, psychiatric, or developmental disabilities, or those who have experienced difficult life events or sudden loss, may gain further benefits through guided therapeutic support from a professionally registered horticultural therapist. According to the American Horticultural Therapy Association (AHTA), horticultural therapy involves guided participation in gardening activities as part of a treatment, rehabilitation, or vocational plan.

From a human services perspective, participating in community gardens provides students with meaningful opportunities in confronting real-world challenges while building resilience. These experiences promote a deeper understanding of systemic barriers while fostering collaboration across diverse cultures, disciplines, and perspectives. Hands-on participation in these initiatives cultivates essential skills in empathy, leadership, and cultural competence, which are core qualities for effective human services practice. Along with preparing

students for their future careers, these experiences strengthen an individual's resilience and foster a strong sense of community.

Psychology Perspective

Gardening has increasingly been recognized not only as a recreational activity but also as a therapeutic practice that can enhance mental health and emotional resilience. A growing body of research highlights its potential to reduce stress, improve mood, and promote social connectedness, particularly among vulnerable populations and college students (e.g., Tracey et al., 2023). Recently, Matias et al. (2023) found that college students who volunteered in the campus gardens during the pandemic experienced several benefits, including a lowered perceived stress score. Additional research has found that volunteering in a garden will also increase vegetable and fruit intake as well as the eating of more locally grown foods (Staub et al., 2019). In a recent literature review, Pedersen and Robinson (2018) discuss the numerous advantages community gardens (CGs) offer to higher education institutions. They highlight social benefits such as fostering interactions among diverse groups, including faculty, students, growers, and consumers across various disciplines.

Community gardens serve as therapeutic spaces, particularly for vulnerable individuals (Dyg et al., 2020; Tracey et al., 2023). Gardening has been found to increase emotional stability and reduce stress in those facing social or economic marginalization. Dyg et al. (2020) posit that the physical act of gardening and being in a natural environment create a calming sensory experience. Furthermore, vulnerable populations who partook in gardening activities experienced more social interaction, belonging, and self-worth (Tracey et al., 2023). Notably, gardening provided individuals with a sense of agency and routine—factors that help reduce stress and improve mental well-being.

This perspective was expanded by Marsh et al. (2020) who reported that the role of context, particularly with regards to trust, connection, and equity, was underscored in shaping positive outcomes. When students felt included and valued within the garden space, their sense of community and emotional well-being improved significantly. Similarly, Kairios et al. (2025) explored the direct link between community gardening and emotional resilience and found that regular engagement with garden spaces promoted mindfulness, reduced symptoms of anxiety, and enhanced coping mechanisms. Participants reported feeling more grounded and capable of managing life stressors after consistent involvement in gardening activities.

From fostering emotional resilience and social connection to providing a sense of routine and purpose, gardening has emerged as a powerful, low-cost intervention. Whether in vulnerable populations or among students, the act of nurturing plants also nurtures one's mental health.

Humanities Perspective

Over the past several decades, academic programs in the humanities have suffered an existential crisis. Faced with the reality of plummeting enrollments, student and parental fears of poor career outcomes, a reckoning on the erasure of Black, Indigenous, and People of Color (BIPOC) experiences and voices, and community perceptions of an "ivory tower" mindset divorced from the needs and concerns of the populace, humanities scholars have produced a number of visions of what will define the "new humanities," and the ways scholars and programs may refocus. Some examples include the digital humanities, medical humanities, urban humanities, environmental humanities, and public humanities. Though the distance between these fields varies, each with a seemingly niche focus, the centralized vision is a shift in the larger field, centering a renewed and more integrated dedication to interdisciplinary approaches, a focus on experiential study, and a drive to more directly serve today's communities. In doing

so, students are also recentralized. It is an ethos of "doing" (to borrow the focal term of Susan Smulyan's *Doing Public Humanities*), an ethos which is perhaps even easier to apply on the microscale (in any single humanities class, regardless of focus or program) as it is on the macroscale and is just as important.

Jennifer Wren Atkinson (2015), a proponent of the environmental humanities, argued that experiential learning that takes students into the field (which in the environmental humanities is driven by a need to reorient humanities studies within the non-human natural world) centers embodied learning where "multi-sensory experience can provide a powerful tool for examining rationalist traditions that disconnect our intelligence from . . . embodied contact with our world" and, when paired with literature and philosophy, "furnish opportunities to track ways that personal environmental encounter and reflection can deepen, disrupt and reshape understandings of literary and cultural texts that are themselves both artefacts and agents of different histories and worldviews" (pp. 254, 259). For any student, this connection between tangible, bodied experience and intellectual, esoteric learning (a hallmark of traditional humanities courses) is valuable, as it exemplifies the multimodal approach. It is doubly important in neurodivergent communities, whose members may particularly struggle with executive functioning skills—especially those central to the field, such as language processing, memory and retention, or recognizing and understanding the figurative.

Gardening is an easily achievable and readily available form of field work. As educational field work, it is nothing new, with proponents such as John Dewey and Wilbur Jackson creating a boom in the late 19th and early 20th centuries. They and others sought to not only teach scientific and practical agricultural skills, but more humanistic pursuits, such as "to promote an appreciation for the beauty and bounty of nature, or develop civic pride" (Kohlstedt

2008, p. 3). It is also a form of field work that is particularly easy to connect to humanities courses, so deeply tied to what it is to be human as to seem tailor-made for the humanities. As a cornerstone of human survival, connection, and interconnection, gardening as act, theme, and metaphor—while not quite universal—certainly is ubiquitous across human intellectual, linguistic, spiritual, cultural, and artistic endeavors. After all, the earliest recorded usages in the etymology of the word "to sow" (Old English) are both literal and figurative (Oxford University Press, n.d.). Even in teaching, we sow the seeds of knowledge. As an act of doing, gardening is both cross-cultural and culturally unique, an act of service and a practical skill; it provides a connection to community and to history. In so many ways, it serves the new humanities well, regardless of larger focuses and drives in individual programs.

Materials and Methods

Design

Based on the previous research, the present study investigated perceptions of gardening in a population of neurodivergent students. First, a quantitative research design was deployed to assess feelings toward working and volunteering in a campus garden. A total of 36 college-aged neurodivergent students completed the survey. In addition to the survey, a small pilot study of nine neurodivergent students who took a humanities course in the spring 2025 semester was conducted using a qualitative research design.

Materials

The survey consisted of 32 open-ended and Likert-type questions (see Appendix A). The questions focus on past gardening experiences, the impact of gardening on student mental health, and the desire for more green spaces on campus. Additional questions asked neurodivergent

students if they have any interest in earning micro-credentials or certifications in conservation and gardening.

Procedure

Neurodivergent students who completed the survey were contacted via email asking for their participation. It took students approximately eight minutes to complete the survey. With regards to the pilot study, students were responsible for creating and maintaining a small garden on campus, including laying soil and fertilizer, planting fruits and vegetables, such as tomatoes and okra, and maintaining the garden over the course of the semester. Student reactions and perceptions were measured at the end of the semester using open-ended questions and interviews.

Results

Qualitative Pilot Study

The second course in the humanities major core sequence is HUM 2802 Humanities II: Modeling Social and Cultural Construction, described in the Beacon College course catalogue as follows:

> In the second of the Humanities series, students will engage in team-based projects and activities in order to resolve various scenarios presented to them. The projects and activities in the course echo the themes with which students will engage throughout the program, focusing on the restructuring and reorganization of society. (Beacon College 2025, p. 90)

The course is intended to allow students to more deeply connect with theoretical concepts touched on in other humanities courses by considering the ways they play out practically in human society. To achieve this, the course has traditionally relied on gamification strategies

(such as role-playing as a group of stranded space travelers, who move from individual strangers to an interdependent group or burgeoning society). These activities are paired with readings across the humanities, most recently with the novel *Parable of the Sower* by Octavia Butler (1993), a dystopian survival novel whose central trope is gardening, both as a literal path to survival (as knowledge and action) and a figurative representation of the central themes of religion, society, survival, and change.

In an effort to create a more direct (and embodied) experiential learning environment, in the fall of 2025, a semester-long class garden was added to the course curriculum. Students:

- Researched local food plants
- Worked together to design, build, plant, and tend the garden
- Chose the way their "society" would distribute garden resources and workload
- Created a justice system governing the garden's use

These activities acted as both an extension of the course role-playing activities and as a way to interact with the reading of *Parable of the Sower*. Class time in the garden was also used as a time for informal class discussions on course material.

Perhaps the most noticeable benefit of creating a course garden was student engagement and enjoyment. Students were eager to begin as soon as the concept was introduced and frequently began their own discussions of possibilities before the official start of class or stayed late to inquire about breaking ground (weeks in advance of the planned start date). As the class proceeded, the benefits of the concrete nature of the course garden became more apparent. Two neurodivergent students (self-identified with autism spectrum disorder) who struggled with the abstract nature of both the role-playing aspect of the course and/or the novel in use, exhibited (with guidance from both the professor and their classmates) an ability to more easily ground

those experiences by relating passages in the novel and episodes in the role-playing to the garden. For example, when students engaged in role-playing—imagining a community member refusing to work but taking group resources—a student suggested extreme punishments (torture and death). Other students pressed the issue using their own class garden and labor to redirect the student's more extreme rhetoric. By moving the discussion out of the no-stakes, highly metaphoric game element and into the very tangible garden, where the stakes were low but existent, students not only helped a classmate move into more productive discussion, but also truly modeled the skill sets humans attempting to build community need (the goal of the course). Similar incidents happened when the class discussed *Parable of the Sower* while working in the garden itself. A student who had found the opening sections of the novel, which were focused on survival planning, "boring" and "annoying," engaged in much more productive discussion while engaged in the manual labor of building the bed of the class garden. Both of these forms of connections were summed up by one student responding to the informal request for feedback:

> The class garden seemed incredibly connected with our learning this semester, and not just because farming plays a crucial role in society-building. I believe it helped us students to relate with Lauren and the other characters of *Parable of the Sower* and to better understand the general team efforts involved in society-building. Essentially, it served as a way to utilize our knowledge "in the field;" through gardening, we witnessed resource and labor allocation directly, which aided in *my* understanding and application of the material. Having that hands-on experience was very valuable, I believe. Furthermore, it was fun and gave us something about which to feel accomplished! (Student feedback, personal communication, Fall 2025)

The experiential nature of the garden consistently acted as a grounding space for our more theoretical discussions, especially for topics that some of the students had little personal exposure to or for whom abstractions were particularly difficult to parse due to neurodivergence. For example, discussing a reading on the concept of "energy interdependence" in hunter-gatherers moved from challenging to overwhelming for many students when asked to consider how the concept still exists in our modern large-scale farming and food distribution systems. Some had never even shopped for groceries beyond snacks and incidentals. Their background knowledge was limited, the idea was abstract, and the discussion required students to engage in deep synthesis. Taking the discussion to the garden, where the ideas became tangible realities was key. In fact, it appeared to speed up the learning process as we finished a full day sooner than classes in the past had. This is highly anecdotal, but the students certainly seemed more at ease when we could take our concepts into the field. As one said:

> I believe that the garden project worked well with this course. The way we utilized our skills in collaboration and team effort properly modeled what we were learning in HUM. 2 for "community building." Overall, I say that this garden was a great addition to the course work. (Student feedback, personal communication, Fall 2025)

This sentiment was echoed by another student, one who often struggled to communicate during discussions due to language processing issues: "The ways on how we communicated with watering and checking on the garden was good and learning about the different resources also had worked for me" (Student feedback, personal communication, Fall 2025). Discussion-oriented classes are especially frustrating and difficult for students with language processing disorders, and working in the garden necessitated a different style and pattern of communication that seemed to aid this student in both her participation and her understanding of the material.

The innate multimodality of field work was the primary reason for incorporating the garden into the course. However, it was surprising how multidimensional learning became as the course moved in and out of the traditional classroom. One of the most interesting effects was the way that the gap between what might be traditionally seen as the strongest students and the weakest shrank as the garden offered multiple dimensions within which students could engage and display knowledge. While the students who were leaders in the classroom also took leadership in the garden, they were not alone and they did not dominate as much, often falling back and listening more. One reason for this is background knowledge. While most of the students were from urban and suburban environments, rarely in contact with farming, not all were. A student who rarely spoke in class became highly vocal once we began our field work. It turned out that he lacked strong background knowledge in literature and thus lacked confidence in discussing it with his classmates, but his family owned a commercial farm. Armed with the background knowledge this afforded him, the student began engaging more deeply, speaking up more often, and practicing the leadership skills that his newfound confidence brought out. The garden leveled the playing field for this student, and his performance rose as his confidence grew, not drastically but incrementally. While it is unlikely that every class will have a gardening expert lurking in its roll, the fact that field work engages different types of preknowledge, skills, and interests than traditional classwork just means there are more opportunities to reach struggling and disengaged students by meeting them where they are at. It is not a guarantee, but it represents one more chance to connect and help.

Incorporating the garden had very few difficulties. The college groundskeepers were invaluable partners, and their aid in planning was essential. The only issue that came up that took away from the program's success was one of timing. Because the gardening segment was not

planned to begin immediately at the onset of the semester, the food grown was not harvestable before the course ended. Despite having planned, at the onset of the project, a feast around their harvest, students were less disappointed than expected. Several attended summer school and emailed to share that they had harvested some of the vegetables. Staff and faculty harvested the rest throughout the summer growing season.

Ultimately, the course garden was seen as a success by the students, all of whom said the activity should be repeated when the course was offered again.

Quantitative Study

The survey results demonstrated a strong interest in community gardening on campus. Of the 36 students who completed the study, a strong majority indicated that they believe gardening helps them feel less stressed, helps them feel more active, and brings the community together in a positive way. Exactly 50% of the students reported that gardening helps them understand how to take care of our planet better and makes them more aware of environmental issues. Over 60% of the students believed that gardening encourages healthier eating habits. About 55% felt that gardening brings the community together, and 75% reported that gardening reduces the amount of stress and anxiety they feel. Finally, almost 70% of students indicated that gardening makes the campus look nicer and creates a positive vibe that makes them want to engage with others. Gardening adds to their college experience and gives them an opportunity to learn and work together to cultivate life.

The survey also asked students about the time spent outdoors and the activities they engage in while outside. Over 75% of the students reported spending a significant amount of time outdoors. Of the 36% who completed the survey, 31 students indicated that they spend most of their time outdoors walking to and from their classes. Almost half of the students indicated

that they spend one to three days a week exercising outside or socializing outside with friends in the campus green spaces. Only five students indicated that they spend time studying outdoors, but about a third of the students reported frequently eating lunch outdoors. The most popular place to spend time outdoors on campus is the Village Oasis—which consists of a basketball court, volleyball court, swimming pool, fire pit, and pavilion. Almost 50% of students indicated their preference for this area of the campus, and just over 30% indicated that their favorite areas were the two pocket parks on campus. The pocket parks consist of tables, chairs, benches, greenery, and various fountains. Overall, students spend a significant amount of time outdoors participating in various activities.

However, about 45% of students reported that they were not aware of the vegetable and herb gardens located on campus. Only 20% were aware that there were two gardens on campus. These results reveal a lack of communication regarding gardens and gardening activities on campus. Just over two-thirds of students also indicated that they would be interested in joining a gardening club on campus, though, and about a third of students indicated that they would be interested in gardening micro-credentials. The results demonstrate a clear interest in gardening activities on campus.

Interdisciplinary Integration

The results highlight gardening's value across multiple disciplines. From a psychological lens, students reported reduced stress, greater activity, and improved well-being. Through the humanities, the garden served as a reflective space where literature and lived experience intersected, deepening meaning-making. Historically, the project echoes traditions of communal gardening as models of civic participation and sustainability. From a human services perspective, strong student interest in clubs and micro-credentials underscores the garden's role in fostering

inclusion, accessibility, and community support. Together, these lenses reveal gardening as a powerful interdisciplinary tool for learning and belonging.

Discussion

The purpose of this study was to examine the mental health benefits of gardening for neurodivergent, college-aged students. Drawing on research from psychology, human services, history, and the humanities, the study demonstrated how gardening can serve as an interdisciplinary tool that supports holistic well-being for a vulnerable student population. The findings suggest that gardening may contribute to improved emotional regulation, increased engagement, and more accessible, hands-on learning experiences for neurodivergent students.

For college campuses, the results highlight the importance of expanding green spaces and investing in community gardens as part of a broader mental health and inclusion strategy. Beyond physical spaces, the study also shows that community gardening can be effectively integrated into academic life through course-based projects, experiential learning opportunities, and micro-credentials focused on sustainability, wellness, and collaboration.

It is important, however, to acknowledge the limitations of this study. The sample size and scope were relatively small, making the findings difficult to generalize to all neurodivergent students. These limitations underscore the need for additional research with larger samples, as well as longer data-collection periods. Future studies may also explore how different types of gardening activities uniquely support the sensory, social, and emotional needs of neurodivergent learners.

Conclusion

Using an interdisciplinary framework grounded in history, the humanities, psychology, and human services, this study demonstrates how gardening provides benefits that are both

culturally relevant and academically meaningful. Gardening encourages thoughtful interactions with nature, aligns with concepts explored in literature, supports psychological well-being, and fosters inclusion within campus environments. These insights highlight the transformative potential of gardening as an instructional tool that can enhance both the personal growth and academic experiences of neurodivergent students.

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Appendix A

Survey Instrument

Please indicate your agreement to each of the following statements on a scale of 1 = strongly disagree to 6 = strongly agree.

11. Gardening helps me understand how to take care of our planet better.
12. Learning about how plants grow makes me more aware of environmental issues.
13. I believe that gardening can encourage healthier eating habits.
14. I think gardening brings our community together and helps us connect with each other.
15. Growing plants makes me feel less stressed, happy, and relaxed.
16. Taking care of houseplants helps me feel responsible and connected to nature, even indoors.
17. Taking care of plants helps me become more responsible and patient.
18. Gardening activities make me feel excited about hands-on learning experiences.
19. I believe that different types of gardening, like vegetable or flower gardening, can teach me valuable life skills.
20. Overall, gardening could add to my college experience by creating chances to learn and work together.
21. I think gardening makes our campus look nicer and creates a positive vibe.
22. I might enjoy creating butterfly gardens because they attract beautiful butterflies and support the ecosystem.
23. Growing herbs makes me feel like I can use fresh ingredients when cooking.

Please answer the following questions.

1. How frequently do you spend time outdoors on campus?
    a. Frequently

b. Sometimes

c. Not very much

d. Rarely

Please indicate how often you ACTUALLY spend time in each of the following activities OUTDOORS on-campus using the following scale: 1 = 1 to 3 times daily; 2 = 1 to 3 times weekly; 3 = 1 to 3 times monthly; 4 = Rarely; 5 = Never

1. Walking to and from class
2. Exercising outside (running, etc.)
3. Organized Sports (including intramurals)
4. Socializing with friends outside
5. Club meetings outside
6. Studying outside
7. Eating outside
8. Relaxing outside
9. Working (work study, other on-campus job or volunteer work)

Please answer the following questions.

1. Do you know about the vegetable gardens we have on campus?
    a. I know about the garden by the Green House/Counseling Center
    b. I know about the garden behind the Education Building/ANZ Labs/Beacon Library
    c. I know about both of the vegetable gardens
    d. I did not know we had any vegetable gardens on-campus
2. Where is your favorite outdoor spot to spend time on-campus?
    a. Pocket Parks (Durand Park by Art building, park next to dining hall, etc.)

   b. Memorial Parks (Mitch's place, etc.)
   c. The Oasis in the Villages
   d. Pavilions at the Commons
   e. Other: _____

3. If Beacon had a gardening club, would you be interested in joining?
4. Would you be interested in any of the following?
   a. Micro-credential courses on gardening, microgreens, composting, etc.
   b. Minor degree in agriculture or some other earth sciences
   c. Bachelor of Science in agriculture or some other earth sciences
   d. Student-led gardening club
   e. Other