

CAMPUS CULTURE
CHANGE *through*
HORTICULTURE

*Written by Elliana Alexander, Ellen Fiedler, Chris Croft, and Brittany Thomas for
the North Carolina Coalition Against Sexual Assault*



Campus Culture Change Through Horticulture: A Holistic Approach to Sexual Violence Prevention & Response

Original art by Jaclyn Gilstrap of A Visual Approach

The materials in this toolkit shall not be altered or redistributed without prior, written approval from North Carolina Coalition Against Sexual Assault. This toolkit may be posted, promoted, or otherwise highlighted without alterations. If citing, please use suggested citation: Alexander, E., Fiedler, E., Croft, C., Thomas, B., 2022. Campus Culture Change Through Horticulture, NC Coalition Against Sexual Assault, Raleigh, NC





Table of Contents

Horticulture Therapy	1
Why Horticulture-Based Interventions for Addressing Sexual Violence?	1
What We Know: Research on Horticulture Therapy	2
Case Study: GreenHouse17	4
Resident Testimonials	4
A Comprehensive Campus-Based Prevention Strategy	5
Laying the Foundation: Campus Organizers	6
Laying the Foundation: Community Partnerships	7
Funding your Campus Horticulture Partnerships	8
Works Cited	9
Appendices	13
Appendix 1: Building an Emergent Space for Groups	13
Appendix 2: Sample Horticulture Support Group Activities for Survivors	13
Seed Paper Activity	13
Nature Journaling (Adapted from the Passion Flower Project in Orlando)	15
Appendix 3: Sample Activities for Campus-Based Horticulture Prevention Projects	18
Building a Culture of Care	18
Principles of Honorable Harvest	20
Starting at the Seed: Planting Conflict Resolution Skills in Our Gardens	21
Appendix 4: Other Related Holistic Interventions With Potential Prevention Applications	22





Horticulture Therapy

Horticultural therapy is the basis of the guiding methods outlined throughout this toolkit. Although horticultural therapy should be delivered by a professional clinician, non-clinician groups may apply the same principles and practices in peer support and community-building contexts. Horticultural therapy seeks to enhance physical, psychological, and social wellbeing through the use of plant-related nature activities that may be used alongside traditional counseling techniques. It has been used for many different purposes and populations, including for substance abuse, PTSD, patients with schizophrenia, and clinically depressed persons (Annerstedt & Währborg, 2011; Gonzalez et al., 2010; Gonzalez, et al., 2011; Horowitz, 2012; Sempik et al., 2005). Although horticultural therapy was not used in psychiatric institutions until the early 1800s, its use has been documented for centuries now. Court physicians once prescribed Egyptian pharaohs walks through gardens as mood instability treatment and Greek philosophers used their personal gardens to draw out their thoughts and feelings (“Horticultural Therapy”, 2016).

Why Horticulture-Based Interventions for Addressing Sexual Violence?

The negative effects of sexual violence on college campuses are well-documented and pervasive across racial, socioeconomic, and religious lines. One in three women and one in four men experience sexual violence involving physical contact during their lifetimes (Smith, et. al, 2018); this risk is elevated for those ages 18-24 (“Campus Sexual Violence: Statistics.”, 2021). In addition to physical injuries, sexual violence often results in psychological ones, such as depression or suicidal thoughts, and chronic ones, such as post-traumatic stress disorder (Basile and Smith, 2011). The trauma resulting from sexual violence can impact the long-term economic wellbeing of survivors and disrupt their personal and community relationships (Smith, et. al, 2018). Moreover, experiencing sexual violence increases the likelihood of additional experiences with violence (“Preventing Multiple Forms of Violence”, 2016).

Trauma is not an intellectual response—it is a physical response and exists in the body and its physiological responses (Van der Kolk, 2014). Traditional methods of addressing sexual violence, such as talk therapy, remain hugely important, yet holistic methods that include the body may be able to better recognize the physiological and non-verbal aspects of a survivor’s experience (Poore, et. al, 2013). For some survivors, traditional verbal methods to healing may not hold relevance in their lives and cultural contexts, while holistic approaches may feel more pertinent to their community’s traditions (Poore, Terri, et al, 2013).





Moreover, some survivors do not feel comfortable with verbally-based healing methods, yet may find greater interest and depth in healing through body or movement-based work (Poore, Terri, et al, 2013). Holistic healing methods that include movement, energy work, and connection with plants and animals empower survivors to interact with the world around them, redevelop trust with others, and come back into their bodies (Poore, et. al, 2013).

What We Know: Research on Horticulture Therapy

While the campus groups outlined in this toolkit may not be led by a clinical therapist, we believe that similar healing benefits from horticulture therapy translate to a non-clinical setting. Horticulture therapy has been used in a variety of healing settings, particularly in recent years among veterans coping with PTSD. Analysis of veterans in a ten-week nature-based therapy program indicated that veterans found the program to be motivational, learned tools to use in stressful situations, and experienced an improvement in their PTSD symptoms through simply being in the garden and performing nature-based activities (NBA) (Poulsen, Dorthe Varning, et al., 2016). The program taught veterans how to transfer their use of nature as a healing practice to their everyday lives and most participants continued to use nature and healing NBA a year after the conclusion of the program (Poulsen, Dorthe Varning, et al., 2016).

There are many theories as to why interaction with nature has the healing effect over humans that it does; Renzetti and Follingstad hypothesize that this is due to a combination of “physical activity, the process of cultivation and production of food, an attentional component, a sensory experience in nature, skill development, and opportunities for informal social contact” (2015). They also point to two relevant theories to explain the effectiveness of horticultural therapy: attention restoration theory and conservation of resources (COR) theory. The former states that working in a nature-based environment can increase traumatized individuals’ ability to participate in daily activities and be resilient while distant from negative distractions and rumination (Renzetti and Follingstad, 2015). Meanwhile, COR theory suggests that while traumatic events cause “resource loss,” such as reduced sense of self, participating in therapeutic horticulture is impactful because it can result in a “resource gain,” such as greater self-sufficiency (Renzetti and Follingstad, 2015). Perhaps our evolutionary relationship with the natural world since the beginning of humanity along with the distance that we often feel from nature in the age of technology is another reason why reconnecting with NBA proves so powerful for our minds, bodies, and spirits.





In addition, the use of horticulture has been proven to be effective at reducing violence. One study evaluated the Clean & Green program, a community-based greening program facilitating resident-driven maintenance of a large sample of vacant lots operated over the course of five years in Flint, Michigan. Ultimately, street segments with lots maintained by the program had nearly 40% fewer assaults and violent crime than street segments with vacant abandoned lots (Heinze, et al., 2018). The program's greening included neighborhood involvement with trash removal, planting, mowing, and weeding. Along with reducing sites for illegal dumping, hiding spots, and discrete places to conduct illicit activities, this community-level empowerment can strengthen the social fabric of a community, which reduces interpersonal violence and crime (Heinze, Justin E., et al., 2018). Kondo et al.'s meta-analysis of violence interventions confirms these results in their review of five studies; for example, Branas et al. found an 8% statistically significant reduction in gun violence by greening vacant land and Kondo et al. found a significant reduction in property crimes around contractor-greened lots and a decrease in violent crimes around community reuse lots with a 27% decrease in felony assaults (2018). While we know sexual violence has unique characteristics that differentiate it from some other forms of violence, these results suggest horticultural interventions' potential to reduce various forms of violence on campuses.

Beyond violence reduction, horticulture programs allow for those involved to develop skills and form strong relationships with their community. Qualitative case studies were conducted on two neighborhood-based community gardens with youth programs in Flint Michigan, both of which aimed to reduce crime while improving neighborhood appearance, providing access to free healthy food, and engaging youth during the summer (Ober Allen, Julie, et al., 2008). In both gardens, older residents acted as mentors, both in and outside of the gardens, and facilitated collective action to prevent the youth involved from engaging in delinquent behavior (Ober Allen, Julie, et al., 2008). The studies concluded that community horticulture programs can positively influence the development of youth by:

- providing opportunities to build skills through a constructive activity
- contribute positively to their community
- build relationships with other adults and youth
- develop interpersonal skills and informal social control
- develop cognitive and behavioral competencies
- improve their knowledge of nutrition and consumption of fresh food





Case Study: GreenHouse17

Working in nature-based settings can provide survivors an avenue to cope with trauma. Available studies indicate that these settings are effective at reducing stress, depression, and negative feelings, as well as in promoting relaxation, social inclusion, and self-confidence (Renzetti and Follingstad, 2015). While horticulture programs for addressing sexual violence remain underutilized, one program doing exceptional work in the field of intimate partner violence (IPV) is GreenHouse17, located in Lexington, Kentucky. Founded in 2004, GreenHouse17 is an emergency shelter for survivors of IPV surrounded by a 40-acre farm, where residents can participate in a six-week stipend-supported program that includes introspective, nature-based healing. In addition to allowing these survivors to become more financially independent, the program also provides them with marketable skills and experience (Branco, 2018). A 2015 study by Renzetti and Follingstad determined that GreenHouse17's therapeutic horticulture program was perceived to have "significant physical, psychological, and social benefits for shelter residents, including exercise and better nutrition, reduction in stress, increased self-esteem, sustained sobriety, and reduced social isolation."

Resident Testimonials

"This week was consumed with transplanting and seeding, carefully replacing seedlings that had started to take root in their permanent place to grow," says Rebecca. "It reminds me of myself and my boys... My children, new seeds, will hopefully be able to adjust to our new life and find a place for themselves to grow. As with transplanted flowers and such, only time will tell if we, like they, can adjust and take root."

"As I was weeding this week, I thought about cutting ties with toxic people in my life, or 'weeding through' the good and bad," says Annie. "It seems to me if you allow one toxic person or 'weed' in your life for very long, it takes root and starts to grow. And roots can grow very, very deep. I allowed my husband to be that toxic person in my life. . . I decided, like those weeds I pulled out by the roots, I also needed to dig up these 'roots' and cut ties with him completely. Now with those 'weeds' gone, the good can start to grow again."

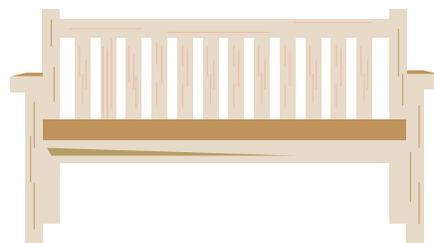




A Comprehensive Campus-Based Prevention Strategy

Horticulture and other forms of holistic healing have been assessed in addressing the needs of sexual violence survivors after they have experienced trauma (Poore, et. al, 2013). While many campus-based sexual violence prevention programs address individual and relationship risk and protective factors, campus community gardens have the potential to create change at the community and societal level through building community and shifting societal norms. In order to create long-lasting change, violence prevention work must address every level of the social-ecological model. Horticulture has the potential to address many risk and protective factors for violence, particularly through providing community connection for students at higher statistical risk of sexual violence, including first-generation students, LGBTQ+ students, and students of color (Perna & Odle, 2020). Community gardens may increase protective factors by providing spaces, such as campus gardens, for personal growth and healing through connection to nature. In spite of this potential for prevention (and demonstrated use in the prevention of other forms of violence), campus community gardens' potential use in primary sexual violence prevention efforts at the communal and societal levels has not been adequately explored. For this toolkit, we propose that campuses consider two parallel and related approaches for integrating HBA into a campus sexual violence strategy: primary prevention group activities and survivor support group activities.

Horticulture can provide opportunities for community engagement and cooperation on the college campus itself and in the surrounding community. This increased community engagement protects against risk factors for violence faced by college students, especially those who have traditionally been marginalized from safety, support, and community. For example, students who feel isolated on campus because of a marginalized identity may not have the same access to the social support they need for positive growth throughout their college experiences. This can lead to a number of risk factors, such as social isolation and a lack of social support (Wilkins, et. al, 2014). If these students participate in gardening and learn to collaborate with members of their community, however, they may experience community connectedness and feel a sense of community support (Wilkins, et. al, 2014). When students feel connected to their communities, they also develop a sense of responsibility for not perpetrating harm against it. Furthermore, the act of gardening can play an important role at the societal level. As individuals work with others who may hold different identities in order to work toward a common cause, they may develop increased empathy towards others.





Lack of employment opportunities for college students who are at an economic disadvantage is another risk factor that community gardening can address. Horticulture can lead to jobs in a variety of employment settings, such as greenhouses, public parks and gardens, and college campuses. Additionally, HBAs can build highly-transferable skills such as project management, problem-solving, planning and implementation, and collaboration that can support students in college or post-college employment settings.

Finally, community gardening has the potential to offer opportunities for students to learn non-violent problem-solving skills (Ober Allen, Julie, et al., 2008). For example, activities, where the group must decide together on a crop layout, or navigate differences of opinion during guided activities, can prove as stages for students to develop their ability to disagree, discuss, come to a decision, and move forward peacefully. Although this initiative should be student-driven, it is important for professional facilitators to be involved with the campus gardening project, either through workshops or a direct advising role. These adults can be community members, faculty, or staff members with expertise in topics from anti-racism to violence prevention. Connection to a caring adult is a protective factor against teen dating violence and will allow students to deepen their relationship with the community around them (Wilkins, et. al, 2014). The protective factors associated with communal horticultural activities can mitigate the risk of sexual violence on campuses as students work toward building healthier, safer communities.

Laying the Foundation: Campus Organizers

Once you are committed to the action of creating campus groups with horticulture therapy-based approaches and are educated on its benefits, your first step is exploring who should have a voice at the table and offering the opportunity to participate in making the program a reality. One key element of this process is recognizing that we all hold a unique and important perspective—no one person or organization is expected to know everything and stakeholders benefit from entering these conversations open to learning from one another.

While this project should be student-driven, connecting with staff or faculty partners from different parts of campus, from student wellness to student housing, will allow for a broader and stronger coalition to be formed. On-campus organizers are invaluable in their ability to communicate your message across the population that you aim to serve.





In order to get buy-in from these organizations, their leaders must understand the importance of the project and believe in it themselves. Potential campus partners may include:

- Campus violence center
- Campus gender and/or LGBTQ center
- Anti-racism groups on campus
- Gardening groups on campus
- Student housing
- Related student orgs
- Campus counseling services
- Partnership on aging
- Fraternity & sorority life
- Faculty who focus on ethnobotany, cultural anthropology, psychology/trauma, agriculture, social justice, women & gender studies
- Campus health center

Many staff and faculty members may be mandatory reporters, meaning that they are legally required to report any suspected abuse. In any group that may involve personal conversations, it is important to be educated on university-wide regulations regarding mandatory reporting and to ensure that those participating in conversations are informed of these regulations ahead of time.

Rather than sending a single email and asking an organization to join the project, consider creating accessible messaging about your campus project by sharing research and your specific reasoning for wanting that group's group involvement. By leaving "bread crumbs" with fun facts, you can then initiate a longer conversation with leadership or ask to present to a specific group's leadership team. This kind of strategic planning can build buy-in for the entire group and bring in additional passionate stakeholders. Once you have identified at least three key partners who have the time and energy to take leadership in the project, bring these groups together to assign roles and brainstorm. Consider using a logic model to help you think through achievable goals and which strategic actions will allow you to reach them.





Laying the Foundation: Community Partnerships

After deciding whom you will connect with on campus, consider creating partnerships with different organizations in the surrounding community. Engaging non-campus partners builds community support and the resulting connectedness benefits both the students and the community in which the college or university exists. There are a number of organizations that may yield mutually beneficial partnerships in developing and implementing your community gardening program, such as local gardening clubs, native plant societies, and holistic community care organizations. Other organizations may be helpful in coordinating regular and special events to promote your garden as well as the missions of the co-sponsoring organizations, such as local rape crisis centers, domestic violence shelters, LGBTQ+ centers and support groups, anti-racism groups, and retirement communities. This list is not exhaustive; as you build more connections with community members, you will learn about and have opportunities to connect with other organizations that previously were not considered.

These partnerships can serve as long-lasting support and add to the sustainability of your garden programming, so keeping the groups invested in your work is important. You might consider rotating the facilitation of group sessions, providing opportunities for networking amongst partner organizations, resource sharing, and ensuring that the partners are receiving as much support as they are giving—all of which can help increase buy-in from community partners. Because community coordination of resources and community connection are both protective factors for violence, creating and sustaining these partnerships contributes to the violence prevention priorities addressed by your community garden programming.

When reaching out to these local organizations, be sure to consider what they have to gain from the partnership and what they have the capacity to contribute. Present the opportunity as a collaboration between your campus and the organization, where both groups support each other in their efforts to create a safer community. Offer them the opportunity to regularly facilitate a group session and to contribute to program development and implementation, if desired. A partner may even be able to provide physical space that can be used for the garden, offering a confidential spot for a survivor-based group away from campus. However, keep in mind that the garden should be in a place that is accessible to all students, whether by walking or public transportation.





Funding your Campus Horticulture Partnerships

Campus Horticulture programming could be supported by a variety of partnerships. Some options to consider include:

- Community-based organizations, such as sexual violence and domestic violence organizations. One listing of such resources by county can be found [here](#).
- Collaborations with other campuses (community colleges, technical schools, and universities)
- Private funding, such as [foundations](#)
- Collaborations with local food insecurity organizations such as food banks
- Local government, such as city or county elected and appointed officials and councils
- The Governor's Crime Commission:
 - [Victims of Crime Act \(VOCA\)](#)
 - [Byrne Justice Assistance Grant](#)
 - [Violence Against Women Act \(VAWA\) STOP Grant](#)
- [North Carolina Council for Women & Youth Involvement State Grants](#)
- Office for Victims of Crime (OVC) funding opportunities, when available
- Family Violence Prevention and Services Act (FVPSA) through the North Carolina Department of Administration (DOA) offers [grant funding opportunities](#)
- Sexual Assault Services Formula Grant Program (SASP) through the U.S. Department of Justice's Office on Violence Against Women



For more support with determining how to fund your programming, or to inquire about SASP funding, reach out to [NCCASA's Member Services Team](#).





Works Cited

Annerstedt, Matilda, and Peter Währborg. "Nature-Assisted Therapy: Systematic Review of Controlled and Observational Studies." *Scandinavian Journal of Public Health*, vol. 39, no. 4, 2011, pp. 371–388., doi:10.1177/1403494810396400.

Basile, Kathleen C., and Sharon G. Smith. "Sexual Violence Victimization of Women." *American Journal of Lifestyle Medicine*, vol. 5, no. 5, 2011, pp. 407–417., doi:10.1177/1559827611409512.

Branco, Patty. "How Can Therapeutic Horticulture Help Meet the Complex Needs of Domestic Violence Survivors and Their Children?" *VAWnet.org*, 5 July 2018, vawnet.org/news/how-can-therapeutic-horticulture-help-meet-complex-needs-domestic-violence-survivors-and-their.

"Campus Sexual Violence: Statistics." *RAINN*, 2021, www.rainn.org/statistics/campus-sexual-violence.

Gonzalez, Marianne Thorsen, et al. "A Prospective Study of Group Cohesiveness in Therapeutic Horticulture for Clinical Depression." *International Journal of Mental Health Nursing*, U.S. National Library of Medicine, 2011, pubmed.ncbi.nlm.nih.gov/21371227/.

Gonzalez, Marianne Thorsen, et al. "Therapeutic Horticulture in Clinical Depression: a Prospective Study of Active Components." *Journal of Advanced Nursing*, 2010, doi:10.1111/j.1365-2648.2010.05383.x.

Heinze, Justin E., et al. "Busy Streets Theory: The Effects of Community-Engaged Greening on Violence." *American Journal of Community Psychology*, vol. 62, no. 1-2, 2018, pp. 101–109., doi:10.1002/ajcp.12270.

Horowitz, Sala. "Therapeutic Gardens and Horticultural Therapy: Growing Roles in Health Care." *Alternative and Complementary Therapies*, vol. 18, no. 2, 2012, pp. 78–83., doi:10.1089/act.2012.18205.

"Horticultural Therapy." *Pacific Quest: Wilderness Therapy for Teens & Young Adults*, 23 Mar. 2016, pacificquest.org/wilderness-therapy-approach/horticultural-therapy/.

Johnson, Rebecca A et al. "Effects of therapeutic horseback riding on post-traumatic stress disorder in military veterans." *Military Medical Research* vol. 5,1 3. 19 Jan. 2018, doi:10.1186/s40779-018-0149-6





Kondo, Michelle C., et al. "Neighborhood Interventions to Reduce Violence." *Annual Review of Public Health*, vol. 39, no. 1, 2018, pp. 253–271., doi:10.1146/annurev-publhealth-040617-014600.

Koshland, Lynn, et al. "PEACE Through Dance/Movement: Evaluating a Violence Prevention Program." *American Journal of Dance Therapy*, vol. 26, no. 2, Sept. 2004, pp. 69–90., doi:10.1007/s10465-004-0786-z.

Ober Allen, Julie, et al. "Growing Vegetables and Values: Benefits of Neighborhood-Based Community Gardens for Youth Development and Nutrition." *Journal of Hunger & Environmental Nutrition*, vol. 3, no. 4, 2008, pp. 418–439., doi:10.1080/19320240802529169.

Perna, L. W., and Odle, T. K. (2020). Recognizing the Reality of Working College Students: Minimizing the harm and maximizing the benefits of work. American Association of University Professors. <https://www.aaup.org/article/recognizing-reality-working-college-students#.YctExy1h1pQ>

Poore, Terri, et al. "Holistic Healing Services for Survivors." Resource Sharing Project, 2013.

Poulsen, Dorthe Varning, et al. "‘Everything Just Seems Much More Right in Nature’: How Veterans with Post-Traumatic Stress Disorder Experience Nature-Based Activities in a Forest Therapy Garden." *Health Psychology Open*, vol. 3, no. 1, 2016, p. 205510291663709., doi:10.1177/2055102916637090.

Preventing Multiple Forms of Violence: A Strategic Vision for Connecting the Dots. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, 2016, www.cdc.gov/violenceprevention/pdf/strategic_vision.pdf.

Renzetti, Claire M., and Diane R. Follingstad. "From Blue to Green: The Development and Implementation of a Therapeutic Horticulture Program for Residents of a Battered Women’s Shelter." *Violence and Victims*, vol. 30, no. 4, 2015, pp. 676–690., doi:10.1891/0886-6708.w-d-14-00091.

Schouten, Karin Alice, et al. "The Effectiveness of Art Therapy in the Treatment of Traumatized Adults: A Systematic Review on Art Therapy and Trauma." *Trauma, Violence, & Abuse*, vol. 16, no. 2, Apr. 2015, pp. 220–228, doi:10.1177/1524838014555032.





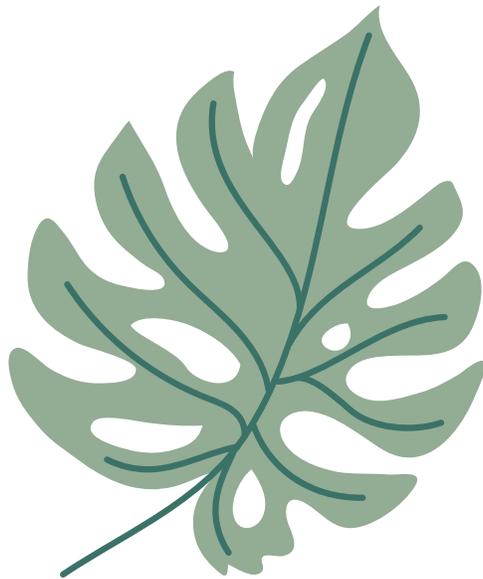
Sempik, J., et al. "Health, Well-Being and Social Inclusion: Therapeutic Horticulture in the UK." Centre for Child and Family Research, 2005.

Smith, Sharon G, et al. "National Intimate Partner and Sexual Violence Survey: 2015 Data Brief – Updated Release." National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, 2018, www.cdc.gov/violenceprevention/pdf/2015data-brief508.pdf.

Stone, Ann, et al. The arts and prosocial impact study: Program characteristics and prosocial effects. ERIC Clearinghouse, 1998.

Van der Kolk, B. (2014). *The Body Keeps the Score: Brain, Mind, and Body in the Healing of Trauma*. Penguin Books: New York, NY.

Wilkins, Natalie, et al. "Connecting the Dots: An Overview of the Links Among Multiple Forms of Violence." *National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.*, 2014, www.cdc.gov/violenceprevention/pdf/connecting_the_dots-a.pdf.





Appendices

Appendix 1: Building an Emergent Space for Groups

Before beginning activities, it is important to establish a framework that will be used in the group space. While “safe” spaces may put the burden on the facilitator to keep peace and “brave” spaces may cause harm through burden on the speakers, emergent spaces center social justice frameworks that take trauma, oppression, identity, and societal impacts into account. In the context of the survivor and primary prevention campus garden groups that we suggest in this toolkit, this means planning activities that:

- intentionally create trust and collaboration among group members;
- do not require marginalized identities to speak on behalf of those with their identities;
- understand the intersectionality between systems of oppression and sexual violence.

Emergent spaces are trauma-informed, meaning that services have an awareness and sensitivity to the ways in which participants' behavior and needs can be understood in the context of their trauma history. For both survivor and primary prevention groups, this means assuming in both contexts that individuals may have lived experiences with trauma that are not verbally expressed, however, activities should use language and action that is inclusive of and sensitive to these experiences. For more information on building an emergent space, please see the [Emergent Space document](#) on the NCCASA website.

Appendix 2: Sample Horticulture Support Group Activities for Survivors

Seed Paper Activity

Seed paper is an eco-friendly product that can be made with recycled paper and a variety of seeds, such as wildflower, herb, and vegetable seeds. This activity will use seed paper to help survivors of violence turn their pain into something beautiful and tangible in their campus garden. This activity would work best in the spring when the weather is milder.

Materials:

- Plantable seed paper (buy from a local store or an [Etsy shop](#), or [make your own](#))
- [Non-toxic pens/markers](#)
- Gardening shovels (optional)
- Water





Instructions:

This is a set of instructions, not a script. The way you deliver the instructions depends on your community and your relationship with that community.

1. Have participants sit in a circle in or near the campus garden, and pass out seed paper & pens. The paper does not need to be very big, two ~4x4in pieces per person should be enough.
2. Describe what seed paper is, as well as how you made it or where you acquired it.
3. On one piece of paper, have participants write words that describe how they feel their trauma has affected them (ie "feeling angry," "not sleeping," "damaged relationships," etc.)
4. Have them set that paper aside, and on the second piece, have them write one or multiple of the following:
 - a. Affirmations or intentions for themselves as they heal (ie "resilient," "valid," "worthy," "finding my voice," "learning to trust again," etc.)
 - b. Hopes for the future
 - c. A quote, prayer, affirmation, etc. that has helped them in their healing journey
5. When they are finished, have them place their paper in a predesignated area of the garden and cover it with a thin layer of soil. It is okay if paper overlaps and if they're not in a straight line.
6. As they plant, invite participants to describe how they are giving whatever they wrote on their paper back to nature, allowing the soil to receive and help carry the burden of their pain and to nurture their hopes.
7. Have them water the area where they have planted their paper - the soil should be nicely damp but not soaking wet.
8. As they water, explain that as we have allowed nature to care for us, we must also care for it.
9. Sit back in the circle, and discuss the following with the group:
 - a. What has your relationship been like with nature? How has it evolved over time?
 - b. How do you think it would feel to let go of past trauma? How can our relationship with nature help us to achieve our goals?
 - c. How can we nurture ourselves and our relationships the way that the earth nurtures us?
 - d. Do you have any messages of validation and solidarity for any individuals in the group, or the group as a whole? Or for yourself?
 - e. Do you have any affirmations, kind words, or compliments for any individuals in the group, or the group as a whole? Or for yourself?





10. Explain that the seed paper should germinate and sprout within the next couple of weeks, and encourage them to return to the garden regularly to check on the progress. The seed paper will need to be watered daily as it germinates then as needed after it sprouts, so if possible, encourage participants to take turns caring for that section of the garden. (Note: For partnerships in which groups are conducted in a space without a permanent garden setting, this activity could be modified to plant seeds in biodegradable seed-starting pots that they can take home and plant if desired.)

11. Gather the same group once plants have sprouted and discuss the following:

- a. Does what you wrote down feel any different watching it blossom into what it has now become?
- b. What are the seeds that we can take from this experience as we go into the world?
- c. How do you plan to allow nature to continue to care for you? How do you plan to continue to care for the earth in return?
- d. Do you have any affirmations for any individuals in the group or the group as a whole?

12. Discuss how the cycle of planting and cultivating and composting and weeding, death and rebirth, growth and blossoming provides a perfect metaphor for the healing process that survivors of any type of trauma go through.

Nature Journaling (Adapted from the Passion Flower Project in Orlando)

Materials:

- Writing utensils
- Journals to be used throughout the group program

Instructions:

There are benefits of nature journaling that we hope to achieve:

- Enhanced self-awareness: this happens as you are journaling your responses and observations of nature and the garden.
- Enhanced mood: exposure to natural vegetation and plants help promote relaxation and reduce stress.
- Grounding tool: each nature journal is used as a snapshot of the moment. These moments are filled with sensation and easily help you alleviate distressful emotions in the future.





Nature Journal Themes:

- Connecting with senses
- Different leaf shapes
- What is blooming?
- What do you appreciate about the season?
- Five things that catch your attention in the garden or nature
- Look for insects and discover which plants they visit. Is it good or bad?
- What colors do you see?
- How are the petals shaped?
- What does the center of the flower look like?
- Is the stem hairy?



If you are feeling stuck, here are a few other ideas to help get your juices flowing:

- Leaf or tree rubbings
- Looking for patterns
- Poetry
- Quotes
- Nature stamps (collect objects, paint them, and press them into your journal)
- Smear some juice from a berry or fruit you are drawing
- Lists of birds, insects, leaves, or flowers you have observed
- Record sit spot seasons – sit in the same spot at least once during each season. Record how it is different
- Seeds (either from a plant you are observing or taken from a packet you plan to plant – record how it is growing)
- Record animal tracks
- What does this place remind me of? Why? Let yourself wonder and come up with answers on your own without the help of a field guide or your phone.





Sample Nature Journal Exercises

1. Allow yourself 15-20 minutes to open the experience of connecting with nature. During this time, focus your attention on your senses. Pay attention to what you 1) see 2) touch 3) smell. As you connect with your senses, acknowledge how they make you feel. For example, you may feel relaxed when smelling lavender, hopeful while watching a butterfly, or curious after discovering seeds. Find a comfortable place to give yourself time to write about what you observe and experience. You may want to write single words or may be inspired to write poetry. Include drawings to illustrate that moment in time. Place no judgment on what you draw. Your drawing is an expression of you and, in the moment, it is as it should be. Further enhance your journal entry by collecting bits of nature such as flowers, seeds, leaves, or bark and add them to your journal.
2. Consider weeds as traumas, negative thoughts, cognitions, or perspectives. What are the ways in which your garden has been overrun with weeds? Pull these weeds from your garden. Now, think of self-care as a weed-evaporator. What has helped you prune your garden in the past? What is not working for you now?

Following a journaling activity, allow for group journal sharing (time permitted) and with group members who feel comfortable.

* Note: Some smells may be triggering for survivors or irritating for allergies. Before using scents in a group, check in with survivors privately about any scents to avoid. Give a heads-up about what will be used and when.





Appendix 3: Sample Activities for Campus-Based Horticulture Prevention Projects

Building a Culture of Care



Materials:

- A whiteboard or large sheet of paper (around 24 x 36 inches)
- A writing utensil

Instructions:

This is a set of instructions, not a script. The way you deliver the instructions depends on your community and your relationship with that community. Depending on time and structure, these may be explored over a period of several meetings.

1. Ask the group to review the following document on group norms. Let them know that they will be applying the information in an activity where they will set group norms together on healthy communication, mutual respect, committing to the process of vulnerability, and growing together.
2. Begin to create a guiding constitution (or code of conduct) as a group that will include shared values and responsibilities. For example: Respecting each others' backgrounds, identities, pronouns, and personal preferences.
 - a. The group can add every suggestion, or take a vote for each suggestion as to whether it will be added.
3. Hold space for a conversation around boundaries. For example: What are our boundaries with each other? What feels comfortable and uncomfortable for us as individuals? How can we make sure to respect others' boundaries?
4. Discuss the concept of calling in: when we acknowledge the harm that has been done to another individual, either intentionally or unintentionally, how can we educate and correct without isolating each other?
 - a. Begin sample activity where students can practice calling each other in for pre-determined topics, like a hug without prior consent or an overstep in asking for personal information that someone feels uncomfortable with. Practice both with the individual calling someone in who has hurt them, and with calling in as a bystander when you see someone else has had harm done to them. This activity is meant to encourage students to get comfortable with "calling in" in kind ways and intervening when harm is done to their community members.



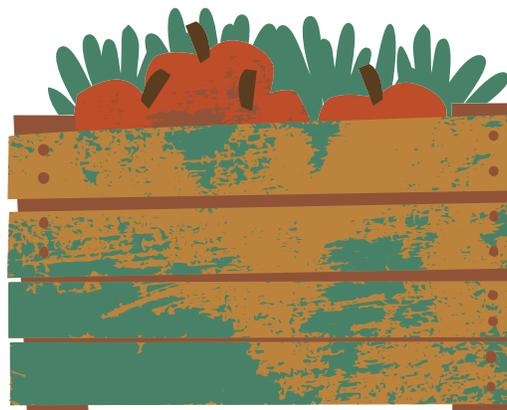


5. After we have done harm, accountability must include meaningful steps to apply what has been learned. Discuss how you can hold yourself accountable, rather than waiting to be corrected after realizing harm has been done. The four steps of apology include Self-Reflection, Apologizing, Repair, and Behavior Change. Read more about giving a good apology [here](#).

6. Having a small group of friends who are committed to helping us see when we might be causing harm, process our feelings about the harm we have caused (so that those we have hurt will not be expected to), and practice taking accountability can help build our skill at being called in. Who is in your “accountability pod”? Choose people who are trustworthy mirrors, who are capable of seeing you for who you are, loving you, and compassionately bringing you into greater clarity. Do some reading online about “accountability pods” using the model from the Bay Area Transformative Justice Collective. Identify who is in your pod, and begin having regular conversations with them now about how you can support each other in ongoing accountability, rather than waiting until you’re in crisis to have conversations. Practice with small harm so that you’ll be familiar with the process if there is ever more impactful harm.

Guided Questions:

1. How can we bring the values we have set forth together actively into this space every time we engage with it? How can we hold ourselves and our peers accountable when we mess up the rules we’ve set?
2. What, if any, rule did we create that we think is the most important to keep in mind for our time together?
3. How can we apply the concept of calling in to other aspects of our lives? How does it relate to our roles as environmental advocates?
4. How does the care we are building for each other together as a group connect with the care we have for the Earth?





Principles of Honorable Harvest

Materials:

A copy of the book *Braiding Sweetgrass* by Robin Wall Kimmerer

Instructions:

Review the rules of the Honorable Harvest from the book. These are guiding principles from interaction with nature. They include the following:

Know the ways of the ones who take care of you, so that you may take care of them.

Introduce yourself. Be accountable as the one who comes asking for life.

Ask permission before taking. Abide by the answer.

Never take the first. Never take the last.

Take only what you need.

Take only that which is given.

Never take more than half. Leave some for others.

Harvest in a way that minimizes harm.

Use it respectfully. Never waste what you have taken.

Share.

Give thanks for what you have been given.

Give a gift, in reciprocity for what you have taken.

Sustain the ones who sustain you and the earth will last forever.

Guided Questions:

- How do you see your relationship to the land? How has this relationship evolved over time?
- How do these rules about interacting with nature feel similar or different from the way that we interact with each other?
- What does consent look like in our interactions with the land? How can we apply principles of consent to our own lives?
- How can we implement these rules in our space as a group?





Starting at the Seed: Planting Conflict Resolution Skills in Our Gardens

This activity will guide you through planning your campus garden. This can be done with however many people want to participate, but it is strongly recommended that the bulk of the session is done in small groups. This activity is a generic sample and should be customized to your campus and the group that participates.

Materials:

- Individual notebooks for each participant to keep
- Pens/pencils
- Any printed instructions you may want to hand out
- Optional - educational books/pamphlets about types of plants that flourish in your region (strongly recommended if there is limited access to the internet)



Instructions:

This is a set of instructions, not a script. The way you deliver the instructions depends on your community and your relationship with that community.

1. Gather as a large group at the plot of land that will become the campus garden. If a plot has not been chosen yet, meet in a different outdoor space and be sure to include location in the planning process with the students.
2. Pass out notebooks to each participant. This will be their space to take notes, brainstorm, and reflect throughout the process.
3. Split into small groups of 3-4 (if the large group is smaller, pairs also work).
4. Instruct groups to come up with a plan for the garden. Emphasize that it is perfectly okay to know little to nothing about gardening. They will be able to use their phones and the educational resources you've given them to make recommendations. They should come up with the following information:
 - a. What shape should the garden take?
 - b. Are there any nearby critters that should be considered in the design of the physical barrier around the garden?
 - c. What types of plants should be planted—vegetables, herbs, flowers? Consider what works best in each season.
 - d. What type of soil is present? How does that impact what can be grown?
 - e. Which way is the soil sloping? Will this impact runoff?
 - f. How much would the plants and soil cost? Is this within the budget?
 - g. What care would need to go into the garden? How often should everything be weeded, watered, harvested, etc.?





5. Come back together as a large group and have one or two people from each group share what they discussed.

6. Have the large group vote on the types of plants to be planted, pulling from ideas that the small groups generated. Ask them to consider not only their preferences but what might most benefit their campus and the surrounding community. For example, does the dining hall lack a particular vegetable? Is there a traditional or ancestral food that may have been grown on the occupied land that the university is located on?

7. Once the group decides their plan for the land together, the facilitators will be in charge of acquiring the necessary items. At the next group meeting, their ideas will come to fruition on the land.

Guided Questions:

- What was fun about planning the garden layout together as a group? What was challenging?
- What is your vision for this space one day? What do you hope you can look back and say you accomplished during your time in the garden?
- What talents do you bring to this community?

Appendix 4: Other Related Holistic Interventions With Potential Prevention Applications

People deserve to be supported by others who have the needed capacity, availability, and training. Those who have experienced trauma should consider whether they would prefer to participate in activities with either a certified or peer provider (for example, group therapy vs. a support group, a therapist vs. a mentor). The activities described here have variations that are led by trained and certified facilitators and are designed to facilitate specific therapeutic outcomes. Alternatively, each program can be led individually or collaboratively by peers within the community, significantly increasing accessibility. However, when programs are facilitated by people without specific clinical training in trauma, tools should proactively be made available for participants who are triggered by the activity or need additional support.





A growing body of research supports that holistic activities and practices can contribute to violence prevention and promote prosocial behaviors. In addition to horticulture, other interventions can include but are not limited to equine-assisted, art-based, and movement-based programs.

Equestrian approaches

Studies have shown that equine-assisted therapeutic interventions have shown success in decreasing symptoms of post-traumatic stress disorder. (Johnson, et. al, 2018). The veteran population specifically has benefited from these interventions after returning from combat, seeing not only a decrease in PTSD symptoms but also an increase in coping self-efficacy, an increase in emotional regulation, and a decrease in loneliness (Johnson, et. al, 2018). These findings can be translated to survivors of sexual violence, providing the same comfort and social connectedness. While this is beneficial to survivors after they have experienced violence, little is known about equine-assisted intervention programs as a tool for violence prevention.

Riding and caring for horses can address a number of risk factors of violence, such as the cultural norms that encourage aggressive behavior and lack of impulse control. When working with horses, a person must be gentle and cautious, or else they will scare the horse and serious injury may occur. By encouraging participants to treat even bad-tempered horses with tenderness and care, equestrian therapeutic programs may increase their skills in non-violent problem solving, a protective factor for violence. Participants in studies discussing equine-assisted therapeutic programs have described horses as “accepting and non-judgmental” animals, making them ideal companions for people struggling to feel socially accepted (Johnson, et. al, 2018). Not only will participants feel connected to the horses, but they will feel connected with the community they create through an equestrian therapy program.

Other animal-based therapies may also be beneficial for both response to and prevention of violence.





Art-based approaches

Art therapy is a clinical specialty that can be used in treating adults or children who have experienced trauma (Schouten, et. al, 2015). It is practiced by licensed art therapists, although mental health professionals with visual art experience or knowledge often use art-based techniques as part of their practice. Art-based programming can also be used to encourage prosocial behavior, such as resolving conflict and fostering self-awareness, in children and young adults, as well as decrease aggressive behavior. Creating art can increase mental and social well-being and, if done in a community setting, enhance feelings of community connectedness. For information on best practices for art-based violence prevention programming, see [this study](#) (Stone, et. al, 1998). Reach out to the [NC Art Therapy Association](#) for referrals to credentialed art therapists.

Clinical music therapy practice also shows promise for promoting connection, collaboration, conflict resolution, and other prosocial behaviors important to violence prevention (Nöcker-Ribaupierre & Wölfl, 2010).

Movement and dance-based approaches

Dance has been used to increase prosocial behaviors in children. In a study that introduced a 12-week violence prevention pilot program to elementary-aged children, researchers found that there was a significant decrease in the frequency of negative behaviors in the classroom after these students completed the program (Koshland, et. al, 2004). These negative behaviors include instigating fights, failing to calm down, and throwing objects (Koshland, et. al, 2004). A similar violence prevention program can be applied to college students, with adjustments to account for the age difference. To learn more about the program and how it can be adapted for college students, see [this study](#).

Martial arts may also be explored as violence prevention. Depending on the mentality of the dojo, martial arts can decrease aggression, improve inhibition, and instill confidence, a sense of safety, self-respect, respect for others, self-control, body awareness, accountability, and responsibility (Harwood-Gross, Lambez, Feldman, Zagoory-Sharon, & Rssovsky, 2021)(Pink Belt Project, 2021).

