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# Garden Counseling Groups and Self-Esteem: A Mixed Methods Study With Children With Emotional and Behavioral Problems

Jacqueline M. Swank  
Sang Min Shin  
*University of Florida*

*This research study focused on the use of a garden group counseling intervention to address the self-esteem of children with emotional and behavioral problems. The researchers found higher self-esteem among participants (N = 31) following the gardening group. Additionally, participants discussed feeling calm and happy and learning to working together through the group experience.*

**Keywords:** children; counseling; garden; group; self-esteem

Children with emotional and behavioral problems often experience numerous challenges that affect their lives at school, home, and in the community. They often have difficulty socializing with others and developing and maintaining relationships (Fitzpatrick & Knowlton, 2009; Lane, Wehby, & Barton-Arwood, 2005; Lehman, Clark, Bullis, Rinkin, & Castellanos, 2002). Additionally, they may struggle with emotional regulation (Lehman et al., 2002). They also may have difficulty with developing a healthy identity and positive self-esteem (Fitzpatrick & Knowlton, 2009; Solar, 2011).

Children spend a significant amount of time within a school setting and schools serve as the primary mental health provider for approximately half of the children with emotional disorders (National Association of School Psychologists, 2008). Additionally, professionals provide interventions in schools focused on addressing behavioral problems and fostering social and emotional development (Sklad, Diekstra, Ritter, Ben, & Gravesteijn, 2012). Counseling interventions provided within the school environment generally have positive outcomes for children, which include development of problem-solving

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Jacqueline M. Swank, Ph.D., is an assistant professor of counselor education, and Sang Min Shin, M.S., is a doctoral candidate, in the School of Human Development and Organizational Studies in Education in the College of Education at the University of Florida. Correspondence concerning this article should be addressed to Jacqueline M. Swank, School of Human Development and Organizational Studies in Education, College of Education, University of Florida, 1215 Norman Hall, PO Box 117046, Gainesville, FL 32611. E-mail: [jswank@coe.ufl.edu](mailto:jswank@coe.ufl.edu)

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skills and a reduction in discipline referrals (Whiston, Tai, Rahardja, & Eder, 2011). Thus, counselors may experience successful outcomes with implementing counseling inventions within the school setting in working with children with emotional and behavioral problems.

## NATURE AND CHILDREN

Ecopsychology integrates tenets from ecology and psychology and focuses on the connection people have with nature (Raja, Carol, Stella, Anthonyraj, & Muthulakshmi, 2013). Generally, humans instinctively connect with the natural environment (Raja et al., 2013) and a healing power exists within our relationship with nature (Miles, 1987; Sackett, 2010). Researchers have reported that connecting with the natural environment may positively affect children (Greenleaf, Bryant, & Pollock, 2014). Outdoor activities provide opportunities for children to experience the natural environment and engage in sensory exploration (Clements, 2004). Specifically, gardening provides opportunities to engage all five senses and aesthetically interact with others and the experience of being in nature (Pecaski McLennan, 2010). Additionally, children who engaged in outdoor activities (i.e., recess) when compared with children who had no or limited breaks during the school day had better classroom behaviors, as reported by their teachers (Barros, Silver, & Stein, 2009). Furthermore, in regards to children with emotional and behavioral problems, researchers have found that engagement in the natural environment decreases attention deficit hyperactivity disorder (ADHD) symptoms, such as difficulty focusing, following directions, and completing tasks (Faber-Taylor & Kuo, 2009; Faber-Taylor, Kuo, & Sullivan, 2001; Kuo & Faber-Taylor, 2004). Thus, it is crucial for children to have frequent experiences engaging in the natural, outdoor environment.

School personnel often develop gardens within the school setting to enhance the curriculum, promote academic achievement in core subject areas including science and math, and to emphasize nutrition (Hazzard, Moreno, Beall, & Zidenberg-Cherr, 2011; Klemmer, Waliczek, & Zajicek, 2005; Swank & Swank, 2013). However, the gardening process also may foster social and emotional development. Specifically, children may develop social skills through interactions with peers and adults and embrace a sense of ownership and pride in their school (Ozer, 2007). Robinson and Zajicek (2005) found that children involved in a gardening program demonstrated overall improvement in life skill development, as well as in two specific categories: working together and self-understanding. Additionally, Block et al. (2012) examined a garden and kitchen program and reported that they observed the children remaining on-task, engaged, and able to

complete tasks without close supervision. They also stated that they witnessed students' sense of achievement and self-confidence that was portrayed through their artwork and writing related to their experiences in the garden and the kitchen. Parents, teachers, and volunteers reported that the children developed greater self-confidence and self-esteem and children reported having a greater sense of ownership within the school. Sandel (2004) also studied gardening interventions with youth, specifically within a detention setting, and found that youth were able to relate the metaphoric power of the garden to their lives, instilling hope for the future and their ability to make their lives better. Staff in the detention center also reported that youth were calmer and more relaxed. The garden environment also appeared to help the staff feel less anxious as well. Furthermore, Feral (1998) found positive emotional growth among children ( $N = 17$ ) through an enhanced self-concept and a greater ability to show empathy in examining the outcomes of an environmental curriculum involving a collaboration between a mental health counselor and a science teacher.

A garden also creates an engaging learning environment that is directed by the children (Block et al., 2012; Skelly & Bradley, 2000). Children are able to engage in hands-on activities within the garden setting and participate in decision-making processes related to the garden. In exploring children's reactions ( $N = 124$ ) to involvement in a garden and kitchen program, Block et al. (2012) found that during interviews children reported enthusiasm and enjoyment in school related to their participation in the garden and kitchen program. Furthermore, researchers have found that personalization of the school's physical environment may enhance a child's self-esteem (Maxwell & Chmielewski, 2008). Although Maxwell and Chmielewski (2008) examined the classroom environment, this also may be relevant to the natural, outdoor environment.

### **Counseling Groups in Nature**

Although researchers have reported that school academic gardens promote social and emotional development (Block et al., 2012; Robinson & Zajicek, 2005), a paucity of research exists examining the use of garden counseling groups in the school setting. Counseling groups promote personal and social development and foster a positive climate (Pérusse, Goodnough, & Lee, 2009). Through the group experience, children have the opportunity to interact with each other and learn and practice skills. Children also have the opportunity to share their experiences and learn that others have experienced similar situations (Pérusse et al., 2009). The group counseling approach also provides the counselor with an opportunity to work with multiple children at

the same time, which increases the number of children served by the counselor. Additionally, counseling groups held in nature provide children with an opportunity to leave the traditional group counseling setting and experience counseling in a natural space. Engagement in the natural environment may appeal to children as opportunities to spend time outside are reduced, especially within the school setting. In addition to promoting a relationship between a child and nature, the natural space provides a unique group setting that may promote the development of relationships between children and foster empathy (Feral, 1998), skills that can then be used in settings beyond the counseling group. Thus, the integration of the natural environment may strengthen and expand upon the benefits of a traditional group counseling experience.

Researchers have identified some benefits related to using nature-based interventions with children (e.g., promoting positive feelings and emotions, facilitating a healthy identity and self-esteem, and developing social skills) in areas that children with emotional and behavioral problems have particular difficulty. Additionally, Swank and Swank (2013) proposed the integration of gardening activities to use in counseling groups within the school setting. However, a paucity of literature was found regarding the effectiveness of using garden counseling groups with children with emotional and behavioral problems within the school setting. Therefore, a need exists for collecting both quantitative and qualitative data to provide a greater understanding of this phenomenon. Thus, the purpose of this study is to learn about the outcomes of a garden group counseling intervention with elementary school children with emotional and behavioral problems.

Within this convergent parallel mixed methods study we collected quantitative and qualitative data in parallel, analyzed and reported the data separately, and then merged the data to discuss the findings (Creswell & Plano Clark, 2011). In this approach, pre/posttest data will be used to examine the children's self-reported level of self-esteem. Additionally, outcomes will be explored through discussions with participants about their experiences in the garden counseling groups. The reason for collecting quantitative and qualitative data is to converge the data to provide a greater understand about the outcomes of the garden counseling groups. The two overall research questions were as follows: (a) Is there a statistically significant difference in the self-esteem, as measured by the Piers-Harris Children's Self-Concept Scale-2 (PHCSCS-2; Piers & Herzberg, 2002) of children with emotional and behavioral problems following participation in a garden group counseling intervention? (b) What are the perceptions of children with emotional and behavioral problems regarding their participation in a garden group counseling experience as portrayed

through discussions about participants' drawings? Additionally, there was a sub-question of the first overall research question: Is there a statistically significant difference in self-reported evaluation of one's behavior, as measured by the behavioral adjustment subscale of the PHSCS-2 of children with emotional and behavioral problems following participation in a garden group counseling intervention?

## METHOD

### Research Design

We conducted this study using a mixed methods research approach. "Mixed methods research is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches . . . for the broad purposes of breadth and depth of understanding and corroboration" (Johnson, Onwuegbuzie, & Turner, 2007, p. 123). Specifically, we used a convergent parallel design, which allowed us to collect and analyze quantitative and qualitative data simultaneously and then combine the data for interpretation (Creswell & Plano Clark, 2011). We selected this method in order to combine the quantitative and qualitative results to provide greater understanding about the use of garden group counseling interventions with children with emotional and behavioral problems.

### Participants

There were a total of 33 children who participated in the groups; however, data were analyzed for only 31 participants because two participants had biased responding and repeated absences from group sessions. Bias responding was identified through the scoring guide for the PHSCS-2. All of the participants attended the same school in the southeastern part of the country. The participants were identified by the school system as having emotional and behavioral problems. There were 2 kindergarteners, 10 first-graders, 6 second-graders, 6 third-graders, 2 fourth-graders, and 5 fifth-graders. Five of the participants (16%) were female and 26 (84%) were male. The ages of the children ranged from 5 to 12, with 1 five-year-old, 3 six-year-olds, 12 seven-year-olds, 4 eight-year-olds, 3 nine-year-olds, 5 ten-year-olds, 2 eleven-year-olds, and 1 twelve-year-old. The race/ethnicity of the participants was 22 (71%) Black, 7 (23%) White, 1 (3%) Hispanic, and 1 (3%) Other. Finally, 12 (39%) of the participants reported previous experience in a garden, 17 (55%) report no previous garden experience, and 2 (6%) did not respond to the question.

## Procedures

Prior to recruiting participants, the researchers received institutional review board (IRB) approval from their institution. After receiving IRB approval and approval from the school district, the researchers sent home consent forms with the children. Children who received permission from their parent/guardian to participate were then asked if they wanted to participate in the study. The intervention consisted of a 6-week group that met twice a week for 30–45 min. There were a total of six small groups with five to six children in each group. The composition of each group consisted of children spanning two grade levels (K–1, 2–3, 4–5). The children were given the pretest and posttest individually or in small groups. The assessment was read aloud to some children, while other children chose to answer the items on their own. Additional data were obtained from participants' discussions about drawings they created during the last group session. The groups were facilitated by a university faculty member and a doctoral student. The faculty member had extensive experience using counseling interventions in nature, including gardening, and with facilitation of groups with children with emotional and behavioral problems. The doctoral student facilitator had experience working with children and facilitating small groups, and was conducting her clinical internship at the school. The school counselor, three master's level students, and another doctoral student also were present for some of the group sessions to assist the two facilitators with activities and to help provide additional adult supervision. All six groups followed the same group curriculum.

## Garden Counseling Group Intervention

The purpose of the group was to provide an opportunity for elementary school children with emotional and behavioral problems to engage in a garden group counseling experience. The goals of the group were to help children: (a) foster healthy self-esteem, (b) learn positive coping skills, (c) develop social skills, and (d) acquire skills in self-regulation. For this study, the researchers used a garden group counseling curriculum developed by Swank and Swank (2013). The curriculum is grounded within a social-ecological and ecopsychology framework. Social-ecological components are integrated from models by Bronfenbrenner (1979); Kelly, Ryan, Altman, and Stelzner (2000); and Ozer (2007) emphasizing a change in one system creating change in other systems. Additionally, a grounding in ecopsychology focuses on the connection between humans and nature and that through understanding of this connection, individuals may enhance their growth and development (Feral, 1998). Furthermore, the researchers chose a small



group counseling format to provide an opportunity for the children to share experiences and learn and practice skills with each other (Pérusse et al., 2009).

The group consisted of engagement in five stages of the gardening process: (a) planning, (b) preparing, (c) planting, (d) maintaining, and (e) harvesting. Following the administration of the pretest, the children developed rules for the group and discussed expectations and activities involved within the group. The children signed the list of rules and expectations and it was reviewed and posted during each session. Posting expectations provides a visual reminder to children, which may help them self-regulate and also provide reminders to others (Regan, 2009). Then, the rest of the first session was focused on planning the garden. During this process, the children engaged in a discussion about what they wanted to plant in the garden, which was facilitated to begin the process of establishing the children's ownership of the garden (Swank & Swank, 2013) and allow them the opportunity to personalize their physical environment. Additionally, the children created journals to record their experiences in the garden throughout the group sessions. During this stage, the facilitators focused on helping the children develop communication skills through sharing their ideas about what they wanted to plant in the garden and listening to others' ideas.

During the second session, the children participated in the garden preparation stage. The children participated in getting the soil ready for planting and the facilitators related this experience to having a solid foundation in one's life to build upon in achieving success. The third and fourth sessions involved planting seeds and starter plants. The children worked in pairs with a group facilitator during this process developing ownership for their small section of the garden. In addition to teamwork, the children developed problem-solving skills (e.g., marking the rows to know what was planted in each area, watering the plants when the hose was too short). The fourth stage (sessions 5 through 10) involved maintaining the garden. This is the longest stage in the gardening process and the children engaged in various activities during this stage focused on self-esteem and coping skills. The children had opportunities to engage in relaxation activities, which included lying on the ground, taking deep breaths, and creating pictures from the clouds in the sky. Other activities involved creating flower pictures that encompassed positive qualities about oneself and discussing feelings related to the growth of the garden. The final stage (sessions 11 and 12), involved harvesting the garden, tasting the vegetables that were grown, and celebrating. Depending upon what the group decides to plant, follow-up sessions may need to be held to harvest the vegetables if they are not fully grown yet. The



facilitators also discussed how the various stages of the garden related to life experiences beyond the garden (e.g., working together, compromising, caring for something, empathy). Throughout the group, the children had opportunities to process their thoughts and feelings about the experience through drawings and discussions at the end of group sessions. Some of the process questions focused on asking the children what they learned about themselves and others, sharing something they enjoyed about the group session, and giving feedback to each other. For additional information about the garden group counseling curriculum see the article written by Swank and Swank (2013).

### **Instruments**

The PHCSCS-2 was used to measure change in self-reported self-esteem using a pretest/posttest design in this study. The PHCSCS-2 is a 60-item assessment with descriptive statements requiring a yes or no response. The instrument encompasses six subscales: (a) physical appearance and attributes, (b) intellectual and school status, (c) happiness and satisfaction, (d) freedom from anxiety, (e) behavioral adjustment, and (f) popularity. Specifically, the behavioral adjustment subscale measures children's self-evaluation of their behaviors regarding compliance with rules and expectations. Additionally, the instrument has two validity scales that assess for biased responding and random responding to items. In examining the psychometrics, Piers and Herzberg (2002) reported that the internal consistency reliability ranged from .89 to .93 for the total scale and .60 to .84 for the combined subscales. Specifically, for the subscale behavioral adjustment, the internal consistency reliability was .81. Convergent validity was assessed through a comparison of the PHCSCS-2 with measures of anger and psychological symptoms, which revealed a negative relationship between both of these areas with the PHCSCS-2 total score and some of the subscales. The norming group consisted of nearly 1,400 children ages 7 to 18 (Piers & Herzberg, 2002). The current study involved four children outside of the range of the norming group because a similar assessment was not found that included this age grouping. The researchers read the items aloud to the children when needed to address their difficulty in reading the items.

Children's drawings were created during the last group session in response to a prompt to draw about their experience in the garden group. The participants were then given an opportunity to discuss their drawings with the group members and facilitators and the facilitators took notes about the discussions. Notes were used instead of audio recordings because the recording devices were distracting to

the children. The drawings and descriptions were used to obtain the children's perspectives about the group experience because drawings provide young children with the opportunity to conceptualize what they learned (Chang, 2012) as well as express their thoughts and feelings without requiring extensive verbal responses (Shaban & Al-Awidi, 2013). Furthermore, Block et al. (2012) used children's artwork in a previous garden intervention study to examine children's perspectives about the intervention.

### **Data Analysis**

The researchers used the self-report data collected from the PHSCS-2 to quantitatively examine the first research question focused on self-esteem. The researchers first examined the data for outliers and missing data. Then, the authors examined the data for biased responding and answering randomly using two validity scales that are integrated within the assessment. Two cases were dropped due to concerns regarding biased responding; therefore, data from a total of 31 cases were analyzed in the study. Due to the span in age (5–12) and grade level (K–5), the participants were divided into two age (younger [5–7] and older [8–12]) and two grade level (early elementary [K–2] and upper elementary [3–5]) groups. We considered the statistical assumptions before initiating the repeated measures analysis of variance (ANOVA). We then proceeded with conducting the analysis using the Statistical Package for the Social Sciences (SPSS, 2012).

In regards to the second research question focused on children's perceptions regarding their experience with the group intervention, the researchers conducted a qualitative analysis of the themes portrayed within the children's verbal and written descriptions about their drawings using a phenomenological approach described by Moustakas (1994). The two group facilitators (researchers) met to discuss their experiences with nature and gardening, and with children with emotional and behavioral problems prior to beginning the study. After the drawings and discussions were completed, we individually reviewed the drawing descriptions and notes about the discussions to identify relevant content. Then, we met to discuss the content and develop themes. We then reviewed the data again to ensure that they included all relevant content. In regards to trustworthiness, we followed recommendations provided by Creswell (2013), including bracketing beliefs and assumptions prior to beginning the study and analyzing the data independently before meeting to discuss the relevant content and reach consensus.

## RESULTS

### Quantitative

The first research question focused on examining whether a change in self-esteem occurred following participation in the garden group counseling intervention. A repeated measures analysis of variance was conducted to compare self-esteem scores between younger (ages 5–7) and older (ages 8–12) children across time. There was no significant interaction between age and time, Wilks' Lambda = .99,  $F(1, 29) = .039$ ,  $p > .05$ . There was a significant main effect for time, Wilks' Lambda = .74,  $F(1, 29) = 10.01$ ,  $p < .05$ , partial eta squared = .26, with both age groups showing an increase in self-esteem scores across two time points. The main effect comparing the two age groups was not significant,  $F(1, 29) = .50$ ,  $p > .05$ . A repeated measures analysis of variance also was conducted to compare self-esteem scores between children in early elementary (K–2) and upper elementary (3–5) grades across time. There was no significant interaction between grade and time, Wilks' Lambda = 1.0,  $F(1, 29) = .00$ ,  $p > .05$ . There was a significant main effect for time, Wilks' Lambda = .75,  $F(1, 29) = 9.70$ ,  $p < .05$ , partial eta squared = .25, with both grade level groups showing an increase in self-esteem scores across two time points. Furthermore, the main effect comparing the two grade level groups was not significant,  $F(1, 29) = .41$ ,  $p > .05$ .

We also examined whether a change occurred in the evaluation of one's behavior following participation in a garden group counseling intervention. A repeated measures analysis of variance was conducted to compare behavioral adjustment scores between younger (ages 5–7) and older (ages 8–12) children across time. There was no significant interaction between age and time, Wilks' Lambda = .99,  $F(1, 29) = .17$ ,  $p > .05$ . There was a significant main effect for time, Wilks' Lambda = .87,  $F(1, 29) = 4.34$ ,  $p < .05$ , partial eta squared = .13, with both age groups showing an increase in behavioral adjustment scores across two time points. Furthermore, the main effect comparing the two age groups was not significant,  $F(1, 29) = .09$ ,  $p > .05$ . A repeated measures analysis of variance also was conducted to compare behavioral adjustment scores between children in early elementary (K–2) and upper elementary (3–5) grades across time. There was no significant interaction between grade and time, Wilks' Lambda = 1.0,  $F(1, 29) = .01$ ,  $p > .05$ . There was a significant main effect for time, Wilks' Lambda = .87,  $F(1, 29) = 4.23$ ,  $p < .05$ , partial eta squared = .13, with both grade level groups showing an increase in behavioral adjustment scores across two time points. Furthermore, the

main effect comparing the two grade level groups was not significant,  $F(1, 29) = .02, p > .05$ .

## Qualitative

The researchers qualitatively analyzed the children's drawings and descriptions for themes to examine the second research question. Three themes appeared within the drawing, consisting of (a) knowledge about nature, gardening, and plants; (b) participants' mood; and (c) social skills. In the area of knowledge, the children reported learning about the stages of the garden and the growth of the plants. This was portrayed through a series of pictures that showed the various stages of plant growth. The series of pictures began with drawings of seeds and evolved to include roots, stems, leaves, and vegetables or flowers. The children discussed the process of caring for their plants across the group experience, including watering them and pulling weeds. Furthermore, they described the harvest stage and tasting the vegetables that they grew in the garden.

The second theme related to the children's feeling about the garden experience. This theme was portrayed through drawings of flowers and vegetables (i.e., radishes and carrots) with smiley faces on them. One child wrote on the picture, "I learned that it makes me feel happier to be in the garden." In discussing these drawings, the children reported that they felt happy and calm in the garden. They also shared their enthusiasm about spending time in the garden each week.

The final theme, social skills, was portrayed through drawings of the children working with each other and with the facilitators in the garden and discussions about teamwork and cooperation experienced in the garden. Specifically, the children shared how they worked together to plant the garden, care for it (watering and weeding), and harvest it. One child drew a picture of everyone sitting in a circle on the tarp (used for group activities in the garden) and wrote in the middle of the circle "working together" and at the top of the picture wrote, "the last day, we'll miss you forever."

## DISCUSSION

This study focused on the use of a garden group as a counseling intervention with children with emotional and behavioral problems. The current study is unique because limited studies exist that examine the effects of gardens on the social and emotional development of children. Additionally, no studies were found that focused on the use of a nature-based intervention, specifically garden groups, in counseling

with children with emotional and behavioral problems. Furthermore, we collected and analyzed both quantitative and qualitative data to provide a richer understanding about the use of the intervention with children with emotional and behavioral problems.

Overall, the results of this study provide initial support for counselors' use of garden groups as a counseling intervention with children with emotional and behavioral problems. The analyses indicated that children's overall self-concept scores were higher and the children felt happier following the intervention. These findings are consistent with previous research (Block et al., 2012; Feral, 1998). Children also scored higher on the behavioral adjustment subscale indicating more positive feelings about their behavior following the garden counseling group intervention. This expands upon the findings of Robinson and Zajicek (2005) regarding children having greater self-understanding following their participation in an academic garden program. Additionally, through the garden, children have the opportunity to work together to care for their plants. Feral (1998) found that engaging in nature may help children develop empathy for nature and for others. Taylor (2002) also reported that caring functions to assist individuals in developing healthy self-esteem and developing patterns of thinking that promote caring behaviors and inhibit violence. Thus, gardening experiences may help children develop empathy and caring behaviors; and therefore, reduce negative behaviors.

Gardening also provides the opportunity for children to tangibly experience success through the process of growing plants that may contribute to fostering a positive self-concept and promote social skills (Miller, 2007; Swank & Huber, 2013). A child's self-concept is influenced by their perception of their abilities and competencies (Harter, 2006); therefore, children need opportunities to experience success. Furthermore, the children's discussions about feeling calm and happy following participation in the garden group counseling intervention is supported by Sandel's (2004) report from staff following youth's engagement in gardening. However, the current findings revealed that children, in addition to staff, had awareness about their feelings in relation to their participation in the garden.

## **Limitations**

As with any study, there are limitations associated with the present study. In regards to the quantitative component of the study, the study involved a pretest/posttest design without a control group, due to the need to provide services without delay to all of the children who qualified for participation in the study. Additionally, in regards to instrumentation, there were four children in the present study who

were outside of the range of the norming group for the PHSCS-2. The researchers also relied on their notes instead of recordings, which may have provided richer data. There also are sampling limitations apparent within the study. Specifically, the sample involved children from one school located in the southeastern part of the United States and the participants were predominately Black (70%). Therefore, the sample may not be representative of elementary school children in other regions of the country or other racial/ethnic groups. Furthermore, the sample was relatively small, while including children across all elementary grade levels (K-5).

### **Recommendations for Future Research**

This study examined the effectiveness of a garden group counseling intervention implemented within the school setting. Future research may focus on having a larger, more diverse sample involving children in multiple schools within different geographic regions of the country. Additionally, researchers may expand upon this study in the future through the use of a control group and random assignment. The researchers also may explore the use of additional assessments. This may include administering an assessment to teachers and parents, and also collecting additional qualitative data through interviews and focus groups. Researchers also may compare children's behaviors in the classroom with their behavior in the natural environment. Furthermore, researchers may focus on measuring the long-term effects on integrating nature-based group activities, including garden group counseling interventions within the school environment, assessing the impact on the school culture and student growth and development.

### **Implications for Group Workers**

A paucity of literature exists regarding the effectiveness of garden group counseling interventions, specifically with children with emotional and behavioral problems. The findings from this study provide some initial support for using garden group counseling interventions with children with emotional and behavioral problems. The school garden provides an opportunity for group workers to collaborate with educators in promoting the holistic development of children. It is crucial to have school personnel invested in the garden to obtain support for allocating time devoted to gardening and other nature-based activities and to promote the sustainability of the garden (Hazzard et al., 2011; Swank & Swank, 2013). Group workers may obtain support for

gardening and other nature-based group counseling interventions by working with teachers to integrate an academic focus, in addition to a counseling focus within the garden. This also communicates to the children that counselors and teachers work together and are both invested in having them achieve positive outcomes in academics and in social and emotional development. Furthermore, establishing a strong collaboration, in relation to the garden, facilitates the development of a positive school community.

The natural setting provides counselors with a creative meeting space. This calming, peaceful, natural setting can be therapeutic and promote self-confidence (Miles, 1987). This can be particularly helpful for children with emotional and behavioral problems, and others, who become overwhelmed in the classroom and need a break from the traditional learning environment. Having an opportunity to sit quietly in the natural space or engage in physical activities in nature (i.e., dig in the dirt, pull weeds, and prune plants) can be therapeutic for children in helping them release energy, relax, and develop healthy coping skills.

In providing opportunities to engage in nature-based counseling interventions, including garden counseling groups, Swank and Swank (2013) discussed a variety of safety considerations. The walls in a building provide clear physical boundaries that are absent in the outdoor setting. The counselor can establish physical boundaries in the natural setting by creating a fenced enclosure around the garden area. An enclosed area also promotes security, discouraging outsiders and animals from entering the area. Additionally, the counselor may use a tarp or other seating arrangements to designate the group meeting space within the natural environment. Furthermore, the counselor also needs to establish safety guidelines regarding the use of gardening tools and equipment.

The school garden provides an opportunity for children to take group ownership in the garden and their school, fostering a sense of pride and greater investment in the school (Ozer, 2007). This is beneficial because children's investment in their school is related to the development of prosocial behaviors and a decrease in violence, substance abuse, and other at-risk behaviors (Hawkins, Guo, Hill, Battin-Pearson, & Abbott, 2001; Ozer, 2007). Taking group ownership of the garden also provides an opportunity for the children to work together to personalize their physical environment. This also is crucial because personalization of the physical environment may contribute to enhanced self-esteem (Maxwell & Chmielewski, 2008). Additionally, children may form attachments to positive role models (e.g., the counselor, teachers, other school personnel, parent, and community volunteers) through their involvement in the garden. Through



their engagement in the garden, children also may learn social skills by working together (Block et al., 2012; Miller, 2007; Robinson & Zajicek, 2005) and develop empathy for nature and for others (Feral, 1998), areas in which children with emotional and behavioral problems have particular difficulty. Furthermore, counselors may use artwork with children to encourage self-expression and to help them process experiences.

In conclusion, this article presents some initial research findings supporting the use of garden group counseling interventions with children with emotional and behavioral problems. Additional research is needed in this area; however, initial support exists for using the garden group counseling intervention to promote personal and social development, in addition to academic learning. Thus, counselors can use garden group counseling interventions to promote the growth and development of children, while building a positive learning environment.

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