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Urban Gardening Initiative for the Enhancement of Wellness and Environmental Attitudes of Service-Learning Research Assistants:
A Participatory Community Action Research Project within Local Homeless Shelters

By: Alicia Selvey, BA, Dr. Roger N. Reeb (Faculty Advisor), Charles A. Hunt MA (Staff Advisor)

Introduction

Behavioral Activation Defined:
Behavioral Activation, based on operant conditioning, is “...a therapeutic process that emphasizes structured attempts at engendering increases in overt behaviors that are likely to bring [the person] into contact with reinforcing environmental contingencies and produce corresponding improvements in thoughts, mood, and overall quality of life” (Hopkot et al., 2003, p. 700).

Behavioral Activation Sessions are Designed to:
1. Enhance empowerment (e.g., computer training, GED training)
2. Enhance coping (e.g., stress management, mindfulness training)
3. Enhance shelter social environment (e.g., art, music, cookouts)

Research Strategy for the Ongoing Study:
Guided by the Psycho-Ecological Systems Model (Reeb & Folger, 2013) and psychopolitical validity (Prillhetskyn, 2008), we use participatory community action research (Reeb, 2006) and service-learning pedagogy (Bringle et al., 2016; Reeb, 2010). Undergraduates in service-learning courses, such as “Engaged Scholarship for Homelessness” (affiliated with the Common Academic Program at the University of Dayton), work to assist faculty, community partners, and graduate students in implementing the project and reflecting on social justice and human rights issues.

Primary Campus-Community Partnerships Include:
St. Vincent de Paul (Dayton, Ohio); National Alliance on Mental Illness (Montgomery County, Ohio); Human Rights Center at University of Dayton; Fitz Center for Leadership in Community at University of Dayton; AmeriCorps Youth Economic Self-Sufficiency (YESS) Program; Homeless Solutions Board (Montgomery County, Ohio); National Association for the Advancement of Colored People (Dayton, Ohio); & Montgomery County Office of Reentry (Montgomery County, Ohio); & Narcotics and Alcoholics Anonymous (Dayton, Ohio).

Urban Gardening Initiative

The current plan is to implement an urban garden on grounds of the men’s homeless shelter as an addition and extension of the Behavioral Activation Project. Soga and colleagues (2017) performed a meta-analysis that shows the benefit of gardening on wellness and health, but only one identified study observed gardening on homeless shelter residents (Grabbage et al., 2013).

The establishment and further examination of the urban garden at the homeless shelter can be seen as an experiment on the efficacy of participating in an urban garden on wellness and health of residents of a homeless shelter. There is strong reason to believe that people with a strong sense of connectedness to nature will benefit from the gardening more than those who do not. This may be due to the fact that they seek out more opportunities to work in gardens. Mayer and Frantz (2004) define connectedness to nature as “...an individual’s experiential sense of oneness with the natural world” or “an individual’s affective, experiential connection to nature” (p. 504).

In addition to examining the connectedness of nature of the shelter guests, we will examine the changes within the environmental attitudes and connectedness to nature of the service-learning students involved within the study.

Highlights of Past Outcomes for Students

Participants:
Thus far, the service-learning student data has been collected from an ongoing three credit course, Engaged Scholarship for Homelessness: A Service-Learning Course. The most recent 48 students from the above course are represented within the data below. These participants, service-learning students (n = 48), were compared to a non-service-learning control group (n = 16), 200-level psychology course students.

Measures:
Community Service Self-Efficacy (CSSE) measures “the individual’s confidence in his or her own ability to make clinically (meaningfully) significant contributions to the community through service” (Reeb, et al., 2010). On three versions of the CSSE, students in the service-learning course (n = 48) demonstrated significant positive changes in self-efficacy as opposed to non-service-learning comparison groups (n = 16).

The Attitudes Toward Homelessness Inventory (ATHI) identified significant positive pre- to post-season changes in stigmatizing attitudes for service-learning students (n = 48), but not for non-service-learning students (n = 16). In brief, the social stigma refers to a person’s levels of comfort, desired to associate with, and the belief or endorsement of negative beliefs, stereotypes, or prejudices toward a specific group or groups of people, such as those experiencing homelessness.

The Awareness of Privilege and Oppression (McClellan, 2014) includes subscales to assess awareness of classism, racism, sexism, and heterosexism. This measure was added recently due to emergent themes in qualitative data, and the small sample size at this point precludes statistical analysis.

Purpose of Proposed Project

Within the context of the Behavioral Activation Project, there is a plan to implement an urban garden at the St. Vincent de Paul Gateway Shelter for Men. The proposed study will examine the effects of participation in this sustainability initiative on service-learning students’ (a)sense of connectedness to nature and (b) environmental attitudes/behaviors.

Hypothesis Regarding Outcomes for Service-Learning Students

Service-learning students who assist shelter guests in urban gardening within the context of the Behavioral Activation Project will show a greater pre- to post-season improvement in connectedness to nature and environmental attitudes/behavior relative to (b) service-learning students who assist shelter guests with other non-urban gardening sessions.

For references or more information regarding the Behavioral Activation Project or the Urban Gardening Initiative please contact:
Roger N. Reeb, reeb1@udayton.edu
For more information regarding shelter guest outcomes associated with the Behavioral Activation Project at this symposium, please see Katy Gibbins (Advisor) - Dr. Roger N. Reeb.
For personal experiences of service-learning students please attend our panel session at 1:00 pm today (Advisors: Roger N. Reed & Greg Elvers)

Urban Gardening Initiative Methods

Participants:
This study focuses on undergraduate students enrolled in the three-credit course Engaged Scholarship for Homelessness: A Service-Learning Course or some other relevant course at the University of Dayton.

Measures:
Connectedness to Nature Scale (CNS). The CNS, as developed by Mayer and Frantz (2004), is “the most widely used measure of the self-nature connection construct” (Martin & Cezlar, 2016, p. 186). This is a 14-item Likert-like scale, with scores ranging from (1) strongly disagree to (5) strongly agree. Mayer and Frantz (2004) report evidence of favorable psychometric properties based on student and community samples.

Environmental Attitudes Inventory (EAI). The EAI was developed by Milfont and Duckitt (2010) who report strong psychometric properties for the instrument including . The EAI consists of 12 subscales, with each subscale including 10 items assessing different aspects of environmental attitudes/behavior. The scale ranges from (1) strongly disagree to (7) strongly agree.

Procedure:
Approval is being sought for the following procedure:
As students register for the course, they are informed about two critical course features. First, they are informed that, beyond the more traditional academic requirements, the course has a required service-learning component. This component involves working a set number of hours to assist with implementation of the behavioral activation project. Second, students contemplating registering for the course will be informed that, once registered, they will be randomly assigned to one of the following components of the service-learning project: (a) assisting and monitoring shelter guests as they work on an urban garden; or (b) assisting with indoor sessions associated with the project. Students will have the option of not consenting to participate in the research and, therefore, either enroll in a regular section of the course (or some other course).

Measurement:
At pre- and post-gardening season, service students will complete the CNS and EAI in addition to the pre to post-semseter measures regularly collected on students involved within the Behavioral Activation Research Project (i.e., demographics, social stigma toward homelessness, community service self-efficacy, and awareness of oppression and privilege).

Proposed Analysis
To examine the above hypothesis, a series of ANOVAs (or ANCOVAs) will be employed, with one independent samples factor (type of service-learning: urban gardening vs. indoor projects) and one repeated measures factor (time: pre vs. post-semseter). For each ANOVA (or ANCOVA) that yields a statistically significant F values (p < .05) for the group by time interaction effect, post-hoc t-tests will be employed to determine if specific group differences are consistent with the hypothesized pattern.