UTILIZATION OF SERVICE-LEARNING PEDAGOGY IN PARTICIPATORY COMMUNITY ACTION RESEARCH IN HOMELESS SHELTERS: QUASI-EXPERIMENTAL STUDY OF STUDENT OUTCOMES

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ABSTRACT

UTILIZATION OF SERVICE-LEARNING PEDAGOGY IN PARTICIPATORY COMMUNITY ACTION RESEARCH IN HOMELESS SHELTERS: QUASI-EXPERIMENTAL STUDY OF STUDENT OUTCOMES

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The present study examined student outcomes across multiple semesters of service-learning students in a particular course (i.e., “Engaged Scholarship for Homelessness: A Service-Learning Course”), which was developed to support the University of Dayton’s Common Academic Program. In addition to completing academic requirements, students assisted with the implementation of the Behavioral Activation Research Project in Homeless Shelters. To connect academic learning with experiential learning, service-learning students engaged in reflection exercises throughout the semester. The study, utilizing a quasi-experimental design, examined two hypotheses: Relative to a comparison group of non-service-learning students (n = 29), service-learning students (n = 45) will show pre-to-post-semester (a) improvements in community service self-efficacy and (b) decreases in stigmatizing attitudes toward homelessness. A series of 2 X 2 ANOVAs were employed, each with one between-subjects factor (service-learning vs. non-service-learning students) and one within-
subjects (repeated measures) factor (pre- vs. post-semester). In support of both hypotheses, the interaction effect was statistically significant, with each set of follow-up t-tests showing statistically significant specific group differences in hypothesized directions. The results are interpreted within the context of past research and theory, while providing recommendations for future research based on the limitations of the present study.
Dedicated to my parents, Cindi S. Hunt and C. Allan Hunt, my fellow Behavioral Activation Research Project research partners, and the undergraduate students at the University of Dayton, without whom my thesis would have been impossible.
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INTRODUCTION

This study utilizes a pre-post two-group quasi-experimental research design to examine pre- to post-semester outcomes of service-learning among university students who assisted with a research project in local homeless shelters. The students (i.e., participants) assisted with the Behavioral Activation Research Project in Homeless Shelters, a participatory community action research project developed by Dr. Roger N. Reeb (Professor of Psychology, Roesch Endowed Chair in the Social Sciences) in conjunction with a community research partner (Mr. David Bohardt, Executive Director of St. Vincent de Paul in Dayton, Ohio). Service-learning students were enrolled in an academic course (i.e., “Engaged Scholarship for Homelessness: A Service Learning Course”) developed by Dr. Reeb in support of the Common Academic Program at the University of Dayton. In brief, the Common Academic Program (a) functions as “a curricular innovation that…serves as the foundation of…education,” (b) provides “a learning experience…common among all undergraduate students…, regardless of their major”; and (c) embodies seven UD Learning Goals: Scholarship, Faith Traditions, Diversity, Community; Practical Wisdom, Critical Evaluation of Our Times, and Vocation (University of Dayton, 2017).

The quasi-experimental design in the present study compared service-learning students (i.e., students enrolled in the aforementioned course) to a comparison group of
non-service-learning students (i.e., students in an abnormal psychology course not utilizing service-learning pedagogy). This research design allowed an examination of differences between the two groups of students with regard to pre- to post-semester changes in (a) community service self-efficacy and (b) stigmatizing attitudes toward homelessness. This M.A thesis is organized into the following sections: The first section describes the concept of service-learning, notes the well-documented outcomes of this pedagogical approach, and briefly describes the service-learning project of the current study (i.e., Behavioral Activation Research Project in Homeless Shelters). The second section discusses the two constructs that represent the major service-learning student outcomes examined in the present study: (a) community service self-efficacy and (b) social stigma (as it relates to homelessness). The third section provides a rationale for, and the hypothesis of, the current study, whereas the fourth section reviews the methodology, research design, and statistical analysis approach utilized. The results of the study are presented in the fifth section, and the final section discusses the findings in light of research, theory, and plans for future studies.

General Description Service-Learning Pedagogy

The concept of service-learning is routinely defined as follows (Bringle, Reeb, Brown, & Ruiz, 2016, p. 105; adapted from Bringle & Hatcher, 1996, p. 222):

“…a course-based, credit-bearing educational experience in which students (a) participate in mutually identified and organized service activities that benefit the community, and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility.”
At the University of Dayton, service-learning is viewed as a valuable pedagogy, and various forms of community engagement are utilized by faculty and staff. Recently, the University of Dayton (2015) received a Community Engagement Classification from the Carnegie Foundation for the Advancement of Teaching. This was in recognition of the university’s long-standing commitment to community engagement through teaching, service, research, and partnerships. Further, the inclusion of a service-learning course in the Common Academic Program is distinctive. The University of Dayton allows greater access to this service-learning opportunity for students across majors by including the course, *Engaged Scholarship for Homelessness: A Service Learning Study*, as a part of the Common Academic Program.

Though a comprehensive review of service-learning outcomes is beyond the scope of this study, several general conclusions can be briefly made regarding the effects of participating in service-learning opportunities. There is a body of research suggesting that service-learning augments the learning of course content (e.g., Reeb, Sammon, & Isackson, 1999; also see Bringle et al., 2016). Recently, two literature reviews have affirmed the myriad of positive psychosocial or personal outcomes associated with service-learning opportunities. Celio, Durlak, and Dymnicki (2011) found in their meta-analysis of 62 studies that service-learning students, as compared to controls, made significant gains in several areas: attitudes towards self (e.g., self-efficacy), civic engagement, attitudes toward learning, academic performance, and social skills.

Further highlighting these positive associations was the review of 55 studies done by Holsapple (2012) that specifically examined student reports regarding the effects of service-learning courses. Holsapple (2012) found 32 studies that documented findings
related to the confrontation of stereotypes previously held regarding the diverse populations with whom they worked. The reduction of stereotype belief and endorsement was typically facilitated by the development of positive relationships between the students and those within the population they were serving. These positive relationships, reciprocal in nature, helped the students gain a greater sense of awareness (and more accurate knowledge base regarding) the target population. Moreover, some studies in the review reported an increased acknowledgment of similarities and differences between students and those within the population they served (Holsapple, 2012). For example, over half of the studies reviewed reported a theme of increased knowledge regarding the population served; specifically, greater awareness of intragroup differences, increased awareness of cultural backgrounds, and greater awareness of marginalization were observed. Furthermore, 11 of the reviewed studies revealed an increase in comfort with cross-cultural interactions, such that after the service-learning opportunity ended, participants had an increased likelihood of interaction with diverse community members (Holsapple, 2012).

For a more comprehensive discussion of student outcomes in service-learning, please refer to Clayton, Bringle, & Hatcher (2013). For a review of community outcomes in service-learning, please refer to a chapter by Reeb and Folger (2013). A new book published by the American Psychological Association (Service Learning in Psychology: Enhancing Undergraduate Education for the Public Good (Bringle, et al., 2016) discusses and illustrates the important role of service-learning in the psychology undergraduate curriculum. The aim of the current study is to focus on two outcomes
related to themes identified in the above comments on service-learning pedagogy: (a) community service self-efficacy, and (b) social stigma toward homelessness.

**Brief Description of the Service-Learning Project**

In the current study, the service-learning project that the students participated as research assistants in the Behavioral Activation Research Project in Homeless Shelters. The Behavioral Activation Project is a participatory community action research project, which utilizes service-learning pedagogy for implementation and sustainability. Strand, Cutforth, Stoecker, Marullo, & Donohue (2003), define community action research (p. 3) as: “a partnership of students, faculty, and community members who collaboratively engage in research with the purpose of solving a pressing community problem or effecting social change”. This research strategy is known to increase the mutual commitment and investment of academic researchers, community partners, and students in a project (Reeb & Folger, 2013). As the name suggests, this project implements behavioral activation session within Behavioral activation, which is rooted in Skinner’s operant conditioning, can be defined as structured attempts to increase overt behaviors that bring individuals into direct contact with opportunities for response-contingent reinforcement resulting in improvements in their quality of life, mood, thoughts, and empowerment to recognize and pursue personal potential (Hopko et al., 2003). In the present project, there are three general categories of sessions implemented: (1) activities devised to enrich empowerment and/or self-sufficiency (e.g., GED training, computer literacy training); (2) activities devised to enrich coping skills (e.g. stress management); and (3) social/recreational activities devised to enrich the “social climate” of the shelter.
Though the overall project examines the outcomes of both shelter guests and service-learning students, this particular M.A. thesis focuses on student outcomes.

Students enrolled in the service-learning course, *Engaged Scholarship for Homelessness: A Service-Learning Course*, developed by Dr. Roger Reeb for the Common Academic Program, follow a specific orientation schedule prior to beginning their service hours within the shelters. First, students must complete the Collaborative Institutional Training Initiative (CITI). After completion of the CITI training, students proceed to the Shelter Safety Procedures, the St. Vincent De Paul Code of Conduct, and lastly, a brief tour of the shelter(s) where their service hours will be conducted. In addition to regularly scheduled evaluations of their understanding regarding the rules and regulations of service-learning at the homeless shelter, students participate in planned reflection exercises inspired by the DEAL Model of Reflection to integrate academic and experiential modes of learning. The DEAL model involves three steps: (1) detailed, objective *Description* of experiences; (2) *Examination* of those experiences as they relate to academic achievement, personal growth, and/or civic learning; and (3) *Articulation* of Learning, including objectives for action that may enhance future experiences and learning opportunities (Ash & Clayton, 2009). Each stage of the DEAL Reflection Model has specific prompts tailored to meet the goals and objectives of the course (Ash & Clayton, 2009). The actual reflection prompts used in the course are modeled after those provided by Bringle et al. (2016).

The conceptual framework that has helped guide this research project is the Psycho-Ecological Systems Model (PESM; Reeb & Folger, 2013). PESM is a systems approach that conceptualizes a social problem from multiple levels of analysis (e.g.,
individual, familial, community, cultural and global). Central to PESM model is the concept of psychopolitical validity (Prilleltensky, 2008), which evaluates a community intervention using two general criteria. The first criterion, epistemic, “demands that psychological and political power be incorporated into community… interventions” (Prilleltensky, 2008, p. 116). The second criterion, transformative, “requires that interventions move beyond ameliorative efforts and toward structural change” (Prilleltensky, 2008, p. 116). In order for a study to have high psychopolitical validity, it must incorporate both of these aspects, which can be seen within this research project.

The focus of the project is to augment existing ameliorative efforts and alleviative care (e.g., food, clothing) for the shelter guests, and also go beyond these needs to help enhance empowerment and the ability to achieve personal potential among the guests (e.g., computer training, vocational preparation). The goal is for the project to provide a working model for homeless shelters that can ideally be generalized to other shelters in this community as well as in other communities.

In addition to the development and implementation of sessions by the University of Dayton graduate and undergraduate students, community partners have been recruited to help address the needs of those who are homeless. A formal working relationship was established during the progression of this research project with the Montgomery County Office of Ex-Offender Reentry, due to the high percentage of shelter guests with a criminal record and history of incarceration, estimated at 25-50% of the homeless adult population (Metraux & Culhane, 2006). Furthermore, “The association between homelessness and imprisonment is bidirectional: imprisonment may precipitate homelessness … and homelessness may increase the risk for imprisonment through
shared risk factors” (Kushel, Hahn, Evans, Bangsberg, and Moss, 2005). Other community partners which have been established prior to and since the inception of the Behavioral Activation Research Project, include but are not limited to: The National Alliance on Mental Illness (Montgomery County, Ohio), the National Association for the Advancement of Colored People, and Homeless Solutions Board (Montgomery County, Ohio).

**Primary Student Outcomes Examined in Present Study**

**Community service self-efficacy.** Related to the specific themes identified above (e.g., attitudes toward self, civic engagement) is community service self-efficacy. The concept of self-efficacy originally stems from Bandura’s social-cognitive theory, which holds that “expectations of personal efficacy determine whether coping behavior is initiated, how much effort will be expended, and how long it will be sustained in the face of obstacles and aversive experiences” (Bandura, 1977, p. 191). Based on Bandura’s research, self-efficacy is a predictor of the degree of initiation and persistence of coping behavior, and assists in mediating corrective modifications in performance and emotion regulation (Bandura, 1977; also see comprehensive reviews by Bandura, 1995, 1997)). Community service self-efficacy is a specific type of self-efficacy that refers to “the individual’s confidence in his or her own ability to make clinically (meaningfully) significant contributions to the community through service” (Reeb, Folger, Langsner, Ryan, & Crouse, 2010, p. 459; also see Reeb, 2006a; Reeb, 2006b; Reeb, Katsuyama, Sammon, & Yoder, 1998).

Bandura proposed the principle of reciprocal determinism, which illustrates how changes in self-efficacy occur (Bandura, 1978). Reeb et al. (2010) utilized the principle
of reciprocal determinism as proposed by Bandura (1978) to illuminate how self-efficacy, behavior, and environmental factors all interact bidirectionally to influence one another. These bidirectional interactions assist in creating and developing a student’s efficacious attitude. Specifically, students with high community service self-efficacy are more likely to seek out service-learning opportunities than students with low community service self-efficacy (Reeb et al., 2010, p. 469). Students with high self-efficacy may be likely to exhibit greater effort in the face of obstacles than students with low self-efficacy, and any favorable consequences from the service may, in turn, reinforce students’ behavior and increase his or her self-efficacy (Reeb et al., 2010). Following Bandura’s (1997) hypothesis regarding increased self-efficacy, Reeb et al. (2010) concluded that, dependent upon the degree of success or failure, a student’s community service-self efficacy “could increase, decrease, or remain stable during a semester of service-learning.” One critical aspect of service-learning is the utilization of reflection as a defining feature (see Ash & Clayton, 2009); therefore, guiding students to recognize (and learn from) their successes and failures sets the stage for growth in community service self-efficacy.

Community service self-efficacy research did not begin to blossom until the development of the Community Service Self-Efficacy Scale (CSSES) by Reeb, et al. (1998). The creation and development was specifically to fill a void in the literature recognized by Reeb et al. (1998). Most other service-learning measures focus on domains such as civic engagement, social responsibility, motives, and values, whereas the CSSES focuses on whether the person was confident in their performance and presumably their ability to perform in the future (self-efficacy) (Reeb et al., 2010). CSSES assesses
whether participants believe they are capable of making meaningful contributions to the community through service (Reeb et al., 1998). Following the early work on the scale (e.g., Reeb et al., 1998), Bringle, Phillips and Hudson (2004) described the CSSES as having “good theoretical rationale, [with] promising psychometric characteristics” (p. 101-102) and referenced its highly versatile utility as a moderating, mediating or outcome variable within research. Subsequently, additional research (Reeb, 2006a, 2006b; Reeb et al., 2010) was conducted to confirm psychometric properties of the CSSES and to develop different versions of the scale for different purposes. Reeb et al. (2010) reviewed over 10 years of research establishing sound psychometric properties of the CSSES; further, an independent research team (Bai & Stewart, 2010) “…cross validated the psychometric properties of the…CSSES…” for different age groups, and drew the following conclusion: “The…CSSES is a psychometrically reliable and valid instrument for evaluation of service-learning programs and research…” (p. 115). Evidence of the various types of reliability and validity for each CSSES version utilized in this project are reviewed in the Methods section.

Due to the research program by Reeb and colleagues, the construct of community service self-efficacy has become a central construct in conceptualizations of student outcomes. For instance, in response to research on the CSSES, Bringle and Steinberg (2010) included the construct of self-efficacy in their broad rubric of the *Civic-Minded Graduate*. Thus, the CSSES is a commonly-used measure in service-learning research and practice (Bringle et al., 2004; Reeb et al., 2010). The psychometric instrument is also used in personality research more generally; for example, a recent study using the CSSES supported the hypothesis that, “self-efficacy generated by the creation of service
opportunities, may not only improve engagement, but may also lessen the influence of [so-called] negative millennial traits including entitlement and narcissism” (Credo, Lanier, Matherne, & Cox, 2016, p. 192).

Due to the direct involvement with the individuals in the homeless shelters, through the service-learning project, it is highly anticipated that students involved within this study would have increases in community service self-efficacy, as measured by the CSSES, over the course of the semester. This increase is believed to occur due to the service work within the shelters assisting homeless individuals in a real-life setting.

**Social stigma toward homelessness.** Goffman (1963) first introduced the field to the concept of social stigma with his recognition that stigma consisted of an attribute or mark that is perceived within society as being immoral or deviating from societal norms and this mark can be heavily intertwined with judgements and discrimination. Simply put, stigma is an “attribute that is deeply discrediting” and that diminishes the holder “from a whole and usual person to a tainted, discounted one” (Goffman, 1963, p. 3). Recently, the conceptualization of stigma has undergone a reframing to include the following features and behaviors: labeling, stereotyping, separation, status loss, and discrimination of other human beings (Link, & Phelan, 2001). Social stigma is a process that begins with the demarcation of a person due to some perceived difference, progressing to subtle or overt separation between groups and increased power differential. The resulting beliefs can induce acts of discrimination. Experiencing stigma is associated with various negative effects, including but not limited to self-stigma. Self-stigma is the internalization and personal endorsement of social stigma, which can lead to decreases in self-esteem and self-efficacy (Corrigan & Watson, 2002). The decline in
self-efficacy and self-esteem due to self-stigma has been associated with the *Why Try* effect. The Why Try effect is the endorsement of beliefs or thoughts of inadequacy or worthlessness that increase the likelihood of avoiding life opportunities and advancements (i.e. applying for jobs, seeking housing assistance) (Corrigan, Larson & Rusch, 2009). The Why Try effect can be viewed as the behavioral outcome of the concept of learned helplessness, as first described by Seligman (1975). Snow and Reeb (2013) review research on social stigma toward homelessness.

Though an extensive discussion of the literature on the stigmatization faced by homeless individuals is beyond the scope of this study, general conclusions can be made based upon the review by Snow and Reeb (2013). The public tends to exaggerate the extent to which homelessness is associated with mental illness, substance abuse, and criminality and these beliefs complicate the ability for the person who is homeless to overcome the barriers surrounding homelessness. According to Snow and Reeb (2013), the public may often fail to recognize the reciprocal relationship between homelessness and these associated problems; that is, these problems (mental illness, substance abuse, and criminality) not only have the potential of contributing to the development of homelessness, but they also represent potential outcomes (consequences) of homelessness. In other words, the condition of homelessness and these associated problems are “interconnected in a cycle of reciprocal determinism” (Snow & Reeb, 2013, p. 119).

Reduction of social stigma has been the aim of many interventions and lines of research since the inception of stigma as a construct. Three types of strategies have been identified for reducing stigma; protest, education, and contact (Corrigan &
O’Shaughness, 2007; Snow & Reeb, 2013). Protest is a strategy in which individuals openly speak out against entities, such as the government or businesses, directly challenging their practices such as boycotting of the services or goods produced. Educational strategies are aimed at dispelling the myths about the discriminated or marginalized community through the presentation of facts. Contact based anti-stigma programs work by facilitating direct contact and interpersonal exchanges between individuals of the marginalized population (i.e., homeless persons) and those within the non-marginalized group (those without a history of homelessness). Though all forms of anti-stigma interventions or campaigns have the potential of reducing social stigma, the literature leads to the following conclusions (Snow & Reeb, 2013): “the contact strategy seems promising in reducing stigma against homeless people, and a strategy that combines contact and education components may be best” (Snow & Reeb, 2013, p. 127). Based on the definitions above, this study can be viewed as a contact-based psycho-educational anti-stigma intervention. This directly places students in regular contact with homeless individuals within their work at the shelter while also augmenting their experience with academic endeavors. Further, students attend the course dedicated to the understanding of the social problem of homelessness and the many myths that exist. Therefore, we anticipate that participating within the Behavioral Activation Research Project in Homeless Shelters would facilitate a reduction in the students’ stigmatizing attitudes toward this population, resulting in an increased ability and willingness to interact with this population in a positive manner.
Rationale and Major Hypotheses

Though past research (reviewed in Reeb et al., 2010) suggests pre-to-post improvements in community service self-efficacy over the course of a semester of service-learning, most of this research has employed upper-level undergraduate students. The current study examined mostly sophomore students in a Common Academic Program course, expanding the academic backgrounds of the students involved within the project. Though preliminary evidence (written reflections) suggest decreases in social stigmatizing attitudes for students completing this course, this study examines pre- to post-semester changes in this construct using a validated instrument (Kingree & Daves, 1997). Due to the unique nature of offering a service-learning course as part of the Common Academic Program, this study has special relevance to the community-oriented Mission of the University of Dayton.

**Hypothesis 1**: Hypothesis 1 is that there will be pre-to-post-semester improvements in community service self-efficacy for service-learning students assisting with implementation of the Behavioral Activation Research Project in Homeless Shelters, but this change is not expected to occur for non-service-learning students (i.e., in students in a psychology course not utilizing service-learning pedagogy). Further, as part of this hypothesis, we predict that students will attribute these changes in community service self-efficacy to the course, *Engaged Scholarship for Homelessness: A Service Learning Course*, as reflected by higher scores on a retrospective measure of community service self-efficacy.
**Hypothesis 2.** Hypothesis 2 is that there will be pre- to post-semester reduction in social stigmatizing attitudes toward homelessness for service-learning students but not for non-service-learning student.
METHOD

Participants

Participants included 45 students in the service-learning course (*Engaged Scholarship for Homelessness: A Service-Learning Course*) and 29 students in a non-service-learning psychology course. Students involved in the service-learning course were from three separate semesters, Fall 2012, Spring 2015 and Spring 2016. Combined, the service-learning students consisted of 7 Freshman, 21 Sophomores, 7 Juniors, and 10 Seniors. The number of students in different majors include: 11 Psychology, 9 Business, 8 Pre-Medical/Dental, 4 Engineering, 2 Pre-Physical Therapy, and with one student majoring in Environmental Biology, Biology, Early Childhood Education, Education Exercise/Physiology, Fine Arts, Computer Science, English, Communication, Human Rights, East Asian Studies, and one undeclared student. The non-service-learning group, an abnormal psychology class, consisted of the following majors 0 Freshman & Sophomores, 14 Juniors, 13 Seniors, and 2 5th-year seniors. The breakdown of the number of students per major is as follows: 10 Psychology, 4 Pre Medical, 2 Political Science, 2 Communication, 2 Biology, 2 Criminal Justice, and one student in each of the following majors: Pre Physical Therapy, Finance, Music, Economics, History, Human Rights, and Operations Management. See below for the composition of each section of the service-learning course in terms of year of study and major. All participants
completed measures at pre- and post-semester time points. The research was fully approved by the Research Review and Ethics Committee, Department of Psychology, University of Dayton.

- Spring 2012 \((n=15)\) consisted of 6 Freshman, 5 Sophomores, 1 Junior, and 3 Seniors. The number of students in different majors included: 4 Psychology, 8 Business, and 3 Pre Medical/Dental.

- Spring 2015 \((n=8)\) consisted of 0 Freshman, 1 Sophomore, 1 Junior, and 6 Seniors. The number of students in different majors included: 2 Pre-Medical, 2 Psychology, 1 Biology, 1 Engineering, 1 Human Rights, and 1 East Asian Studies.

- Spring 2016 \((n=22)\) consisted of 1 Freshman, 15 Sophomores, 5 Juniors, and 1 Senior. The number of students in different majors included: 5 Psychology, 3 Pre-Medical/Dental, 2 Pre-Physical therapy, 3 Engineering, 1 Environmental Biology, 1 Early Childhood Education, 1 Education Exercise/Physiology, 1 Business, 1 Fine Arts, 1 Computer Science, 1 English, 1 Communication, and 1 undeclared student.

**Measures**

**Community service self-efficacy scale (original version).** The Community Service Self Efficacy Scale (CSSES; Appendix A) is a 10-item, 10 point Likert scale that assesses whether participants believe they are capable of making meaningful contributions to the community through service (Reeb, et al., 2010). The CSSES has been shown to have a test-retest reliability of .62 (Reeb et al. 2010) over the course of a semester for non-service-learning students and has strong internal consistency with
alphas over .90 (Reeb et al., 1998). There is evidence of convergent validity, as the CSSES has positive correlations with measures of such constructs as generalized self-efficacy, behavioral intention for community service, hope, self-esteem, generativity, growth motivation, and empathy (Reeb et al., 2010). Evidence of discriminant validity is also available (e.g., there is evidence that CSSES scores do not reflect social desirability, and the CSSES has inverse correlations with such constructs as social alienation).

Research has demonstrated that the CSSES is sensitive in detecting changes in self-efficacy as students engage in service-learning work (Reeb et al., 2010). Items on the CSSES are rated from 1 (uncertain) to 10 (certain) regarding the participants’ agreements with the affirmations (e.g., *If I choose to participate in community service in the future, I will be able to make a meaningful contribution*), and factor analysis has demonstrated uni-dimensionality (Reeb et al., 2010). An independent research team (Bai & Stewart, 2010) cross-validated major psychometric properties of the CSSES for undergraduate students and high school students. These independent researchers concluded that “the instrument showed internal consistency reliability, test-retest reliability, content validity, and construct validity” (p. 123), and they did not obtain any findings that contradict findings from Reeb’s research team. The CSSES was administered at both pre- and post-semester. At pre-semester, the alpha (indicator of internal consistency) for the service-learning group was 0.908 and it was 0.918 for the non-service-learning group. At post-semester, the alpha for the service-learning group was 0.934 and it was 0.933 for the non-service-learning group.

**Community service self-efficacy scale (sensitive to change version).** The Community Service Self Efficacy Scale- Sensitive to Change (CSSE-SC; Appendix B) is
a variation of the CSSES scale (Reeb, et al., 2010) consisting of 10 items on a 10-point Likert scale. It was developed to eliminate ceiling effects that may preclude an examination of change by asking participants to compare themselves to “an individual with 10 years of community service experience” while rating each item. The CSSES-SC correlates highly with the original CSSES, and studies routinely yield alpha above .90 for CSSE-SC (Reeb et al. 2010). There is some evidence that the CSSE-SC is more sensitive to changes in self-efficacy, relative to the original CSSES (Reeb et al., 2010). Participants responded to each item (Compared to an individual with 10 years of community service experience, how meaningful of a contribution will you be able to make through community service?) with an endorsement between 1 (less than that of the experienced participant) to 10 (greater than that of the experienced participant). A higher score indicates that the participant is in more agreement with the items and this assessment was given for both pre-post assessment purposes. The instrument was administered at pre- and post-semester. At pre-semester, the alpha (indicator of internal consistency) for the service-learning group was 0.929 and 0.919 for the non-service-learning group. At post-semester, the alpha for the service-learning group was 0.971 and 0.935 for the non-service-learning group.

Community service self-efficacy scale (retrospective version). The Community Service Self Efficacy Scale- Retrospective Version (CSSE-RV; Appendix C) is a 10 item, 10-point Likert scale that assesses participants’ “perceptions of a course’s contribution to their community service self-efficacy” (Reeb, et al., 2010). This version of the CSSE was developed for situations wherein (a) it is not possible to do a pre- to post-semester assessment or (b) a ceiling effect is evident in the pre-semester assessment. Like the other
versions of the CSSES, the CSSE-RV routinely has alpha levels above .90, and it correlates with the original CSSES (Reeb et al., 2010). The scale has 10 items (e.g., *This course increased or strengthened my confidence that, in the future, I will be able to make a meaningful contribution to the community through service.*) with an endorsement between 1 (*quite uncertain*) and 10 (*certain*). A higher score indicates that the participant is in more agreement with the affirmations. The CSSE-RV was administered at post-semester only. At post-semester, the alpha for the service-learning group was 0.960 and it was 0.984 for the non-service-learning group.

**Attitudes toward homelessness inventory.** Two forms of the Attitudes Toward Homelessness Inventory (ATHI; Appendix D; Kingree & Daves, 1997) were utilized within this study. The original ATHI is a 27-item, 6-point Likert scale designed to assess the endorsement of social stigma of respondents toward homeless individuals, with higher scores representing less stigmatizing views toward the homeless. The current and adapted version is an 18-item, 6-point Likert scale; retaining 12 items identical to the original scale. The changes within scale implementation from the 27- to 18-item scale were due to: (1) to reduce participant burden (i.e., taking out similar questions *Most homeless people have mental defects vs. Homeless people are mentally ill*), and (2) Reflect changes in time (i.e., changing one question’s time frame from *recent* to *in the past*). Through a series of studies on diverse populations, the ATHI has been shown to have good internal consistency and reliability (Kingree & Daves, 1997). Participants respond to all items (e.g., *Homeless people are mentally ill.*) with an endorsement between 1 (*strongly agree*) to 6 (*strongly disagree*). Some items (2, 3, 4, and 11) have to
be reverse coded to coincide with the overall scale indicating that higher scores represent less stigmatizing views of the homeless population.

The ATHI was administered at pre- and post-semester and contains four dimensions; (a) Personal Causation – homelessness is individually caused (PC; Items 1, 7, 8, 9, 14, and 15); (b) Societal Causation – homelessness is due to societal defects (SC; Items 2, 3, and 11); (c) Affiliation – willingness to interact with homeless persons (AFF; Items 4 & 12); and (d) Solutions – there are viable solutions to homelessness (SOL; Items 5, 6, 13, 17, and 18). The remaining items on the Adapted version of the ATHI (10 and 16) do not directly align with the various subscales of the ATHI at this time. Due to the changes within scale implementation over the project, only 12 out of the 18 items were “common” across all courses studied, and so the study examined these 12 items. At pre-semester, the alpha values (indicator of internal consistency) for the service-learning group were as follows: Overall = .76, PC = .77, SC = .61, AFF = .76, and SOL = .68. For the comparison group, the pre-semester alpha values were: Overall = .45, PC = .64, SC = .79, AFF = .77, and SOL = .64. At post-semester, the alpha values for the service-learning group were as follows: Overall = .564, PC = .53, SC = .66, AFF = .45, SOL = .30. For the non-service-learning group, the Alpha values were: Overall = .709, PC = .68, SC = .76, AFF = .74, SOL = .39.

**Demographics.** The demographic variables collected for this study (Appendix F) include, age, gender, ethnicity, year and major in school, both paternal and maternal levels of education, type of environment the participant grew up in (i.e. city, suburb, small town), previous experiences with homeless persons, and screening for previous volunteer experience regardless of population served. For the comparison group, a non-
service-learning abnormal psychology class at the University of Dayton, there were a
total of 29 participants (14 were males and 15 were females), with an age range of 20 –
23-years old, with an average age of participant being 20.69 years ($SD= 0.76$). The ethnic
background of participants was as follows: 6.9% (2) African American, 3.4% (1)
Latino/a, 82.8% (24) Caucasian, 3.4% (1) Asian/Pacific Islander, and 3.4% (1)
Multiracial. For the service-learning group, across all semesters, there were 45
participants (12 males and 33 females), with the average age of 19.56 years ($SD=1.22$
and age range of 18 – 22 years-old. The ethnic background of the service-learning groups
was as follows: 6.7% (3) African American, 2.2% (1) Latino/a, 86.7% (39) Caucasian,
and 4.4% (2) Multiracial.

**Background Service.** The previous service experiences of the participants were
also collected (Appendix E). Specifically, information collected included the length and
place of the service, population being served, reason for service (service-learning class,
community volunteer work through job) and a description of the services performed. Due
to changes in data collection and management over time, background service information
is unavailable for the comparison group. A current study (another quasi-experimental
study) of the Behavioral Activation Research Project includes a new comparison group,
with background service information uniformly collected across the service-learning
class and non-service-learning class. For the service-learning group, across all semesters,
there were 95.6% (43) individuals who participated in previous community service work,
while 58.1% (25) of those with a history of community service work with the homeless
population in some capacity (e.g. serving food to homeless in shelters).
Procedure

The research was fully approved by the Research Review and Ethics Committee, Department of Psychology, University of Dayton. At the beginning of the semester, students who agreed to participate in the study signed an informed consent document designed for their course (Appendix G or Appendix H), a demographic measure (Appendix E), and a Service Background measure (Appendix F). At pre- and post-semester, both the service-learning and non-service-learning students completed the aforementioned psychometric instruments; CSSES, CSSE-SC, and ATHI. Over the course of the semester, service-learning students engaged in reflection exercises (both written and group discussion sessions) informed by the DEAL model (Ash & Clayton, 2009). At post-semester, the students completed the CSSE-RV and a debriefing form (Appendix I).

Research Design and Statistical Analysis

A quasi-experimental research design was used. For each dependent variable (versions of the CSSES and the ATHI), the study used a 2 X 2 ANOVA with one between-subjects factor (service-learning group vs. non-service-learning group) and one within-subjects factor (pre- vs. post-semester). For each ANOVA with a significant $F$ value, $t$-tests were used to determine if the pattern of group differences was in the hypothesized direction. While qualitative data was collected from service-learning students in this study, the current M.A. thesis project focuses on quantitative findings using the aforementioned psychometric instruments. Nevertheless, a preliminary examination of the qualitative data revealed themes that are consistent with hypotheses. Therefore, as statistical findings are presented for each dependent variable, a sample from
the qualitative data (students’ written reflections) will be provided. Further, it will be shown that this preliminary examination of qualitative data revealed another possible theme (i.e., awareness of privilege). The future systematic examination of qualitative data is expected to provide information on how and why changes in the constructs of interest occurred. In the Discussion section, recommendations are provided for (a) a future systematic examination of the qualitative data using grounded theory methodology and (b) a plan to capture the new theme identified in preliminary examination of qualitative data (i.e., awareness of privilege) with a well-validated psychometric instrument. It is recognized that quantitative data and qualitative data complement one another in important ways.
RESULTS

Results of Analyses Testing Hypothesis 1

Hypothesis 1 states that there would be a pre- to post-semester improvement in community service self-efficacy for the service-learning students but not for the non-service-learning students. All three CSSES versions were employed.

**CSSES (Original Version).** Consistent with Hypothesis 1, the Group (service-learning) X Time (pre- vs. post-semester) interaction on CSSES (original scale) average scores was statistically significant, $F(1, 71)=17.735, p<0.001$. This result was fairly uniform across CSSES items; that is, the Group X Time interaction was significant on 9 out of 10 items (except item 7). The main effect for group was not significant, $F(1, 71)=0.080, p=0.779$ while the main effect for time was significant, $F(1, 71)=5.688, p=0.020$.

Given the significant Group X Time interaction, follow-up $t$-tests were employed to reveal specific group difference as shown in Table 1. At pre-semester, the mean difference in CSSES scores between the service-learning group and comparison (non-service-learning) group was not statistically significant, indicating that both groups were approximately the same on this construct at pre-semester. The remaining item, Item number 7 “I am confident that, through community service, I can help in promoting equal opportunity for citizens.” was not significant. At post-test, however, the mean CSSES
score was higher for the service-learning group relative to the non-service-learning group. Table 1 illustrates that this pattern of findings was consistent on 3 out of 9 items with significant interaction effects, 4 out of 9 items had scores trending toward significance, and 1 out of 9 items did not have a significant post-semester difference between groups. Further, the pre-to-post-semester increase in CSSES mean score was statistically significant for the service-learning group, whereas the pre-to-post-semester changes in the CSSES mean score was not significant for the non-service-learning group. This pattern of findings was fairly consistent across 9 out of 10 items for the service-learning group (see Table 2). Thus, Hypothesis 1 was strongly supported for the CSSE original scale.

As an additional follow-up, effect sizes were computed, as delineated below. That is, the effect sizes for the pre- to post-semester changes in the service-learning class sections (combined across semesters) and the effect size for the comparison group were computed. Further, it was important to examine effect sizes for pre- to post-semester changes for each service-learning section. The rationale for this is that service-learning classes likely became increasingly engaged in implementing behavioral activation across the semesters, especially given that the first section taught in Fall 2012 was considered a “pilot” (i.e., the Behavioral Activation Research Project had not been formally implemented at that time).

Across all semesters, the Group (service-learning) X Time (pre- vs. post-semester) interaction on CSSES (original scale) average scores was statistically significant, $F(1, 71)= 17.735, p= <0.001$. The main effect for group was not significant, $F(1, 71)= 0.080, p= .779$, while the main effect for time was significant, $F(1, 71)= 5.688,$
$p = .020$. The effect sizes ($r^2$) were calculated for each group: For the service-learning group, the effect size was 0.439, while for the comparison (non-service-learning) group, it was 0.037.

For Fall 2012, the Group X Time interaction on CSSES average scores was statistically significant, $F(1, 41) = 7.107, p = .011$. The main effect for group was not significant, $F(1, 41) = 0.717, p = .402$, and the main effect for time was also not significant, $F(1, 41) = 1.697, p = .200$. The effect sizes ($r^2$) were calculated for each group: For Fall 2012, the effect size was 0.474, while for the comparison (non-service-learning) group, it was 0.037.

For Spring 2015, the Group X Time interaction on CSSES average scores was statistically significant, $F(1, 34) = 7.393, p = .010$. The main effect for group was not significant, $F(1, 34) = 0.426, p = .518$, nor was the main effect for time significant, $F(1, 34) = 2.962, p = .094$. The effect sizes ($r^2$) were calculated for each group: For Spring 2015 the effect size was 0.552, while for the comparison (non-service-learning) group, it was 0.037.

For Spring 2016, the Group X Time interaction on CSSES average scores was statistically significant, $F(1, 48) = 11.414, p = .001$. The main effect for group was not significant, $F(1, 48) = 0.195, p = .660$, while the main effect for time trended toward significance, $F(1, 48) = 3.866, p = .055$. The effect sizes ($r^2$) were calculated for each group: For Spring 2016 the effect size was 0.404, while for the comparison (non-service-learning) group, it was 0.037.

**CSSE (Sensitive to Change Version).** Also in support of hypothesis 1, the Group (service-learning) X Time (pre- vs. post-semester) interaction on CSSE-SC mean score
was also statistically significant, $F(1, 71)= 17.155, p < .001$. This result was fairly uniform across CSSE-SC items; that is, the Group X Time interaction was significant on 9 out of 10 items. The main effect for group and the main effect for time were both significant, $F(1, 71)= 7.671, p= .007$, and $F(1, 71)= 6.790, p= .011$, respectively.

Given the significant Group X Time interaction, follow-up $t$-tests were employed to reveal specific group differences. At pre-semester the mean difference between the service-learning and non-service-learning comparison group was not significant. This finding was fairly consistent across 9 out of 10 items for the service-learning group (see Table 3). At post-semester, however significant differences were found between groups, such that those within the service-learning group had higher scores than the non-service-learning group, and these results were consistent for all 9 items (also see Table 3). Pre- to post-semester changes were also examined for both the service-learning and non-service-learning groups. Pre- to post-semester scores increased significantly for the service-learning group, while the non-service-learning group did not have significantly different scores across time (see Table 4). These results were consistent for the service-learning and non-service learning groups on all 9 of the items with a significant interaction effect. Thus, hypothesis 1 was strongly supported by analyses of the dependent variable of CSSE-SC.

As explained earlier, an additional follow-up approach included the computation of effect sizes for the pre- to post-semester changes in the service-learning class sections (combined across semesters) as well as for each section separately. This was done to determine if the effect size was consistent across service-learning course sections offered over time.
Across all semesters, the Group (service-learning) X Time (pre- vs. post-semester) interaction on CSSE-SC means scores which was also was statistically significant, $F(1, 71)= 17.155, p < 0.001$. The main effect for group (service-learning vs. non-service-learning) and the main effect for time were both significant, $F(1, 71)= 7.671, p= .007$, and $F(1, 71)= 6.790, p= .011$, respectively. The effect sizes ($r^2$) were calculated for each group: For the service-learning group, the effect size was 0.392, while for the comparison (non-service-learning) group, it was 0.037.

For Fall 2012, the Group X Time interaction on CSSE-SC means scores was not statistically significant, $F(1, 41)= 2.261, p= .140$. The main effect for group and the main effect for time were both also found to be not significant, $F(1, 41)= 0.309, p=.581$, and $F(1, 41)= .170, p= .682$, respectively. The effect sizes ($r^2$) were calculated for each group: For Fall 2012, the effect size was 0.070, while for the comparison (non-service-learning) group, it was 0.037.

For Spring 2015, the Group X Time interaction on CSSE-SC means scores was statistically significant, $F(1, 34)= 6.561, p= .015$. The main effect for group was statistically significant, $F(1, 34)= 25.018, p <0.001$, while the main effect for time was not significant, $F(1, 34)= 2.340, p= .135$. The effect sizes ($r^2$) were calculated for each group, For Spring 2015: The effect size was 0.670 for the service-learning group, while for the comparison (non-service-learning) group, it was 0.037.

For Spring 2016, the Group X Time interaction on CSSE-SC means scores was statistically significant, $F(1, 48)= 26.323, p <0.001$. The main effect for group and the main effect for time were both significant, $F(1, 48)= 5.749, p= .020$, and $F(1, 48)= 13.941, p= .001$, respectively. The effect sizes ($r^2$) were calculated for each group: For
the service-learning group, the effect size was 0.642, while for the comparison (non-service-learning) group, it was 0.037.

**CSSE (Retrospective Version).** The CSSE-RV was only given at post-semester and is designed to capture students’ perceptions regarding the impact of the course on their community service self-efficacy. Thus, independent $t$-tests were employed to examine group differences. At post-test, the mean CSSE-RV score for the service-learning group was significantly higher than the mean CSSE-RV score for the non-service-learning group. This result was consistent for 9 out of 10 items (except item 7, see Table 5), strongly supporting hypothesis 1 for this dependent variable (CSSE-RV).

The above quantitative findings for the various versions of the CSSES appear to be supported by a preliminary examination of qualitative data (students’ written reflections), in which a theme of improved confidence in community work seems evident. Consider the following written reflection comment:

“The feedback that students received from [shelter staff] made me feel as though St. Vincent de Paul has really benefitted from its collaboration with [our class]…Because of this feedback and my experience [at the shelter], I believe my agency…for future community service has greatly increased…I really can make a difference in the lives of other people…I believe that I will be involved in other [community] services in the future because it has been such a rewarding experience…I feel as though even a small amount of difference I make to a community could be a world of difference to an individual.”

As we can see from the above quote, students are receiving feedback from shelter guests and employees helping to indicate their work is having an overall effect in the community.
and lives of the guests. This feedback could possibly have a direct effect on their endorsement of higher scores on the CSSES, CSSE-SC, and CSSE-RV.

**Results of Analyses Testing Hypothesis 2**

Consistent with hypothesis 2, the Group (service-learning) X Time (pre- vs. post-semester) interaction on ATHI mean score was statistically significant, $F(1, 71)= 10.418$, $p= .002$. The main effect for group was not significant, $F(1, 71)= 3.282$, $p=.074$, while the main effect for time was significant, $F(1, 71)= 10.806$, $p= .002$.

At pre-semester, the mean difference in ATHI scores between the service-learning group and comparison (non-service-learning) group was not statistically significant, indicating that both groups were approximately the same on this construct at pre-semester (see Table 6). At post-test, however significant differences were found between groups, such that those within the service-learning group had higher scores relative to non-service-learning group. Pre- to post-semester changes were also examined for both the service-learning and non-service-learning groups. From pre- to post-semester, the increase in ATHI mean scores was statistically significant for the service-learning group, whereas the pre- to post-semester changes in the ATHI mean score were not significant for the non-service-learning (see Table 7).

Due to the four-factor nature of the ATHI, separate 2 X 2 ANOVA’s were run on composite scores of for each factor: (1) Personal Causation (PC items 1, 7, 8, and 14); (2) Social Causation (SC items 2, 3, & 11); (3) Affiliation (AFF items 4, & 12); and (4) Solutions (SOL items 5, 6, and 13). For the factors PC, AFF, and SOL, significant Group X Time interaction effects were found. Due to these significant interactions effects, follow-up $t$-tests were employed to elucidate specific group differences.
For the factor PC, there was a significant Group X Time interaction effect, $F(1, 71)= 5.273, p= .025$. Both the main effect of time $F(1, 71)= 0.452, p= .504$, and the main effect of group, $F(1, 71)= 0.312, p= .578$ were not significant. Follow-up $t$-tests reveal that the difference between groups was not significant at either pre- or post-semester (Table 8). However, there was a significant increase between pre- to post-semester scores for the service-learning group, but there was not a significant change in pre- to post-semester scores for the comparison group (Table 9).

For the Factor SC, there was not a significant Group X Time interaction effect, $F(1, 71)= 0.333, p= .556$. However, the main effect of time was significant, $F(1, 71)= 9.084, p= .004$, while the main effect of group was not significant, $F(1, 71)= 0.017, p= .896$. Despite the non-significant interaction effect, exploratory follow-up $t$-tests were computed in an attempt to more fully understand possible trends. The exploratory follow-up $t$-tests did not reveal significant differences between pre- and post-semester scores between the service-learning and comparison group (Table 8). However, according to exploratory follow-up $t$-tests, there were significant increases in pre- to post-semester scores for the service-learning group but not for the non-service-learning comparison group (Table 9).

For the factor AFF, there was a significant Group X Time interaction effect, $F(1, 71)= 5.232, p= .025$. The main effect of time was significant, $F(1, 71)= 6.881, p= .011$, while the main effect for group was trending toward significance $F(1, 71)= 3.774, p= .056$. Follow-up $t$-tests reveal that post-semester (Table 8) score for the service-learning group were significantly higher than for the non-service-learning group, while pre-semester scores were not significantly different between the two groups. Further, there
were significant increases in pre- to post-semester scores for the service-learning group but not for the non-service-learning comparison group (Table 9).

For SOL there was also a significant interaction effect, $F(1, 71)= 4.678, p= .034$. The main effect for time was not significant, $F(1, 71)= 2.318, p= .132$, while the main effect of group was significant, $F(1, 71)= 8.701, p= .004$. Follow-up $t$-tests reveal that there are significant differences between post-semester scores for the service-learning and non-service-learning comparison group (Table 8), while at pre-semester the differences in scores between groups did not reach significance. Additionally, there is a significant increase in pre- to post-semester score for the service-learning group but not for the non-service-learning comparison (Table 9).

Consistent with the follow-up approach used in examining other outcomes, effect sizes were computed for the pre- to post-semester changes in the service-learning class sections (combined across semesters) as well as for each section separately. This was done to determine if the effect size was consistent across service-learning course sections offered over time. Computation of effect sizes focused on ATHI total scores (as opposed to separate factor scores).

Across all semesters, the Group (service-learning) X Time (pre- vs. post-semester) interaction on ATHI mean score was statistically significant, $F(1, 71)= 10.418, p= .002$. The main effect for group was not significant, $F(1, 71)= 3.282, p= .074$, while the main effect for time was significant, $F(1, 71)= 10.806, p= .002$. The effect sizes were calculated for each group: For the service-learning group, the effect size was 0.366, while for the comparison (non-service-learning) group, it was less than 0.001.
For Fall 2012, the Group (service-learning) X Time (pre- vs. post-semester) interaction on ATHI mean score was statistically significant, $F(1, 41)= 13.134, p= .001$. The main effect for group was not significant, $F(1, 41)= 1.448, p= .236$, while the main effect for time was significant, $F(1, 41)= 13.458, p= .001$. The effect sizes were calculated for each group: For Fall 2012, the effect size was 0.528, while for the comparison group, it was less than 0.001.

For Spring 2015, the group by time interaction on ATHI mean score was not statistically significant, $F(1, 34)= 0.301, p= .587$. The main effect for group was significant, $F(1, 34)= 8.786, p= .006$, while the main effect for time was not significant, $F(1, 34)= .348, p= .559$. The effect sizes were calculated for each group: For Spring 2015, the effect size was 0.093, while for the comparison group, it was less than 0.001.

For Spring 2016, the group (service-learning) by time (pre- vs. post-semester) interaction on ATHI mean score was statistically significant, $F(1, 48)= 6.969, p= .011$. The main effect for group was not significant, $F(1, 48)= 0.521, p= .474$, while the main effect for time was significant, $F(1, 48)= 7.249, p= .010$. The effect sizes were calculated for each group: For Spring 2016, the effect size was 0.357, while for the comparison group, it was less than 0.001.

The above quantitative findings for the ATHI appear to be supported by a preliminary examination of qualitative data (students’ written reflections). Consider the following written reflection comment:

“Assuming that most homeless people are mentally ill is contributing to the stigmatization of homeless individuals… [Likewise], assuming that homeless people are lazy by nature is…an example of stigma because the assumption
ignores all the other…factors that make finding a job difficult for the homeless population…[T]here are multiple contributing factors to a person being homeless…I never honestly realized how often people around me talk negatively about [the] homeless, but now it really bothers me…[If] more people took the time to just sit and hear out [the guests at the shelters]…, much of the stigma that we have in our heads would go away…This project has allowed me to view homelessness through a different lens.”

With direct exposure to the people within the stigmatized population, a contact-based anti-stigmatization approach may have a direct effect on the thoughts and feelings of the students – not only toward those who are homeless, but also toward their counterparts at the University during events and day-to-day interactions. Also, note that this quote embodies one of the main goals of the project; that is, to change the perspectives of those involved (and in the community in general) with regard to the causes, explanations, and stigmatization of the homeless population.

**Preliminary Findings for Qualitative Overview**

Over the course of the project, the service-learning students involved in the Behavioral Activation Research Project have identified various themes within their reflections, such as those above related to community service self-efficacy and social stigma toward homelessness. Another area worthy of highlighting through the preliminary analysis of the qualitative data is that concerning the awareness of one’s privilege. A comprehensive analysis of qualitative data (students’ written reflections) utilizing grounded theory methodology is outside the scope of the present study, but such an analysis is planned for a future study. To give examples of data collected that identify
the theme of privilege, samples of written reflections are provided within the following organizational scheme (similar to domains identified by McClellan, 2014): Awareness of Classism; Privilege of Freedom; Privilege of Family Connectedness; and Awareness of Racism.

**Awareness of classism.** The first theme identified through preliminary analysis was that of awareness of classism. Awareness of classism can be defined as the recognition of the advantages of social class by a student within the course granted to them due to family social status. The following quote highlights this category:

“I am privileged to be from a family of middle socioeconomic status … a family supporting me in earning a college degree, cultivating academic and technical skills, and developing valuable employment connections... Many of the guests have a high school education or GED, but very few have a college degree…. Since the guests do not have a formally recognized education (or may have histories of incarceration), many employers will not hire them.”

**Privilege of freedom.** The second theme identified was that of the awareness of the privilege of freedom. This can be defined as the recognition of the power of personal choice in terms of actions and timing of actions in one’s life. The following quote embodies many seen regarding the awareness of the privileges of freedom:

“I think that I took for granted how privileged I was, and was almost unaware of it until working with the homeless. I never talked about privilege or examined my own life until I started [working] at the shelter. What is most shocking is the lack of freedom… they are unable to choose when they eat their meals, what time they...
Privilege of family connectedness. The third category of privilege that was identified was that of the privilege of family connectedness. This can be defined as the recognition of the importance of a supportive family even through difficult times and failures. The following quote is an example of the recognition of family connectedness as a privilege by the service-learning students:

“Although sometimes I disagree with my parents, they love me and would do anything for me. Unfortunately, this is not the case with many of the guests at the shelter. From what I have heard, many guests were there because of their family. Their families were not there for them when they needed them most.”

Awareness of racism. The last theme identified by preliminary analysis of the qualitative reflections was that of the recognition of racism. This can be defined as the recognition of differences and discrimination based upon race. The following quote is an example of a reflection regarding awareness of racism:

“One of the main reasons why African Americans are overrepresented in the homeless population is because they have a higher incarceration rate then other demographics that have the same percentage of people breaking the law. This disrupts many family dynamics, which perpetuates the cycle… damaging the well-being of the next generation. When a person is released from prison, most times they have two options: they can live with a family member or they can live at the homeless shelter. In addition, immediately after being released from jail,
they often have a ton of additional fees that they have to pay… while… not being able to find work because of a criminal record….”

Further analyses utilizing grounded theory methodology are needed to fully understand all of the themes present within the reflections of those involved in the service-learning group.
DISCUSSION

Service-learning is one approach to experiential education. As noted early on as service-learning became a commonly used pedagogy (Furco, 1996), and as still emphasized to this day (Bringle, et al., 2016; Reeb, 2006c), this modality offers a unique perspective of focusing on the reciprocity between individuals who provide service and those who receive the service, with a dual focus on the service and learning that is occurring. In service-learning, academic learning and experiential learning are connected via reflection exercises (Ash & Clayton, 2009). Course-related service-learning has been shown to lead to a myriad of positive changes in those students who participate. These include (but are not limited to) improvements in attitudes toward self (e.g., self-efficacy), civic engagement, attitudes toward learning, and social engagement and skills (Bringle et al., 2016; Holsapple, 2012). This style of learning adds a structured environment for community engagement, which is augmented by direct education and focused reflections designed to challenge the students in connecting academic learning with experiential learning (Bringle et al., 2016).

Community Service Self-Efficacy

Community service self-efficacy is a specific type of self-efficacy that refers to a person’s belief that they will be able to make significant and meaningful contributions to the community through their service (Reeb et. al, 2010). As described previously, self-
efficacy is one of the domains delineated by Bringle and Steinberg (2010) in their broad rubric of a *Civic-Minded Graduate*, and it has become a key component of service-learning pedagogy outcome goals.

In support of Hypothesis 1, this quasi-experimental study showed that service-learning students had pre- to post-semester improvements in community service self-efficacy, whereas non-service learning students did not show this change. It is important to emphasize that this finding was observed for both the CSSES and CSSE-SC, which were administered at pre- and post-semester. In addition, the CSSE-RV suggested that students attributed improvements in their community service self-efficacy to the service-learning course. Further, the findings appear to be supported by a preliminary analysis of qualitative data (i.e., written reflection comments pertaining to self-efficacy or self-confidence in working in the community), though a more comprehensive and systematic analysis of the qualitative data (likely employing grounded theory methodology) is needed to confirm this notion.

With the exception of a study showing changes in community service self-efficacy among court-involved adolescents in a diversion (community service) program (reviewed in Reeb et al., 2010), most studies in this program of research that examine pre-post changes have focused on upper-class students, and so this study extends past research by demonstrating the pre-post change in sophomores (as well as upper-class students). This finding is consistent with a number of studies (reviewed in Reeb et al., 2010) demonstrating improvements in community service self-efficacy among students engaging in community service-learning.
Further, there was some limited support for the notion that, relative to service-learning students who played more of a shadowing role (and helping at the front desk) at the shelter (i.e., students enrolled in the 2012 “pilot” of the service-learning course), changes in community service self-efficacy tended to be greater for service-learning students in later course sections. These later course sections (i.e., students enrolled in the last two offerings) the Behavioral Activation Research Project was fully established and students were (a) more fully engaged in implementing behavioral activation sessions and (b) obtained more regular (positive) feedback from graduate students. While there is this initial evidence of varied gains between service-learning sections additional research is needed to explore the matter further. For instance, with the CSSE-SC, the Group X Time interaction effect was not statistically significant for the Fall 2012 semester, but this interaction effect was statistically significant for both of the other semesters (Spring 2015 and Spring 2016) and the average across all semesters. The notion that a student’s community service self-efficacy would be more likely to increase when he/she is more fully engaged in implementing a project and more regularly receiving (justified) positive feedback from supervisors is consistent with one of Bandura’s (1997, p. 80) basic conclusions about self-efficacy: “…Enactive mastery experiences are the most influential source of efficacy information because they provide the most authentic evidence of whether one can muster whatever it takes to succeed…”

Social Stigma

In society, we have continually magnified the differences between one group of people and another, though highlighted for varying reasons, this can also breed a multitude of beliefs or stereotypes. These stereotypes can grow into forms of stigma,
which encompass social distancing and potential acts of discrimination (Goffman, 1963). Combating stigma is a complex and tenuous act that forces those who may hold negative beliefs or attitudes toward others into situations that require them to be personally challenged and accountable for their perspectives. Without the challenging of these views, either by direct interactional contact or through reflection, the experiences, such as that seen within some forms of volunteerism, may actually serve to reinforce the unfounded attitudes and strengthen the stigmatizing views present within an individual due to a lack of systemized reflection upon experience (Hondagneu-Sotelo & Raskoff, 1994).

In support of Hypothesis 2, service-learning students showed pre- to post-semester decreases in stigmatizing attitudes on a psychometric measure, while the non-service-learning students did not show this change. In addition, preliminary examination of qualitative data (i.e., written reflections pertaining to social stigma) seemed to support this finding, but confirmation of this impression awaits a more comprehensive and systematic analysis of the qualitative data (likely employing grounded theory methodology).

As defined above within the introduction, there are 3 main types of anti-stigma campaigns: protest, psychoeducation and contact based (Snow & Reeb, 2010). The unique features of this project, in addition to being a service-learning student outcome study, is the fact that it can also be conceptualized as an anti-stigma intervention that incorporates both contact-based and education routes for change in stigmatizing attitudes (perhaps held by some students). Furthermore, given the combination of education and contact-based work, this study adds to the literature about the effectiveness of these
combined methods as described by Snow & Reeb (2010), as it provides an excellent opportunity to challenge beliefs and views that may be unacknowledged in regular volunteerism without academic and reflection components.

Consistent with the hypothesis that those involved within the service-learning project would have a reduction in stigmatizing views of the homeless population, this study demonstrates the effective nature of a contact-based psychoeducation anti-stigma approach, adding value to the literature about the overall effectiveness of this integrative technique. Though these changes were not completely consistent across items of the ATHI, they were significant on 3 out of 4 factors of the ATHI (i.e., Personal Causation, Affiliation, and Solutions) but not for the factor of Social Causation. Perhaps this provides further evidence of a four-factor conceptualization of the ATHI, as opposed to a single-factor average score. The Social Causation factor is designed to capture stigma and bias toward societal causes of homelessness. It is possible that this factor does not so much represent stigmatizing attitudes toward homelessness, but instead, perhaps it represents views toward the social systems involved. For instance, one item in this factor is as follows: In the past, government cutbacks in welfare contributed substantially to the homeless problem in this country. Service-learning students have direct experience with individuals struggling against the obstacles and barriers to transcending homelessness, and they encounter evidence of current systemic limitations that exist in supporting the homeless population. Such experiences could increase the understanding of the societal causes and, therefore, not necessarily decrease negative views regarding the system involved. In this connection, some students have identified positive employment soft-skills in shelter guests, and students may feel that many skills of the guests are
overlooked, perhaps due to systemic problems. It seems that service-learning students
come to realize these facts as part of their experiential learning.

**Limitations and Directions for Future Research**

One major limitation within this study is that it utilized a quasi-experimental
design, which gives limited control over the numerous variables and, therefore, precludes
confirmatory statements regarding cause-and-effect. It is useful to consider ways to
improve upon our current quasi-experimental approach. One way to improve the quasi-
experimental design would be to match students in the service-learning course with
students in the non-service-learning course on key demographic and background
variables (e.g., past community work). Another way to improve our quasi-experimental
approach would be to assure that the two sections being compared are in fact two sections
of the same course, but with one section using service-learning pedagogy and the other
section using standard educational practices. This would give us the ability to look into
the effect of the course in isolation of the service-learning component, as the course is
specifically designed to teach them about causes of homelessness, outcomes of
homelessness, obstacles involved in overcoming homelessness, and ways to address the
problem of homelessness. Separating this out would enable us to look at the effect of
service-learning beyond traditional educational practices (e.g., lecture, discussion).

Of course, utilization of a true experimental design (random assignment) would
be ideal from a methodological point of view. A way to address this limitation would be
to hold two sections of the course, with students randomly assigned to either (a) a section
with a service-learning component or (b) a section without a service-learning component.
This would provide a control for the information being taught, which is not controlled by
using a psychology course as a comparison. Other examples of experimental studies would be to compare outcomes of service-learning students in a class who are randomly assigned to (a) different types of reflection (structured vs. unstructured), (b) service activities (e.g., involvement in the implementation of different types of behavioral activation sessions at the shelter), or (c) populations served (e.g., assisting in sessions tailored to homeless individuals with mental illness vs. assisting in sessions tailored for homeless individuals without mental illness). However, due to practical difficulties in arranging such well-controlled studies, experimental research studies are rare in the service-learning literature. Nevertheless, with systematic planning and orchestration with University administrators and staff, it would be possible. A recent book on service-learning by Bringle et al. (2016) promotes this latter position and argues that we must continue to strive toward the ideal of “the highest standards for evidence-based research on teaching and learning” (p. 196).

We do not know the extent to which involvement in this service-learning course has long-standing influences on students. Ideally, it would be informative to conduct a longitudinal (prospective) follow-up study to determine if, for example, students who obtained the highest levels of self-efficacy during the course are more likely to select certain career paths (careers somehow related to the service-learning experience) or engage in community service upon graduation. With regard to short-term follow-up, it would be possible to conduct studies such as examining the hypothesis that students who obtain higher levels of self-efficacy during the course are more likely to continue to work on this project (or other community-oriented projects).
Another limitation is that, in this M.A. thesis project, the primary focus was on quantitative data, and so the wealth of qualitative data (students’ written reflections) were examined in only a cursory and preliminary way. There is a plan for a follow-up study to examine the available qualitative data in this project, likely by fully utilizing grounded theory methodology. This may allow us to have a better understanding of why, how, or when changes in the constructs of interest occurred throughout the semester. In brief, grounded theory is defined as a general approach, a way of thinking about and conceptualizing data (Strauss & Corbin, 1994). The methodology of grounded theory is complex in the sense that data collection and analysis are continually interrelated and ongoing, involves complex coding, conceptualization into themes, and relating themes to theoretical concepts (Corbin & Strauss, 1990). With regard to the collection and analysis of data, unlike other qualitative methods, grounded theory methodology continually and sequentially informs the research along the process. The coding within grounded theory involves three levels: (1) open coding in which researchers begin to divide the data into preliminary categories; (2) axial coding wherein researchers combine the categories and compare them with one another as they search for general themes; and (3) selective coding where the research integrates the themes and categories into a coherent understanding or theory (Corbin & Strauss, 1990).

As noted in the results section, the preliminary examination of qualitative data (students’ written reflections) collected throughout the semester did identify a potential theme (i.e., awareness of privilege). Due to many of the written reflection comments relating to this theme, our research team identified a quantitative measure to use in the future – the Awareness of Privilege and Oppression Scale (McClellan, 2014), which
includes subscales to assess awareness of classism, racism, sexism, and heterosexism. This provides a good example of how qualitative data can inform plans regarding quantitative assessment. At present (spring semester of 2017), our research team is replicating the present study and extending it by incorporating the Awareness of Privilege and Oppression Scale at pre- and post-semester. The new study also utilizes a quasi-experimental design, but as an improvement upon the study reported in this thesis, we are utilizing a comparison class that includes students who are more similar (i.e., same year of study) as the students in the service-learning course (i.e., Engaged Scholarship for Homelessness: A Service-Learning Course).
CONCLUSION

The present study examined student outcomes across multiple semesters of service-learning (Engaged Scholarship for Homelessness: A Service-Learning Course), within the University of Dayton’s Common Academic Program. Students assisted with the implementation of the behavioral activation session within the Behavioral Activation Research Project in Homeless Shelters. Connecting academic learning with direct experience, service-learning students engaged in reflection exercises (informed by the DEAL Model of Reflection; see Ash & Clayton, 2009; Bringle et al., 2016) throughout the semester. This study found support for two hypotheses: Relative to a comparison group of non-service-learning students, service-learning students, across a number of semesters, showed pre-to-post-semester (a) improvements in community service self-efficacy and (b) decreases stigmatizing attitudes toward homelessness. A preliminary analysis of qualitative data (written reflections by students) supported these quantitative findings, but an additional study of qualitative data (likely utilizing grounded theory methodology) is needed to confirm this notion. Preliminary analysis of qualitative data (written reflections by students) identified an additional theme (awareness of privilege), which will be examined in the future using both quantitative assessment (a psychometric measure of awareness of privilege) and qualitative data. At present, a replication study is being conducted, which also improves upon the current study in a number of important ways, as delineated in the Discussion section.

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REFERENCES


http://uknowledge.uky.edu/edp_etds/22


Table 1.
Mean Group Differences on CSSES Items at Pre- and Post-Semester

<table>
<thead>
<tr>
<th>Item and Average Level Comparisons</th>
<th>Time</th>
<th>CM (n=28)</th>
<th>SL (n=45)</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. If I choose to participate in community service in the future, I will be able to make a meaningful contribution.</td>
<td>Pre</td>
<td>8.69 1.14</td>
<td>8.18 1.76</td>
<td>71.99</td>
<td>1.52</td>
<td>.133</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>8.48 1.35</td>
<td>8.02 1.63</td>
<td>72</td>
<td>1.27</td>
<td>.210</td>
</tr>
<tr>
<td>2. In the future, I will be able to find community service opportunities which are relevant to my interests and abilities.</td>
<td>Pre</td>
<td>8.46 1.17</td>
<td>9.00 1.13</td>
<td>71</td>
<td>-1.95</td>
<td>.056</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>8.24 1.72</td>
<td>7.53 1.59</td>
<td>72</td>
<td>1.81</td>
<td>.075</td>
</tr>
<tr>
<td>3. I am confident that, through community service, I can help in promoting social justice.</td>
<td>Pre</td>
<td>8.25 1.35</td>
<td>8.33 1.24</td>
<td>71</td>
<td>-0.27</td>
<td>.788</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>8.66 1.61</td>
<td>8.31 1.59</td>
<td>72</td>
<td>0.90</td>
<td>.369</td>
</tr>
<tr>
<td>4. I am confident that, through community service, I can make a difference in my community.</td>
<td>Pre</td>
<td>8.97 1.55</td>
<td>8.53 1.49</td>
<td>72</td>
<td>1.20</td>
<td>.233</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>8.68 1.25</td>
<td>9.18 1.03</td>
<td>71</td>
<td>-1.86</td>
<td>.068</td>
</tr>
<tr>
<td>5. I am confident that I can help individuals in need by participating in community service activities.</td>
<td>Pre</td>
<td>8.17 1.33</td>
<td>7.89 1.28</td>
<td>72</td>
<td>0.92</td>
<td>.361</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>8.04 1.57</td>
<td>8.64 1.28</td>
<td>71</td>
<td>-1.81</td>
<td>.075</td>
</tr>
<tr>
<td>6. I am confident that, in future community service activities, I will be able to interact with relevant professionals in ways that are meaningful and effective</td>
<td>Pre</td>
<td>7.52 1.40</td>
<td>7.31 1.88</td>
<td>72</td>
<td>0.51</td>
<td>.615</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>7.64 1.83</td>
<td>7.98 1.44</td>
<td>71</td>
<td>-0.870</td>
<td>.387</td>
</tr>
<tr>
<td>7. I am confident that, through community service, I can help in promoting equal opportunity for citizens.</td>
<td>Pre</td>
<td>8.10 1.72</td>
<td>7.49 1.89</td>
<td>72</td>
<td>1.41</td>
<td>.162</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>7.75 1.60</td>
<td>8.67 1.24</td>
<td>71</td>
<td>-2.74</td>
<td>.008</td>
</tr>
<tr>
<td>8. Through community service, I can apply my knowledge in ways that solve “real-life” problems.</td>
<td>Pre</td>
<td>8.07 1.81</td>
<td>7.91 1.56</td>
<td>72</td>
<td>0.40</td>
<td>.692</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>8.07 1.82</td>
<td>8.96 1.26</td>
<td>43.09</td>
<td>-2.25</td>
<td>.029</td>
</tr>
<tr>
<td>9. By participating in community service, I can help people to help themselves.</td>
<td>Pre</td>
<td>9.31 1.20</td>
<td>9.04 1.48</td>
<td>72</td>
<td>0.81</td>
<td>.419</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>8.64 1.45</td>
<td>9.33 1.22</td>
<td>71</td>
<td>-2.19</td>
<td>.032</td>
</tr>
<tr>
<td>10. I am confident that I will participate in community service activities in the future.</td>
<td>Pre</td>
<td>8.42 1.14</td>
<td>8.02 1.20</td>
<td>72</td>
<td>1.42</td>
<td>.160</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>8.23 1.18</td>
<td>8.78 0.97</td>
<td>71</td>
<td>-2.19</td>
<td>.032</td>
</tr>
</tbody>
</table>

Note: CM=Comparison Group; SL=Service-Learning. Item 1 pre and Item 9 post equal variances cannot be assumed. Item number 7 was non-significant for interaction effects.
Table 2.
Pre- to Post-Semester Mean Changes in CSSES Items by Group

<table>
<thead>
<tr>
<th>CSSE- Original Version items</th>
<th>GP</th>
<th>Pre</th>
<th>Post</th>
<th>df</th>
<th>95% CI</th>
<th>r</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>If I choose to participate in community service in the future, I will be able to make a meaningful contribution.</td>
<td>CM</td>
<td>8.68</td>
<td>1.16</td>
<td>8.39</td>
<td>1.31</td>
<td>27</td>
<td>[.30,0.87]</td>
<td>.26</td>
</tr>
<tr>
<td>SL</td>
<td>8.23</td>
<td>1.75</td>
<td>8.84</td>
<td>1.14</td>
<td>.31</td>
<td>43</td>
<td>[.97,-0.26]</td>
<td>.75</td>
</tr>
<tr>
<td>In the future, I will be able to find community service opportunities which are relevant to my interests and abilities.</td>
<td>CM</td>
<td>8.46</td>
<td>1.37</td>
<td>8.46</td>
<td>1.17</td>
<td>27</td>
<td>[.47,0.47]</td>
<td>.52</td>
</tr>
<tr>
<td>SL</td>
<td>8.02</td>
<td>1.63</td>
<td>9.00</td>
<td>1.13</td>
<td>.31</td>
<td>44</td>
<td>[.42,-0.54]</td>
<td>.49</td>
</tr>
<tr>
<td>I am confident that, through community service, I can help in promoting social justice.</td>
<td>CM</td>
<td>8.36</td>
<td>1.64</td>
<td>8.25</td>
<td>1.35</td>
<td>27</td>
<td>[.46,0.67]</td>
<td>.54</td>
</tr>
<tr>
<td>SL</td>
<td>7.53</td>
<td>1.59</td>
<td>8.33</td>
<td>1.24</td>
<td>.21</td>
<td>44</td>
<td>[.25,0.35]</td>
<td>.47</td>
</tr>
<tr>
<td>I am confident that, through community service, I can make a difference in my community.</td>
<td>CM</td>
<td>8.79</td>
<td>1.47</td>
<td>8.36</td>
<td>1.39</td>
<td>27</td>
<td>[.17,1.03]</td>
<td>.42</td>
</tr>
<tr>
<td>SL</td>
<td>8.31</td>
<td>1.59</td>
<td>8.91</td>
<td>1.22</td>
<td>.21</td>
<td>44</td>
<td>[.99,-0.21]</td>
<td>.61</td>
</tr>
<tr>
<td>I am confident that I can help individuals in need by participating in community service activities.</td>
<td>CM</td>
<td>9.07</td>
<td>1.46</td>
<td>8.68</td>
<td>1.25</td>
<td>27</td>
<td>[.29,1.08]</td>
<td>.16</td>
</tr>
<tr>
<td>SL</td>
<td>8.53</td>
<td>1.49</td>
<td>9.18</td>
<td>1.03</td>
<td>.21</td>
<td>44</td>
<td>[.00,-0.29]</td>
<td>.61</td>
</tr>
<tr>
<td>I am confident that, in future community service activities, I will be able to interact with relevant professionals in ways that are meaningful and effective.</td>
<td>CM</td>
<td>8.14</td>
<td>1.33</td>
<td>8.04</td>
<td>1.57</td>
<td>27</td>
<td>[.45,0.66]</td>
<td>.53</td>
</tr>
<tr>
<td>SL</td>
<td>7.89</td>
<td>1.28</td>
<td>8.64</td>
<td>1.28</td>
<td>.21</td>
<td>44</td>
<td>[.23,-0.28]</td>
<td>.25</td>
</tr>
<tr>
<td>I am confident that, through community service, I can help in promoting equal opportunity for citizens.</td>
<td>CM</td>
<td>7.50</td>
<td>1.43</td>
<td>7.64</td>
<td>1.83</td>
<td>27</td>
<td>[.86,0.57]</td>
<td>.38</td>
</tr>
<tr>
<td>SL</td>
<td>7.31</td>
<td>1.88</td>
<td>7.98</td>
<td>1.44</td>
<td>.21</td>
<td>44</td>
<td>[.18,-0.15]</td>
<td>.50</td>
</tr>
<tr>
<td>Through community service, I can apply my knowledge in ways that solve “real-life” problems.</td>
<td>CM</td>
<td>8.07</td>
<td>1.74</td>
<td>7.75</td>
<td>1.60</td>
<td>27</td>
<td>[.44,1.08]</td>
<td>.31</td>
</tr>
<tr>
<td>SL</td>
<td>7.49</td>
<td>1.89</td>
<td>8.67</td>
<td>1.24</td>
<td>.21</td>
<td>44</td>
<td>[.71,-0.65]</td>
<td>.42</td>
</tr>
<tr>
<td>By participating in community service, I can help people to help themselves.</td>
<td>CM</td>
<td>8.04</td>
<td>1.84</td>
<td>8.07</td>
<td>1.82</td>
<td>27</td>
<td>[.65,0.58]</td>
<td>.63</td>
</tr>
<tr>
<td>SL</td>
<td>7.91</td>
<td>1.56</td>
<td>8.96</td>
<td>1.26</td>
<td>.21</td>
<td>44</td>
<td>[.52,-0.57]</td>
<td>.40</td>
</tr>
<tr>
<td>I am confident that I will participate in community service activities in the future.</td>
<td>CM</td>
<td>9.29</td>
<td>1.21</td>
<td>8.64</td>
<td>1.45</td>
<td>27</td>
<td>[.10,1.18]</td>
<td>.46</td>
</tr>
<tr>
<td>SL</td>
<td>9.04</td>
<td>1.48</td>
<td>9.33</td>
<td>1.22</td>
<td>.21</td>
<td>44</td>
<td>[.57,-0.01]</td>
<td>.78</td>
</tr>
<tr>
<td>Average Across All Items</td>
<td>CM</td>
<td>8.44</td>
<td>1.15</td>
<td>8.23</td>
<td>1.18</td>
<td>27</td>
<td>[.21,0.63]</td>
<td>.56</td>
</tr>
<tr>
<td>SL</td>
<td>8.02</td>
<td>1.20</td>
<td>8.78</td>
<td>0.97</td>
<td>.21</td>
<td>44</td>
<td>[.02,-0.50]</td>
<td>.62</td>
</tr>
</tbody>
</table>

Note: GP= Group; CM= Comparison Group; SL=Service-Learning. Item number 7 did not have significant interaction effects, thus follow-up t-tests were not employed for analysis.
<table>
<thead>
<tr>
<th>Item</th>
<th>Question</th>
<th>Time</th>
<th>CM (n=28)</th>
<th>SL (n=45)</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>how meaningful of a contribution will you be able to make through community service?</td>
<td>Pre</td>
<td>5.03</td>
<td>5.18</td>
<td>71</td>
<td>-0.37</td>
<td>.712</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post</td>
<td>4.68</td>
<td>5.18</td>
<td>70.83</td>
<td>-5.15</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>2</td>
<td>how confident are you about finding community service opportunities that are relevant to your interests and abilities?</td>
<td>Pre</td>
<td>4.66</td>
<td>5.47</td>
<td>72</td>
<td>1.63</td>
<td>.107</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post</td>
<td>4.57</td>
<td>6.56</td>
<td>71</td>
<td>-3.72</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>3</td>
<td>how confident are you that you can help in promoting social justice through community service?</td>
<td>Pre</td>
<td>5.24</td>
<td>4.84</td>
<td>72</td>
<td>0.82</td>
<td>.415</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post</td>
<td>4.71</td>
<td>6.27</td>
<td>69.70</td>
<td>-3.57</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>4</td>
<td>how confident are you that you can make a difference in your community through service?</td>
<td>Pre</td>
<td>5.69</td>
<td>5.84</td>
<td>72</td>
<td>-0.32</td>
<td>.747</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post</td>
<td>5.29</td>
<td>7.13</td>
<td>67.08</td>
<td>-4.56</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>5</td>
<td>how confident are you that you can help individuals in need by participating in community service activities?</td>
<td>Pre</td>
<td>5.86</td>
<td>5.87</td>
<td>72</td>
<td>-0.08</td>
<td>.939</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post</td>
<td>5.39</td>
<td>7.13</td>
<td>69.64</td>
<td>-4.18</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>6</td>
<td>how confident are you that you will be able to interact with relevant professionals in a meaningful and effective ways in future community service?</td>
<td>Pre</td>
<td>5.17</td>
<td>5.00</td>
<td>72</td>
<td>0.39</td>
<td>.694</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post</td>
<td>4.64</td>
<td>6.58</td>
<td>71</td>
<td>-3.80</td>
<td>.013</td>
</tr>
<tr>
<td>7</td>
<td>how confident are you that, through your own community service, you can help in promoting equal opportunity for citizens?</td>
<td>Pre</td>
<td>4.76</td>
<td>4.95</td>
<td>69.55</td>
<td>-0.41</td>
<td>.684</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post</td>
<td>4.96</td>
<td>6.23</td>
<td>66.93</td>
<td>-2.56</td>
<td>.001</td>
</tr>
<tr>
<td>8</td>
<td>how confident are you that, through community service, you can apply knowledge in ways that solve “real-life” problems?</td>
<td>Pre</td>
<td>5.03</td>
<td>5.09</td>
<td>72</td>
<td>-0.12</td>
<td>.902</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post</td>
<td>5.04</td>
<td>6.60</td>
<td>71</td>
<td>-3.31</td>
<td>.003</td>
</tr>
<tr>
<td>9</td>
<td>how confident are you that, by participating in community service, you can help people to help themselves?</td>
<td>Pre</td>
<td>5.21</td>
<td>5.53</td>
<td>72</td>
<td>-0.70</td>
<td>.488</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post</td>
<td>5.32</td>
<td>6.82</td>
<td>71</td>
<td>-3.04</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>10</td>
<td>how confident are you that you will participate in community service in the future?</td>
<td>Pre</td>
<td>6.24</td>
<td>7.20</td>
<td>72</td>
<td>-1.71</td>
<td>.092</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post</td>
<td>5.57</td>
<td>7.71</td>
<td>69.54</td>
<td>-4.23</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

**Note:** CM = Comparison Group; SL = Service-Learning. Equal variances cannot be assumed for Items 1, 2, 3, 4, 5, and average post score, and Item 7 pre and post scores. Pre and Post refer to semester time points. Item number 7 did not have a significant interaction effect, but was included for entire scale presentation.
### Table 4.
Pre- to Post-Semester Mean Changes in CSSES (Sensitive to Change) Items by Group

"Compared to an individual with 10 years community experience.

<table>
<thead>
<tr>
<th>Item</th>
<th>Pre M</th>
<th>Pre SD</th>
<th>Post M</th>
<th>Post SD</th>
<th>df</th>
<th>95% CI</th>
<th>r</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>how confident are you that you will participate in community service?</td>
<td>CM 5.07</td>
<td>1.51</td>
<td>4.68</td>
<td>1.09</td>
<td>27</td>
<td>[-0.21, 0.99]</td>
<td>.33</td>
<td>1.34</td>
<td>.190</td>
</tr>
<tr>
<td>how confident are you about finding community service opportunities that are relevant to your interests and abilities?</td>
<td>SL 5.18</td>
<td>1.76</td>
<td>6.39</td>
<td>1.82</td>
<td>43</td>
<td>[-1.77, -0.64]</td>
<td>.46</td>
<td>-4.29</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>how confident are you that, by participating in community service, you can help in promoting social justice through community service?</td>
<td>CM 4.68</td>
<td>1.93</td>
<td>4.57</td>
<td>2.04</td>
<td>27</td>
<td>[-0.76, 0.97]</td>
<td>.37</td>
<td>0.25</td>
<td>.902</td>
</tr>
<tr>
<td>how confident are you that, through your own community service, you can make a difference in your community through service?</td>
<td>CM 5.47</td>
<td>2.20</td>
<td>6.56</td>
<td>2.31</td>
<td>44</td>
<td>[-1.75, -0.43]</td>
<td>.53</td>
<td>-3.33</td>
<td>.002</td>
</tr>
<tr>
<td>how confident are you that you can help individuals in need by participating in community service activities?</td>
<td>CM 5.25</td>
<td>1.99</td>
<td>4.71</td>
<td>1.54</td>
<td>27</td>
<td>[-0.28, 1.15]</td>
<td>.32</td>
<td>1.35</td>
<td>.188</td>
</tr>
<tr>
<td>how confident are you that you will be able to interact with relevant professionals in a meaningful and effective ways in future community service?</td>
<td>CM 5.84</td>
<td>2.08</td>
<td>6.27</td>
<td>2.17</td>
<td>44</td>
<td>[-2.07, -0.78]</td>
<td>.49</td>
<td>-4.44</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>how confident are you that, through your own community service, you can help in promoting equal opportunity for citizens?</td>
<td>CM 5.71</td>
<td>1.88</td>
<td>5.29</td>
<td>1.51</td>
<td>27</td>
<td>[-0.24, 1.10]</td>
<td>.50</td>
<td>1.31</td>
<td>.201</td>
</tr>
<tr>
<td>how confident are you that, through community service, you can apply knowledge in ways that solve “real-life” problems?</td>
<td>CM 5.86</td>
<td>1.92</td>
<td>5.39</td>
<td>1.47</td>
<td>27</td>
<td>[-0.40, 1.33]</td>
<td>.17</td>
<td>1.11</td>
<td>.278</td>
</tr>
<tr>
<td>how confident are you that, by participating in community service, you can help people to help themselves?</td>
<td>CM 5.87</td>
<td>2.28</td>
<td>7.13</td>
<td>2.07</td>
<td>44</td>
<td>[2.00, -0.54]</td>
<td>.38</td>
<td>-3.49</td>
<td>.001</td>
</tr>
<tr>
<td>how confident are you that you will participate in community service in the future?</td>
<td>CM 5.21</td>
<td>1.64</td>
<td>4.64</td>
<td>1.93</td>
<td>27</td>
<td>[-0.20, 1.34]</td>
<td>.29</td>
<td>1.52</td>
<td>.140</td>
</tr>
<tr>
<td>Average Across All Items</td>
<td>CM 5.30</td>
<td>1.38</td>
<td>5.02</td>
<td>1.35</td>
<td>27</td>
<td>[-0.29, 0.86]</td>
<td>.41</td>
<td>1.02</td>
<td>.319</td>
</tr>
<tr>
<td></td>
<td>SL 5.50</td>
<td>1.66</td>
<td>6.75</td>
<td>1.90</td>
<td>44</td>
<td>[-1.72, -0.78]</td>
<td>.62</td>
<td>-5.33</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

**Note:** GP = Group; SL = Service-Learning; CM = Comparison Group. Item 7 did not have a significant interaction effect, follow-up t-tests were not employed for analysis but included for entire scale presentation.
### Table 5.
**Mean Group Differences on Items of the CSSES (Retrospective Version)**

<table>
<thead>
<tr>
<th>Item</th>
<th>CM (n=29)</th>
<th>SL (n=45)</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>make meaningful contributions to the community through service.</td>
<td>6.79</td>
<td>2.32</td>
<td>8.91</td>
<td>1.44</td>
<td>40.19</td>
<td>-4.36</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>find community service opportunities which are relevant to my interests and abilities.</td>
<td>6.86</td>
<td>2.32</td>
<td>8.71</td>
<td>1.63</td>
<td>43.64</td>
<td>-3.70</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>help in promoting social justice through community service.</td>
<td>6.96</td>
<td>2.27</td>
<td>8.16</td>
<td>1.66</td>
<td>71</td>
<td>-2.58</td>
<td>.012</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>make a difference in the community through community service.</td>
<td>7.21</td>
<td>2.28</td>
<td>8.71</td>
<td>1.38</td>
<td>39.34</td>
<td>-3.13</td>
<td>.003</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>help individuals in need by participating in community service activities.</td>
<td>7.29</td>
<td>2.21</td>
<td>8.89</td>
<td>1.37</td>
<td>40.04</td>
<td>-3.45</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>interact with relevant community professionals in ways that are meaningful and effective.</td>
<td>7.00</td>
<td>2.39</td>
<td>8.36</td>
<td>1.64</td>
<td>42.90</td>
<td>-2.64</td>
<td>.011</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>help in promoting equal opportunity for citizens through my community service activities.</td>
<td>7.07</td>
<td>2.23</td>
<td>7.76</td>
<td>1.84</td>
<td>71</td>
<td>-1.43</td>
<td>.158</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>apply my knowledge to community service in ways that help to solve “real-life” problems.</td>
<td>7.14</td>
<td>2.21</td>
<td>8.49</td>
<td>1.55</td>
<td>43.54</td>
<td>-2.83</td>
<td>.007</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>help people to help themselves as I engage in community service.</td>
<td>7.36</td>
<td>2.38</td>
<td>8.82</td>
<td>1.37</td>
<td>38.32</td>
<td>-2.97</td>
<td>.005</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>commit myself to community service.</td>
<td>7.75</td>
<td>2.30</td>
<td>9.11</td>
<td>1.56</td>
<td>42.40</td>
<td>-2.76</td>
<td>.009</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Average Across All Items</strong></td>
<td><strong>7.41</strong></td>
<td><strong>2.15</strong></td>
<td><strong>8.59</strong></td>
<td><strong>1.33</strong></td>
<td><strong>40.06</strong></td>
<td><strong>-3.21</strong></td>
<td><strong>.003</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Note: CM= Comparison Group; SL= Service-Learning. All items were significant for their respective comparison except for item number 7.*
Table 6.
Mean Group Differences on ATHI Items at Pre- and Post-Semester

<table>
<thead>
<tr>
<th>ATHI Analyzed items</th>
<th>Time</th>
<th>CM (n=28)</th>
<th>SL (n=45)</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Homelss people had parents who took little interest in them as children.</td>
<td>Pre</td>
<td>4.55</td>
<td>1.24</td>
<td>3.93</td>
<td>1.12</td>
<td>72</td>
</tr>
<tr>
<td>2. In the past, government cutbacks in housing assistance for the poor made the</td>
<td></td>
<td>4.25</td>
<td>1.24</td>
<td>4.18</td>
<td>1.11</td>
<td>71</td>
</tr>
<tr>
<td>homeless problem in this country worse.</td>
<td>Post</td>
<td>4.41</td>
<td>1.18</td>
<td>4.22</td>
<td>1.13</td>
<td>72</td>
</tr>
<tr>
<td>3. The low minimum wage in this country virtually guarantees a large homeless</td>
<td></td>
<td>4.71</td>
<td>1.27</td>
<td>4.53</td>
<td>1.18</td>
<td>71</td>
</tr>
<tr>
<td>population.</td>
<td>Post</td>
<td>3.69</td>
<td>1.31</td>
<td>3.58</td>
<td>1.32</td>
<td>72</td>
</tr>
<tr>
<td>4. I would feel comfortable eating a meal with a homeless person.</td>
<td></td>
<td>4.59</td>
<td>1.09</td>
<td>4.78</td>
<td>0.93</td>
<td>72</td>
</tr>
<tr>
<td>5. Rehabilitation programs for homeless people are too expensive to operate.</td>
<td></td>
<td>4.68</td>
<td>0.86</td>
<td>4.98</td>
<td>1.10</td>
<td>71</td>
</tr>
<tr>
<td>6. There is little that can be done for people in homeless shelters except to see</td>
<td></td>
<td>4.21</td>
<td>1.05</td>
<td>4.44</td>
<td>1.01</td>
<td>72</td>
</tr>
<tr>
<td>that they are comfortable and well fed.</td>
<td>Post</td>
<td>4.21</td>
<td>1.03</td>
<td>4.58</td>
<td>1.03</td>
<td>71</td>
</tr>
<tr>
<td>7. Most circumstances of homelessness in adults can be traced to their emotional</td>
<td></td>
<td>4.79</td>
<td>1.01</td>
<td>5.22</td>
<td>0.90</td>
<td>72</td>
</tr>
<tr>
<td>experiences in childhood.</td>
<td>Post</td>
<td>4.64</td>
<td>1.34</td>
<td>5.58</td>
<td>0.72</td>
<td>36.93</td>
</tr>
<tr>
<td>8. Most homeless persons are mentally ill.</td>
<td></td>
<td>3.86</td>
<td>1.16</td>
<td>3.58</td>
<td>0.99</td>
<td>72</td>
</tr>
<tr>
<td>9. In the past, government cutbacks in welfare contributed substantially to the</td>
<td></td>
<td>3.50</td>
<td>1.23</td>
<td>3.58</td>
<td>1.12</td>
<td>71</td>
</tr>
<tr>
<td>homeless problem in this country.</td>
<td>Post</td>
<td>4.17</td>
<td>1.20</td>
<td>4.20</td>
<td>1.34</td>
<td>72</td>
</tr>
<tr>
<td>10. I feel uneasy when I meet homeless people.</td>
<td></td>
<td>4.11</td>
<td>1.23</td>
<td>4.93</td>
<td>1.03</td>
<td>50.01</td>
</tr>
<tr>
<td>11. A homeless person cannot really be expected to adopt a normal lifestyle.</td>
<td></td>
<td>4.07</td>
<td>1.19</td>
<td>4.07</td>
<td>0.86</td>
<td>72</td>
</tr>
<tr>
<td>12. Most homeless persons are substance abusers.</td>
<td></td>
<td>4.29</td>
<td>1.05</td>
<td>4.42</td>
<td>0.99</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.90</td>
<td>1.14</td>
<td>4.10</td>
<td>1.19</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.00</td>
<td>1.09</td>
<td>4.90</td>
<td>0.85</td>
<td>47.11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.59</td>
<td>0.95</td>
<td>4.78</td>
<td>0.97</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.57</td>
<td>0.92</td>
<td>5.11</td>
<td>0.91</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.76</td>
<td>1.18</td>
<td>4.29</td>
<td>0.94</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.00</td>
<td>1.02</td>
<td>4.36</td>
<td>1.03</td>
<td>71</td>
</tr>
<tr>
<td>Across All Items</td>
<td></td>
<td>4.22</td>
<td>0.43</td>
<td>4.26</td>
<td>0.55</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.23</td>
<td>0.55</td>
<td>4.59</td>
<td>0.44</td>
<td>71</td>
</tr>
</tbody>
</table>

Note: ATHI= Attitudes Toward Homelessness Inventory; CM= Comparison Group; SL= Service-Learning. Higher scores reflect endorsing a more non-stigmatizing view. Follow-up t-tests were only performed on significant interaction effects (8, 10 & Average score), or significant main effect of group (6, & 12). All other items had non-significant interaction effects.
Most homeless persons are mentally ill.

There is little that can be done for people in homeless shelters except to see that they are comfortable and well fed.

Most circumstances of homelessness in adults can be traced to their emotional experiences in childhood.

Most homeless persons are substance abusers.

Across All Items

Table 7.

Pre- to Post-Semester Mean Changes in ATHI Items by Group

<table>
<thead>
<tr>
<th>ATHI Analyzed Items</th>
<th>GP</th>
<th>Pre M</th>
<th>Pre SD</th>
<th>Post M</th>
<th>Post SD</th>
<th>df</th>
<th>95% CI</th>
<th>r</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Homeless people had parents who took little interest in them as children.</td>
<td>CM</td>
<td>4.50</td>
<td>1.23</td>
<td>4.25</td>
<td>1.24</td>
<td>27</td>
<td>[0.26, 0.76]</td>
<td>0.43</td>
<td>1.00</td>
<td>.326</td>
</tr>
<tr>
<td>2. In the past, government cutbacks in housing assistance for the poor made the</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>homeless problem in this country worse.</td>
<td>SL</td>
<td>3.93</td>
<td>1.12</td>
<td>4.18</td>
<td>1.11</td>
<td>44</td>
<td>[-0.62, 0.13]</td>
<td>0.38</td>
<td>-1.32</td>
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</tr>
<tr>
<td>3. The low minimum wage in this country virtually guarantees a large homeless</td>
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<tr>
<td>population.</td>
<td>CM</td>
<td>4.43</td>
<td>1.20</td>
<td>4.71</td>
<td>1.27</td>
<td>27</td>
<td>[-0.69, 0.12]</td>
<td>0.64</td>
<td>-1.44</td>
<td>.161</td>
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<td>4. I would feel comfortable eating a meal with a homeless person.</td>
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<td>5. Rehabilitation programs for homeless people are too expensive to operate.</td>
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<td>6. There is little that can be done for people in homeless shelters except to see</td>
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<tr>
<td>that they are comfortable and well fed.</td>
<td>SL</td>
<td>4.44</td>
<td>1.01</td>
<td>4.58</td>
<td>1.03</td>
<td>44</td>
<td>[-0.41, 0.14]</td>
<td>0.60</td>
<td>-0.97</td>
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<td>7. Most circumstances of homelessness in adults can be traced to their emotional</td>
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<tr>
<td>experiences in childhood.</td>
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<td>1.00</td>
<td>4.64</td>
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<td>[-0.40, 0.62]</td>
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<td>8. Most homeless persons are mentally ill.</td>
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<td>9. In the past, government cutbacks in welfare contributed substantially to the</td>
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<tr>
<td>homeless problem in this country.</td>
<td>CM</td>
<td>4.04</td>
<td>1.20</td>
<td>4.29</td>
<td>1.05</td>
<td>27</td>
<td>[-0.64, 0.14]</td>
<td>0.61</td>
<td>-1.32</td>
<td>.199</td>
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<tr>
<td>10. I feel uneasy when I meet homeless people.</td>
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<tr>
<td>11. A homeless person cannot really be expected to adopt a normal lifestyle.</td>
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<tr>
<td>12. Most homeless persons are substance abusers.</td>
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<tr>
<td>Across All Items</td>
<td>CM</td>
<td>4.23</td>
<td>0.43</td>
<td>4.23</td>
<td>0.55</td>
<td>27</td>
<td>[-0.15, 0.15]</td>
<td>0.72</td>
<td>-0.04</td>
<td>.968</td>
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<td></td>
<td>SL</td>
<td>4.26</td>
<td>0.44</td>
<td>4.59</td>
<td>0.56</td>
<td>44</td>
<td>[-0.46, 0.12]</td>
<td>0.64</td>
<td>-5.04</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Note: ATHI = Attitudes Toward Homelessness Inventory; GP = Group; CM = Comparison Group; SL = Service-Learning. High scores reflect less stigmatizing views of homeless individuals. T-tests were only preformed on items that had a significant intervention effect (average score, Item 8 and Item 10) and the one item (9) that has a significant main effect of time.
### Table 8.
**Mean Group Differences on ATHI Four-Factors at Pre- and Post-Semester**

<table>
<thead>
<tr>
<th>ATHI Analyzed items</th>
<th>Time</th>
<th>Comparison Group</th>
<th>Service-Learning</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor 1: Personal Causation</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1. Homeless people had parents who took little interest in them as children.</td>
<td>Pre</td>
<td>4.09</td>
<td>0.83</td>
<td>72</td>
<td>0.43</td>
<td>.666</td>
</tr>
<tr>
<td>7. Most circumstances of homelessness in adults can be traced to their</td>
<td>Post</td>
<td>3.96</td>
<td>0.83</td>
<td>71</td>
<td>-1.65</td>
<td>.104</td>
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<tr>
<td>emotional experiences in childhood.</td>
<td></td>
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<tr>
<td>8. Most homeless persons are mentally ill.</td>
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<tr>
<td>12. Most homeless persons are substance abusers.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Factor 2: Social Causation</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>2. In the past, government cutbacks in housing assistance for the poor made</td>
<td>Pre</td>
<td>4.06</td>
<td>1.03</td>
<td>72</td>
<td>0.47</td>
<td>.689</td>
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<tr>
<td>the homeless problem in this country worse.</td>
<td>Post</td>
<td>4.26</td>
<td>0.96</td>
<td>71</td>
<td>-0.20</td>
<td>.906</td>
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<tr>
<td>3. The low minimum wage in this country virtually guarantees a large</td>
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<td>homeless population.</td>
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<td>9. In the past, government cutbacks in welfare contributed substantially to</td>
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<td>the homeless problem in this country.</td>
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<tr>
<td><strong>Factor 3: Affiliation</strong></td>
<td></td>
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</tr>
<tr>
<td>4. I would feel comfortable eating a meal with a homeless person.</td>
<td>Pre</td>
<td>4.24</td>
<td>1.01</td>
<td>72</td>
<td>-0.78</td>
<td>.438</td>
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<td>10. I feel uneasy when I meet homeless people.</td>
<td>Post</td>
<td>4.34</td>
<td>0.87</td>
<td>71</td>
<td>-3.07</td>
<td>.003</td>
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<td><strong>Factor 4: Solutions</strong></td>
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<tr>
<td>5. Rehabilitation programs for homeless people are too expensive to operate.</td>
<td>Pre</td>
<td>4.53</td>
<td>0.76</td>
<td>72</td>
<td>-1.60</td>
<td>.116</td>
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<tr>
<td>6. There is little that can be done for people in homeless shelters except to see</td>
<td>Post</td>
<td>4.48</td>
<td>0.74</td>
<td>71</td>
<td>-3.92</td>
<td>&lt;0.001</td>
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<tr>
<td>that they are comfortable and well fed.</td>
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<tr>
<td>11. A homeless person cannot really be expected to adopt a normal lifestyle.</td>
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<tr>
<td><strong>Across All Items</strong></td>
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<tr>
<td>1. Homeless people had parents who took little interest in them as children.</td>
<td>Pre</td>
<td>4.22</td>
<td>0.43</td>
<td>72</td>
<td>-0.39</td>
<td>.698</td>
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<tr>
<td>7. Most circumstances of homelessness in adults can be traced to their</td>
<td>Post</td>
<td>4.23</td>
<td>0.55</td>
<td>71</td>
<td>-3.08</td>
<td>.003</td>
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<tr>
<td>emotional experiences in childhood.</td>
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<td>8. Most homeless persons are mentally ill.</td>
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<td>12. Most homeless persons are substance abusers.</td>
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</tbody>
</table>

**Note:** ATHI=Attitudes Toward Homelessness Inventory. All factors except for Social Causation had significant interaction effect present.
Table 9.
Pre- to Post-Semester Changes on ATHI Four-Factors by Group

<table>
<thead>
<tr>
<th>ATHI Analyzed Items</th>
<th>GP</th>
<th></th>
<th></th>
<th>df</th>
<th>95% CI</th>
<th>r</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1: Personal Causation</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>1. Homeless people had parents who took little interest in them as children.</td>
<td>CM</td>
<td>4.11 0.83</td>
<td>3.96 0.83</td>
<td>27</td>
<td>[-0.15, 0.44]</td>
<td>.59</td>
<td>1.00</td>
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<tr>
<td>7. Most circumstances of homelessness in adults can be traced to their emotional</td>
<td>SL</td>
<td>4.00 0.84</td>
<td>4.26 0.69</td>
<td>44</td>
<td>[-0.48, -0.05]</td>
<td>.58</td>
<td>-2.45</td>
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<tr>
<td>experiences in childhood.</td>
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<tr>
<td>8. Most homeless persons are mentally ill.</td>
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<td>12. Most homeless persons are substance abusers.</td>
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<tr>
<td>Factor 2: Social Causation</td>
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<tr>
<td>2. In the past, government cutbacks in housing assistance for the poor made the</td>
<td>CM</td>
<td>4.04 1.04</td>
<td>4.26 0.96</td>
<td>27</td>
<td>[-0.54, 0.09]</td>
<td>.67</td>
<td>-1.47</td>
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</tr>
<tr>
<td>homeless problem in this country worse.</td>
<td>SL</td>
<td>3.96 0.82</td>
<td>4.29 0.93</td>
<td>44</td>
<td>[-0.56, -0.11]</td>
<td>.65</td>
<td>-3.01</td>
<td>.004</td>
</tr>
<tr>
<td>3. The low minimum wage in this country virtually guarantees a large homeless</td>
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<td>population.</td>
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<td>9. In the past, government cutbacks in welfare contributed substantially to the</td>
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<tr>
<td>homeless problem in this country.</td>
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<tr>
<td>Factor 3: Affiliation</td>
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<tr>
<td>4. I would feel comfortable eating a meal with a homeless person.</td>
<td>CM</td>
<td>4.30 0.97</td>
<td>4.34 0.87</td>
<td>27</td>
<td>[-0.34, 0.27]</td>
<td>.64</td>
<td>-0.24</td>
<td>.811</td>
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<tr>
<td>10. I feel uneasy when I meet homeless people.</td>
<td>SL</td>
<td>4.42 0.95</td>
<td>4.94 0.78</td>
<td>44</td>
<td>[-0.81, -0.24]</td>
<td>.43</td>
<td>-3.72</td>
<td>.001</td>
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<tr>
<td>Factor 4: Solutions</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Rehabilitation programs for homeless people are too expensive to operate.</td>
<td>CM</td>
<td>4.52 0.78</td>
<td>4.48 0.74</td>
<td>27</td>
<td>[-0.21, 0.31]</td>
<td>.61</td>
<td>0.38</td>
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<tr>
<td>6. There is little that can be done for people in homeless shelters except to see</td>
<td>SL</td>
<td>4.81 0.75</td>
<td>5.09 0.58</td>
<td>44</td>
<td>[-0.45, -0.10]</td>
<td>.64</td>
<td>-3.15</td>
<td>.003</td>
</tr>
<tr>
<td>that they are comfortable and well fed.</td>
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<tr>
<td>11. A homeless person cannot really be expected to adopt a normal lifestyle.</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Across All Items</td>
<td>CM</td>
<td>4.23 0.43</td>
<td>4.23 0.55</td>
<td>27</td>
<td>[-0.15, 0.15]</td>
<td>.72</td>
<td>-0.04</td>
<td>.968</td>
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<tr>
<td></td>
<td>SL</td>
<td>4.26 0.44</td>
<td>4.59 0.56</td>
<td>44</td>
<td>[-0.46, -0.20]</td>
<td>.64</td>
<td>-5.04</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

*Note: ATHI= Attitudes Toward Homelessness Inventory; GP=Group; CM=Comparison Group; SL=Service-Learning. All factors had significant interaction effect except for Social Causation.*
APPENDIX A

COMMUNITY SERVICE SELF EFFICACY SCALE—ORIGINAL VERSION

Please rate the items on the following scale:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>quite certain</td>
<td>uncertain</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

1. If I choose to participate in community service in the future, I will be able to make a meaningful contribution.
   1 2 3 4 5 6 7 8 9 10

2. In the future, I will be able to find community service opportunities which are relevant to my interests and abilities.
   1 2 3 4 5 6 7 8 9 10

3. I am confident that, through community service, I can help in promoting social justice.
   1 2 3 4 5 6 7 8 9 10

4. I am confident that, through community service, I can make a difference in my community.
   1 2 3 4 5 6 7 8 9 10

5. I am confident that I can help individuals in need by participating in community service activities.
   1 2 3 4 5 6 7 8 9 10

6. I am confident that, in future community service activities, I will be able to interact with relevant professionals in ways that are meaningful and effective.
   1 2 3 4 5 6 7 8 9 10

7. I am confident that, through community service, I can help in promoting equal opportunity for citizens.
   1 2 3 4 5 6 7 8 9 10

8. Through community service, I can apply my knowledge in ways that solve “real-life” problems.
   1 2 3 4 5 6 7 8 9 10

9. By participating in community service, I can help people to help themselves.
   1 2 3 4 5 6 7 8 9 10

10. I am confident that I will participate in community service activities in the future.
    1 2 3 4 5 6 7 8 9 10
**APPENDIX B**

**COMMUNITY SERVICE SELF EFFICACY SCALE-SENSITIVE TO CHANGE**

Please rate the items on the following scale:

<p>| | | | | | | | | | | |</p>
<table>
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<td>4</td>
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<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

1. Compared to an individual with 10 years of community service experience, how meaningful of a contribution will you be able to make through community service?

   |   |   |   |   |   |   |   |   |   |   |
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10|

2. Compared to an individual with 10 years of community service experience, how confident are you about finding community service opportunities that are relevant to your interests and abilities?

   |   |   |   |   |   |   |   |   |   |   |
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10|

3. Compared to an individual with 10 years of community service experience, how confident are you that you can help in promoting social justice through community service?

   |   |   |   |   |   |   |   |   |   |   |
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10|

4. Compared to an individual with 10 years of community service experience, how confident are you that you can make a difference in your community through service?

   |   |   |   |   |   |   |   |   |   |   |
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10|

5. Compared to an individual with 10 years of community service experience, how confident are you that you can help individuals in need by participating in community service activities?

   |   |   |   |   |   |   |   |   |   |   |
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10|
6. Compared to an individual with 10 years of community service experience, how confident are you that you will be able to interact with relevant professionals in a meaningful and effective ways in future community service?

1  2  3  4  5  6  7  8  9  10

7. Compared to an individual with 10 years of community service experience, how confident are you that, through your own community service, you can help in promoting equal opportunity for citizens?

1  2  3  4  5  6  7  8  9  10

8. Compared to an individual with 10 years of community service experience, how confident are you that, through community service, you can apply knowledge in ways that solve “real-life” problems?

1  2  3  4  5  6  7  8  9  10

9. Compared to an individual with 10 years of community service experience, how confident are you that, by participating in community service, you can help people to help themselves?

1  2  3  4  5  6  7  8  9  10

10. Compared to an individual with 10 years of community service experience, how confident are you that you will participate in community service in the future?

1  2  3  4  5  6  7  8  9  10
APPENDIX C

COMMUNITY SERVICE SELF EFFICACY SCALE—
RETROSPECTIVE VERSION

Please rate the items on the following scale:

<table>
<thead>
<tr>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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This course increased or strengthened my confidence that, in the future, I will be able to...

1. Make meaningful contributions to the community through service.
   1   2   3   4   5   6   7   8   9   10

2. Find community service opportunities which are relevant to my interests and abilities.
   1   2   3   4   5   6   7   8   9   10

3. Help in promoting social justice through community service.
   1   2   3   4   5   6   7   8   9   10

4. Make a difference in the community through community service.
   1   2   3   4   5   6   7   8   9   10

5. Help individuals in need by participating in community service activities.
   1   2   3   4   5   6   7   8   9   10

6. Interact with relevant community professionals in ways that are meaningful and effective.
   1   2   3   4   5   6   7   8   9   10

7. Help in promoting equal opportunity for citizens through my community service activities.
   1   2   3   4   5   6   7   8   9   10

8. Apply my knowledge to community service in ways that help to solve “real-life” problems.
   1   2   3   4   5   6   7   8   9   10

9. Help people to help themselves as I engage in community service.
   1   2   3   4   5   6   7   8   9   10

10. Commit myself to community service.
    1   2   3   4   5   6   7   8   9   10

66
APPENDIX D

ATTITUDES TOWARD HOMELESSNESS INVENTORY (ADAPTED)

Please rate the items on the following scale:

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Unsure but probably agree</th>
<th>Unsure but probably disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
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<td>1</td>
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</tbody>
</table>

1. Homeless people had parents who took little interest in them as children.
   1  2  3  4  5  6

2. In the past, government cutbacks in housing assistance for the poor made the homeless problem in this country worse.
   1  2  3  4  5  6

3. The low minimum wage in this country virtually guarantees a large homeless population.
   1  2  3  4  5  6

4. I would feel comfortable eating a meal with a homeless person.
   1  2  3  4  5  6

5. Rehabilitation programs for homeless people are too expensive to operate.
   1  2  3  4  5  6

6. There is little that can be done for people in homeless shelters except to see that they are comfortable and well fed.
   1  2  3  4  5  6

7. Most circumstances of homelessness in adults can be traced to their emotional experiences in childhood.
   1  2  3  4  5  6
8. Most homeless persons are mentally ill.
   
9. Mental illness is the primary cause of homelessness.
   
10. The experience of homelessness often leads to or exacerbates mental illness.
    
11. In the past, government cutbacks in welfare contributed substantially to the homeless problem in this country.
    
12. I feel uneasy when I meet homeless people.
    
13. A homeless person cannot really be expected to adopt a normal lifestyle.
    
14. Most homeless persons are substance abusers.
    
15. Substance abuse is the primary cause of homelessness.
    
16. The experience of homelessness often leads or exacerbates substance abuse.
    
17. Homeless people should be forced into shelters
    
18. Homeless people should be forced into treatment or rehabilitation.
APPENDIX E
DEMOGRAPHIC INFORMATION (PRE ONLY)

Please take a few moments to complete the following demographic information.

1. Age: ______________

2. Gender: Male Female

3. Ethnicity (circle all that apply):
   Caucasian   African-American   Latino/a   Asian/Pacific Islander
   Native American   Other: Please describe: ______________

4. Year in School: Freshman Sophomore Junior Senior

5. Major: ___________________________________________________

6. Highest Level of Education Completed by Mother:
   High School Diploma Some College Associate’s Degree
   Bachelor’s Degree Graduate/Professional training

7. Highest Level of Education Completed by Father:
   High School Diploma Some College Associate’s Degree
   Bachelor’s Degree Graduate/Professional training

8. Where did you grow up: ___City ___Suburb ___Small Town-
   (pop. Under 50,000)
   ___ Rural area outside a Metropolitan Region

9. Have you worked with homeless persons prior to this class? Yes No

10. If yes to question 9, what did you do? And when?

11. Do you have a history of volunteering? Yes No
APPENDIX F

BACKGROUND SERVICE (PRE ONLY)

Please list and briefly describe past volunteer work, jobs that involved community work, internships in the community, or service-learning work.

POSITION 1:

Exact Agency and Location: Dates:

Brief Description of Work (and hours per week):

Purpose (circle one): volunteer work jobs that involved community work/internships the community, service-learning work

Other (specify): _______________________

POSITION 2:

Exact Agency and Location: Dates:

Brief Description of Work (and hours per week):

Purpose (circle one): volunteer work jobs that involved community work/internships the community, service-learning work

Other (specify): _______________________

NOTE: Multiple pages like this will be provided for those students who have a greater number of service experiences.
APPENDIX G

INFORMED CONSENT TO PARTICIPATE IN A RESEARCH PROJECT:
FOR SERVICE-LEARNING STUDENTS

Project Title: Service-Learning Involvement

Investigator(s): Roger N. Reeb PhD (faculty sponsor) and graduate student assistants

Description of Study: You are being asked to complete a questionnaire that asks about demographic information (e.g., age, ethnicity, year of study, major, family income, and so on) as well as a form asking about your past service experience. In addition, you are being asked to complete a few brief questionnaires about your attitudes toward service and your impressions about homeless people at the beginning and end of the semester. As you know from completing the course agreement, the service at the shelter and reflection exercises (group and written) are required as part of the course whether or not you agree to participate in this study. By signing this form, you are also agreeing for us to use your written reflections as data to be examined as part of the study. Whether or not you decide to participate in this research will not have any influence on your grade in the course.

Adverse Effects and Risks: We are merely collecting information regarding perceptions of students as it relates to service-learning and community action, and no adverse effects or risks for this study are anticipated.

Duration of Study: The study (i.e., components that you are being asked to complete that go beyond the course requirements of service and reflection) will take approximately one hour to complete. That is, the pre- and post-assessments will take approximately 30 minutes each.

Confidentiality of Data: Your name will be kept separate from the data, and a coding system will be used to match your pre-semester ratings with your post-semester ratings. Both your name and the data will be kept in a locked filing cabinet. Only the investigators named above will have access to the locked filing cabinet. However, you may be identifiable based on the combination of responses you provide to the demographic questions. Your name will not be revealed in any document resulting from this study.
Contact Person: Students may contact Roger N. Reeb, PhD St. Joseph’s Hall (room 306), Department of Psychology, University of Dayton, 937-626-6300, rreeb1@udayton.edu. If you have questions about your rights as a research participant you may also contact the chair of the Research Review and Ethics Committee, Lee Dixon, PhD in SJ 310, (937) 229-2160, lee.dixon@udayton.edu.

Consent to Participate: I have voluntarily decided to participate in this study. The investigator named above has adequately answered any and all questions I have about this study, the procedures involved, and my participation. I understand that the experimenter will be available to answer any questions about research procedures throughout this study. I also understand that I may voluntarily terminate my participation in this study at any time, and such a decision would not influence my course grade in Psy 493 (Independent Study) in any way. I also understand that the investigator named above may terminate my participation in this study if s/he feels this to be in my best interest. In addition, I certify that I am 18 (eighteen) years of age or older.

____________________________________________
Signature of Student
Student’s Name (printed)

Date________________

________________________________________________________
Signature of Witness

Date________________

The University of Dayton supports researchers' academic freedom to study topics of their choice. The topic and/or content of each study are those of the principal investigator(s) and do not necessarily represent the mission or positions of the University of Dayton.
INFORMED CONSENT TO PARTICIPATE IN A RESEARCH PROJECT: FOR NON-SERVICE-LEARNING STUDENTS

Project Title: Service-Learning Involvement

Investigator(s): Roger N. Reeb PhD (faculty sponsor) and graduate student assistants

Description of Study: You are being asked to complete a questionnaire that asks about demographic information (e.g., age, ethnicity, year of study, major, family income, and so on) as well as a form asking about your past service experience. In addition, you are being asked to complete a few brief questionnaires about your attitudes toward service and your impressions about disadvantaged people at the beginning and end of the semester. Whether or not you decide to participate in this research will not have any influence on your grade in the course.

Adverse Effects and Risks: We are merely collecting information regarding perceptions of students as it relates to service-learning and community action, and no adverse effects or risks for this study are anticipated.

Duration of Study: The study (i.e., components that you are being asked to complete that go beyond the course requirements of service and reflection) will take approximately one hour to complete. That is, the pre- and post-assessments will take approximately 30 minutes each.

Confidentiality of Data: Your name will be kept separate from the data, and a coding system will be used to match your pre-semester ratings with your post-semester ratings. Both your name and the data will be kept in a locked filing cabinet. Only the investigators named above will have access to the locked filing cabinet. However, you may be identifiable based on the combination of responses you provide to the demographic questions. Your name will not be revealed in any document resulting from this study.

Contact Person: Students may contact Roger N. Reeb, PhD St. Joseph’s Hall (room 306), Department of Psychology, University of Dayton, 937-626-6300, rreeb1@udayton.edu. If you have questions about your rights as a research participant you may also contact the chair of the Research Review and Ethics Committee, Lee Dixon, PhD in SJ 310, (937) 229-2160, lee.dixon@udayton.edu.
Consent to Participate: I have voluntarily decided to participate in this study. The investigator named above has adequately answered any and all questions I have about this study, the procedures involved, and my participation. I understand that the experimenter will be available to answer any questions about research procedures throughout this study. I also understand that I may voluntarily terminate my participation in this study at any time, and such a decision would not influence my course grade in Psy 493 (Independent Study) in any way. I also understand that the investigator named above may terminate my participation in this study if s/he feels this to be in my best interest. In addition, I certify that I am 18 (eighteen) years of age or older.

________________________________________________________
Signature of Student
Student’s Name (printed)

Date___________________

________________________________________________________
Signature of Witness

Date___________________

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APPENDIX I

DEBRIEFING FORM

Reflection and Service-Learning: An Ongoing Study

**Objective:**
The objective of this study is to investigate the influence of service-learning on civic attitudes. Some participants in this study were enrolled in a service-learning course, whereas other participants were enrolled in a non-service-learning course.

**Hypothesis:**
Our hypotheses are as follows: (a) Students in the service-learning class will show pre-to-post improvements in measures of civic development and decreases in tendencies to endorse stigmatizing attitudes toward homelessness. (b) Students in the non-service-learning class will not show these pre-to-post semester changes.

**Your Contribution:**
By participating in this study, you have allowed us to collect data that will lead to a better understanding of the beneficial effects of combining experiential work with academic requirements on student development.

**Benefits:**
Participating in the study will help researchers and universities have a better understanding as to the potential benefits from a service-learning course. This course also permits real-world experience that is unique from most University courses.

**Assurance of Privacy:**
We are studying service-learning outcomes and are not evaluating you personally in any way. Your responses will be kept completely confidential and your responses will only be identified by a participant number in the data set with other participant numbers. Your name will not be revealed in any document resulting from this study.

**Please note:**
- We ask you to kindly refrain from discussing this study with others in order to help us avoid biasing future participants.
- If you have any questions please do not hesitate to contact any of the individuals listed on this page.
- For further information about this area of research, you may consult the references cited below.
Contact Information:

Students may contact Roger N. Reeb, PhD St. Joseph’s Hall (room 306), Department of Psychology, University of Dayton, 937-229-2395, rreeb1@udayton.edu if you have questions or problems after the study. If you have questions about your rights as a research participant you may also contact the chair of the Research Review and Ethics Committee, Lee Dixon, PhD in SJ 310, (937) 229-2160, lee.dixon@udayton.edu.

Thank you for your participation.

Disclaimer:

The University of Dayton supports researchers' academic freedom to study topics of their choice. The topic and/or content of each study are those of the principal investigator(s) and do not necessarily represent the mission or positions of the University of Dayton.

References:

To obtain additional information about this subject matter, you may wish to consult the following sources:


