

The Impact of Service-Learning on Occupational Therapy Doctoral Students

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Service-learning (S-L) can be used as a pedagogical tool to enhance occupational therapy (OT) students' knowledge and skills in the areas of critical thinking and problem-solving, diversity, health promotion, community issues, social justice, and citizenship. S-L can be described as an experience comprising equal parts of learning and serving, where all individuals involved are considered educators and learners (Sigmon, 1997). S-L is based on the philosophy of learning by doing when students provide service in collaboration with a community partner (Flecky & Gittow, 2009). S-L can enhance OT students' flexibility, and collaboration and provide an opportunity for the student to reflect on the differences in client interactions in the community (Gittow, & Flecky, 2005). Students' experiences during community service can promote compassion, care, and a sense of community (Flecky & Gittow, 2009).

S-L is used in higher education as a teaching strategy to integrate community service with instruction and reflection. The components of a successful S-L experience are linked to academic content and standards and meet tangible and distinct community needs (Maloney et al., 2014). Both the community and the service providers should benefit from the S-L experience, and the S-L experience should establish a connection between the subject area and learning goals (Maloney et al., 2014). Because S-L combines academic learning and service to the community to create a deeper appreciation

ABSTRACT

The aim of this study was to determine how participation in a community service project impacts entry-level OT doctoral (OTD) students at different time points in their education. This study employed a mixed-method, prospective cohort design. The Community Service Attitudes Scale (CSAS) is an instrument to measure college students' attitudes about community service. Open-ended questions were asked after participation in the experience in addition to the CSAS to gather a deeper reflection of the S-L experience. A total of 62 OTD students participated in the study. There was no statistically significant difference between the CSAS scores between the OTD first-year and third-year students. Students reported that they gained knowledge regarding occupational justice and community-based interventions, how to establish a therapeutic relationship, and the impact of occupation-based interventions when asked what they learned from the experience. Through the participation in a S-L experience, the students gained knowledge regarding occupational justice and community-based interventions, how to establish a therapeutic relationship, and an awareness of the impact of occupation-based interventions on clients.

of civic responsibilities, it differs from volunteerism (Hoppes et al., 2005). Many OT students volunteer during their education; however, volunteering benefits an organization and is not directly tied to student learning. S-L experiences provide opportunities to build confidence and skills and may help prepare students for a successful transition into practice (Bazak et al., 2010). S-L can help students better understand what they are learning in the classroom through hands-on experience in a community setting. By incorporating S-L into the curriculum, Kearney (2004) reported that students that engaged in SL experiences gained skills in oral and written communication, critical thinking, and leadership skills. Compared with corequisite courses that did not involve S-L, students reported greater positive attitudes towards the courses that contained S-L activities (Kearney, 2004).

The Community Service Attitudes Scale (CSAS) is an instrument to measure college students' attitudes about community service based on Schwartz's (1977) model of altruistic helping behavior. The CSAS can be used to measure the effect of S-L and has been used across undergraduate and graduate programs (Bauer et al., 2007; Doehler, 2018; Perry, et al., 2014; Shiarella, et al., 2000). Doehler (2018) used the CSAS to measure attitudinal changes toward service before and after an S-L project with a local nonprofit organization. Bauer and colleagues (2007) used the CSAS to determine attitudes toward service activities among students and faculty.

Comparing student experiences following S-L participation at different time points in their OT education is important because the perceived benefits experienced by the students may change after being involved in community service projects throughout their educational coursework. The aim of this study was to determine if participation in a community service project impacts entry-level OT doctoral (OTD) students differently at two time points in their OT education.

Literature Review

In a scoping review of community-based occupational therapy research, the researchers concluded that community-based occupational therapy should modify the conditions that allow the community to carry out and engage in occupations that ultimately will promote the health and well-being of its members (Estrany-Munar, et al. 2021). S-L objectives and goals are collaboratively developed and designed with communities. The types of activities that can take place within S-L experiences are diverse, and students should benefit from S-L activities, and the goals of experiences should fall within the scope of practice of the occupational therapy profession (Janse van Rensburg, et al., 2019). This required a focus on the objective of enabling occupation during the S-L experience (Janse van Rensburg, et al., 2019). A study of the perceptions of community representatives regarding the outcomes of OT S-L experiences reported that the community partners gained increased knowledge and skills, attitudinal changes leading to practice reform, increased access to resources and infrastructure, enhanced community connections, enhanced confidence, and dignity, and enhanced occupational participation (Janse van Rensburg, et al., 2019).

In occupational therapy literature, several studies report on the impact of specific S-L programs. OT students who engaged in an S-L health promotion project over a semester found that S-L involvement facilitated mindfulness of community service,

communication, and clinical reasoning (Lau, 2016). In a qualitative study to determine the benefits of S-L, OT students voiced themes of increased self-awareness, awareness of homeless individuals as persons, awareness of social issues, and professional self-efficacy (Maloney et al., 2014). OT students gained experience during Widening Occupation Weeks engaging with different organizations to support local organizations to complete a project or contribute to ongoing work (Parmenter & Thomas, 2015). The students learned about the occupational therapy paradigm and the value of establishing therapeutic relationships and professional practice (Parmenter & Thomas, 2015). Parmenter & Thomas (2015) reported that student learning occurs through reflection over time on the experiences offered by S-L to promote the development of personal theories of practice. Utilizing service learning in conjunction with self-reflection has shown greater impact on the students and enhanced their abilities to apply the knowledge gained to real-life healthcare situations (Hansen et al., 2007). Students that participated in a program that assisted clients with psychiatric conditions to achieve higher education and employment goals gained research and clinical skills (Schindler, 2014). Tomkovick et al. (2008) found that students who participated in S-L were more likely to participate in volunteer efforts post-graduation, indicating that student involvement S-L can lead to greater community-based efforts once they become practitioners. When students understand the impact of their service on the community and the clients served, they are more inclined to volunteer their time (Tomkovick et al., 2008). OT students led community-based health promotion groups for 20 hours in either a homeless women's shelter, senior center, an inpatient pediatric unit, or a university club that provided them with a positive experience leading groups to develop healthier lifestyles (Scott, 1999).

Methods

Study Design

This study employed a mixed-method, prospective cohort design. Post-intervention CSAS scores were used to determine the overall impact of the S-L project. Open-ended questions were included with the CSAS paper assessment to provide additional information on the student perceived benefits of participating in the S-L project.

Participants

Using convenience sampling, a cohort of first- and third-year entry-level OT doctoral program students were invited to participate in a study examining their perspectives after engaging in an S-L project. None of the students were excluded from receiving an invitation to participate, regardless of academic performance or clinical area of interest. The study received approval from the university's institutional review board, and the participants signed a consent form to participate in the study. This experience was the first opportunity for the first year OTD students to participate in a S-L experience. The third-year students had participated in a community S-L experience in each year of their OTD curriculum, including CarFit. CarFit is an educational program that offers older adults the opportunity to check how well their vehicles "fit" them and

measure the executive functioning of clients that were receiving court-ordered drug and alcohol rehabilitation.

Procedure

OTD students delivered an eight-week financial literacy program to individuals ordered by the court to be residents of a substance abuse treatment center. Following the intervention, the students completed the CSAS and additional open-ended questions to examine the impact of the S-L experience.

Tools

The CSAS is an instrument for measuring college students' attitudes about community service after participating in an S-L activity. The CSAS includes components of normative attitudes that people can and should help in the community, beliefs that one is part of one's community and should help out, costs of helping, awareness of needs in the community, a personal desire to participate in community service (and S-L), benefits to the volunteer resulting from helping, and attitudes about the seriousness of the needs of the community (Shiarella et al., 2000). The scale consists of six demographic questions, 32 items on community service attitudes, and two items on intentions to participate in community service projects or enroll in S-L classes (Shiarella et al., 2000).

The response choices for the attitude and intention items are a 7-point Likert-type scale. The choice of seven indicates strong agreement with the statement. A total score is calculated by averaging all items into a single score. A higher score is indicative of a more favorable attitude toward S-L. The CSAS was tested for validity and reliability with a sample of 198 college students (Perry, 2010). Scores on each of the subscales of the CSAS showed strong reliability, with coefficient alpha scores ranging from .80 to .93. (Perry, 2010). The factor analysis confirmed the findings of the developer of the tool developer's findings, with eight factors having eigenvalues greater than one (Perry, 2010). Validity analyses confirmed that the measure distinguishes between groups expected to differ (Perry, 2010).

Open-ended questions were asked after participation in the experience in addition to the CSAS to gather a deeper reflection of the S-L experience. The questions included:

1. What need was met through the provision of financial literacy training?
2. What did you learn through the experience?
3. Would you like to do further community service work after this experience?

Data Analysis

Quantitative analyses were performed using SPSS Analytic Software version 27.0. (IBM SPSS Statistics for Windows, Armonk, New York, USA: IBM Corp.). The difference between the first and third year OTD student scores was analyzed using a Mann-Whitney U test. An alpha level of .05 was used for statistical significance. An inductive approach was used for the thematic analysis of the open-ended responses (Braun & Clark, 2006). Two authors reviewed the responses independently to generate initial codes. Codes were then collated into themes by the authors, discussed, and revised until agreement was achieved to identify the final themes.

Results

A total of 62 OTD students participated in the study, 31 in each cohort. The CSAS and open-ended questions were completed by all participants. The students ranged between 21 and 39 years old, with a mean age of 34. Forty-five (74%) of the students identified as Caucasian, eight (13%) as Hispanic, 7 (11%) as African American, one (1%) as Asian, and one (1%) identified as "other." The mean CSAS score of the first year OTD students was 5.79. The mean score for the third year OTD students was 6.31. A Mann-Whitney U test was run to determine if there were differences in CSAS total scores between cohorts. Distributions of CSAS scores for both cohorts were similar, as assessed by visual inspection. CSAS scores were not statistically significantly different between first year OTD students (Mdn = 208) and third-year OTD students (Mdn = 215), $U = 638.50$, $z = -7.578$, $p = .116$, using an exact sampling distribution for U (Dineen & Blakesley, 1973).

Multiple themes were identified through thematic analysis. Regarding Question 1 (What need was met through the provision of financial literacy training?), three themes emerged. Themes of skills needed to improve occupational performance ($n=31$), social interaction ($n=17$), and the opportunity for client self-expression ($n=6$) all emerged. Selected responses included: "*They will know how to budget and get things accomplished,*" "*Executive functioning skills,*" and "*Peer support and compassion*".

For Question 2 (What did you learn through the experience?), three additional themes emerged. Themes included knowledge regarding occupational justice and community-based interventions ($n=27$), how to establish a therapeutic relationship ($n=23$), and the impact of occupation-based interventions ($n=11$). Selected responses included: "*Every individual deserves the opportunity to learn,*" "*I learned that it is important to truly get to know someone and their values before trying to help them,*" "*I learned about the therapeutic use of self.*"

Lastly, for Question 3 (Would you like to do further community service work after this experience?), the theme of continued participation in community service work emerged. All 62 OTD students indicated that they wanted to participate in community service work following the experience. Selected responses included: "*I would like to do more community service because I enjoyed the learning that comes with it,*" "*Absolutely, it gave me the confidence to be in front of others and be professional,*" and "*I think it is a great opportunity to use our new OT skills.*"

Discussion

This study aimed to determine the impact of an S-L project on entry-level OT doctoral students at different time points. There was no statistically significant difference between the CSAS scores between the OTD first-year and third-year students. A higher score is indicative of a more favorable attitude toward S-L, and both groups' scores were greater than 5.79. These findings indicate that continued engagement in S-L across the OTD curriculum does not change the student's attitude toward participating in a S-L experience over time. It is also possible that the CSAS instrument has a ceiling effect and cannot capture a heightened attitude toward involvement in S-L that may occur after repeated exposure to S-L. Perry et al. (2014) suggested that a possible

limitation of the CSAS is that the measure is limited by a ceiling effect. However, the quantitative outcomes of the CSAS and qualitative data demonstrated that OT students gained knowledge and skills participating in the S-L experience and had a positive attitude toward the clients they interacted with.

Open-ended questions were analyzed thematically to further understand the impact of participation in a S-L experience beyond CSAS scores. One of the objectives of engagement in S-L is to allow students to determine the needs of a population and demonstrate to the students that their services can make a difference in the community (Smith, 1994). Our thematic analysis demonstrated that students reported awareness of occupational justice. Students also developed an understanding that every individual should have the opportunity to learn. These concepts are core to the principles of occupational therapy, and participation in this S-L experience allowed the students to bring home the importance of these concepts in OT practice. Occupational justice is defined as equity and fairness for individuals, groups, and communities regarding resources and opportunities for their engagement in diverse, healthy, and meaningful occupations (Nhunzvi et al., 2019). Maloney et al. (2014) also reported that OT student awareness of social issues increased following engagement in community service. S-L activities also provide students with an opportunity to gain an increased understanding of social and economic issues impacting clients. The use of S-L with underserved populations allows students an opportunity to develop into culturally sensitive OTD professionals (Short & St. Peters, 2017).

OTD students in this study also reported that they could see the impact of an occupation-based intervention. This is important because a cross-sectional survey found that although OTs value occupation-based practice, OTs spend more time on impairment-based practices than occupation-based practice (Hóglad Aas & Bonsaksen, 2022). Participant satisfaction after observing the transformative power of occupation was also reported in a qualitative study of OT students who participated in an after-school S-L program (Bazak et al., 2010).

Students in this study reported that they learned how to develop a therapeutic relationship and were excited to use the tools they learned about in school in a real-world experience. Therapists and patients face challenges in building high-quality therapeutic relationships, and these relationships develop over time (Horton et al., 2021). In occupational therapy, researchers associate therapeutic success with the quality of the therapeutic relationship (Horton et al., 2021). One student in this study reported that they were able to start using the skills they had been learning to build client/therapist rapport. Another student indicated that she stepped out of her comfort zone to communicate in a professional manner, like an OT. Another student reported that the connections they made with the individuals with substance abuse disorder were "invaluable." One student stated, *"I learned how to feel comfortable conducting assessments, including asking questions to complete an occupational profile. I also learned how to feel more comfortable in an unfamiliar population and how to be a flexible OT!"* The therapeutic use of self as a theme was also reported by Bazak et al. (2010) in their qualitative study of OT students engaged in S-L. Maloney and colleagues reported that their OT students developed increased self-efficacy (2014).

Overall, students indicated that they were more confident after the S-L experience. Professional confidence is viewed as one of the most important factors

influencing clinical decision-making because the OT needs to believe that they possess the skills to assess the patient's concerns (Holland et al, 2012). Professional confidence is an important component of occupational therapy education, and students should be provided with several opportunities while they are students to build their confidence. Professional confidence should be nurtured in OT education (Holland et al, 2012).

Implication for Education

In determining criteria for community partners to be productive for OT students, Hoppes et al. (2005) stated that services should be delivered to diverse populations not typically encountered in a clinical setting. There should also be opportunities for students to experience leadership roles in program planning and interaction with clients (Hoppes et al., 2005). Finally, they reported that students should interact with clients with significant issues that challenge the student's problem-solving skills.

Thorough contemplation of the criteria, combined with thoughtful initiation and management of relationships, helps assure the quality of S-L for both students and partners. OT educators need to establish relationships with community partners that meet the requisite criteria. Organizing and maintaining this type of affiliation requires sustained interactions. Time should be allocated to meet the community partners' stakeholders, ask questions, and gain a complete understanding of the agency's missions and methods (Hoppes et al., 2005). Debriefing with the community partner following a S-L experience is also essential. The following questions can be asked of community partners. How did our students do? Did their projects meet your needs? Is there anything we can do differently next time? Has working with us been convenient for you? (Hoppes et al., 2005).

OT educators should also include student reflection in S-L experiences. Reflection is "*the use of creative and critical thinking skills to help prepare for, succeed in, and learn from the service experience and to examine the larger picture and context in which the service occurs*" (Toole & Toole, 1995, p. 100). Students should be asked about what they experienced during the S-L opportunity and the impact of these experiences (Hoppes et al., 2005). Helping students acquire abilities to reflect critically is vital for OT programs because critical reflection has been associated with expert clinical reasoning (Hoppes et al., 2005). An S-L reflection toolkit is available online (Gateway Technical College, 2013).

Hansen et al. (2007) indicated that SL experiences provide OT educators with an opportunity for students to gain skills that support student engagement, social participation, and learning by doing. The OTD curriculum should include S-L activities to allow students to observe the importance of the therapeutic use of self (Maloney & Griffith, 2013). This is best accomplished when S-L experiences are developed early in the curriculum and sustained throughout (Kearney, 2004). S-L activities should be linked to course objectives, with clear goals and set learning experiences (Hansen, et al., 2007).

Limitations and Future Research

This S-L project was part of the OTD curriculum, which could have biased the findings. Many universities encourage community service, and social desirability may have also influenced the CSAS scores. The use of a relatively small sample size and only two cohorts from a single university may limit the generalizability of our findings. Future research should include students from multiple universities, diverse locations,

and include community-identified outcomes to better engage community partners in the research. Furthermore, future studies should include longitudinal designs to examine predictors and the long-term effects of S-L on community service engagement after graduation.

Conclusion

All the OTD students that engaged in the S-L experience indicated that they wanted to participate in additional S-L experiences in the future, suggesting that the experience was worthwhile and may inspire continued S-L engagement. Through the participation in a S-L experience, the students gained knowledge regarding occupational justice and community-based interventions, how to establish a therapeutic relationship, and an awareness of the impact of occupation-based interventions on clients. S-L enables OT educators to provide opportunities for students to gain critical skills that will translate into clinical practice.

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Kristin Valdes received her OTD degree with a specialization in hand rehabilitation from Rocky Mountain University of Health Care Professions in Provo, Utah. She is involved in the hand therapy profession at the national level and has served on the American Society of Hand Therapist Board of Directors for nine years. She is a past president of the American Society of Hand Therapists. She was in private practice for over thirty years and specialized in the treatment and rehabilitation of the upper extremity.

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