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Original Study

Occupational Therapy Student-Run Free Clinic: Mutual Benefits in Expanded Homeless and Health Services and Clinical Skills Development

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Abstract

Background: Evidence indicates occupational therapy (OT) services can address the unmet needs of individuals experiencing homelessness (IEH) to promote health, engagement in meaningful activities, and independent living skills. Additionally, student-run free clinics (SRFCs) are an effective method for developing clinical skills while providing needed services for the community. Based on the available evidence, a student-run OT clinic was developed in partnership with a local homeless services agency. The objective of this pilot study was to evaluate the services established in an OT SRFC in a homeless population to determine the initial effectiveness of the clinic for students and clients. It was hypothesized that the SRFC would increase student perceived clinical skills and provide mutual benefit to clients.
Methods: Participants of this SRFC included 17 OT students (n=10 doctoral students, n=7 masters students) and 70 IEH since its opening in Fall 2018. OT students developed and implemented evidenced-based group and individual interventions designed to address health, wellness, and quality of life for the homeless population. Student skills competency, confidence, and client satisfaction were regularly evaluated through survey. Mann-Whitney U tests were used to determine statistical differences.
Results: Results indicate that clients are satisfied with clinic services, students' engagement, and some positive changes in independent living skills. Students reported statistically significant improvement in competency of professional behaviors ($p<0.001$) and interventions ($p=0.003$).
Conclusion: Providing OT services through an SRFC is a promising approach to service delivery within the homeless population due to the mutual benefit for students to increase clinical and interpersonal skills and attitudes in preparation for entry-level practice.

Introduction

There were 567,715 individuals experiencing homelessness (IEH) in America on a single night in 2019, and 1031 of IEH were in St. Louis, Missouri.[1] Homelessness is defined as a lack of a fixed, regular, and adequate night-time residence.[1] Homelessness poses a burden on an individual and societal level resulting from lack of employment opportunities, decreased funding for public assistance, and lack of affordable housing for low-income individuals.[2,3] While most mental illness and substance abuse remain undiagnosed and unreported, about two-thirds of IEH have a documented mental illness, and one-third have a substance use disorder.[4,5] IEH face unique barriers to participating in daily activities, negatively impacting health, wellness, and social integration.[6-9] Barriers often exist in employment, leisure participation, activities of daily living (ADLs), and cognition.[6,9] IEH do not always acquire the ability to complete self-care ADLs and engage in skills necessary for independent living due to cognitive deficits, such as difficulty with memory recall and

executive function, associated with extended periods of homelessness and persistent, untreated mental illness.[10] Additionally, restricted living conditions in homeless shelters significantly impact the ways IEH complete ADLs, manage health-related issues, and survive day-to-day, especially when they exhibit low levels of self-efficacy.[11] Recent literature demonstrates the benefits of occupational therapy (OT) interventions for IEH to enable engagement in activities, promote and maintain health, set goals, and gain independence because OTs are uniquely equipped to provide analysis of activities to facilitate the independent participation in occupations.[12,13]

OT helps individuals across the lifespan engage in the activities they need and want to do.[14] Occupations are defined as all activities in which individuals engage and participate and that occupy their time.[15] OT targets the complexity of factors underlying successful engagement in occupation, such as motivation, cognition, activity demands, human capacity, and environment, to understand how to help increase individuals' participation in meaningful occupations and increase overall quality of life.[16]

Student-Run Free Clinics and Occupational Therapy

Student-run free clinics (SRFCs) provide pro-bono health care for individuals with limited financial means and geographic access to care.[17] Clinical supervisors within SRFCs aim to provide students with problem-solving, critical thinking, and skill-building opportunities in preparation for clinical practice.[17] SRFCs offer a mutual benefit for students and clients. In SRFCs, patient satisfaction and quality of care are comparable to other healthcare settings; clients have noted benefits including improved coping strategies, increased ability for decision-making, and higher levels of satisfaction with health management education, making SRFCs a viable option to meet the healthcare needs of IEH.[18]

While SRFCs are a popular option for providing healthcare to IEH, many clinics do not include OT. SRFC literature from other healthcare disciplines indicates a need for OT based on research findings calling for increased skills training and health promotion efforts in areas where the evidence supports OT's inclusion.[19-23] For example, SFRC studies have noted the need to address women's hygiene management, chronic condition management, nutrition planning, mental health symptom management, and increasing general empathetic and holistic care.[19-23] Literature in OT on IEH supports group and individual interventions focused on self-management of chronic conditions, health promotion and maintenance, management of musculoskeletal conditions and pain, promoting access to community resources for health, leisure and social participation, and environmental redesign to support participation in desired activities.[24]

Creation of the Student-Run Free Clinic

The Community Independence Occupational Therapy Clinic (CIOTC) is a partnership between a homeless service agency and Washington University School of Medicine Program in Occupational Therapy in St. Louis, Missouri. The CIOTC mission is to provide an opportunity for community-based clinical practice for OT masters and doctoral students to provide client-centered OT services to IEH.[25] All students practiced under the supervision of a licensed OT, who developed the clinic. The CIOTC operates two days a week, providing group and individual OT interventions. Group sessions follow a specific OT protocol and last approximately one and a half hours each.[26] Individual sessions are provided per request and can be provided for any amount of time but average about an hour per session. For clients, the SRFC aims to enhance health literacy, improve quality of life, promote self-management, and increase community independence necessary to transition to and maintain independent living. Topics addressed in individual and group interventions include financial management, health management and maintenance, meal preparation and clean-up, shopping, leisure exploration, leisure participation, communication management, job performance, and home establishment and management (Table 1). Clients are seen on a weekly basis with no formal discharge timeline; many clients are seen for years at a time. Follow-up is given as needed based on when clients return to the clinic; however, clients are strongly encouraged to return for follow-up services each week. There is currently no follow-up process for clients who do not return to the clinic. This is due

Table 1. Group intervention topics and discussion

Group Topic	Description
Financial Management	Identifying financial needs versus wants, budgeting for an apartment, practice managing a monthly budget for all necessities
Health Management and Maintenance	Mindfulness, physical health/exercise, nutrition, sexual health, medication management, health hygiene, scheduling doctor's appointments, sleep hygiene
Meal Preparation and Cleanup	Finding recipes, preparing meals, baking, cleaning up after meals
Shopping	Budgeting and planning trip to store for apartment, cooking groups, and personal items
Leisure Exploration	Using computer to explore social support groups and activities to increase leisure participation
Leisure Participation	Visiting local landmarks, gardening, playing recreational sports
Communication Management	Learning to have important conversations with partner(s) about sexual health, appropriate communication with employers and coworkers, effective communication with family/friends
Job Performance	Creating a resume, how to find jobs, mock interviews, finding appropriate transportation to get to work

to the transient nature of IEH as tracking their whereabouts is a big challenge of service delivery for this population. Research demonstrates that OT students involved in SRFCs report improvements with clinical reasoning skills, client interactions, interdisciplinary teamwork, and advocating for the profession.[15,28,29] OT students, who worked in SRFCs, note improved problem-solving skills through assessment selection and client engagement.[28] SRFCs provide opportunities for OT students to collaborate with other healthcare disciplines.[29] Based on the current evidence to support OT's role with IEH and the mutual benefits of SRFC for both students and clients, the objective of this pilot study was to evaluate the initial effectiveness of an OT SRFC for students and clients. It is hypothesized an OT SRFC will increase student perceived clinical skills and provide benefits to clients in skill building.

Methods

This pilot study collected initial data on both student and client experiences within a newly created SRFC. At CIOTC, OT services are provided to adults seeking services at the partner agency serving IEH. SFRC clients must be underinsured or uninsured; all clients who seek services in the partnering agency are eligible for services on a voluntary basis. Clients' participation in this study was voluntary. Yet, clients are never turned away from the clinic's services, regardless of study participation. Since the clinic is physically located within the partnering agency, agency staff may refuse admittance to clients with histories of violence or who are actively under the influence of substances. All CIOTC clients have a history of or are presently experiencing homelessness. CIOTC serves individuals across the gender spectrum, those experiencing serious mental illness, and individuals with a history of substance abuse. All clients are English speaking, as no translator services currently exist; however, no clients have been excluded from this study or services due to no incidences non-English speaking clients presenting for services. In this study, participant recruitment included an informal referral process using client word of mouth and face-to-face invitations for existing and new clients. CIOTC clients completed a client satisfaction survey at the end of each session. The client satisfaction survey is a homegrown tool designed specifically for use in the clinic and has not been validated. The survey is provided via paper and pencil and asks clients to rank their agreement or disagreement with three statements regarding their level of contentment with services provided (Online Appendix). Visual representations of satisfaction (smiling or frowning faces) and written words are provided to aid with literacy concerns. Any clients may request assistance with reading and comprehending the survey.

Descriptive statistics were run on the surveys using SPSS Statistics for Windows, version 27 (IBM Corporation, Armonk, NY, USA). The mean values for each topic were calculated to evaluate

client satisfaction and the effectiveness of each group. Clients' ratings of satisfaction were then averaged for each type of service provided. For example, all client satisfaction ratings for groups focused on recipe selection and cooking were categorized under meal preparation and clean up while group sessions such as medication management, exercise, nutrition, and sleep hygiene were included under health management & maintenance.

Student outcomes were measured using the American Occupational Therapy Association (AOTA) Level I Fieldwork Competency Evaluation (FWCE) at the end of the Spring 2019 and Fall 2019 semesters.[30] Students received the AOTA FWCE via email at the end of each semester. The same students completed the AOTA FWCE both semesters, less three students who had graduated before Fall 2019. The AOTA FWCE evaluates student competency in five fundamental practice domains using mixed methods data.[30] Fundamentals of practice are skills related to ethics, safety, and compliance. Skills classified under basic tenants define the profession, including understanding the role and scope of OT. Screening and evaluation skills include selecting, administering, and interpreting standardized and non-standardized assessments. In contrast, intervention skills are related to OT service delivery and design. Management of OT services focus on skills needed to be part of an interprofessional team, bill for services, and maintain productivity. Finally, communication and professional behaviors include both written and verbal communication skills as well as work behaviors. All items were scored on a 5-point response scale from unacceptable (0) to outstanding (4). A score of 2 represents a student meeting entry-level standards. Quantitative data was entered into SPSS Statistics for Windows, version 27. Descriptive statistics were run to calculate the mean score and standard deviation. Mann-Whitney U tests were used to test differences between Spring 2019 and Fall 2019 semester responses (Table 2). The Mann-Whitney U tests were completed in place of the t-test for independent samples because scores in this study were not normally distributed.[31] A p-value of ≤0.001 was considered statistically significant. This study was approved by the Institutional Review Board of Washington University School of Medicine and St. Patrick Center in St. Louis, Missouri.

Results

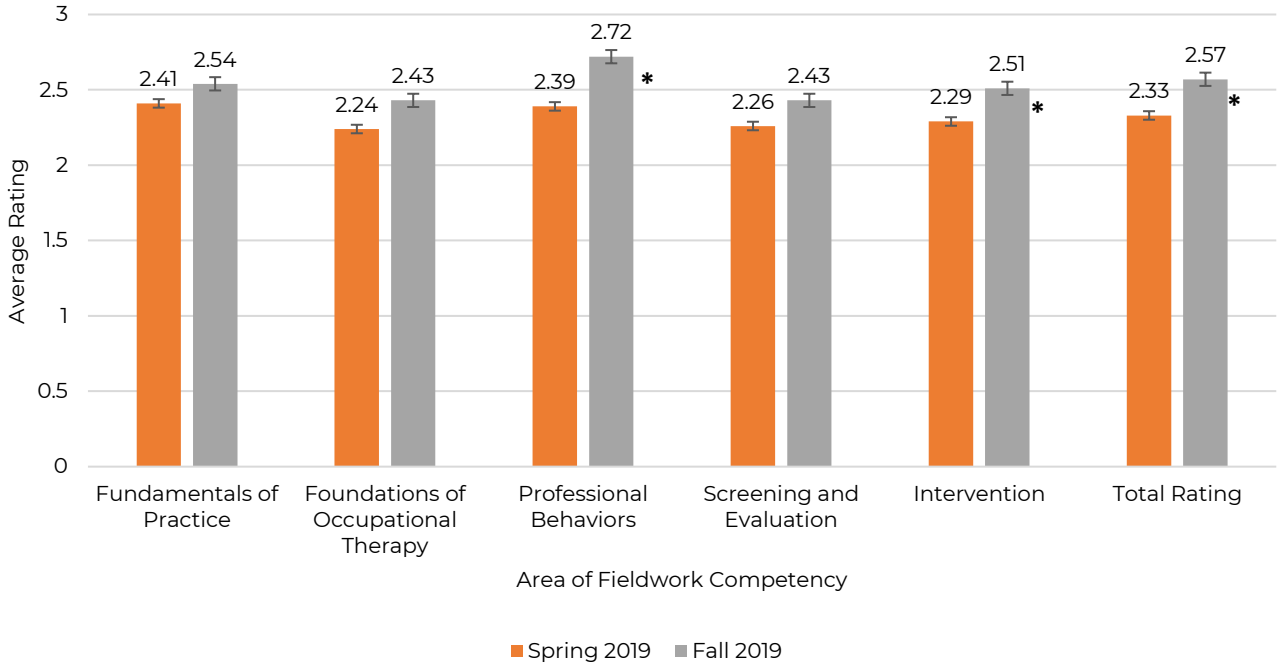
Collectively in Spring 2019 and Fall 2019, the SRFC has provided services to 70 individuals through group and individual sessions. Seventy responses (N=70) for the client satisfaction survey were collected. No clients declined participation. Participants rated their satisfaction based on a 5-point scale, and satisfaction ratings were averaged each semester (Figure 1). No comparison tests were run to determine changes in satisfaction ratings over time because of the population's transient nature, resulting in a singular point in time data. The group topics ranked highest in satisfaction rates (M=5.00) were financial management and home establishment & management, followed by meal preparation & cleanup (M=4.73), job performance (M=4.71), leisure participation and communication management (M=4.67), leisure exploration (M=4.18), shopping (M=4.11), and health management & maintenance (M=3.67).

Since the clinic's opening in 2018, 17 masters and doctoral OT students, including an initial six students in the Fall 2018 semester and an additional 11 students in the Spring 2019 and Fall 2019 semesters. Based on the AOTA Level I Fieldwork Competency Evaluation results, all students who complete the survey (N=17, n=17 Spring 2019, n=14 Fall 2019) reported their skills as meeting entry-level practice standards (2) or higher in every category (Figure 2). Results demonstrate an increase in self-reported skills in self-efficacy and competency in areas evaluated using the AOTA Level I Fieldwork Competency Evaluation. The mean score for all skills measured increased from Spring 2019 to Fall 2019, with statistically significant results found in Professional Behaviors ($p<0.001$) and Interventions ($p=0.003$). A statistically significant difference was found when comparing the total evaluation as well ($p<0.001$).

Discussion

Due to the complexity of homelessness, healthcare providers must be prepared to meet the multifaceted needs of this population. This study's findings demonstrated an increase in self-

Figure 1. Student Fieldwork Competency Self-Evaluation

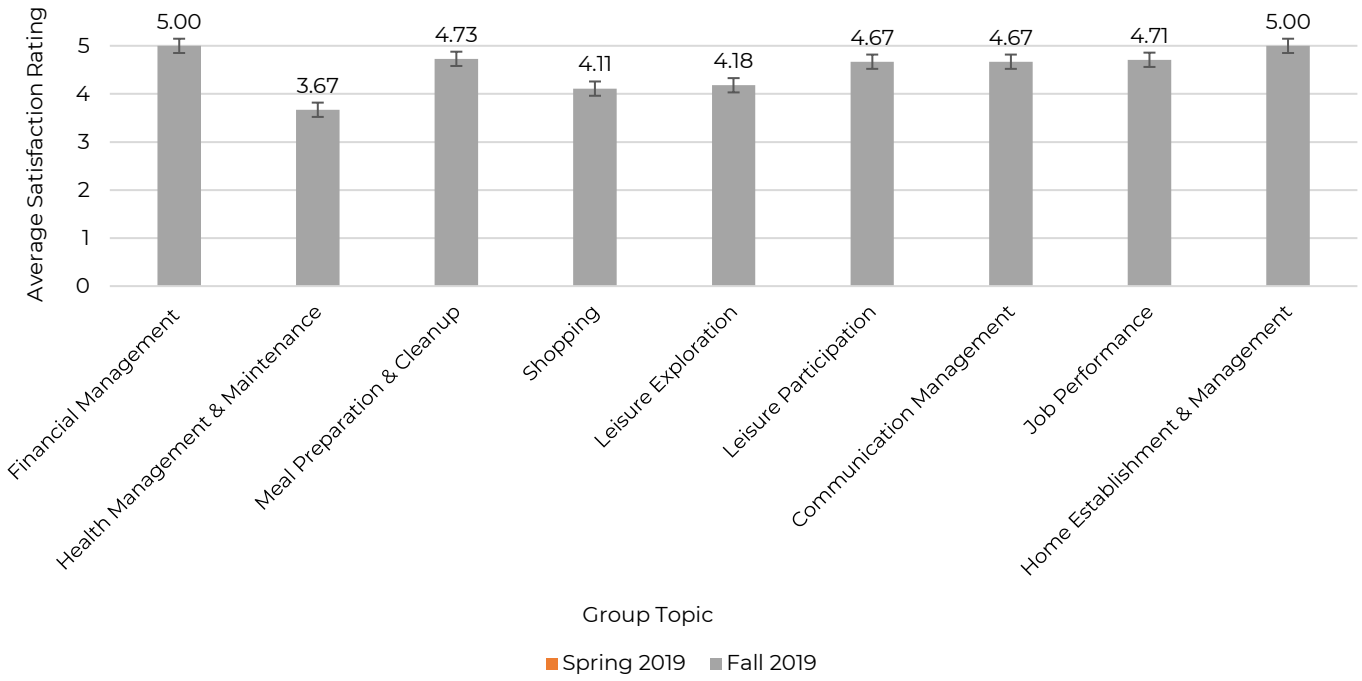


Mean (+ standard deviation) student performance scores on the American Occupational Therapy Association Level I Fieldwork Competency Evaluation. (*) indicates a statistically significant p-value.

reported clinical skills among students participating in the SRFC with statistically significant improvements in the areas of professional behaviors and interventions. In addition, clients reported satisfaction with services provided in the CIOTC. These findings are consistent with the limited literature available supporting OT's role in SRFCs for the homeless population.[15] OT services provided in this study were rated as above average by participants. Participants' rating of independent living skills taught in home establishment and management groups were found to be to be most valuable, which may be due to the increased need for services focused on independence.[32] Further, participants rating of interventions targeted at employment as highly satisfying may indicate future interest in vocation pursuits. Client satisfaction can serve as a positive indicator of the quality of healthcare services and future engagement in services.[33]

Although further research is needed, OT services may be beneficial to increase client participation in occupations related to independent living skills, community re-integration, health management and maintenance, and well-being in an interprofessional SRFC.[24,32] In particular, the addition of OT services to SRFCs could address client concerns based on the individual and environmental barriers to participating in their everyday lives.[25] Other SRFC studies discuss the need for OT without direct acknowledgement, possibly due to a limited interprofessional understanding of the OT scope of practice.[19-23] Skills addressed by OT, in this study, might serve as a guide for how other SRFCs might introduce OT services as a companion to other healthcare services. The inclusion of OT in interprofessional SRFCs can provide much needed healthcare services and may increase satisfaction among clients. Student data in the study mimics most studies, which explore the impact of student participation in clinical experiences on student learning.[28,34] Students reported increases in clinical skills in all areas but reported significant increases in interpersonal skills and attitudes. These results indicate this SRFC provided positive exposure to relevant practice skills and opportunities to build clinical reasoning skills and professionalism. The CIOTC allowed students to gain hands-on observation, evaluation, and intervention skills needed for

Figure 2. Client group satisfaction survey



Mean standard deviation of student performance scores on the American Occupational Therapy Association Level I Fieldwork Competency Evaluation. (*) indicates a statistically significant p-value.

clinical rotations and entry-level practice that they would not otherwise receive through traditional curriculum instruction. Engagement in SRFCs has been demonstrated as an effective method for teaching clinical skills to healthcare students.[17] One SRFC study of physical therapy students reported improvement in the areas of clinical and interpersonal skills.[35] SRFCs allow students to feel autonomous in all portions of the clinic process, including engaging with the partnering agency and actively communicating with clients in a professional manner. This may have accounted for the marked self-reported increase in professional behaviors in this study. Future research should focus on long-term follow-ups with students participating in SRFCs, focusing on their post-didactic clinical rotations and entry-level positions to determine if benefits from participation in the SRFC were still present.

Limitations and Future Directions

This study has several limitations, including a small sample size for student data and lack of baseline data for student perceived confidence scores to indicate change. Future studies plan to continue collecting data from future semesters of the SRFC and from students within the same educational program who did not participate in a SRFC, to serve as a control group. The largest limitation of this study was the self-reported nature of the outcome measures increasing reporting bias. Yet, the use of self-report measures is common to determine client satisfaction with healthcare services and students' perceptions of their learning.[36-38] Despite these limitations, this study still adds a valuable example for future SRFCs to evaluate and expound upon.

Conclusion

The initial data from the CIOTC has demonstrated it to be a beneficial experience for both clients and students. This mutual benefit strengthens the partnership between the agency and the university, allowing for greater avenues of research, interprofessional collaboration, and program development.

Disclosures

The authors have no conflicts of interest to disclose.

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