

International Assistive Technology Service Case Report: Outcomes of a Romanian and Huntington University Collaboration

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ABSTRACT

Internationally, individuals living with disabilities are marginalized by the lack of mobility related assistive technology. Insufficient mobility devices impede individuals with disabilities and their caregiver's ability to participate within the community. Without access to a wheelchair for sufficient mobility, they and their caregivers are left at an economic and social disadvantage.

This paper describes a case study of Huntington University's Occupational Therapy Doctoral Program as it provides collaborative and culturally appropriate assistive technology interventions as an example for future practice. Under the supervision of licensed therapists, students provided 137 seating and mobility evaluations and devices to individuals with disabilities residing in Romania. This case report highlights the outcomes of these international collaborations and the program's impact on occupational therapy students.

INTRODUCTION

Internationally, individuals living with disabilities are marginalized by the lack of mobility related assistive technology. Insufficient mobility devices impede individuals with disabilities and their caregiver's ability to participate within the community. Without access to a wheelchair for sufficient mobility, they and their caregivers are left at an economic and social disadvantage. This paper describes a case study of Huntington University's Occupational Therapy Doctoral Program as it provides collaborative and culturally appropriate assistive technology interventions as an example for future practice. Under the supervision of licensed therapists, students provided 137 seating and mobility evaluations and devices to individuals with disabilities residing in Romania. This case report highlights the outcomes of these international collaborations and the program's impact on both occupational therapy students and the individuals and families served.

BACKGROUND

A team of occupational therapists, occupational therapy students, Romanian church members, interpreters, and journalists collaborated with Joni and Friends' Wheels for the World™, to deliver seating and mobility services to individuals with disabilities. The team convened in Romania, where services were provided at several clinical sites throughout the nation. Each team member learned to adapt to each clinic site, as each site was unique, many with limited access to materials and types and sizes of wheelchairs.

The World Health Organization (WHO) projects that globally one billion people are living with a disability. Disability prevalence continues to be on the rise due to population ageing and the increase of chronic health conditions. [2] A new understanding has emerged classifying a disability a human rights issue, due to the societal barrier's individuals with disabilities experience. Of the estimated disability population, 70 million individuals are in need of a wheelchair, with only 5-15% obtaining access to one. In addition to the unavailability of devices, WHO identified a shortage of healthcare personnel equipped with the knowledge and skills to provide wheelchairs that meet individual's specific mobility needs. [3] Lack of mobility can lead to limited engagement in meaningful activities and community mobility. [4]

Disabled Persons in Romania

An estimated 3.41% of the Romanian population lives with a disability. [5] Literature reveals an inconsistency between the reported low consensus of individuals living with disabilities in Romania compared to the 14 % European Union average.[6] Individuals are likely unaccounted for in the national census due to geographical and societal barriers. [7]

The primary ethnography served during the collaboration constitutes one of the European Union's largest minority groups, the Roma. Evidence reveals a higher association of disability prevalence within the Roma population due to higher rates of chronic disease and poor access to primary care and preventative health programs. [8] In recent years, Romania have strived towards inclusion for all, with a notable shift in perspective towards seeing disability as a human rights issue. Hurjui and colleagues urge for the

continuation of measures to facilitate the effective integration of individuals with disabilities into society, which they note will require maximum attention from all the world's countries. [9]

This significant need in Romania has challenged all current services. The collaboration between Joni and Friends' Wheels for the World™ and Huntington University depicts an opportunity for a continuation and adoption for future innovative service programs.

METHODS

The researchers conducted a survey, which generated qualitative findings related to the impact of the Romania service trip on occupational therapy students. An exempt IRB application was submitted and approved for by the Huntington University Institutional Review Board.

A team consisting of licensed occupational therapists and students provided seating and mobility services to individuals with disabilities residing in Romania. Prior to the service trip, occupational therapy students engaged in a five-hour cultural competency training which included a course in cross-cultural learning. Additionally, students were enrolled in a six-hour seating and mobility instructional laboratory to ensure foundational competence in serving as a seating therapy assistant or seating mechanic. Interventions for the event included a seating assessment, fitting, and training to the client or family members on how best to utilize the mobility device. Each intervention varied in length due to complexity of each client, ranging from one hour to five hours of time spent with each client. In total, the team provided 137 custom seating and mobility devices.

To gather data regarding the impact of the service trip, students were asked to fill out a free-response question survey about their trip experience. The interview generated feedback on the qualities and program's impact on students' clinical expertise. Survey transcripts were analyzed using a four-step procedure: 1) removal of identifying information, 2) survey responses were iteratively reviewed while highlighting pertinent information and key words, 3) common themes were identified, 4) comparison of all interview transcripts.

Free-response question survey to occupational therapy students:

1. How would you describe your service trip experience in Romania?
2. How was your clinical expertise as a future OT impacted by the trip?



Image 1. Mobility devices at one of the clinical sites in Romania

RESULTS

Six out of seven occupational therapy students responded to the survey. Three themes emerged from the qualitative data: 1) life-changing experience, 2) improved ability in providing culturally competent care, and 3) impactful to future clinical practice. The six participants in the study will be referred to as Participant A-F to ensure confidentiality. Eight quotations provided specific examples related to cultural

experience and clinical practice. Two themes were excluded due to irrelevance to the assistive technology intervention. Example quotations from each of the themes follow.

Theme 1: Life-changing experience

Participant A: "I would say my experience impacted my career as an OT by experiencing hands on cultural competence and language barriers by making me more aware of others and their beliefs."

Participant E: "Serving people in Romania was a humbling experience. Living in America, I believe we often forget how fortunate we are to have a vast array of resources at our fingertips...Simply put, seeing how under-served those of Romania are has inspired me to use the resources I am able to offer for a greater good; what may be readily available and expected to us, could be significant and invaluable to someone else."

Theme 2: Improved ability to provide culturally competent care

Participant A: I think the most important thing I learned while on the trip was how to interact with people from a different culture. Learning how to communicate through a translator or using nonverbal communication will be very beneficial in the future as I work with families from various backgrounds.

Participant E: "When language is a barrier, it is vital to be able to read individuals' body language in order to build rapport. While in Romania, more times than not, we had to use a translator as a means to communicate. Although helpful, it was evident certain words/phrases did not translate equivalently. That's when being able to read facial expressions, posture, and even recognizing changes in tone, were extremely helpful and critical. What I gained certainly transferred to my clinical expertise as a future OT."

Theme 3: Impactful to future clinical practice

Participant A: "I would say my experience impacted my career as an OT..."

Participant C: "It allowed me to refine my clinical problem-solving abilities and communication strategies..."

Participant E: "The experience was a profound demonstration of how important nonverbal communication is during clinical practice... When language is a barrier, it is vital to be able to read individuals' body language in order to build rapport."

Participant F: "The clinical knowledge I gained while in Romania focused on seating systems to improve functional mobility in the community and to complete activities of daily living. This knowledge I have already been able to use during a level II rotation in a nursing home while working with ATPs during wheelchair assessments."

Over half of those surveyed expressed the impact the trip had on their improved ability to provide culturally competent care, and five of the six participants mentioned how the trip would benefit them in future clinical practice.

DISCUSSION

Qualitative data revealed three major findings and implications for future assistive technology programs and clinical practice and exhibits a potential important model to expand assistive technology practice worldwide. Firstly, the intercultural programs in assistive technology directly impact clients lives and have a substantial impact on the clinical instruction in assistive technology. A secondary benefit to students would improve future clinical practice and competence working with clients globally. Lastly, service program's provide innovative and inexpensive ways to assist individuals with disabilities and provide services to countries with limited access to materials and mobility related assistive technology. The service-trip generated positive feedback from all participants interviewed, as well as statements classifying the trip as a life-changing experience.

CONCLUSION

Results from the study align with prior research regarding the positive outcomes associated with providing international assistive technology services to individuals with disabilities as well as the team members who provided services.

The outcomes of the program support the findings of Short and colleagues on the short-term benefits of international service, including evidence of increased cultural competence. [1] The custom seating and mobility devices provided mobility freedom to individuals with disabilities and an impactful experience for the students that will carry on with them into future clinical practice.

University's should be encouraged to adopt and continue to operate programs such as this. Collaborations such as these are a promising way to advance the field of assistive technology, and the services highlight the role current and future practitioners can play in collaborative international programming. There is a continued need for innovative models for service delivery as the global implementation of assistive technology continues to improve.

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Image 1.

Brief Description: Image 1 is a picture of mobility devices at one of the clinical sites in Romania.

Essential Description: Image1 is a picture used to demonstrate the types of mobility devices, including wheelchairs and walkers, at one of the clinical sites in Romania. The mobility devices are organized by device type and size.

