

Adapted Air-Rifle Shooting: The Role of OT in Developing a Community-Based Program.

Student: Andy Farriell OTS, Faculty Mentor: Allison Naber, OTD OTR/L, CLT-LANA



PURPOSE

The purpose of this project was to develop advanced clinical practice skills and competency in development of a community adaptive air-rifle program at the Sioux Falls Veterans Administration Medical Center (VAMC) with a community partnership with Sanford Health.

BACKGROUND LITERATURE

- The Veterans Administration (VA) is a government-run, single-payer healthcare system that is responsible for administering benefits programs to veterans and their family members (Keese, 2008).
- During their service, many veterans were exposed to challenging physical activities and adverse physical and mental conditions. (Rogers, Mallinson & Peppers, 2014; Stahlman & Taubman, 2018).
- Veterans may experience chronic pain and post-traumatic stress disorder (PTSD) leading to depression, weakened interpersonal relationships, and reduced self-efficacy (Lundberg, Bennet & Smith, 2011; Rogers et al., 2014; Farrokhi, Perez, Eskridge & Clouser, 2018).
- Veterans with an UE amputation experience depression, loss of self-confidence and decreased ability to perform leisure activities like adaptive sports (Smurr et al., 2008).
- Occupational therapy (OT) plays a role in rehabilitating veterans with UE amputations to use prosthetic devices to improve their performance in leisure activities like adaptive sports (Smurr et al., 2008).
- Benefit of participation in adaptive sports for veterans with disabilities include improved physical fitness, higher life satisfaction, increased social integration, positive perceptions of physical appearance, increased sports related competence and increased quality of life (QoL) scores (Blauwet, Sudhakar, Doherty, Garshick, Zafonte & Morse, 2013; Diaz, Miller & Fredericson, 2019; Laferrier, Teodorski & Cooper, 2015; Lee & Uihlein, 2019; Lundberg et al., 2011).
- Veterans who participated in adaptive sports showed improvements in QoL; those who had participated for at least 10 year showed the greatest increases (Spornier et al., 2009; Laferrier et al., 2015).
- Veterans with PTSD, UE amputations, and depression who participated in adaptive sports exhibited increased sports-related competence scores from pre-to-post participation (Lundberg et al., 2011).



Source: <https://www.sioxfalls.va.gov/Psychology-Training-Program.asp>

THEORETICAL CONSTRUCTS

Occupational Adaptation (OA)

- Examines the process of addressing an occupational challenge created by an individual's desire for mastery, their environment's demand for mastery, and the resultant press for mastery (Schkade & Schultz, 1993).
- This frame of reference (FOR) guided this student in addressing each veteran's respective occupational challenges that stemmed from physical and mental health disabilities and related to their ability participate in adaptive air-rifle shooting.

The Human Activity – Assistive Technology (HAAT) Model

- The HAAT model outlines the process of prescribing a piece of assistive technology (AT) through interaction between four components: the human, the activity, the AT and the context (Giesbrecht, 2013).
- This model was used when evaluating veterans and prescribing air-rifle shooting AT. Examples of shooting AT included a shooting terminal device (TD) for use with an UE prosthesis and a pellet loader.

PROGRAM METHODS AND ACTIVITIES

The Sioux Falls VAMC was the primary site of this capstone. Recreational therapy and OT mentors provided their expertise for the development of the adaptive air-rifle program. Veterans who received therapies from both were recruited to participate in the community adaptive air-rifle program. Veterans who utilized an UE prosthesis completed the the Quality of Life, Enjoyment, and Satisfaction Questionnaire Short Form (Q-LES-Q-SF), and the Quick Disabilities of the Arm, Shoulder and Hand (QuickDASH) and the Physical Self-Perception Profile-Revised (PSPP-R) sports subdomain. Secondary locations included the Great Bear Ski Lodge and the Special Olympics facility in Sioux Falls. These locations hosted a community adaptive ski weekend and a community bocchia ball program, respectively.

PROGRAM OUTCOMES

- This student gained experience in community adaptive sports program development as well as in evaluation and treatment of veterans for adaptive sport participation.
- This student lead two, individual shooting sessions with veterans who used an UE prosthesis
 - The evaluation scores of the QuickDASH, Q-LES-Q-SF, and PSPP-R were taken pre-and-post participation in the air-rifle program.
 - Two case-studies were written describing these veterans, their shooting sessions and their pre-and post-evaluation results.
- This student laid the foundational work for the future success of the program.
 - A needs assessment and SWOT analysis were created.
 - An electronic schedule spreadsheet and post-participation survey were created.
 - An in-service presentation about the program was presented to therapists.
 - An educational slide-show was created to train future volunteers.

IMPLICATIONS FOR OT

Occupational therapists can play an important role in community adaptive sports program development (American Occupational Therapy Association, 2014). Research has indicated that participation in adaptive sports promotes good physical and psychosocial health. Therefore, occupational therapists should draw upon their talents to incorporate adaptive sports into their practice, contribute to the body of research concerning adaptive sports, and educate other occupational therapists about their potential to use adaptive sports as a therapeutic treatment.

REFERENCES



VIEW NOW