Creation of an online adaptive sports & recreation training program for non-healthcare professionals

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INTRODUCTION

Participation in physical activity and adaptive sports is widely shown to have many benefits for participants. Better physical health is often cited as a benefit to participation in adaptive sports, especially since people with disabilities are at a disproportionate risk for obesity, which can come with a range of other health problems. One study said adults with a disability are 53% more likely to be obese than adults with without disabilities [1]. Increased weight is also associated with wrist and shoulder injuries in wheelchair users. However, better physical health is not the only benefit. One study found that participation positively influenced quality of life, overall health, quality of family life and quality of social life [2]. Participation in adaptive sports has even been associated with an approximately 4% higher likelihood of employment per year of sports participation [3]. The Bureau of Labor Statistics published that 19.1 % of people with disabilities are employed, compared to 65.9 percent of people without disabilities [4]. A 4% increase in employment could have significant economic benefits as well as quality of life benefits.

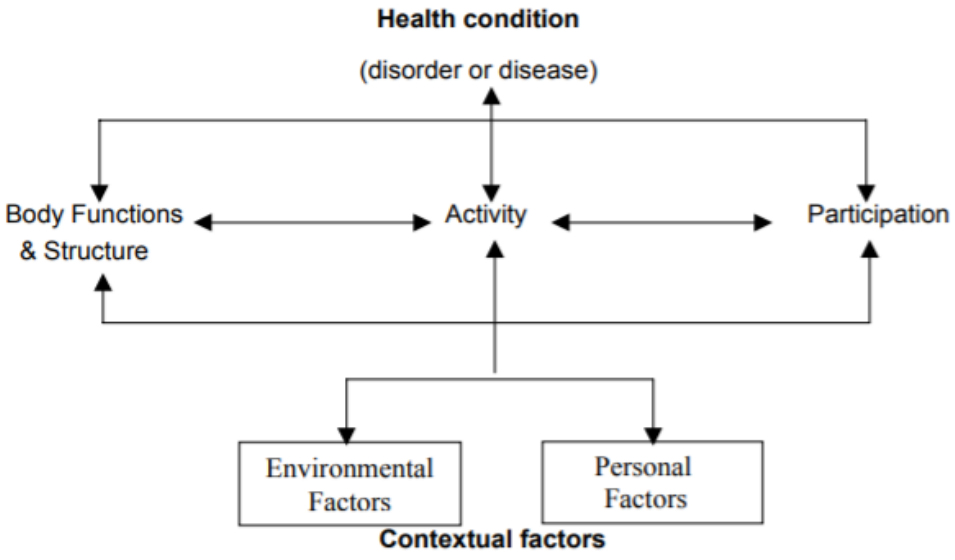

Figure1. International Classification of Function, Disability, and Health (ICF) Model (5)

The International Classification of Functioning, Disability and Health (ICF) is the World Health Organization's (WHO) framework for measuring health and disability [5]. It is based off the biopsychosocial model of disability (Figure 1). It shows the interaction between a health condition and contextual factors such as personal and environmental factors. It can be used at an individual level as well as at a population level. According to the WHO, the ICF framework uses the three levels of functioning classified by the ICF: functioning at the level of the body or body part, the whole person and the whole person in a social context. Disability can therefore be classified as dysfunction at one or more of those levels. Factors involved can act as barriers or facilitators to participation in a given activity.

Using the ICF's framework, the Evidence Synthesis Program (ESP) associated with the Department of Veterans Affairs identified various barriers, facilitators, and motivators associated with adaptive sports participation among veterans. As has been previously discussed, participation has many benefits so it would be in ideal to reduce or eliminate as many barriers as possible, while increasing facilitators. This has also been noted in Article 30 of the United Nations Convention on the Rights of Persons with Disabilities [7].

Community-based adaptive sports and recreation organizations and events often utilize volunteers who may or may not have a healthcare background. The goal is to create an online education tool for volunteers who do not have a healthcare background so they may be better prepared and better serve adaptive sports participants. Volunteers and staff of community based adaptive sports programs have asked for a training resource to ensure participants have a safe and positive experience. By educating volunteers, some barriers such as "limited accessibility" can be reduced or eliminated. Having educated volunteers can also potentially reduce the "fear of injury/pain" and "perception of disability" which have both been identified as barriers to participation. A volunteer education tool can also increase facilitators and motivators for participation. The ESP reported that having a supportive, stress free and safe environment was reported as a facilitator by multiple studies [6]. One study specifically "attributed continued participation to a welcoming environment that created a sense of belonging" [6]. By better preparing volunteers, a safer, less stressful and more supportive environment can be more easily

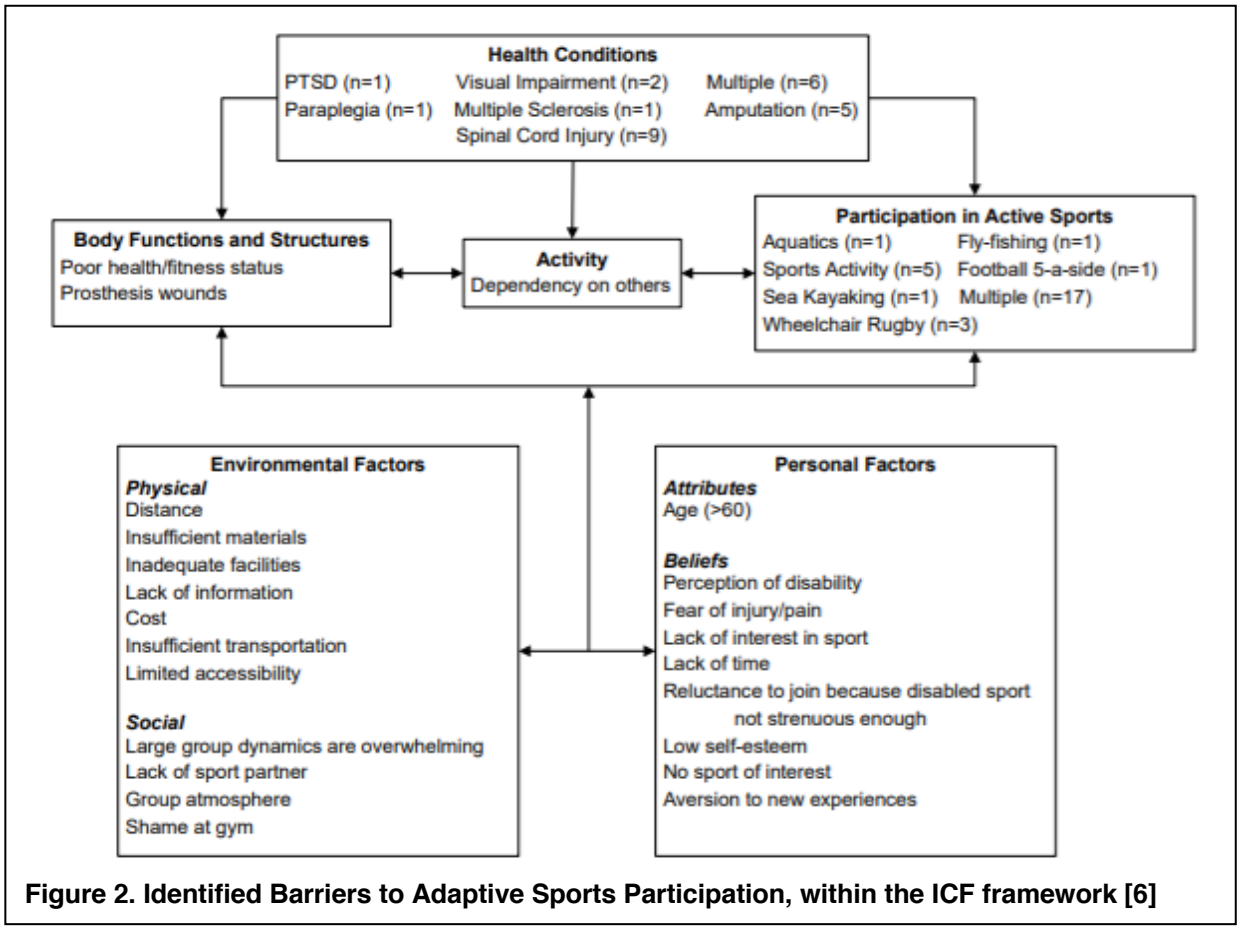

Figure 2. Identified Barriers to Adaptive Sports Participation, within the ICF framework [6]

obtained.

METHODS

To identify content for the course, a tiered system methods approach was applied that included a survey, interviews, and a review of current resources. The goal of the survey was to see what stakeholders thought should be included, whereas the goal of the review of current resources was to see what is and is not being included currently. By using both tools together, gaps and overlaps could be seen which were then used to better tailor the information given in the online training. The results of the two methods were then synthesized and analyzed together as a whole.

The survey was developed using input from various medical professionals and ASR experts with experience volunteering at adaptive sports events. An in-person survey was distributed to adaptive athletes, non-healthcare provider volunteers, as well as healthcare volunteers at an adaptive sporting event. If time allowed, an interview

accompanied the survey distributed at the adaptive sporting event. An online survey was also distributed to adaptive athletes as well as professionals in adaptive sports such as coaches, team managers, and event coordinators. The online survey was created in Qualtrics, a web-based research platform. A total of 27 people were surveyed or interviewed using the in-person and online survey. Survey distribution ended when the answers provided reached saturation. Answers were then analyzed and grouped into categories based on similarities. The most commonly submitted responses were noted and duplicate responses were removed for data ease of use.

A review of current resources occurred concurrently with survey distribution. The review focused on volunteer training or information at sporting events, or for organizations with some sort of adaptive sporting division. Common resources reviewed included Disabled Sports USA, Adaptive CrossFit, Boy Scouts Disabilities Awareness merit badge, USRowing's guide to adaptive rowing, as well as information from major marathons with an adaptive division which may include things such as using a guide for persons with a Visual Impairment, handcycling, wheelchair racing, or using a support runner.

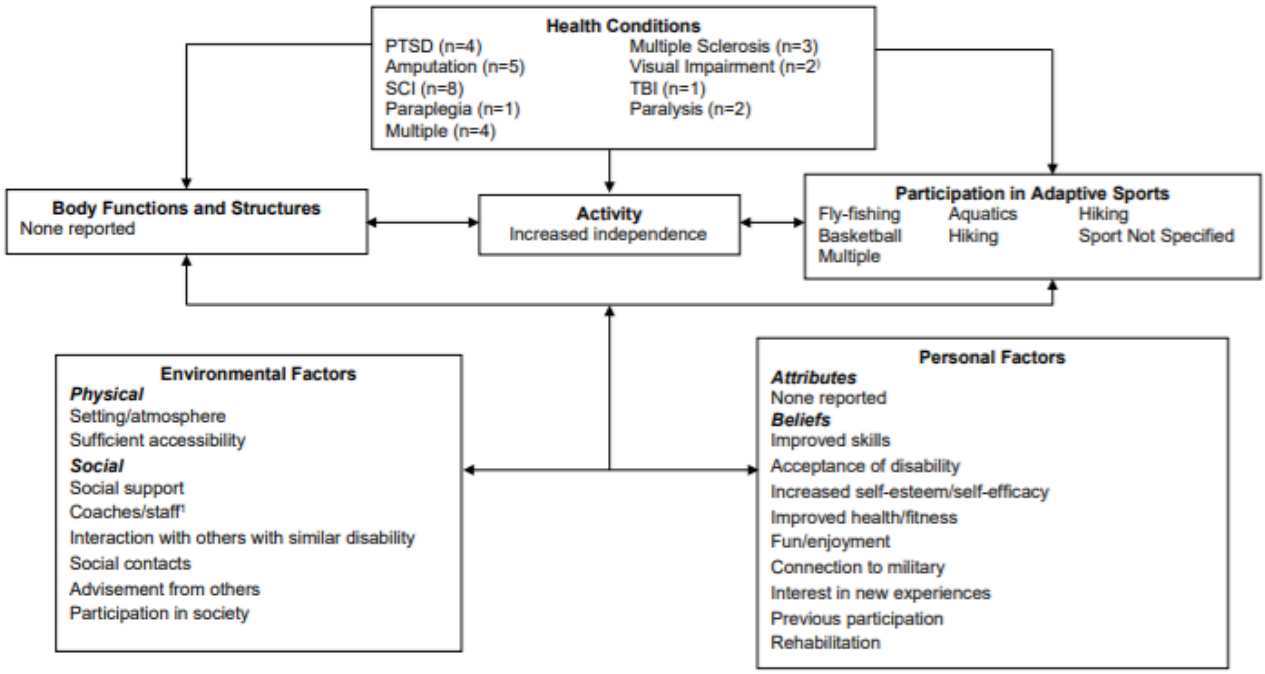

Figure 3. Identified Facilitators of Adaptive Sports Participation with the ICF framework [6]

RESULTS

The categories that emerged from the survey responses seemed to mirror the ICF model and included many of the barriers and facilitators noted by ESP. The initial categories that emerged, in no particular order, were equipment, terminology, event specific knowledge, disability etiquette, example scenarios, safety concerns, as well as common mistakes. The format of the training program was changed to use a more integrative approach rather than many discrete categories. The modules now included will be disability etiquette, diagnosis, and equipment. While it may seem as though important information such as safety has been removed from the training, the information was simply redistributed so that an integrative approach could be used. The course will contain written materials and videos as well as additional resources. Once all content has been created, the course will be moved and housed in the CANVAS online Learning Management System. Once the training is in CANVAS, there will be a pilot testing period in which volunteers will pilot the course and give feedback. After the pilot testing period, the course will be released and accessible to adaptive sports organizations and their volunteers.

CONCLUSION

The overall future impact of this course is to assure people providing ASR programming to Veterans and Servicemembers with disabilities have a basic understanding of the medical and functional aspects of disabilities as it relates to sports participation. This will result in increased competency in guiding individuals toward appropriate activities for which they are likely to be successful and enjoy their time volunteering. The course also aims to reduce identified barriers and increase facilitators to adaptive sports.

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