



RT Wise Owls

Recreational Therapy Evidence Based Practice:
Strengthening the Profession

NOTE: Permission has been granted from Temple University's Therapeutic Recreation Program to reprint this abstract and knowledge translation plan. A full copy is publically available and can be downloaded at www.RTWiseOwls.com.

Student Research

Obesity Management in Spinal Cord Injury through Leisure Time Physical Activity

Julianne Hirst
Heather Porter

Keywords: *obesity; spinal cord injury; leisure time physical activity; recreational therapy*

Search Terms: obesity AND spinal cord injury; physical activity AND spinal cord injury; leisure-time physical activity AND spinal cord injury

Years: 2005–2013

Databases: SPORTDiscus with Full Text, CINAHL, MEDLINE, PsycARTICLES, Psychology and Behavioral Sciences Collection, PsycINFO

Julianne Hirst is a recreational therapist with the Good Shepherd Rehabilitation Network and a recent graduate of the Master's of Science in Recreation Therapy program at Temple University for which this reserach was produced. **Heather Porter** is an assistant professor in the Department of Rehabilitation Sciences at Temple University. Please send correspondence to juliannehirst@gmail.com

Summary of Research Findings

The research on obesity management in the spinal cord injury (SCI) population makes three things clear. First, obesity is under assessed, under managed, and under studied in the SCI population. The development of SCI specific assessment tools and diagnostic criteria is necessary to accurately identify obesity in the SCI population (Gater, 2007; Rajan, McNeely, Warms, & Goldstein, 2008). The current assessment tools (such as body mass index, ideal body weight, and waist circumference) provide limitations since they are either dependent upon a standing height measurement or a standing waist measurement and their able bodied cut-off points may not be sensitive enough to detect obesity in the SCI population (Rajan et al., 2008). Secondly, clinicians wishing to address obesity management with SCI clients must recognize the need to address lifestyle behaviors, such as adherence to a proper diet and physical activity levels, together; clinicians should not assume that participation in leisure time physical activity (LTPA) is automatically associated with a healthy diet (Knight, Buchholz, Martin Ginis, & Goy, 2012). Likewise, clinicians have to recognize the need for specific, individualized education regarding health risks for secondary chronic diseases such as obesity, cardiovascular disease, and diabetes and the relationship between such risk factors and participation in LTPA (Bassett & Martin Ginis, 2011; Buchholz et al., 2012). And lastly, influencing client personal factors, such as intentions and social support, through targeted interventions will have the largest impact on increasing LTPA participation levels and maintaining an active pattern trajectory over time (Martin Ginis et al., 2012; Sweet & Martin Ginis, 2012). Furthermore, most of the current research avail-

able is based on the epidemiological data originally collected in Canada during the creation of the Study of Health and Activity in People with Spinal Cord Injury (SHAPE-SCI), which measured LTPA participation using the The Physical Activity Recall Assessment for People with Spinal Cord Injuries, as well as, physiologic characteristics through physical measurements and blood draws (Martin Ginis et al., 2008). While this has led to numerous spin-off studies whose results have provided essential information on correlations between LTPA and a number of factors in the SCI population, it also highlights the drastic need for further, continuing research on activity in the SCI population—especially in the United States.

Knowledge Translation Plan

The findings from the literature review indicate that there are four main areas that must be addressed in clinical practice to successfully manage obesity and promote increased engagement in LTPA in individuals with SCI: 1) clinician awareness, 2) client education, 3) personal factors, and 4) continued research. Recreational therapists (RTs) treating clients with SCI in an inpatient rehabilitation setting need to be aware of the existing issues using standard assessment techniques, definitions, and cutoff points for measuring obesity in the SCI population. Current assessment tools may not be sensitive enough to detect obesity in this population (Rajan et al., 2008). Thus, it is prudent for RTs working with individuals with SCI to be aware that obesity may be under or inappropriately diagnosed in this population. Likewise, it is necessary for clinicians to have a working knowledge of the coupled lifestyle behaviors that occur between physical activity and diet quality. Unlike in the general

population, there is no significant relationship between participation in LTPA and adherence to a healthy diet in the SCI population (Knight et al., 2011). It is imperative that clinicians working with individuals with SCI not assume that those who are more active necessarily consume better quality diets than those who are low-active or inactive (Knight et al., 2011). Due to common short lengths of stay in an inpatient rehab facility, RTs may not have an adequate length of time to implement an extensive weight management intervention. They can, however, plan individualized sessions to help explore leisure interests and increase leisure awareness, as well as provide client-specific education about the relationship between chronic disease risk factors, obesity, and the outcomes of engagement

in LTPA (Bassett & Martin Ginis, 2011). While a weight management intervention may not be feasible, there are some targeted interventions—specifically those that address the personal factors of intentions and social integration—that RTs can realistically implement during a short stay. Intentions for physical activity have been shown to increase through the use of motivational interviewing and peer modeling and can be sustained through coping planning interventions (Martin Ginis et al., 2012). Lastly, it is imperative that RTs take an active role in tracking outcomes and initiating continued, epidemiological research in these areas; without such initiatives it will become virtually impossible to develop physical activity guidelines and prescriptions for this specific population (Martin Ginis et al., 2008).

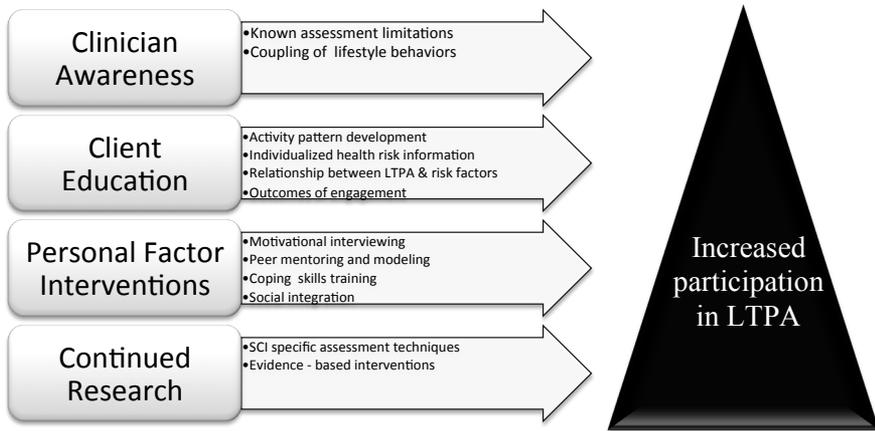


Figure 1. Graphical Representation of Knowledge Translation Plan

References

Bassett, R. L., & Martin Ginis, K. A. (2011). Risky business: The effects of an individualized health information intervention on health risk perceptions and leisure time physical activity among people with spinal cord injury. *Disability and Health Journal*, 4, 165–176.

Buchholz, A. C., Horrocks, J., Martin Ginis, K. A., Bray, S. R., Craven, B. C., Hicks, A. L., Hayes, K. C., ... Wolfe, D. L. (2012). Changes in traditional chronic disease risk factors over time and their relationship with leisure-time physical activity in people living with spinal cord injury. *Applied Physiology, Nutrition, and Metabolism*, 37, 1072–1079.

- Buchholz, A. C., Martin Ginis, K. A., Bray, S. R., Craven, B. C., Hicks, A. L., Hayes, K. C., Latimer, A. E., ... Wolfe, D. L. (2009). Greater leisure time physical activity is associated with lower chronic disease risk in adults with spinal cord injury. *Applied Physiology, Nutrition, and Metabolism*, 34(4), 640–647.
- Gater, D. R. (2007). Obesity after spinal cord injury. *Physical Medicine and Rehabilitation Clinics of North America*, 18(2), 333–351.
- Knight, K. H., Buchholz, A. C., Martin Ginis, K. A., & Goy, R. E. (2012). Leisure-time physical activity and diet quality are not associated in people with chronic spinal cord injury. *Spinal Cord*, 49, 381–385.
- Martin Ginis, K. A., Arbour-Nicitopoulos, K. P., Latimer-Cheung, A. E., Buchholz, A. C., Bray, S. R., Craven, B. C., Hayes, K. C. (2012). Predictors of leisure-time physical activity among people with spinal cord injury. *Annals of Behavioral Medicine*, 44(1), 104–118.
- Martin Ginis, K. A., Latimer, A. E., Buchholz, A. C., Bray, S. R., Craven, B. C., Hayes, K. C., Hicks, A. L., ... Wolfe, D. L. (2008). Establishing evidence-based physical activity guidelines: Methods for the study of health and activity in people with spinal cord injury (SHAPE SCI). *Spinal Cord*, 46, 216–221.
- Rajan, S., McNeely, M. J., Warmis, C., Goldstein, B. (2008). Clinical assessment and management of obesity in individuals with spinal cord injury: A review. *The Journal of Spinal Cord Medicine*, 31(4), 361–372.
- Sweet, S. N., Martin Ginis, K. A. (2012). Examining physical activity trajectories for people with spinal cord injury. *Health Psychology*, 31(6), 728–732.