Abstract

Objective: A pilot to determine consumer preference in ranking walking function utilizing the Walking Index for Spinal Cord Injury (WISCI) tool in a diverse sample of consumers with differing walking abilities from professionals who used the WISCI according to impairment.

Methods: Photographs were taken depicting each defined WISCI level (5 photos in all) using the same person and a similar background in order to ensure consistency of the pictures other than the defined differences on the WISCI levels. The pictures were printed out on a color laser printer on a half sheet of paper with the written WISCI descriptors at the bottom of each photo. The photographs were randomly shuffled. Thirty individuals with diverse levels of spinal cord injury (12 females, 18 males) were asked to rate each picture on a scale using the research construct and were asked to place the pictures in rank order by their individual preference for walking. The responses of each participant were entered into an Excel spreadsheet.

Results: Fifty percent (50%) of the consumers ranked the WISCI levels requiring physical assistance as a lower preference than those levels not requiring physical assistance. Twenty percent (20%) of the consumers ranked the ability of a walker higher than crutches. These differed from the professionals who were instructed to rank pictures from most impaired to least impaired based on the theoretical construct of the WISCI scale (Ditunno et al. 2006). Differences in raters were significant (p<.05)

Conclusions: Consumer preference for recovery of walking function differed from professionals. Minimal clinical significance for recovery of walking function may need to be verified independently for professionals and consumers since the differences may reflect bias in the ranked preferences.

Introduction

Recovery of walking function is important to individuals with acute incomplete spinal cord injury (SCI). The ‘Walking Index for Spinal Cord Injury’ (WISCI) tool has been validated in a number of studies and has been accepted as one of two capacity measures by the European Clinical Trials Group. The hierarchical walking function was validated by the Delphi method among an international group of SCI therapists, clinicians and investigators and demonstrated construct and face validity (1). Subsequently, it was converted to a clinical tool for use in daily practice, and is commonly used to assess and monitor the functional ability of individuals using ambulatory devices (2-7). The 'WISCI' is a self-administered tool, comprised of dichotomous questions and describes a hierarchy of mobility and function while allowing for assessment of both injury and impairments. The WISCI tool has been validated using reliability and construct methods and shown to correlate with lower extremity motor scores (impairment) and followed a monotonic progression for demonstration of prospective validity (8). The hierarchical ranking, however, has not been assessed in a consumer population. As SCI investigators, physicians and physical therapists were instructed to order the WISCI levels in order to define the clinical construct of the WISCI tool. However there is not a defined hierarchy among an impairment dimension, worst to best, the scale integrated physical assistance with devices (see Table 1). Our hypothesis is that consumers would rank the WISCI hierarchy based on a functional independence dimension as compared to impairment and therefore WISCI levels that require physical assistance would be placed at a lower level than those that do not require physical assistance.

Subjects and Methods

Demographics

This study was approved by the institutional review board (IRB) at Thomas Jefferson University and Magee Rehabilitation Hospital. Volunteer subjects were recruited from the SCI Education and Family Spinal Cord Injury Hospital. Individuals with diverse, acute, incomplete spinal cord injury levels were recruited. Participants were asked to participate in the study if they were: ambulatory, using a walker or crutches, able to identify themselves on the WISCI, and not using devices, braces or locomotor FIM illustrating prospective criterion validity. Lastly, it was utilized in an international study and shown to correlate with lower extremity motor scores (impairment) and followed a monotonic progression for demonstration of prospective validity.

Method

Photographs were taken by study personnel depicting each defined WISCI level (5 photos in all) using the same person and a similar background in order to ensure uniformity of the pictures other than the defined differences in the WISCI levels. The pictures were printed out on a color laser printer on a half sheet of paper with the written WISCI descriptors at the bottom of each photo (see Figure 1). The photographs were randomly shuffled. Each participant was asked to rank order the pictures next to the corresponding WISCI level that best represented his or her ability to walk.

Results

1) Consumer ranking of the WISCI levels based on preference for walking differed from the professionals who were instructed to rank subjects from most impaired to least impaired based on the theoretical construct of the WISCI scale, defined differences in the WISCI levels. The pictures were printed out on a color laser printer on a half sheet of paper with the written WISCI descriptors at the bottom of each photo. (See Figure 1). The photographs were randomly shuffled.

2) Each participant was asked to rank order the pictures next to the corresponding WISCI level that best represented his or her ability to walk.

3) The results of each participant were entered into an Excel spreadsheet for analysis.

Discussion

Our pilot study suggests that different clinicians (treatment plans or expertise) yield different results given to consumer ranking between consumers and professionals. Therefore, what is important is an evaluation of goals depending on what is asked and who is asked. For example, if one wants to determine the need for the use of a walker, the consumer will rank walk with no assist as the highest and the professional will rank no walk as the highest. The direction of goals for ambulation will be different and awareness of clinical significance of recovery need to be linked to the specific research question and to the specific group assessed.

References