## SUCCESSFUL EMPLOYMENT AND QUALITY WORK LIFE AFTER SEVERE DISABILITY: *COMPARISON OF PREDICTIVE MODELS WITH MULTIPLE SCLEROSIS AND SPINAL CORD INJURY*

Despite all that is known about multiple sclerosis (MS), the literature is lacking studies examining patterns in labor force participation. There is a need for large-sample representative studies examining subjective and objective aspects of the employment experiences of people with MS, particularly focusing on quality indicators of successful employment. This study will yield important data regarding employment patterns of a large sample of people with MS, and the detailed measures of respondents' employment experiences will bring unprecedented insights into the dynamics of the career development process for these individuals. We will compare patterns of predictive factors between MS and a spinal cord injury (SCI) population, using data currently being collected from the South Carolina SCI Surveillance System Registry and an ongoing longitudinal SCI Aging study (NIDRR #H133A120122).  Standardizing our employment experience survey across the two constituent groups, namely, people with MS and SCI, will permit valuable time-series comparisons of these two populations of people with neurologically-based physical disabilities.

### Study Overview ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■

This study uses a labor participation model (LPM) that identifies key variables and allows for the determination of attributable differences, related to non-changeable control characteristics, and policy effects, related to variables that may become the focus of policy change. The control and policy variables and employment outcomes are presented in Figure 1. The study will be implemented in two phases using a mixed methods methodology. The first phase will involve conducting four focus groups for people with MS to discuss their work experiences. Phase Two will incorporate the findings from the Phase One focus groups and use the LPM as a basis for structuring and selecting predictive factors with diverse employment outcomes in the development of a survey for individuals with MS. The study is designed to answer the following research questions:
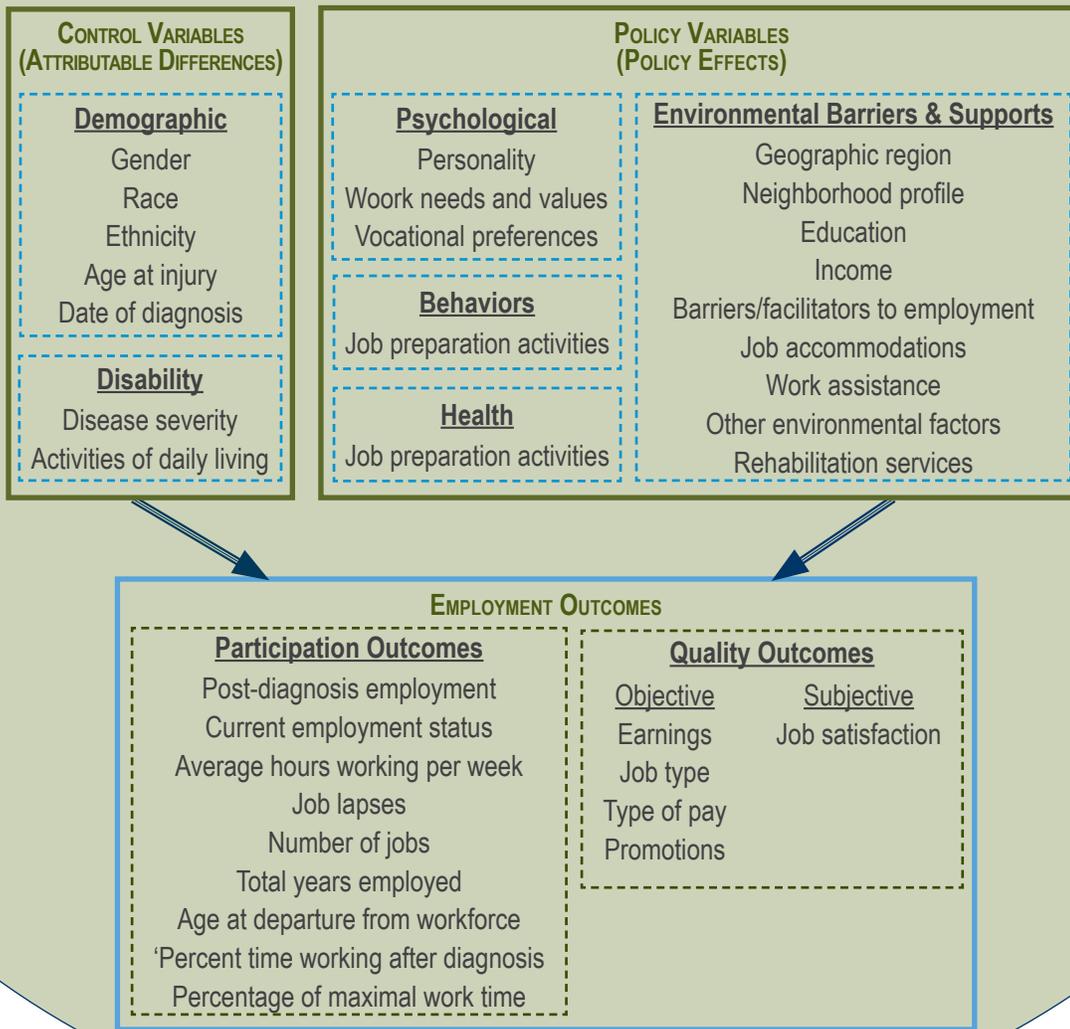
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1. What are the primary control and policy variables and the primary employment outcomes of greatest importance, as defined by those with physical disability secondary to MS who have had varying levels of success with employment?

2. To what extent are differences in successful employment outcomes attributable to unchange-able control factors, particularly race-ethnicity?

3. What policy variables will be associated with successful employment outcomes?

4. What interactions may exist between control and policy factors that will explain variations in successful employment outcomes?

5. What interactions exist between the two participant populations (MS, SCI) in the relation-ships between control factors and policy factors with successful employment participation and quality indicators of employment?

## FIGURE 1: LABOR PARTICIPATION MODEL

**CONTROL VARIABLES (ATTRIBUTABLE DIFFERENCES)**

**Demographic**
Gender
Race
Ethnicity
Age at injury
Date of diagnosis

**Disability**
Disease severity
Activities of daily living

**POLICY VARIABLES (POLICY EFFECTS)**

**Psychological**
Personality
Woork needs and values
Vocational preferences

**Behaviors**
Job preparation activities

**Health**
Job preparation activities

**Environmental Barriers & Supports**
Geographic region
Neighborhood profile
Education
Income
Barriers/facilitators to employment
Job accommodations
Work assistance
Other environmental factors
Rehabilitation services

**EMPLOYMENT OUTCOMES**

**Participation Outcomes**
Post-diagnosis employment
Current employment status
Average hours working per week
Job lapses
Number of jobs
Total years employed
Age at departure from workforce
'Percent time working after diagnosis
Percentage of maximal work time

**Quality Outcomes**
Objective          Subjective
Earnings           Job satisfaction
Job type
Type of pay
Promotions

## Phase One:  Quantitative Assessment of Policy Factors and Employment Outcomes ■ ■ ■ ■ ■ ■ ■

During Phase One, four focus groups will be conducted consisting of eight people with MS through the National MS Society Ohio Buckeye Chapter.  They will be heterogeneous in terms of characteristics. To be included in the study, participants must have been employed after their diagnosis.

Focus groups will follow a semi-structured format lasting two to three hours. Participants' confidentiality will be protected, and their names will never be published or disseminated. Any identifying information collected will be stored separately from any data  collected. Transcripts will be produced from recordings of the interviews but identifying information will not be included in the transcripts. The focus group interviews will consist of questions designed to elicit information about the personal, environmental, and policy related factors that influence job outcomes. The general goal is to identify topics, themes, and patterns, and draw inferences about their meaning, which will aid in the development of a survey instrument to be used during Phase Two of the research.

## Phase Two:  Quantitative Study of Factors Related to Successful Employment ■ ■ ■ ■ ■ ■ ■

During Phase Two, a community advisory panel (CAP), comprised of eight individuals with MS, will assist with incorporation of the qualitative results into the final measure. Other measures included in the survey will be organized according to the LPM: demographic, disability, psychological characteristics, behavioral characteristics, health, environmental barriers and supports, and employment outcomes (participant and quality outcomes). We will pilot test the overall survey with 15 individuals with MS to verify the appropriateness of the overall instrument, its length, clarity, and the integration of the various components. Next, we will recruit approximately 1,050 participants through the MS clinic at Shepherd Center, a large specialty hospital in Atlanta, Georgia. Data collection will be staggered over 30 months.

As part of a separate study (NIDRR #H133A120122), data will be collected regarding variables in the LPM model on persons with traumatic SCI of at least 1-year duration.  Data collection with that study will mirror the data collection proposed in Phase 2, with the exception of any additional variables added to Phase 2 based on responses to Phase 1, as well as any MS specific variables.  These analyses will identify the generality of the findings with different diagnostic groups (essential for the effective application of policy change), while at the same time allowing for specific patterns of

relationships to emerge for MS and with variables specific to MS (course of the condition).

We will assess:

1. differences attributable to control factors (age, gender, race, injury severity),

2. differences due to policy effects (psychological, environmental, behavioral, health),

3. interactions between control and policy variables, and

4. variations in policy variables between MS and SCI. The CAP will also suggest data analysis and assist in interpretation of the

## Summary ■ ■ ■ ■ ■ ■ ■ ■ ■ ■

The purpose of this study is to identify characteristics associated with successful employment throughout the work life cycle among approximately 1,050 participants with physical disability resulting from MS and compare patterns of predictive factors with those identified in an independent study of SCI. We will generate new knowledge to promote participation and quality employment outcomes by quantifying the impact of psychological, environmental, behavioral, and health factors on successful employment outcomes.

The VCU-RRTC on Employment of People with Physical Disabilities is interested in obtaining your feedback on this research. If you have questions or would like to discuss the research, you may contact:

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Information for this research brief was developed for the VCU-RRTC on Employment of People with Physical Disabilities. Information for this research brief was developed for the VCU-RRTC on Employment of People with Physical Disabilities. For more information on the VCU-RRTC or if accommodations are needed, please contact **Dr. Katherine Inge, Project Director at kinge@vcu.edu or (804)-828-5956**.

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