

VCU-RRTC on Employment of People with Physical Disabilities

Research Study #4: Evaluating the Effectiveness of a Multi-Component Demand-Side Intervention Toolkit for VR Professionals to Improve Employment Outcomes of People with Physical Disabilities: A Randomized Controlled Trial Study



Mediators of Symptom Cluster and Employment in People with Multiple Sclerosis

Introduction

According to the National Multiple Sclerosis Society (NMSS), approximately 400,000 individuals are living with MS in the United States (NMSS, 2014). MS is a chronic illness of the central nervous system that impacts physical, psychological, and social functioning (Costa, Sa, & Calheiros, 2012; Tesar, Baumhackl, Kopp, & Gunther, 2003; Tortorella et al., 2014). MS symptoms have been studied in symptom clusters because they often co-occur and may have a compounding impact on an individual (Crayton & Rossman, 2006; Motl & McAuley, 2009; Motl, Suh, & Weikert, 2010). Symptom clusters are defined as “three or more concurrent symptoms (e.g., pain, fatigue, sleep insufficiency) that are related to each other” (Dodd et al., 2001, p. 465).

Due to the progressive, unpredictable, and disabling nature of MS and its associated symptoms, employment rates for individuals with MS are low (O’Connor, Cano, Thompson, & Playford., 2005). Employment is considered to be an important public health intervention for people with multiple sclerosis (MS). Individuals with MS who are employed, whether full or part-time, have better psychosocial and health outcomes than individuals who are not employed (Chiu et al., 2015). Given the evidence of the benefits of work and considering that symptom clusters have a significant impact on participation for persons with MS, it is important that we better understand the relationship between symptom clusters and employment.

Does Context Matter to the Relationship Between Symptom Severity and Employment

In short, the answer is yes. Recent research on the World Health Organization’s (WHO) International Classification of Functioning (ICF) as a model for vocational rehabilitation (VR) demonstrates the importance of person-environment (P-E) contextual factors in mediating the effect of impairments on participation (Chan et al., 2009). The positive human traits factors of core self-evaluations (CSE) and social support are considered effective P-E contextual factors in ICF research (Smedema, Chan, et al., 2015; Smedema, Chan, & Phillips, 2014; Wilson et al., 2013). The purpose of this study was to evaluate CSE and social support as person-environment mediators for the relationship between symptom cluster and employment for persons with MS.

Method

Participants for this study consisted of 154 people with MS at prime working age (25 – 54 years old). Participants were recruited by advertisements through monthly electronic newsletters and through a single round of direct email solicitation sent by National Multiple Sclerosis Society chapters to their members. Participants who completed the online survey received a \$15.00 gift card upon completion of the study.

Results

Figures 1 and 2 show that increased symptom clusters was related to increased odds of unemployment for people with multiple sclerosis. However, Figure 1 shows that core-self evaluations fully mediated this relationship. In other words, the influence of symptom clusters on employment can be explained by participants’ levels of core self-evaluations. Figure 2 shows that the relationship between symptom clusters and unemployment, although still significant, was less so when mediated by social support.

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Figure 1: Path Coefficients for Simple Mediation Analysis on Employment Status (N=154)

Note: Dotted line denotes the effect of MS symptom on employment status when CSE is not included as a mediator. b, c and c' are unstandardized logistic regression coefficients, a is an unstandardized ordinary least squares (OLS) regression coefficient. * $p < .05$, ** $p < .01$, *** $p < .001$

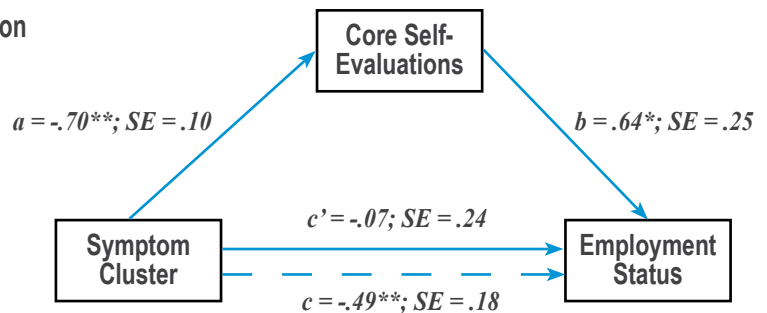
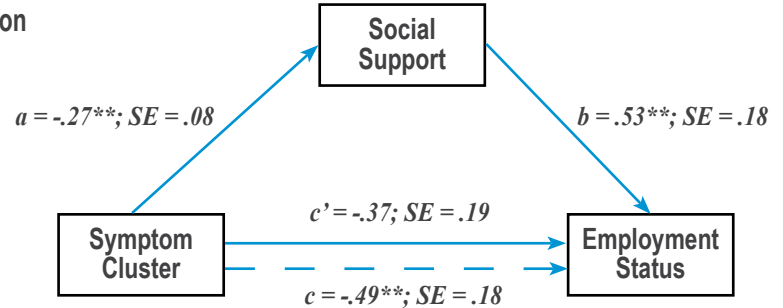


Figure 2: Path Coefficients for Simple Mediation Analysis on Employment Status (N=154)

Note: Dotted line denotes the effect of MS symptom on employment status when social support is not included as a mediator. b, c and c' are unstandardized logistic regression coefficients, a is an unstandardized ordinary least squares (OLS) regression coefficient. * $p < .05$, ** $p < .01$, *** $p < .001$.



Conclusions

Findings suggest that both core self-evaluations and social support play an important role in the employment of people with MS, regardless of symptom severity. Together, increasing both CSE and social support will reduce the adverse impact of MS symptom cluster on employment outcome. Therefore, CSE and social support can be viewed as protective factors for maintaining employment in MS.

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