

## **P717 - Variation in employment status among people with MS in the United States, United Kingdom and Germany**

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**Introduction:** Multiple sclerosis (MS) is associated with impairment of physical and cognitive function. These impairments contribute to high unemployment rates ranging from 40-80%. Demographic factors such as age and sex, as well as disability level are associated with unemployment. Variations in health systems and supports, as well as social policies regarding employment accommodations may also influence employment rates.

**Objective:** To compare employment rates among people with MS living in three countries, including the United States, United Kingdom (UK) and Germany.

**Methods:** We identified participants in three MS registries, the North American Research Committee on MS (NARCOMS) Registry, the UK MS Register (UK-MS), and the German MS Register (GMSR) between the ages of 18-62 (common working age in all three regions). All these registries capture information about demographics (age, gender, education), disability status (as measured using the PDDS, MSIS or EDSS) and employment. Disability was categorized as mild, moderate or severe to account for the different scales used across registries. We identified a common set of questions which assessed employment status (employed, unemployed), whether employment was full-time or part-time, and if MS was the reason for reducing or stopping to work. We summarized the overall and age, gender and disability specific rates of employment across the three MS registries. Comparisons were evaluated using chi-square tests.

**Results:** We identified 31011 persons with MS (NARCOMS: 5436, UK-MS: 10529, GMSR: 15046) fulfilling the inclusion criteria. Of these 74.7% were women, of mean (SD) age 47.5 (10.2) years. Overall employment rates were highest in GMSR, 10053 (66.8%), followed by the UK-MS, 5064 (48.1%), and NARCOMS, 2322 (42.7%;  $p < 0.001$ ). We observed a significant difference in the proportion of males and females employed in the GMSR (71.8% vs 64.9%,  $p < 0.0001$ ), but not in NARCOMS (40.7% vs 43.1%,  $p = 0.169$ ) or UK-MS (48.0% vs 48.2%,  $p = 0.89$ ). Employment was high for mild disability levels (UK-MS: 80.3%, GMSR: 79.3%, NARCOMS: 65.3%) and decreased with increasing disability. Generally, as age increased the proportion employed decreased. Among those older than 30 years, higher proportions of participants were employed in the GMSR and UK-MS than in NARCOMS ( $p < 0.0001$ ).

**Conclusions:** Employment rates of participants varied across countries with the GMSR having higher rates of employment overall, and stratified by gender and age.

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