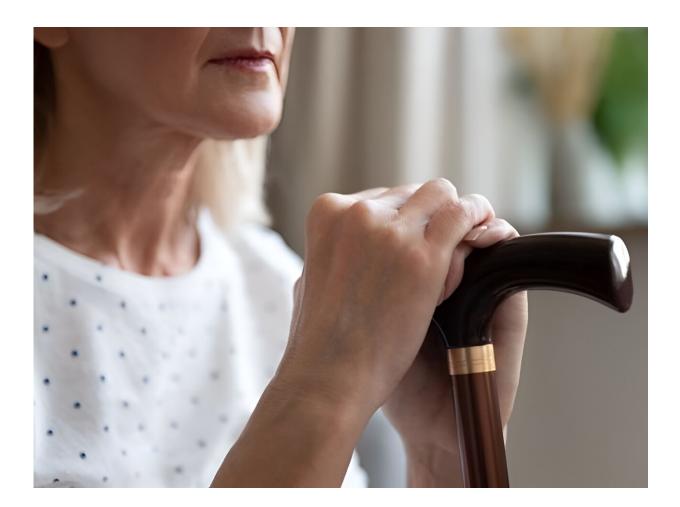# Sociodemographic factors before MS diagnosis tied to disease severity

September 29 2023, by Lori Solomon

Education, income, and marital status prior to multiple sclerosis (MS)

onset are associated with future symptom and disability severity, according to a study published online Sept. 26 in *JAMA Network Open*.

Anna He, M.B.B.S., from the Karolinska Institute in Stockholm, and colleagues used data from the Swedish MS Registry, Longitudinal Integrated Database for Health Insurance and Labor Market Studies, and National Patient Register during 2000 to 2020 to determine whether premorbid education, income, and marital status are associated with future MS disability and symptom severity. The analysis included sociodemographic data (education, income, and marital status) from one and five years prior to onset of MS for 4,557 patients ages 23 to 59 years.

The researchers found that with relapse-onset MS, higher premorbid income and education correlated with lower disability (Expanded Disability Status Scale [EDSS], −0.16 points per income quartile; EDSS, −0.47 points if tertiary educated), physical symptoms (Multiple Sclerosis Impact Scale [MSIS-29] physical subscore, −14 percent per income quartile; MSIS-29 physical subscore, −43 percent if tertiary educated), and psychological symptoms (MSIS-29 psychological subscore, −12 percent per income quartile; MSIS-29 psychological subscore, −25 percent if tertiary educated).

There was an association observed between marital separation and adverse outcomes (EDSS, 0.34; MSIS-29 physical subscore, 35 percent; MSIS-29 psychological subscore, 25 percent). Similarly, among those with progressive-onset MS, higher income correlated with lower EDSS (−0.30 points per income quartile), while education correlated with lower physical (−34 percent) and psychological symptoms (−33 percent). A similar pattern of results was observed for the five-year period prior to the MS index date for the relapse-onset cohort.

"These findings suggest that predisease education, income, and marital

status are associated with severity of future disability and symptom severity, and they should be considered in risk stratification," the authors write.

Several authors disclosed ties to the pharmaceutical industry.

More information: Anna He et al, Premorbid Sociodemographic Status and Multiple Sclerosis Outcomes in a Universal Health Care Context, *JAMA Network Open* (2023). DOI: 10.1001/jamanetworkopen.2023.34675

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