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Abstract Title: Structural Downward Mobility in Income for People Living with Multiple Sclerosis: Threshold Dynamics, Decision-Proximal Evidence, and Sex-Based Baseline Vulnerability

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Preferred Presentation Type: Oral or Poster presentation

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Background

Multiple sclerosis (MS) is a chronic neurological disease that often constrains functional capacity, severely impacting income.

Objectives/Aims

Extending predominantly Northern European evidence centred on employment or mean income, this study conceptualises MS as a progressive human capital shock and analyses distribution-wide downward mobility, including labour-market mechanisms and sex-specific penalties.

Methods

We linked the 2023 Australian Multiple Sclerosis Longitudinal Study (AMSLS) Economic Impact Survey with a propensity-score-matched healthy benchmark from Waves 22–23 of the Household, Income and Labour Dynamics in Australia (HILDA) Survey. Gross personal income was analysed across ordered income tiers capturing intensive-margin adjustment and exits into unemployment or disability retirement. Generalised ordered logit models estimated income-tier transitions, while Generalised Structural Equation Modelling (GSEM) decomposed income loss into direct wage effects and structurally mediated pathways using decision-proximal indicators such as self-rated productivity loss and MS-related occupational change.

Results

People with MS were disproportionately clustered in lower income tiers and underrepresented at higher levels relative to matched controls. This downward re-sorting was driven primarily by disability retirement and unemployment rather than within-job wage compression. Although income penalties were observed for both sexes, there was no evidence of a larger proportional MS-related shock for females; sex differences instead reflected unequal baseline earnings, producing larger absolute losses for females. GSEM results showed that income loss was predominantly mediated by occupational displacement and career erosion, with negligible direct wage effects. Decision-proximal

indicators identified functional thresholds associated with discrete income losses. Adjustment dynamics are sharply sex-based: among males with MS short run wage stability masks abrupt income loss driven by occupational displacement, whereas among females with MS income loss accrues more gradually through cumulative serial career erosion.

Conclusion

The findings support a threshold-based interpretation of income loss under MS, where economic penalties arise mainly from occupational disruption rather than gradual wage decline. The study highlights the importance of proactive policies focused on job retention and career continuity through early workplace accommodations, rather than relying primarily on post hoc income replacement after permanent workforce exit.

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