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Development of a Comorbidity Index for Persons With Spinal Cord Injury Combining The Spinal Cord Injury Secondary Conditions Scale (SCI-SCS) and Mortality-Based Weights

Topic: Miscellaneous

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BACKGROUND

To determine whether spinal cord injury (SCI)-specific comorbidity index that incorporate severity and mortality weights is better predictor of functioning and health than the overall score of the Spinal Cord Injury Secondary Conditions Scale (SCI-SCS).

METHODS

This study utilized data from the International Spinal Cord Injury Survey (InSCI), encompassing 21 countries across six WHO regions. To develop the comorbidity index, we used the secondary health conditions reported in the survey, which form the basis of the SCI-SCS, along with depression. In the first step, we created seven indices combined various levels of reported severity and mortality weights. The severity reflects how much of a problem they had with a specific health condition in the last three months, the mortality differentiate the health problems with the mortality risk. First weighted the health conditions equally, and second, we used disease-based weights within the SCI population. In the second step, we validated the indices. We examined their associations with two variables: 1) Functioning, measured using Pearson correlations, and 2) Self-reported health status, assessed with Spearman correlations. The analysis was also conducted at the country level to account for specific-country variability.

RESULTS

We developed eight indices, including the original SCI-SCS score. The index that demonstrated the strongest association with both functioning and self-reported health status combined the SCI-SCS score with mortality weights. The traditional SCI-SCS score followed closely in performance. All the constructed indices showed the expected patterns: a higher number of comorbidities correlated with reduced functioning and worse health status.

CONCLUSION

The SCI-SCS score effectively reflects a participant's health and improves when adjusted with mortality weights. This study confirms the feasibility of building a comorbidity index using self-reported data from individuals with SCI and highlights the complex connections between comorbidity, functioning, and self-reported health.

Statement of Disclosures

None

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