

# INSTRUMENTS MEASURING (HEALTH-RELATED) QUALITY OF LIFE IN PEOPLE WITH MULTIPLE SCLEROSIS: A SYSTEMATIC REVIEW FOLLOWING COSMIN GUIDELINES



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## INTRODUCTION

Multiple sclerosis (MS) is the most common disabling neurological disease in young adults and is characterized by variable disease course and clinical manifestations. There are many patient-reported outcome measures (PROMs) of quality of life (QoL) and health-related QoL (HRQoL) in MS. However, a comprehensive assessment of the most suitable (HR)QoL PROMs for use in an evaluative application is lacking.

## AIM

This systematic review aimed to assess the psychometric properties of (HR)QoL PROMs for people with MS.

## METHODS

We conducted a systematic review following the Consensus-based Standards for the selection of health Measurement Instruments (COSMIN) methodology (PROSPERO 2024; CRD42024507743) [1].

We searched MEDLINE, EMBASE, CINAHL, and PsycINFO databases (inception-1 July 2025). We included studies if their aim was to evaluate at least one psychometric property of a generic/MS-specific (HR)QoL PROM. Instruments with evidence for sufficient content validity and internal consistency were recommended, while those with high quality evidence for any insufficient measurement property were unrecommended.

## RESULTS (I)

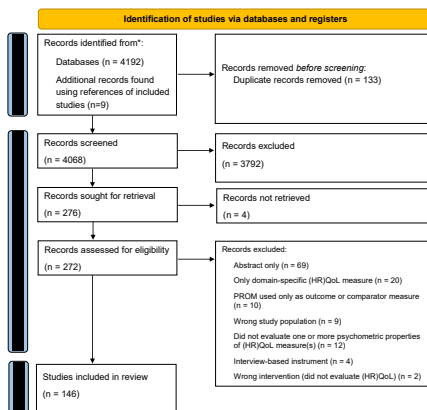
We screened 3628 abstracts, reviewed 267 full-text articles, and included 144 studies (Figure 1). 41 PROMs were identified including 16 generic (HR)QoL and 25 MS-specific (HR)QoL instruments. Overall, hypotheses testing for construct validity (convergent and known-groups validity), internal consistency, test-retest reliability, and structural validity were the most investigated measurement properties. Criterion validity, measurement error and cross-cultural validity/measurement invariance were the least studied.

## RESULTS (II)

Seven instruments were recommended for use:

1. Leeds MS QoL scale (**LMSQoL**) [2];
2. **MSQoL-54** items (physical and mental health composite scores, all subscale scores except for social function) [3];
3. MS Impact Scale-29 items (**MSIS-29**) (physical and psychological scores) [4];
4. MS International QoL questionnaire (**MusiQoL**) (all subscale scores except for satisfaction with healthcare and coping) [5];
5. QoL in Neurological Disorders (**Neuro-QoL**) (depression and communication short-form scores) [6];
6. **MSQoL-29** items (physical and mental health composite scores) [7];
7. Short QoL scale (**SQoL**) (physical, mental, energy subscale scores) [8].

Figure 1. Study flow diagram



## CONCLUSIONS

The COSMIN review:

- Identified the **evidence** available on the **psychometric properties** of 41 self-report instruments assessing **(HR)QoL in MS**
- Highlighted which **properties** have been more or less frequently studied
- Will support **clinicians and researchers** in selecting the most appropriate instruments

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