

# The Perception of Disability in Multiple Sclerosis: Validation and Psychometric Properties of the Italian Perceived Disability Scale

Federica Satriano<sup>1</sup>, Gina Ferrazzano<sup>1</sup>, Simona Raimo<sup>2</sup>, Antonella Di Vita<sup>1</sup>, Mariachiara Gaita<sup>3</sup>, Miriam Veneziano<sup>3</sup>, Valentina Torchia<sup>2</sup>, Angelo Collura<sup>1</sup>, Maria Paola Zerella<sup>1</sup>, Daniele Belvisi<sup>1,4</sup>, Giorgio Leodori<sup>1,4</sup>, Elisabetta Signoriello<sup>5,6</sup>, Giacomo Lus<sup>5,6</sup>, Marco Innamorati<sup>7</sup>, Liana Palermo<sup>2</sup>, Antonella Conte<sup>1,4</sup>

1. Department of Human Neuroscience, 'Sapienza' University of Rome, Roma, Italy
2. Department of Medical and Surgical Sciences, 'Magna Graecia' University of Catanzaro, Catanzaro, Italy
3. Department of Psychology, University of Campania 'Luigi Vanvitelli', Caserta, Italy
4. IRCCS Neuromed, Pozzilli (IS), Italy
5. Multiple Sclerosis Center, II Neurological Clinic, University of Campania 'Luigi Vanvitelli', Napoli, Italy
6. Department of Medical and Surgical Sciences, University of Campania 'Luigi Vanvitelli', Napoli, Italy
7. Department of Health and Life Sciences, European University of Rome, Rome, Italy

## INTRODUCTION

Traditional assessments of Multiple Sclerosis (MS)-related disability primarily rely on objective clinical evaluations, often neglecting the subjective experiences of people with MS (pwMS), which are affected by physical, cognitive, and emotional factors.

## AIM

To validate the Italian version of the Perceived Disability Scale (IPDS), a 20-item self-report tool designed to evaluate perceived disability across physical, psychological, and social domains.

## METHOD

A total of 100 pwMS underwent the IPDS and a comprehensive clinical and neuropsychological assessment, including the Expanded Disability Status Scale (EDSS), Fatigue Severity Scale (FSS), Hamilton Depression and Anxiety Rating Scales (HAM-D and HAM-A), and the Brief Repeatable Battery of Neuropsychological Tests (BRB-N).

Factor analysis was performed to examine the IPDS structure. Internal consistency was assessed using Cronbach's alpha. Correlational analyses were conducted to examine the relationship between IPDS scores and clinical variables.

1. Il mio corpo è debole e inaffidabile
2. La mia salute è più ragionevole di quella delle altre persone
3. I farmaci mi perseguiteranno per tutto il resto della vita
4. Per tutta la vita sarò costretto a preoccuparmi delle mie condizioni
5. Mi sembra di essere sempre senza fiato
6. Non riesco a uscire di casa e quando lo faccio ho una costante paura
7. Perdo le staffe molto più facilmente di un tempo
8. La mia malattia o le mie condizioni frequentemente mi deprimono
9. Mi stanco molto più facilmente di un tempo
10. Mi è sempre più difficile provare piacere per qualcosa
11. Ogni novità ormai mi crea ansia e angoscia
12. Spesso provo un dolore intollerabile
13. Non riesco più a lavorare come un tempo
14. Parti del mio corpo sembrano non appartenermi più
15. Le condizioni economiche mie e della mia famiglia sono peggiorate a causa delle mie condizioni
16. La mia vita familiare è danneggiata dalle mie condizioni
17. Non riesco più a coltivare i miei passatempi come un tempo
18. Non riesco più a mantenere i contatti con gli amici come vorrei
19. Spesso mi vengono in mente pensieri negativi o immagini sgradevoli riguardanti il futuro
20. Spesso mi sento stanco di questa vita

## RESULTS

Factor analysis confirmed the five-factor structure of the IPDS:

- **Factor 1:** Cognitive Impact of Disability,
- **Factor 2:** Emotional Perception – Anxiety;
- **Factor 3:** Emotional Perception – Depression, Anhedonia, Anger;
- **Factors 4:** perception of Current Health;
- **Factor 5:** perception of Future Health.

The five factors cumulatively explained 75% of the total variance, with excellent internal consistency (Cronbach's alpha = 0.90).

The IPDS total score showed significant correlations with EDSS ( $r = 0.43$ ,  $p < 0.001$ ), FSS ( $r = 0.61$ ,  $p < 0.001$ ), HAM-A ( $r = 0.41$ ,  $p < 0.001$ ), and HAM-D ( $r = 0.48$ ,  $p < 0.001$ ).

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
16. My family life is damaged by my condition.	1.035	-0.401	-	-	-
15. My family's and my own financial situation has worsened because of my condition.	0.759	-	-0.142	-	-0.134
17. I can no longer enjoy my hobbies as I used to	0.724	-	-0.161	0.198	0.255
18. I am unable to maintain contact with friends as I would like.	0.597	0.286	-	-0.213	0.203
19. Negative thoughts or unpleasant images about the future often come to mind.	0.455	0.189	0.311	-0.176	0.153
6. I can't leave the house, and when I do, I am constantly afraid.	-0.229	0.911	-	-	-
11. Any new situation now causes me anxiety and distress.	-	0.830	-0.199	-0.106	0.139
5. I always feel like I am out of breath.	-0.208	0.686	0.230	-	-
1. My body is weak and unreliable.	-	0.550	-	0.450	-
14. Parts of my body no longer feel like they belong to me.	0.361	0.481	-	0.225	-0.127
7. I lose my temper much more easily than I used to.	-0.364	-0.127	0.833	0.130	0.127
20. I often feel tired of this life.	0.214	0.104	0.756	-0.308	-
10. It is increasingly difficult for me to find joy in anything.	0.185	-	0.725	-	-
8. My illness or condition frequently makes me feel depressed.	0.289	-	0.469	-	0.162
12. I often experience unbearable pain.	-	0.250	0.439	0.285	-0.214
9. I get tired much more easily than I used to.	-	-0.198	0.136	0.790	0.220
2. My health is more fragile than that of other people.	-	-	-	0.717	0.180
13. I can no longer work as I used to.	0.277	0.210	-	0.522	-0.187
3. Medication will haunt me for the rest of my life.	-	0.171	-	-	0.831
4. I will have to worry about my condition for the rest of my life	-	-	-	0.230	0.794

## CONCLUSIONS

These findings validate the IPDS as a reliable and valuable tool for assessing perceived disability in MS. By capturing pwMS' subjective experiences, the IPDS offers valuable insights for personalized care and supports the integration of patient-reported outcomes into routine clinical practice.



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