

# Tools for assessing sexual function in MS Patients

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## Abstract

**Introduction:** Young adults are most commonly affected by Multiple Sclerosis (MS), a demyelinating illness of the Central Nervous System (CNS) that alters motor function, vision, sphincter control, and gait. These symptoms reduce the patient's functional status. On the other hand, other signs, including sexual dysfunction, might also affect a person's quality of life.

**Development:** Sexual dysfunction will affect between 50% and 90% of patients at some point during their illness. It might be a subsequent symptom of demyelinating lesions in the brain, spinal cord, or both, or it can be brought on by symptoms unrelated to the neurological system (fatigue; psychological, social, and cultural factors; etc.). Sexual dysfunction is usually underestimated, despite the fact that its frequency and effects on quality of life are well established. In order to provide early multidisciplinary care, therefore evaluate the many scales for determining the presence or severity of sexual dysfunction in this article.

**Conclusion:** We examined five questionnaires that might detect the existence of sexual dysfunction in MS patients and establish its cause, aiding in treatment selection. MS must be viewed as a multifaceted illness that affects more than just individuals' capacity to function and involves numerous facets of their health.

**Keywords:** Multiple sclerosis • Sexual dysfunction • Disability • Depression • Urodynamic function

## Introduction

Multiple Sclerosis (MS) is a central nervous system inflammatory demyelinating disease that primarily affects adults (20 years–40 years old), mostly women. Early on, it exhibits inflammation, demyelination, and axonal damage, which results in impairment, physical changes, and mood swings with a detrimental effect on the quality of life [1]. Globally, 2.5 million people are affected by the illness, with a mean prevalence of 33 instances per 100,000 people; the prevalence varies by country, with North America and Europe showing the greatest rates. Since sexuality has an effect on many parts of everyday life, including self-image, self-esteem, and interpersonal and romantic relationships, Sexual Dysfunction (SD) is one of the symptoms of MS that is frequently of concern. But it hasn't gotten much attention. SD is prevalent between 50% and 90% of the time and can develop at any point during the course of MS. However, the precise prevalence of SD is difficult to quantify due to variations in its categorization. Previous studies have indicated prevalence rates of 33% to 75% in women and 47% to 75% in men.

Neurologists commonly undervalue SD since they have a propensity to ignore it while assessing MS patients. In a research by the consortium of multiple sclerosis centres, sadness, anxiety, sleep problems, and pain were the most frequently assessed symptoms (other than motor, sensory, or bowel/bladder symptoms) (80%) [2]. Only half of SD instances are treated with a general question, and only 4 out of 24 times do doctors employ a specific tool, either because of time constraints or a lack of knowledge about this problem. Additionally, there aren't many verified and standard instruments available for researching sexual function in MS. In a systematic analysis of 21 validated questionnaires for the assessment of sexual function in neurological patients, only four of the 21 validated questionnaires for usage in MS patients were found. However, these tools have not been included in a complete care model for MS patients, are only validated in a small number of languages, and are primarily intended to evaluate female sexual function. In order to propose a more all-encompassing treatment for this condition, taking into account its effects on quality of life, this review aims to describe general and specific diagnostic and follow-up tools used in studies of patients with MS and SD (scales assessing sexual function or other factors directly or indirectly affecting sexual function).

## Sexual dysfunction

A diverse range of diseases known as sexual dysfunction is characterised by a clinically significant change in a person's sexual response or ability to enjoy sexual activity. This includes genitopelvic discomfort, Erectile Dysfunction(ED), diminished sexual desire, orgasmic dysfunction in women, premature and delayed ejaculation, and drug-induced SD. Except in the instance of drug-induced SD, SD may be characterised as a condition that causes anxiety and interpersonal stress for at least 6 months [3]. During the assessment, it is necessary to determine when SD first manifested (lifelong or acquired) as well as how it manifested (generalised or situational); these details offer diagnostic hints and may therefore influence the treatment action. We should also take into account additional variables that could affect SD, including the partner's sexual or physical health issues, interpersonal issues, personal vulnerability (poor body image, history of sexual abuse), psychiatric comorbidities (depression, anxiety), stressors (unemployment), cultural or religious factors, and medical issues. Biological, psychological, and societal factors all have an impact on sexual function. It has been proposed that MS may impact sexual function through a variety of direct and indirect pathways. However, the precise aetiology of SD is more complicated because it combines anatomical, physiological, biochemical, and psychological factors. In their conceptual model, Foley and Iverson divided the dysfunction caused by SD in MS into three categories: main, secondary, and tertiary. MS-related neurological alterations that result in demyelinating lesions to the brain and/or spinal cord are the primary cause of primary SD and may have an impact on sexual sensation and responsiveness. Loss of libido, poor genital sensitivity, orgasm and arousal dysfunction, decreased vaginal lubrication, and erectile dysfunction is all brought on by these lesions. Secondary SD is produced by symptoms not directly engaging nervous system routes like to the genital system; it results from physical changes rather than sequelae that indirectly affect sexual responsiveness. These signs and symptoms include weakness, weariness, spasticity, trouble moving, poor coordination, bladder and bowel dysfunction, bad drug reactions, pain, discomfort in non-genital areas, and cognitive issues. Secondary SD deals with psychological, social, and cultural components of MS that have an impact on sexual function, such as low self-esteem, a sense of unattractiveness, a lack of confidence, a fear of being rejected, sadness, and rage [4].

## Sexual dysfunction evaluation

Patients with SD may also have urodynamic dysfunction, low quality of life, and psychiatric comorbidities (depressive and/or anxiety disorder). In light of this, patients should also be evaluated using scales that concentrate on the quality of life, urodynamic function, sexual satisfaction, and mood in order to ensure a thorough assessment of sexual function. When evaluating Sexual Dysfunction (SD) in patients with neurological diseases, validated questionnaires and tools should be used to assess various factors that may have an effect on MS either directly or indirectly. These include physical changes like spasticity, bowel and bladder dysfunction, unfavourable drug reactions, and psychosocial issues like depression. A thorough examination helps to improve the diagnosis and management of SD. The use of sexual function assessments along with scales evaluating the quality of life, urodynamic function, sexual satisfaction, and mood symptoms has been discussed in several studies [5].

## Scales for evaluating sexual function in MS patient

### Index of female sexual function

For non-neurological patients, the Female Sexual Function Index (FSFI) was initially created to assess particular facets of sexual function over the previous four weeks. It has even been suggested as the gold standard for the identification of this disorder. It is one of the most commonly used scales for the evaluation of SD in women. The 19 items of the FSFI are graded on a Likert-type scale from 1 to 5, depending on how much agreement they receive. Sexual desire, arousal, lubrication, orgasm, satisfaction, and pain are the domains that are assessed. Total scores can be between 2 and 36, with scores under 26.55 indicating an SD [6]. The scale has never been used to assess changes in SD following therapeutic intervention, but this area of study has great promise. Men are not eligible to utilise the FSFI for the diagnosis or follow-up of women with MS.

### International erectile function index

To assess the efficacy of sildenafil treatment in individuals with SD, the International Index of Erectile Function (IIEF) was created and validated in 1996–1997. Erectile function, orgasmic function, sexual desire, satisfaction during intercourse, and overall satisfaction are the five domains that are evaluated by the questionnaire's 15 questions. The total score might be between 0 and 75 points. Although the IIEF has been used in multiple studies to estimate the prevalence of SD in MS-positive men, it has not yet been approved for use in neurological patients. It is regarded as the gold standard measure for efficacy assessment in clinical studies of erectile dysfunction and has been validated in other languages, including Spanish. It does not, however, assess other aspects of sexuality, such as early ejaculation, diminished desire for sex, and romantic relationships.

## Mood symptoms

Several studies have found a link between MS and depression, with depression causing SD and vice versa. The following depression indices are used in the context of MS:

- The Beck Depression Inventory (BDI) is a self-assessment tool used to assess the clinical sorrow and intrusive thoughts that are part of depression. This scale does not assess motor or anxiety symptoms, but it does assess the majority of cognitive symptoms. It is widely used to gauge the severity of sickness [7].
- The Hamilton Depression Rating Scale (HAM-D) is a scale for measuring the depth or severity of depression that must be given by a medical expert. It is one of the instruments that are most frequently used to track the course of symptoms in both clinical and research settings. With the exception of sleep items, which ask about the previous two days, the majority of questions were asked about the patient's feelings at the moment of evaluation. There are 21 items in the original edition. There are now shorter variations available, such as a 17-item version created by Hamilton as well as 24-item and 6-item versions [7].
- The Montgomery Asberg Depression Rating Scale (MADRS), which was created in 1979 and is based on the Comprehensive Psychopathological Rating Scale, has ten items that assess the severity of depression symptoms (CPRS). It is intended to be administered by a medical practitioner.
- A screening technique called the Center for Epidemiological Studies-Depression (CES-D) can identify depression depending on whether or not a person has had depressive symptoms throughout the past week.

## Urodynamic function

Modifications to the urogenital system may directly affect sexual function. The following are some of the most popular scales for identifying urodynamic dysfunction:

- Female lower urinary tract symptoms are assessed using the self-administered International Consultation on Incontinence Questionnaire-Female Lower Urinary Tract Symptoms (ICIQ-FLUTS) [8].
- An instrument for assessing the presence, nature, and severity of urinary incontinence as well as the related urogenital symptoms is the Urogenital Distress Inventory (UDI-6) [9].
- I-QoL: A Measure of Incontinence Quality of Life (I-QoL). This assessment has three subscales: social shame; psychosocial impact; and avoidance and limiting behaviours [10].

## Conclusion

Only five scales have been validated or specifically created for MS patients, despite the fact that many scales have been devised to assess SD. These tools could aid in the diagnosis of SD, the origin of the condition, and the identification of potential treatments. Given the high frequency of SD in MS patients and its significant negative impact on quality of life, all patients should have their sexual function thoroughly examined. This evaluation should take into account factors including mood, disability, and urodynamic function. This study offers details on the scales now in use as well as a broad overview of the complex and challenging to control components that contribute to SD. For the purpose of making treatment decisions, these scales offer useful information. These questionnaires should be used in future research to assess patient response to SD treatment and to ascertain whether MS disease-modifying therapies have an effect on SD. In addition to the resulting disability, MS must be recognised as a complex entity involving many other health domains.

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