

Instruments with evidence of validity on male sexual dysfunction: scoping review protocol

Instrumentos com evidências de validade sobre disfunção sexual masculina: protocolo de revisão de escopo

Dayane Abreu Ribeiro¹
ORCID: 0000-0001-8359-1544

André Carlos Santos Ferreira¹
ORCID: 0000-0003-3393-7062

Cassia Regina Gontijo Gomes²
ORCID: 0000-0002-9231-6672

Cissa Azevedo³
ORCID: 0000-0001-5881-5710

Fábio da Costa Carbogim⁴
ORCID: 0000-0003-2065-5998

M. Graça Pereira⁵
ORCID: 0000-0001-7987-2562

Luciana Regina Ferreira da Mata¹
ORCID: 0000-0002-5080-4643

¹Universidade Federal de Minas Gerais,
Belo Horizonte, MG, Brasil

²Faculdade Pitágoras, Betim, MG, Brasil

³Universidade Federal de São João del-Rei,
Divinópolis, MG, Brasil

⁴Universidade Federal de Juiz de Fora,
Juiz de Fora, MG, Brasil

⁵Universidade do Minho, Braga, Portugal

Editors:

Ana Carla Dantas Cavalcanti
ORCID: 0000-0003-3531-4694

Paula Vanessa Peclat Flores
ORCID: 0000-0002-9726-5229

Barbara Pompeu Christovam
ORCID: 0000-0002-9135-8379

Corresponding author:

Luciana Regina Ferreira da Mata
E-mail: lucianarfmat@gmail.com

Submission: 12/15/2023
Approved: 07/28/2024

ABSTRACT

Objective: to map instruments with evidence of validity that assess male sexual dysfunction. **Method:** a scoping review based on the methodology of the Joanna Briggs Institute, in conjunction with the PRISMA-ScR checklist. The search will be carried out in three stages. The main data sources include: Virtual Health Library, MEDLINE via PubMed, Cochrane Library, Scopus, Web of Science, Embase, and PsycInfo. In addition, additional sources such as OpenGrey and the Brazilian Digital Library of Theses and Dissertations will be used. The selection of studies will be done independently by two reviewers using the Rayyan software, and a third reviewer will resolve divergences. Data extraction will be conducted using a form created by the authors. This protocol will guide the scoping review in enumerating and mapping the results, which will be presented through a narrative discussion, tables, summaries, and flowcharts. This study is ongoing, and the protocol is registered with the Open Science Framework: <https://osf.io/jdh78>.

Descriptors: Physiological Sexual Dysfunctions; Male; Surveys and Questionnaires.

RESUMO

Objetivo: mapear instrumentos com evidência de validade que avaliam a disfunção sexual masculina. **Método:** revisão de escopo baseada na metodologia do Instituto Joanna Briggs, em conjunto com o *checklist* PRISMA-ScR. A busca será realizada em três etapas. As principais fontes de dados incluem: Biblioteca Virtual em Saúde, MEDLINE via PubMed, Cochrane Library, Scopus, Web of Science, Embase e PsycInfo. Além disso, serão utilizadas fontes adicionais como OpenGrey e a Biblioteca Digital Brasileira de Teses e Dissertações. A seleção dos estudos será feita de forma independente por dois revisores utilizando o *software* Rayyan, e divergências serão resolvidas por um terceiro revisor. A extração dos dados será conduzida por meio de um formulário criado pelos autores. Este protocolo guiará a revisão de escopo para enumerar e mapear os resultados, que serão apresentados por meio de uma discussão narrativa, tabelas, resumos e fluxogramas. Este estudo está em andamento e o protocolo está registrado no Open Science Framework: <https://osf.io/jdh78>.

Descritores: Disfunções Sexuais Fisiológicas; Masculino; Inquéritos e Questionários.

INTRODUCTION

Sexuality is a basic human need that involves multidimensional aspects: biological, psychological, social, cultural, and historical^(1,2). It is an important predictor of health-related quality of life (QoL), influencing thoughts, attitudes, feelings, and social interactions and affecting physical and emotional health. The human sexual cycle consists of four phases, each with its neurophysiology: 1) desire, which is the interest in sexual activity; 2) arousal, referring to the sensation of sexual pleasure; 3) orgasm, characterized by muscle contractions and a feeling of relief; and 4) resolution, which is the feeling of well-being after muscle relaxation⁽³⁾.

Sexual dysfunction (SD) is defined as any alteration or disturbance in an individual's sexual response cycle, whether in the phase of desire, arousal, and/or orgasm, which results in an unsatisfactory and unrewarding sexual experience⁽²⁾. Among the leading male DS are erectile dysfunction (ED), Peyronie's disease (PD), ejaculatory disorders (e.g., premature and delayed ejaculation), and sexual desire problems⁽⁴⁾.

A Polish study that assessed the prevalence of SD in men and women aged 18 to 70 found that, among the 1,054 male participants, 36.5% had some form of SD⁽⁵⁾. Another study, carried out in Germany with 2,500 men, revealed that 30% had SD, 21% with ED, 7.2% with low libido, and 5.2% with premature ejaculation⁽⁶⁾.

Male SD can affect men of all ages and is associated with adverse health conditions and various risk factors, such as age, sedentary lifestyle, smoking, excessive alcohol consumption, depression, and cardiovascular diseases. Clinical assessment is therefore essential to diagnose this condition⁽⁷⁾. In this context, the importance of Patient-Reported Outcome Measures (PROMs) to aid clinical decision-making and better understand the impact of SD on individuals' QoL is highlighted. These tools objectively measure subjective information and are helpful in research and clinical practice⁽⁸⁾.

Various instruments are designed to assess phenomena in the health area based on different constructs. It is essential that these instruments are validated through psychometric analysis to guarantee validity, reliability, practicability, sensitivity, and responsiveness⁽⁹⁾.

A preliminary search was carried out in December 2022 and updated on November 4, 2023, in the following databases: Virtual Health Library (VHL), MEDLINE (Medical Literature Analysis and Retrieval System Online) via Pubmed, Cochrane, Scopus, Web Of Science, Embase (Excerpta Medica Database) and Psycinfo (Psychological Information Database). The research indicated that, in the context of male SD, there are instruments that assess ED, sexual desire, and ejaculation time, among other com-

ponents^(10,11). However, no review studies were found that specifically addressed the topic of interest.

A study of 2,021 men validated the Colombian version of the International Index of Erectile Function (IIFE-5), an instrument consisting of five items in Likert format⁽¹¹⁾. The results showed that the IIFE-5 has adequate psychometric properties, confirmed the scale's one-dimensional factorization, and presented evidence of validity and reliability. The authors stress that instruments like this are essential for assessing and guiding the treatment of SD⁽¹¹⁾.

This justifies the relevance of this scoping review, which aims to map the instruments with evidence of validity that assess male SD. It is hoped that by using valid instruments, a detailed and individualized assessment of SD will be possible, allowing appropriate clinical decisions in line with patients' expectations and needs.

METHOD

This is a scoping review protocol. To guarantee the quality and rigor of this type of study, the guidelines of the Joanna Briggs Institute (JBI)⁽¹²⁾, in conjunction with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses—Extension for Scoping Reviews (PRISMA-ScR)⁽¹³⁾, will be considered. The protocol was registered on the Open Science Framework (OSF) platform and can be accessed at <https://osf.io/jdh78>.

Review question

The PCC (Population, Concept, and Context) mnemonic was used to formulate the guiding question of this review: "What instruments exist in the literature with evidence of validity to assess male SD?"

Inclusion criteria

Participants

Studies with men of any age that deal with the psychometric analysis of instruments to measure the construct of interest will be considered.

Concept

For the purposes of conceptualization, this review will include male SD diagnoses listed in the ICD-11, such as hypoactive sexual desire disorder, ED, anorgasmia, and ejaculatory disorders (premature and delayed)⁽¹⁴⁾.

According to the Standards for Educational and Psychological Testing⁽¹⁵⁾, the pentagonal model will be used to verify the validity of the instruments. The pentagonal model covers: test content, response process, internal structure, relationship with other variables, and test consequences. At least one of these criteria must be met.

Context

The study context is clinical health practice, including outpatient settings, hospitals, or any other setting related to DS care. Studies that use instruments only to evaluate clinical outcomes in intervention research or to evaluate the psychometric properties of different instruments will be excluded.

Type of evidence sources

Quantitative, mixed, experimental, quasi-experimental, observational, and qualitative validation and methodological studies will be considered. Conference abstracts, materials presented orally at events, editorials, systematic reviews, and narratives will be excluded.

Search strategy

According to the JBI, the search strategy consists of three stages: in the first stage, a limited search was carried out in the VHL and the MEDLINE database, using the descriptors: "Physiological Sexual Dysfunctions", "Male", "Validation Study", "Surveys and Questionnaires", and "Erectile Dysfunction". Next, the keywords and indexing terms in the title and abstract of the retrieved articles used to identify studies were analyzed. In the second stage, a search will be carried out using all the identified keywords and indexing terms in the BVS, MEDLINE via PubMed, Cochrane Library, Scopus, Web of Science, Embase, and PsycInfo databases. A search of the gray literature will also be carried out through the OpenGrey and Brazilian Digital Library of Theses and Dissertations (BDBTD) databases. In the third stage, the researchers will manually screen the references of the studies selected in the review to identify potentially eligible studies. If necessary, the authors of the selected studies will be contacted via e-mail to obtain further information. The full description of the search strategy is shown in Figure 1. The strategy was developed by the reviewers in conjunction with a librarian from the Federal University of Minas Gerais (UFMG), with no time or language restrictions.

Figure 1 - Database search strategy. Belo Horizonte, MG, Brazil, 2024

Sources of information	Search strategy	Records retrieved
BVS	("Inquéritos e Questionários" OR "Surveys and Questionnaires" OR "Encuestas y Cuestionarios" OR "Enquêtes et questionnaires" OR Questionário OR Questionários OR Instrumento OR Instrumentos OR Escala OR Escalas OR Questionnaire OR Questionnaires OR Instrument OR Instruments OR Scale OR Scales) AND ("Disfunções Sexuais Fisiológicas" OR "Sexual Dysfunction, Physiological" OR "Disfunciones Sexuales Fisiológicas" OR "Troubles sexuels d'origine physiologique" OR "Physiological Sexual Disorder" OR "Physiological Sexual Disorders" OR "Physiological Sexual Dysfunction" OR "Physiological Sexual Dysfunctions") AND ("Disfunção Erétil" OR "Erectile Dysfunction" OR "Disfunción Erétil" OR "Dysfonctionnement érectile" OR Masculino OR Male OR Mâle OR Masculina OR "Impotência Sexual Masculina" OR "Male Impotence" OR "Male Sexual Impotence") AND ("Estudo de Validação" OR "Validation Study" OR "Estudio de Validación" OR "Études de validation" OR "Estudos de Validação" OR "Validation Studies")	86
MEDLINE (via PubMed)	("Surveys and Questionnaires" OR Questionnaire OR Questionnaires OR Instrument OR Instruments OR Scale OR Scales) AND ("Sexual Dysfunction, Physiological" OR "Physiological Sexual Disorder" OR "Physiological Sexual Disorders" OR "Physiological Sexual Dysfunction" OR "Physiological Sexual Dysfunctions") AND ("Erectile Dysfunction" OR Male OR "Male Impotence" OR "Male Sexual Impotence") AND ("Validation Study" OR "Validation Studies")	136
Cochrane Library	("Surveys and Questionnaires" OR Questionnaire OR Questionnaires OR Instrument OR Instruments OR Scale OR Scales) AND ("Sexual Dysfunction, Physiological" OR "Physiological Sexual Disorder" OR "Physiological Sexual Disorders" OR "Physiological Sexual Dysfunction" OR "Physiological Sexual Dysfunctions") AND ("Erectile Dysfunction" OR Male OR "Male Impotence" OR "Male Sexual Impotence") AND ("Validation Study" OR "Validation Studies")	1
Scopus	("Surveys and Questionnaires" OR Questionnaire OR Questionnaires OR Instrument OR Instruments OR Scale OR Scales) AND ("Sexual Dysfunction, Physiological" OR "Physiological Sexual Disorder" OR "Physiological Sexual Disorders" OR "Physiological Sexual Dysfunction" OR "Physiological Sexual Dysfunctions") AND ("Erectile Dysfunction" OR Male OR "Male Impotence" OR "Male Sexual Impotence") AND ("Validation Study" OR "Validation Studies")	31
Web of Science	("Surveys and Questionnaires" OR Questionnaire OR Questionnaires OR Instrument OR Instruments OR Scale OR Scales) AND ("Sexual Dysfunction, Physiological" OR "Physiological Sexual Disorder" OR "Physiological Sexual Disorders" OR "Physiological Sexual Dysfunction" OR "Physiological Sexual Dysfunctions") AND ("Erectile Dysfunction" OR Male OR "Male Impotence" OR "Male Sexual Impotence") AND ("Validation Study" OR "Validation Studies")	1
Embase	(questionnaire or scale or instrument) and ('sexual dysfunction') and ('erectile dysfunction' or male) and ('validation study')	115
PsycInfo (acesso mediante assinatura)	("Surveys and Questionnaires" OR Questionnaire OR Questionnaires OR Instrument OR Instruments OR Scale OR Scales) AND ("Sexual Dysfunction, Physiological" OR "Physiological Sexual Disorder" OR "Physiological Sexual Disorders" OR "Physiological Sexual Dysfunction" OR "Physiological Sexual Dysfunctions") AND ("Erectile Dysfunction" OR Male OR "Male Impotence" OR "Male Sexual Impotence") AND ("Validation Study" OR "Validation Studies")	2
OpenGrey	(questionnaire or scale or instrument) and ("sexual dysfunction")	0
Biblioteca Digital Brasileira de Teses e Dissertações	(questionário or instrumento or escala) and ("disfunção sexual")	4

Study selection

The identified studies will be exported to the online software Endnote Web (Clarivate Analytics, PA, USA) to store and correctly organize the references obtained in the search. Duplicates will be removed, and the data will be exported to the Rayyan software⁽¹⁶⁾, in which two reviewers will assess the studies independently so that one reviewer will not have access to the decisions of the other. Disagreements will be resolved by a third reviewer. The initial selection will be based on reading the titles and abstracts, followed by reading the full text of the articles

included. Both stages will be based on meeting the inclusion criteria of the study objective.

Data extraction

Data extraction will be done using a form drawn up by the reviewers based on the JBI manual⁽⁹⁾ (Figure 2).

The form may be adjusted during the completion phase, with any changes recorded in the review report. Two reviewers will carry out the extraction independently, with subsequent comparisons. A third reviewer will analyze points of disagreement to decide whether or not to include the study.

Figure 2 - Data extraction tool. Belo Horizonte, MG, Brazil, 2024

Identification of the study						
Journal/impact factor	Title	Author	Year	Country	Language	Objective
Instrument characteristics						
Name	Outcome analyzed	Number and description of domains	Number of itens	Answer options	Form of analysis (scoring/ranking system)	
Participants in the validity process						
Sample size and characteristics		Type of DS	Inclusion criteria	Exclusion criteria		
Evidence of the instrument's validity						

Presentation of results

The results will be presented using charts, tables, summaries, flowcharts, and narrative discussion to provide an overview of the instruments that assess male SD, their validity evidence, and psychometric properties.

REFERENCES

- Chen L, Shi GR, Huang DD, Li Y, Ma CC, Shi M, et al. Male sexual dysfunction: A review of literature on its pathological mechanisms, potential risk factors, and herbal drug intervention. *Biomed Pharmacother.* 2019;112:108585. <https://doi.org/10.1016/j.biopha.2019.01.046>
- Nosrati F, Nikoobakht MR, Oskouie IM, Rahimdoost N, Inanloo H, Abolhassani M, et al. Does Significant Weight Loss After Bariatric Surgery Affect Sexual Function and Urinary Symptoms? An Iranian Study. *Obes Surg.* 2023;33(8):2509-2516. <https://doi.org/10.1007/s11695-023-06717-w>
- Nicol A, Chung E. Male sexual dysfunction: Clinical diagnosis and management strategies for common sexual problems. *Aust J Gen Pract.* 2023;52(1-2):41-45. <https://doi.org/10.31128/AJGP-09-22-6559>
- Anderson D, Laforge J, Ross MM, Vanlangendonck R, Hasoon J, Viswanath O, et al. Male sexual dysfunction. *Health Psychol Res.* 2022;10(3):37533. <https://doi.org/10.52965/001c.37533>
- Lew-Starowicz Z, Czajkowska K. Prevalence of sexual dysfunctions and associated risk factors in Poland. *Arch Med Sci.* 2019;18(4):1031-1040. <https://doi.org/10.5114/aoms.2019.86794>
- Herkommer K, Meissner VH, Dinkel A, Jahnen M, Schiele S, Kron M, et al. Prevalence, lifestyle, and risk factors of erectile dysfunction, premature ejaculation, and low libido in middle-aged men: first results of the Bavarian Men's Health-Study. *Andrology.* 2023;1-8. <https://doi.org/10.1111/andr.13524>

7. Calogero AE, Burgio G, Condorelli RA, Cannarella R, La Vignera S. Epidemiology and risk factors of lower urinary tract symptoms/benign prostatic hyperplasia and erectile dysfunction. *Aging Male*. 2019;22(1):12-19. <https://doi.org/10.1080/13685538.2018.1434772>
8. Churrua K, Pomare C, Ellis LA, Longa JC, Henderson SB, Murphy ED, et al. Patient-reported outcome measures (PROMs): A review of generic and condition-specific measures and a discussion of trends and issues. *Health Expect*. 2021;24(4):1015-1024. <https://doi.org/10.1111/hex.13254>
9. Nora CRD, Zoboli E, Vieira MM. Validation by experts: importance in translation and adaptation of instruments. *Rev Gaúcha Enferm*. 2017;38(3):e64851. <http://dx.doi.org/10.1590/1983-1447.2017.03.64851>
10. Przydacz M, Golabek T, Dudek P, Chłosta P. The Multiple Sclerosis Intimacy and Sexuality Questionnaire (MSISQ-15): translation, adaptation and validation of the Polish version for patients with multiple sclerosis and spinal cord injury. *BMC Neurol*. 2021;21(1):103. <https://doi.org/10.1186/s12883-021-02132-9>
11. Vallejo-Medina P, Saffon JP, Álvarez-Muelas A. Colombian Clinical Validation of the International Index of Erectile Function (IIEF-5). *Sex Med*. 2022;10(1):100461. <https://doi.org/10.1016/j.esxm.2021.100461>
12. Peters MDJ, Godfrey C, McInerney P, Munn Z, Tricco AC, Khalil, H. Chapter 11: Scoping Reviews (2020 version). In: Aromataris E, Munn Z, editors. *JBIM Manual for Evidence Synthesis* [Internet]. Adelaide: JBI; 2020 [citado 2022 mai 23]. Available from: <https://synthesismanual.jbi.global>
13. Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med*. 2018;169(7):467-473. <http://dx.doi.org/10.7326/M18-0850>
14. World Health Organization. ICD-11 for Mortality and Morbidity Statistics [Internet]. Geneva: WHO; 2021 [citado 2022 Mai 22]. Available from: <https://icd.who.int/browse11/l-m/en#/http://id.who.int/icd/entity/16069046>
15. American Educational Research Association; American Psychological Association; National Council on Measurement in Education. Standards for educational and psychological testing [internet]. Washington (DC): American Educational Research Association; 2014 [citado 2022 Mai 22]. Available from: https://www.testingstandards.net/uploads/7/6/6/4/76643089/standards_2014edition.pdf
16. Ouzzani M, Hammady H, Fedorowicz Z, Elmagarmid A. Rayyan-a web and mobile app for systematic reviews. *Syst Rev*. 2016;5(1):210. <https://doi.org/10.1186/s13643-016-0384-4>

AUTHORSHIP CONTRIBUTIONS

Project design: Ribeiro DA, Ferreira ACS, Mata LRF da

Data collection: Ribeiro DA, Ferreira ACS, Gomes CRG, Mata LRF da

Data analysis and interpretation: Ribeiro DA, Ferreira ACS, Gomes CRG, Mata LRF da

Writing and/or critical review of the intellectual content: Ribeiro DA, Ferreira ACS, Gomes CRG, Azevedo C, Mata LRF da

Final approval of the version to be published: Ribeiro DA, Ferreira ACS, Gomes CRG, Azevedo C, Carbogim F da C, Pereira MG, Mata LRF da

Responsibility for the text in ensuring the accuracy and completeness of any part of the paper: Ribeiro DA, Ferreira ACS, Gomes CRG, Azevedo C, Carbogim F da C, Pereira MG, Mata LRF da



Copyright © 2024 Online Brazilian Journal of Nursing

This is an Open Access article distributed under the terms of the Creative Commons Attribution License CC-BY, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.