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Characteristics of constipation screening and assessment tools: a scoping review protocol

Lene Odgaard [1], Anne A Rasmussen,[2] Rebecca Feo [3], Pia Kjær Kristensen [4]

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[1]Hammel Neurorehabilitation Centre and University Research Clinic, Aarhus University, Hammel, Denmark
[2]Department of Cardiology, Aarhus University Hospital, Aarhus, Denmark
[3]College of Nursing and Health Sciences, Flinders University, Adelaide, SA, Australia
[4]Department of Orthopaedic, Aarhus University Hospital, Aarhus, Denmark

Correspondence to
Dr Lene Odgaard;
lene.odgaard@midt.rm.dk

ABSTRACT

Introduction Constipation is a common and significant burden on individuals and healthcare systems. Accurate assessment of constipation severity and symptom improvement are vital aspects of caring for patients with constipation. Therefore, nurses and allied healthcare professionals should possess knowledge regarding the characteristics of constipation assessment tools (ie, aim, scope, definition of constipation, content, structure, mode, administration time and context of use). However, existing reviews summarising characteristics of tools have been restricted to chronic constipation and self-reported measures. Furthermore, they have not included literature published after 2011. This scoping review aims to identify and comprehensibly map the characteristics of available tools for screening and assessment of constipation in order to manage the nursing care need related to constipation within any healthcare or research context and any patient group.

Methods and analysis This review will include primary research articles, methodological papers and clinical guidelines using tools for constipation screening and assessment, pertinent to nursing care management. It is not limited to a specific population or healthcare setting. Databases to be searched include PubMed, Embase, CINAHL, ProQuest, ClinicalKey and Google Scholar. To identify grey literature, national health services in selected countries will be searched. Papers written in English, Nordic language or German will be included. The reviewers will independently review the retrieved citations against the inclusion criteria, and data from included papers will be extracted using a data extraction form developed for this review. The scoping review will be conducted following the Joanna Briggs Institute Guidelines. The results will be presented in a table accompanied by a narrative summary.

Ethics and dissemination Ethical approval is not required, as no individual patient data are included. Findings will be shared and discussed with relevant stakeholders and disseminated through peer-reviewed publications and conference presentations. The protocol is registered on Open Science Framework (registration number: osf.io/h2vzd).

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ The scoping review is strengthened by a comprehensive search strategy that includes different databases and grey literature with no restrictions regarding type of constipation, study designs, publication dates, populations or healthcare settings.
⇒ The scoping review follows the Joanna Briggs Institute methodology for the conduct of scoping reviews and will be reported in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews ensuring a structured and recognised review approach.
⇒ The screening and data extraction will be performed in duplicate.
⇒ The scoping review is limited to English, German, Norwegian, Swedish and Danish languages, potentially leading to a risk of overlooking relevant content reported in other languages.

INTRODUCTION

Constipation, defined as hard and dry stool that is difficult to pass and/or rare bowel movements, is a common health problem with a global prevalence of 10%.[1] The severity of constipation can range from a mild acute event to a chronic condition.[2] In patients admitted for hospital treatment, constipation is frequent, with prevalence rates up to 90% in patients receiving dialysis[3] and up to 79% in patients with stroke.[4] Constipation is also a common side effect of many drugs, such as antipsychotics (31%)[5] and opioids (40%–80%).[6] Constipation can cause painful bowel movements and the feeling of being bloated, uncomfortable and sluggish.[7] In addition, patients with constipation often have low nutritional intake,[8] increasing the risk of adverse outcomes, including pressure ulcers,[9] infections[10] and weight loss, which ultimately increases the risk of death.[11] It is estimated that the total hospital cost for treating constipation in the UK in 2018/2019 was £168 million.[12] Further, the costs of over-the-counter laxatives were £87 million in the same period.[12]

Elimination (or toileting) is one of patients' fundamental care needs.[13] Nurses are typically responsible for ensuring that

patients' fundamental care needs are met,[14] meaning managing constipation falls under the remit of nurses, supported by care delivery from allied health professionals (eg, physiotherapists, dietitians) where necessary. Accurate screening and assessment of constipation (such as of constipation severity and symptom improvement) are vital aspects of caring for patients with constipation. However, nurses and allied healthcare professionals often deprioritise screening and assessment of constipation, typically due to low awareness of the consequences of constipation, lack of time and limited awareness of available assessment tools.[15 16] Furthermore, preventing and managing constipation is often considered by patients to be a private problem and is rarely discussed with nurses and allied health professionals.[17]

The availability and use of tools for the screening and assessment of constipation can empower nurses and allied health professionals with a professional and standardised terminology that facilitates the identification and appropriate management of sensitive fundamental care needs in a dignified manner. However, this requires overcoming nurses' and allied health professionals' limited awareness and knowledge of existing tools for the screening and assessment of constipation in order to manage the nursing care need related to constipation. A scoping review can offer nurses and allied health professionals a comprehensive overview of available tools for constipation screening and assessment purposes, including the characteristics of the tools (eg, their aims, content and in what context they have been used).

A preliminary search of PROSPERO, MEDLINE, the Cochrane Database of Systematic Reviews and Joanna Briggs Institute (*JBI) Evidence Synthesis* revealed seven reviews on tools to identify constipation.[18–24] Three of these existing reviews focused on the definition of constipation[18–20] and one review aimed to evaluate the methodological quality of the tools.[21] The remaining three reviews examined characteristics including aim, scope, content, structure, mode, administration time and context of use. However, of these, one was restricted to chronic constipation,[23] one focused only on self-reported tools[22] and one was based on a limited literature search.[24] Importantly, neither of the three reviews covered material published after 2011. Hence, the aim of this scoping review is to identify and comprehensively map the characteristics of tools for screening and assessment of acute and chronic constipation within any healthcare or research context and for any patient group.

OBJECTIVES

Our overarching review question is: What tools are available for nurses and allied health professionals for screening and assessment of acute and chronic constipation in order to manage the nursing care need related to constipation within any healthcare setting and for any patient group? Two specific objectives were identified:

1. To identify available tools for constipation screening and assessment purposes in clinical practice and/or research.
2. To map the characteristics of these tools (scope, aim, definition of constipation, content, structure, mode and administration time, context of use and by whom).

METHODS AND ANALYSIS

The proposed scoping review will be conducted in accordance with the JBI methodology for scoping reviews[25] and in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) extension for Scoping Reviews.[26]

Eligibility criteria

Participants

The review will not be limited to a specific population (ie, there will be no restrictions on age, diagnosis etc). We will include patient-reported, clinician-reported and family/carer-reported tools. We will also consider papers that do not include a population, such as methodological papers that describe a tool and/or its development.

Concept

We will consider papers that include and/or describe the development and refinement of constipation-specific tools for screening and assessment of constipation (chronic and/or acute) only. We will exclude tools used for diagnosing gastrointestinal diseases, and tools that measure the symptoms of specific diseases but where constipation is only one of the symptoms measured.

Tools that cannot be retrieved in their entirety (ie, where each item in a tool is not available to be viewed) will be excluded.

Context

Papers within any healthcare context, including primary, acute and community care, and within any geographical location will be included.

Information sources and search strategy

This scoping review will consider quantitative, qualitative and mixed methods study designs for inclusion. Grey literature, for example, unpublished theses and clinical guidelines, will also be considered. We will include research papers as well as descriptive and methodological papers that: (1) describe the development of tools for screening and assessment of constipation and/or (2) have used the tool to measure aspects of constipation.

The search strategy will aim to locate both published and unpublished literature. An initial limited search of MEDLINE (PubMed) was performed to identify papers on the topic using the following keywords: (prevention OR risk OR measure OR measurement) AND constipation (title). The key text words in the titles and abstracts of relevant papers retrieved through this initial search, as well as the papers' vocabulary thesaurus used to index the papers, will then be used to develop a full search strategy

for MEDLINE (PubMed), Embase (Ovid), CINAHL (EBSCO), Web of Science (Web of Science), Cochrane (Cochrane), PsycINFO (Ovid), Joanna Briggs (Ovid), PEDro, OTseeker, ProQuest and ClinicalKey (Elsevier) (see online supplemental appendix 1 for complete search strategy for MEDLINE). The search strategy, including all the identified keywords and index terms, will be adapted for each included information source. A librarian will conduct the literature search. Unpublished papers and grey literature, including clinical guidelines, will be identified via Google Scholar and national health services in Scandinavian countries, Germany, Great Britain, Australia, New Zealand, Canada and the USA. The reference lists of previous reviews and of the papers selected for full-text review will be screened for additional papers. The search will not be limited to specific dates. Papers published in English, Nordic language or German will be included. The search will be conducted in October 2023.

Selection of sources of evidence

Following the search, all identified records will be collated and uploaded into Endnote V.20.3 (Clarivate Analytics, Pennsylvania, USA) and duplicates will be removed. Titles and abstracts will be screened independently by two reviewers for assessment against the inclusion criteria using Covidence systematic review software (Veritas Health Innovation, Melbourne, Australia). Potentially relevant papers will be retrieved in full. Next, two reviewers will independently assess the full texts of the selected citations in detail against the inclusion criteria. The reasons for exclusion of full-text papers that do not meet the inclusion criteria will be recorded and reported in the scoping review. Any disagreements between the reviewers at each stage of the selection process will be resolved through discussion or by a third reviewer. Finally, the search results will be reported in full in the final scoping review and presented in a PRISMA flow diagram.[26] The selection of relevant sources of evidence begins in October 2023 and ends in May 2024.

Data extraction and data items

Data will be extracted from papers included in the scoping review independently by two reviewers using a data extraction tool developed by the authors specifically for this review. A pilot test of the data extraction tool will be conducted using the first five identified papers to ensure that appropriate information is extracted. The extracted data will include specific details about the study aim, population, setting, methods and the constipation tool. Details on the constipation tool will include its name, the definition of constipation used (eg, according to the ROME definition,[27] including specifying whether all criteria were included), the content being measured (eg, patient symptoms, stool consistency), the structure (eg, the number of scales and subscales), the mode of completion (eg, self-reported or completed by a health professional), administration time and context(s) of use.

A draft extraction tool is provided (see online supplemental appendix 2). The draft data extraction tool will be modified and revised as necessary during the process of extracting data from the included papers. The modifications will be detailed in the full scoping review. In addition, authors of papers will be contacted to request missing or additional data, where required. The timeline for authors to respond to our request is 3 months. Data extraction will be conducted between May 2024 and September 2024.

Synthesis of results

We will present the extracted data in a summary table. Online supplemental appendix 3 presents a draft presentation table developed for this scoping review. As the results most likely stem from heterogeneous studies, we will accompany the presentation table with a narrative summary to describe how the results relate to the review question and aims. The results will be synthesised between September and December 2024.

Patient and public involvement

No patients or member of the public have been involved in the protocol design.

Ethics and dissemination

Ethical approval is not required, as no individual patient data are included. Relevant stakeholders such as managers, clinical nurses, nurse specialists and allied health and medical professionals within the field of gastroenterology will be involved in the final stages of the scoping review, to support interpretation and dissemination of the findings. Findings will be disseminated through a peer-reviewed publication and conference presentations. The protocol is registered on the Open Science Framework (osf.io/h2vzd).

Conclusion

This is the first scoping review that offers nurses and allied healthcare professionals a comprehensive overview of available tools for screening and assessment of acute and chronic constipation to manage the care need constipation, focusing specifically on their content, including whether and how tools evaluate constipation severity and improvement in constipation symptoms. This overview can empower nurses and allied health professionals with a professional and standardised terminology that facilitates the identification of constipation in a dignified manner.

Twitter Lene Odgaard @OdgaardLene and Pia Kjær Kristensen @pia_kjar

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Contributors LO, AAR and PKR designed the review questions and overall analysis and wrote the protocol with contributions and methodological guidance from RF.

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Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

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ORCID iDs
Lene Odgaard http://orcid.org/0000-0002-9830-3282
Rebecca Feo http://orcid.org/0000-0001-9414-2242
Pia Kjær Kristensen http://orcid.org/0000-0001-5473-9386

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Appendix I: Search strategy

MEDLINE (PubMed). Search conducted on June 12th, 2023

Search	**Query**	**Records retrieved**
#1	"Constipation"[Mesh] OR (constipat*[TI]) OR (dyschezia[TI]) OR (colonic inertia[TI])	17,419
#2	"Patient Reported Outcome Measures"[MeSH Terms] OR "Weights and Measures"[MeSH Terms] OR "measure*"[Title] OR "Risk Assessment"[MeSH Terms] OR "Risk Management"[MeSH Terms] OR "risk assessment*"[Title] OR "Risk Management"[Title] OR "Equipment and Supplies"[Mesh] OR "Surveys and Questionnaires"[Mesh] OR "Survey*"[Title] OR "Questionnaire"[Title] OR "Quality Indicators, Health Care"[Mesh] OR "Psychometrics"[Mesh] OR "psychometric"[Title] OR "instrument"[Title] OR "index"[Title] OR "inventory"[Title] OR "tool"[Title] OR "scale"[Title]	3,917,864
#3	#1 AND #2	2,544

Appendix II: Data extraction instrument

Details and characteristics of the paper	
Reviewer, date of review	
Citation details (e.g., author/s, date, title, journal, volume, issue, pages)	
Country/s of origin	
Type (e.g., scientific or academic journals, books)	
Aim/purpose of the paper	
Study design	
Characteristics of the tool extracted from the paper	
• Name of the tool	
• Aim	
• Scope (e.g., evaluating severity of constipation)	
• Definition of constipation (e.g., according to the ROME definition. Specify which criteria were excluded from the definition if not all were included.)	
• Content	
○ Patient symptoms measured, y/n	
○ List most frequent patient symptoms	
○ Stool consistency measured, y/n	
• Structure	
○ Number of scales, n	
○ Number of subscales, n	
○ Number of items	
Mode of completion (e.g., patient-reported, clinician-reported, or family/carer-reported)	
Administration time	
Context (clinical/educational/ research)	
Setting (e.g., type of clinical setting)	
Participants	
○ number	
○ diagnosis	
○ age	
○ sex	
○ other	

Appendix III: Presentation table

	[Name of tool1]	[Name of tool2]	[Name of tool3]
Papers investigating the tool			
Characteristics of the tools			
Aim of the tool			
Scope of tool (e.g., evaluating severity of constipation)			
Definition of constipation			
Contents of tool			
Patient symptoms measured, y/n			
List most frequent patient symptoms			
Stool consistency measured, y/n			
Structure of tool			
Number of scales, n			
Number of subscales, n			
Number of items			
Mode of completion			
Healthcare professional/self-reported/family-carer			
Administration time, minutes			
Study setting(s) for use of tool (country)			
Study population(s) (diagnosis, age, sex)			
Implemented in clinical practice, y/n			
If yes, where			
Educational purposes, y/n			
If yes, where			
Research purposes, y/n			
If yes, number			