

# Identifying the health care–initiated and self-initiated interventions used by women for the management of rectal emptying difficulty secondary to obstructive defecation: a scoping review protocol

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## ABSTRACT

**Objective:** This scoping review aims to identify interventions used by women for the management of rectal emptying difficulty secondary to obstructive defecation.

**Introduction:** Rectal emptying difficulty is typically a symptom of obstructive defecation syndrome. Even though a range of interventions are already available for this condition, this review is necessary to increase understanding of what interventions women find useful and are acceptable for them. This depth of understanding will facilitate the development of a specific care pathway to support women living with rectal emptying difficulty secondary to obstructive defecation syndrome.

**Inclusion criteria:** This review will consider studies that include adult women (over 18 years of age) living in the community who have experienced difficulty with rectal emptying secondary to obstructive defecation and who have not had surgical intervention. Exclusion criteria include prolapse surgery and surgical techniques, oral laxatives, vaginal pessaries, cognitive impairment, pregnancy, and those residing in care homes.

**Methods:** The databases to be searched include MEDLINE, Embase, CINAHL, PsycINFO, Emcare, AMED, Web of Science, Scopus, PROSPERO, Open Grey, ClinicalTrials.gov, International Clinical Trials Registry Platform Search Portal, UK Clinical Trials Gateway, International Standard Randomised Controlled Trial Number Registry, *JBI Evidence Synthesis*, Epistemonikos, Cochrane Library, and gray literature. Studies conducted in English from any time period will be considered for inclusion. The titles and abstracts will then be screened by two independent reviewers for assessment against the inclusion criteria for the review.

**Keywords:** difficulty emptying; digitation; female adult; interventions; obstructive defecation

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## Introduction

Rectal emptying difficulty in women is typically a symptom of obstructive defecation syndrome (ODS).<sup>1</sup> Obstructive defecation syndrome is defined as “incomplete evacuation of fecal contents from the rectum, straining at stool and vaginal digitations,”<sup>1(p.15)</sup> and is an overarching term to describe pelvic floor disorders.<sup>1</sup> One disorder is posterior

compartment prolapse, which is a type of pelvic organ prolapse where the rectum herniates forward into the vagina (known as a rectocele), obstructing the rectal emptying of stools. Rectal emptying difficulty can be a result of the interplay between anatomical and functional problems relating to the pelvic floor.<sup>2</sup> Prevalence of rectal emptying difficulties affect approximately one in 10 people, and this ratio can increase with age.<sup>3</sup> Prolapse of any kind in the vaginal vault can be a distressing long-term condition and can reach a prevalence of 40% for women over 50 years of age, equating to 4.6 million women across the UK.<sup>4–6</sup> Although risk factors are known to be childbirth, multiparity, aging, and

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obesity, little is known about the histological causes.<sup>4,7</sup> For women with rectocele causing their rectal emptying difficulty, they may resort to digitally positioning the anatomy to align the rectum for passing stools (commonly known as digitation or splinting).<sup>1</sup> A recent study identified that 56% of women with rectocele reported the need to use digitation to aid rectal emptying.<sup>8</sup> Of note, it has been suggested that a rectocele is not always associated with ODS, and may be a result of ODS as opposed to the cause.<sup>9</sup>

The impact of rectal emptying difficulty on women is mostly unknown and it is commonly a hidden problem.<sup>10</sup> The health-seeking behavior of women with this problem can be low<sup>11</sup>; however, women may present to their general practitioner (GP) with related symptoms such as constipation. Constipation is associated with a defecatory disorder and is four-times more likely to be found in women than in men.<sup>12</sup> Women's self-management options are poorly understood and the impact of such care on their quality of life is lacking. Despite the scope of the problem and its impact on women's lives and health care, little attention has been paid to non-surgical approaches because surgery has dominated the literature.<sup>13</sup> Non-surgical approaches include both health care-initiated and self-initiated interventions. However, emerging opinion on women's pelvic floor disorders identifies that this affects millions of women globally<sup>14</sup>; for example, it is estimated that one in five women may require surgery for this problem by the age of 85 years.<sup>14</sup> The impact is not just financial in terms of health care and the economy, but it also increases the burden on quality of life.<sup>15</sup> This burden may be reduced by early identification of risk factors and easy access to non-surgical, useful, and acceptable interventions. However, more needs to be known about the usefulness and acceptability of interventions, which can translate into a meaningful non-surgical approach care pathway for rectal emptying difficulty secondary to ODS.

In this scoping review, the authors will refer to the Cambridge Dictionary definition of intervention that is an "action taken to intentionally become involved in a difficult situation to improve it or prevent it from getting worse."<sup>16(para 1)</sup> Interventions that have been used for rectal emptying difficulty include self-initiated approaches, predominantly digitation or splinting, or health care-initiated approaches, such as suppositories, enemas, transanal irrigation, biofeedback (including pelvic floor

muscle exercises), or electro-stimulation.<sup>17-19</sup> Differences between the two types depend on whether or not the individual is the lead initiator of the intervention. For instance, self-initiated implies that the individual can promote health with or without the support of a health care provider,<sup>20</sup> whereas the health care-initiated intervention, according to the World Health Organization, is "an act performed for, with or on behalf of a person or population whose purpose is to assess, improve, maintain, promote or modify health, functioning or health conditions. cited in Fortune *et al.* (2018)."<sup>21</sup> Whilst this emphasizes differences to a certain extent, it does not consider the acceptability of an intervention, which is a key consideration in terms of adherence and achieving optimum outcomes.<sup>22</sup> Interventions not included in this review include oral laxative therapy, which is a common mainstay of primary care intervention for women who present with constipation<sup>23</sup> but has little effect on emptying the rectum where an anatomical defect is present.<sup>24</sup> Other common interventions that primary care can recommend or offer is vaginal support pessaries, which commonly don't help improve rectal emptying.<sup>25</sup> Consequently, such therapies are beyond the scope of this review.

In the pursuit of a better understanding of what health care-initiated and self-initiated interventions are used, a lens on the psychological impact of living with rectal emptying difficulty may emerge. The acceptability and usefulness of interventions are woven into the fabric of how an individual manages anxiety or worry about their symptoms.<sup>26</sup> There is an increasing understanding of how bowel problems can affect quality of life,<sup>27</sup> especially related to body image<sup>28</sup> and activities of daily living.<sup>29</sup> Problems with low self-esteem are also often identified during clinical consultations.<sup>30</sup> The relationship between a woman and personal bowel function appears to be a largely private affair and it takes courage for some to discuss these concerns with health care professionals.<sup>31</sup> Fear and shame may lead women to find intuitive ways of managing their issue, such as digitation, without seeking a health care-initiated intervention. Digitation can be an uncomfortable process requiring good dexterity; it does not always work, and can present additional problems with co-morbidities or increased age.<sup>32</sup>

A preliminary search of PROSPERO, MEDLINE, the Cochrane Database of Systematic Reviews, and the *JB I Database of Systematic Reviews and*

*Implementation Reports* was conducted and no current or in-progress systematic reviews on the topic were identified. Strikingly, the literature was plentiful for diagnostic and surgical approaches,<sup>13,32</sup> providing a sense check that intermediate care, between diagnostics and surgery, is lacking.<sup>33,34</sup> Even though a range of interventions is available, this review is necessary to increase understanding of interventions used by women with rectal emptying difficulty that is due to ODS and to inform gaps in the knowledge base.

### Review question

What health care–initiated and self-initiated interventions are used by women for the management of rectal emptying difficulty secondary to ODS?

### Inclusion criteria

#### *Participants*

This review will consider studies that include adult women (over 18 years of age) experiencing difficulty with rectal emptying secondary to ODS. Women with cognitive impairments, women who are pregnant, and those residing in care homes will be excluded.

#### *Concept*

The scoping review will consider the concept of rectal emptying difficulties due to ODS in adult females living in the community. The scoping review will consider self-initiated and health care–initiated interventions used for rectal emptying difficulties due to ODS. Self-initiated interventions may include, but will not be limited to, digitation or splinting. Health care–initiated interventions may include, but will not be limited to, suppositories, enemas, transanal irrigation, biofeedback, or electrostimulation. The authors acknowledge that some of these interventions could be both self-initiated and/or health care initiated, and will rely on the clinical experience of the author team to determine the difference. Interventions that will be excluded from this review include surgical interventions, oral laxatives, and vaginal pessaries.

#### *Context*

This scoping review will consider studies that focus on adult women (over the age of 18 years) living in their own homes within the community.

#### *Types of sources*

This scoping review will consider all sources of data. Studies using experimental and quasi-experimental study designs, randomized controlled trials, non-randomized controlled trials, before and after studies, and interrupted time-series studies will be included. Also, analytical observational studies including prospective and retrospective cohort studies, case-control studies and analytical cross-sectional studies will be considered for inclusion. This review will also consider descriptive observational study designs including case series, individual case reports, and descriptive cross-sectional studies for inclusion. Qualitative studies will also be considered that focus on qualitative data including, but not limited to, designs such as phenomenology, grounded theory, ethnography, qualitative description, action research, and feminist research. The literature will not be limited by date but will be limited to English only.

### Methods

The scoping review will be conducted in accordance with JBI methodology<sup>35</sup> for scoping reviews and reported using the PRISMA-ScR checklist.<sup>36,37</sup>

#### *Search strategy*

The search strategy will aim to locate both published and unpublished studies. An initial limited search of MEDLINE, Embase, CINAHL, and PsycINFO was undertaken to identify articles on the topic. The text words contained in the titles and abstracts of relevant articles, and the index terms used to describe the articles were used to develop a full search strategy for MEDLINE (see Appendix I). The search strategy, including all identified keywords and index terms, will be adapted for each included information source. The reference list of all studies selected will be screened for additional studies.

#### **Information sources**

The databases to be searched include MEDLINE (Ovid), Embase (Elsevier), CINAHL (EBSCO), PsycINFO (APA), Emcare (Ovid), AMED (Ovid), Web of Science (Thomson Reuters), Scopus (Elsevier), PROSPERO (NIHR), International Clinical Trials Registry Platform Search Portal (WHO), UK Clinical Trials Gateway (NIHR), International Standard Randomised Controlled Trial Number Registry

(ISRCTN), *JB* Evidence Synthesis, Epistemonikos (Epistemonikos Foundation), and Cochrane Library (Wiley). Gray literature will include Open Grey, ClinicalTrials.gov, and [www.evidence.nhs.uk](http://www.evidence.nhs.uk).

### Study selection

Following the search, all identified citations will be collated and uploaded into EndNote X7 (Clarivate Analytics, PA, USA) and duplicates (internal and external) removed. The citations will then be uploaded to RAYYAN systematic review software (Qatar Computing Research Institute, Doha, Qatar), which facilitates the initial screening of abstracts and titles using a semi-automation process. The titles and abstracts will then be screened by two independent reviewers for assessment against the inclusion criteria for the review. Potentially relevant studies will be retrieved in full and their citation details imported into the JBI System for the Unified Management, Assessment and Review of Information (JBI SUMARI; JBI, Adelaide, Australia). The full text of selected citations will be assessed in detail against the inclusion criteria by two independent reviewers. Reasons for exclusion of full-text studies that do not meet the inclusion criteria will be recorded and reported in the scoping review. Any disagreements that arise between the reviewers at each stage of the study selection process will be resolved through discussion or with a third reviewer. The results of the search will be reported in full in the final systematic review and presented in a Preferred Reporting Items for Systematic Reviews and Meta-analyses for Scoping Reviews (PRISMA-ScR) flow diagram.<sup>36,37</sup>

### Data extraction

Data will be extracted from papers included in the scoping review by two independent reviewers using a data extraction tool developed for the review. The data extracted will include specific details about the population, concept, context, study methods, and key findings relevant to the review objective. A draft extraction table is provided (see Appendix II). The draft data extraction tool will be modified and revised as necessary during the process of extracting data from each included study. Modifications will be detailed in the scoping review. Any disagreements that arise between the reviewers will be resolved through discussion or with a third reviewer. Authors of papers will be contacted to request missing or additional data, where required.

### Data synthesis

The extracted data will be presented in diagrammatic or tabular form in a manner that aligns with the objective of this scoping review. A narrative summary will accompany the tabulated and/or charted results and will describe how the results relate to the review's objective and question.

### Acknowledgments

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### References

1. Sultan AH, Monga A, Lee J, Emmanuel A, Norton C, Santoro G, et al. An International Urogynecological Association (IUGA)/International Continence Society (ICS) joint report on the terminology for female anorectal dysfunction. *Neurolog Urodyn* 2017;36(1):10–34.
2. Dimitriou N, Shah V, Stark D, Mathew R, Miller AS, Yeung JMC. Defecating disorders: a common cause of constipation in women. *Womens Health* 2015;11(4):485–500.
3. Chatoor D, Emmanuel A. Constipation and evacuation disorders. *Best Pract Res Clin Gastroenterol* 2009;23(4): 517–30.
4. Grimes CL, Lukacz ES. Posterior vaginal compartment prolapse and defecatory dysfunction: are they related? *Int Urogynecol J* 2012;23(5):537–51.
5. Hagen S, Stark D, Glazener C, Dickson S, Barry S, Elders A, et al. Individualised pelvic floor muscle training in women with pelvic organ prolapse (POPPY): a multicentre randomised controlled trial. *Lancet* 2014;383(9919):796–806.
6. Statistics OfN. Population estimates for UK, England and Wales, Scotland and Northern Ireland mid-2015 [internet]. 2016 [cited 2020 Jan 2]. Available from: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/annualmidyearpopulationestimates/mid2015>.
7. De Landsheere L, Munaut C, Nussgens B, Maillard C, Rubod C, Nisolle M, et al. Histology of the vaginal wall in women with pelvic organ prolapse: a literature review. *Int Urogynecol J* 2013;24(12):2011–20.
8. Sung VW, Rardin CR, Raker CA, LaSala CA, Myers DL. Changes in bowel symptoms 1 year after rectocele repair. *Am J Obstet Gynecol* 2012;207(5):423 e1–5.
9. Hicks CW, Savitt L, Bordeianou L, Weinstein M, Wakamatsu M, Pulliam S. In patients with rectoceles and obstructed defecation syndrome, surgery should be the option of last resort. *Surgery (United States)* 2014;155(4):659–67.

10. Eustice S, Endacott R, Morris J, Shankar R, Kent B. Women's experiences of managing digitation: do we ask enough in primary care? *JRSM Open* 2018;9(8):1–7.
11. Neels H, Tjalma WA, Wyndaele JJ, De Wachter S, Wyndaele M, Vermandel A. Knowledge of the pelvic floor in menopausal women and in peripartum women. *J Phys Ther Sci* 2016;28(11):3020–9.
12. Noelting J, Eaton JE, Choung RS, Zinsmeister AR, Locke GR 3rd, Bharucha AE. The incidence rate and characteristics of clinically diagnosed defecatory disorders in the community. *Neurogastroenterol Motil* 2016;28(11):1690–7.
13. Douskos A, Pitsouni E, Grigoriadis T, Athanasiou S. Surgical management of pelvic organ prolapse: an update. *HJOG* 2017;16(1):1–6.
14. Milsom I, Gyhagen M. Breaking news in the prediction of pelvic floor disorders. *Best Pract Res Clin Obstet Gynaecol* 2019;54:41–8.
15. Racaniello E, Terzoni S, Accardi R, Ricci C, Boccasanta P, Destrebecq A. Quality of life of patients undergoing surgery for obstructed defecation syndrome: a before-after study. *Int J Surg* 2015;21:18–21.
16. Dictionary C. Cambridge Dictionary [internet]. 2019 [cited 2020 Jan 2]. Available from: <https://dictionary.cambridge.org/>.
17. Aigner F MD, Mascher A, Maier H, Zweckberger A, Madersbacher H. Transanal irrigation - A promising strategy of conservative treatment for defaecation disorders; short and medium term results. *Int Urogynecol J Pelvic Floor Dysfunct*. 2011; 22.
18. Starr JA, Drobnis EZ, Lenger S, Parrot J, Barrier B, Foster R. Outcomes of a comprehensive nonsurgical approach to pelvic floor rehabilitation for urinary symptoms, defecatory dysfunction, and pelvic pain. *Female Pelvic Med Reconstr Surg* 2013;19(5):260–5.
19. Cadeddu F, Salis F, Ciangola CI, Milito G. Biofeedback and electrostimulation: last chance or first choice for obstructed defecation? *Surgery* 2015;157(2):405–6.
20. Narasimhan M, Allotey P, Hardon A. Self care interventions to advance health and wellbeing: a conceptual framework to inform normative guidance. *BMJ* 2019;365:l688.
21. World Health Organization. International classification of health interventions (ICHI) [internet]. 2017 [cited 2020 Apr 17] Available from: <https://www.who.int/classifications/ichi/en/>.
22. Sekhon M, Cartwright M, Francis JJ. Acceptability of health care interventions: an overview of reviews and development of a theoretical framework. *BMC Health Serv Res* 2017;17(1):88.
23. Bashir A, Sizar O. Laxatives. *StatPearls* [internet]. StatPearls Publishing; 2019.
24. Podzemny V, Pescatori LC, Pescatori M. Management of obstructed defecation. *World J Gastroenterol* 2015;21(4): 1053–60.
25. Bugge C, Adams EJ, Gopinath D, Reid F. Pessaries (mechanical devices) for pelvic organ prolapse in women. *Cochrane Database Syst Rev* (2):2013:CD004010.
26. Vrijens D, Berghmans B, Nieman F, van Os J, van Koevinge G, Leue C. Prevalence of anxiety and depressive symptoms and their association with pelvic floor dysfunctions—A cross sectional cohort study at a Pelvic Care Centre. *Neuro-urology Urodyn* 2017;36(7):1816–23.
27. McClurg D, Beattie K, Lowe-Strong A, Hagen S. The elephant in the room: the impact of bowel dysfunction on people with multiple sclerosis. *J Assoc of Charter Physiother Women Health* 2012;Autumn(111):13–21.
28. Jelovsek JE, Barber MD. Women seeking treatment for advanced pelvic organ prolapse have decreased body image and quality of life. *Am J Obstet Gynecol* 2006;194 (5):1455–61.
29. Jelovsek JE, Maher C, Barber MD. Pelvic organ prolapse. *Lancet* 2007;369(9566):1027–38.
30. Aujoulat I, Marcolongo R, Bonadiman L, Deccache A. Reconsidering patient empowerment in chronic illness: a critique of models of self-efficacy and bodily control. *Soc Sci Med* 2008;66(5):1228–39.
31. Tucker J, Murphy EMA, Steen M, Clifton VL. Understanding what impacts on disclosing anal incontinence for women when comparing bowel-screening tools: a phenomenological study. *BMC Womens Health* 2019;19(1):142.
32. Mustain WC. Functional Disorders: Rectocele. *Clin Colon Rectal Surg* 2017;30(1):63–75.
33. Brown H, Grimes C. Current trends in management of defecatory dysfunction, posterior compartment prolapse, and fecal incontinence. *Curr Obstet Gynecol Rep* 2016;5 (2):165–71.
34. Giannini A, Russo E, Cano A, Chedraui P, Goulis DG, Lambrinoudaki I, et al. Current management of pelvic organ prolapse in aging women: EMAS clinical guide. *Maturitas* 2018;110:118–23.
35. Aromataris E, Munn Z [Editors]. *JBIR Reviewer's Manual* [internet]. Adelaide: JBI. 2017 [cited 2020 Aug 20]. Available from <https://reviewersmanual.joannabriggs.org/>.
36. Tricco AC, Lillie E, Zarifn 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):467–73.
37. Peters MD, Godfrey CM, Khalil H, McInerney P, Parker D, Soares CB. Guidance for conducting systematic scoping reviews. *Int J Evid Based Healthc* 2015;13(3):141–6.

## Appendix I: Search strategy

Search	Query	Records retrieved
MEDLINE (Ovid) search conducted on 21.05.2019	15 MEDLINE ("obstructive defaecation" OR "obstructive defecation" OR rectocele).ti,ab 1231	903
	18 MEDLINE (empt* ADJ1 (rectum OR rectal)).ti,ab 202	
	40 MEDLINE RECTOCELE/ 663	
	41 MEDLINE (15 OR 18 OR 40) 1589	
	20 MEDLINE (Pelvic OR Biofeedback OR "Rectal irrigation" OR Lavage OR Laxative* OR Suppositor* OR Enema* OR Electro-stimulation OR electrotherapy OR electrostimulation OR Digitat* OR Splint* OR Conservative OR Patient-centred OR Patient-centered).ti,ab 302027	
	21 MEDLINE "THERAPEUTIC IRRIGATION"/ 17042	
	22 MEDLINE ENEMA/ 6926	
	23 MEDLINE "ELECTRIC STIMULATION THERAPY"/ 19693	
	24 MEDLINE "CONSERVATIVE TREATMENT"/ 1755	
	25 MEDLINE (20 OR 21 OR 22 OR 23 OR 24) 334284	
42 MEDLINE (41 AND 25) 903		
No limitations on date; language limits to English only		

## Appendix II: Data extraction instrument

<b>Scoping review details</b>	
Scoping review title:	Identifying the health care–initiated and self-initiated interventions used by women for the management of rectal emptying difficulty secondary to obstructive defecation: a scoping review protocol
Review objective:	This scoping review aims to identify what interventions are used by women for the management of rectal emptying difficulty secondary to obstructive defecation.
Review question:	What health care–initiated and self-initiated interventions are used by women in the management of rectal emptying difficulties secondary to obstructive defecation?
<b>Inclusion/exclusion criteria</b>	
Population	Adult female
Concept	Literature that includes interventions such as digitation or splinting; or health care–initiated approaches such as suppositories, enemas, transanal irrigation, biofeedback or electro-stimulation used by women to manage rectal emptying difficulty.
Context	Considers studies that focus on adult women (over the age of 18 years) living in their own homes in the community.
Types of study	Experimental and quasi-experimental study designs; analytical observational studies including prospective and retrospective cohort studies, case-control studies and analytical cross-sectional studies, and qualitative studies
<b>Study details and characteristics</b>	
Study citation details (eg, author/s, date, title, journal, volume, issue, pages)	
Country	
Type of study	
Type of paper	
Context	
Study inclusion criteria	
Study exclusion criteria	
Sample size (size/age/gender)	
Participants	

<b>Details/results extracted from study</b> (in relation to the concept of the scoping review)	
<b>Health care–initiated interventions</b>	
<b>Self-initiated interventions</b>	
<b>Follow-up</b>	