

A REVIEW OF MEASUREMENT PROPERTIES OF VOIDING DIARIES FOR LOWER URINARY TRACT SYMPTOMS ASSESSMENT

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HYPOTHESIS OF STUDY

- LUTS can negatively affect the quality of life;
- Voiding diaries (VD) are non-invasive, low-cost, and easy-to-apply tool to access LUTS;
- There are several types and designs: printed or digital, duration in days, and content of VD;
- Evaluation of its measurement properties to guarantee good methodological quality;
- Reliability, validity and responsiveness should be evaluated and considered suitable and relevant.

AIMS OF STUDY

The aim of this review is identifying **the bladder diary characteristics** on its contents, format, and duration; in addition to describing the tested **measurement properties** of the voiding diaries.

MATERIALS AND METHODS

Systematic Search:

- PubMed
- Embase
- Scopus
- Web of Science

Controlled descriptors:

- “Lower Urinary Tract Symptoms”;
- “bladder diary”;
- “validation”.

Study selection:

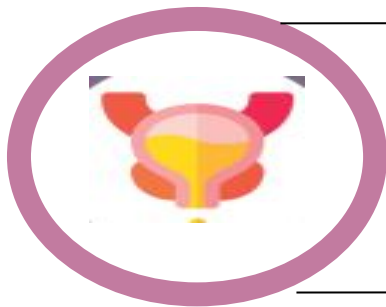
- Original studies: observational or methodological;
- Portuguese, English, or Spanish.

Data extraction and synthesis

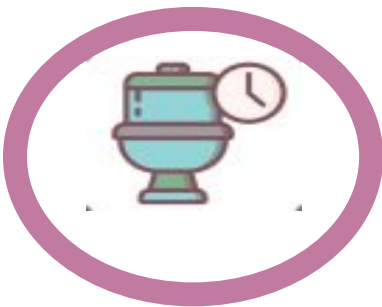


Voiding diary duration

Voiding diary format



Storage or voiding LUTS

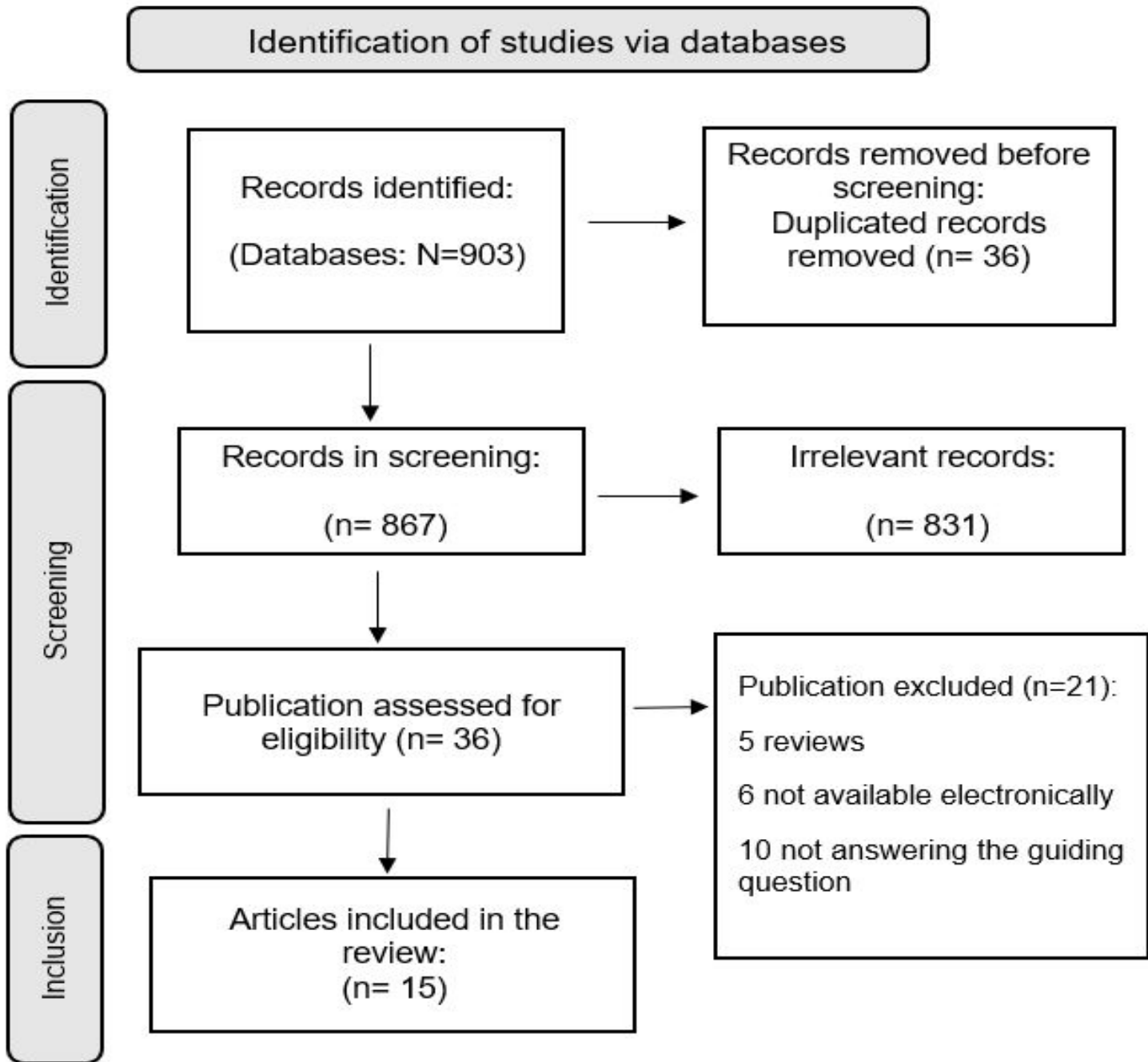


Measurement properties

COSMIN terminology: internal consistency, reliability, measurement mistakes, content validity, construct validity, criterion validity, responsiveness, and interpretability.



RESULTS



- Format**
7 VD were in a printed and 3 were in an electronic format.
- Content**
Bladder storage symptoms were the most investigated; fluid intake; frequency, urine volume; number of pads. 1 VD: dysuria and pain
- Duration**
3-day VD were the most used; 2 VD used a longer duration of 5 and 7 days.
- Validity**
The content validity index (CVI) and Delphi Method; patients' with LUTS and experts opinions.
- Reliability**
Test-retest with application intervals ranging from two to three weeks.
- Responsiveness**
Evaluated in only the versions of **ICIQ bladder diary** (4 studies).

INTERPRETATION OF RESULTS

- The preferred VD formats are still paper-based models by patients;
- A three-day bladder diary is adequate to reduce the patient's burden; Symptoms, such as IU and OAB;
- Patient's feeling of identification with the tool; Face validity and/or concurrent validity are the main measurement properties tested for validation.

CONCLUSIONS

Numerous of voiding diaries are found in the literature. Printed format with a duration of three days are still the preferred models. Bladder storage symptoms are the most investigated ones. The bladder diary should be in consonance with specific characteristics of each target population and measurement properties validation and reliability should be tested for accuracy.

REFERENCES

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2. Bright E, Drake MJ, Abrams P. Urinary diaries: Evidence for the development and validation of diary content, format, and duration. *Neurourol Urody.* 2011;30(3): 348-352.
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