



# RESEARCH AND CLINICAL APPLICATION OF THE MENOPAUSE-SPECIFIC QUALITY OF LIFE (MENQOL) QUESTIONNAIRE: A COMPREHENSIVE SYSTEMATIC REVIEW

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## Background

- The menopause-specific quality of life (MENQOL) questionnaire was developed as a validated research tool to measure condition-specific quality of life in early postmenopausal women.
- Since its introduction in 1996, it has been increasingly used in women's health clinical trials and menopause research worldwide.
- The exact extent and relevance of MENQOL usage in medical research is not known.

## Objectives

To examine the use of MENQOL in research and clinical settings over the past 16 years in order to assess its value in providing patient assessment information to clinicians, patients, and healthcare workers.

## Study Methods

We conducted a systematic review of articles published between 1996 and 2012 using 'menqol' as the search word to screen 13 biomedical and clinical data bases.

Additional articles were collected from references within key articles.

Duplicates were removed in RefWorks reference manager.

Included were all studies using MENQOL or its further development MENQOL-Intervention as a tool.

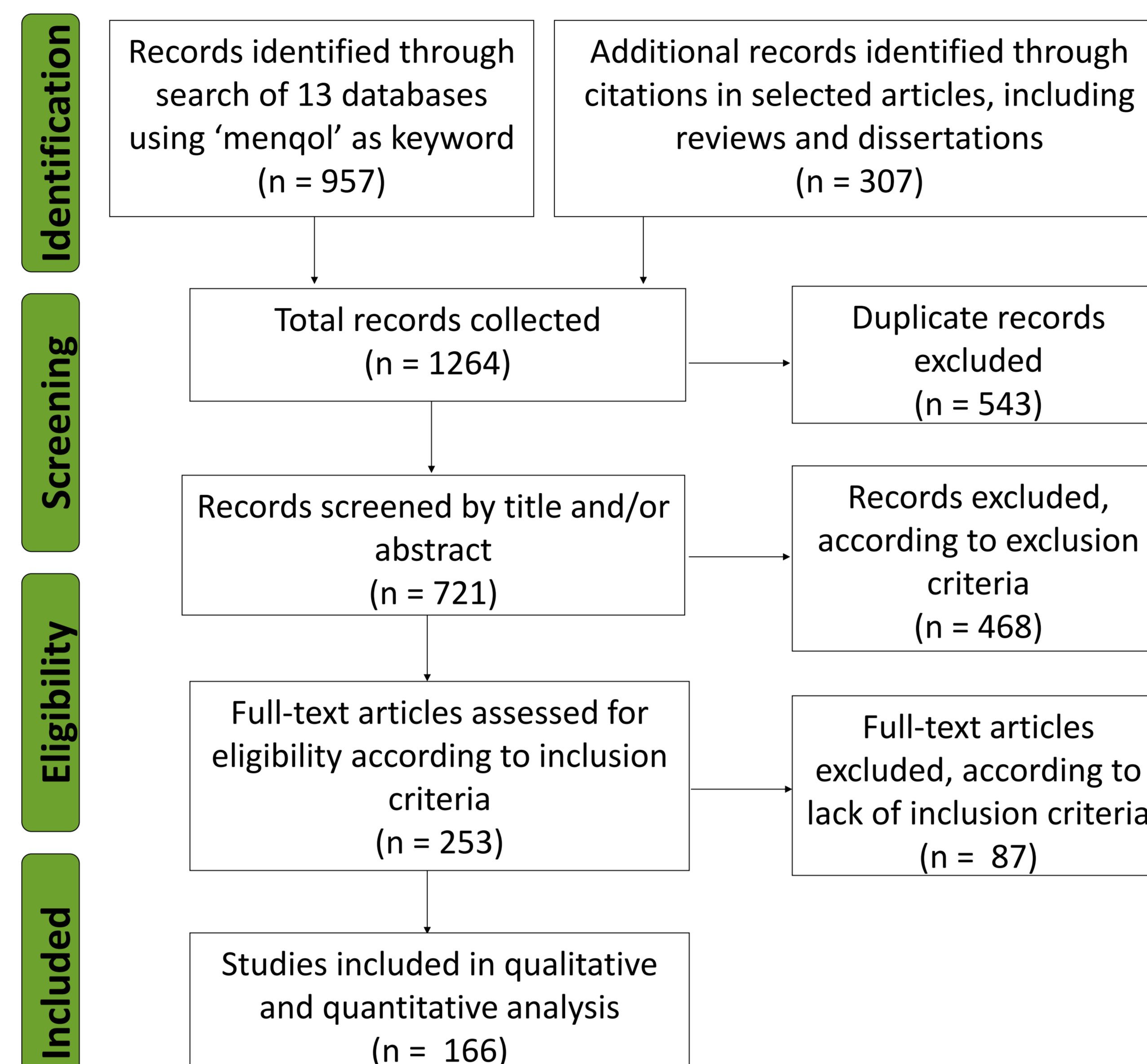
Excluded were review articles, dissertations, meeting abstracts and proceedings, incomplete clinical trials, articles that only cite MENQOL, and foreign language duplicates.

Data were extracted and charted according to:

- Author, year of publication, country and language
- Study design and intervention,
- Participant number, age, menopausal stage,
- MENQOL version(original, Intervention, adaptation)

## Results and Data Analysis

**Figure 1: PRISMA Flow Diagram**



According to: Moher, D et al, The PRISMA group (2009). PLoS Med 6(6): e100097.

**Table 1: Characteristics of included papers**

Study design <sup>a</sup>	Number (%) of articles, N=166
Cross-sectional survey	65 (39.16)
Longitudinal survey	6 (3.61)
Randomized controlled trials	65 (39.16)
Experimental studies	27 (16.27)
Psychometric evaluation	6 (3.61)
Case report	3 (1.81)
Intervention <sup>b</sup>	
Hormones	30 (18.07)
Non-hormonal drugs	13 (7.83)
Natural supplements	20 (12.04)
Exercise/yoga/tai-chi	10 (6.02)
Massage/acupuncture	10 (6.02)
Behavioral therapy/counseling	16 (9.64)
None (surveys, epidemiology studies)	72 (43.37)

<sup>a</sup>: Studies could include more than one study design

<sup>b</sup>: Studies could include more than one intervention

All study designs and menopause-specific interventions were represented in the 166 articles.

**Table 2: Participants' age and menopausal stage**

Age <sup>a</sup>	Number (%) of articles, N=166
Target range (40-65)	<b>93 (56.02)</b>
Target range & younger	9 (5.42)
Target range & older	19 (11.45)
Target range & older & younger	10 (6.02)
Not specified	35 (21.08)
Menopausal stage <sup>a</sup>	
Post-menopausal only	<b>85 (51.20)</b>
Peri-menopausal only	8 (4.81)
Pre-menopausal only	2 (1.20)
Post- & peri-menopausal	33 (19.88)
Post- & pre-menopausal	2 (1.20)
Post, peri-, & pre-menopausal	25 (15.06)
Not specified	11 (6.63)

<sup>a</sup>: MENQOL target population: postmenopausal women age 40 to 65.

More than half of the 166 articles confined their study to women with the age and menopause stage for which MENQOL was validated (in bold).

**Table 3: Analytical Methodology**

Version used <sup>a</sup>	Total (% of N=166)	Item number <sup>b</sup> 29+1/32+1	Report on past <sup>b</sup> 1week/1month	Scoring <sup>b</sup> 1 to 8
MENQOL	115 (69.28)	97/115	44/115	35/115
MENQOL-Intervention	12 (7.23)	11/12	3/12	3/12
Modified version	12 (7.23)		4/12	5/12
Not specified	27 (16.27)		3/27	

<sup>a</sup>: Original MENQOL :29 items plus one QOL question, report on past one month, scoring 1 to 8  
MENQOL-Intervention :32 items plus one QOL question, report on past one week, scoring 1 to 8.

<sup>b</sup>: Numbers indicate use of correct questionnaire item number, reporting period, and scoring.

Only 18 articles reported on the proper usage of all 3 analytical properties.

## Conclusions

Our data indicate that the MENQOL questionnaire has found extensive use over the past 16 years in research and clinical studies of various designs. However, few articles appear to use the validated analytical methodology.

Used in the appropriate and validated form, MENQOL emerges as a valuable tool for the assessment of menopausal women.

Acknowledgements:

