



Limited Published Quantitative Evidence on Medication Adherence of Multimorbid Elderly Women with Polypharmacotherapy: Results of a Systematic Literature Review



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Background

- Compared with men, women generally live longer, and tend to have more diagnosed chronic conditions, which often requires lifelong, complex medication regimen¹
- Diseases that elderly women face differs from elderly men's¹
- Medication non-adherence is a complex problem for elderly women receiving polypharmacy, resulting in significant clinical and economic consequences^{2,3}

Objective

- **To provide an overview on empirical evidence of adherence to polypharmacotherapy in multimorbid elderly women**

Methods

- A systematic literature review following the PRISMA guideline principles was conducted
- Searched databases: Pubmed, Embase, Academic Search Complete and EBSCO CINAHL
- Literature search was limited to English language publications published in the last ten years
- Search strategy (finalized in January 2021) was built up as a combination of search strings applying synonyms of adherence, medication, polypharmacy, multimorbidity, elderly women and postmenopause
- Data on medication adherence both as explanatory and/or outcome variables were extracted by two researchers independently

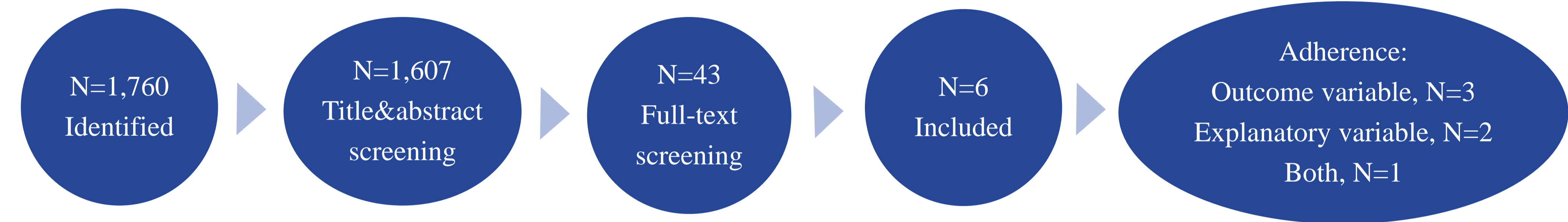
Results

- Of the 1,607 screened records only 6 articles were included in the final analysis (*Figure 1.*)
 - 18 articles which assessed only the gender-based differences in medication adherence were excluded from this analysis
- Included studies were conducted in North America and Europe
- Adherence was assessed in 2 studies, persistence in 3 studies and 1 study evaluated both adherence and persistence
- Study settings (*Table 1-2.*) and adherence measurement methodologies differed across the included studies

Conclusions

- Our study identified limited quantitative evidence for adherence to polypharmacotherapy in the subgroup of multimorbid elderly women
- A better understanding and further empirical studies are needed on the influencing factors and consequences of medication non-adherence
- **Effective health technology assessment and reimbursement practices should be developed for adherence enhancing interventions applied in this vulnerable patient population**

Figure 1. The flow-diagram of the systematic literature review



- Sample sizes across the studies ranged between 32-40,004 (*Table 1.*)
- From these 6 studies, 3 addressed adherence as outcome variable, 2 as explanatory variable, and 1 as both
- Influencing factors of adherence/persistence and variables explained by adherence/persistence are listed in *Figure 2.*
 - Ageing, multimorbidity, BMI in case of depression and experienced barriers (i.e. scheduling and cost barriers) decreased medication adherence or persistence, while less frequent administration, tumor grade and BMI in case of breast cancer increased medication adherence or persistence.
 - Among adherent/persistent patients hip fracture incidence and new-onset depressive symptomatology were lower, and bone alkaline phosphatase level was higher

Table 1. Study setting and sample size of studies included in the systematic literature review

Study setting	Sample size
RCT	137-36,282
Retrospective database analysis	40,004
Prospective cohort study	3,941-4,069
Cross-sectional study	32

Table 2. Main diseases reported in the included studies

Main diseases
Osteoporosis
Depression
Breast cancer

Figure 2. Influencing factors and consequences of adherence and persistence

