Evaluation of medication management interventions for the elderly

Wendt D A

Authors' objectives
To describe and summarise specific nursing interventions that have been devised to aid the community-dwelling elderly with the self-administration of prescribed medications.

Searching
CINAHL and MEDLINE were searched from 1980 to 1997, and the bibliographies of the identified studies were examined. The search terms of 'self-administration' or 'self-medication' were combined with 'patient education' and 'nursing intervention'. The searches were limited to research studies of patients aged at least 65 years of age, which were published in English in nursing journals.

Study selection
Study designs of evaluations included in the review
Case studies, experimental studies and quasi-experimental studies were included.

Specific interventions included in the review
A nursing intervention or treatment that fell within the realm of established nursing practice. The intervention had to have the purpose of improving the ability of clients to manage their own medications. The specific interventions found were: teaching session with phone call or instruction sheet; medication fact sheet with instruction and/or medication schedule; home visits with oral instruction; picture schedule; taped instruction; medication counselling and fact sheet. The control groups had alternative interventions or no treatment.

Participants included in the review
Three hundred and forty-two elderly people (convenience samples) were included. The participants were aged at least 65 years, and were managing their own medications in the home setting.

Outcomes assessed in the review
Compliance with medication, as assessed by pill count, survey or self-report. In addition, knowledge was assessed.

How were decisions on the relevance of primary studies made?
The titles and abstracts of the articles were examined by a single reviewer.

Assessment of study quality
The author does not state that they assessed validity.

Data extraction
The data were extracted by the researcher alone, using a coding sheet. The variables coded were author(s), publication date, sample size, study design, compliance measure used, interventions implemented, and evaluation of the intervention.

Methods of synthesis
How were the studies combined?
The studies were combined using a qualitative narrative, and by tabulation.

How were differences between studies investigated?
The author does not state how differences between the studies were investigated.
Results of the review
Eight studies with 342 participants were included: 5 experimental studies (n=271), 1 case study (n=1), and 3 quasi-experimental studies (n=70).

A number of individuals and Interventions that combined patient education with written information or follow-up phone calls produced the most positive results. None of the studies showed effectiveness over the long-term, i.e. longer than 2 months.

Authors' conclusions
A relatively small number of research studies evaluating the nursing interventions used to assist the community-dwelling elderly with self-medication management have been published.

The most successful interventions combined medication teaching and written hand-outs with some type of ongoing reinforcement system.

CRD commentary
This was a clearly written review of the literature on nursing interventions to aid the community-dwelling elderly with the self-administration of prescribed medication. The inclusion criteria for the studies were clearly described, and the studies were combined using a clear qualitative narrative. A qualitative summary of the results seems to have been appropriate given the obvious differences between the included studies in terms of the design, interventions and outcomes. Some details of the primary studies were presented in the text and in tabular format.

Two databases (CINAHL and MEDLINE) were searched. PsycLIT would also have been appropriate since the author was looking for health promotion interventions, but it was not used. The author only considered articles from nursing journals and not the health promotion journals. In addition, the search was restricted to publications in the English language. Publication bias may have influenced the outcomes and this has not been taken into account by the author. The validity of the primary studies was not assessed, so the reliability of the outcomes is unknown. The data were extracted by one reviewer only. Finally, no indication was given as to which study provided the more reliable evidence; the case study had the same weight as experimental studies.

Implications of the review for practice and research
The author stated that consistent reinforcement is needed to sustain self-medication regimens. Telling clients about their drugs is insufficient; effective nursing interventions combine oral instructions with written information and written schedules. Research on the self-administration of medications in the home setting is needed.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.