Authors' objectives
To review the effects on patients' well-being (pain) of nurse continuing education.

Searching
MEDLINE, PsycLIT and ERIC were searched from 1981 to June 1995 (no search terms stated). Additional material was located by searching the Journal of Continuing Education in Nursing, the Journal of Nursing Staff Development, and references from a previous meta-analysis.

Study selection
Study designs of evaluations included in the review
Uncontrolled and controlled studies were included. Incomplete studies and those for which too much relevant information about the intervention, research methods or findings was lacking, were excluded.

Specific interventions included in the review
Continuing education programmes about pain for nurses. The courses varied in content (e.g. pain theories, effects and side-effects of pain medication, and pain assessment), mode of delivery and duration.

Participants included in the review
Nurses and nursing assistants were included. Some studies also included doctors and pharmacists.

Outcomes assessed in the review
Nurses' knowledge about pain and attitudes to pain; nurses' practice (e.g. documentation of pain, administration of analgesics); patients' perceptions of pain and reception of analgesics.

How were decisions on the relevance of primary studies made?
The authors do not state how the papers were selected for the review, or how many of the authors performed the selection.

Assessment of study quality
The authors do not report a method for assessing validity; however, studies were categorised according to study design and elements that protect against publication bias were discussed.

Data extraction
The authors do not state how the data were extracted for the review, or how many of the authors performed the data extraction.

Methods of synthesis
How were the studies combined?
The studies were combined using a narrative synthesis, and tables of studies were provided.

How were differences between studies investigated?
Narrative and tabular descriptions identify differences between the interventions (study programmes) and study designs.
Results of the review
There were 12 studies in total: 1 randomised controlled trial (RCT) with 44 nurses, 2 controlled trials with 91 nurses, 6 before-and-after studies with no controls (over 188 nurses), and 3 studies with post-intervention measurement only and no control group (over 115 nurses).

Nine of the 10 studies, which assessed nurses' knowledge, attitudes or behaviour relating to the assessment and management of pain, reported some positive effects. The one study which did not report any change was the RCT, for which the primary outcome measure was nurses' documentation of pain.

In all 4 studies assessing the administration or receipt of analgesics, increases in analgesic use were observed after the interventions.

Authors' conclusions
The 12 studies examined do not constitute conclusive evidence, but they do suggest that continuing pain education for nursing staff can have an impact on both nurses and patients. Future methodologically-sound studies will have to further examine the effectiveness of different types of pain programmes, varying content, teaching strategies, target group and duration.

Future programmes should consider including non-pharmacological nursing interventions.

CRD commentary
Some details of the methods used to carry out this review were not provided. It was not stated clearly whether the search strategy sought to identify studies published in all languages, but one of the included studies was published in Dutch. As the authors point out, the quality of the primary studies was limited (studies were categorised according to study design and elements that protect against bias were considered). The large number of positive findings among the included studies may be associated with publication bias.

The interventions (continuing education programmes) studied were complex: they often consisted of several components and were delivered by varying means. Their effects are likely to vary in different contexts. As the range of outcome areas reported in this review illustrates, they may be introduced with diverse aims and may impact on a wide range of variables.

This review provides some evidence to suggest that continuing education programmes can affect nurses' knowledge, attitudes and behaviour in relation to pain and pain management, but it provides little guidance for those wanting to design such programmes.

Bibliographic details

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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.