A nurse is a nurse: a systematic review of the effectiveness of specialised nursing in breast cancer

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CRD summary
This review assessed the effectiveness of specialised nursing in breast cancer. The authors' cautious conclusion, that specialised nursing care in women with breast cancer may be beneficial in improving physical and psychosocial well-being, is reasonable given the small number and diversity of included studies.

Authors' objectives
To determine the effectiveness of specialised nursing in breast cancer.

Searching
MEDLINE and CINAHL were searched for articles published in English or German between 1980 and 2006; the search terms were reported. The authors used snowball sampling methods to locate any additional articles.

Study selection
Study designs of evaluations included in the review
Studies with a comparative design were eligible for inclusion. The included studies were randomised controlled trials (RCTs), case-control studies and studies of comparative design.

Specific interventions included in the review
Studies that assessed specialised nursing were eligible for inclusion. Four studies compared specialised nursing performance with services provided by physicians and surgeons, while six studies compared conventional care models with supplementary specialised nursing services. Specialised nurses included those with and without formal accreditation.

Participants included in the review
Studies of women with breast cancer were eligible for inclusion. The participants included newly diagnosed women with breast cancer, women undergoing surgery for breast cancer, women with early stage breast cancer and mastectomy, and women with modified radical mastectomy and full axillary clearance.

Outcomes assessed in the review
Inclusion criteria were not defined with respect to the outcomes. The outcomes reported included improvement of physical impairment, psychosocial problems, patient satisfaction, decision-making processes and collaboration in a multiprofessional team.

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

Assessment of study quality
Two reviewers independently assessed the quality of the included RCTs against a set of predefined criteria: definition of inclusion and exclusion criteria, the comparability of the patients, double-blinding (except in the context of individualised care) and whether intention-to-treat analysis was performed. All studies were given a score from 1 (lowest quality) to 9 (highest quality). Hierarchical evidence levels were also assigned to each study.

Data extraction
The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction. The main statistically significant results for each study were presented.

**Methods of synthesis**

How were the studies combined?
A narrative synthesis was used, with studies grouped by outcome.

How were differences between studies investigated?
Differences between the studies were apparent from study descriptions and the body of the test.

**Results of the review**

Ten studies (n=1,978) were included in the review: 8 RCTs (n=1,559), 1 case-control study (n=300) and 1 comparative design (n=119).

The quality scores of the 8 RCTs ranged from 2 to 7, with the majority scoring 4 or less; inter-rater agreement was moderately high (kappa 0.67).

Physical impairment: 3 studies were identified. One RCT found a significant improvement in arm function after axillary lymph node clearance in patients receiving specialised nursing care. One RCT found a significant improvement in pain sensation for patients receiving counselling after surgery. One RCT found no significant between-group differences in pain sensation in women with mastectomy for early stage breast cancer.

Psychosocial problems: 7 studies were identified. Five RCTs found a positive effect of specialised nursing care. Two RCTs did not find any significant difference between the intervention groups.

Patient satisfaction: 3 studies were identified. One RCT found no significant between-group differences. The comparative study found significantly greater patient satisfaction in the specialist nursing group, while the case-control study indicated that specialist nurse counselling was important in decision-making for future hospital selection.

Decision-making processes: 2 studies were identified. Both studies found an improvement in decision-making processes in the specialist nursing group. One RCT found greater confidence in having a voice in decision-making; an increased proportion of patients opted for breast conserving therapy and radiation therapy, as well as more frequent adjuvant radiation therapy and axillary dissection in this subpopulation. One case-control study found higher rates of patients opted for plastic reconstruction.

Collaboration in multiprofessional teams: 3 studies were identified. One RCT found significantly better recognition of patients at risk of psychiatric morbidity and a higher referral rate to a psychiatrist in the special care group. One comparative study found a positive influence on continuity of care, information, patient support and efficiency of treatment response. One case-control study found no difference between treatment groups in the quality of results of fine-needle aspirations.

**Cost information**

One study compared conventional health care costs for breast cancer patients with additional advanced nurse practitioner care; no significant differences in charges and reimbursement were reported between the groups.

**Authors’ conclusions**

Specialised nursing care in women with breast cancer may be beneficial in improving physical and psychosocial well-being.

**CRD commentary**

The review question was supported by relatively broad inclusion criteria; given the variation in the intervention.
outcome measures and population between the included studies, the narrative synthesis was appropriate. The methods used to select the papers and extract the data were not reported, thus the possibility of bias or error being introduced at these stages could not be assessed. The methodological quality of the primary studies was assessed but only the composite score was presented, which makes it difficult for the reader to judge the validity of the studies for themselves.

Although promising, the small number of studies included in the review and the diversity between them made firm conclusions difficult; the authors' cautious conclusions appear reasonable.

**Implications of the review for practice and research**
Practice: The authors did not state any implications for practice.

Research: The authors stated the need for a more uniform definition of the models of specialised nursing in breast cancer (including role and required skills), as well as more rigorous studies evaluating the effectiveness of such models.

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