Interventions for sexual problems following treatment for breast cancer: a systematic review

Taylor S, Harley C, Ziegler L, Brown J, Velikova G

CRD summary
The review concluded that couple-based psychoeducation interventions that included an element of sexual therapy were the most effective interventions. In light of the review's methodological and reporting limitations, the reliability of the authors' conclusions is uncertain.

Authors' objectives
To explore the nature and effectiveness of interventions to treat sexual problems experienced by breast cancer patients.

Searching
MEDLINE, EMBASE Classic and EMBASE, PsycINFO, AMED, CINAHL were searched from inception to January 2011. Also Cochrane Collaboration Cochrane Review Database was searched. Search terms were reported in the supplementary section. Reference lists of relevant papers were handsearched for additional studies.

Study selection
Studies that evaluated interventions for sexual problems due to breast cancer diagnosis or treatment, and that measured sexual functioning using a patient-reported outcome (PRO) questionnaire were eligible for inclusion. Studies that used qualitative data or studies which did not focus on improving sexual problems were excluded.

Most of the studies were conducted in western countries and included patients with early breast cancer (stages 0 to 3a). Types of intervention used were: physical intervention; medical intervention skilled-based training; counselling; information provision; therapy; hypnosis. Some studies used a combination of the interventions. Most of the interventions offered a series of sessions and were delivered face-to-face or over the telephone. Interventions were delivered to individual patients, patients and their partners (couple-based) or groups of patients. Included studies used a variety of validated and non-validated patient reported outcome (PRO) questionnaires.

Two reviewers were independently involved in study selection.

Assessment of study quality
Study quality was assessed based on Cochrane and Revenson criteria using quality grading scale, which ranged from highest quality grade 1 (Randomised controlled trials with no methodological flaw) to lowest quality grade 7 (one intervention group no comparison).

The authors did not state how many reviewers were involved in quality assessment.

Data extraction
Stage of disease progression, types of intervention and delivery method, timing of first interventions and the sessions, sexual functioning outcomes and intervention effect were recorded.

The authors did not state how many reviewers were involved in data extraction.

Methods of synthesis
Trials were narratively synthesised and grouped according to the types of interventions.

Results of the review
Twenty-one studies were included in the review (1,980, range 14 to 304). The quality of the studies varied: three studies reported grade 1; eleven studies reported grade 2; one study reported grade 3; two studies reported grade 6; four studies reported grade 7.

Medical intervention (three studies): Two studies reported positive results in sexual functioning with medical intervention, of which one was statistically significant. One study combined pharmacological intervention with
counselling and reported better sexual functioning in the intervention group.

**Exercise intervention (two studies):** Neither of the studies found positive effects on sexual functioning.

**Counselling as a main intervention (three studies):** Two studies did not find statistically significant improvement of sexual functioning in counselling, but one study did.

**Counselling as part of a mixed intervention (two studies):** One study found positive effects on sexual functioning in the counselling group compared with the control group. The other study reported significant improvement in patient coping training and couple-coping training compared with the medical information education group.

**Skills-based training (nine studies):** Eight out of nine studies reported some positive effects; three with statistically significant findings of sexual functioning in the skilled-based training group which involved education, coping skills, problem-solving and communication techniques.

**Information provision (four studies):** Three of the four interventions which included information provision reported some positive effects, but the exact contribution of the information component was unclear.

**Therapy (six studies):** Three studies which involved psychotherapy and one study which involved supportive expressive therapy reported no statistically significant effects on sexual functioning. Two studies that involved sex therapy reported positive findings in sexual functioning.

**Hypnosis (one study):** One study reported a statistically significant decrease in hot flash symptoms on sexuality with hypnosis.

Nine of the eleven interventions targeted at individual patient and all five of the interventions targeting couples reported positive results, where as none of the interventions targeted to groups of patients reported positive effects on sexual functioning.

**Authors’ conclusions**
Tentative findings suggested the most effective interventions were couple-based psychoeducation interventions that include an element of sexual therapy.

**CRD commentary**
The review addressed a clear question and was supported by appropriate inclusion criteria. Several relevant data sources were searched but it was not clear whether the authors searched the studies in different languages or made attempts to find the unpublished studies, so language bias and publication bias could not be ruled out. The authors did not report how many authors performed data extraction and quality assessment, so reviewer bias and error was possible in this process.

The authors acknowledged the major methodological problems in most studies, including small sample size, non-random design and use of non-validated outcome measures. Because of differences in stages of cancer progression and wide range of interventions, a narrative synthesis was appropriate in this review. However, few actual result details from the primary studies were presented, and a simple “vote counting” synthesis was presented, with little account made for sample size, effect size or study quality. A very basic evaluation of study quality was made, with few details provided regarding the criteria assessed. Furthermore, information was often not provided about control interventions.

In light of the review’s methodological and reporting limitations, the reliability of the authors’ conclusions is uncertain.

**Implications of the review for practice and research**

**Practice:** The authors did not state any implications for practice.

**Research:** The authors stated that more methodologically strong research was needed before any intervention could be recommended for routine practice. The timing of interventions and the effects of interventions in patients with advanced breast cancer also need to be explored. Also future research should be focused on providing evidence based intervention which was designed to improve sexual difficulties experienced by women after cancer.
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