Effects of psychoeducational interventions on sexual functioning, quality of life and psychosocial well-being in patients with gynaecological cancer: a systematic review

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Title of systematic review protocol
Effects of psychoeducational interventions on sexual functioning, quality of life and psychosocial well-being in patients with gynaecological cancer: a systematic review.

Background
Gynaecological cancer refers to cancer involving female reproductive tract, i.e. cervix, uterus, ovary, vulva, vagina and fallopian tubes. According to World Health Organization, cervical, ovarian and uterine cancers were the fifth, eighth and thirteenth most common cancers in women in the world. In Hong Kong, gynaecological cancer was the fifth leading cause of cancer death in women in 2008. It also accounted for 1,454 new cases registered in 2007. The incidence rate was 40 in 100,000 women in Hong Kong.

The diagnosis of gynaecological cancer and the effects of various treatments such as surgery, radiation and/or chemotherapy have many physical and psychological ramifications. Such ramifications have adverse effects to sexual functioning at different aspects and extent. Moreover, such adverse effects do not dissipate with time and may last for a long period of time.

Sexuality is an important aspect of quality of life. It is not confined to sexual intercourse. Sexuality includes feelings about body image, femininity, child-bearing ability and function sexually. Any adverse changes in sexual functioning may reflect problems in all areas of quality of life and psychosocial aspect, including physical symptoms, emotional state, self-esteem, self-perception, sense of well-being, life satisfaction and social relationships.

Effects of gynaecological cancer on sexual functioning, quality of life and psychosocial well-being
Over the past decades, advanced medical technologies have resulted in an improved prognosis in gynaecological cancer. As a result, more attention has been paid to the sexual functioning, quality of life and psychosocial well-being of gynaecological cancer survivors following the diagnosis, treatment and recovery of disease.

A study was performed by Aerts et al to compare the prevalence of sexual dysfunction and psychological functioning between women who underwent pelvic surgery for gynaecological cancer and healthy controls. All of 50 women with a history of gynaecological cancer were asked to complete the questionnaires 6-18 months after the surgery. The results showed that more women with gynaecological cancer reported sexual problems than control group (83% vs 20%), including decrease in sexual desire (76% vs 14%) and impaired vaginal lubrication (42% vs 9%). Moreover, it was found that pelvic surgery for gynaecological cancer was associated with several changes in sexual functioning such as changed intensity of orgasm (43%),
reduced vaginal sensitivity (38%) and vaginal elasticity (30%), superficial dyspareunia (27%), vaginal narrowing (26%) and vaginal shortening (22%). Although there was no significant differences between either group for total quality of relationship with their partners and depression, women with gynaecological cancer reported significant lower marital cohesion. Certain limitations were apparently present in the study. The sample size of the study and control groups was quite small, 50 and 39 respectively. Moreover, 50 women with history of gynaecological cancer consisted of vulvar, cervical and endometrial cancer. Different surgical treatment was provided for different cancer. This made the heterogeneity of the subjects restricting the findings of the study on the specific influence of different surgical treatment for a range of cancer.

Levin et al\textsuperscript{15} conducted a study to investigate the association between sexual morbidity, psychological adjustment and quality of life among gynaecological cancer survivors. One hundred and eighty six participants, at mean of 4 years after diagnosis of gynaecological cancer and at least 6 months after cancer treatment, were recruited into the study. Sexual morbidity was found to be covaried with greater depression and body change stress symptoms, as well as poorer psychological quality of life. Although the subjects consisted of cervical, endometrial, ovarian and vulvar cancer survivors, this finding suggested that treatment of sexual morbidity among gynaecological cancer survivors might improve their psychological adjustment and quality of life.

**Asian studies on sexual functioning and quality of life in gynaecological cancer survivors**

In Asia, studies were conducted to identify problems related to sexual functioning and quality of life in gynaecological cancer survivors. In Korea, it was found that cervical cancer survivors had more clinically severe symptoms experiences, worse body image, poorer sexual and vaginal functioning, and more sexual worry than controls. Moreover, they were more anxious about sexual performance.\textsuperscript{16} In Taiwan, cervical cancer patients also reported impaired sexual functioning with dyspareunia as the worst problem.\textsuperscript{17} In Hong Kong, Chinese gynaecological cancer survivors experienced disrupted sex life after the diagnosis and treatment. Furthermore, they had misconceptions about sex. They were afraid of having sex as they thought this might cause the recurrence of cancer. However, very few women sought advice from their doctors. Some of them reported that their husband had extramarital affairs after the diagnosis of their cancer.\textsuperscript{18} Chinese women's belief and behavior about sexuality seemed to be affected by Taoism and Confucianism. Taoist sexual beliefs suggested that Chinese women and their partners should reduce or stop sexual activities after the diagnosis and treatment of cancer to prevent further trauma to reproductive organs and facilitate postoperative recovery, whilst Confucian sexual belief mainly concerned about sexual adjustment in the context of
reproduction and childbirth. This cultural beliefs led to high prevalence sexual dysfunction in Chinese women with gynaecological cancer.

**Contradictory finding on sexual functioning in gynaecological cancer patients**

Conversely, Leenhouts et al. reported contradictory finding about the sexual problems among gynaecological cancer patients. It was indicated that women with early-stage gynaecological cancer were not at higher risk for severe sexual problems. The positive outcome of the study might be due to the improved patient care and education on sexual aspects in Dutch in recent years. At 6 months post-treatment, over 90% of the participants had discussed sexuality with medical specialist and 80% of them were satisfied with the information obtained. This might improve the coping with the consequences of cancer and related treatment on sexual lives.

**Care and intervention on sexuality for gynaecological cancer patients**

It is undoubtedly the area that all relevant literatures agree is sexual functioning considerably affected in gynaecological cancer patients and makes a major contribution to their quality of life and psychosocial aspects. However, care and intervention on this area are still ignored. Sexuality is seldom addressed by health care professionals and sexual function is rarely assessed as a treatment outcome.

The attitudes and behaviors of doctors and nurses treating women with gynaecological cancer towards the discussion of sexual issues were investigated. It was found that although most health care professionals believed that women with gynaecological cancer mostly experienced sexual problems, only 20-35% of them discussed sexual issues with the patients. Algier & Kav had a similar finding that nearly half of 77 nurses working with cancer patients never explained and explored patients’ views about the effects of the cancer treatment on sexual desire. It was indicated that nearly 80% of nurses did not receive education about sexuality.

Lack of education appeared to be the main reason for nurses not to discuss sexual issues with patients. Other reasons include lack of experience, lack of resources to provide support if needed, not their responsibility and felt uncomfortable and embarrassed with this topic. Medical professionals’ reasons for not discussing sexual problems included time constraints, efficacy of treatment being focused and lack of time.

In the context of patients and their partners, they expressed that all the information regarding the illness, and the effects of illness and treatment on sexuality were important to them. They also wanted to acquire the information related to the change of body image and practical strategies to manage sexual problems. A study found that 42% of patients recognized discussing sexuality with their nurse was important. They expressed a desire to be able to ask
questions about their sex life. Moreover, it was found that acquisition of knowledge about the consequences of the illness and its treatment would minimize the risk of negative impact on couple relationship. However, they, especially in the Asian culture like Hong Kong, often hesitated to raise questions or concerns about sex with health care professionals because they viewed sexuality as a taboo topic and seldom discussed in public. As a result, most patients lacked knowledge of reproductive organs and accurate sexual information. They also had misconceptions of their sexual functioning. Furthermore, women expressed that they were reluctant to discuss sexual concerns with their partners and thus affected couple’s relationship. This highlighted the need to provide intervention on sexuality for these women. Nurses should take an active role in this area to provide care.

Sexuality interventions
There were a number of interventions for problems associated with sexuality and sexual functioning, such as psychosexual interventions and medical treatment. Most often, the terms “psychosexual interventions”, “psychosocial interventions” and “psychoeducational interventions” were used interchangeably. Both of them combined education and information with elements of psychological, cognitive and behavioural therapy. The goal of these interventions were to enhance the person’s acceptance of her illness, decrease the psychosocial morbidity associated with gynaecological cancer, assist in clarifying misconceptions and misinformation, and lessen feeling of isolation. They were provided in the format of individual or group, with or without couple participation, to give information, provide coping skills training, discuss concerns and express emotion. Preferred timing for intervention varied in different studies. Some women felt that they would benefit from preoperative intervention as they could expect what to be happened in terms of their sexual function after operation. But some women felt that postoperative intervention would be helpful as sexuality might be put at a low priority for newly diagnosed cancer. In fact, intervention provision should be held at the appropriate time according to the needs of patients.

Psychoeducational interventions
In this review, the term “psychoeducational interventions” will be adopted to examine its effects on sexual functioning, quality of life and psychosocial well-being in gynaecological cancer patients. It is defined as interventions which involve education and elements of psychological, cognitive and behavioural therapy, aiming at enhancing the acceptance of gynaecological cancer and recovery from the illness and treatment. It seems to be the most optimal nursing intervention in sexuality issue among gynaecological cancer patients.

Literatures demonstrated that psychoeducational interventions had positive effects on sexual functioning and body image in many types of cancer patients. It was also beneficial in
psychological adjustment and physical recovery.\textsuperscript{37-39}

In the aspect of gynaecological cancer, cancer in an organ implying femininity and sexuality might evoke a different reaction than other types of cancer.\textsuperscript{40} It was found that psychoeducational interventions had a positive effect on sexual function as well as mood, body image, and quality of life among gynaecological cancer patients.\textsuperscript{26,41,42} As a result, it was suggested to include sexual education and brief counselling in care of the patients.\textsuperscript{43-45} However, one study showed no significant effect of counselling for newly diagnosed gynaecological cancer patients.\textsuperscript{46} This controversial result needs further exploration.

It is clear from the literature that sexual functioning, quality of life and psychosocial aspects such as body image and anxiety level were influenced by the diagnosis and treatment of gynaecological cancer. Psychoeducational interventions are recommended to use in clinical area for gynaecological cancer patients to improve patient care. However, the evidence for its effectiveness is far from conclusive. Moreover, such intervention is still scarce or even absent in most countries. Upon retrieval of previous systematic review, there was only one review providing the evidence regarding the effectiveness of psychosocial interventions on quality of life among women with gynaecological cancer. However, the effects on sexual functioning and psychosocial well-being were not measured.\textsuperscript{47} The findings of this systematic review will inform health care professionals whether the provision of psychoeducational interventions is crucial to optimize gynaecological cancer patients’ sexual functioning and psychosocial well-being, so that to improve their quality of life. In addition, the suitable format, types and optimal time to deliver interventions are essential to support the gynaecological cancer patients and their partners.

**Objectives/research questions**

The objective of this systematic review is to identify the best available research evidence related to the effectiveness of psychoeducational interventions on sexual functioning, quality of life and psychosocial well-being in patients with gynaecological cancer.

The specific review questions to be addressed are:

1. What are the effectiveness of psychoeducational interventions for improving sexual functioning and quality of life in patients with gynaecological cancer?
2. What are the effectiveness of psychoeducational interventions on psychosocial well-being including body image, self-concept, mood, anxiety, and depression in patients with gynaecological cancer?
3. What are the effectiveness of various types of psychoeducational interventions, for example, information provision, counseling, psychotherapy, social support group,
behavioral or cognitive therapy, cognitive-behavioral intervention or therapy, on outcomes including sexual functioning, quality of life and psychosocial well-being?

4. What are the effectiveness of combined various types of psychoeducational interventions, for example, information provision plus counselling, information provision plus social support group, counselling plus cognitive-behavioral intervention or therapy etc., on outcomes including sexual functioning, quality of life and psychosocial well-being?

5. What are the effectiveness of various formats of psychoeducational interventions, for example, individual, group, couple participation, on outcomes including sexual functioning, quality of life and psychosocial well-being?

6. What are the effectiveness of various providers of psychoeducational interventions, for example, nurses, physicians, psychologists, social workers, or other allied health providers, on outcomes including sexual functioning, quality of life and psychosocial well-being?

7. What are the effectiveness of various provision time frames of psychoeducational interventions, for example, at the time of diagnosis, before operation, after operation during in-hospital, and after discharge, on outcomes including sexual functioning, quality of life and psychosocial well-being?

8. What are the effectiveness of varying duration of psychoeducational interventions, for example, frequency of sessions and duration of each session, on outcomes including sexual functioning, quality of life and psychosocial well-being?

Methods of the review
Inclusion criteria
Types of participants
Adult women who are over the age of 18 years and have a primary gynecological cancer, i.e. uteri, corpus, vagina, cervix, ovary or fallopian tube, confirmed by pathology test will be included. Participants who are either completely treated or still receiving active treatment, whether it is surgery, chemotherapy or radiotherapy, will be included as the effectiveness of various provision time frames of psychoeducational intervention will be compared. Those with metastases in the genital tract from an extra-genital primary will be excluded as they differ considerably in treatment and prognosis from primary gynaecological cancer. We excluded studies that included women with known mental disorders.

Types of studies
This systematic review will consider all studies that used randomized controlled trials (RCT) design to evaluate the effects of psychoeducational interventions that are aimed at improving sexual functioning, quality of life and psychosocial well-being of gynaecological cancer patients. In the absence of RCTs, other research designs such as non-randomized or
quasi-experimental studies and controlled clinical trials without control group will be included in
the review.

Types of interventions
For the purpose of the review, psychoeducational interventions are defined as interventions
which combine education and information with elements of psychological, cognitive and
behavioural therapy, aiming at enhancing the acceptance of gynaecological cancer and
recovery from the illness and treatment among gynaecological cancer patients, which include
the following features:
- the types of interventions include: information provision, counselling, psychotherapy,
  social support group, behavioural or cognitive therapy, cognitive-behavioural intervention
  or therapy;
- the formats of interventions include: individual or group, with or without couple
  participation;
- the providers of interventions include: nurses, physicians, psychologists, social workers,
  or other allied health providers;
- psychoeducational interventions of provision time frames such as at the time of diagnosis,
  before operation, after operation during in-hospital, and after discharge;
- psychoeducational interventions of varying duration such as frequency of sessions and
duration of each session.

Comparison interventions
Foreseen comparisons of intervention trials include:
- comparison between two or more types of interventions: for example psychoeducational
  interventions vs. information-only therapy, psychoeducational interventions vs.
  counselling therapy or support group, psychoeducational interventions vs. routine care
  or no additional care;
- comparison between different combined types of intervention: for example information
  provision plus counselling vs. information provision plus social support group, or
  information provision plus counselling vs. counselling plus cognitive-behavioural
  intervention or therapy;
- comparison between formats of intervention: for example individual format vs. group
  format, individual format vs. couple participation, or couple participation vs. group format;
- comparison between providers of intervention: for example nurses vs. physicians,
  psychologists, social workers or other allied health providers;
- comparison between time frames of intervention provision: for example at the time of
  diagnosis vs. before operation or treatment vs. after operation during in-hospital vs. after
  discharge;
• comparison between duration of intervention: for example one one-hour session per week vs. one two-hour session per week, or one one-hour session per week vs. two one-hour sessions per week etc.

Types of outcome measures

Outcomes

Sexual functioning: defined as the physiologic and anatomic ability to engage in sexual activity. It consists of four components, human anatomy, sexual response cycle, hormonal levels and life cycle changes in sexual physiology.\(^4\)

Quality of life: defined as a person's physical, psychological, social and spiritual well-beings.\(^{48}\)

Psychosocial well-being refers to the relationship between social condition and psychological health. In other words, it relates to the feelings of a patient about her disease and treatment affecting her social functioning at work, at home and in relationships with her partner, children, relatives and friends.\(^{49}\)

Outcome measures

The outcome measures for quantifying the effects of the psychoeducational interventions include:

1. improvement in sexual functioning measured by, for example sex relations subscale of Psychosocial Adjustment to Illness Scale (PAIS), Changes in Sexual Functioning Questionnaire (CSFQ), Lasry Sexual Functioning Scale, Sexual History Form (SHF), Sexual knowledge questionnaire (Knowledge), and Sexual function-Vaginal changes Questionnaire (SVQ).

2. improvement in quality of life measured by, for example, European Organisation for the Research and Treatment of Cancer Quality of Life Questionnaire-Core 30 (EORTC QLQ-C30), and City of Hope Quality of Life Ovarian Cancer Tool (QOL-OVCA).

3. improvement in psychosocial outcomes, including body image, self-concept, mood, anxiety, and depression, measured by, for example Self-Rating Symptom Scale, Profile of Mood States, Tennessee Self-Concept Scale, Hamilton Anxiety Scale, Hamilton Depression Scale, and Psychological Distress Thermometer.

Exclusion criteria

Studies will be excluded from the review if they:

1. were written in a language other than English and Chinese
2. were research designs including descriptive studies, literature reviews, systematic reviews, clinical guidelines or recommendations, case studies, editorials or reports of
expert opinions.

3. were combining psychoeducational intervention with some other interventions such as relaxation exercise, music therapy, medical therapy etc.

Search strategy

A three-step search approach will be utilized. First, a limited search of MEDLINE and CINAHL, followed by analysis of the key words used in the title and abstract will be performed. Second, more extensive search of the databases using the identifying keywords and index terms will be performed to identify potential articles for inclusion into the review. Third, a hand searching of other sources of studies, including a manual search of relevant conference proceedings and journals, postgraduate and doctoral dissertation, online search of databases and websites such as Google Scholar, will also be conducted to identify studies which are not located through the search strategies. Reference lists and bibliographies of all retrieved articles will be screened to reveal additional relevant studies.

In addition, relevant scales used in gynaecological cancer patients to measure sexual functioning, quality of life and psychosocial well-being will be searched. For example, Psychosocial Adjustment to Illness Scale (PAIS), Changes in Sexual Functioning Questionnaire (SFQ), Lasry Sexual Functioning Scale, Sexual History Form (SHF), Sexual Knowledge Questionnaire (Knowledge), Sexual function-Vaginal changes Questionnaire (SVQ), EORTC QLQ C30, QOL-Ovarian Cancer Tool, Self-Rating Symptom Scale, Profile of Mood States, Tennessee Self-Concept Scale, Hamilton Anxiety Scale, Hamilton Depression Scale and Psychological Distress Thermometer.

Databases to be searched for English studies will include:

- Academic Search Premise (1975-present)
- British Nursing Index (1994-present)
Databases to be searched for Chinese studies will include:

- China Journal Net (CJN) (中國期刊全文數據庫)
- Chinese Biomedical Literature Database (CBM) (中國生物醫學文獻數據庫)
- Chinese Medical Current Contents (CMCC) (中文生物醫學期刊數據庫)
- Hong Kong Index to Chinese Periodical (HKInChiP) (香港中文期刊論文索引)
- HyRead (台灣全文資料庫)
- Taiwan Electronic Periodical Services (TEPS) (台灣電子期刊服務網)
- WanFang Data (萬方數據)

The search for unpublished studies or grey studies will include:

- Agency of Healthcare Research and Quality (AHRQ)
- Academic Archive Online
- Digital Dissertations Consortium
- Grey Literature Report (via New York Academy of Medicine)
- Lancashire Care Library and Information Service
- MEDNAR
- National Library of Medicine Gateway
- Netting the Evidence
- ProQuest Dissertation and Thesis
- The Networked Digital Library of Theses and Dissertations (NDLTD)
- Key organizations and key researchers of conducting psychoeducational interventions for gynaecological cancer patients will be contacted

The search strategies for MEDLINE and CINAHL are in Appendix I.

Assessment of eligibility
All studies identified from database search will be assessed for relevance to the review based on the title and abstract. Two reviewers will assess all identified abstracts using the Study Eligibility Verification Form (Appendix II), and remove duplicate studies. Inclusion and exclusion criteria regarding the types of study design, participants, intervention, and outcome will be used to perform the assessment. If a research study is considered eligible for inclusion into the review, full text will be retrieved for critical appraisal and data analysis. If the title and abstract are inconclusive, full text of the study will be retrieved for further analysis. Study authors will be contacted when insufficient information is found. Disagreement between reviewers will be resolved via discussion or by consultation with a third reviewer. The details of eligible studies will be stored in a bibliographic software package (RefWorks).

Assessment of methodological quality
The methodological quality of eligible studies will be assessed independently by two reviewers using the Joanna Briggs Institute (JBI) critical appraisal checklists for experimental studies (Appendix III) or descriptive/case series studies (Appendix IV). Any disagreements that arise between the reviewers will be resolved by discussion or consultation with the third reviewer.

Data extraction
Details of the included studies will be extracted and summarized independently by one reviewer using the modified version of the JBI data extraction form, which is tailored to the specific questions in this systematic review (Appendix V). A second reviewer will independently check for its accuracy. Discrepancies between the reviewers will be resolved by discussion. The data extraction form will be pilot-tested on two randomly-selected included studies, and refined it accordingly prior to use. The data extracted will include precise details about the settings; the population and participant demographics; participant inclusion and exclusion criteria; study methods; the characteristics, formats and duration of the interventions; outcome measures; results; and the number and reasons for withdrawals and dropouts. If data was missing from the included studies, study authors will be contacted to retrieve statistical data.

Data synthesis
The included studies will be categorized according to the types and formats of interventions being conducted. In order to minimize the risk of errors during data entry, results will be subject to double data entry. For continuous data that are collected using the same scale, the mean difference and 95% confidence interval will be calculated for each included study and used as the summary measure of effect; while for continuous studies collected using different scales, the standardized mean differences and their 95% confidence interval will be calculated. For dichotomous data, relative risks, odd ratios and their 95% confidence interval will be calculated and used as a summary measure of effect. The studies will be assessed for clinical
heterogeneity by considering the settings, populations, interventions and outcomes. If appropriate, quantitative results of comparable studies will be pooled in statistical meta-analysis using the JBI Meta Analysis Statistics, Assessment and Review Instrument (JBI-MAStARI). The statistical heterogeneity of the combined studies will be tested using the $I^2$. $I^2$ describes the percentage of total variation across a study that is due to heterogeneity rather than chance. A fixed effects model will be applied for pooling if there is no clinical or statistical heterogeneity; while a random effects model will be used in the absence of clinical heterogeneity but with the presence of statistical heterogeneity. Reporting bias will be assessed by using a funnel plot. If statistical pooling of results of the included studies is not appropriate or possible, the findings will be summarized in narrative form. Subgroup analysis will also be performed to evaluate the comparisons between:

- one type of psychoeducational interventions and other types of interventions;
- individual format and group format, with or without couple participation;
- different interventions providers;
- different time frames of intervention provision;
- different duration of interventions including frequency of sessions and duration of each session.

If significant heterogeneity is detected, study characteristics will be examined to find out the potential cause.
References


30. Devine EC, Westlake SK. The effects of psychoeducational care provided to adults with


Appendix I: Initial search strategy

MEDLINE (Ovid)
1. exp Genital Neoplasms, Female/
2. (genital neoplasm*, female or gyn?ecologic* cancer or gyn?ecologic* neoplasm or gyn?ecologic* tumo?r or female genital neoplasms or genital cancer female or genital neoplasms female or genital tumo?rs female or malignant female reproductive system neoplasm or malignant gynecologic tumo?r or female reproductive cancer).mp.
3. exp Ovarian Neoplasms/
4. (ovarian neoplasm* or ovarian cancer* or ovarian tumo?r or malignant neoplasm of
ovary or malignant ovarian tumo?r or malignant ovarian neoplasm or ovary cancer* or
ovarian carcinoma or cancer* ovary or cancer* ovarian).mp.
5. exp Uterine Neoplasms/
6. exp Endometrial Neoplasms/
7. (uterine neoplasm* or endometrial neoplasm* or uterine cancer* or uterine tumo?r or
uterus cancer* or malignant uterine tumo?r or cancer* uterus or cancer* uterine).mp.
8. exp Uterine Cervical Neoplasms/
9. exp Cervix Uteri/
10. (uterine cervical neoplasm* or cervix uteri or cervical cancer or cervical neoplasm* or
cervical tumo?r or uterine cervix carcinoma or uterine cervix cancer or cervix carcinoma
or cervix cancer or cervical carcinoma or carcinoma cervix or cervix neoplasm* or cervix
tumo?r*).mp.
11. or/1-10
12. (psychoeducation* intervention or psycho education* or information provision).mp.
13. exp Patient Education as Topic/
14. exp Teaching/
15. exp Counseling/
16. exp Psychotherapy/
17. (patient education as topic or teaching or counsel?ing or psychotherapy).mp.
18. (support group*or support group treatments and procedures or support group
facilitation).mp.
19. exp Self-Help Groups/
20. exp Social Support/
21. (self help group* or self help organization or group* support or group* self help or social
support).mp.
22. exp Cognitive Therapy/
23. exp Cognition/
24. exp Behavior Therapy/
25. (cognitive therapy or cognition or cognitive or behavio?r therap* or therapy conditioning
or therap* behavio?r or modification behavio?r or conditioning therap* or behavio?r*
treatment* or behavio?r* modification* or behavio?r* intervention* or behavio?r*
modification psychotherapy or behavio?r* modification technique or behavio?r*
psychotherapy).mp.
26. exp Models, Theoretical
27. or/12-26
28. 11 and 27
29. exp Sexuality/
30. (sexuality or sexual function*).mp.
31. exp Quality of Life/
32. (quality of life or quality of life satisfaction or life quality or life qualities).mp.
33. psychosocial wellbeing.mp.
34. exp. Body Image/
35. (body image* or image* body).mp.
36. exp Self Concept/
37. (self concept or concept* self).mp.
38. exp Emotions/
39. exp Mood Disorders/
40. exp Affective Symptoms/
41. exp Affect/
42. (emotion* or mood disorder* or affective symptom* or mood* or feeling* or affective state or mood* or mood function or affect).mp.
43. exp Anxiety/
44. exp Anxiety Disorders/
45. exp Stress, Psychological/
46. (anxiety or anxiety disorder* or reaction anxiety or anxiety reaction or angst or anxiousness or feeling anxious).mp.
47. exp Depression/
48. exp Depressive Disorder/
49. (depression or feeling of sadness or sadness or depressed or depressed mood or feeling low or low mood or melancholic or miserable or sad or morose mood or morosity or neurosis depressive or disorder* depressive or depressive neurosis or depressive illness or monopolar depression or mental depression).mp.
50. or/29-49
51. 11 and 50
52. 28 and 51
53. exp Clinical Trial/
54. exp Randomized Controlled Trial/
55. exp Placebos/
56. exp Random Allocation/
57. (clinical trial or randomi?ed controlled trial or placebo* or random allocation or rct or RCT or random).mp.
58. (comparison stud* or comparison group*).mp.
59. (pre- and post- test).mp.
60. or/53-59
61. limit 60 to humans
62. 52 and 62

**Appendix II: Study Eligibility Verification Form**

Effects of psychoeducational interventions for gynaecological cancer patients

<table>
<thead>
<tr>
<th>Author/s and Year</th>
<th>Journal and volume (Issue)</th>
<th>Title of article</th>
<th>Page number</th>
</tr>
</thead>
</table>

**Inclusion criteria (please √ when appropriate)**

The eligibility of study to be included: at least one YES to 1, 2 and 3, and at least one to 4
### 1. Study design

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Randomized controlled trial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-randomized controlled trial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Controlled trial without control group</td>
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<td></td>
</tr>
</tbody>
</table>

### 2. Participants

Gynaecological cancer patients

### 3. Interventions

- Behavioural intervention / therapy
- Counselling
- Cognitive intervention / therapy
- Cognitive-behavioural intervention / therapy
- Education / information provision
- Psychoeducation
- Psychotherapy
- Social support group

### 4. Outcomes

<table>
<thead>
<tr>
<th>Gynaecological cancer patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual functioning</td>
</tr>
<tr>
<td>Quality of life</td>
</tr>
<tr>
<td>Psychosocial aspects</td>
</tr>
<tr>
<td>(e.g. body image, self-concept, mood, anxiety and depression)</td>
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</tbody>
</table>

This study to be included?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

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### Appendix III: JBI-MAStARI Critical Appraisal Checklist for experimental studies

Reviewer: _____________________ Date: ___________
Author _____________________ Year ___________ Record number: ___________

<table>
<thead>
<tr>
<th>1. Was the assignment to treatment group truly random?</th>
<th>Yes</th>
<th>No</th>
<th>Unclear</th>
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<tbody>
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<table>
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<tr>
<th>2. Were participants blinded to treatment allocation?</th>
<th>Yes</th>
<th>No</th>
<th>Unclear</th>
</tr>
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<tr>
<td></td>
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<tr>
<th>3. Was allocation to treatment groups concealed from</th>
<th>Yes</th>
<th>No</th>
<th>Unclear</th>
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the allocator?

4. Were the outcomes of people who withdrew described and included in the analysis? □ □ □

5. Were those assessing outcomes blind to the treatment allocation? □ □ □

6. Were the control and treatment groups comparable at entry? □ □ □

7. Were groups treated identically other than for the named interventions? □ □ □

8. Were outcomes measured in the same way for all groups? □ □ □

9. Were outcomes measured in a reliable way? □ □ □

10. Was appropriate statistical analysis used? □ □ □

Overall appraisal: Included □ Excluded □ Seek further info. □

Comments (including reasons for exclusion)
________________________________________________________________________
________________________________________________________________________
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Appendix IV: JBI-MAStARI Critical Appraisal Checklist for Descriptive/Case series studies

Reviewer: _____________________ Date: ___________
Author _________________________ Year __________ Record number:_________
deal with them stated?

4. Were outcomes assessed using objective criteria? □ □ □

5. If comparisons are being made, was there sufficient descriptions of the groups? □ □ □

6. Was follow up carried out over a sufficient time period? □ □ □

7. Were the outcomes of people who withdrew described and included in the analysis? □ □ □

8. Were outcomes measured in a reliable way? □ □ □

9. Was appropriate statistical analysis used? □ □ □

______________________________

Overall appraisal: Included □ Excluded □ Seek further info. □

Comments (including reasons for exclusion)
_____________________________________________________________________
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Appendix V: Data Extraction Form

Effects of psychoeducational interventions for gynaecological cancer patients

Reviewer ___________________________ Date _______________

Author ___________________________ Year _______________

Journal Title and Volume (issue) _______________________________________

Article Title _________________________________________________________

Page number __________

Study design _______________________________________________________

Details of the study

Aim/objectives of the study

________________________________________________________________________
Country/Setting
--------------------------------------
Population/Sample
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<table>
<thead>
<tr>
<th>Inclusion criteria</th>
<th>Exclusion criteria</th>
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Gynaecological cancer patients’ characteristics

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
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<tbody>
<tr>
<td></td>
<td>(experimental 1)</td>
<td>(experimental 2)</td>
<td>(control)</td>
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<tr>
<td>Sample size</td>
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<tr>
<td>Mean age (SD)</td>
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<tr>
<td>Age range</td>
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<tr>
<td>Clinical characteristics</td>
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<tr>
<td>Type of gynaecological cancer (N, %)</td>
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<td></td>
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<tr>
<td>- Cervical cancer</td>
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<td>- Ovarian cancer</td>
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<td>- Uterine cancer</td>
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<td>- Vaginal cancer</td>
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<td>- Vulval cancer</td>
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<tr>
<td>- Others</td>
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<td>- Undetermined</td>
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<td><strong>Time since diagnosis of gynaecological cancer</strong> (mean, SD)</td>
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<td><strong>Time after completion of cancer treatment</strong> (mean, SD)</td>
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<td>- In combination of treatment</td>
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<td><strong>Marital status</strong></td>
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<td>- Married</td>
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<td>- Divorced/separated</td>
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<td>- Widowed</td>
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<td><strong>Others</strong></td>
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<tr>
<td><strong>Withdrawals/dropouts reasons</strong></td>
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<td><strong>Details of psychoeducational interventions</strong></td>
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<td>Group 2 (experimental 2)</td>
<td>Group 3 (control)</td>
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<th>Group 3 (control)</th>
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<th>Participants</th>
<th>Group 1 (experimental 1)</th>
<th>Group 2 (experimental 2)</th>
<th>Group 3 (control)</th>
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| (1: patients only
2: couple involved) | | | |

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<th>Descriptions of interventions</th>
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<th>Group 2 (experimental 2)</th>
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<th>Quality of life</th>
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### Psychosocial aspects
(e.g. body image, self-concept, mood, anxiety, depression etc.)

### Secondary outcomes

#### Satisfaction with intervention

#### Others
(e.g. return to employment, knowledge level, participation in leisure activities etc.)

### Results

#### Dichotomous data

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<th>Outcomes</th>
<th>Group 1 (odd ratio /relative risk /95% CI)</th>
<th>Group 1 (odd ratio /relative risk /95% CI)</th>
<th>Group 1 (odd ratio /relative risk /95% CI)</th>
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<td>Group 3 (mean difference /standardized mean differences /95% CI)</td>
<td>p value</td>
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**Narrative results**

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**Authors’ conclusion**

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**Other comments**