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Psychological supportive care needs interventions for cervical cancer patients: A systematic review

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Outlines

- Background and objectives
- Methodology
- Results
- Conclusions
- Acknowledgements

Background and objectives

- Psychological supportive care needs (SCNs)
 - Anxiety, feeling down or depressed, feelings of sadness,
 - Fears of cancer spreading, Worry of treatment results beyond control.
 - Ten items of psychological domain of supportive care need survey short form 34 for the assessment of SCNs among cancer patients¹.

1. Boyes A, Girgis A, Lecathelinais C. Brief assessment of adult cancer patients' perceived needs: Development and validation of the 34-item supportive care needs survey (SCNS-SF34). J Eval Clin Pract. 2009;15(4):602-6.

Background and objectives

- Psychological supportive care intervention
 - Any set of activities
 - Used to change behaviors, emotions, or cognitions of a person who suffered from any kind of psychological SCNs¹ .

Background and objectives

- In comparison with other gynecological cancer patients:
 - Cervical cancer patients face manifold psychological needs:
 - = Anxiety, depression, irritability, memory loss, worse emotional distress,
 - = Social distress, spiritual suffering, and poor quality of life¹ .
- With the help of supportive care intervention (SC):
 - Patients and family members can manage these disease-related problems comprehensively and holistically during the disease course^{1, 2} .

1. Shirali E, Yarandi F, Ghaemi M, Montazeri A. Quality of life in patients with gynecological cancers: a web-based study. Asian Pacific J Cancer Prev APJCP [Internet]. 2020;21(7):1969. Available from: http://journal.waocp.org/article_89165_d891d6eeb2333d7a5908353c75d14911.pdf

2. Margaret I. Fitch, John Maamoun. Unmet supportive care needs and desire for assistance in patients receiving radiation treatment: Implications for oncology nursing. Can Oncol Nurs J. 2016;26(1):53–9.

3. Gaertner J, Wolf J, Frechen S, Klein U, Scheicht D, Hellmich M, et al. Recommending early integration of palliative care—does it work? Support Care Cancer. 2012;

Background and objectives

- Cervical Cancer- worldwide, ranked seventh common cancer overall
- Fourth most frequently diagnosed cancer in women
- Fourth leading cause of cancer death in women¹.

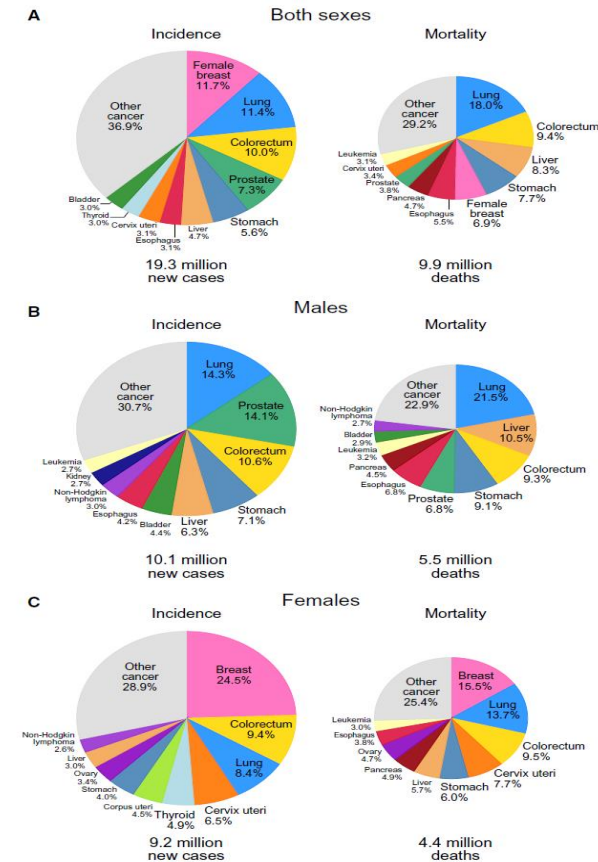


FIGURE 4. Distribution of Cases and Deaths for the Top 10 Most Common Cancers in 2020 for (A) Both Sexes, (B) Men, and (C) Women. For each sex, the area of the pie chart reflects the proportion of the total number of cases or deaths; nonmetastatic skin cancers (excluding basal cell carcinoma for incidence) are included in the "other" category. Source: GLOBOCAN 2020.

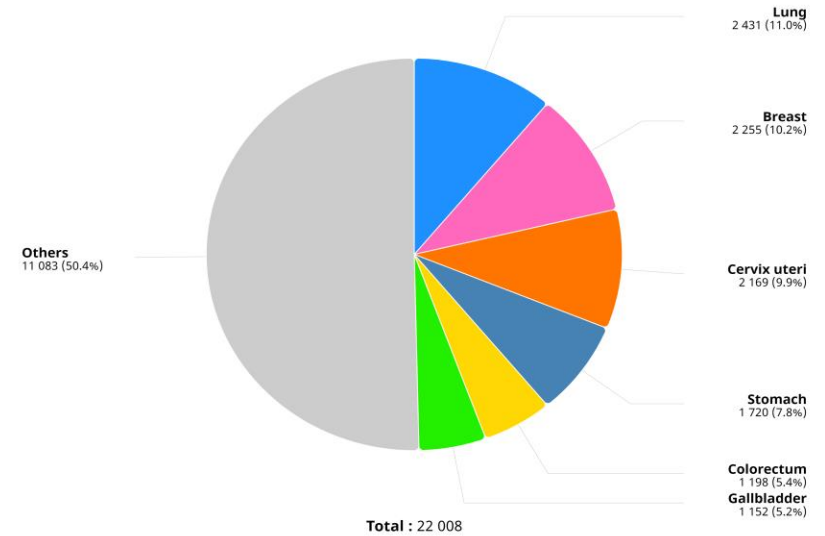
Background and objectives

In Nepal

- Cervical cancer - Second most frequent cancer among women ^{1,2}.

- With 2,169 new cases and 1,493 deaths yearly ^{1,2}

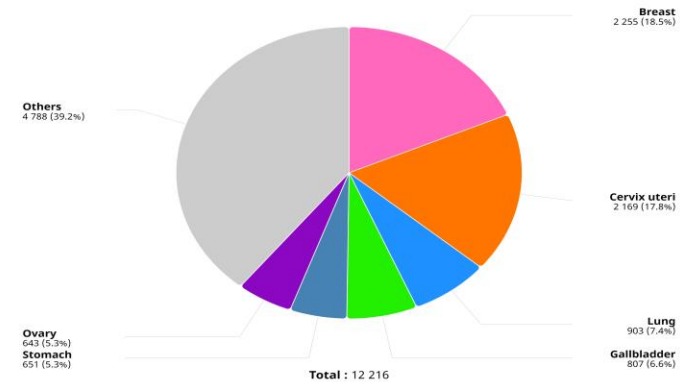
Absolute numbers, Incidence, Both sexes, in 2022
Nepal



Cancer TODAY | IARC - <https://gco.iarc.who.int/today>
Data version : Globocan 2022 (version 1.1)
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Absolute numbers, Incidence, Females, in 2022
Nepal



Cancer TODAY | IARC - <https://gco.iarc.who.int/today>
Data version : Globocan 2022 (version 1.1)
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Background and objectives

- Different types of psychological interventions help to increase psychological well-being and to alleviate physical symptoms¹.
- The aim of the study was to evaluate the effect of psychological supportive care intervention on anxiety and depression among cervical cancer patients.

Methodology

Study Selection Criteria and Search Strategy

- Registered in International's prospective register of systematic reviews (PROSPERO) - ID No CRD42023164594¹.
- The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 statement adopted².
- The population, intervention, comparator, and outcomes (PICO) search strategy applied².
- Six electronic databases (PubMed, Science Direct, Willey online library, Cochrane, Google Scholar, and JSTOR)

1. Higgins JPT, Altman DG, Gøtzsche PC, Jüni P, Moher D, Oxman AD, et al. The Cochrane Collaboration's tool for assessing risk of bias in randomised trials. BMJ [Internet]. 2011;343(7829):1–9. Available from: <https://www.bmj.com/content/bmj/343/bmj.d5928.full.pdf>

2. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. BMJ. 2021;372(71):1–8.

Methodology

Study Selection Criteria and Search Strategy

- Electronic searches from 20th March 2023 to 30th April 2023.
- Searched the specified databases since 1999 Jan to 2023 April
- Two-step systematic search strategy was used¹.
- Key word: psychological AND supportive care AND intervention AND anxiety AND depression AND cervix AND cervical AND cancer

Methodology

Inclusion criteria

- RCTs, quasi experimental design, and one group pre-post studies
- Conducted among cervical cancer targeting psychological problems
- Full-text articles in the English language¹

Exclusion criteria

- Review studies, qualitative studies, quantitative studies
- Commentaries, letters, pilot studies, preprint articles, study protocols
- Clinical trials with international trial registries but unpublished¹

1. Getu MA, Chen C, Panpan W, Mboineki JF, Dhakal K, Du R. The effect of cognitive behavioral therapy on the 1. quality of life of breast cancer patients: a systematic review and meta-analysis of randomized controlled trials. Qual Life Res [Internet]. 2020;(0123456789). Available from: <https://doi.org/10.1007/s11136-020-02665-5>

Methodology

Intervention

- The intervention involved the training of CC patient
- Healthcare professionals/trainers/psychologists
- Health education, and physical and psychological exercise targeting to address the psychological problems¹.

Comparator(s)/Control

- The patients with usual (regular) care¹

Outcome Measures

- Reduction of anxiety and depression after getting involved in the targeted intervention as a primary outcome¹.

Methodology

Data extraction procedures

- Mandalay was used as the automation tool
- Removal of duplication (KD, BA)
- Following a two-stage process for data extraction.
 - Initial screening stage - shortlist of articles - titles and abstracts (KD and JFM) .
 - Discrepancies on inclusion were resolved by discussion with third author (BA)^{1,2,3}.

1. Mboineki JF, Wang P, Chen C. Fundamental Elements in Training Patient Navigators and Their Involvement in Promoting Public Cervical Cancer Screening Knowledge and Practices: A Systematic Review. *Cancer Control*. 2021;28:1–19.
2. 1. Getu MA, Chen C, Panpan W, Mboineki JF, Dhakal K, Du R. The effect of cognitive behavioral therapy on the 1. quality of life of breast cancer patients: a systematic review and meta-analysis of randomized controlled trials. *Qual Life Res [Internet]*. 2020;(0123456789). Available from: <https://doi.org/10.1007/s11136-020-02665-5>
3. 1. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*. 2021;372(71):1–8.

Methodology

Data extraction procedures

- Second stage screening - retrieval of articles in full- text articles.
- Two co-authors independently assessed all articles for eligibility (KD, PW)
- Data extraction tables were specifically developed for this review.
- Pilot-tested on three randomly selected studies of the final sample and refined
- Standard data extraction checked by CC^{1,2,3}.

1. Mboineki JF, Wang P, Chen C. Fundamental Elements in Training Patient Navigators and Their Involvement in Promoting Public Cervical Cancer Screening Knowledge and Practices: A Systematic Review. *Cancer Control*. 2021;28:1–19.
2. 1. Getu MA, Chen C, Panpan W, Mboineki JF, Dhakal K, Du R. The effect of cognitive behavioral therapy on the 1. quality of life of breast cancer patients: a systematic review and meta-analysis of randomized controlled trials. *Qual Life Res [Internet]*. 2020;(0123456789). Available from: <https://doi.org/10.1007/s11136-020-02665-5>
3. 1. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*. 2021;372(71):1–8.

Methodology

Assessment of risk of bias in included studies

- Effective Public Health Practice Project (EPHPP) tool¹.

Data analysis

1. Systematic review
 - Data heterogeneity,
 - Characteristics, design, sample size, intervention and outcomes
 - Descriptive statics (Frequency, Percentage, Mean)².

1. EPHPP. Quality assessment tool for quantitative studies. Eff Public Heal Pract Proj [Internet]. 2010;(1998):1–4. Available from: https://merst.ca/wp-content/uploads/2018/02/quality-assessment-tool_2010.pdf

2. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. BMJ. 2021;372(71):1–8.

Methodology

Data analysis

2. Meta analysis

- Subsequent meta-analysis among homogeneous studies,
- Utilizing a random-effects model
- Standardized mean difference approach¹.

1. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*. 2021;372(71):1–8.

Results

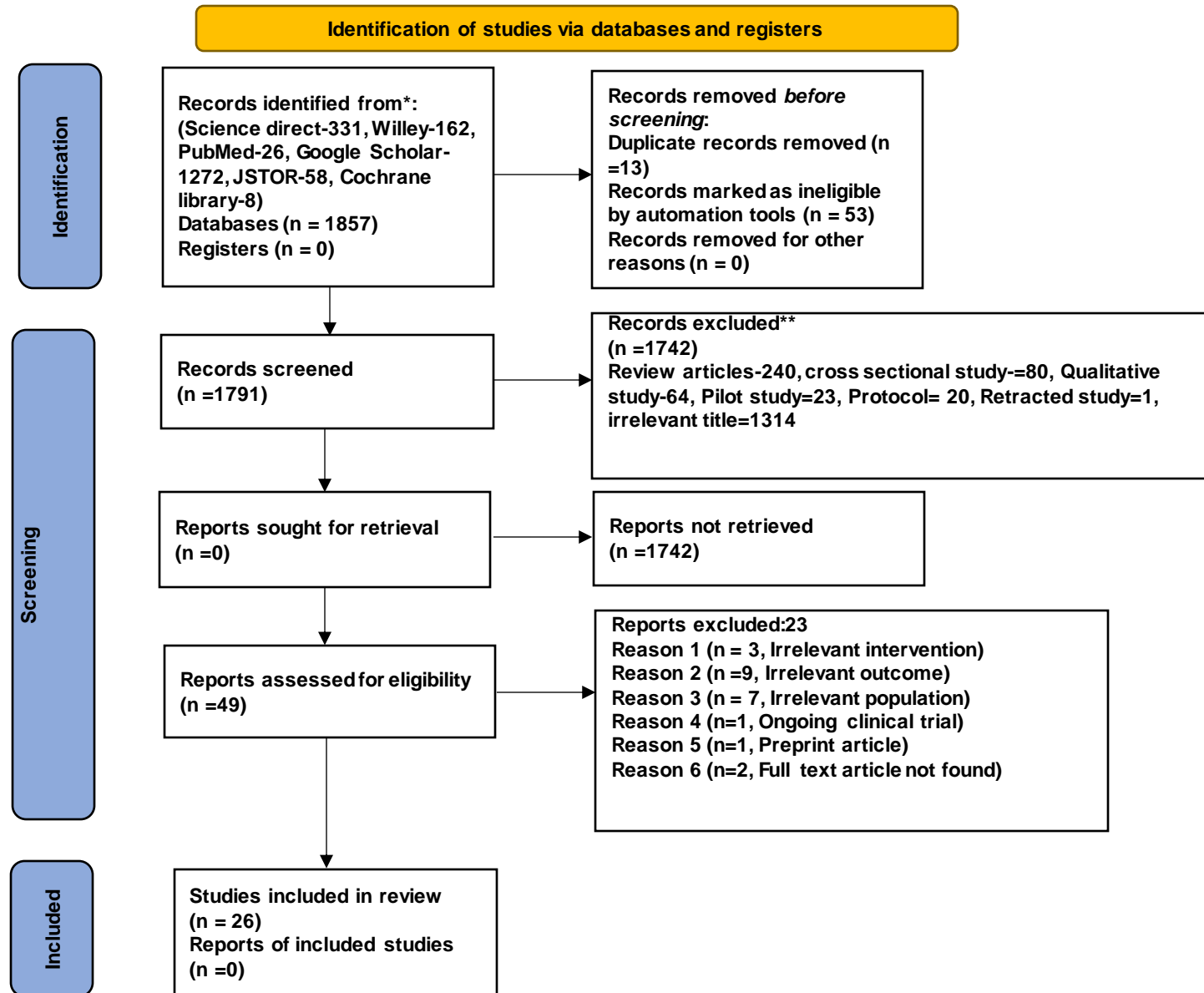


Fig. 1 Study flow diagram based on PRISMA, 2020

Results

- Twenty-six interventional studies:
 - Thirteen - Randomized controlled trials,
 - Twelve – Quasi experimental design,
 - One - one group pre posttest design
- With 11,638 cervical cancer patients.
- Mean age of respondents:
 - 34.15 ± 10.18 to 66.7 ± 4.5 in the intervention group
 - 36.57 ± 11.42 to 65.7 ± 4.1 in the control group

Results

- Sample size ranges from a minimum of 30 to a maximum of 417
- Twenty-six reviewed studies were from six different countries
 - Majority; eighteen studies were from china, two form Indonesia,
 - One from Turkey, one from Zambia, one USA and one from India.
 - All studies were conducted in hospitals

Results

- Various interventions:
 - Psychological nursing
 - Exercise (Progressive muscle relaxation therapy, mindful breathing, deep breathing, back massage)
 - Counselling, psycho-curative approaches
 - Peer and family education
 - Psychotherapy

Results

- Only two studies incorporated homework sessions.
- Intervention provider- nursing staff in most of studies –ten studies
- The range of sessions - minimum one to maximum sixty sessions
- Duration of each session- minimum twenty three minutes to maximum seventy five minutes

Results

- Self-Rating Depression Scale (SDS) and Self-Rating Anxiety Scale (SAS) in twenty studies,
- Hospital Anxiety and Depression Scale (HADs) in three studies
- Hamilton psychiatric rating scale for depression (HAM-D17) in three studies
- Statistical significant difference in anxiety and depression scores between treatment and control groups ($p < 0.005$) post-intervention across all studies.

Results

- Among 26 studies:
 - One study had strong rating (no weak score, all strong score) ,
 - Twenty four studies had all moderate score/ strong score (no weak score)
 - One study had weak rating with having more than two weak score.

Results

- Various studies exhibited variability in effect sizes ranging from low to high.
- A subsequent meta-analysis of eight homogeneous studies:
 - Moderate-to-high overall effect size (1.35, 95% CI: 0.75 to 1.94)
 - Indicating a statistically significant positive impact.

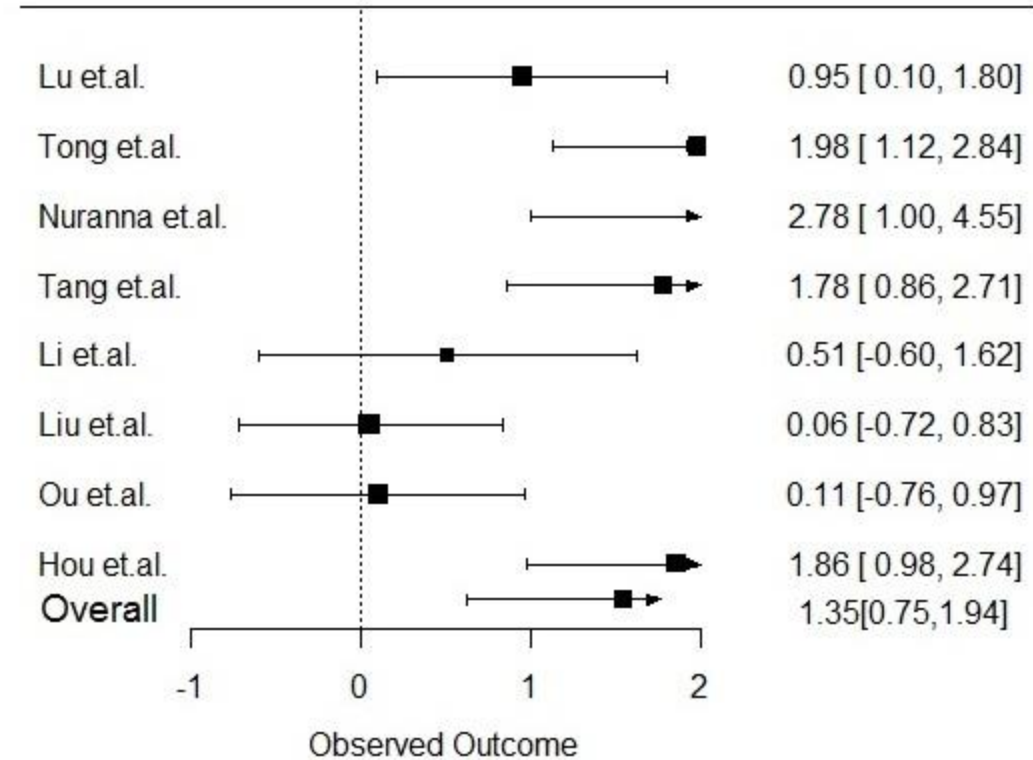


Fig 2 Forest plot of psychological supportive care intervention versus conventional control in alleviating anxiety and depression symptoms.

Conclusions

- Psychological interventions in any form are found effective for the reduction of psychological supportive care needs especially anxiety and depression.
- Selection of RCTs helps to decrease bias and increase the effect size of the study outcomes.
- Preliminary evidence supports the positive impact of psychological supportive care interventions on cervical cancer outcomes:
 - Urging further research, especially exploring long-term effects and employing rigorous study designs.

Acknowledgements

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- Institute of Medicine Nepal
- Nepal Health Research Council
- Prof. Changying Chen
- All my professional seniors, friends and juniors
- All translators and subject experts
- All respondents
- My family members

Brief biodata of presenter.



- Lecturer; Maharajgunj Nursing Campus; TUIOM, PhD Nursing Scholar; Zhengzhou University Henan; China.
- 25 years of working experiences including education and services
- Publication of articles in national and international journal including six articles published in Science citation indexed journal.
- Paper presentation in national and international forum including International Council of Nursing (ICN) Congress nursing conference, 2021.



Thank
you!