

AFSETH, J., TROTTER, E., KING, M. and CAMPBELL, K. 2022. Mixed method systematic review: cancer nurse's experiences and perceptions of potential occupational exposure to cytotoxic drugs. [Protocol]. *PROSPERO* [online], item number CRD42022289276. Available from:
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Mixed method systematic review: cancer nurse's experiences and perceptions of potential occupational exposure to cytotoxic drugs.

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Review question

What are the experiences and perceptions of cancer nurses of potential occupational exposure to cytotoxic drugs?

P: Nurses having worked administered cytotoxic chemotherapy in their career

E: Occupational exposure to cytotoxic drugs

O: Experiencing of handling and administering cytotoxic drugs while caring for cancer patients.

Searches

MEDLINE ; CINAHL; PsycINFO; EMBASE; Scopus;

Search dates: 1990 to 2022

Publication language : English

Types of study to be included

Non-experimental studies (cohort studies) and Qualitative studies

Condition or domain being studied

Perceptions of potential occupational exposure to cytotoxic drugs, specifically from a cancer nurse perspective.

Participants/population

Inclusion: Nurses that have worked with cytotoxic drugs at any point in their career that have handled cytotoxic chemotherapy while caring for cancer patients.

Exclusion: Handling of Immune and antibiotic therapy. Non- nursing profession, non use of cytotoxic chemotherapy. Patient and lay care givers perceptions.

Intervention(s), exposure(s)

Inclusion criteria of the studies include:

1)the findings associated with the handling of cytotoxic chemotherapy while administrating and/or caring for oncology

patient's across the nursing career. 2) the findings associated with the perception of handling of cytotoxic chemotherapy while administrating and/or caring for oncology patient's across the nursing career. 3) the findings associated with the experience of handling of cytotoxic chemotherapy while administrating and/or caring for oncology patient's across the nursing career. 4) the findings associated with individual and collective behaviour of handling of cytotoxic chemotherapy while administrating and/or caring for oncology patient's across the nursing career 5) The findings associated with organisational factors relating too handling of cytotoxic chemotherapy while administrating and/or caring for oncology patient's across the nursing career. 6) findings associated with the ability to influence practice.

Exclusion Criteria are studies which include: 1) mixed health care professional studies where the data is not specifically presented /associate with nurses and comprises of less than 20% of the participant population of the study. 2) nurse who have not worked with chemotherapy. 3) Other health care professionals than qualified nurses. 4) not patients or lay caregivers.

Comparator(s)/control

Not applicable

Context

Setting can include any settings in which cytotoxic drugs are administered or handled by cancer nurses.

Main outcome(s)

The perception and experience of handling of cytotoxic chemotherapy while administrating and/or caring for oncology patient's across the nursing career

Measures of effect

The review will include measures of the variables influencing perception and experience of exposure in the handling of cytotoxic chemotherapy while administrating and/or caring for oncology patient's across the nursing career. This includes years of experience, knowledge of the hazard; perceived risk; self efficacy; perceived barriers ; Organisational influence; interpersonal influence ; perceived conflict of interest between health of the nurse.

This will be measured in the quotations and narrative provided by the studies included.

Additional outcome(s)

None

Data extraction (selection and coding)

Search results will be exported to the reference manager EndNote, and duplicates removed. A four-stage review process will then be implemented, as follows:

Stage 1: all retrieved articles will be screened as abstracts on the systematic review software by each of the reviewers independently against the inclusion and exclusion criteria.

Stage 2: all articles identified as meeting the inclusion criteria in stage 1 by at least two reviewers will be retrieved for a full text review. This stage will be conducted by all three reviewers separately.

Stage 3: all articles identified as meeting the inclusion criteria at stage 2, by at least two reviewers, will be selected for retention and inclusion in the review.

Stage 4: the reference lists of the included articles will be hand searched for further studies meeting the inclusion criteria. Articles obtained in this manner will be discussed between the three reviewers in order to ensure their inclusion is agreed

before final selection for the review.

Stage 5: Data from included articles will be extracted using data extraction sheet designed for this specific review by two reviewers and collated.

At all stages, any differences in opinion will be discussed, and resolution for inclusion sought. A Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) diagram (Moher, Liberati, Tetzlaff & Altman, The PRISMA Group, 2009) will detail this process.

Data Extraction sheet will include - Author/ year/title/ journal/country/ date of data collection/ age groups, time from qualification, health care setting ; Primary and secondary objective/aim, methodology, data collection method, outcome , sample, Preference/ outcome, professional and workplace barriers and facilitators, cancer nurses experience quotations; key message related to findings and limitations of study.

Risk of bias (quality) assessment

The characteristics to be assessed will include: Title, aim, methodology and findings. Quality assessment will be conducted independently by two individuals reviewers, with differences in the assessment being resolved through discussion. A third reviewer, who will not be involved in any other aspect of the data extraction or quality assessment processes, will resolve any disagreements, should they arise. Appropriate quality assessment tools will be used for all the included studies. Selection of the quality assessment tools will be informed by the design of the studies to be assessed in order to ensure a consistent use of the same suite of tools (e.g. CASP, Joanna Briggs) across the greatest number of studies. Articles will not be excluded based on the results of the quality assessment; the purpose of the assessment is instead , to comment on their quality and possible bias, to inform future research.

Strategy for data synthesis

Overall Framework analysis will be conducted using a combination of NVivo and the data extraction sheets including qualitative and quantitative variables.

Stage 1: The quotations and key data within the extraction sheet will be placed on Nvivo software to collate and be coded by two reviewers.

Stage 2: Collective data will be coded by two reviewers against the framework and new codes will be agreed by the same two reviewers and conflicts will be discussed and resolved by the third reviewer.

Stage 3: Framework analysis will be conducted on the agreed coding system by two reviews. Regular

meetings will be conducted to ensure the coding structure is accurate and applicable to draw conclusions of the findings emerging.

Stage 4: The results will be reported as descriptive quantitative data and /or qualitative synthesis.

Stage 5: Relationships will be sought between both the descriptive quantitative data and the qualitative data in this mixed method review. There will be no minimal number of papers of studies for this type of review.

Collation of Data: Statistical data will not be collated it will be synthesised in alignment with the qualitative data. No statistical models will be applied to this review. Framework analysis will be used to collate both the descriptive statistics in alignment with the qualitative data in the papers.

Analysis of subgroups or subsets

Not applicable

Contact details for further information

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Organisational affiliation of the review

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Review team members and their organisational affiliations

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Type and method of review

Synthesis of qualitative studies, Systematic review

Anticipated or actual start date

01 February 2022

Anticipated completion date

30 September 2022

Funding sources/sponsors

UK Oncology Nursing Society (UKONS)

Grant number(s)

State the funder, grant or award number and the date of award

UK Oncology Nursing Society: Competitive grant call to to understanding Cancer Nurse's experiences and perceptions of potential occupational exposure to cytotoxic drugs.

Awarded in January 2022

Conflicts of interest

Language

English

Country

Scotland

Stage of review

Review Ongoing

Subject index terms status

Subject indexing assigned by CRD

Subject index terms

Humans; Neoplasms; Occupational Exposure; Pharmaceutical Preparations

Date of registration in PROSPERO

25 February 2022

Date of first submission

24 February 2022

Stage of review at time of this submission

The review has not started

Stage	Started	Completed
Preliminary searches	No	No
Piloting of the study selection process	No	No
Formal screening of search results against eligibility criteria	No	No
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

The record owner confirms that the information they have supplied for this submission is accurate and complete and they understand that deliberate provision of inaccurate information or omission of data may be construed as scientific misconduct.

The record owner confirms that they will update the status of the review when it is completed and will add publication details in due course.

Versions

25 February 2022

