

BAK-KLIMEK, A., SPENCER, E., LEE, S., CAMPBELL, K., MCINALLY, W. and MACLEAN, R. 2022. Determinants of psychological distress in teenagers and young adults (TYAs) affected by cancer: a systematic review and meta-analysis. [Protocol]. *PROSPERO* [online], Item number CRD42022322069. Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42022322069

Determinants of psychological distress in teenagers and young adults (TYAs) affected by cancer: a systematic review and meta-analysis.

[Protocol]

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2022

Determinants of psychological distress in teenagers and young adults (TYAs) affected by cancer: a systematic review and meta-analysis

Citation

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Review question [1 change]

What are the key determinants of psychological distress in teenagers and young adults (TYAs) affected by cancer?

Searches [1 change]

Sources to be searched: MEDLINE, PsycINFO, CINAHL, the Cochrane Database of Systematic Reviews, EMBASE and PsycARTICLES.

Data range: any date.

Language: English.

Grey literature to be included: no.

Additional search strategy information can be found in the attached PDF document (link provided below).

Types of study to be included [1 change]

Inclusion:

Primary research will be included.

Any quantitative studies that assess the association among different factors (including individual and contextual types of factors commonly explored in the available literature in the subject area) with psychological distress will be included e.g. cross-sectional and longitudinal studies.

Exclusion:

We will exclude qualitative studies, mixed methods, commentary papers, discussion papers and systematic reviews. Any studies that will not assess the association among different factors with psychological distress will be excluded.

Studies that focus solely on examining the prevalence of psychological distress will be excluded.

Condition or domain being studied

Psychological distress in teenagers and young adults (TYAs) affected by cancer.

Participants/population [1 change]

Inclusion: teenagers and young adults (TYA) a) aged 13-24 years at cancer diagnosis (in line with Teenage Cancer Trust's definition b) at any stage of cancer, c) diagnosed with anxiety, depression, or/and PTSD or reported depressive/anxiety/PTSD symptomatology (on a validated self-report or clinician measure).

Exclusion: children below 13 years and adults over 24 years.

Intervention(s), exposure(s) [1 change]

Teenagers and young adults (TYA) at any stage of cancer will be included e.g. (diagnosis/pre-treatment, during treatment, post-treatment/discharge, end of life, survivorship (patients in remission from cancer beyond five years after diagnosis)

Comparator(s)/control

Given the focus of this review included studies do not require a comparator.

Context [1 change]

Studies have to investigate at least one possible determinant of psychological distress to be included in the systematic review.

Main outcome(s) [1 change]

Anxiety, depression, post-traumatic stress disorder (PTSD).

Measures of effect

We will use Pearson's correlation coefficient r as the effect-size index for this study. For studies that presented data as means and standard deviations, or inferential statistics, such as t , F , or p -values, results will be converted to Pearson's correlation coefficient r using the ES calculator provided by Wilson (2001). For the effect size of a longitudinal study at several different time points, we will choose the effect size of the time point with the largest sample size. If a study reports a separate coefficient r for independent samples (different patient groups) a combined weighted correlation will be calculated. We will use Cohen's guidelines to interpret the effect size, where r of at least 0.10 = small, 0.30 = medium, and 0.50 = large (Cohen, 1992).

Additional outcome(s)

None.

Measures of effect

Not applicable.

Data extraction (selection and coding) [1 change]

Two review authors (ABK and ES) will independently review the titles and abstracts of all studies and disagreements will

be solved by discussion.

Using a standardized data extraction form, two review authors (ABK and ES) will independently extract data from eligible studies including: Study characteristics e.g. authors names, date of publication, location, study design, sample size; Participant characteristics: age at participation, gender, ethnic group, employment/school status, relationship/marital status; Outcome Measures (e.g. anxiety, depression, PTSD), The determinant studied; Theoretical Framework used to study distress; Main results (including a) whether the association was significant and if so, the direction of the association. b) effect size

Risk of bias (quality) assessment

Two authors will independently assess the risk of bias.

The quality of included studies will be assessed with the Newcastle-Ottawa Scale (NOS) checklist.

Disagreements between review authors about risk of bias in particular studies will be resolved by discussion, with involvement of a third review author where necessary.

Strategy for data synthesis [1 change]

Synthesis

We will provide a narrative synthesis of the findings from the included studies, structured around the population characteristics, predictors of psychological distress, type of outcome (e.g. anxiety, depression, PTSD) and theoretical frameworks used to inform the study on psychological distress

The Biopsychosocial Model and the literature on cancer will inform the data synthesis on predictors. The determinants of psychological distress will be categorized into: individual factors (including demographics, psychological factors e.g. personality traits, coping skills; clinical/treatment-related factors: e.g. cancer stage and type, physical condition (e.g. pain, fatigue, nausea) AND social/environmental factors (including family environment, social networks, parent-child communication etc).

Only those individual and social/environmental determinants that were investigated by three or more studies will be included in the review as fewer than three is considered as insufficient evidence for narrative synthesis, as recommended by previous systematic reviews.

We will consider conducting a meta-analysis. A meta-analysis will be conducted for each predictor (e.g. social support) where at least two independent studies reported a measure of effect size. When appropriate, we will use the shifting unit of analysis approach (Cooper, 2010) e.g. the effect sizes of support from different sources (e.g., parent, peer, and teacher) will be combined into an effect size of social support.

Random-effect models will be used in the study, assuming significant heterogeneity in all of the studies.

A χ^2 test will be performed to determine the probability that the obtained effect sizes are not heterogeneous.

Publication bias will be examined by visual inspection of funnel plots.

Analysis of subgroups or subsets [1 change]

We are expecting significant heterogeneity in all of the studies in terms of the following sample and study characteristics e.g. study design, outcome measures, country of study, sample size, stage of cancer treatment.

We are considering subgroup and meta-regression analyses to investigate whether effect sizes for factors are moderated by different characteristics e.g. study design (cross sectional vs. longitudinal); outcome measure (e.g. validated self-report or clinician measure); Stage of Treatment (e.g. diagnosis/pre-treatment, during treatment, post-treatment/discharge, end of life, survivorship); sample size.

Contact details for further information

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Organisational affiliation of the review

Edinburgh Napier University

Review team members and their organisational affiliations [1 change]

Dr Anna Bak-Klimek. Edinburgh Napier University
Miss Emily Spencer. Edinburgh Napier University
Dr Siew Lee. Robert Gordon University
Assistant/Associate Professor Karen Campbell. Edinburgh Napier University
Dr Wendy McInally. Open University
Dr Rory MacLean.

Type and method of review

Epidemiologic, Meta-analysis, Narrative synthesis, Systematic review

Anticipated or actual start date [1 change]

05 May 2022

Anticipated completion date [1 change]

30 June 2023

Funding sources/sponsors

Edinburgh Napier University

Grant number(s)

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

Edinburgh Napier University, 10/12/21

Conflicts of interest

Language

English

Country

Scotland

Stage of review

Review Ongoing

Subject index terms status

Subject indexing assigned by CRD

Subject index terms

Adolescent; Adolescent Health; Anxiety; Anxiety Disorders; Depression; Humans; Mental Disorders; Mental Health; Neoplasms; Psychological Distress; Public Health; Risk Factors; Stress Disorders, Post-Traumatic; Young Adult

Date of registration in PROSPERO

09 May 2022

Date of first submission

06 April 2022

Stage of review at time of this submission [2 changes]

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

Revision note

Quality Assessment has been completed Systematic Review Analysis has been completed and Meta-Analysis has started An additional member Dr Rory MacLean has been added. Rory has expertise in statistics and offers guidance on

conducting a meta-analysis

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

09 May 2022

22 August 2022

29 January 2023