DMP TEMPLATE FOR PAIRWISE SYSTEMATIC REVIEWS

(The template was adapted from the Portage DMP template for Systematic reviews. Examples were extracted from Beck, A., LeBlanc, J.C., Morissette, K. et al. Screening for depression in children and adolescents: a protocol for a systematic review update. Syst Rev 10, 24 (2021). https://doi.org/10.1186/s13643-020-01568-3)

This document is a working draft and will continue to undergo piloting and refinement. It represents an ongoing effort to improve data management plans in the biomedical sciences.

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1. DATA DESCRIPTION AND COLLECTION

1a. Describe the Systematic Review for which the data is being collected.

Example:

This systematic review aims to evaluate the benefits and potential harms of depression screening among children and adolescents in both primary care and non-mental health clinic settings. This review will include randomized controlled trials and controlled trials.

1b. What types of data will you collect, create, link to, acquire and/or record?

Example:

Data will include: search strategy files, list of electronic literature database records (.ris files); PDFs of articles; quantitative and qualitative data extracted from individual studies (.csv); a document describing the study protocol (.txt), and the data extraction form (.txt).

1c. What file formats will your data be collected in? Will these formats allow for data reuse, sharing, and long-term access to the data?

Example:

Word and PDF: project documents, notes, drafts, review protocol, line-by-line search strategies, data screening form, data extraction form PRISMA or other reporting checklists; included studies
RIS, XML: files exported from literature databases, Reference Manager, and RevMan.
Excel (csv): search tracking spreadsheets, screening/study selection/appraisal worksheets, and data extraction worksheets exported from DistillerSR or other propriety software.
TIF, PNG, etc.: images and figures

1d. What conventions and procedures will you use to structure, name and version-control your files to help you and others better understand how your data are organized?

Example:

Suggested format - PDF full-texts of included studies: AuthorLastName_Year_FirstThreeWordsofTitle
Example: Sutton_2019_MeetingTheReview
Suggested format - screening file for reviewers: ProjectName_TaskName_ReviewerInitials_YYYYMMDD.
Example: DepressionScreening_ScreeningSet1_ZP

2. DOCUMENTATION AND METADATA

2a. What documentation will be needed for the data to be read and interpreted correctly in the future?

Example:

The metadata will include the protocol, search strategies, data extraction form, screening form, PRISMA checklist, and a readme file with the variables, naming conventions, analytical code, and standards.

2b. Describe in detail the data-level information, codes and definitions.

Example:

Data extraction	*Variable*	*Format/Definitions*
Publication details	*Year of publication*	*YYYY*
	Language of publication	
	Source of publication	
Characteristics of study	*Study design*	*RCT or controlled trial*
	Country of study conduct	
	Setting	*Primary care or other non-mental health clinic setting*
	Sample size	
	Number of centres [if applicable]	
	Duration of follow-up	*In months*
	Study funding source	*Founding agency, if applicable*
Characteristics of population	*Age*	*In years*
	Sex/Gender	*According to how reported by study authors*
	Ethnicity	*E.g., Indigenous peoples; will be determined post hoc, depending on populations encountered in studies*
	Risk factors for depression	*To be determined post-hoc, depending on combination of risk factors as reported in studies*
	Information regarding respondent bias/representativeness of the included population	
Research design	*Sampling mechanism*	
	Treatment assignment mechanism	
Details about intervention and comparator	*Any additional services provided to comparator group*	
	Type of treatment provided (duration and methods)	
	Outcomes of interest: Definitions, measurement methods, data, adjusted and unadjusted effect estimates, cluster correlation coefficients (where relevant)	
	Lost to follow-up	
Risk of bias / Newcastle-Ottawa	*Risk of bias / Newcastle-Ottawa*	*0 to 9 points*

2c. How will you make sure that documentation is created and captured consistently throughout your project?

Example:

Before commencing data extraction, we will pilot the data extraction form in DistillerSR on a random sample of full-text articles. Data will be collected on the data extraction form using DistillerSR by two independent reviewers. The reviewers will compare data sets, discuss, and resolve any conflicts through discussion. If consensus cannot be reached, we will consult with a senior team member.

3. STORAGE AND BACKUP

3a. What are the anticipated storage requirements for your systematic review, in terms of storage space (in megabytes, gigabytes, terabytes, etc.) and the length of time you will be storing it?

Example:

The estimated storage space is 50GB. The included articles will be retained only until completion of the study. Extracted data, and codes for meta-analysis (if applicable) will be stored and shared on the Borealis repository after the study is published.

3b. How and where will your data be stored and backed up during the systematic review?

Example:

The data will be stored using the 3-2-1 backup rule. Three copies of every piece of data will be generated, the original data and two backups. The original data will be stored on the computer disk of the PI (password-protected). The two backup copies of this data will be stored on 2 different types of media, one on an external hard drive and one on a secure cloud server on OneDrive (with disaster recovery).

3c. How will the research team and other collaborators access, modify, and contribute data throughout the systematic review?

Example:

This review will not include patient-level data. During the project, the data including the reference list will be stored on OneDrive. Every member of the research team will have access to the files. The data entry on DistillerSR is controlled by usernames and passwords, and any changes to data will require the user to enter their username and password and only the reviewers and the PI will have access.

4. PRESERVATION

4a. Where will you deposit your data for long-term preservation and access at the end of systematic review?

Example:

When ready to make available, the data will be shared on the Borealis repository.

4b. Indicate how you will ensure your data is preservation ready. Consider preservation-friendly file formats, ensuring file integrity and the inclusion of supporting documentation.

Example:

The datasets will be generated in the comma-separated (CSV) preservation-ready format. After completion of the data collection, data quality control will be checked for inconsistencies. The other documents and metadata will be shared as text ('.txt') and PDFs. Images will be stored in TIFF.

5. SHARING AND REUSE

5a. What data will you be sharing and in what form? (e.g. raw, processed, analyzed, final, and metadata).

Example:

We will share:
- protocols
- complete search strategies for all databases
- data extraction forms and screening forms
- PRISMA checklist
- Data files and analytical code used to generate meta-analyses
We will also provide metadata, with a readme file with the variables, analytical code, naming conventions and standards.

5b. What type of end-user will you use for your data?

Example:

Data will be shared under Creative Commons' CC-BY-4.0 license.

5c. What steps will be taken to help the research community know that your data exists?

Example:

To make our data findable and accessible, the data and metadata will be archived and shared via the Borealis repository. Borealis assigns and promotes persistent identifiers - Digital Object Identifiers (DOIs) – to hosted studies. This initiative promotes academic credit, direct citation, and tangible metrics for researchers who collect and share data. DOIs contain metadata that identify and acknowledge the staff and sites that contribute to the dataset, as well as information on the location of the study, funders, and publications or documents associated with the data. To make the data interoperable, we will share detailed metadata and the data will be shared in preservation-friendly formats. To make the data reusable, we will share the de-identified data publicly under a Creative Commons CC-BY-4.0 license.

6. RESPONSIBILITIES AND RESOURCES

6a. Identify who will be responsible for managing this project's data during and after the project and the major data management tasks for which they will be responsible.

Example:

The team will include:
Dr. Analytika - Principal Investigator – (CONTACT DETAILS)
Dr. Meta Reviewington- Co-investigator– (CONTACT DETAILS)
Dr. Synthesis PRISMA – Reviewer 1 – (CONTACT DETAILS)
Dr. Reviewus Analyticus – Reviewer 2 – (CONTACT DETAILS)

Sponsor (ADD ROLES, IF ANY)

Principal investigator will be responsible for:
(1) Agreement of the final Protocol and the Data Analysis Plans;
(2) Reviewing progress of the study and, if necessary, deciding on Protocol changes;
(3) Review and approval of study publications and substudy proposals;
(4) Oversee and analyze the project's data;
(5) Developing the data extraction form and screening forms;
(6) Resolve conflicts if any.
(7) Conduct meta-analysis

Co-investigator will be responsible for:
(1) Conduct meta-analysis
(2) Data documentation
(2) Data processing and storage;

Reviewer 1 will be responsible for:
(1) Data screening and extraction;
(2) Data processing and storage;

Reviewer 2 will be responsible for:
(1) Data screening and extraction;
(2) Data processing and storage;

6b. How will responsibilities for managing data activities be handled if substantive changes occur in the personnel overseeing the project's data, including a change of Principal Investigator?

Example:

The co-investigator Dr. Meta Reviewington will be tasked with this responsibility. In case the principal investigator is no longer involved in the project, the co-investigator will be promoted to manage this project or a qualified researcher will be hired to lead the project.

6c. What resources will you require to implement your data management plan? What do you estimate the overall cost for data management to be?

Example:

Our project includes a data management budget of $1,000 which will be allocated to a Research Coordinator's time to provide day-to-day input and implementation of the data management plan. We will use an open data repository (OSF). Therefore, there will be no cost.

7. ETHICS AND LEGAL COMPLIANCE

7a. If your research project includes sensitive data, how will you ensure that it is securely managed and accessible only to approved members of the project?

Example:

Not applicable. We will not use patient-level data.

7b. If applicable, what strategies will you undertake to address secondary uses of sensitive data?

Example:

Not applicable. We will not use patient-level data.

7c. How will you manage legal, ethical, and intellectual property issues?

Example:

We will not use others' published datasets or non-open access documents.