Plan Overview

A Data Management Plan created using DMPonline.be

Title: Understanding the vicious cycle between poverty and common mental disorders through the lens of scarcity

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Template: KU Leuven BOF-IOF

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Project abstract:

In all countries around the world, anxiety disorders and depression soar in people who live in poverty. This constitutes a vicious cycle in which poverty and mental disorders risk reinforcing themselves. Breaking this cycle should be a number one priority in social and mental health policy. But we still don't know much about how the cycle works, which makes it difficult to intervene.

With the current project, we offer a novel approach, through the lens of scarcity, to investigate the direction and causality between poverty and mental disorders. We will test our theory at multiple levels of analysis, including a sociological analysis of a wide-scale, longitudinal, European dataset, a time-series analysis of daily assessments among people who live in poverty, and an experimental analysis of physiological assessments during modeled scarcity in the lab.

By shedding light on the role of scarcity and its psychological consequences, the current project holds great promise to advance our understanding of, and potentially alleviating, the vicious cycle between poverty and mental disorders. Reducing poverty and the prevalence of common mental disorders are two global challenges that are prioritized in the UN Sustainable Development Goals (SDG1 & SDG17).

Although KU Leuven hosts world-class expertise on both poverty and common mental disorders, the intersection between these global challenges is currently a blind spot. Integrating the disciplines of sociology, psychology and psychiatry will put KU Leuven at the forefront of fundamental research on the link between poverty and mental disorders.

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Understanding the vicious cycle between poverty and common mental disorders through the lens of scarcity

Research Data Summary

List and describe all datasets or research materials that you plan to generate/collect or reuse during your research project. For each dataset or data type (observational, experimental etc.), provide a short name & description (sufficient for yourself to know what data it is about), indicate whether the data are newly generated/collected or reused, digital or physical, also indicate the type of the data (the kind of content), its technical format (file extension), and an estimate of the upper limit of the volume of the data.

Dataset name / ID	Description	New or reuse	Digital or Physical data	Data Type	File format	Data volume	Physical volume
		*Indicate: **N**(ew data) or **E**(xisting data)*	Indicate: **D**(igital) or **P**(hysical)	Indicate: **A**udiovisual **I**mages **S**ound **N**umerical **T**extual **M**odel **SO**ftware Other (specify)		Indicate: <1GB <100GB <1TB <5TB >5TB NA	
Macro-level	SHARE dataset	E	D	N, I	.dta	<100GB	Project folder on Sharepoint
Meso-level	SIGMA(-X) dataset	E	D	N, T	.tab/txt files and .xlsx/.csv files	<100GB	Project folder on Sharepoint
Meso-level	Daily diary study with N = 220 participants (N = 100 participants living in poverty, N = 100 participants not living in poverty and N = 20 participants receiving financial support)	N	D	N, T	.tab/txt files and .xlsx/.csv files	<100GB	Project folder on Sharepoint + 1 physical folder of informed consent and exclusion criteria forms
Micro-level	Behavioural and psychophysiological data collected as part of a lab-based study	N	D	N, T	.tab/txt files, .xlsx/.csv files and .acq files	<100GB	Project folder on Sharepoint + 1 physical folder of informed consent and exclusion criteria forms

If you reuse existing data, please specify the source, preferably by using a persistent identifier (e.g. DOI, Handle, URL etc.) per dataset or data type:

SHARE dataset: Data files are provided by The Survey of Health, Ageing and Retirement in Europe (SHARE). The data is free of charge and can be downloaded after registration through the data center of SHARE (https://share-eric.eu).

DOIs of the SHARE dataset: 10.6103/SHARE.w1.900, 10.6103/SHARE.w2.900, 10.6103/SHARE.w3.900, 10.6103/SHARE.w4.900, 10.6103/SHARE.w5.900, 10.6103/SHARE.w6.900, 10.6103/SHARE.w6.DBS.100, 10.6103/SHARE.w7.900, 10.6103/SHARE.w8.900, 10.6103/SHARE.w8ca.900, 10.6103/SHARE.w9.900, 10.6103/SHARE.w9ca900, 10.6103/SHARE.HCAP1.100

SIGMA(-X) dataset: This dataset was collected by one of the PI's (Prof. Inez Myin-Germeys) and researchers (Dr. Robin Achterhof) of this project. The dataset is available upon request, but has not been made available online (no DOI available).

Are there any ethical issues concerning the creation and/or use of the data (e.g. experiments on humans or animals, dual use)? If so, refer to specific datasets or data types when appropriate and provide the relevant ethical approval number.

- Yes, human subject data (Provide SMEC or EC approval number below)

Meso-level: Existing (SIGMA-X) data has been approved by the Medical Ethical Committee Research: METC S61395. Ethical approval for the newly collected data will be requested prior to the start of data collection.
Micro-level: SMEC G-2024-8946

Will you process personal data? If so, please refer to specific datasets or data types when appropriate and provide the KU Leuven or UZ Leuven privacy register number (G or S number).

- Yes (Provide PRET G-number or EC S-number below)

Meso-level: G-2020-1838-R3 (SIGMA-X). For new data, ethical approval will be requested prior to the start of data collection.
Micro-level: SMEC G-2024-8946

Does your work have potential for commercial valorization (e.g. tech transfer, for example spin-offs, commercial exploitation, …)? If so, please comment per dataset or data type where appropriate.

- No

Do existing 3rd party agreements restrict exploitation or dissemination of the data you (re)use (e.g. Material or Data transfer agreements, Research collaboration agreements)? If so, please explain in the comment section to what data they relate and what restrictions are in place.

- No

Are there any other legal issues, such as intellectual property rights and ownership, to be managed related to the data you (re)use? If so, please explain in the comment section to what data they relate and which restrictions will be asserted.

- No

Documentation and Metadata

Clearly describe what approach will be followed to capture the accompanying information necessary to keep data understandable and usable, for yourself and others, now and in the future (e.g. in terms of documentation levels and types required, procedures used, Electronic Lab Notebooks, README.txt files, codebook.tsv etc. where this information is recorded).

For the macro-level, data documentation is provided by SHARE on https://share-eric.eu/data/data-documentation. Data from the meso- and micro-level will be stored on an online Sharepoint accessible to all researchers and PI's involved in the project. For these levels, raw source data files will be stored in a "raw data" folder. Extracted and aggregated data will be stored in a "processed data" folder. All preprocessing scripts that will be used to create the extracted data will be stored in a "code folder". Similarly, for the macro-level, all preprocessing and analysis scripts used on the dataset will be stored in a "code" folder on the online Sharepoint. All preprocessing and analysis files will contain elaborate notes describing the analysis procedure and included data files.

Metadata for the meso- and micro-level will include: information about experimental design, procedure, and measurement characteristics; specification of the raw data file names (which measures they refer to); information that describes the variable codes (referring to type and time of specific measurements) in the aggregated data files.

Will a metadata standard be used to make it easier to find and reuse the data?
If so, please specify which metadata standard will be used.

If not, please specify which metadata will be created to make the data easier to find and reuse.

- No

Metadata will be added to the meso- and micro-level experiment folders and files to label the protocol and data. For the macro-level, data documentation is provided by SHARE on https://share-eric.eu/data/data-documentation.

Data Storage & Back-up during the Research Project

Where will the data be stored?

- Sharepoint online
- Other (specify below)

All digital data (questionnaire answers, subjective ratings, behavioral data, physiological recordings, ESM-data) for the meso- and micro-level will be stored on an online Sharepoint dedicated to this project. Moreover, a backup will be made on personal, encrypted hard drives available to the researchers.
Data in paper format (including informed consent forms and inclusion/exclusion criteria forms) will be stored separately from research data in a key-locked cabinet in dedicated archive rooms of the different research groups.
Data provided by SHARE will be stored on the online Sharepoint, and will only be accessible for those who registered through the data center of SHARE. The syntax used for analyses (STATA-code, R-code) will also be stored on this online Sharepoint.

How will the data be backed up?

- Standard back-up provided by KU Leuven ICTS for my storage solution
- Personal back-ups I make (specify below)

All data is stored on an online Sharepoint, accessible to the PI's and researchers involved in the project. Moreover, data will be backed up on personal, encrypted hard drives available to the researchers. Considering the micro-level, an additional encrypted backup on faculty servers is foreseen by the research group.

Is there currently sufficient storage & backup capacity during the project?

If no or insufficient storage or backup capacities are available, explain how this will be taken care of.

- Yes

The online Sharepoint provides sufficient storage and backup capacity.

How will you ensure that the data are securely stored and not accessed or modified by unauthorized persons?

All digital data will be stored on an online Sharepoint site and encrypted drives. Additional security for the online Sharepoint is provided by the KU Leuven two-factor authentication protocol. Data in paper format will be stored in a key-locked cabinet in dedicated archive rooms of the different research groups. Access to these archive rooms is limited to the PI's.
For SHARE data, only those researchers who have signed the confidentiality declaration of SHARE have access to the specific folders containing the confidential microdata of these surveys.

What are the expected costs for data storage and backup during the research project? How will these costs be covered?

Currently, the use of Sharepoint is free. We therefore do not foresee an additional cost for data storage and backup.

Data Preservation after the end of the Research Project

Which data will be retained for 10 years (or longer, in agreement with other retention policies that are applicable) after the end of the project?

In case some data cannot be preserved, clearly state the reasons for this (e.g. legal or contractual restrictions, storage/budget issues, institutional policies...).

- All data will be preserved for 10 years according to KU Leuven RDM policy

Where will these data be archived (stored and curated for the long-term)?

- Other (specify below)

In line with the most recent recommendations by the University, all data will be stored in an online Sharepoint dedicated to this project and managed by the PI's.

What are the expected costs for data preservation during the expected retention period? How will these costs be covered?

Currently, the use of Sharepoint is free. In case the University policy would be altered and a storage fee would be required, the three PI's will share the cost of data preservation.

Data Sharing and Reuse

Will the data (or part of the data) be made available for reuse after/during the project?
Please explain per dataset or data type which data will be made available.

- Other (specify below)

For SHARE data (macro-level): data is freely available to registered users via https://share-eric.eu/data/data-access, but STATA/R code used for the analyses will be made available online. For the meso- and micro-level, data will be made available upon request. All R code used for analyses will be made available online.

If access is restricted, please specify who will be able to access the data and under what conditions.

The researchers and PI's have direct access to the data. Anonymized data will be made available upon request.

Are there any factors that restrict or prevent the sharing of (some of) the data (e.g. as defined in an agreement with a 3rd party, legal restrictions)?

Please explain per dataset or data type where appropriate.

- No

Where will the data be made available?

If already known, please provide a repository per dataset or data type.

- Other data repository (specify below)

The data will be made available through the Open Science Framework (OSF).

When will the data be made available?

- Upon publication of research results

Following publication of research results, data will be made available upon request.

Which data usage licenses are you going to provide?

If none, please explain why.

- CC-BY 4.0 (data)

Do you intend to add a persistent identifier (PID) to your dataset(s), e.g. a DOI or accession number? If already available, please provide it here.

- No

What are the expected costs for data sharing? How will these costs be covered?

Public repositories are free of charge.

Responsibilities

Who will manage data documentation and metadata during the research project?

The researchers working on this project (i.e. Dr. Lore Van Herreweghe, Dr. Robin Achterhof and Dr. Celine Samaey at the macro-, meso- and micro-level respectively) will be responsible for the data documentation and metadata.

Who will manage data storage and backup during the research project?

The researchers and PI's of this project are responsible for data storage and backup. More specifically, Dr. Lore Van Herreweghe and Prof. Wim Van Lancker will manage data storage and backup for the macro-level. Dr. Robin Achterhof and Prof. Inez Myin-Germeys will manage data storage and backup for the meso-level. Finally, Dr. Celine Samaey and Prof. Bram Vervliet will manage data storage and backup for the micro-level.

Who will manage data preservation and sharing?

The PI's of this project: prof. Wim Van Lancker, prof. Inez Myin-Germeys and prof. Bram Vervliet.

Who will update and implement this DMP?

The researchers and PI's of this project.