Plan Overview

A Data Management Plan created using DMPonline

Title: Identifying subtypes of anxiety based on individual difference in fear generalization

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Template: Data Management Plan v4.6

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Project abstract:

The project aims to examine whether fear generalization can serve as a marker for identifying anxiety subtypes. To achieve this process, we will combine questionnaire methods, experimental methods, and experiential sampling methods in the current project.

ID: 189482

Start date: 10-11-2025

End date: 09-11-2027

Last modified: 28-10-2025

Identifying subtypes of anxiety based on individual difference in fear generalization

General

Please tick the following boxes if you agree to act according to the following terms:

- I will check and, if necessary, update my data management plan a minimum of once a year
- I will discuss the data management plan with my research team
- I will answer all questions truthfully and to the best of my knowledge

Support in writing a data management plan is available through the faculty Data Stewards. Which research support professional is available for you?

- Data Steward of my own faculty - ESSB

Scientific research must be conducted in line with existing guidelines on good research practices and integrity. Please tick the boxes if you have read and understand these guidelines and will act accordingly.

- The Netherlands Code of Conduct for Research Integrity (VSNU, 2018)
- The European Code of Conduct for Research Integrity (ALLEA, 2023)

Administration and Project Description

1. Provide the details of your project

Project title

Identifying subtypes of anxiety based on individual difference in fear generalization

Project start date as intended

2025-11-10

Project duration in months as intended

24

Funding body (if applicable)

Question not answered.

Grant number (if applicable)

Question not answered.

Date of DMP Version 1

2025-10-28

Current DMP - Version [if other than version 1]

Current DMP - Date [if other than version 1]

2. List the name and affiliation of all members of the research team.
List the researcher responsible for research data management first.
For PhD projects, please indicate the Promotor(s) and/or Daily Supervisor(s) with a (!)

	Name	Email	ORCID	Research Institution
1	Qiaoling Hua	hua@essb.eur.nl	https://orcid.org/0009-0004-4335-4666	ESSB - EUR
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4	Matthias J. Wieser (!)	wieser@essb.eur.nl	https://orcid.org/0000-0002-0429-1541	ESSB - EUR

3. Briefly summarize the project background and research question(s) to help others understand the purpose for which the data are being collected or created

Background:

Fear generalization refers to the tendency for fear learned from threatening cues to extend to similar but safe cues. Although fear generalization is an adaptive survival mechanism, anxious individuals often show exaggerated fear responses to safe cues, leading to maladaptive behavior (Dunsmoor & Paz, 2015; Dymond et al., 2015). A recent meta-analysis highlighted fear generalization as a promising transdiagnostic factor for distinguishing anxiety-related disorders from healthy groups (Cooper et al., 2022). Similarly, Stegmann et al. (2019) found that distinct phenotypes of fear generalization identified by arousal ratings were associated with differences in anxiety symptomatology, underscoring its role as a risk factor for anxiety. However, this study relied only on a single measure (i.e., arousal ratings) to identify distinct profiles of fear generalization. It remains unclear how individual differences in fear generalization can be fully characterized through multiple response patterns (i.e., neurobiological, psychophysiological, and subjective ratings), and whether these patterns reveal distinct anxiety subtypes. Therefore, the first goal of this study is to identify distinct profiles of fear generalization based on multiple measures using latent profile analysis (LPA).

Furthermore, Modecki et al. (2023) found that overgeneralization to safe stimuli was associated with heighted anxiety in non-stressful (safe) situations, while remaining the same across stressful situations in daily life. This suggests that fear generalization contributes to anxiety not only in laboratory settings but also in daily contexts. Yet, it is still unclear whether this extends to broader anxiety-related experiences, such as positive and negative affect, uncertainty, social anxiety, worry, experiential avoidance, and stress. Therefore, the second goal of this study is to examine whether these profiles reflect differences in anxiety-related symptomatology and momentary experiences in a large healthy sample.

Research questions:

(1) Can distinct profiles of fear generalization across multiple response patterns (i.e., neurobiological, psychophysiological, and subjective ratings) be found?

(2) Do these profiles differ in anxiety-related symptomatology?

(3) Do these profiles differ in anxiety-related momentary experiences in real life?

(4) Do individuals with fear overgeneralization overrespond to safe, non-stressful situations, thereby reporting more anxiety-related experiences in real life, compared to those with low fear generalization?

4. Specify the research type and briefly describe the methodology, how the data will be collected, and the tools used for data collection, processing and analysis:

This study will use questionnaire methods, experimental methods, and experiential sampling methods (ESM). Firstly, the psychological data (i.e., questionnaire scores) will be collected via the survey platform *Qualtrics*. Next, the neurophysiological data (i.e., EEG, ECG, and EDA) during a fear generalization task will be collected in the Erasmus Behavioral Laboratory. All neurophysiological data will be recorded by the BioSemi ActiveTwo Systems. Finally, the momentary anxiety-related experiences will be collected three times per day over 14 days through the platform *Avicenna*.

5. Are additional (financial or time) resources required for data management in this project?

- No, I will use the services and resources provided by the EUR

Preparation: Legal Arrangements and Policy

6. With whom will you need to make legal arrangements?

- With research participants

7. List the agreements that you will initiate and with whom will you make them.

Who	Type of agreement
Research participants	Informed Consent

8. List the agreements or other data management policies that you need to uphold but did not initiate. If you are reusing existing data, list the terms of use under which you may re-use them.

Who	Type	Version and Date
EUR	RDM policy of Erasmus University Rotterdam (EUR)	Version 1.0 [August 14th, 2020]
EUR	Internet and ICT facilities policy	Version 1.0 [September 1, 2021]

9. Do you need to obtain ethical approval for your research project?

- Yes, I am preparing to submit my application

10. If you have obtained ethical approval, list the reference number

Question not answered.

During research: Collecting and analyzing

11. Specify what data you will be collecting and indicate format, estimated size, and whether this is data that you will be generating or existing data that you will be re-using.

Type	Data Classification	Format	Estimated size	Generate or Re-use
Questionnaire scores	Confidential	.csv, .xlsx	< 1 GB	Generate
Picture rating scores	Confidential	.edat3	1-5 GB	Generate
Neurophysiological data (EEG, ECG, and EDA)	Confidential	.bdf	10-50 GB	Generate
ESM survey scores	Confidential	.csv, .xlsx	< 1 GB	Generate

12. Will you be collecting or re-using (sensitive) personal data?

- Yes – Personal data that is sensitive --> Consult your faculty’s Privacy Officer
- Yes – Personal data that is non-sensitive -->Consult your faculty’s Privacy Officer

13. If you collect or re-use (sensitive) personal data, how will you protect the privacy of participants?

- Not applicable - I have participants' consent (e.g. oral history research)
- I will fully anonymize the data
- I will pseudonymize the data

14. Please elaborate on your anonymization/ pseudonymization plans. If you are working with multiple datasets, please specify which datasets will be anonymized and which will be pseudonymized.

We will post our study information on the student recruitment platform (ERAS) at Erasmus University Rotterdam. Participants can register for the study through this platform. Their name, email address, and student number will be automatically recorded by the platform. We will export this information to contact participants and manage the appointments.

Before data collection, each participant will be assigned a unique number. This number will serve as an identifier across all phases of data collection, including questionnaires, lab-based measures, and online surveys. This ensures that participants’ data, including non-sensitive personal information and other study-related data, will be pseudonymized. Sensitive personal data, such as name, email address, and student number, will be stored separately from the rest of the data.

Participants will also sign an informed consent form, authorizing the collection, storage, and use of their data. Only fully anonymized data will be made publicly available for research purposes. One year after the data collection is completed, all data will be fully anonymized so that it can no longer be linked back to individual participants.

15. Will you be collecting or re-using non-personal sensitive data?

- No

16. Where will you store your data during the project? You can select multiple options.

- EUR Teams/Sharepoint
- EUR OneDrive
- EUR SURF Research Drive (for collaborations)
- EUR SURFdrive

18. What hardware and software do you use? Select all applicable options.

- Private software or freeware [e.g. private DropBox]
- Private hardware [e.g. personal laptop, private external hard-drive]
- EUR supported software as found in the software catalog
- EUR supported hardware [e.g. @wEURk laptop, @wEURk workstation]

19. If you use private hardware, software, or freeware, please specify what and for what reason:

I used my personal laptop to process the experimental materials (i.e., faces) with the freeware *Sqirlz Morph* (Xiberpix, Solihull, UK). This was necessary because the software was not available in the software catalog at EUR and could not be downloaded onto my work laptop.

20. Are regular backups made of your data?

- Yes, I use only EUR supported tools (as listed in Q18), thus to a limited extent backups are made automatically

21. Who manages access to the data?

- Researcher responsible for research data management

22. Who will have access to the data (during the project)?

- Other (please specify in the additional information box).
- Only researchers as indicated under ‘Administration & Project description’

Bachelor and master students or research assistants who may be involved in this study will have access to the data. However, bachelor and master students will only be granted access to pseudonymized data.

23. How are you going to make sure your data will be accessible in case of staff changes, illness, etc?

- There is a clear procedure in place in my research team, department, or faculty

The relative people under “list the names and affiliations of all members of the research team” have access to the data in case there is an emergency.

24. Have you and your research team agreed on a way to name and order project folders and files?

- Yes - And I have documentation on it

25. Have you and your research team agreed on how to handle versioning of files?

- Yes - And I have documentation on it

Research Publication: Data sharing and re-use

26. What data (and code) will be shared in a research data repository?

- All data (and code) produced in the project
- All data (and code) underlying published papers / reports

27. Please specify why you are unable to share (all) data (and code)

Question not answered.

28. List the data (and code) that you plan to share in a research data repository. Also list the information / documentation / metadata that you will include to make the data package self-explanatory and re-usable in the future (for other researchers and yourself)

Data	Format	Size
Processed questionnaire scores	.csv, .xlsx	< 1 GB
Processed picture rating scores	.csv, .xlsx	< 1 GB
Processed neurophysiological data (EEG, ECG, and EDA)	.csv, .xlsx	< 1 GB
Processed ESM survey scores	.csv, .xlsx	< 1 GB
The preprocessing and statistical analysis codes	.Rmd	1-5 GB
Codebooks	.html	< 1 GB
Readme file	.text	< 1 GB

29. In which repository will you place the metadata, data, and/or code that are associated with your paper?

- Open Science Framework (OSF)
- EUR Data Repository (EDR)

30. What metadata standard will you use to document your research?

- DCMI [Dublin Core Metadata Initiative] (Note: Default within the EUR Data Repository)

31. Will you place any restrictions on re-using the data you plan to share?

- No

34. Under what license will you make your data available for re-use?

- Creative commons (e.g. CC0 or CC-BY, please specify in Q.35)

35. Please specify which license

CC-BY 4.0

After research: Archiving

36. You may be obliged to destroy some data before archiving. Do any of such obligations apply to you?

- Yes - Privacy law [e.g. personal data of participants]

The participants' personal data, including their name, email address, and student number, will be destroyed.

37. List the data and all documentation you will be archiving. These data constitute your archival package.

Data	Format	Size
Raw neurophysiological data (EEG, ECG, and EDA)	.bdf	10-50 GB
Processed neurophysiological data (EEG, ECG, and EDA)	.csv, .xlsx	<1 GB
Raw questionnaire scores	.csv, .xlsx	< 1 GB
Processed questionnaire scores	.csv, .xlsx	< 1 GB
Raw picture rating scores	.csv, .xlsx	< 1 GB
Processed picture rating scores	.csv, .xlsx	< 1 GB
Raw ESM survey scores	.csv, .xlsx	< 1 GB
Processed ESM survey scores	.csv, .xlsx	< 1 GB
Data Management Plan	.docx, .pdf	<1 GB
Ethical review application & approval document	.docx, .pdf	<1 GB
Experimental programming procedure (E-prime)	.es3	<1 GB
The preprocessing and analysis codes	.Rmd	1-5 GB
Other study-related materials (e.g., questionnaires, surveys, informed consent form, debriefing letter, experimental protocols)	.docx, .pdf	<1 GB
EUR policy documents	.pdf	<1 GB
Codebooks	.html	<1 GB
Readme file	.txt	<1 GB
Eventual manuscripts/publications	.pdf	<1 GB

38. Where will you be archiving your data?

- EUR Yoda Vault (EUR Archive) [retention period min. 10 years] --> You have reached the end of the DMP