

Tutorial for the pssr R package

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This document provides a brief tutorial for the pssr R package. The package provides a suite of functions for preregistrating and sharing data/materials. Although it was initially designed as an easy-to-use tool for experimental psychopathologists and other researchers in clinical psychology, it can be used from any researcher running experimental studies.

The rationale behind the design of the package can be found in the pre-print A Step-By-Step Guide on Preregistration and Effective Data Sharing for Psychopathology Research.

Installation instructions

Before installing the software, make sure that you have the most recent versions of the following software installed: R, Rtools, and git, pandoc. You can also chose between installing MikTeX or tinytex.

After that, start a new R session and paste the following commands in the R console.

```
if(!require(devtools)) { install.packages("devtools") } # Install devtools incase it is not installed
devtools::install_github("AngelosPsy/pssr")
```

If everything went as planned, the software is now ready to be used.

Initiating a pssr session

The main function is the `pssr::shiny_app()` which initiates a new shiny session. As in any other function in R, just paste

```
pssr::shiny_app()
```

in the R console. After doing that, a new window will appear. We now explain each tab of the software.

Create project Tab

For creating a new project, navigate to the ‘Create project’. Then, place a name in the ‘Project name’ box and click on the ‘Create new project’. In case you want to reopen an existing project, the user can just click on the ‘Find existing project’ box and navigate to an existing project. In case a folder is selected that was not created by the *pssr*, the program returns a warning.

When a project folder is created, the program automatically creates a directory with the project’s name. Inside the directory the following subdirectories are created: “analyses”, “data”, “manuscript”, “material”, and “preregistration”.

The Preregistration and Sharing Software

General instructions

Use the present app for creating a project, creating a preregistration, and for time stamping changes in your project directory. For executing any of these actions you can use the corresponding tabs on the right.

Disclaimer

The present app is distributed for free without any guarantee.

Contact

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Reference

Kypotos, A.-M., Klugkist, I., Mertens, G., & Engelhardt, I. M. (submitted). A Step-By-Step Guide on Preregistration and Effective Data Sharing for Psychopathology Research.

Create projectPreregistrationAnonymize dataZip and encrypt data

Use this tab for either creating a new project or finding an existing one. For creating a new project, just provide a name and select the folder in which the project will be saved. For finding an existing project, you just need to locate it using the 'Find existing project' button.

Project name

Create new projectFind existing project

Preregistration Tab

For creating a preregistration document, you can enter a name in the “Enter name of the preregistration”. Then, choose template you want to use so as to form your preregistration. The pssr software supports 3 templates. These are the ‘pss’, the ‘aspredicted’ from the [aspredicted website](#), and the ‘osf’ from the [\(osf\)\[osf.io\]](#) website. In case the ‘pss’ template is selected, then a new tab is presented, with each tab now having different boxes for every different piece of information that needs to be preregistrated (e.g., methods, statistical analyses). We describe more about this type of information in our paper.

In case the ‘aspredicted’ or the ‘osf’ template are selected, then a new window will appear. The user then can use manipulate the text using the (Rmarkdown)[<https://rmarkdown.rstudio.com>] template. For these templates, we use the (prereg)[<https://cran.r-project.org/web/packages/prereg/index.html>] package authored by (Frederik Aust)[<https://github.com/crsh>].

Generate a pdf of the pregristration file

Under ‘Preregistration’ press ‘Choose files’. On the pop up window, go to the ‘preregistration’ folder. Inside that folder, select the ‘Rmd’ file with the name of the preregistration file you want to manipulate and click on ‘Select’. After that, click on the ‘Create PDF’s’. Then the pdf files of the preregistration files are now being saved in the ‘preregistration’ folder.

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Create projectPreregistrationAnonymize dataZip and encrypt dataRecord changesVersion control

Here you can create and manage preregistration documents. If you want to create a new preregistration file, please type in a name and then choose one of the available templates. A new window with the editor will be shown to modify the template. To select an existing file, just locate it ('Choose file' button). After that a button will be shown named 'Continue editing'. After clicking on it you can continue editing the pre-registration file. Once the text file is edited, please save the file and close the text editor window. The 'Search' button will show the available preregistrations that are in the specified project. To generate PDF files of the preregistrations please click on the 'Choose Files' button and select one or multiple files (for multiple files press CTRL/Cmd + click on the desired files). Once the files are selected, the 'Create PDFs button' will be shown, click on it and wait for the message below confirming that the files were rendered successfully (this might take some time).

Enter name of the preregistration

Choose a pre-registration template

Search PreregistrationsChoose filesContinue editingCreate

Anonymize data

Our software can also be used to anonymize data. For that, navigate to the ‘Anonymize data’ folder. Then, choose a CSV file that can be used for anonymizing data. The software currently accepts only csv files. After that, select the columns that will be anonymized. After selecting the columns, you can select either to fill in the columns using random numbers or just encryption algorithms by clicking one of the options in the drop down menu named ‘How to anonymize data?’.

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Create project Preregistration Anonymize data **Zip and encrypt data** Record changes Version control

Here you can anonymize the data of your project. For that you need to select the data file -- at this moment only .csv files are supported. Then, select the columns to be anonymized. The software will fill in the columns with random numbers or any of the encryption choices. By clicking on 'Yes' at save data, the anonymized data are will be saved in the data directory of the project.

Upload data

Choose CSV File

Browse... d.csv

Upload complete

☒ Header

Separator

☐ Comma

☒ Semicolon

☐ Tab

Original data

Show 10 3 entries

Search:

x	y
0,0548292823567679	-0,121573380696185
-0,615099538896638	-0,798116631366138
x	y

Showing 1 to 2 of 100 entries

Previous 1 2 3 4 5 ... 50 Next

Select Columns

x

How to anonymize data?

random

Zip and encrypt data

The full project can be zipped and encrypted so that it can be easily shared with the rest of the community. For that, navigate to the 'Zip and encrypt data' tab. Then, enter the password you want, select the columns that you want to zip and encrypt, and then click on the 'Encrypt Project files'.

The Preregistration and Sharing Software

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Create project Preregistration Anonymize data **Zip and encrypt data** Record changes Version control

You can use this tab for zipping and encrypting the folders in the project. To do that, just tick on the folders you want to encrypt, select a password, and then click on 'Encrypt Project files' button.

Enter password

Select the subfolders to encrypt

☐ Analyses

☐ Data

☐ Manuscript

☐ Material

☐ Preregistrations

☒ Encrypt Project files

The following links constitute sources that are often used to backup personal data in cloud storage. Click on one of them if you want to manually upload your ZIP project file.

[Upload to The Open Science Foundation](#)

[Upload to The GitHub](#)