

Comparing Smoking Frequency, Weekly Exercise, and Quitter Self-Identity Over Time

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This file is meant to allow you to reproduce our analysis of the changes in smoking frequency, weekly exercise, and quitter self-identity between the prescreening questionnaire on the one hand and the post-questionnaire and follow-up questionnaire on the other hand. In the chapter, the results are reported in "Step 5: Training the model - Study."

Examine Results as Computed by Us

To examine the output of the analyses obtained by us, refer to:

- the file "comparison_prefollowup.pdf" for the comparison between the prescreening questionnaire and the follow-up questionnaire, and
- the file "comparison_prepost.pdf" for the comparison between the prescreening questionnaire and the post-questionnaire.

Reproduce Analyses Yourself

This section is to explain how you can run the analyses yourself.

Requirements

You need to have Docker installed.

Steps to Reproduce Analyses

The reproduction of our analyses is based on Docker and R Studio. Take the following steps:

1. Make sure you have Docker installed. You can check if you do by running `docker -v`.
2. Navigate to the folder this README-file is in.
3. Now you have 2 options:
 - Build the Docker image via `docker build . -t gbna4/usefulness2024_r_rethinking`, or
 - Pull the Docker image from Dockerhub via `docker pull gbna4/usefulness2024_r_rethinking`.
4. Run the Docker container via `docker run -d -p 8787:8787 -v <path_to_this_directory>:/home/rstudio/analysis -e PASSWORD=<some_password> gbna4/usefulness2024_r_rethinking`.
5. Go to localhost:8787.
6. Login with username 'rstudio' and the password chosen in step 4.
7. Navigate to the "analysis"-folder in R Studio.
8. Now you can reproduce the analysis results using the files "comparison_prefollowup.Rmd" and "comparison_prepost.Rmd."

Knitting R Markdown

If you just want to knit an analysis file to a pdf-file, take the following steps:

1. Make sure you have Docker installed.
2. Navigate to the folder this README-file is in.
3. Now you have 2 options:
 - Build the Docker image via `docker build . -t gbna4/usefulness2024_r_rethinking .`
 - Pull the Docker image from Dockerhub via `docker pull gbna4/usefulness2024_r_rethinking .`
4. Run an interactive session with the Docker container via `docker run -it -v <path_to_directory_of_this_README_file>:/home/rstudio/analysis gbna4/usefulness2024_r_rethinking /bin/bash .`
5. In the interactive session, type `cd /home/rstudio/analysis` to navigate to the analysis-folder.
6. Start an R session via `R .`
7. Import rmarkdown via `library('rmarkdown') .`
8. Knit an R markdown file via `render("<analysis_file>.Rmd", output_file = "<desired_output_file_name>.pdf") .`

Explanation of Folders and Files

This directory contains the following files and folders:

- Data:
 - `prefu_preprocessed.csv`: preprocessed data for the comparison between the prescreening questionnaire and the follow-up questionnaire.
 - `prepost_preprocessed.csv`: preprocessed data for the comparison between the prescreening questionnaire and the post-questionnaire.
- `comparison_prefollowup.pdf`: results of the comparison between the prescreening questionnaire and the follow-up questionnaire obtained by us.
- `comparison_prefollowup.Rmd`: Rmd-file to allow you to reproduce our results from the above file.
- `comparison_prepost.pdf`: results of the comparison between the prescreening questionnaire and the post-questionnaire obtained by us.
- `comparison_prepost.Rmd`: Rmd-file to allow you to reproduce our results from the above file.
- `Dockerfile`: file to allow you to build the Docker image yourself.
- `README.md/README.pdf`: this README-file.