SF36 Software v1.2.0 Documentation

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Abstract

SF36 is a questionnaires that assess the quality of life (QoL). Through 36 items, one can obtain sub-domains scores *(Physical Functioning, Role-Physical, Bodily-Pain, General Health, Vitality, Social Functioning, Role-Emotional, Mental Health, Reported Health Tran sition, Mean Current Health)*, as well as general domains scores *(Physical, Mental, Global)*. The `sf36.py` software automates these calculations.

Keywords: SF36, Python.

1 What are the requirements?

Before using the `sf36.py` software, ensure you have **Python 3** installed from https://www.python.org/downloads/. The **Anaconda** distribution (https://www.anaconda.com/download/success) is recommended as it includes all required modules.

Download the repository from https://github.com/MatthieuGG/SF36-scores/archive/refs/heads/main.zip, and extract the files.

Transpose your paper, PDF, or online questionnaires into CSV files, and put them all in the same folder. Please find an example of the original paper SF36 filled at https://github.com/MatthieuGG/SF36-scores/blob/main/docs/sample.pdf. You can provide one document per participant, or one document containing them all (one line per participant). Example of file structure can be found at https://github.com/MatthieuGG/SF36-scores/tree/main/data. Ensure your files follow the structure shown in Table 1.

Table 1: Input data structure

ID	Q1	Q2	Q3a	Q3b	Q3c	Q4a	Q4b	Q4c	Q5	Q6	Q7	Q8	Q9a	Q9b	PQ9c	Q9d	Q9e	Q9f	Q9g	Q9h	Q9i	Q9j	Q10a	Q10b	Q10c	Q10d	Q10e	Q10f	Q10g	Q10h	Q10i	Q11a	Q11b	Q11c	Q11d
Participant 1																																			
...																																			

2 What does the software do?

The `sf36.py` software first checks that the folder containing the data as well as the data files exist, that the data files are correctly structured, that there is no duplicate, missing values or inconsistent values, and that values range are respected (ex: between 1 and 5 for item 1). If any issue is present in the data, the corresponding print will appear in the terminal. Also, the software re orders the columns - **please note that the question order may differ between SF36 version**.

The software then calculates the different values for 10 subdomains on [0;100] scales (*"Physical Functioning", "Role-Physical", "Bodily-Pain", "General Health", "Vitality", "Social Functioning", "Role-Emotional", "Mental Health", "Reported Health Transition",* and *"Mean Current Health"*). It then estimates 3 composite scores: *Physical, Mental,* and *Global*; and saves the results as csv files. The structure of this file is shown in Table 2. Example of file structure can be found at https://github.com/MatthieuGG/SF36-scores/tree/main/results.

Table 2: Output data structure

ID	Q1	...	Q11b	Physical Functionning	Role-Physical	Bodily-Pain	General Health	Vitality	Social Functionning	Role-Emotionnal	Mental Health	Reported Health Transition	Mean Current Health	PHYSICAL	MENTAL	GLOBAL
Participant 1																
...																

We based our calculation on the guidelines *"SF36 Health Survey- Manual and Interpretation Guide"* from John E. Ware, Jr. PhD (https://www.researchgate.net/publication/247503121_SF36_Health_Survey_Manual_and_Interpretation_Guide).

3 How to use the software?

3.1 Terminal functions and options

From the terminal, navigate to the directory where the `sf36.py` file is located. To do to, use the `cd` function:

```
cd /path/to/sf36.py
```

You can now run the program in the terminal using this line command:

```
python3 sf36.py [-d <input_path>] [-o <output_path>] [-ind]
```

The options are:

- `[-d <input_path>]`: defines the path to your data. If you don't provide one, the default is `/data/` in the same folder.

- `[-o <output_path>]`: defines the path to your results. If you don't provide one, the default is `/results/` in the same folder.

- `[-ind]`: saves individual files. If you don't specify this, the default is one concatenated file.

3.2 Example of Use

```
cd /Users/Me/Downloads/SF36_scores/main
```

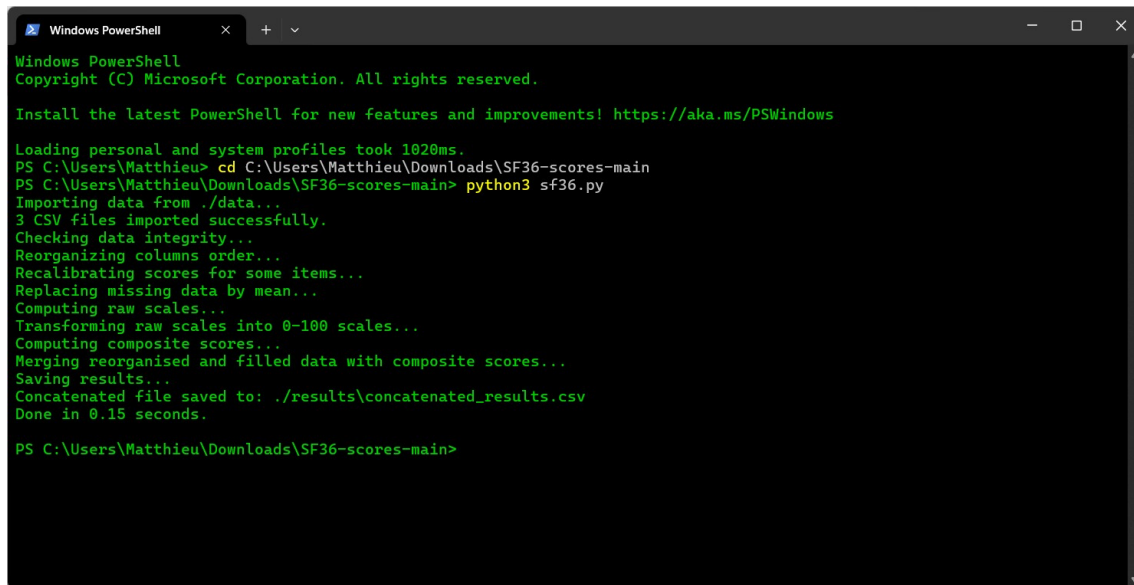→ Will navigate to the folder where the `sf36.py` file is located.

```
python3 sf36.py
```

→ Will use the `/data` folder in `SF36_scores_main` as input, and create or use the `/results` folder in `SF36_scores_main` for output, saving one unique CSV file for all subjects.

```
python3 sf36.py -d /Users/Me/Desktop/sf36/myData/ -o
↪    /Users/Me/Desktop/sf36/myResults/ -ind
```

→ Will use the `/Users/Me/Desktop/sf36/myData/` folder as input, and create or use the `/Users/Me/Desktop/sf36/myResults/` folder for output, saving one CSV file per subject.

See the Figure 1 for an illustration of console commands and prints.

Figure 1: Console illustration for using **sf36.py** freshly downloaded

4 How to cite this work?

To cite this work, use the following reference:

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