Package: gbhs (via r-universe)

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Title Lifebrain Global Brain Health Survey Data

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Description Between June 2019 and August 2020, Lifebrain conducted the Global Brain Health Survey to collect data on people's perceptions of brain health and willingness to take care of their brain by adopting new lifestyles. The survey was conducted online and translated into 14 languages to reach as many people as possible. In total, it collected 27,590 responses from people in 81 countries. This package contains code and data from this survey.

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`gbhs` *Lifebrain Global Brain Health Survey*

Description

Between June 2019 and August 2020, Lifebrain conducted the Global Brain Health Survey to collect data on people's perceptions of brain health and willingness to take care of their brain by adopting new lifestyles. The survey was conducted online and translated into 14 languages to reach as many people as possible. In total, it collected 27,590 responses from people in 81 countries.

Usage

```
data(gbhs)
```

Format

An object of class `tbl_df` (inherits from `tbl`, `data.frame`) with 27590 rows and 107 columns.

Value

A data.frame with all responses

References

Budin-Ljøsne I, Friedman BB, Suri S, Solé-Padullés C, Düzel S, Drevon CA, Baaré WFC, Mowinckel AM, Zsoldos E, Madsen KS, Carver RB, Ghisletta P, Arnesen MR, Bartrés Faz D, Brandmaier AM, Fjell AM, Kvalbein A, Henson RN, Kievit RA, Nawijn L, Pochet R, Schnitzler A, Walhovd KB and Zasiekina L (2020) The Global Brain Health Survey: Development of a Multi-Language Survey of Public Views on Brain Health. Front. Public Health 8:387. doi: 10.3389/fpubh.2020.00387 (DOI)

Examples

```
data(gbhs)
```

---

gbhs_long_q *Make GBHS question into long format data*

Description

Several questions in the GBHS can be made into long format data, as they either contain data from multiple choice questions (each answer separated with a ';') or come from a group of questions exploring the same theme with the same response scale. This function collects these questions and responses into dedicated columns where the "key" column in the question asked and responses are stored in "value" (response category), "continuous" (ordinal scale), and "bin" (binary scale). All other data remain in the data frame, but the number of rows is increased, and the "submission_id" column denotes the individual respondent.

Usage

```
gbhs_long_q(data, question)
```

Arguments

`data`	data.frame to work on. Needs to be a `gbhs` derivative
`question`	integer indicating which question to make the data longer from. Values accepted are `1,2,3,4`

Value

data frame with long data

Examples

```
data(gbhs)
gbhs_long_q(gbhs, 2)
gbhs_long_q(gbhs, 4)
```

gbhs_path_child *Get path of child document*

Description

Get path of child document

Usage

```
gbhs_path_child(path = NULL, ...)
```

Arguments

path	filename of child document to get path of. If NULL, lists possibilities
...	other arguments to list.files

Value

string of file path

Source

This function is adapted from `readxl::readxl_example()`.

Examples

```
gbhs_path_child()
gbhs_path_child("bin_desc.Rmd")
gbhs_path_child("ord_mod.Rmd")
```

gbhs_path_data *Get file path to raw data*

Description

The raw data from the survey is stored in individual files for each survey language. These are not cleaned or harmonised, as there are small inconsistencies in coding between the languages.

Usage

```
gbhs_path_data(path = NULL, type = "clean", destination = NULL, ...)
```

Arguments

path	Name of file in quotes with extension. If NULL, the example files will be listed.
type	type of data to look up. Either "clean" (default) or "raw"
destination	optional string indicating where to copy the file to
...	other arguments to list.files

Value

string of file path

Source

This function is adapted from readxl::readxl_example().

Examples

```
gbhs_path_data()
gbhs_path_data("114338_en.tsv")
head(read.delim(gbhs_path_data("114338_en.tsv")))
head(read.delim(gbhs_path_data("114338_en.tsv", "raw")))
```

---

gbhs_path_meta *Get path to meta-data and codebooks*

Description

Get path to meta-data and codebooks

Usage

```
gbhs_path_meta(path = NULL, type = "codebook", ...)
```

Arguments

path	filename of utility file to get path of. If NULL, lists possibilities
type	either "codebook" or "meta-data"
...	other arguments to list.files

Value

string of file path

Source

This function is adapted from readxl::readxl_example().

Examples

```
gbhs_path_meta()
gbhs_path_meta("131674_ch.json")
gbhs_path_meta(type = "meta-data")
gbhs_path_meta("131674_ch.json", type = "meta-data")
```

`gbhs_path_rmd` *Get file path to template files*

Description

There are two basic type of template files, one descriptive and one with models. These are based on the exploration and testing of the data towards our publicised manuscripts and reports. To run the "model" documents, the corresponding "descriptive" document for that paper must have been previously run.

Usage

```
gbhs_path_rmd(type = "descriptives", paper = 1, destination = NULL)
```

Arguments

`type`	either "descriptive" (default) or "model"
`paper`	an integer of either 1,2 or 3.
`destination`	optional string indicating where to copy the file to

Value

string of file path

Source

This function is adapted from `readxl::readxl_example()`.

Examples

```
gbhs_path_rmd()
gbhs_path_rmd("descriptive", 2)
gbhs_path_rmd("model", 3)
```

gbhs_path_utilities *Get path of utility functions*

Description

Get path of utility functions

Usage

```
gbhs_path_utilities(path = NULL, ...)
```

Arguments

path	filename of utility file to get path of. If NULL, lists possibilities
...	other arguments to list.files

Value

string of file path

Source

This function is adapted from readxl::readxl_example().

Examples

```
gbhs_path_utilities()
gbhs_path_utilities("data-utils.R")
gbhs_path_utilities("model-utils.R")
```

gbhs_render_report *Render GBHS reports*

Description

Descriptives and models for the GBHS data can be explored by generating the pre-created report templates.

Usage

```
gbhs_render_report(
  data = gbhs,
  type = "desc",
  paper = 1,
  output_dir = ".",
  ...
)
```

Arguments

data	data to be used. Can be a subselection of the gbhs data, or the entire gbhs data (default)
type	either "descriptive" (default) or "model"
paper	an integer of either 1,2 or 3.
output_dir	Directory to output the document to.
...	other arguments to render

Value

creats a report using the data and GBHS template

Examples

```
## Not run:
gbhs_render_report(type = "desc", paper = 1)
gbhs_render_report(type = "desc", paper = 2)
gbhs_render_report(type = "mod", paper = 1)

## End(Not run)
```

---

ggbar *Barchart for GBHS data*

Description

Barchart for GBHS data

Usage

```
ggbar(data, grouping = NULL)
```

Arguments

data	GBHS data to plot
grouping	Grouping variable

Value

ggplot object

Examples

```
ggbar(gbhs_long_q(gbhs, 2))
```

ggmodel *Plot a model output from GBHS*

Description

Utility function to plot model output from the GBHS survey

Usage

```
ggmodel(data, y, reverse = FALSE)
```

Arguments

data	data as prepared from prep_model_output
y	What goes on the y-axis
reverse	Should the scale be reversed

Value

ggplot object

ggstacked *Create a stacked bar chart*

Description

Create a stacked bar chart

Usage

```
ggstacked(
  data,
  y = key,
  npos = 1.1,
  min_pc = 0.05,
  pattern = NULL,
  n_breaks = 2,
  text_size = 3
)
```

Arguments

`data`	data to plot
`y`	value for the y-axis
`npos`	position of sidebar text
`min_pc`	minimum percent to display text of
`pattern`	regex pattern to use with `grepl` for turning text white/black
`n_breaks`	number of break points
`text_size`	text size

Value

ggplot object

`ggstacked_wrap` *Wrap a ggstacked plot*

Description

Wrap a ggstacked plot

Usage

```
ggstacked_wrap(data, y, ...)
```

Arguments

`data`	data to wrap
`y`	y-axis variable
`...`	other arguments to `ggstacked`

Value

ggplot object

logit2prob *Transform logit to probability*

Description

Transform logit to probability

Usage

```
logit2prob(logit)
```

Arguments

logit	a vector of logit scale

Value

a vector of probabilities

Examples

```
logit2prob(c(0.5, 1, 1.5))
```

na_col_rm *Remove columns with only NA*

Description

In part of the cleaning process, we needed to easily remove columns that only contained NA values.

Usage

```
na_col_rm(data)
```

Arguments

data	data.frame with data

Value

data.frame without columns that only have NA values

Examples

```
na_col_rm(mtcars)
```

pc *Calculate percent*

Description

Calculate percent

Usage

```
pc(x)
```

Arguments

x	vector to calculate the percent from

Value

a vector of percents given the vectors whole.

Examples

```
pc(1:10)
```

percent *Pretty percent displaying*

Description

Pretty percent displaying

Usage

```
percent(x, accuracy = 1, ...)
```

Arguments

x	vector of numbers
accuracy	accuracy of the percent
...	other arguments to percent

Value

character vector with percentage sign at the end

Examples

```
percent(10)
```

prep_model_output *Prepare model output for plots*

Description

Models run come in an output that require a little work to get plotted. This function helps clean up and get the data prepared for plotting in particular.

Usage

```
prep_model_output(data, model, y, reverse = FALSE)
```

Arguments

data	Data used in the model
model	model output
y	what goes on the y-axis
reverse	whether the categorical scale should be reversed

Value

fortified data for plotting

surveys *Survey tibble*

Description

There were in all 16 surveys launched for the global brain health survey. These were in different languages to try to capture as many respondents as possible, especially in Europe.

Usage

```
surveys()
```

Value

a tibble with 16 rows and 3 columns

Examples

```
surveys()
```

thousand *Format thousands*

Description

Format thousands

Usage

```
thousand(x)
```

Arguments

x	numeric vector

Value

character vector where one thousands has a space to the next number

Examples

```
thousand(c(1000, 150000, 16000))
```

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