Package 'scaledescr'

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Type Package

Title Descriptive, Reliability, and Inferential Tables for Psychometric Scales and Demographic Data

Version 0.1.3

Description
Provides functions to format and summarise already computed outputs from commonly used statistical and psychometric functions into compact, single-row tables and simple graphs, with utilities to export results to CSV, Word, and Excel formats. The package does not implement new statistical methods or estimation procedures; instead, it organises and presents results obtained from existing functions such as psych::describe(), psych::alpha(), stats::t.test(), and gtsummary::tbl_summary() to streamline reporting workflows in clinical and psychological research.

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Encoding UTF-8

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Imports dplyr, gtsummary, purrr, rlang, stats, officer, openxlsx, utils

Suggests psych, testthat (>= 3.0.0)

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NeedsCompilation no

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Depends R (>= 4.1.0)

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Contents

`make_alpha_table` *Wrap a pre-computed psych::alpha object into a single-row table*

Description

Wrap a pre-computed psych::alpha object into a single-row table

Usage

```
make_alpha_table(alpha_res, scale_name = "Scale")
```

Arguments

`alpha_res`	A psych::alpha object (already computed)
`scale_name`	Name of the scale (default: "Scale")

Value

A data frame with columns: Scale, 95% CI lower, Alpha, 95% CI upper

Examples

```
# Create a minimal "psych::alpha" like object manually
alpha_obj <- list(
  total = list(
    raw_alpha = 0.85,
    lower = 0.78,
    upper = 0.92
  )
)

# Generate the formatted alpha table
make_alpha_table(alpha_obj, scale_name = "PHQ-9")
```

make_dataframe_to_output *Export a data frame to CSV, Word, or Excel*

Description

This function writes a data frame to a user-specified file path in a user-specified format (CSV, Word, or Excel).

- CSV uses `write.csv()`
- Word (`docx`) uses `officer` and makes column names safe
- Excel (`xlsx`) uses `openxlsx`

Usage

```
make_dataframe_to_output(x, filename = NULL, format = "csv")
```

Arguments

`x`	A data frame to export
`filename`	Optional. The file name (with or without path, without extension). If not provided, the data frame name is used.
`format`	Character. One of `"csv"`, `"docx"`, or `"excel"`. Default is `"csv"`.

Value

Invisible path to the generated file

Examples

```
df <- data.frame(x = 1:3, y = c("A", "B", "C"))

# Write to a temporary directory (CRAN-safe)
tmp_file <- file.path(tempdir(), "demo_csv")
make_dataframe_to_output(df, filename = tmp_file, format = "csv")
```

make_demographic_table *Create a demographics summary table*

Description

Create a demographics summary table

Usage

```
make_demographic_table(data, vars, continuous_vars = NULL)
```

Arguments

data	A data frame
vars	demographic variables to include in the table
continuous_vars	Optional subset of vars to be treated as continuous

Value

A gtsummary table

Examples

```
# Minimal example data
df <- data.frame(
  age = c(25, 30, 35),
  sex = c("M", "F", "M"),
  education = c("HS", "BA", "MA")
)

# Generate a demographic summary table (assign to object to avoid printing)
demo_table <- make_demographic_table(df, vars = c("age", "sex", "education"))
demo_table # optionally inspect the table
```

make_paired_t_test_table *Create a one-row summary table of a paired t-test*

Description

This function performs a paired t-test between two numeric variables in a data frame and returns a one-row summary table including means, mean difference, t-value, degrees of freedom, p-value, and confidence interval.

Usage

```
make_paired_t_test_table(
  data,
  var1,
  var2,
  var_name = NULL,
  alternative = "two.sided",
  conf.level = 0.95
)
```

Arguments

data	A data frame containing the two numeric variables.
var1	Character string. Name of the first variable (observation 1) in data.
var2	Character string. Name of the second variable (observation 2) in data.
var_name	Optional character string. Custom name for the variable to display in the table. Default is var1 vs var2.
alternative	Character string specifying the alternative hypothesis. One of "two.sided", "less", or "greater". Default is "two.sided".
conf.level	Confidence level for the interval. Default is 0.95.

Value

A one-row data frame with columns:

- Variable - variable name
- Mean_obs1 - mean of observation 1
- Mean_obs2 - mean of observation 2
- Mean_diff - mean difference (obs1 - obs2)
- t_value - t statistic
- df - degrees of freedom
- p_value - p-value
- CI_lower - lower bound of confidence interval
- CI_upper - upper bound of confidence interval

Examples

```
# example data
df <- data.frame(
  before = c(10, 12, 14, 15, 11),
  after  = c(11, 13, 13, 16, 12)
)

# Run the paired t-test summary
make_paired_t_test_table(df, var1 = "before", var2 = "after")
```

`make_scale_description_table` *Create a Descriptive Statistics Table Row*

Description

Formats a descriptive statistics object into a single-row data frame

Usage

```
make_scale_description_table(descr_object, scale_name)
```

Arguments

`descr_object`	An object returned by `psych::describe()`. Must contain: `n`, `mean`, `sd`, `median`, `min`, `max`, `skew`, `kurtosis`.
`scale_name`	A single character string specifying the name of the scale.

Details

This function is intended for reporting descriptive statistics of total scores that has been calculated using psych::describe().

Value

A single-row data frame with formatted descriptive statistics.

Examples

```
{
  # Create 10 random PHQ-9 scores
  phq9_data <- as.data.frame(matrix(sample(0:3, 10 * 9, replace = TRUE), 10, 9))
  colnames(phq9_data) <- paste0("Q", 1:9)
  phq9_data$total <- rowSums(phq9_data)
  descr_total <- psych::describe(phq9_data$total)
  make_scale_description_table(descr_total, scale_name = "PHQ-9")
}
```

scaledescr *scaledescr*

Description

Provides helper functions to format and summarise already computed outputs from commonly used statistical and psychometric functions into compact, single-row tables and simple graphs. Functions such as make_scale_description_table(), make_demographic_table(), make_alpha_table(), make_paired_t_test_table(), and make_dataframe_to_output() organise results obtained from existing functions including psych::describe(), psych::alpha(), stats::t.test(), and gtsummary::tbl_summary() for streamlined reporting and export to CSV, Word, and Excel formats. The package does not implement new statistical methods or perform additional estimation.

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