

# Package: hitop (via r-universe)

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**Title** Score and Distribute HiTOP Society Questionnaire Instruments

**Version** 0.2.0

**Description** Provides item data, scoring, validity screening, and reliability estimation for the questionnaire instruments distributed by the Hierarchical Taxonomy of Psychopathology (HiTOP) Society, including the Personality Inventory for DSM-5 (PID-5) and its short and brief forms, the HiTOP Self-Report and Brief-Report measures, and the HiTOP Harmful Substance Use Measure. Scoring follows published scoring keys and is verified against primary sources. The package also generates ready-to-administer paper forms and 'Qualtrics' and 'REDCap' import files for each instrument.

**License** GPL (>= 3)

**URL** <https://github.com/jmgirard/hitop>,  
<https://jmgirard.github.io/hitop/>

**BugReports** <https://github.com/jmgirard/hitop/issues>

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---

available\_scales

*List the Scales an Instrument Offers*


---

## Description

Returns the scales available for building a module, with the name to print on a form, the camelCase stem that names the scored output column, how many items the scale contributes, and the scale's brief clinician-facing definition. Either name column may be passed to [hitop\\_module\(\)](#).

This is a convenience view of the instrument's own scale table, so a researcher choosing scales need not know which dataset to open.

## Usage

```
available_scales(instrument = "hitopsr")
```

## Arguments

**instrument**      A string naming the instrument. Currently only "hitopsr" is supported. (default = "hitopsr")

## Details

A scale whose definition is missing from the instrument's definitions table is an error, never a blank cell: the abort carries the condition class `hitop_missing_definition`, which a caller may catch. It is not reachable from the shipped tables, which are built under a check that the two tables carry the same stems.

## Value

A tibble with one row per scale and four columns: **Scale** (the display name), **camelCase** (the scored-output stem), **nItems** (integer), and **Brief** (the clinician-facing definition, as [hitopsr\\_definitions](#) carries it).

## See Also

[hitop\\_module\(\)](#), which takes these names; [hitopsr\\_definitions](#), which carries the definitions in full.

## Examples

```
# Every HiTOP-SR scale, with its item count
available_scales("hitopsr")

# Pick a few and build a module from them
hitop_module("hitopsr", scales = c("Agoraphobia", "Appetite Loss"))
```

calc\_alpha

*Compute Cronbach's Coefficient Alpha***Description**

Computes Cronbach's coefficient alpha for a set of items from the **unstandardized covariance** matrix. Items are coerced to numeric before calculation. Missing data can be handled via **pairwise** deletion.

**Usage**

```
calc_alpha(df)
```

**Arguments**

**df** A data frame or matrix with one row per observation and one column per item.

**Details**

Let  $k$  be the number of items and let  $X_1, \dots, X_k$  denote the item scores. Define the total score  $T = \sum_{i=1}^k X_i$ . Cronbach's alpha can be written without matrix notation as

$$\alpha = \frac{k}{k-1} \left( 1 - \frac{\sum_{i=1}^k \text{Var}(X_i)}{\text{Var}(T)} \right).$$

In words: take the sum of the item variances and divide by the variance of the total score; subtract this ratio from 1 and multiply by  $k/(k-1)$ .

Both  $\text{Var}(X_i)$  and  $\text{Var}(T)$  are computed using pairwise-complete observations. @section Coercion: Each column is coerced via **as.numeric()**. This means:

- factors are converted to **integer level codes** (not labels);
- characters that are not parsable as numbers become **NA**;
- dates/times become their underlying numeric representations. Ensure your columns are truly numeric item responses or pre-process as needed.

**Value**

A numeric scalar giving Cronbach's alpha (typically in  $[0, 1]$ , but can be outside this range for problematic data).

**References**

- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297–334.
- Sijtsma, K. (2009). On the use, the misuse, and the very limited usefulness of Cronbach's alpha. *Psychometrika*, 74(1), 107–120.

## Examples

```
# Cronbach's alpha for the HiTOP-BR Detachment scale (items 7, 12, 30, 31, 37)
detach_items <- sprintf("hbr_%02d", c(7, 12, 30, 31, 37))
calc_alpha(ku_hitopbr[detach_items])
```

---

calc\_omega

*Compute McDonald's Omega (total) via CFA*

---

## Description

Computes McDonald's  $\omega_{\text{total}}$  for a unidimensional scale using a one-factor confirmatory factor analysis (CFA) fit with **lavaan** using MLR estimation. Missing data can be handled via full information maximum likelihood (FIML).

## Usage

```
calc_omega(df)
```

## Arguments

**df** A data frame or matrix with one row per observation and one column per item.

## Details

The model is  $\mathbf{f} \sim \text{item1} + \text{item2} + \dots + \text{itemK}$  with `std.lv = TRUE` (i.e.,  $\text{Var}(f) = 1$ ).

$\omega = \frac{(\sum_i \lambda_i)^2}{(\sum_i \lambda_i)^2 + \sum_i \theta_i}$ , where  $\lambda_i$  are *unstandardized* loadings and  $\theta_i$  are *unstandardized* residual variances of the indicators.

The function validates inputs and fails with informative messages if the CFA does not converge or if implied residual variances are invalid. Mixed-sign loadings trigger a warning (often indicates reverse-keying is needed).

Note that the latent variable will be estimated as **f**, so please avoid naming any of your items that.

## Value

A numeric scalar giving McDonald's  $\omega_{\text{total}}$  (typically in  $[0, 1]$ ; small estimation anomalies can yield values slightly outside this range).

## References

- McDonald, R. P. (1999). *Test Theory: A Unified Treatment*. Lawrence Erlbaum.
- Green, S. B., & Yang, Y. (2009). Reliability of summed item scores using structural equation modeling: An alternative to coefficient alpha. *Psychometrika*, 74(1), 155–167.
- Zinbarg, R. E., Revelle, W., Yovel, I., & Li, W. (2005). Cronbach's  $\alpha$ , Revelle's  $\omega$ , and McDonald's  $\omega$ . *Psychometrika*, 70(1), 123–133.

## Examples

```
# McDonald's omega-total for the HiTOP-BR Detachment scale
detach_items <- sprintf("hbr_%02d", c(7, 12, 30, 31, 37))
calc_omega(ku_hitopbr[detach_items])
```

---

```
generate_docx_hitopbr
```

*Generate a Word Document for the HiTOP-BR Assessment*

---

## Description

Creates a formatted Microsoft Word document containing the Hierarchical Taxonomy of Psychopathology - Brief Report (HiTOP-BR) items, instructions, and optional scoring keys.

## Usage

```
generate_docx_hitopbr(
  file = "hitopbr.docx",
  papersize = c("us", "a4"),
  title = "HiTOP-BR (v1.0)",
  include_scoring = TRUE,
  font_size = 10,
  font_family = "Times New Roman"
)
```

## Arguments

|                        |                                                                                                                               |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>file</b>            | Character string specifying the output file path. Defaults to "hitopbr.docx".                                                 |
| <b>papersize</b>       | Character string specifying the paper dimensions. Must be one of "us" (8.5x11 inches) or "a4" (210x297 mm). Defaults to "us". |
| <b>title</b>           | Character string for the document header title. Defaults to "HiTOP-BR (v1.0)".                                                |
| <b>include_scoring</b> | Logical. If <b>TRUE</b> (default), appends a page break and the scoring instructions table.                                   |
| <b>font_size</b>       | Numeric value specifying the base font size in points. Defaults to 10.                                                        |
| <b>font_family</b>     | Character string specifying the font family to be used. Defaults to "Times New Roman".                                        |

## Value

Invisibly returns the path to the created file (**file**).

## Examples

```
# Write a HiTOP-BR paper form to a temporary Word document
generate_docx_hitopbr(file = tempfile(fileext = ".docx"))
```

---

```
generate_docx_hitophsum
```

*Generate a Word Document for the HiTOP-HSUM Assessment Overview*

---

## Description

Creates a formatted Microsoft Word document containing the Hierarchical Taxonomy of Psychopathology - Substance Use Module (HSUM) overview, branching logic, and items.

## Usage

```
generate_docx_hitophsum(
  file = "hitophsum_overview.docx",
  papersize = c("us", "a4"),
  title = "HiTOP-HSUM (v1.0) Overview",
  font_size = 10,
  font_family = "Times New Roman"
)
```

## Arguments

|                    |                                                                                                                               |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>file</b>        | Character string specifying the output file path. Defaults to "hitophsum_overview.docx".                                      |
| <b>papersize</b>   | Character string specifying the paper dimensions. Must be one of "us" (8.5x11 inches) or "a4" (210x297 mm). Defaults to "us". |
| <b>title</b>       | Character string for the document header title. Defaults to "HiTOP-HSUM (v1.0) Overview".                                     |
| <b>font_size</b>   | Numeric value specifying the base font size in points. Defaults to 10.                                                        |
| <b>font_family</b> | Character string specifying the font family to be used. Defaults to "Times New Roman".                                        |

## Value

Invisibly returns the path to the created file (**file**).

## Examples

```
# Write a HiTOP-HSUM paper form to a temporary Word document
generate_docx_hitophsum(file = tempfile(fileext = ".docx"))
```

---

generate\_docx\_hitopsr

*Generate a Word Document for the HiTOP-SR Assessment*


---

## Description

Creates a formatted Microsoft Word document containing the Hierarchical Taxonomy of Psychopathology - Self-Report (HiTOP-SR) items, instructions, and optional scoring keys. The 405 items are formatted into a single continuous table.

## Usage

```
generate_docx_hitopsr(
  file = "hitopsr.docx",
  papersize = c("us", "a4"),
  title = NULL,
  include_scoring = TRUE,
  include_subscales = FALSE,
  font_size = 10,
  font_family = "Times New Roman",
  module = NULL,
  renumber = TRUE,
  randomize = FALSE,
  descriptor = NULL,
  subset = NULL
)
```

## Arguments

|                          |                                                                                                                                                                                                                                                                                                                     |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>file</b>              | Character string specifying the output file path. Defaults to "hitopsr.docx".                                                                                                                                                                                                                                       |
| <b>papersize</b>         | Character string specifying the paper dimensions. Must be one of "us" (8.5x11 inches) or "a4" (210x297 mm). Defaults to "us".                                                                                                                                                                                       |
| <b>title</b>             | Character string for the document header title, printed verbatim. The default (NULL) resolves by what the form contains: "HiTOP-SR Module (v1.0)" when <b>module</b> is supplied and "HiTOP-SR (v1.0)" otherwise, so a form built from a few scales is not headed as the full 405-item instrument. (default = NULL) |
| <b>include_scoring</b>   | Logical. If TRUE (default), appends a page break and the scoring instructions table.                                                                                                                                                                                                                                |
| <b>include_subscales</b> | Logical. If TRUE, appends optional subscales to the scoring instructions table. With a <b>module</b> , the table gets the subscales of the scales the module holds, and no others. Defaults to FALSE.                                                                                                               |
| <b>font_size</b>         | Numeric value specifying the base font size in points. Defaults to 10.                                                                                                                                                                                                                                              |

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>font_family</code> | Character string specifying the font family to be used. Defaults to "Times New Roman".                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <code>module</code>      | An optional <code>hitop_module()</code> object restricting the form to the items of the chosen scales. With <code>include_subscales = TRUE</code> , the form adds the subscales of the scales it holds. A module whose <code>items</code> , <code>nItems</code> , <code>camelCase</code> or <code>instrument</code> differ from a fresh <code>hitop_module()</code> build of its scales, or that cannot be rebuilt from its <code>instrument</code> and <code>scales</code> , is refused with an error of class <code>hitop_module_mismatch</code> , before any file is written. (default = NULL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <code>renumber</code>    | Logical. If <code>TRUE</code> (default), the printed items are numbered 1 to <code>n</code> down the page, so a module form does not show the full instrument's gapped numbers. Set to <code>FALSE</code> to print each item's original HiTOP-SR number instead. The scoring page always uses whichever numbers are printed. This differs from <code>generate_qualtrics_hitopsr()</code> and <code>generate_redcap_hitopsr()</code> , which never renumber, because there an item number names a collected data column.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <code>randomize</code>   | <p>Logical. If <code>TRUE</code>, the items are printed in a random order. On a renumbered module form the document also carries a crosswalk from each printed number back to its original HiTOP-SR number, so the form is scoreable from the paper alone; that crosswalk is printed whether or not <code>include_scoring</code> appends the key. It is <i>not</i> printed when <code>module</code> is <code>NULL</code> (405 pairs would be one dense paragraph) or when <code>renumber = FALSE</code> (the printed numbers are already the original ones) — in both cases read the order from the <code>item_order</code> attribute described under Value. There is no <code>seed</code> argument: call <code>set.seed()</code> before this function to make an order reproducible. (default = <code>FALSE</code>)</p> <p><b>Scoring data collected on a shuffled form.</b> By default <code>score_hitopsr()</code> and <code>reliability_hitopsr()</code> expect a module's items in ascending original order — not the order a shuffled form prints them in. Data entered straight off the form has its columns in the order the form printed, its first column holding the answer to the paper's item 1. Score such columns with <code>layout = "printed"</code> and a module carrying the printed order on its <code>item_order</code> attribute: pass <code>descriptor</code> here and <code>read_module()</code> hands that module back. Scoring printed-order columns under the default layout returns wrong scale scores and raises no error; columns already in instrument order take the default, and <code>layout = "printed"</code> applied to them scrambles what was right.</p> |
| <code>descriptor</code>  | An optional path to write a module descriptor to, beside the Word file. The saved file records which scales the form covers and which instrument items they draw on, so <code>read_module()</code> hands the module straight back to <code>score_hitopsr()</code> at scoring time. A call passing no <code>module</code> writes a descriptor naming every scale, describing the full administration. With <code>randomize = TRUE</code> it also records the printed order, returned on the read module's <code>item_order</code> attribute — the record a shuffled whole-instrument form otherwise leaves nowhere, since no crosswalk is printed for one. Written before the Word file, so an unwritable path is reported before any form is produced; if the Word file then cannot be written, the descriptor is removed again, a file that was already at that path included. It must name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

a path of its own: an empty string, or the same path as `file`, is refused rather than leaving you with no descriptor and no error. Once both files are on disk the descriptor's path is announced on the console, after the message naming the Word file. (default = NULL)

**subset**           Deprecated. The former name of `module`; supplying it warns. Supplying both `module` and `subset` is an error. (default = NULL)

## Value

Invisibly returns the path to the created file (`file`), carrying an `item_order` attribute: the original HiTOP-SR item numbers in the order they were printed. It is present on every call, and is simply ascending unless `randomize = TRUE`.

## See Also

`write_module()` and `read_module()` for the descriptor file.

## Examples

```
# Write a HiTOP-SR paper form to a temporary Word document
generate_docx_hitopsr(file = tempfile(fileext = ".docx"))

# A module containing only two scales, printed as items 1 to 8
generate_docx_hitopsr(
  file = tempfile(fileext = ".docx"),
  module = hitop_module("hitopsr", c("Agoraphobia", "Appetite Loss"))
)

# The same module keeping the full instrument's own item numbers
generate_docx_hitopsr(
  file = tempfile(fileext = ".docx"),
  module = hitop_module("hitopsr", c("Agoraphobia", "Appetite Loss")),
  renumber = FALSE
)

# A shuffled form; the scoring page carries the crosswalk back
set.seed(1)
out <- generate_docx_hitopsr(
  file = tempfile(fileext = ".docx"),
  module = hitop_module("hitopsr", c("Agoraphobia", "Appetite Loss")),
  randomize = TRUE
)
attr(out, "item_order")

# The same form with a descriptor saved beside it; the descriptor carries
# the printed order, so the collected columns can be put back in order
# without keeping a note by hand
f <- tempfile(fileext = ".json")
generate_docx_hitopsr(
  file = tempfile(fileext = ".docx"),
  module = hitop_module("hitopsr", c("Agoraphobia", "Appetite Loss")),
```

```

    randomize = TRUE,
    descriptor = f
  )
  attr(read_module(f), "item_order")

```

---

`generate_docx_pid5`     *Generate a Word Document for the PID-5 (Full)*

---

## Description

Generate a Word Document for the PID-5 (Full)

## Usage

```

generate_docx_pid5(
  file = "pid5.docx",
  papersize = c("us", "a4"),
  title = "PID-5 (Full)",
  include_scoring = TRUE,
  font_size = 10,
  font_family = "Times New Roman"
)

```

## Arguments

|                              |                                                                                                                               |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <code>file</code>            | Character string specifying the output file path.                                                                             |
| <code>papersize</code>       | Character string specifying the paper dimensions. Must be one of "us" (8.5x11 inches) or "a4" (210x297 mm). Defaults to "us". |
| <code>title</code>           | Character string for the document header title.                                                                               |
| <code>include_scoring</code> | Logical. If <code>TRUE</code> , appends a page break and scoring instructions.                                                |
| <code>font_size</code>       | Numeric value specifying the base font size in points.                                                                        |
| <code>font_family</code>     | Character string specifying the font family to be used.                                                                       |

## Examples

```

# Write a PID-5 (full) paper form to a temporary Word document
generate_docx_pid5(file = tempfile(fileext = ".docx"))

```

---

`generate_docx_pid5bf` *Generate a Word Document for the PID-5-BF*

---

## Description

Generate a Word Document for the PID-5-BF

## Usage

```
generate_docx_pid5bf(  
  file = "pid5bf.docx",  
  papersize = c("us", "a4"),  
  title = "PID-5-BF",  
  include_scoring = TRUE,  
  font_size = 10,  
  font_family = "Times New Roman"  
)
```

## Arguments

|                              |                                                                                                                               |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <code>file</code>            | Character string specifying the output file path.                                                                             |
| <code>papersize</code>       | Character string specifying the paper dimensions. Must be one of "us" (8.5x11 inches) or "a4" (210x297 mm). Defaults to "us". |
| <code>title</code>           | Character string for the document header title.                                                                               |
| <code>include_scoring</code> | Logical. If TRUE, appends a page break and scoring instructions.                                                              |
| <code>font_size</code>       | Numeric value specifying the base font size in points.                                                                        |
| <code>font_family</code>     | Character string specifying the font family to be used.                                                                       |

## Examples

```
# Write a PID-5-BF paper form to a temporary Word document  
generate_docx_pid5bf(file = tempfile(fileext = ".docx"))
```

---

`generate_docx_pid5bfchild`

*Generate a Word Document for the PID-5-BF Child Form (Ages 11 to 17)*

---

## Description

Write the 25-item PID-5-BF child form for ages 11 to 17 (Krueger et al., 2013) as a paper form. Its items, their order and their keying are those of the adult brief form, so the items are `pid_items$Text` numbered 1 to 25 and the scoring page is the one `generate_docx_pid5bf()` prints. The instructions are the child form's, and the footer carries the APA copyright and permission notice the child form prints. Score the responses with `score_pid5(version = "BF")`.

## Usage

```
generate_docx_pid5bfchild(
  file = "pid5bfchild.docx",
  papersize = c("us", "a4"),
  title = "PID-5-BF, Child Age 11-17",
  include_scoring = TRUE,
  font_size = 10,
  font_family = "Times New Roman"
)
```

## Arguments

|                              |                                                                                                                               |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <code>file</code>            | Character string specifying the output file path.                                                                             |
| <code>papersize</code>       | Character string specifying the paper dimensions. Must be one of "us" (8.5x11 inches) or "a4" (210x297 mm). Defaults to "us". |
| <code>title</code>           | Character string for the document header title.                                                                               |
| <code>include_scoring</code> | Logical. If TRUE, appends a page break and scoring instructions.                                                              |
| <code>font_size</code>       | Numeric value specifying the base font size in points.                                                                        |
| <code>font_family</code>     | Character string specifying the font family to be used.                                                                       |

## References

Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2013). *The Personality Inventory for DSM-5—Brief Form (PID-5-BF)—Child Age 11–17*. American Psychiatric Association.

## Examples

```
# Write a PID-5-BF child form to a temporary Word document
generate_docx_pid5bfchild(file = tempfile(fileext = ".docx"))
```

---

generate\_docx\_pid5bfpm

*Generate a Word Document for the PID5BF+M*


---

## Description

Write the 36-item modified brief form of the PID-5 (PID5BF+M; Bach et al., 2020) as a paper form. The items are numbered 1 to 36 in BF+M order, with their PID-5 text, and the instructions and response options are those of the other PID-5 forms. The scoring page lists the 2 items of each of the 18 facets, then the 3 facets each of the 6 domains averages, as `score_pid5()` scores them with `version = "BFPM"`.

## Usage

```
generate_docx_pid5bfpm(
  file = "pid5bfpm.docx",
  papersize = c("us", "a4"),
  title = "PID5BF+M",
  include_scoring = TRUE,
  font_size = 10,
  font_family = "Times New Roman"
)
```

## Arguments

|                              |                                                                                                                               |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <code>file</code>            | Character string specifying the output file path.                                                                             |
| <code>papersize</code>       | Character string specifying the paper dimensions. Must be one of "us" (8.5x11 inches) or "a4" (210x297 mm). Defaults to "us". |
| <code>title</code>           | Character string for the document header title.                                                                               |
| <code>include_scoring</code> | Logical. If TRUE, appends a page break and scoring instructions.                                                              |
| <code>font_size</code>       | Numeric value specifying the base font size in points.                                                                        |
| <code>font_family</code>     | Character string specifying the font family to be used.                                                                       |

## References

Bach, B., Kerber, A., Aluja, A., Bastiaens, T., Keeley, J. W., Claes, L., Fossati, A., Gutierrez, F., Oliveira, S. E. S., Pires, R., Riegel, K. D., Rolland, J.-P., Roskam, I., Sellbom, M., Somma, A., Spanemberg, L., Strus, W., Thimm, J. C., Wright, A. G. C., & Zimmermann, J. (2020). International assessment of DSM-5 and ICD-11 personality disorder traits: Toward a common nosology in DSM-5.1. *Psychopathology*, 53(3-4), 179-188. doi:10.1159/000507589

## Examples

```
# Write a PID5BF+M paper form to a temporary Word document
generate_docx_pid5bfpm(file = tempfile(fileext = ".docx"))
```

---

```
generate_docx_pid5child
```

*Generate a Word Document for the PID-5 Child Form (Ages 11 to 17)*

---

## Description

Write the 220-item PID-5 child form for ages 11 to 17 (Krueger et al., 2013) as a paper form. Its items, their order and their keying are those of the adult full form, so the items are `pid_items$Text` numbered 1 to 220 and the scoring page is the one [generate\\_docx\\_pid5\(\)](#) prints. The instructions are the child form's, and the footer carries the APA copyright and permission notice the child form prints. Score the responses with `score_pid5(version = "FULL")`.

## Usage

```
generate_docx_pid5child(
  file = "pid5child.docx",
  papersize = c("us", "a4"),
  title = "PID-5 (Full), Child Age 11-17",
  include_scoring = TRUE,
  font_size = 10,
  font_family = "Times New Roman"
)
```

## Arguments

|                              |                                                                                                                               |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <code>file</code>            | Character string specifying the output file path.                                                                             |
| <code>papersize</code>       | Character string specifying the paper dimensions. Must be one of "us" (8.5x11 inches) or "a4" (210x297 mm). Defaults to "us". |
| <code>title</code>           | Character string for the document header title.                                                                               |
| <code>include_scoring</code> | Logical. If TRUE, appends a page break and scoring instructions.                                                              |
| <code>font_size</code>       | Numeric value specifying the base font size in points.                                                                        |
| <code>font_family</code>     | Character string specifying the font family to be used.                                                                       |

## References

Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2013). *The Personality Inventory for DSM-5 (PID-5)—Child Age 11–17*. American Psychiatric Association.

## Examples

```
# Write a PID-5 child form to a temporary Word document
generate_docx_pid5child(file = tempfile(fileext = ".docx"))
```

---

```
generate_docx_pid5irf
```

*Generate a Word Document for the PID-5 Informant Form*

---

## Description

Write the 218-item PID-5 Informant Form (PID-5-IRF; Markon et al., 2013), on which an adult informant rates the person receiving care, as a paper form. The items are numbered 1 to 218 in the form's order, with the informant wording (`pid_items$TextIRF`). The form's opening instructions come first; its rating prompt and the stem "He or she..." that each item completes head the item table on every page, as on the printed form. The scoring page lists each of the 25 facets with its informant item numbers, marking the 14 reverse-scored items with (R), as `score_pid5()` scores them with `version = "IRF"`. The footer carries the APA copyright and permission notice the form prints.

## Usage

```
generate_docx_pid5irf(
  file = "pid5irf.docx",
  papersize = c("us", "a4"),
  title = "PID-5-IRF (Informant Form)",
  include_scoring = TRUE,
  font_size = 10,
  font_family = "Times New Roman"
)
```

## Arguments

|                              |                                                                                                                               |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <code>file</code>            | Character string specifying the output file path.                                                                             |
| <code>papersize</code>       | Character string specifying the paper dimensions. Must be one of "us" (8.5x11 inches) or "a4" (210x297 mm). Defaults to "us". |
| <code>title</code>           | Character string for the document header title.                                                                               |
| <code>include_scoring</code> | Logical. If TRUE, appends a page break and scoring instructions.                                                              |
| <code>font_size</code>       | Numeric value specifying the base font size in points.                                                                        |
| <code>font_family</code>     | Character string specifying the font family to be used.                                                                       |

## References

Markon, K. E., Quilty, L. C., Bagby, R. M., & Krueger, R. F. (2013). *The Personality Inventory for DSM-5—Informant Form (PID-5-IRF)—Adult*. American Psychiatric Association. See also Markon et al. (2013), *Assessment*, 20(3), 370-383. doi:10.1177/1073191113486513

## Examples

```
# Write a PID-5 Informant Form paper form to a temporary Word document
generate_docx_pid5irf(file = tempfile(fileext = ".docx"))
```

---

`generate_docx_pid5sf` *Generate a Word Document for the PID-5-SF*

---

## Description

Generate a Word Document for the PID-5-SF

## Usage

```
generate_docx_pid5sf(
  file = "pid5sf.docx",
  papersize = c("us", "a4"),
  title = "PID-5-SF",
  include_scoring = TRUE,
  font_size = 10,
  font_family = "Times New Roman"
)
```

## Arguments

|                              |                                                                                                                               |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <code>file</code>            | Character string specifying the output file path.                                                                             |
| <code>papersize</code>       | Character string specifying the paper dimensions. Must be one of "us" (8.5x11 inches) or "a4" (210x297 mm). Defaults to "us". |
| <code>title</code>           | Character string for the document header title.                                                                               |
| <code>include_scoring</code> | Logical. If TRUE, appends a page break and scoring instructions.                                                              |
| <code>font_size</code>       | Numeric value specifying the base font size in points.                                                                        |
| <code>font_family</code>     | Character string specifying the font family to be used.                                                                       |

## Examples

```
# Write a PID-5-SF paper form to a temporary Word document
generate_docx_pid5sf(file = tempfile(fileext = ".docx"))
```

---

```
generate_qualtrics_hitopbr
```

*Generate a Qualtrics Import File for the HiTOP-BR*

---

## Description

Creates a text file formatted for the Qualtrics Advanced Format import tool containing the Hierarchical Taxonomy of Psychopathology - Brief Report (HiTOP-BR) items and instructions.

## Usage

```
generate_qualtrics_hitopbr(
  file = "hitopbr_qualtrics.txt",
  block_name = "HiTOP-BR",
  id_prefix = "HBR",
  include_instructions = TRUE,
  breaks = 15
)
```

## Arguments

|                             |                                                                                                                                        |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>file</b>                 | Character string specifying the output file path. Defaults to "hitopbr_qualtrics.txt".                                                 |
| <b>block_name</b>           | Character string specifying the name of the block in Qualtrics. Defaults to "HiTOP-BR".                                                |
| <b>id_prefix</b>            | Character string specifying the prefix for the question IDs. Defaults to "HBR".                                                        |
| <b>include_instructions</b> | Logical. If TRUE (default), includes the starting instructions as a descriptive text block.                                            |
| <b>breaks</b>               | Integer or NULL. The number of items to display before inserting a page break. Set to 0 or NULL to disable pagination. Defaults to 15. |

## Value

Invisibly returns the path to the created file (**file**).

## Examples

```
# Write a HiTOP-BR Qualtrics import file to a temporary location
generate_qualtrics_hitopbr(file = tempfile(fileext = ".txt"))
```

---

```
generate_qualtrics_hitopsr
```

*Generate a Qualtrics Import File for the HiTOP-SR*

---

## Description

Creates a text file formatted for the Qualtrics Advanced Format import tool containing the Hierarchical Taxonomy of Psychopathology - Self-Report (HiTOP-SR) items and instructions.

## Usage

```
generate_qualtrics_hitopsr(
  file = "hitopsr_qualtrics.txt",
  block_name = "HiTOP-SR",
  id_prefix = "HSR",
  include_instructions = TRUE,
  breaks = 15,
  module = NULL,
  descriptor = NULL,
  subset = NULL
)
```

## Arguments

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>file</b>                 | Character string specifying the output file path. Defaults to "hitopsr_qualtrics.txt".                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>block_name</b>           | Character string specifying the name of the block in Qualtrics. Defaults to "HiTOP-SR".                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>id_prefix</b>            | Character string specifying the prefix for the question IDs. Defaults to "HSR".                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>include_instructions</b> | Logical. If TRUE (default), includes the starting instructions as a descriptive text block.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>breaks</b>               | Integer or NULL. The number of items to display before inserting a page break. Set to 0 or NULL to disable pagination. Defaults to 15.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>module</b>               | An optional <code>hitop_module()</code> object restricting the file to the items of the chosen scales, keeping their original HiTOP-SR item numbers. This is deliberately unlike <code>generate_docx_hitopsr()</code> , whose module forms are numbered 1 to n: here an item number names a collected data column, so renumbering would rename variables in dictionaries already in the field. The zero-padding is the full instrument's for the same reason: item 4 is HSR_004 in a module file as in the complete one, never HSR_04. A module whose <code>items</code> , <code>nItems</code> , <code>camelCase</code> or <code>instrument</code> differ from a fresh <code>hitop_module()</code> build of its scales, or that cannot be rebuilt from its <code>instrument</code> and <code>scales</code> , is refused with an error of class <code>hitop_module_mismatch</code> , before any file is written. (default = NULL) |

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>descriptor</b> | An optional path to write a module descriptor to, beside the instrument file. The saved file records which scales the form covers and which instrument items they draw on, so <code>read_module()</code> hands the module straight back to <code>score_hitopsr()</code> at scoring time. A call passing no <code>module</code> writes a descriptor naming every scale, describing the full administration. Written before the instrument file, so an unwritable path is reported before any form is produced; if the instrument file then cannot be written, the descriptor is removed again, a file that was already at that path included. It must name a path of its own: an empty string, or the same path as <code>file</code> , is refused rather than leaving you with no descriptor and no error. Once both files are on disk the descriptor's path is announced on the console, after the message naming the import file. The descriptor's <code>columns</code> field holds the names that the generated file assigns to the items: the questions' <code>[[ID:]]</code> values, such as <code>HSR_066</code> (built from <code>id_prefix</code> ). A Qualtrics data export with the item variable names as column headers uses these names. Exported as numeric values rather than choice text, it can be scored by <code>score_hitopsr()</code> and <code>reliability_hitopsr()</code> from the module <code>read_module()</code> returns, with <code>items</code> omitted. Pass <code>items</code> for data whose columns carry other names, such as an export made with "Use internal IDs in header" or a question renamed after import. (default = <code>NULL</code> ) |
| <b>subset</b>     | Deprecated. The former name of <code>module</code> ; supplying it warns. Supplying both <code>module</code> and <code>subset</code> is an error. (default = <code>NULL</code> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

### Value

Invisibly returns the path to the created file (`file`).

### See Also

`write_module()` and `read_module()` for the descriptor file.

### Examples

```
# Write a HiTOP-SR Qualtrics import file to a temporary location
generate_qualtrics_hitopsr(file = tempfile(fileext = ".txt"))

# A two-scale module, original numbering preserved (unlike the Word form)
generate_qualtrics_hitopsr(
  file = tempfile(fileext = ".txt"),
  module = hitop_module("hitopsr", c("Agoraphobia", "Appetite Loss"))
)
```

**Description**

Generate a Qualtrics Import File for the PID-5 (Full)

**Usage**

```
generate_qualtrics_pid5(
  file = "pid5_qualtrics.txt",
  block_name = "PID-5",
  id_prefix = "PID5",
  include_instructions = TRUE,
  breaks = 15
)
```

**Arguments**

|                                   |                                                                      |
|-----------------------------------|----------------------------------------------------------------------|
| <code>file</code>                 | Character string specifying the output file path.                    |
| <code>block_name</code>           | Character string specifying the name of the block in Qualtrics.      |
| <code>id_prefix</code>            | Character string specifying the prefix for the question IDs.         |
| <code>include_instructions</code> | Logical. If TRUE, includes instructions block.                       |
| <code>breaks</code>               | Integer or NULL. The number of items to display before a page break. |

**Examples**

```
# Write a PID-5 (full) Qualtrics import file to a temporary location
generate_qualtrics_pid5(file = tempfile(fileext = ".txt"))
```

---

`generate_qualtrics_pid5bf`

*Generate a Qualtrics Import File for the PID-5-BF*

---

**Description**

Generate a Qualtrics Import File for the PID-5-BF

**Usage**

```
generate_qualtrics_pid5bf(
  file = "pid5bf_qualtrics.txt",
  block_name = "PID-5-BF",
  id_prefix = "PID5BF",
  include_instructions = TRUE,
  breaks = 15
)
```

**Arguments**

|                                   |                                                                      |
|-----------------------------------|----------------------------------------------------------------------|
| <code>file</code>                 | Character string specifying the output file path.                    |
| <code>block_name</code>           | Character string specifying the name of the block in Qualtrics.      |
| <code>id_prefix</code>            | Character string specifying the prefix for the question IDs.         |
| <code>include_instructions</code> | Logical. If TRUE, includes instructions block.                       |
| <code>breaks</code>               | Integer or NULL. The number of items to display before a page break. |

**Examples**

```
# Write a PID-5-BF Qualtrics import file to a temporary location
generate_qualtrics_pid5bf(file = tempfile(fileext = ".txt"))
```

---

```
generate_qualtrics_pid5bfchild
```

*Generate a Qualtrics Import File for the PID-5-BF Child Form  
(Ages 11 to 17)*

---

**Description**

The 25 items of the PID-5-BF child form for ages 11 to 17, which are the adult brief form's items in the same order with the same keying, and the child form's instructions and response options. The question IDs are the adult form's, PID5BF\_01 to PID5BF\_25, so the export scores with `score_pid5(version = "BF")` as an adult export does.

**Usage**

```
generate_qualtrics_pid5bfchild(
  file = "pid5bfchild_qualtrics.txt",
  block_name = "PID-5-BF Child",
  id_prefix = "PID5BF",
  include_instructions = TRUE,
  breaks = 15
)
```

**Arguments**

|                                   |                                                                      |
|-----------------------------------|----------------------------------------------------------------------|
| <code>file</code>                 | Character string specifying the output file path.                    |
| <code>block_name</code>           | Character string specifying the name of the block in Qualtrics.      |
| <code>id_prefix</code>            | Character string specifying the prefix for the question IDs.         |
| <code>include_instructions</code> | Logical. If TRUE, includes instructions block.                       |
| <code>breaks</code>               | Integer or NULL. The number of items to display before a page break. |

## References

Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2013). *The Personality Inventory for DSM-5—Brief Form (PID-5-BF)—Child Age 11–17*. American Psychiatric Association.

## Examples

```
# Write a PID-5-BF child form Qualtrics import file to a temporary location
generate_qualtrics_pid5bfchild(file = tempfile(fileext = ".txt"))
```

---

```
generate_qualtrics_pid5bfpm
```

*Generate a Qualtrics Import File for the PID5BF+M*

---

## Description

The 36 items of the modified brief form of the PID-5 (PID5BF+M), in BF+M order with their PID-5 text, and the instructions and response options of the other PID-5 forms. Score the export with `score_pid5(version = "BFPM")`.

## Usage

```
generate_qualtrics_pid5bfpm(
  file = "pid5bfpm_qualtrics.txt",
  block_name = "PID5BF+M",
  id_prefix = "PID5BFPM",
  include_instructions = TRUE,
  breaks = 15
)
```

## Arguments

|                                   |                                                                      |
|-----------------------------------|----------------------------------------------------------------------|
| <code>file</code>                 | Character string specifying the output file path.                    |
| <code>block_name</code>           | Character string specifying the name of the block in Qualtrics.      |
| <code>id_prefix</code>            | Character string specifying the prefix for the question IDs.         |
| <code>include_instructions</code> | Logical. If TRUE, includes instructions block.                       |
| <code>breaks</code>               | Integer or NULL. The number of items to display before a page break. |

## Examples

```
# Write a PID5BF+M Qualtrics import file to a temporary location
generate_qualtrics_pid5bfpm(file = tempfile(fileext = ".txt"))
```

---

`generate_qualtrics_pid5child`

*Generate a Qualtrics Import File for the PID-5 Child Form (Ages 11 to 17)*

---

## Description

The 220 items of the PID-5 child form for ages 11 to 17, which are the adult full form's items in the same order with the same keying, and the child form's instructions and response options. The question IDs are the adult form's, PID5\_001 to PID5\_220, so the export scores with `score_pid5(version = "FULL")` as an adult export does.

## Usage

```
generate_qualtrics_pid5child(  
  file = "pid5child_qualtrics.txt",  
  block_name = "PID-5 Child",  
  id_prefix = "PID5",  
  include_instructions = TRUE,  
  breaks = 15  
)
```

## Arguments

|                                   |                                                                                    |
|-----------------------------------|------------------------------------------------------------------------------------|
| <code>file</code>                 | Character string specifying the output file path.                                  |
| <code>block_name</code>           | Character string specifying the name of the block in Qualtrics.                    |
| <code>id_prefix</code>            | Character string specifying the prefix for the question IDs.                       |
| <code>include_instructions</code> | Logical. If <code>TRUE</code> , includes instructions block.                       |
| <code>breaks</code>               | Integer or <code>NULL</code> . The number of items to display before a page break. |

## References

Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2013). *The Personality Inventory for DSM-5 (PID-5)—Child Age 11–17*. American Psychiatric Association.

## Examples

```
# Write a PID-5 child form Qualtrics import file to a temporary location  
generate_qualtrics_pid5child(file = tempfile(fileext = ".txt"))
```

---

```
generate_qualtrics_pid5irf
```

*Generate a Qualtrics Import File for the PID-5 Informant Form*

---

## Description

The 218 items of the PID-5 Informant Form (PID-5-IRF), in the form's order with the informant wording (`pid_items$TextIRF`). The instructions block ends with the form's rating prompt and the stem "He or she..." that each item completes, and the response options are the form's 0 to 3 labels. With `breaks`, a descriptive block restating the prompt and stem opens every page after the first. The question IDs are `PID5IRF_001` to `PID5IRF_218`. Score the export with `score_pid5(version = "IRF")`.

## Usage

```
generate_qualtrics_pid5irf(
  file = "pid5irf_qualtrics.txt",
  block_name = "PID-5-IRF",
  id_prefix = "PID5IRF",
  include_instructions = TRUE,
  breaks = 15
)
```

## Arguments

|                                   |                                                                                    |
|-----------------------------------|------------------------------------------------------------------------------------|
| <code>file</code>                 | Character string specifying the output file path.                                  |
| <code>block_name</code>           | Character string specifying the name of the block in Qualtrics.                    |
| <code>id_prefix</code>            | Character string specifying the prefix for the question IDs.                       |
| <code>include_instructions</code> | Logical. If <code>TRUE</code> , includes instructions block.                       |
| <code>breaks</code>               | Integer or <code>NULL</code> . The number of items to display before a page break. |

## Examples

```
# Write a PID-5 Informant Form Qualtrics import file to a temporary location
generate_qualtrics_pid5irf(file = tempfile(fileext = ".txt"))
```

---

`generate_qualtrics_pid5sf`*Generate a Qualtrics Import File for the PID-5-SF*

---

## Description

Generate a Qualtrics Import File for the PID-5-SF

## Usage

```
generate_qualtrics_pid5sf(  
  file = "pid5sf_qualtrics.txt",  
  block_name = "PID-5-SF",  
  id_prefix = "PID5SF",  
  include_instructions = TRUE,  
  breaks = 15  
)
```

## Arguments

|                                   |                                                                                    |
|-----------------------------------|------------------------------------------------------------------------------------|
| <code>file</code>                 | Character string specifying the output file path.                                  |
| <code>block_name</code>           | Character string specifying the name of the block in Qualtrics.                    |
| <code>id_prefix</code>            | Character string specifying the prefix for the question IDs.                       |
| <code>include_instructions</code> | Logical. If <code>TRUE</code> , includes instructions block.                       |
| <code>breaks</code>               | Integer or <code>NULL</code> . The number of items to display before a page break. |

## Examples

```
# Write a PID-5-SF Qualtrics import file to a temporary location  
generate_qualtrics_pid5sf(file = tempfile(fileext = ".txt"))
```

---

`generate_redcap_hitopbr`*Generate a REDCap Instrument ZIP File for the HiTOP-BR*

---

## Description

Generates a REDCap-compatible data dictionary for the Hierarchical Taxonomy of Psychopathology - Brief Report (HiTOP-BR) and packages it into an Instrument ZIP file for easy uploading.

**Usage**

```
generate_redcap_hitopbr(
  file = "hitopbr_redcap.zip",
  form_name = "hitopbr_questionnaire",
  required = TRUE,
  breaks = 15
)
```

**Arguments**

|                  |                                                                                                                                                 |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>file</b>      | Character string. The destination path for the output ZIP file. Defaults to "hitopbr_redcap.zip".                                               |
| <b>form_name</b> | Character string. The internal name of the form in REDCap. Defaults to "hitopbr_questionnaire".                                                 |
| <b>required</b>  | Logical. Whether the items should be marked as required. Defaults to TRUE.                                                                      |
| <b>breaks</b>    | Integer or NULL. The number of items to display before inserting a page break. Set to 0 or NULL to disable pagination entirely. Defaults to 15. |

**Value**

Invisibly returns the path to the created file (**file**).

**See Also**

Step-by-step import instructions for Qualtrics and REDCap: <https://jmgirard.github.io/hitop/articles/import-instructions.html>

**Examples**

```
# Write a HiTOP-BR REDCap instrument ZIP to a temporary location
generate_redcap_hitopbr(file = tempfile(fileext = ".zip"))
```

---

```
generate_redcap_hitophsun
```

*Generate a REDCap Instrument ZIP File for the HiTOP-HSUM*

---

**Description**

Generates a REDCap-compatible data dictionary for the Hierarchical Taxonomy of Psychopathology - Substance Use Module (HiTOP-HSUM) and packages it into an Instrument ZIP file for easy uploading.

## Usage

```
generate_redcap_hitophsum(  
  file = "hitophsum_redcap.zip",  
  form_name = "hitophsum_questionnaire",  
  required = TRUE,  
  other_drug_rule = c("most_frequent", "per_drug")  
)
```

## Arguments

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>file</b>            | Character string. The destination path for the output ZIP file. Defaults to "hitophsum_redcap.zip".                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>form_name</b>       | Character string. The internal name of the form in REDCap. Defaults to "hitophsum_questionnaire".                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>required</b>        | Logical. Whether the items should be marked as required. Defaults to TRUE.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>other_drug_rule</b> | Character string. How symptom items are gated for the "other drug" substances (every substance except alcohol and nicotine). The default, "most_frequent", follows the source module's looping rule: symptom items are shown only for the most frequently used other drug that is used at least monthly (drugs whose frequency is "Prefer not to say" are ignored; when two or more drugs tie for the highest frequency, the symptom items are shown for each of them). "per_drug" loosens the gate so that every other drug used at least monthly gets its own symptom items, regardless of relative frequency. Alcohol and nicotine symptom gating is unaffected by this argument. |

## Value

Invisibly returns the path to the created file (**file**).

## See Also

Step-by-step import instructions for Qualtrics and REDCap: <https://jmgirard.github.io/hitop/articles/import-instructions.html>

## Examples

```
# Write a HiTOP-HSUM REDCap instrument ZIP to a temporary location  
generate_redcap_hitophsum(file = tempfile(fileext = ".zip"))
```

---

```
generate_redcap_hitopsr
```

*Generate a REDCap Instrument ZIP File for the HiTOP-SR*

---

## Description

Generates a REDCap-compatible data dictionary for the Hierarchical Taxonomy of Psychopathology - Self-Report (HiTOP-SR) and packages it into an Instrument ZIP file for easy uploading.

## Usage

```
generate_redcap_hitopsr(
  file = "hitopsr_redcap.zip",
  form_name = "hitopsr_questionnaire",
  required = TRUE,
  breaks = 15,
  module = NULL,
  descriptor = NULL,
  subset = NULL
)
```

## Arguments

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>file</code>       | Character string. The destination path for the output ZIP file. Defaults to "hitopsr_redcap.zip".                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <code>form_name</code>  | Character string. The internal name of the form in REDCap. Defaults to "hitopsr_questionnaire".                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>required</code>   | Logical. Whether the items should be marked as required. Defaults to TRUE.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <code>breaks</code>     | Integer or NULL. The number of items to display before inserting a page break. Set to 0 or NULL to disable pagination entirely. Defaults to 15.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>module</code>     | An optional <code>hitop_module()</code> object restricting the instrument to the items of the chosen scales, keeping their original HiTOP-SR item numbers. This is deliberately unlike <code>generate_docx_hitopsr()</code> , whose module forms are numbered 1 to <code>n</code> : here an item number names a collected data column, so renumbering would rename variables in dictionaries already in the field. The zero-padding is the full instrument's for the same reason: item 4 is <code>hsr_004</code> in a module dictionary as in the complete one, never <code>hsr_04</code> . A module whose <code>items</code> , <code>nItems</code> , <code>camelCase</code> or <code>instrument</code> differ from a fresh <code>hitop_module()</code> build of its scales, or that cannot be rebuilt from its <code>instrument</code> and <code>scales</code> , is refused with an error of class <code>hitop_module_mismatch</code> , before any file is written. (default = NULL) |
| <code>descriptor</code> | An optional path to write a module descriptor to, beside the instrument file. The saved file records which scales the form covers and which instrument items they draw on, so <code>read_module()</code> hands the module straight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

back to `score_hitopsr()` at scoring time. A call passing no `module` writes a descriptor naming every scale, describing the full administration. Written before the instrument file, so an unwritable path is reported before any form is produced; if the instrument file then cannot be written, the descriptor is removed again, a file that was already at that path included. It must name a path of its own: an empty string, or the same path as `file`, is refused rather than leaving you with no descriptor and no error. Once both files are on disk the descriptor's path is announced on the console, after the message naming the instrument ZIP. The descriptor's `columns` field holds the names that the generated file assigns to the items: the dictionary's field names, such as `hsr_066`. A REDCap data export with the item variable names as column headers uses these names, so `score_hitopsr()` and `reliability_hitopsr()` can score it from the module `read_module()` returns, with `items` omitted. Pass `items` for data whose columns carry other names, such as a field renamed after import. (default = NULL)

**subset**           Deprecated. The former name of `module`; supplying it warns. Supplying both `module` and `subset` is an error. (default = NULL)

## Value

Invisibly returns the path to the created file (`file`).

## See Also

Step-by-step import instructions for Qualtrics and REDCap: <https://jmgirard.github.io/hitop/articles/import-instructions.html>  
[write\\_module\(\)](#) and [read\\_module\(\)](#) for the descriptor file.

## Examples

```
# Write a HiTOP-SR REDCap instrument ZIP to a temporary location
generate_redcap_hitopsr(file = tempfile(fileext = ".zip"))

# A two-scale module, original numbering preserved (unlike the Word form)
generate_redcap_hitopsr(
  file = tempfile(fileext = ".zip"),
  module = hitop_module("hitopsr", c("Agoraphobia", "Appetite Loss"))
)
```

---

`generate_redcap_pid5`   *Generate a REDCap Instrument ZIP File for the PID-5 (Full)*

---

## Description

Generate a REDCap Instrument ZIP File for the PID-5 (Full)

## Usage

```
generate_redcap_pid5(  
    file = "pid5_redcap.zip",  
    form_name = "pid5_questionnaire",  
    required = TRUE,  
    breaks = 15  
)
```

## Arguments

|                        |                                                                      |
|------------------------|----------------------------------------------------------------------|
| <code>file</code>      | Character string. The destination path for the output ZIP file.      |
| <code>form_name</code> | Character string. The internal name of the form in REDCap.           |
| <code>required</code>  | Logical. Whether the items should be marked as required.             |
| <code>breaks</code>    | Integer or NULL. The number of items to display before a page break. |

## See Also

Step-by-step import instructions for Qualtrics and REDCap: <https://jmgirard.github.io/hitop/articles/import-instructions.html>

## Examples

```
# Write a PID-5 (full) REDCap instrument ZIP to a temporary location  
generate_redcap_pid5(file = tempfile(fileext = ".zip"))
```

---

`generate_redcap_pid5bf`

*Generate a REDCap Instrument ZIP File for the PID-5-BF*

---

## Description

Generate a REDCap Instrument ZIP File for the PID-5-BF

## Usage

```
generate_redcap_pid5bf(  
    file = "pid5bf_redcap.zip",  
    form_name = "pid5bf_questionnaire",  
    required = TRUE,  
    breaks = 15  
)
```

**Arguments**

|                        |                                                                      |
|------------------------|----------------------------------------------------------------------|
| <code>file</code>      | Character string. The destination path for the output ZIP file.      |
| <code>form_name</code> | Character string. The internal name of the form in REDCap.           |
| <code>required</code>  | Logical. Whether the items should be marked as required.             |
| <code>breaks</code>    | Integer or NULL. The number of items to display before a page break. |

**See Also**

Step-by-step import instructions for Qualtrics and REDCap: <https://jmgirard.github.io/hitop/articles/import-instructions.html>

**Examples**

```
# Write a PID-5-BF REDCap instrument ZIP to a temporary location
generate_redcap_pid5bf(file = tempfile(fileext = ".zip"))
```

---

```
generate_redcap_pid5bfchild
```

*Generate a REDCap Instrument ZIP File for the PID-5-BF Child Form (Ages 11 to 17)*

---

**Description**

The 25 items of the PID-5-BF child form for ages 11 to 17, which are the adult brief form's items in the same order with the same keying, and the child form's instructions and response options. The item fields are the adult form's, `pid5bf_01` to `pid5bf_25`, the names `rename_pid5_items()` and `label_pid5()` use with `version = "BF"`. Score them with `score_pid5(version = "BF")`. Because the field names are the adult form's, one REDCap project cannot hold this instrument and the one `generate_redcap_pid5bf()` writes.

**Usage**

```
generate_redcap_pid5bfchild(
  file = "pid5bfchild_redcap.zip",
  form_name = "pid5bfchild_questionnaire",
  required = TRUE,
  breaks = 15
)
```

**Arguments**

|                        |                                                                      |
|------------------------|----------------------------------------------------------------------|
| <code>file</code>      | Character string. The destination path for the output ZIP file.      |
| <code>form_name</code> | Character string. The internal name of the form in REDCap.           |
| <code>required</code>  | Logical. Whether the items should be marked as required.             |
| <code>breaks</code>    | Integer or NULL. The number of items to display before a page break. |

## References

Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2013). *The Personality Inventory for DSM-5—Brief Form (PID-5-BF)—Child Age 11–17*. American Psychiatric Association.

## See Also

Step-by-step import instructions for Qualtrics and REDCap: <https://jmgirard.github.io/hitop/articles/import-instructions.html>

## Examples

```
# Write a PID-5-BF child form REDCap instrument ZIP to a temporary location
generate_redcap_pid5bfchild(file = tempfile(fileext = ".zip"))
```

---

```
generate_redcap_pid5bfpm
```

*Generate a REDCap Instrument ZIP File for the PID5BF+M*

---

## Description

The 36 items of the modified brief form of the PID-5 (PID5BF+M), in BF+M order with their PID-5 text, and the instructions and response options of the other PID-5 forms. The item fields are pid5bfpm\_01 to pid5bfpm\_36, the names `rename_pid5_items()` and `label_pid5()` use with `version = "BFPM"`. Score them with `score_pid5(version = "BFPM")`.

## Usage

```
generate_redcap_pid5bfpm(
  file = "pid5bfpm_redcap.zip",
  form_name = "pid5bfpm_questionnaire",
  required = TRUE,
  breaks = 15
)
```

## Arguments

|                        |                                                                      |
|------------------------|----------------------------------------------------------------------|
| <code>file</code>      | Character string. The destination path for the output ZIP file.      |
| <code>form_name</code> | Character string. The internal name of the form in REDCap.           |
| <code>required</code>  | Logical. Whether the items should be marked as required.             |
| <code>breaks</code>    | Integer or NULL. The number of items to display before a page break. |

## See Also

Step-by-step import instructions for Qualtrics and REDCap: <https://jmgirard.github.io/hitop/articles/import-instructions.html>

## Examples

```
# Write a PID5BF+M REDCap instrument ZIP to a temporary location
generate_redcap_pid5bfpm(file = tempfile(fileext = ".zip"))
```

---

```
generate_redcap_pid5child
```

*Generate a REDCap Instrument ZIP File for the PID-5 Child Form (Ages 11 to 17)*

---

## Description

The 220 items of the PID-5 child form for ages 11 to 17, which are the adult full form's items in the same order with the same keying, and the child form's instructions and response options. The item fields are the adult form's, pid5\_001 to pid5\_220, the names `rename_pid5_items()` and `label_pid5()` use with `version = "FULL"`. Score them with `score_pid5(version = "FULL")`. Because the field names are the adult form's, one REDCap project cannot hold this instrument and the one `generate_redcap_pid5()` writes.

## Usage

```
generate_redcap_pid5child(
  file = "pid5child_redcap.zip",
  form_name = "pid5child_questionnaire",
  required = TRUE,
  breaks = 15
)
```

## Arguments

|                        |                                                                      |
|------------------------|----------------------------------------------------------------------|
| <code>file</code>      | Character string. The destination path for the output ZIP file.      |
| <code>form_name</code> | Character string. The internal name of the form in REDCap.           |
| <code>required</code>  | Logical. Whether the items should be marked as required.             |
| <code>breaks</code>    | Integer or NULL. The number of items to display before a page break. |

## References

Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2013). *The Personality Inventory for DSM-5 (PID-5)—Child Age 11–17*. American Psychiatric Association.

## See Also

Step-by-step import instructions for Qualtrics and REDCap: <https://jmgirard.github.io/hitop/articles/import-instructions.html>

## Examples

```
# Write a PID-5 child form REDCap instrument ZIP to a temporary location
generate_redcap_pid5child(file = tempfile(fileext = ".zip"))
```

---

```
generate_redcap_pid5irf
```

*Generate a REDCap Instrument ZIP File for the PID-5 Informant Form*

---

## Description

The 218 items of the PID-5 Informant Form (PID-5-IRF), in the form's order with the informant wording (`pid_items$TextIRF`). The instructions field ends with the form's rating prompt and the stem "He or she..." that each item completes, and the response options are the form's 0 to 3 labels. With `breaks`, the section header that starts each later page restates the prompt and stem. The item fields are `pid5irf_001` to `pid5irf_218`, the names `rename_pid5_items()` and `label_pid5()` use with `version = "IRF"`. Score them with `score_pid5(version = "IRF")`.

## Usage

```
generate_redcap_pid5irf(
  file = "pid5irf_redcap.zip",
  form_name = "pid5irf_questionnaire",
  required = TRUE,
  breaks = 15
)
```

## Arguments

|                        |                                                                      |
|------------------------|----------------------------------------------------------------------|
| <code>file</code>      | Character string. The destination path for the output ZIP file.      |
| <code>form_name</code> | Character string. The internal name of the form in REDCap.           |
| <code>required</code>  | Logical. Whether the items should be marked as required.             |
| <code>breaks</code>    | Integer or NULL. The number of items to display before a page break. |

## See Also

Step-by-step import instructions for Qualtrics and REDCap: <https://jmgirard.github.io/hitop/articles/import-instructions.html>

## Examples

```
# Write a PID-5 Informant Form REDCap instrument ZIP to a temporary location
generate_redcap_pid5irf(file = tempfile(fileext = ".zip"))
```

---

generate\_redcap\_pid5sf

*Generate a REDCap Instrument ZIP File for the PID-5-SF*


---

## Description

Generate a REDCap Instrument ZIP File for the PID-5-SF

## Usage

```
generate_redcap_pid5sf(
  file = "pid5sf_redcap.zip",
  form_name = "pid5sf_questionnaire",
  required = TRUE,
  breaks = 15
)
```

## Arguments

|                        |                                                                      |
|------------------------|----------------------------------------------------------------------|
| <code>file</code>      | Character string. The destination path for the output ZIP file.      |
| <code>form_name</code> | Character string. The internal name of the form in REDCap.           |
| <code>required</code>  | Logical. Whether the items should be marked as required.             |
| <code>breaks</code>    | Integer or NULL. The number of items to display before a page break. |

## See Also

Step-by-step import instructions for Qualtrics and REDCap: <https://jmgirard.github.io/hitop/articles/import-instructions.html>

## Examples

```
# Write a PID-5-SF REDCap instrument ZIP to a temporary location
generate_redcap_pid5sf(file = tempfile(fileext = ".zip"))
```

---

hitop\_artifacts

*Distribution Artifact Manifest*


---

## Description

Version manifest for the prebuilt instrument artifacts. They ship in the package at `inst/extdata/` and are distributed from the package website's download pages, which serve their own byte-identical copy. Each build of an artifact adds a row (the full history is kept), so the latest row per `file` describes the currently distributed file. Artifact revisions are identified by build date; the instrument version (e.g., "1.0") is the version of the instrument itself and changes only when its publisher revises it. To check which build you have, compare your downloaded file's MD5 checksum (e.g., `tools::md5sum()`) against the `md5` column.

## Usage

```
hitop_artifacts
```

## Format

A [tibble](#) with one row per artifact build and 7 columns:

**file** Artifact file name, the same in `inst/extdata/` and on the website's download pages

**instrument** Instrument the artifact administers

**format** Artifact format: "docx\_us", "docx\_a4", "qualtrics", "redcap", or "json"

**instrument\_\_version** Version of the instrument itself

**build\_\_date** Date this build of the artifact was generated

**md5** MD5 checksum of the built file

**changes** What changed in this build

## Examples

```
hitop_artifacts
```

---

```
hitop_module
```

*Describe a Module of an Instrument's Scales*

---

## Description

Builds a validated description of a **module**: a chosen set of an instrument's scales, administered and scored on its own. Supplying the result as the **module** argument of a generator produces an instrument containing only the items belonging to those scales. The **items** field below always holds the **original** instrument numbers, whatever a generator prints: the online exports keep those numbers, while [generate\\_docx\\_hitopsr\(\)](#) numbers a Word form 1 to `n` down the page unless asked not to. Supplying the module again to [score\\_hitopsr\(\)](#) or [reliability\\_hitopsr\(\)](#) scores the collected columns either way.

A module naming every scale holds exactly the instrument's own items – all 405 of them for the HiTOP-SR – but it is still a module, and [generate\\_docx\\_hitopsr\(\)](#) frames it as one: the form is headed "HiTOP-SR Module (v1.0)", and with `randomize = TRUE` it also carries a 405-row crosswalk. Supply no **module** at all to get the full instrument's framing. The Qualtrics and REDCap exports are the same either way.

Use [available\\_scales\(\)](#) to see which scales an instrument offers.

## Usage

```
hitop_module(instrument = "hitopsr", scales, call = rlang::current_env())
```

## Arguments

|                         |                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>instrument</code> | A string naming the instrument to build a module from. Currently only "hitopsr" is supported. (default = "hitopsr")                                                                                                                                                                                                                                           |
| <code>scales</code>     | A character vector of scale names to keep. Names may be given either as they are printed on the instrument ("Antisocial Behavior") or as the camelCase stems used in scored output ("antisocialBehavior"), in any mixture and ignoring case. Duplicates are dropped.                                                                                          |
| <code>call</code>       | Internal. The environment blamed by any error this raises. A default argument is evaluated in this function's own frame, so a direct call blames <code>hitop_module()</code> ; the deprecated <code>hitop_subset()</code> passes its own frame instead, so a bad argument there names the function the user actually wrote. (default = this function's frame) |

## Value

An object of class `hitop_module`: a list with the resolved `instrument`, the canonical display `scales` and their camelCase stems, the integer `items` kept (original instrument numbering, ascending), the parallel `reverse` keying flags, and `nItems`.

## See Also

`available_scales()` for the scale names this accepts; `generate_docx_hitopsr()`, `generate_qualtrics_hitopsr()` and `generate_redcap_hitopsr()`, each of which takes a module argument; `score_hitopsr()` and `reliability_hitopsr()` for scoring the result.

## Examples

```
# Describe a two-scale module of the HiTOP-SR
m <- hitop_module("hitopsr", scales = c("Agoraphobia", "Appetite Loss"))
m

# `m$items` holds the original HiTOP-SR numbers, not 1..8 -- this is the
# descriptor, not what any particular generator prints
m$items

# Select the collected item columns by NAME, never by position: `m$items`
# holds item numbers, which are column positions only in a frame that is
# exactly the 405 items in order. `ku_hitopsr` leads with `participant` and
# `biosex`, so `ku_hitopsr[m$items]` would quietly return the wrong columns.
collected <- ku_hitopsr[sprintf("hsr_%03d", m$items)]
ncol(collected) == m$nItems
```

## Description

Descriptive statistics for each HiTOP-BR scale, as printed in the "Superspectra and Spectra Scales" block of Table 1 of the HiTOP-SR introduction paper. The reference group is that paper's **Development Sample 2**, N = 780 Prolific Academic participants stratified by sex and age to approximate a community-representative United States population. It is a development sample, not a community norm: no weighting to a census frame was applied and the paper publishes no raw-score to T-score table. Read a score against these statistics as a comparison with the sample the instrument was developed on.

## Usage

```
hitopbr_devstats
```

## Format

A [tibble](#) with 8 rows and 8 columns:

**Scale** The name of the scale. Matches [hitopbr\\_scales\\$Scale](#).

**camelCase** That name converted to camel case – the stem [score\\_hitopbr\(\)](#) appends to its **prefix** when it names a score column

**type** "scale" throughout. Table 1 prints all eight rows under one heading and labels none of them a superspectrum or a spectrum, so no such distinction is recorded here.

**nItems** The number of items in the scale (integer)

**reliability** The internal-consistency reliability coefficient printed for that scale

**reliabilityType** What that coefficient is. "alpha" throughout: Cronbach's alpha is what the paper prints. Supplied by this package, not read from the table.

**mean** The scale score's mean in the development sample

**sd** The scale score's standard deviation in the development sample

## Details

Every statistic is a printed cell of that table, transcribed and verified against it; nothing here is computed from data by this package. The **mean** and **sd** are on the HiTOP-BR's own four-option 1-4 response coding, and scale scores are item means, so a score computed on another coding is not comparable to them. [interval\\_hitopbr\(\)](#) reads this table.

The HiTOP-BR scales were developed independently of the HiTOP-SR primary scales, drawing on the same item pool, and are not a short form of them (Table 1's Note), so these statistics are not comparable with [hitopbr\\_devstats](#).

## Item counts

Table 1's printed **# Items** agrees with the item count [hitopbr\\_scales](#) derives from [hitopbr\\_items](#) for all eight scales. It did not always: item 36 ("I had a hard time asserting myself to others.") was keyed to **Detachment** in this package until it was corrected to **Internalizing**, the scale the instrument's development workbook gives it in both its item-to-scale sheet and its scoring syntax, and the scale the paper's own factor table loads it on. **Detachment** therefore has 5 items and **Internalizing** 8, which is what Table 1 prints for each.

**Examples**

```
hitopbr_devstats
```

---

|               |                           |
|---------------|---------------------------|
| hitopbr_items | <i>HiTOP-BR Item Data</i> |
|---------------|---------------------------|

---

**Description**

Information about items in the HiTOP-BR.

**Usage**

```
hitopbr_items
```

**Format**

A [tibble](#) with 45 rows and 8 columns:

**HBR** Item number on the HITOP-BR (integer)

**Reverse** Whether the item needs to be reverse scored

**Scale** Name of the scale

**Externalizing** Whether the item is part of the Externalizing scale

**Pfactor** Whether the item is part of the p-Factor scale

**Text** Item text

**HSR** Item number on the HiTOP-SR (integer)

**Original** Item ID in the original, development item pool

**Examples**

```
hitopbr_items
```

---

|                |                            |
|----------------|----------------------------|
| hitopbr_scales | <i>HiTOP-BR Scale Data</i> |
|----------------|----------------------------|

---

**Description**

Information about scales in the HiTOP-BR.

**Usage**

```
hitopbr_scales
```

**Format**

A [tibble](#) with 8 rows and 5 columns:

**Scale** Name of the scale

**itemdata** A list column containing one item-data tibble per scale; its two item-number columns are integers

**nItems** The number of items in the scale (integer)

**itemNumbers** A list column containing one integer item-number vector per scale

**camelCase** The name of the scale converted to camel case

**Examples**

```
hitopbr_scales
```

---

|                   |                               |
|-------------------|-------------------------------|
| hitophsum_choices | <i>HiTOP-HSUM Choice Sets</i> |
|-------------------|-------------------------------|

---

**Description**

Response choice sets referenced by `hitophsum_items$Choice_Set`. Used by the HiTOP-HSUM instrument generators (e.g. `generate_redcap_hitophsum()`).

**Usage**

```
hitophsum_choices
```

**Format**

A [tibble](#) with 185 rows and 3 columns:

**Choice\_Set** Name of the choice set

**Value** Coded response value

**Label** Response label displayed to respondents

**Examples**

```
hitophsum_choices
```

---

|                 |                             |
|-----------------|-----------------------------|
| hitophsum_items | <i>HiTOP-HSUM Item Data</i> |
|-----------------|-----------------------------|

---

### Description

Information about the items in the HiTOP-HSUM (Harmful Substance Use Measure). Used by the HiTOP-HSUM instrument generators (e.g. `generate_redcap_hitophsum()`).

### Usage

```
hitophsum_items
```

### Format

A [tibble](#) with 650 rows and 9 columns:

**Item** Item number (integer)

**Variable** Variable name for the item

**Substance** Name of the substance the item refers to

**Tier** The assessment tier the item belongs to (e.g. Screening)

**Field\_Type** The response field type (e.g. radio)

**Gate\_Variable** Name of the gating variable, or NA if ungated

**Gate\_Value** Value of the gating variable required to show the item, or NA

**Choice\_Set** Name of the response choice set (see `hitophsum_choices`)

**Text** Item text

### Examples

```
hitophsum_items
```

---

|                     |                             |
|---------------------|-----------------------------|
| hitopsr_definitions | <i>HiTOP-SR Definitions</i> |
|---------------------|-----------------------------|

---

### Description

Brief clinician and client-facing definitions of each scale and subscale in the HiTOP-SR

### Usage

```
hitopsr_definitions
```

**Format**

A [tibble](#) with 93 rows and 5 columns:

**Scale** The name of the scale

**Subscale** The name of the subscale (or NA if not a subscale)

**Brief** The brief clinician-facing definition (10-20 words)

**Client** The client-facing definition with examples (30-40 words)

**camelCase** The camel case name of whatever the row defines: the subscale where there is one, otherwise the scale. Matches [hitopsr\\_scales\\$camelCase](#) on the scale rows and [hitopsr\\_subscales\\$camelCase](#) on the subscale rows.

**Examples**

```
hitopsr_definitions
```

---

|                  |                                               |
|------------------|-----------------------------------------------|
| hitopsr_devstats | <i>HiTOP-SR Development-Sample Statistics</i> |
|------------------|-----------------------------------------------|

---

**Description**

Descriptive statistics for each HiTOP-SR primary scale and subscale, as printed in Table 1 of the HiTOP-SR introduction paper. The reference group is that paper's **Development Sample 2**, N = 780 Prolific Academic participants stratified by sex and age to approximate a community-representative United States population. It is a development sample, not a community norm: no weighting to a census frame was applied and the paper publishes no raw-score to T-score table. Read a score against these statistics as a comparison with the sample the instrument was developed on.

**Usage**

```
hitopsr_devstats
```

**Format**

A [tibble](#) with 93 rows and 8 columns:

**Scale** The name of the scale or subscale. Matches [hitopsr\\_scales\\$Scale](#) on the scale rows and [hitopsr\\_subscales\\$Subscale](#) on the subscale rows.

**camelCase** That name converted to camel case – the stem [score\\_hitopsr\(\)](#) appends to its **prefix** when it names a score column

**type** Either "scale" (76 rows) or "subscale" (17 rows)

**nItems** The number of items in the scale or subscale (integer)

**reliability** The internal-consistency reliability coefficient printed for that scale

**reliabilityType** What that coefficient is. "alpha" throughout: Cronbach's alpha is what the paper prints. Supplied by this package, not read from the table.

**mean** The scale score's mean in the development sample

**sd** The scale score's standard deviation in the development sample

## Details

Every statistic is a printed cell of that table, transcribed and verified against it; nothing here is computed from data by this package. The `mean` and `sd` are on the HiTOP-SR's own four-option 1-4 response coding, and scale scores are item means, so a score computed on another coding is not comparable to them. `interval_hitopsr()` reads this table.

## Examples

```
hitopsr_devstats
```

---

|               |                           |
|---------------|---------------------------|
| hitopsr_items | <i>HiTOP-SR Item Data</i> |
|---------------|---------------------------|

---

## Description

Information about items in the HiTOP-SR.

## Usage

```
hitopsr_items
```

## Format

A [tibble](#) with 405 rows and 6 columns:

**HSR** Item number on the full HiTOP-SR (integer)

**Reverse** Whether the item needs to be reverse scored

**Scale** Name of the scale (level 2)

**Subscale** Name of the subscale (level 1)

**Text** Item text

**Original** Item ID in the original, development item pool

## Details

Two scales carry other names in the literature and in earlier versions of this package. The scale this table calls **Non-suicidal Self-injury** is widely written by its abbreviation, **NSSI**, and was named that way here before version 0.2.0; the scale it calls **Appearance Focus** was named **Body Focus** here before version 0.2.0. Both names are the ones printed in the HiTOP-SR introduction paper's Table 1. Scoring functions derive a column name from each scale name, so those scales' scored columns are `hsr_nonSuicidalSelfInjury` and `hsr_appearanceFocus`.

## Examples

```
hitopsr_items
```

---

|                |                            |
|----------------|----------------------------|
| hitopsr_scales | <i>HiTOP-SR Scale Data</i> |
|----------------|----------------------------|

---

**Description**

Information about scales in the HiTOP-SR.

**Usage**

```
hitopsr_scales
```

**Format**

A [tibble](#) with 76 rows and 5 columns:

**Scale** Name of the scale

**itemdata** A list column containing one item-data tibble per scale; its item-number column is an integer

**nItems** The number of items in the scale (integer)

**itemNumbers** A list column containing one integer item-number vector per scale

**camelCase** The name of the scale converted to camel case

**Examples**

```
hitopsr_scales
```

---

|                   |                               |
|-------------------|-------------------------------|
| hitopsr_subscales | <i>HiTOP-SR Subscale Data</i> |
|-------------------|-------------------------------|

---

**Description**

Information about subscales in the HiTOP-SR.

**Usage**

```
hitopsr_subscales
```

**Format**

A [tibble](#) with 17 rows and 6 columns:

**Subscale** Name of the subscale

**Scale** Name of the scale that the subscale is part of

**itemdata** A list column containing one item-data tibble per subscale; its item-number column is an integer

**nItems** The number of items in the subscale (integer)

**itemNumbers** A list column containing one integer item-number vector per subscale

**camelCase** The name of the subscale converted to camel case

## Examples

```
hitopsr_subscales
```

---

|                  |                                                       |
|------------------|-------------------------------------------------------|
| interval_hitopbr | <i>Confidence intervals for HiTOP-BR scale scores</i> |
|------------------|-------------------------------------------------------|

---

## Description

Converts scored HiTOP-BR columns into a regression-based true-score estimate and a confidence interval around it, using the development-sample mean, standard deviation and reliability shipped as [hitopbr\\_devstats](#). This function converts already-scored columns and never rescores: the 8 scale columns [score\\_hitopbr\(\)](#) produces are the ones it is built for, and [hitopbr\\_devstats](#) carries a row for each of them.

## Usage

```
interval_hitopbr(
  data,
  scores,
  srange = c(1, 4),
  prefix = "hbr_",
  level = 0.95,
  append = TRUE
)
```

## Arguments

|               |                                                                                                                                                                                                                                                                                                                                                                                |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>data</b>   | A data frame containing scored HiTOP-BR columns.                                                                                                                                                                                                                                                                                                                               |
| <b>scores</b> | The score columns to convert, as column names or column positions (mirroring the <b>items</b> argument of <a href="#">score_hitopbr()</a> ). Each column must be numeric (or logical) and each may be named only once.                                                                                                                                                         |
| <b>srange</b> | The response range the items were scored on, as <code>c(low, high)</code> . The reference statistics are printed on the official four-option <code>c(1, 4)</code> coding; any other coding is a different metric. See Details.                                                                                                                                                 |
| <b>prefix</b> | The prefix <a href="#">score_hitopbr()</a> applied to its output columns, used to match a score column back to its scale. Matched literally, not as a regular expression: a column name that does not begin with exactly this string keeps its whole name and is reported as uncovered. Pass "" when the columns are named for the scales themselves, with no prefix to strip. |
| <b>level</b>  | The confidence level, as a proportion between 0 and 1. Defaults to 0.95.                                                                                                                                                                                                                                                                                                       |
| <b>append</b> | Whether to return the input <b>data</b> with the interval columns appended ( <code>TRUE</code> , the default) or the interval columns alone.                                                                                                                                                                                                                                   |

## Details

**What is computed.** For a score  $x$  on a scale whose reference group has mean  $M$ , standard deviation  $SD$  and reliability  $r$ , the estimate and bounds are Schmukle’s (2026) Equations (10) to (12), p. 821:

$$est = M + \sqrt{r}(x - M)$$

$$SEM = SD\sqrt{1-r}$$

$$lo, hi = est \pm z SEM$$

where  $z$  is the two-sided standard normal quantile for `level` (1.959964 at the default 0.95). The estimate is the observed score pulled toward the reference mean, because with imperfect measurement a true score tends to lie nearer the mean than the observed score does; the  $\sqrt{r}$  factor is Schmukle’s scale correction, which returns the estimate to the metric the observed score is on so the two can be read against each other.

**The reference group is a development sample.** `hitopbr_devstats` carries the statistics printed for the HiTOP-SR introduction paper’s Development Sample 2:  $N = 780$  Prolific Academic participants stratified by sex and age to approximate a community-representative United States population. That is a development sample and not a community norm – no census weighting was applied and no raw-score to T-score table is published – so an interval from this function says where a score sits relative to the sample the instrument was developed on, and not what percentile it occupies in any population.

**Two limitations worth stating.** Equation (12)’s interval is symmetric about the estimate and the same width for every respondent on a given scale, which is what classical test theory implies and what the source computes. On a floor-heavy scale that width can put a bound outside the response range, and the bounds are **not** clamped, because clamping would report something other than the equation this function cites. Every HiTOP-BR scale is floor-heavy enough for this to bite: on all eight, a score of 1 – the response floor – returns a lower bound below 1. And the coverage Schmukle demonstrates is *marginal*: over a population of respondents drawn from the reference distribution, about `level` of the intervals contain the true score. It is established under a linear measurement model with approximately normal item responses, so it is not a guarantee for any one respondent, nor a demonstration on scales as skewed as these.

**The scales overlap.** Externalizing and p-Factor are drawn from the same items as the six spectrum scales rather than added to them, so a respondent contributes the same answers to several of these intervals. Read them as eight views of one response set, not as eight independent measurements.

**Reporting and silence.** Both things this function reports are warning conditions, so a single `suppressWarnings()` call silences it and either report can still be caught and tested for on its own.

- A score column with no `hitopbr_devstats` row returns NA in all three columns, with a warning of class `hitop_interval_uncovered` naming the columns. A column is matched by stripping `prefix` and looking the rest up in `hitopbr_devstats$camelCase`, so this fires for a mistyped prefix as well as for a column that is not a HiTOP-BR scale score.

- A call whose `srange` is not the `c(1, 4)` coding the reference mean and standard deviation are printed on returns NA in every interval column, with a warning of class `hitop_interval_coding`. Nothing is reconciled: a shift or a stretch of the response range moves a scale score, and no mapping from another coding onto these statistics is published.

**Partly scored scales are not detected.** A score computed from fewer than a scale's full items – from data with items missing under `missing = "available"` – is not on the same footing as the reference statistics, which come from complete scales. This function receives scores and not items, so it cannot tell such a column from a fully scored one and does not try: it converts what it is given. Treat an interval on a partly scored scale as not comparable to the reference group.

**Errors.** `scores` is checked before anything is converted. Naming the same score column twice is an error rather than a duplicated set of output columns, and a factor or character score column is an error rather than a silent coercion – a factor's integer codes are not its scores, and a character column would coerce to NA. Logical columns are accepted.

A `scores` argument that names no columns is an error, reported ahead of the other selection arguments, so the cause named is the empty selection and not a consequence of it. The condition is classed `hitop_empty_selection`, so a caller can catch this refusal by name.

With `append = TRUE`, a column of `data` whose name this call would also produce is an error rather than an overwrite or a duplicated column: the message names every colliding column. Re-run with `append = FALSE` to return only the new columns, or drop the colliding columns from `data` first. The condition is classed `hitop_append_collision`, so a caller can catch this refusal by name.

## Value

A [tibble](#) with an `_est`, `_lo` and `_hi` column for every requested score column, alongside all original `data` columns if requested. An NA score returns NA in all three.

## References

Schmukle, S. C. (2026). Unbiased confidence intervals for psychological testing: The regression-based true score approach with scale correction. *Assessment*, 33(5), 817-825. Equations (10) to (12), p. 821, are what this function computes; Box 1, p. 823, works two examples.

## Examples

```
# Score the HiTOP-BR, then put an interval around two scales
scored <- score_hitopbr(sim_hitopbr, items = 1:45)
interval_hitopbr(
  scored,
  scores = c("hbr_detachment", "hbr_pFactor"),
  append = FALSE
)

# A 90% interval is narrower
interval_hitopbr(
  scored,
```

```

    scores = "hbr_detachment",
    level = 0.90,
    append = FALSE
  )

```

---

**interval\_hitopsr**
*Confidence intervals for HiTOP-SR scale scores*


---

## Description

Converts scored HiTOP-SR columns into a regression-based true-score estimate and a confidence interval around it, using the development-sample mean, standard deviation and reliability shipped as [hitopsr\\_devstats](#). This function converts already-scored columns and never rescores. It is built for the 76 scale columns [score\\_hitopsr\(\)](#) produces and for the 17 subscale columns that [score\\_hitopsr\(include\\_subscales = TRUE\)](#) produces. Each subscale column converts on its own subscale row of [hitopsr\\_devstats](#).

## Usage

```

interval_hitopsr(
  data,
  scores,
  srange = c(1, 4),
  prefix = "hsr_",
  level = 0.95,
  append = TRUE
)

```

## Arguments

|               |                                                                                                                                                                                                                                                                                                                                                                                |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>data</b>   | A data frame containing scored HiTOP-SR columns.                                                                                                                                                                                                                                                                                                                               |
| <b>scores</b> | The score columns to convert, as column names or column positions (mirroring the <b>items</b> argument of <a href="#">score_hitopsr()</a> ). Each column must be numeric (or logical) and each may be named only once.                                                                                                                                                         |
| <b>srange</b> | The response range the items were scored on, as <code>c(low, high)</code> . The reference statistics are printed on the official four-option <code>c(1, 4)</code> coding; any other coding is a different metric. See Details.                                                                                                                                                 |
| <b>prefix</b> | The prefix <a href="#">score_hitopsr()</a> applied to its output columns, used to match a score column back to its scale. Matched literally, not as a regular expression: a column name that does not begin with exactly this string keeps its whole name and is reported as uncovered. Pass "" when the columns are named for the scales themselves, with no prefix to strip. |
| <b>level</b>  | The confidence level, as a proportion between 0 and 1. Defaults to 0.95.                                                                                                                                                                                                                                                                                                       |
| <b>append</b> | Whether to return the input <b>data</b> with the interval columns appended ( <b>TRUE</b> , the default) or the interval columns alone.                                                                                                                                                                                                                                         |

## Details

**What is computed.** For a score  $x$  on a scale whose reference group has mean  $M$ , standard deviation  $SD$  and reliability  $r$ , the estimate and bounds are Schmukle’s (2026) Equations (10) to (12), p. 821:

$$est = M + \sqrt{r}(x - M)$$

$$SEM = SD\sqrt{1 - r}$$

$$lo, hi = est \pm z SEM$$

where  $z$  is the two-sided standard normal quantile for `level` (1.959964 at the default 0.95). The estimate is the observed score pulled toward the reference mean, because with imperfect measurement a true score tends to lie nearer the mean than the observed score does; the  $\sqrt{r}$  factor is Schmukle’s scale correction, which returns the estimate to the metric the observed score is on so the two can be read against each other.

**The reference group is a development sample.** `hitopsr_devstats` carries the statistics printed for the HiTOP-SR introduction paper’s Development Sample 2:  $N = 780$  Prolific Academic participants stratified by sex and age to approximate a community-representative United States population. That is a development sample and not a community norm – no census weighting was applied and no raw-score to T-score table is published – so an interval from this function says where a score sits relative to the sample the instrument was developed on, and not what percentile it occupies in any population.

**Two limitations worth stating.** Equation (12)’s interval is symmetric about the estimate and the same width for every respondent on a given scale, which is what classical test theory implies and what the source computes. On a strongly skewed scale that width can put a bound outside the response range – the floor of `hsr_conversionSymptoms` is one such case – and the bounds are **not** clamped, because clamping would report something other than the equation this function cites. And the coverage Schmukle demonstrates is *marginal*: over a population of respondents drawn from the reference distribution, about `level` of the intervals contain the true score. It is established under a linear measurement model with approximately normal item responses, so it is not a guarantee for any one respondent, nor a demonstration on scales as skewed as the rarer HiTOP-SR ones.

**Reporting and silence.** Both things this function reports are warning conditions, so a single `suppressWarnings()` call silences it and either report can still be caught and tested for on its own.

- A score column with no `hitopsr_devstats` row returns NA in all three columns, with a warning of class `hitop_interval_uncovered` naming the columns. A column is matched by stripping `prefix` and looking the rest up in `hitopsr_devstats$camelCase`, so this fires for a mistyped prefix as well as for a scale the table does not carry.
- A call whose `srange` is not the `c(1, 4)` coding the reference mean and standard deviation are printed on returns NA in every interval column, with a warning of class `hitop_interval_coding`. Nothing is reconciled: a shift or a stretch of the response range moves a scale score, and no mapping from another coding onto these statistics is published.

**Partly scored scales are not detected.** A score computed from fewer than a scale's full items – from a module form, or from data with items missing under `missing = "available"` – is not on the same footing as the reference statistics, which come from complete scales. This function receives scores and not items, so it cannot tell such a column from a fully scored one and does not try: it converts what it is given. Treat an interval on a partly scored scale as not comparable to the reference group.

**Errors.** `scores` is checked before anything is converted. Naming the same score column twice is an error rather than a duplicated set of output columns, and a factor or character score column is an error rather than a silent coercion – a factor's integer codes are not its scores, and a character column would coerce to NA. Logical columns are accepted.

A `scores` argument that names no columns is an error, reported ahead of the other selection arguments, so the cause named is the empty selection and not a consequence of it. The condition is classed `hitop_empty_selection`, so a caller can catch this refusal by name.

With `append = TRUE`, a column of `data` whose name this call would also produce is an error rather than an overwrite or a duplicated column: the message names every colliding column. Re-run with `append = FALSE` to return only the new columns, or drop the colliding columns from `data` first. The condition is classed `hitop_append_collision`, so a caller can catch this refusal by name.

## Value

A [tibble](#) with an `_est`, `_lo` and `_hi` column for every requested score column, alongside all original `data` columns if requested. An NA score returns NA in all three.

## References

Schmukle, S. C. (2026). Unbiased confidence intervals for psychological testing: The regression-based true score approach with scale correction. *Assessment*, 33(5), 817-825. Equations (10) to (12), p. 821, are what this function computes; Box 1, p. 823, works two examples.

## Examples

```
# Score the HiTOP-SR, then put an interval around two scales
scored <- score_hitopsr(sim_hitopsr, items = 1:405)
interval_hitopsr(
  scored,
  scores = c("hsr_agoraphobia", "hsr_wellBeing"),
  append = FALSE
)

# A 90% interval is narrower
interval_hitopsr(
  scored,
  scores = "hsr_agoraphobia",
  level = 0.90,
  append = FALSE
)
```

---

ku\_hitopbr

*Real HiTOP-BR Data*


---

**Description**

Real responses to items on the HiTOP-BR from University of Kansas students.

**Usage**

```
ku_hitopbr
```

**Format**

A [tibble](#) with 411 rows and 47 columns.

**participant** An anonymized id for each participant

**biosex** A factor indicating each participant's biological sex

**hbr\_\_01 to hbr\_\_45** Responses on each item

**Examples**

```
ku_hitopbr
```

---

ku\_hitopsr

*Real HiTOP-SR Data*


---

**Description**

Real responses to items on the HiTOP-SR from University of Kansas students.

**Usage**

```
ku_hitopsr
```

**Format**

A [tibble](#) with 411 rows and 407 columns.

**participant** An anonymized id for each participant

**biosex** A factor indicating each participant's biological sex

**hsr\_\_001 to hsr\_\_405** Responses on each item

**Examples**

```
ku_hitopsr
```

ku\_pid5sf

*Real PID-5-SF Data***Description**

Real responses to items on the PID-5-SF (with 100 items) from University of Kansas students.

**Usage**

```
ku_pid5sf
```

**Format**

A [tibble](#) with 386 rows and 101 columns.

**response\_\_id** An anonymized id for each participant

**pid5sf\_\_001 to pid5sf\_\_100** Responses on each item

**Examples**

```
ku_pid5sf
```

label\_hitopbr

*Label HiTOP-BR Columns with Semantic Descriptions***Description**

Add literal item text or clean scale names as attributes to data frame columns for the HiTOP Brief Report (HiTOP-BR), making them readable by data viewers and reporting packages.

**Usage**

```
label_hitopbr(data, target = c("items", "scales"), prefix = "hbr_")
```

**Arguments**

**data** A data frame containing HiTOP-BR items or scales.

**target** A string specifying what to label: **"items"** to label raw item columns with questionnaire text, or **"scales"** to label computed scale columns.

**prefix** A string specifying the prefix used on the column names. Item columns are expected as the prefix followed by the item number zero-padded to two digits (`hbr_01` to `hbr_45` under the default, the pattern the shipped datasets and the package's REDCap export use; the Qualtrics export writes `HBR_01`, matched by `prefix = "HBR_"`). Columns that carry the prefix and a number that is not one of those expected names are not labelled, and a warning of class `hitop_unpadded_items` names them, in a sentence per kind: a number without that padding is reported as not zero-padded to two digits, and a number outside 1 to 45 is reported as out of range, whatever its padding. That warning is raised whether or not any other column matched. Scale columns are expected as the prefix followed by the scale's `camelCase` name, which is what `score_hitopbr()` writes under its own default `prefix`. (default = `"hbr_"`)

### Value

A data frame with labeled columns. If no column matched the expected names at all, `data` is returned unchanged and a warning of class `hitop_no_columns_matched` says so; the `hitop_unpadded_items` report still names every prefixed item column it found. Both classes may be caught or suppressed by callers.

### Examples

```
# Attach item text as a `label` attribute to the raw item columns
labeled <- label_hitopbr(sim_hitopbr, target = "items")
attr(labeled$hbr_01, "label")
```

---

|               |                                                          |
|---------------|----------------------------------------------------------|
| label_hitopsr | <i>Label HiTOP-SR Columns with Semantic Descriptions</i> |
|---------------|----------------------------------------------------------|

---

### Description

Add literal item text or clean scale names as attributes to data frame columns, making them readable by data viewers and reporting packages.

### Usage

```
label_hitopsr(data, target = c("items", "scales"), prefix = "hsr_")
```

### Arguments

**data** A data frame containing HiTOP-SR items or scales.

**target** A string specifying what to label: `"items"` to label raw item columns with questionnaire text, or `"scales"` to label computed scale columns.

**prefix** A string specifying the prefix used on the column names. Item columns are expected as the prefix followed by the item number zero-padded to three digits (`hsr_001` to `hsr_405` under the default, the pattern the shipped datasets and the package's REDCap export use; the Qualtrics export writes `HSR_001`, matched by `prefix = "HSR_"`). Columns that carry the prefix and a number that is not one of those expected names are not labelled, and a warning of class `hitop_unpadded_items` names them, in a sentence per kind: a number without that padding is reported as not zero-padded to three digits, and a number outside 1 to 405 is reported as out of range, whatever its padding. That warning is raised whether or not any other column matched. Scale columns are expected as the prefix followed by the scale's `camelCase` name, which is what `score_hitopsr()` writes under its own default `prefix`. Sub-scale columns, which `score_hitopsr()` writes under `include_subscales = TRUE`, are expected the same way, as the prefix followed by the subscale's `camelCase` name in `hitopsr_subscales`, and are labelled with its `Subscale` name. (default = `"hsr_"`)

Value

A data frame with labeled columns. If no column matched the expected names at all, `data` is returned unchanged and a warning of class `hitop_no_columns_matched` says so; the `hitop_unpadded_items` report still names every prefixed item column it found. Both classes may be caught or suppressed by callers.

Examples

```
# Attach item text as a `label` attribute to the raw item columns
labeled <- label_hitopsr(sim_hitopsr, target = "items")
attr(labeled$hsr_001, "label")
```

---

|            |                                                       |
|------------|-------------------------------------------------------|
| label_pid5 | <i>Label PID-5 Columns with Semantic Descriptions</i> |
|------------|-------------------------------------------------------|

---

Description

Add literal item text or clean scale names as attributes to data frame columns, making them readable by data viewers and reporting packages.

Usage

```
label_pid5(
  data,
  target = c("items", "scales"),
  version = c("FULL", "SF", "BF", "BFPM", "IRF", "FFBF"),
  prefix = NULL
)
```

**Arguments**

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>data</b>    | A data frame containing PID-5 items or scales.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>target</b>  | A string specifying what to label: <code>"items"</code> to label raw item columns with questionnaire text, or <code>"scales"</code> to label computed scale columns. (default = <code>"items"</code> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>version</b> | A string specifying the PID-5 form the columns belong to: <code>"FULL"</code> (220 items), <code>"SF"</code> (100 items), <code>"BF"</code> (25 items), <code>"BFPM"</code> (the 36-item PID5BF+M), <code>"IRF"</code> (the 218-item Informant Form, labelled with its informant wording from <code>pid_items\$TextIRF</code> ), or <code>"FFBF"</code> (the 100-item Forensic Faceted Brief Form, labelled with its English self-report text from <code>pid_ffbf_items\$Text</code> , also for informant data). Only a full name is accepted, in any letter case. Any other value, a start of a name such as <code>"F"</code> included, is an error of class <code>hitop_unknown_version</code> . The forms number their items independently and score different sets of scales, so the form named here decides both the text attached to an item column and which scale columns are recognized. (default = <code>"FULL"</code> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>prefix</b>  | <p>A string specifying the prefix used on the column names. NULL resolves to the default for the given <code>target</code> and <code>version</code>: under <code>target = "items"</code>, the form's own stem (<code>"pid5_"</code>, <code>"pid5sf_"</code>, <code>"pid5bf_"</code>, <code>"pid5bfpm_"</code>, <code>"pid5irf_"</code> or <code>"pid5ffbf_"</code>); for the full, short and brief forms this is the pattern the shipped datasets and the package's REDCap export use; under <code>target = "scales"</code>, <code>"pid_"</code>, which is what <code>score_pid5()</code> writes under its own default <code>prefix</code>. (default = NULL)</p> <p>Item columns are expected as the prefix followed by the item number zero-padded to the width of the form's largest item number (<code>pid5_001</code> to <code>pid5_220</code> for the full form, <code>pid5bf_01</code> to <code>pid5bf_25</code> for the brief form). A column carrying the prefix and a number that is not one of those expected names is not labelled, and a warning of class <code>hitop_unpadded_items</code> names it, in a sentence per kind: a number padded to some other width is reported as not zero-padded to the form's width, and a number outside the form's range is reported as out of range, whatever its padding. That warning is raised whether or not any other column matched. Scale columns are expected as the prefix followed by the scale's <code>camelCase</code> name.</p> |

**Value**

A data frame with labeled columns. Columns the named form does not recognize keep whatever attributes they had. The validity-scale columns `validity_pid5()` writes and the `_se` columns `score_pid5(calc_se = TRUE)` writes are not labelled. If no column matched the expected names at all, `data` is returned unchanged and a warning of class `hitop_no_columns_matched` says so; the `hitop_unpadded_items` report still names every prefixed item column it found. Both classes may be caught or suppressed by callers.

**References**

Markon, K. E., Quilty, L. C., Bagby, R. M., & Krueger, R. F. (2013). *The Personality Inventory for DSM-5—Informant Form (PID-5-IRF)—Adult*. American Psychiatric Asso-

ciation. The source of the informant wording that `version = "IRF"` labels items with. See also Markon et al. (2013), *Assessment*, 20(3), 370-383. doi:10.1177/1073191113486513

Examples

```
# Attach item text as a `label` attribute to the raw item columns
labeled <- label_pid5(sim_pid5bf, target = "items", version = "BF")
attr(labeled$pid5bf_01, "label")
```

---

|           |                                                                         |
|-----------|-------------------------------------------------------------------------|
| norm_pid5 | <i>Convert PID-5 scale scores to normative T scores and percentiles</i> |
|-----------|-------------------------------------------------------------------------|

---

Description

Looks up scored PID-5 columns in the published normative tables shipped as `pid_norms` and returns a T score and a percentile for each. Scores are produced by `score_pid5()` and `validity_pid5()`; this function converts them and never rescores.

Usage

```
norm_pid5(
  data,
  scores,
  version = c("FULL", "SF", "BF"),
  srange = c(0, 3),
  prefix = "pid_",
  append = TRUE
)
```

Arguments

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>data</b>    | A data frame containing scored PID-5 columns.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>scores</b>  | The score columns to convert, as column names or column positions (mirroring the <code>items</code> argument of <code>score_pid5()</code> ). Each column must be numeric (or logical) and each may be named only once.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>version</b> | Which PID-5 version the scores came from: "FULL" (220 items), "SF" (100 items), or "BF" (25 items). Only a full name is accepted, in any letter case. Any other value, a start of a name such as "F" included, is an error of class <code>hitop_unknown_version</code> . The normative tables differ by version. These are self-report norms: do not norm scores from <code>score_pid5(version = "IRF")</code> with them. Informant scores have the full form's column names, so <code>version = "FULL"</code> accepts them without a warning, but the informant norms (Markon et al., 2024, Tables A-10 and A-11) are not in <code>pid_norms</code> . Nor norm scores from <code>score_pid5(version = "FFBF")</code> : their facet and APA domain columns have the short form's names, so <code>version = "SF"</code> converts them with no version warning (only the two forensic domains are reported as not covered), but no FFBF norms are published. |

|               |                                                                                                                                                                                                                                                                                                                                                                          |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>srange</b> | The response range the items were coded on, as <code>c(low, high)</code> . Any four-option coding is accepted and reconciled to the official <code>c(0, 3)</code> range before lookup; a coding with a different number of options is not convertible. See Details.                                                                                                      |
| <b>prefix</b> | The prefix <code>score_pid5()</code> applied to its output columns, used to match a score column back to its scale. Matched literally, not as a regular expression: a column name that does not begin with exactly this string keeps its whole name and is reported as uncovered. Pass "" when the columns are named for the scales themselves, with no prefix to strip. |
| <b>append</b> | Whether to return the input <b>data</b> with the conversion columns appended ( <b>TRUE</b> , the default) or the conversion columns alone.                                                                                                                                                                                                                               |

## Details

For each named score column the tables are searched for the printed row whose raw score is **nearest** the observed value, and that one row's printed T score and printed percentile are returned. Nothing is interpolated: every returned number is a cell of Markon et al. (2024).

Markon et al. print the tables but give no instruction for reading them — no rounding, interpolation, or tie rule appears anywhere in the book — so the rules below are this package's, chosen and defended rather than quoted. They were settled by an independent review of the tables recorded in the package's development history as report RR02 (in the project repository, not the installed package).

- **Between printed rows.** The nearer row wins. Printed raws step by 0.01-0.07 while attainable scores fall on much coarser grids (a 5-item brief-form domain mean can only be a multiple of 0.2), so most lookups land between rows.
- **Ties.** Where two or more rows are equally near – a raw printed in several rows, or a value exactly midway between two rows – the row whose T score is nearest 50 is returned. The four validity scales carry no T score, so a tie there returns the row whose percentile is nearest 0.50.
- **Scores of 0.** Nearly every tabled scale prints raw 0.00 across a run of low T scores, because the linear T the book tabulated predicts a negative raw there and 0.00 is printed instead. The tie rule returns the run's highest T, the one row of the run that renders an attainable score. (Two columns – full-form detachment and risk taking – print 0.00 just once, so no tie arises there.) Its printed percentile is positive on some scales and 0.00 on others; that asymmetry is a property of the published tables, not of this function.
- **Scores outside the table.** A score above the highest printed raw returns whatever an observation *at* that raw returns, rather than an extrapolation – the last printed row on most scales, but the lowest-T row of the run where the top raw is printed several times (see "Unattainable printed rows" below). A score below the lowest returns whatever an observation *at* the lowest printed raw returns – which, on the scales whose tables print a run of 0.00, is that run's highest-T row and not the table's first row, so the two agree instead of jumping. A warning reports how many observations were capped at each end. This is reachable in ordinary data: PRD is a 22-item sum reaching 66 while its table stops at 55.

- **Unattainable printed rows.** 47 of the 66 tabled scales print rows above the 3.00 ceiling a 0-3 item mean can reach – five domain scales and 42 of the 50 facet columns – so the top of those T ranges cannot be attained. A maximum score returns  $T = 84$  (brief-form negative affectivity), 87 (brief-form detachment), 93 (brief-form disinhibition), 87 (full-form negative affectivity), 85 (short-form negative affectivity), or, on a facet, a T between 76 and 98 depending on the facet and the form – each at percentile 1.00. Nineteen facet columns go further and print the same top raw, 4.00, on several consecutive T rows (12 of them for short-form anxiousness); those rows ship as published, and the tie rule above returns the lowest T of the run. Nothing is wrong with such data and nothing is reported.
- **Comparison tolerance.** All comparisons use an absolute tolerance of  $1e-8$ , so that scores on grids with no exact binary representation (a short-form domain mean is a twelfth) match the printed 2-decimal raws as intended.

Columns the tables do not cover for the requested **version** – SD-TD, or any facet on the brief form, for instance – return NA in both conversion columns with a warning naming them. An NA score returns NA.

**Reporting and silence.** Everything this function reports – the capping count above, the uncovered-column warning, and the two response-coding reports below – is a warning condition, so a single `suppressWarnings()` call silences the function and any one report can still be caught and tested for individually.

**Errors.** `scores` is checked before anything is converted. Naming the same score column twice is an error rather than a duplicated pair of output columns, and a factor or character score column is an error rather than a silent coercion – a factor’s integer codes are not its scores, and a character column would coerce to NA. Logical columns are accepted, since a 0/1 indicator converts as it reads.

A `scores` argument that names no columns is an error, reported ahead of the other selection arguments, so the cause named is the empty selection and not a consequence of it. The condition is classed `hitop_empty_selection`, so a caller can catch this refusal by name.

With `append = TRUE`, a column of `data` whose name this call would also produce is an error rather than an overwrite or a duplicated column: the message names every colliding column. Re-run with `append = FALSE` to return only the new columns, or drop the colliding columns from `data` first. The condition is classed `hitop_append_collision`, so a caller can catch this refusal by name.

**Response coding.** The normative tables are built on the official four-option 0-3 coding. Data collected on a four-option coding that merely starts elsewhere – 1-4, say – carries the same information, so each score is reconciled to the official range before lookup and the conversion proceeds. A coding with a different *number* of options is a different metric: no mapping onto a four-option norm table is defined, so every conversion column is returned as NA with a warning, and the items must be recoded and rescored.

How much a shift moves a score depends on how the scale is computed, so the reconciliation is applied per scale rather than per item. No published source states these rules – Markon et al. give the tables for the official coding only – so, like the reading rules above, they are this package’s, derived from each scale’s own definition:

- **Item means** (the 25 facets, the five domains, and the brief form’s total) are reconciled by subtracting `srange[[1]]`. Shifting every item by a constant shifts their mean by the same constant.

- PRD is a plain sum over its 22 items, so the same shift moves it by `srange[[1]]` times the number of items, which is what is subtracted. The item count is read from `pid_items` rather than assumed.
- INC and INC-S are sums of *absolute differences within item pairs*. A constant added to both members of a pair cancels in the difference, so these are unchanged by a shift and nothing is subtracted.
- ORS is a count of items answered at the top of the response range – `validity_pid5()` computes it by comparing each item to `srange[[2]]` rather than to a fixed value (`R/validity_pid5.R:153` in the package sources). A shift moves the top of the range along with the answers, so the same items are counted and the score is unchanged.

A shifted coding raises one warning per call naming which of the requested scales were adjusted and which were left alone; where every requested scale turns out to be coding-invariant, it says so rather than claiming an adjustment. The warning covers the scales the tables actually carry, so a request the tables cover nowhere raises the coverage warning above instead and nothing about coding. The official coding is silent.

One consequence is worth stating plainly, because it can put two differently grounded numbers side by side in the same session: `validity_pid5()`'s published cut scores are **not** reconciled to a shifted coding. PRD and SD-TD are compared against fixed thresholds that assume 0-3 items, and `validity_pid5()` warns rather than adapting them. So a respondent scored on a 1-4 coding can receive a reconciled percentile from this function and, from `validity_pid5()`, a validity flag still read against the 0-3 thresholds. Adapting those cut scores is a separate, deliberately deferred question.

## Value

A `tibble` with a `_t` column for every converted scale whose normative rows carry a T score (the five domains, the 25 facets of the full and short forms, and the brief form's total) and a `_pt1` column for every converted scale, alongside all original `data` columns if requested. The four validity scales (INC, INCS, ORS, PRD) are distributed as percentiles only and get no `_t` column.

## References

Markon, K. E., Fossati, A., Somma, A., & Krueger, R. F. (2024). *Understanding the Personality Inventory for DSM-5 (PID-5)*. American Psychiatric Association Publishing. The normative tables in `pid_norms`, Appendix "Normative Score Distributions" (pp. 113-219), are the source for every value this function returns.

## Examples

```
# Score the brief form, then convert its domains and total
scored <- score_pid5(sim_pid5bf, items = 1:25, version = "BF")
norm_pid5(scored, scores = paste0("pid_", c("detachment", "total")),
           version = "BF", append = FALSE)
```

---

pid\_bfpm\_domains      *PID5BF+M Domain Data*

---

## Description

The map from each of the 6 domains of the PID5BF+M (the 36-item modified brief form of the PID-5) to its 3 facets, used to compute the domain scores of `score_pid5(version = "BFPM")` and the domain rows of `reliability_pid5(version = "BFPM")`. Each domain score is the mean of its 3 facet scores (Bach et al., 2020). The rows are in the order of the form's key, with Anankastia fifth.

## Usage

```
pid_bfpm_domains
```

## Format

A [tibble](#) with 6 rows and 4 columns, the columns of [pid\\_domains](#):

**Domain** Name of the domain. The five domains the form shares with the PID-5 are spelled as in [pid\\_domains](#)

**camelCase** The domain name in camel case (the score-output column stem)

**primaryFacets** A list column of the 3 facet names per domain, as `pid_scales$BFPM$Facet` spells them

**facetStems** A list column of those 3 facet names in camel case (the facet score-output column stems)

## Source

Bach, B., Kerber, A., Aluja, A., Bastiaens, T., Keeley, J. W., Claes, L., Fossati, A., Gutierrez, F., Oliveira, S. E. S., Pires, R., Riegel, K. D., Rolland, J.-P., Roskam, I., Sellbom, M., Somma, A., Spanemberg, L., Strus, W., Thimm, J. C., Wright, A. G. C., & Zimmermann, J. (2020). International assessment of DSM-5 and ICD-11 personality disorder traits: Toward a common nosology in DSM-5.1. *Psychopathology*, 53(3-4), 179-188. doi:10.1159/000507589

The keying itself is transcribed from the form's coding scheme: Kerber, A. (2020). *Persönlichkeitsinventar für DSM-5 und ICD-11: Kurzform Modifiziert (PID5BF+ M)* [Questionnaire and coding scheme, German]. Freie Universität Berlin, p. 2.

## Examples

```
pid_bfpm_domains
```

pid\_domains

*Personality Inventory for DSM-5 Domain Data***Description**

The map from each of the 5 PID-5 personality-trait domains to the 3 facets contributing primarily to it, used to compute domain scores for the FULL, SF and IRF versions (APA scoring keys, Step 3; the PID-5 Informant Form's Domain Table names the same primary facets). This is the 15-facet primary subset, not the broader `pid_items$Domain` grouping.

**Usage**

pid\_domains

**Format**

A [tibble](#) with 5 rows and 4 columns:

**Domain** Name of the domain (matches `pid_items$Domain`)

**camelCase** The domain name in camel case (the score-output column stem)

**primaryFacets** A list column of the 3 primary facet names per domain

**facetStems** A list column of those 3 facet names in camel case (the facet score-output column stems)

**Examples**

pid\_domains

pid\_ffbf\_domains

*PID-5 Forensic Faceted Brief Form Domain Data***Description**

The map from each of the 7 domains that `score_pid5(version = "FFBF")` returns to its 3 facets. The first 5 rows are the APA domains of [pid\\_domains](#), each the mean of its 3 primary facets (Niemeyer et al., 2022, p. 33). The last 2 rows are the domains of the paper's four-factor solution that are not APA domains, Disinhibited Aggression and Insecurity, with the facets of the authors' analysis code. The paper's four-factor Antagonism and Detachment have the facets of the APA domains of the same names, so they are not repeated.

**Usage**

pid\_ffbf\_domains

**Format**

A [tibble](#) with 7 rows and 4 columns, the columns of [pid\\_domains](#):

**Domain** Name of the domain. The APA domains are spelled as in [pid\\_domains](#) and the two forensic domains as the paper prints them

**camelCase** The domain name in camel case (the score-output column stem)

**primaryFacets** A list column of the 3 facet names per domain

**facetStems** A list column of those 3 facet names in camel case (the facet score-output column stems)

**Source**

Niemeyer, L. M., Grosz, M. P., Zimmermann, J., & Back, M. D. (2022). *Journal of Personality Assessment*, 104(1), 30-43. doi:10.1080/00223891.2021.1923522. The four-factor domain facets are from the authors' analysis code on the paper's OSF project (<https://osf.io/m42gn/>).

**Examples**

```
pid_ffbf_domains
```

---

|                |                                                    |
|----------------|----------------------------------------------------|
| pid_ffbf_items | <i>PID-5 Forensic Faceted Brief Form Item Data</i> |
|----------------|----------------------------------------------------|

---

**Description**

The 100 items of the PID-5 Forensic Faceted Brief Form (PID-5-FFBF), an adaptation of the PID-5 faceted short form for people in prison, with self- and informant-report versions in English and German. Most items are rewritten for the prison setting, so they have their own table rather than columns of [pid\\_items](#). The form was validated in German. Its English text is the authors' English version, from Table S3, and the study validated only the German version (Niemeyer et al., 2022, p. 40). Items they did not adapt keep the APA PID-5 wording. Scored by `score_pid5(version = "FFBF")`.

**Usage**

```
pid_ffbf_items
```

**Format**

A [tibble](#) with 100 rows and 7 columns:

**FFBF** Item number on the PID-5-FFBF (integer)

**Facet** Name of the PID-5 facet, spelled as in `pid_items$Facet`. Each facet has 4 items: facet k, in alphabetical order, holds items k, k + 25, k + 50, and k + 75

**Reverse** Whether the item needs to be reverse scored (items 12 and 26)

- Text** Self-report item text, English
- TextIRF** Informant-report item text, English, without a subject (Table S3 prints each with a leading ellipsis)
- TextDE** Self-report item text, German
- TextIRFDE** Informant-report item text, German, without a subject

Details

The texts are those of Table S3 of the form’s supplement, without its source notes, its reverse marks, the stray markers E14, E18 and E77, a leading ellipsis, or the final period, and with straight quotes and apostrophes (including an acute accent used as an apostrophe in item 50). Hyphens inside German words are removed, and English words split at a hyphen across a line are joined with the hyphen kept. The printed wording is otherwise kept, typos included.

Source

Niemeyer, L. M., Grosz, M. P., Zimmermann, J., & Back, M. D. (2022). Assessing mal-adaptive personality in the forensic context: Development and validation of the Personality Inventory for DSM-5 Forensic Faceted Brief Form (PID-5-FFBF). *Journal of Personality Assessment*, 104(1), 30-43. doi:10.1080/00223891.2021.1923522. Item text from its supplement, Table S3 (<https://osf.io/fzyvr/>): Copyright 2013 American Psychiatric Association, German version 2015, developed with permission from Hogrefe and the APA.

Examples

pid\_ffbf\_items

|           |                                           |
|-----------|-------------------------------------------|
| pid_items | Personality Inventory for DSM-5 Item Data |
|-----------|-------------------------------------------|

Description

Information about the items in different versions of the PID-5.

Usage

pid\_items

Format

- A [tibble](#) with 220 rows and 18 columns:
- FULL, SF, BF** Item number on the full PID-5, PID-5 faceted short form, and PID-5 brief form (integer)
  - BFPM** Item number on the PID5BF+M, the 36-item modified brief form (integer). Its keying is in `pid_scales$BFPM` and [pid\\_bfpm\\_domains](#)

- IRF** Item number on the PID-5 Informant Form, the 218-item informant-report form (integer). It is NA on self-report items 96 and 177, which the informant form does not have, so IRF item n is self-report item n, n + 1 or n + 2. Each informant item shares its row’s facet and reverse keying
- Reverse** Whether the item needs to be reverse scored
- INC,INCS** Item number on the response inconsistency scale full and short forms (integer)
- ORS,ORSS** Item number on the overreporting scale full and short forms (integer)
- PRD,PRDS** Item number on the positive impression management response distortion scale full and short forms (integer)
- SDTD,SDTDS** Item number on the social desirability-total denial scale full and short forms (integer)
- Facet** Name of the PID-5 facet. The PID5BF+M regroups six of the Rigid Perfectionism items into its three anankastia facets, whose item membership is held only in pid\_scales\$BFPM
- Domain** Name of the domain
- Text** Item text, copyright APA
- TextIRF** Informant Form item text, copyright APA, from Markon, K. E., Quilty, L. C., Bagby, R. M., & Krueger, R. F. (2013), *The Personality Inventory for DSM-5—Informant Form (PID-5-IRF)—Adult*, American Psychiatric Association. Each item completes the stem "He or she..."; this column does not include the stem, the leading ellipsis or the final period, and uses straight quotes and apostrophes

Examples

pid\_items

---

|           |                                                         |
|-----------|---------------------------------------------------------|
| pid_norms | <i>Personality Inventory for DSM-5 Normative Tables</i> |
|-----------|---------------------------------------------------------|

---

Description

Published normative score distributions for the PID-5, PID-5-SF, and PID-5-BF, in long form: the raw score and percentile at each T score for the five domain scales, the 25 facet (trait) scales of the full and short forms, and the brief form’s total score; and the percentile at each raw score for the validity scales, which are tabled without T scores.

Usage

pid\_norms

## Format

A [tibble](#) with 4606 rows and 5 columns:

**version** The PID-5 version the row norms: "FULL", "SF", or "BF"

**scale** Name of the scale, as the score-output column stem used by `score_pid5()` and `validity_pid5()` (i.e., without their `prefix`), so a lookup joins to scored output with no crosswalk. Every scale normed here is produced by one of those two functions, the brief form's "total" included (see `score_pid5()`)

**tscore** The T score, or NA for the validity scales, whose tables print none

**raw** The raw scale score, on the metric `score_pid5()` and `validity_pid5()` return: for the FULL and SF domains, the mean of the three primary facet scores (themselves item means, and the facets differ in length, so this is not a mean over the domain's items); for the FULL and SF facets and for the BF domains and total, a mean item response; for the validity scales, an item sum. 42 of the 50 facet columns print raws above the 3.00 a mean of 0-3 items can reach, up to 4.00, and 19 of those repeat their top raw across consecutive T scores; all such rows ship as published and are simply unattainable (see `norm_pid5()`)

**percentile** The percentile of the normative distribution at that score, as a proportion between 0 and 1

## Details

The INC and INCS scales are called the Variable Response Inconsistency (VRIN) scale by Markon et al. (2024), so a reader coming from the book will find those tables here under the package's own names.

Markon et al. call the 25 facets *trait scales*; they are tabled under the book's own captions, which the package maps onto the [pid\\_scales](#) facet names.

Norms come from a sample of 1,082 individuals from a U.S. Census-matched panel. The validity-scale distributions use all 1,082; the FULL and SF domain and facet distributions use the 995 respondents who scored below 17 on the inconsistency scale, left no more than a quarter of responses missing, and did not endorse both infrequency items. The source states no separate sample size for the brief form tables. All T scores and percentiles were computed with sampling weights reflecting U.S. Census data.

The published informant-form tables are not included.

## Source

Markon, K. E., Fossati, A., Somma, A., & Krueger, R. F. (2024). *Understanding the Personality Inventory for DSM-5 (PID-5)*. American Psychiatric Association Publishing. Appendix, Tables A-1 to A-9 (pp. 113-219).

## Examples

```
pid_norms
```

pid\_scales

*Personality Inventory for DSM-5 Scale Data*

## Description

Information about the scales (facets) in different versions of the PID-5, used by `score_pid5()` to map each scale to its item numbers. It is also read by `reliability_pid5()` and by the printed scoring table in `generate_docx_pid5*()`, so adding or removing a row changes all three.

## Usage

```
pid_scales
```

## Format

A named [list](#) of length 6 (elements FULL, SF, BF, BFPM, IRF, and FFBF), one per PID-5 version. Each element is a [tibble](#) with one row per scale and 5 columns:

**Facet (named Domain in the BF element)** Name of the scale: the facet for the FULL, SF, BFPM, IRF, and FFBF versions, the domain for the BF version. The BF element carries a sixth row, **Total**, which is not a domain but the whole 25-item form scored as one scale (see `score_pid5()`). The BFPM element holds the 18 facets of the PID5BF+M, 2 items each, grouped by domain in the order of its key; its domains are in [pid\\_bfpm\\_domains](#). The IRF element holds the 25 facets of the Informant Form in the FULL element's order, numbered by informant item, with the informant text in **itemdata**. The FFBF element holds the 25 facets of the PID-5 Forensic Faceted Brief Form in the SF element's order, numbered by FFBF item, with the English self-report text in **itemdata**; its items are in [pid\\_ffbf\\_items](#) and its domains in [pid\\_ffbf\\_domains](#)

**itemdata** A list column containing one item-data tibble per scale; its item-number column is an integer

**nItems** The number of items in the scale (integer)

**itemNumbers** A list column containing one integer item-number vector per scale

**camelCase** The name of the scale converted to camel case (the score-output column stem)

## Examples

```
pid_scales[["BF"]]
```

plot\_pid5

*Plot a norm-referenced PID-5 profile*

## Description

Renders one respondent's normed PID-5 scores as a profile against the published normative tables in [pid\\_norms](#). The plot presents scores against norms and characterizes none of them: it carries no severity bands, no elevation thresholds, and no annotation about what a score means. Judging a profile is the clinician's job, not this package's.

## Usage

```
plot_pid5(
  data,
  version = c("FULL", "SF", "BF"),
  level = c("domain", "facet"),
  metric = c("t", "percentile"),
  labels = TRUE,
  prefix = "pid_"
)
```

## Arguments

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>data</b>    | A data frame with exactly one row, carrying the <code>_t</code> and/or <code>_pt1</code> columns produced by <a href="#">norm_pid5()</a> . More than one row is an error – a profile plot shows one respondent.                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>version</b> | Which PID-5 version the scores came from: "FULL" (220 items), "SF" (100 items), or "BF" (25 items). Only a full name is accepted, in any letter case. Any other value, a start of a name such as "F" included, is an error of class <code>hitop_unknown_version</code> . The PID-5 Informant Form has no norms in this package, so <code>version</code> does not take "IRF". Do not plot scores from <code>score_pid5(version = "IRF")</code> as "FULL": they would be compared with self-report norms. Nor plot scores from <code>score_pid5(version = "FFBF")</code> as "SF": no FFBF norms are published. |
| <b>level</b>   | Which scales to plot. "domain" plots the five personality domains, plus the brief form's total. "facet" plots all 25 facets in panels, and is available for "FULL" and "SF" only – the brief form has no facet scores. The APA key ties three facets to each domain; those get a panel per domain, and the remaining ten, which define no domain, share a final panel rather than being dropped.                                                                                                                                                                                                             |
| <b>metric</b>  | Which normed metric to plot: "t" for T scores, or "percentile" for percentile ranks. <a href="#">norm_pid5()</a> returns percentiles as a proportion; this function multiplies them by 100 so the axis reads on the familiar 0-100 percentile scale.                                                                                                                                                                                                                                                                                                                                                         |
| <b>labels</b>  | Whether to label each point with its rounded value. <code>TRUE</code> by default. The labels need a figure about 7 inches wide or more: below that, a label on a                                                                                                                                                                                                                                                                                                                                                                                                                                             |

score at the top of the published span runs into the edge of the panel and is cut off. Set `labels = FALSE` for a narrower figure and the points and profile line are drawn without them; the score axis then drops the extra padding it reserves for a label, so the profile itself gets that width back. This is a choice you make, not one the function can make for you – a plot is assembled before anything knows what size it will be drawn at.

**prefix** The column-name prefix used when the scores were computed, as passed to `score_pid5()` and `norm_pid5()`. Pasted onto each scale's camelCase name to find its column.

## Details

### What the plot draws:

Each plotted scale gets a point at its normed value, labelled with that value just to its right (set `labels = FALSE` to drop the labels), and the points are joined by a profile line. A single reference line marks the normative sample's midpoint –  $T = 50$ , or the 50th percentile. Both are definitional properties of the metrics themselves rather than thresholds this package chose.

The score axis spans the range the normative tables actually print for the plotted scales, so the axis does not rescale from respondent to respondent and two profiles on the same version and level are directly comparable. Scales are listed top to bottom in the order their scoring table gives them, under their printed names rather than their column stems.

On the brief form the profile line stops before **total**: the total is an overall elevation across the five domains rather than a sixth domain, so joining it to the profile line would imply a comparability it does not have. The point itself is still plotted.

### Scales with no value:

A scale whose normed value is `NA` – because the respondent's items were missing, or because the score fell outside what could be converted – is dropped from the profile with a warning naming it, and the remaining scales are still plotted. A scale whose column is absent from `data` altogether is an error rather than a warning: it means `data` was not normed at the level being plotted.

## Value

A `ggplot` object. Print it to draw the profile, or add further `ggplot2` layers to restyle it.

## References

Markon, K. E., Fossati, A., Somma, A., & Krueger, R. F. (2024). *Understanding the Personality Inventory for DSM-5 (PID-5)*. American Psychiatric Association Publishing. The normative tables in `pid_norms`, Appendix "Normative Score Distributions" (pp. 113-219), supply every value and every axis bound this function draws.

## See Also

`score_pid5()` to compute the scores, `norm_pid5()` to convert them against the normative tables, and `pid_norms` for the tables themselves.

## Examples

```
# Score, norm, and plot one respondent's brief-form domain profile
scored <- score_pid5(sim_pid5bf[1, ], items = 1:25, version = "BF")
normed <- norm_pid5(scored, scores = paste0("pid_", pid_scales[["BF"]]$camelCase),
                    version = "BF")
plot_pid5(normed, version = "BF")
```

---

|             |                                               |
|-------------|-----------------------------------------------|
| rank_scales | <i>Rank and list the top-n scales per row</i> |
|-------------|-----------------------------------------------|

---

## Description

For each row of selected scale columns, return a comma-separated string of the **top** highest (or lowest) scale names, optionally removing a common **prefix** from the column names and optionally appending the result to the original data as a tibble.

## Usage

```
rank_scales(
  data,
  scales,
  prefix = NULL,
  top = 5,
  dir = "high",
  reverse = NULL,
  srange = NULL,
  name = "top_scales",
  append = TRUE
)
```

## Arguments

|               |                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>data</b>   | A data frame containing the scale columns.                                                                                                                                                                                                                                                                                                                                        |
| <b>scales</b> | A character or integer vector identifying the columns in <b>data</b> to rank (names or positions). These columns should be numeric.                                                                                                                                                                                                                                               |
| <b>prefix</b> | A length-1 string giving a leading string to strip from each selected column name before concatenation, or <b>NULL</b> to keep names as is. The match is literal, not a regular expression: a column name that does not begin with exactly <b>prefix</b> is left unchanged, and characters that are regex metacharacters ( <b>.</b> , <b>(</b> , <b>+</b> ) stand for themselves. |
| <b>top</b>    | Integer (length 1). The number of columns to include per row after ranking. Must be between 1 and <b>length(scales)</b> .                                                                                                                                                                                                                                                         |
| <b>dir</b>    | Direction of ranking: <b>"high"</b> for largest values first or <b>"low"</b> for smallest values first.                                                                                                                                                                                                                                                                           |

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>reverse</b> | A subset of <b>scales</b> (names or positions) identifying scales that are keyed in the opposite direction to the rest (higher = healthier, e.g. a well-being scale). Before ranking, each such column is reflected via <code>sum(srange) - value</code> so that all selected scales share a common "higher = more elevated" metric and <b>dir</b> applies uniformly. Set to <code>NULL</code> (the default) when every scale is keyed the same way. |
| <b>srange</b>  | A numeric vector of length 2 giving the minimum and maximum of the scale scores, used to reflect the <b>reverse</b> columns. Required when <b>reverse</b> is not <code>NULL</code> ; ignored otherwise. (default = <code>NULL</code> )                                                                                                                                                                                                               |
| <b>name</b>    | A length-1 string giving the name of the output column holding the ranked-scale strings. (default = <code>"top_scales"</code> )                                                                                                                                                                                                                                                                                                                      |
| <b>append</b>  | Logical. If <code>TRUE</code> , bind the result as a new column to <b>data</b> . If <code>FALSE</code> , return only the result column.                                                                                                                                                                                                                                                                                                              |

## Details

Ranking is performed row-wise using `order()` on the selected columns. Ties are resolved by the original column order (the default behavior of `order`). Missing values are placed last by `order()` and will be included only if there are fewer than **top** non-missing values in a row.

If **prefix** is not `NULL`, the function removes that exact leading string from each selected column name before concatenation. Names that do not begin with it are carried through whole.

The output column is named by **name**. When **append** = `TRUE` it is added after the existing columns of **data** (whose order is preserved); when **append** = `FALSE` the result is a one-column tibble.

**Errors.** A **scales** argument that names no columns is an error, reported ahead of the other selection arguments, so the cause named is the empty selection and not a consequence of it. The condition is classed `hitop_empty_selection`, so a caller can catch this refusal by name.

With **append** = `TRUE`, a column of **data** whose name this call would also produce is an error rather than an overwrite or a duplicated column: the message names every colliding column. Re-run with **append** = `FALSE` to return only the new columns, or drop the colliding columns from **data** first. The condition is classed `hitop_append_collision`, so a caller can catch this refusal by name.

## Value

A [tibble](#). If **append** = `TRUE`, it is **data** with an added character column named by **name**. If **append** = `FALSE`, it is a one-column tibble (named by **name**) whose values are the comma-separated ranked scale names, one per row of **data**.

## Examples

```
# List each respondent's 3 highest-scoring HiTOP-BR scales
scored <- score_hitopbr(sim_hitopbr, items = 1:45, append = FALSE)
rank_scales(scored, scales = names(scored), prefix = "hbr_", top = 3,
```

```
append = FALSE)
```

---

`read_form_responses`    *Read hitop-form response files into one data frame*

---

## Description

Reads the CSV files that the hitop-form web page saves, one file per participant, or the CSV download of a store the page sends to, one row per participant, and binds them into one tibble that the scoring functions take as it is. The page is at <https://jmgirard.github.io/hitop-form/>.

## Usage

```
read_form_responses(path)
```

## Arguments

**path**                      A directory that holds the response files, or a character vector of paths to them. A directory is read as every file in it whose name ends in `.csv` (in either case). The paths are sorted in the C locale before they are read, so the rows come back in the same order however the paths were supplied.

## Details

A file the page saves holds one header row and one response row. A store's download, such as a Google Sheet's CSV export or a Supabase table's, holds one header row and one row per participant. Every response row of every file is a row of the result, the files in path order and the rows in file order. The first eight columns of the result are `study`, `participant`, `instrument`, `form_build`, `submitted`, `item_order`, `prolific_study` and `prolific_session`. The item columns follow from the ninth, one per item, named by the instrument's file stem and the item number (`hitopsr_001`, `hitopbr_01`, `pid5_001`, `pid5sf_001`, `pid5bf_01`). A module form saves only the module's items. The page keeps the item columns in the order it showed the items, except under a study link that asks for a random order: the page then draws a new order for each participant, keeps the item columns in the instrument's order (a module's items in the order its descriptor lists them, which `write_module()` writes ascending and the page requires ascending), and writes `item_order`.

`form_build` is the build date of the instrument's export the page showed, as YYYY-MM-DD. The result keeps each cell as written, so the column is character. Convert it with `as.Date()` when you need a date and the file holds one instrument.

**Several instruments in one file.** A file's item columns may form two or more groups, one per instrument. The columns of each group sit side by side and hold one stem, and no stem appears in two groups. The optional lead columns and the answer columns may sit anywhere after `submitted`, between two groups or inside one, and they do not split a group. The `instrument` cell holds the stems in the order of the groups, joined by single spaces

(`hitopbr pid5bf`). The `form_build` cell holds one date per stem, in the same order, joined by single spaces (2026-09-20 2026-09-18). The result holds the item columns in file order. Score each instrument in its own call, with its columns chosen by stem, as `grep("^pid5bf_", names(responses), value = TRUE)` chooses the PID-5-BF's. The hitop-form page writes such a file for a study link whose `instruments` field lists two or three instruments.

`item_order` is the order the participant saw the items, as item numbers with no leading zero, joined by single spaces with none at either end (`hitopbr_01` is 1). In a file of several instruments it holds one group per stem, in the order of the `instrument` cell, joined by a space, a bar and a space (2 1 | 3 1 2), each group that instrument's item numbers in the order shown. The page writes it under a random order and not otherwise. A file may hold the column anywhere after `submitted`, as a store's download may append it after the item columns, and the result places it sixth. A file may also lack it: its rows then hold NA there. Scoring does not read the column, and it is not an item column, so it does not enter the check that every file holds the same item columns. A cell that is not blank and does not list the file's item numbers, each once, in one group per stem, is an error naming the file and the response row. A group does not name its stem, so the reader cannot tell two groups apart when their instruments hold the same item numbers: swapped, they read as written.

`prolific_study` and `prolific_session` hold the study and session identifiers that Prolific adds to a study link, when the file records them for a study recruited through Prolific. The hitop-form page writes them when the link builder's recruiting site is Prolific, and then takes the participant identifier from the Prolific ID in the page's address. Under another recruiting site (SONA, CloudResearch Connect) the page takes the identifier from that site's address parameter into `participant` and writes no further column. A file may hold either or both anywhere after `submitted`, and the result places `prolific_study` seventh and `prolific_session` eighth. A row from a file without a column holds NA in it, and so does a blank cell. Scoring does not read them, and they are not item columns, so neither enters the check that every file holds the same item columns. The cells are read as written, with no check on their content.

A column whose name starts with `q_` is an answer column: it holds the answer to a question of the researcher's own, named `q_` and then the question's name (`q_age`). A file may hold answer columns anywhere after `submitted`, and the result places them after the item columns. They come in the order the reader first meets them, with the files in path order and each file read from left to right. Each is character, read as written with no conversion, and a blank cell is NA. Files that hold different answer columns read together, and a row from a file without a column holds NA in it. Answer columns are not item columns, so they do not enter the check that every file holds the same item columns. After `q_`, a name must hold a lower-case letter and then up to 29 lower-case letters, digits or underscores, the pattern `^q_[a-z][a-z0-9_]{0,29}$`. A name that starts with `q_` and does not match is an error naming the file and the column.

Every file must carry the same item columns in the same order, because a set of files that differ cannot be one data frame: a full HiTOP-SR beside a module, or two modules that shuffled their items differently, need separate calls. A file that does not look like one the page saved is an error naming the file: a UTF-16 or UTF-32 file (described below), a line holding a NUL byte or a byte sequence that is not UTF-8, a line outside a quoted cell made only of spaces and tabs, no header row (a zero-byte file, blank lines only, a UTF-8 byte-order mark only), first columns other than the five the page writes first, a column that appears twice, a

header with no response row, a response row holding fewer or more fields than the header, an answer column whose name does not match the pattern above, an item column whose name is not a stem of lower-case letters and digits, an underscore and the item number (`hitopbr_01`, not `foo` or `Hitopbr_01`), a stem whose columns another stem's columns split (`hitopbr_01`, `pid5bf_01`, `hitopbr_02`), an `instrument` cell that differs from the item columns' stems in file order (`pid5bf` beside `hitopbr_01`, or `hitopbr` beside `hitopbr_01` and `pid5bf_01`), an item value that is not a whole number or is outside R's integer range, a `form_build` cell whose date count differs from the stem count, or a date that does not parse. An error on a line names the lines at fault, counted from the file's first line. An error on a row names the response rows at fault, counted from the first row after the header. An error on an item value names each cell at fault as its response row, its column and the value as written, the first five cells and a count of the rest. The errors on a NUL byte or a byte sequence that is not UTF-8, on a line of spaces and tabs, on a row's field count and on an `instrument` cell likewise name the first five lines or rows at fault and a count of the rest. The error on a UTF-16 or UTF-32 file names the encoding and no line, and asks that the file be saved as UTF-8. A file that starts with the byte-order mark FF FE 00 00 or 00 00 FE FF is taken as UTF-32, and one that starts with FF FE or FE FF as UTF-16. A file with no mark is read as UTF-32 and then as UTF-16, each little-endian and then big-endian. In each encoding the lines are split on that encoding's line feed. Empty lines and lines of a lone carriage return at the top are skipped. The first line that is not blank then has its trailing carriage return dropped. If it holds only printable ASCII characters and tabs, the file is taken as that encoding. A file of blank lines only in one of these encodings is also taken as that encoding when it holds at least one line feed. A file taken as UTF-32 is refused as UTF-32, not as UTF-16. A UTF-16 or UTF-32 file the rule does not take is read as UTF-8, and a NUL byte in it meets the byte error. The field count of a row reads `#` as data and a quoted cell holding a line break as one cell, as the read does. A `submitted` stamp may carry fractional seconds.

**Errors.** Files whose item columns differ from the first file's in name, in count or in order stop the read under the condition class `hitop_form_responses_mismatch`, and the message names each file that differs and how. A directory holding no `.csv` file stops it under `hitop_form_responses_none`. Both classes are a public contract a caller can catch by name.

## Value

A `tibble` with one row per response row. The first eight columns are `study`, `participant`, `instrument` and `form_build` as character, `submitted` as POSIXct in UTC, and `item_order`, `prolific_study` and `prolific_session` as character, each NA on a row from a file without that column and on a blank cell. The item columns follow as integers, in the column order of the first file after sorting. An item the participant left blank is NA. The answer columns, when any file holds one, come last as character, in order of first appearance, each NA on a row from a file without it and on a blank cell.

## See Also

`score_hitopshr()`, `score_hitopbr()`, `score_pid5()` and `read_module()`, which score the item columns; the Collecting Responses Online article walks the Google Sheet route from the study link to the scores, and the modules article and `vignette("pid5_scoring")` show the hand-off for a module and for the PID-5.

## Examples

```
# Two files as the page saves them, here written by hand.
dir <- tempfile("responses")
dir.create(dir)
writeLines(
  c("study,participant,instrument,form_build,submitted,hitopbr_01,hitopbr_02",
    "demo,p001,hitopbr,2026-09-20,2026-09-20T21:20:36Z,4,1"),
  file.path(dir, "demo_p001.csv")
)
writeLines(
  c("study,participant,instrument,form_build,submitted,hitopbr_01,hitopbr_02",
    "demo,p002,hitopbr,2026-09-20,2026-09-21T09:02:11Z,2,"),
  file.path(dir, "demo_p002.csv")
)

responses <- read_form_responses(dir)
responses

unlink(dir, recursive = TRUE)
```

---

read\_module

*Read a Module from a File*


---

## Description

Reads a module descriptor written by `write_module()` (or written by hand to the same format) and returns the `hitop_module()` object it describes, ready to pass to `score_hitopsr()`, `reliability_hitopsr()`, or any of the generators.

The file never supplies keying. The module is rebuilt by passing the file's `scales` through `hitop_module()`, so this package's own tables remain the only source of which items belong to a scale. The file's recorded `items` and `nItems`, where present, are checked against that rebuild, and a disagreement is an error: a descriptor written against scale tables that have since moved fails loudly rather than scoring quietly.

## Usage

```
read_module(file)
```

## Arguments

`file`                    A string giving the path to read from.

## Value

A `hitop_module` object with integer items. This is also true for a file written from the deprecated `hitop_subset` class, or from a module whose items are doubles. If the file carries an `itemOrder`, it is returned on the object's `item_order` attribute — the same

attribute `generate_docx_hitopsr()` returns for a shuffled form. Pass the module to `score_hitopsr()` or `reliability_hitopsr()` with `layout = "printed"` to score columns entered in that printed order. If the file carries `columns`, the names are returned as a character vector on the object's `columns` attribute. A bare JSON string reads as one name. Pass the module to `score_hitopsr()` or `reliability_hitopsr()` with `items` omitted to score the columns it names. A file with no `columns`, or with `"columns": null`, gives a module with no such attribute.

## Errors

Every failure below aborts with a condition naming the file, so a caller may catch a particular one by class: `hitop_module_file_missing`, `hitop_module_file_invalid_json`, `hitop_module_file_missing_field`, `hitop_module_file_unsupported_format`, `hitop_module_file_unknown` (which carries `hitop_module()`'s own refusal as its parent), `hitop_module_file_items_mismatch`, `hitop_module_file_bad_item_order`, and `hitop_module_file_bad_columns`.

The list is exhaustive by design: a descriptor that is malformed rather than merely wrong — a top level that is a JSON array instead of an object, or a number field that is not a flat array of numbers — is refused as `hitop_module_file_invalid_json` or as the mismatch condition for the field it spoils, never as a bare R coercion error.

In `items`, `nItems`, and `itemOrder`, every value must be a JSON number with a whole value. A JSON string, a JSON boolean, or a number such as 12.4 is refused, even where it would convert to the right item number. A JSON null inside an array is also refused. `items` and `nItems` raise `hitop_module_file_items_mismatch`, and `itemOrder` raises `hitop_module_file_bad_item_order`. A whole number written as 2.0 or 3e0 is accepted. A field whose whole value is JSON null reads as absent.

`columns` raises `hitop_module_file_bad_columns` when it is an object or a number, when an element is not a non-empty JSON string, when it holds a different number of names than the module has items, or when it repeats a name.

## The descriptor format

The file is JSON, with these fields:

**format** The format version, a "major.minor" string. This release writes "1.0".

**package**, **packageVersion**, **buildDate** The package that wrote the file, its version, and the date it was written. Recorded for the reader; `read_module()` ignores all three.

**instrument** The instrument the module belongs to.

**scales** The module's scales, as they are printed on the instrument. **Required:** these are what the module is rebuilt from.

**items**, **nItems** The original instrument item numbers the module covers, and how many there are. `write_module()` writes them in ascending order, and the hitop-form web page requires that order, refusing a descriptor whose `items` are not ascending. Cross-checked on read: `read_module()` compares them as a set, so their order carries no meaning to it, but a repeated number is an error, and the printed order of a shuffled form belongs in `itemOrder` instead.

**itemOrder** The printed order of a shuffled form: a permutation of **items**. Optional — a form printed in instrument order carries none. `read_module()` returns it on the module's **item\_order** attribute, the same attribute `generate_docx_hitopbr()` returns, and `write_module()` writes it back from that attribute, so a descriptor read and written again keeps the order it recorded. The generators' **descriptor** argument sets the attribute for you, and `score_hitopbr()` and `reliability_hitopbr()` read it under **layout** = "printed" to score columns entered in the form's printed order.

**columns** The names that an online export gives the module's items: one string per item, in ascending item-number order. Optional. `generate_redcap_hitopbr()`'s **descriptor** writes the dictionary's item field names here, and `generate_qualtrics_hitopbr()`'s writes the questions' [[ID:]] values. A Word form has no columns, so its descriptor has no field. `read_module()` returns the field on the module's **columns** attribute, and `write_module()` writes it back from that attribute as a JSON array. `score_hitopbr()` and `reliability_hitopbr()` use the attribute as **items** when **items** is omitted.

**format**, **instrument**, and **scales** are required. A reader of format "1.0" ignores a field it does not know, so release 0.2.0, the first with `read_module()`, and later releases read a file with **columns** and ignore the field. The fields and the version string are a public contract and change only deliberately.

## See Also

`write_module()` to write the file; `hitop_module()` to build a module without one.

## Examples

```
m <- hitop_module("hitopbr", scales = c("Agoraphobia", "Appetite Loss"))

f <- tempfile(fileext = ".json")
write_module(m, f)

m2 <- read_module(f)
m2
identical(m2, m)

file.remove(f)
```

---

reliability\_hitopbr    *Estimate HiTOP-BR scale reliability*

---

## Description

Compute per-scale internal-consistency reliability — Cronbach's alpha and McDonald's omega — for the HiTOP Brief-Report (45 items). Reliability is estimated on the item responses for each of the scales that `score_hitopbr()` outputs (the HiTOP-BR has no reverse-keyed items).

## Usage

```
reliability_hitopbr(data, items, srange = c(1, 4), alpha = TRUE, omega = TRUE)
```

## Arguments

|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>data</b>   | A data frame containing all HiTOP-BR items (numerically coded).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>items</b>  | A vector of column names (as strings) or numbers (as integers) corresponding to the 45 HiTOP-BR items in order. Items must be supplied in instrument order; duplicated entries are an error. Each column must be numeric or logical, or character holding only numbers (blank cells and NA values count as missing, but the text "NA" is refused). A haven labelled column is read as its plain values. Any other column, such as the choice text of an online export or a factor, is an error of class <code>hitop_nonnumeric_items</code> . So is a 64-bit integer ( <code>integer64</code> ) column, and, in a UTF-8 session, a column holding text that is not valid UTF-8 (text marked Latin-1 is read as its text); convert such text with <code>iconv()</code> . So is an SPSS column ( <code>haven_labelled_spss</code> ) that holds a value it declares missing; turn those codes into NA with <code>haven::zap_missing()</code> first. A declared value that is blank is not refused, since blank cells count as missing. The SPSS class of haven before 2.0 ( <code>labelled_spss</code> ) is refused the same way, but <code>haven::zap_missing()</code> leaves it unchanged, so set the values its <code>na_values</code> or <code>na_range</code> attribute declares to NA first. |
| <b>srange</b> | An optional numeric vector specifying the minimum and maximum values of the HiTOP-BR items, used for reverse-coding. (default = <code>c(1, 4)</code> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>alpha</b>  | Optional logical; if TRUE, include a column of Cronbach's alpha per scale. (default = TRUE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>omega</b>  | Optional logical; if TRUE, include a column of McDonald's omega (total per scale, estimated via a one-factor CFA (requires the <b>lavaan</b> package). (default = TRUE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## Details

Alpha is computed by `calc_alpha()` (covariance-based, pairwise deletion) and omega by `calc_omega()` (one-factor lavaan CFA, FIML). A scale whose estimate cannot be computed (e.g. too few items or, for omega, a non-converging CFA or an uninstalled **lavaan**) is returned as NA rather than aborting the call. Omega needs at least 3 items: for a scale with fewer, no model is fitted and omega is NA. The overlapping **externalizing** and **pFactor** scales are included alongside the six base spectra.

## Value

A **tibble** with one row per scale and columns **Scale** (the scale's canonical display name, as the instrument's keying table spells it), **camelCase** (the stem that names the scale's column in the matching `score_*`() output, read from the same keying-table row), **nItems** (integer), and (when requested) **alpha** and **omega**.

## Examples

```
# Per-scale alpha for the HiTOP-BR
reliability_hitopbr(sim_hitopbr, items = 1:45, omega = FALSE)
```

---

|                     |                                            |
|---------------------|--------------------------------------------|
| reliability_hitopsr | <i>Estimate HiTOP-SR scale reliability</i> |
|---------------------|--------------------------------------------|

---

## Description

Compute per-scale internal-consistency reliability — Cronbach's alpha and McDonald's omega — for the HiTOP Self-Report (405 items). Reliability is estimated on the reverse-keyed item responses for each of the scales that `score_hitopsr()` outputs and, with `include_subscales = TRUE`, for each of its 17 subscales (fewer under a `module`).

## Usage

```
reliability_hitopsr(
  data,
  items,
  srange = c(1, 4),
  alpha = TRUE,
  omega = TRUE,
  module = NULL,
  layout = c("instrument", "printed"),
  include_subscales = FALSE,
  subset = NULL
)
```

## Arguments

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>data</b>  | A data frame containing the HiTOP-SR items (numerically coded): all 405 of them, or, when <code>module</code> is supplied, that module's items.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>items</b> | A vector of column names (as strings) or numbers (as integers) corresponding to the HiTOP-SR items held in <code>data</code> — all 405, or, when <code>module</code> is supplied, that module's items. Items must be supplied in instrument order, or in the form's printed order under <code>layout = "printed"</code> ; duplicated entries are an error. The ascending-name warning <code>score_hitopsr()</code> describes applies here too. Under <code>layout = "printed"</code> , names whose trailing numbers equal the module's <code>item_order</code> are in the printed order and pass with no warning. When <code>items</code> is omitted or <code>NULL</code> , the names on the <code>module</code> 's <code>columns</code> attribute are used, as in <code>score_hitopsr()</code> . A call with <code>items</code> omitted is an error if no <code>module</code> is supplied, if the module has no <code>columns</code> attribute, or under <code>layout = "printed"</code> . A supplied <code>items</code> is always used, whether or not the module has the attribute. Each column must be numeric or logical, or character holding only numbers (blank cells and NA values count as missing, but the text "NA" is refused). A |

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                | <p>haven labelled column is read as its plain values. Any other column, such as the choice text of an online export or a factor, is an error of class <code>hitop_nonnumeric_items</code>. So is a 64-bit integer (<code>integer64</code>) column, and, in a UTF-8 session, a column holding text that is not valid UTF-8 (text marked Latin-1 is read as its text); convert such text with <code>iconv()</code>. So is an SPSS column (<code>haven_labelled_spss</code>) that holds a value it declares missing; turn those codes into NA with <code>haven::zap_missing()</code> first. A declared value that is blank is not refused, since blank cells count as missing. The SPSS class of haven before 2.0 (<code>labelled_spss</code>) is refused the same way, but <code>haven::zap_missing()</code> leaves it unchanged, so set the values its <code>na_values</code> or <code>na_range</code> attribute declares to NA first.</p> |
| <code>srange</code>            | An optional numeric vector specifying the minimum and maximum values of the HiTOP-SR items, used for reverse-coding. (default = <code>c(1, 4)</code> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <code>alpha</code>             | Optional logical; if TRUE, include a column of Cronbach's alpha per scale. (default = TRUE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <code>omega</code>             | Optional logical; if TRUE, include a column of McDonald's omega (total) per scale, estimated via a one-factor CFA (requires the <code>lavaan</code> package). (default = TRUE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <code>module</code>            | An optional <code>hitop_module</code> object, as returned by <code>hitop_module()</code> , describing a module of the instrument. When supplied, <code>data</code> and <code>items</code> hold only that module's item columns — in ascending instrument order, as the <code>generate*_hitopsr()</code> forms lay them out — and one row is returned per module scale. When NULL, all 405 items are expected and all 76 scales are estimated. A module whose <code>items</code> , <code>nItems</code> , <code>camelCase</code> or <code>instrument</code> differ from a fresh <code>hitop_module()</code> build of its scales, as after an edit by hand, or that cannot be rebuilt from its <code>instrument</code> and <code>scales</code> , is refused with an error of class <code>hitop_module_mismatch</code> . (default = NULL)                                                                                                     |
| <code>layout</code>            | The order the item columns are in. "instrument" (the default) is ascending HiTOP-SR order, as the <code>generate*_hitopsr()</code> forms lay the items out. "printed" is the order a shuffled Word form printed them: column k holds the answer to the form's printed item k. It needs a module carrying an <code>item_order</code> attribute, the record a module descriptor written by <code>generate_docx_hitopsr()</code> with <code>randomize = TRUE</code> keeps and <code>read_module()</code> returns; the columns are put back into instrument order through that attribute before the estimates run. A call with <code>layout = "printed"</code> and no module, a module with no <code>item_order</code> , or an <code>item_order</code> that is not a permutation of the module's items is an error. (default = "instrument")                                                                                                  |
| <code>include_subscales</code> | A logical. If TRUE, one row per subscale in <code>hitopsr_subscales</code> follows the scale rows, in that table's row order. A subscale row's <code>Scale</code> is the subscale's name ( <code>Subscale</code> in <code>hitopsr_subscales</code> ), and its <code>camelCase</code> and <code>nItems</code> come from the same row. With a module, only the subscales whose parent scale is in the module get a row. (default = FALSE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <code>subset</code>            | Deprecated. The former name of <code>module</code> ; supplying it warns. Supplying both <code>module</code> and <code>subset</code> is an error. (default = NULL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## Details

Alpha is computed by `calc_alpha()` (covariance-based, pairwise deletion) and omega by `calc_omega()` (one-factor lavaan CFA, FIML). A scale whose estimate cannot be computed (e.g. too few items or, for omega, a non-converging CFA or an uninstalled **lavaan**) is returned as NA rather than aborting the call. Omega needs at least 3 items: for a scale with fewer, no model is fitted and omega is NA.

## Value

A `tibble` with one row per scale (and per subscale under `include_subscales = TRUE`) and columns `Scale` (the scale's canonical display name, as the instrument's keying table spells it), `camelCase` (the stem that names the scale's column in the matching `score_*`() output, read from the same keying-table row), `nItems` (integer), and (when requested) `alpha` and `omega`.

## Examples

```
# Per-scale alpha for the HiTOP-SR
reliability_hitopsr(sim_hitopsr, items = 1:405, omega = FALSE)

# Per-scale alpha for data collected with a two-scale module. Select the
# item columns by name: `m$items` holds original HiTOP-SR numbers, which are
# column positions only in a data frame that is exactly the 405 items in order.
m <- hitop_module("hitopsr", scales = c("Agoraphobia", "Appetite Loss"))
collected <- sim_hitopsr[sprintf("hsr_%03d", m$items)]
reliability_hitopsr(collected, items = names(collected), module = m, omega = FALSE)

# The same for data entered off a shuffled form: the columns are in the
# order the form printed its items, recorded on the module's `item_order`
# attribute (here set by hand; a descriptor written with `randomize = TRUE`
# carries it).
attr(m, "item_order") <- c(144L, 202L, 66L, 389L, 260L, 109L, 291L, 118L)
printed <- collected[match(attr(m, "item_order"), m$items)]
reliability_hitopsr(printed, items = seq_along(printed), module = m,
  layout = "printed", omega = FALSE)
```

---

reliability\_pid5

---

*Estimate PID-5 scale reliability*


---

## Description

Compute per-scale internal-consistency reliability — Cronbach's alpha and McDonald's omega — for the Personality Inventory for DSM-5: full version (PID-5, 220 items), short form (PID-5-SF, 100 items), brief form (PID-5-BF, 25 items), modified brief form (PID5BF+M, 36 items), Informant Form (PID-5-IRF, 218 items; Markon et al., 2013), or Forensic Faceted Brief Form (PID-5-FFBF, 100 items; Niemeyer et al., 2022). Reliability is estimated on the reverse-keyed item responses, at the facet level for FULL/SF/IRF/FFBF and the domain level for BF (the same scales `score_pid5()` outputs, before FULL/SF/IRF/FFBF

domain aggregation). The FFBF facets are its 25 four-item facets in the SF's order (see `score_pid5()`). The IRF facets are the full form's 25, numbered by informant item and reverse-keyed as the APA IRF key's Facet Table marks (see `score_pid5()`). The BF version also returns a **Total** row covering all 25 items; note that this scale spans five heterogeneous domains, so its internal consistency is not comparable to a domain's and is reported without further interpretation.

## Usage

```
reliability_pid5(
  data,
  items,
  version = c("FULL", "SF", "BF", "BFPM", "IRF", "FFBF"),
  srange = c(0, 3),
  alpha = TRUE,
  omega = TRUE
)
```

## Arguments

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>data</b>    | A data frame containing (at least) all the PID items (numerically scored and in order).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>items</b>   | A vector of column names (as strings) or numbers (as integers) corresponding to the PID items in order. Items must be supplied in instrument order; duplicated entries are an error. Each column must be numeric or logical, or character holding only numbers (blank cells and NA values count as missing, but the text "NA" is refused). A haven labelled column is read as its plain values. Any other column, such as the choice text of an online export or a factor, is an error of class <code>hitop_nonnumeric_items</code> . So is a 64-bit integer ( <code>integer64</code> ) column, and, in a UTF-8 session, a column holding text that is not valid UTF-8 (text marked Latin-1 is read as its text); convert such text with <code>iconv()</code> . So is an SPSS column ( <code>haven_labelled_spss</code> ) that holds a value it declares missing; turn those codes into NA with <code>haven::zap_missing()</code> first. A declared value that is blank is not refused, since blank cells count as missing. The SPSS class of haven before 2.0 ( <code>labelled_spss</code> ) is refused the same way, but <code>haven::zap_missing()</code> leaves it unchanged, so set the values its <code>na_values</code> or <code>na_range</code> attribute declares to NA first. |
| <b>version</b> | A string indicating the version of the PID to score: "FULL", "SF", "BF", "BFPM" (the 36-item PID5BF+M), "IRF" (the 218-item Informant Form), or "FFBF" (the 100-item Forensic Faceted Brief Form). Only a full name is accepted, in any letter case. Any other value, a start of a name such as "F" included, is an error of class <code>hitop_unknown_version</code> . (default = "FULL")                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>srange</b>  | An optional numeric vector specifying the minimum and maximum values of the items, used for reverse-coding. (default = <code>c(0, 3)</code> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>alpha</b>   | Optional logical; if TRUE, include a column of Cronbach's alpha per scale. (default = TRUE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

**omega** Optional logical; if TRUE, include a column of McDonald's omega (total) per scale, estimated via a one-factor CFA (requires the **lavaan** package). (default = TRUE)

## Details

The BFPM version returns both levels: its 18 two-item facets, then its 6 domains, each estimated over the 6 items of its 3 facets (the map is in [pid\\_bfpm\\_domains](#)). Omega is NA for every facet, because a one-factor model of 2 items is not identified; alpha is reported for all 24 rows.

Alpha is computed by [calc\\_alpha\(\)](#) (covariance-based, pairwise deletion) and omega by [calc\\_omega\(\)](#) (one-factor lavaan CFA, FIML). A scale whose estimate cannot be computed (e.g. too few items or, for omega, a non-converging CFA or an uninstalled **lavaan**) is returned as NA rather than aborting the call. Omega needs at least 3 items: for a scale with fewer, no model is fitted and omega is NA.

## Value

A [tibble](#) with one row per scale and columns **Scale** (the scale's canonical display name, as the instrument's keying table spells it), **camelCase** (the stem that names the scale's column in the matching **score\_\***() output, read from the same keying-table row), **nItems** (integer), and (when requested) **alpha** and **omega**.

## References

Markon, K. E., Quilty, L. C., Bagby, R. M., & Krueger, R. F. (2013). The development and psychometric properties of an informant-report form of the Personality Inventory for DSM-5 (PID-5). *Assessment*, 20(3), 370-383. doi:10.1177/1073191113486513 The scoring key for **version = "IRF"** is the APA's *The Personality Inventory for DSM-5—Informant Form (PID-5-IRF)—Adult* (2013).

Niemeyer, L. M., Grosz, M. P., Zimmermann, J., & Back, M. D. (2022). Assessing maladaptive personality in the forensic context: Development and validation of the Personality Inventory for DSM-5 Forensic Faceted Brief Form (PID-5-FFBF). *Journal of Personality Assessment*, 104(1), 30-43. doi:10.1080/00223891.2021.1923522 The source of **version = "FFBF"**.

## Examples

```
# Facet-level reliability for the full PID-5 (alpha only)
reliability_pid5(sim_pid5, items = 1:220, version = "FULL", omega = FALSE)
```

## Description

Rename data frame columns to standard HiTOP-SR item names based on either legacy ("Original") variable names or item text matching.

## Usage

```
rename_hitopsr_items(
  data,
  method = c("original", "text"),
  item_cols = NULL,
  item_text = NULL,
  prefix = "hsr_"
)
```

## Arguments

|                  |                                                                                                                                                                                                                                                                                                                    |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>data</b>      | A data frame containing the HiTOP-SR items.                                                                                                                                                                                                                                                                        |
| <b>method</b>    | A string specifying the matching method: "original" to match against the legacy item pool names in <code>hitopsr_items\$Original</code> , or "text" to match against the literal item prompt text. (default = "original")                                                                                          |
| <b>item_cols</b> | An optional character vector of current column names to be renamed. Required if <code>method = "text"</code> .                                                                                                                                                                                                     |
| <b>item_text</b> | An optional character vector of item texts corresponding exactly to the columns specified in <code>item_cols</code> . Required if <code>method = "text"</code> .                                                                                                                                                   |
| <b>prefix</b>    | A string pasted literally before each standardized item number, which is zero-padded to three digits: <code>hsr_001</code> to <code>hsr_405</code> under the default, the pattern the shipped datasets and the package's REDCap export use (the Qualtrics export writes <code>HSR_001</code> ). (default = "hsr_") |

## Value

A data frame with renamed column names for the matched HiTOP-SR items. Inputs that could not be matched keep their names, and each of the three warnings this function raises carries a condition class callers may catch or suppress by. Under `method = "original"`, if no column matches a legacy name, nothing is renamed and the report is `hitop_no_columns_matched`. Under `method = "text"`, an `item_text` entry matching no item is skipped and named in a `hitop_unmatched_items` report. Under either method, if some but not all of the 405 items were renamed, the completeness report is `hitop_incomplete_rename`.

## Examples

```
# Rename legacy item-pool columns to standard HiTOP-SR item names
legacy <- head(hitopsr_items$Original, 3)
df <- as.data.frame(matrix(0, nrow = 2, ncol = 3,
                           dimnames = list(NULL, legacy)))
names(rename_hitopsr_items(df, method = "original"))
```

---

|                   |                                                    |
|-------------------|----------------------------------------------------|
| rename_pid5_items | <i>Rename Columns to Standard PID-5 Item Names</i> |
|-------------------|----------------------------------------------------|

---

## Description

Rename data frame columns to the standard PID-5 item names of one form, matching either on the item number carried in the current column name or on the literal item prompt text. The standard names are the ones the package's REDCap and Qualtrics exports write and the shipped datasets carry: `pid5_001` to `pid5_220` for the full form, `pid5sf_001` to `pid5sf_100` for the short form, and `pid5bf_01` to `pid5bf_25` for the brief form. The PID5BF+M names, `pid5bfpm_01` to `pid5bfpm_36`, the Informant Form names, `pid5irf_001` to `pid5irf_218`, and the Forensic Faceted Brief Form names, `pid5ffbf_001` to `pid5ffbf_100`, follow the same pattern.

## Usage

```
rename_pid5_items(
  data,
  version = c("FULL", "SF", "BF", "BFPM", "IRF", "FFBF"),
  method = c("number", "text"),
  item_cols = NULL,
  item_text = NULL,
  from_prefix = "pid_",
  prefix = NULL
)
```

## Arguments

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>data</b>    | A data frame containing the PID-5 items.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>version</b> | A string specifying the PID-5 form the items belong to: "FULL" (220 items), "SF" (100 items), "BF" (25 items), "BFPM" (the 36-item PID5BF+M), "IRF" (the 218-item Informant Form, whose text matches <code>pid_items\$TextIRF</code> ), or "FFBF" (the 100-item Forensic Faceted Brief Form, whose text matches any of the four texts in <code>pid_ffbf_items</code> : self or informant report, English or German). Only a full name is accepted, in any letter case. Any other value, a start of a name such as "F" included, is an error of class <code>hitop_unknown_version</code> . (default = "FULL")                                                                                                                                                                                        |
| <b>method</b>  | A string specifying the matching method: "number" to rename columns spelled <code>from_prefix</code> followed by an item number, or "text" to match against the literal item prompt text in <code>pid_items\$Text</code> ( <code>pid_items\$TextIRF</code> for <code>version = "IRF"</code> ; for <code>version = "FFBF"</code> , any of the four texts in <code>pid_ffbf_items</code> ). Typographic quotes (‘ ’ “ ”) count as straight ones, and any periods, ellipses (... or ...), spaces (the no-break space too), tabs or line breaks at the start or the end of the text are ignored. So a leading ellipsis and a final period do not count. The informant text has no "He or she..." stem, so remove that stem from text copied from the printed informant form first. (default = "number") |

The forms number their items independently, so "number" reads the digits as an item number of the form named by **version**: under **version = "SF"**, **pid\_7** is short-form item 7, not the full-form item the short form numbers 7. Data labelled by full-form item numbers must be renamed with **version = "FULL"** first, or matched with **method = "text"**.

|                    |                                                                                                                                                                                                                                                                    |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>item_cols</b>   | An optional character vector of current column names to be renamed. Required if <b>method = "text"</b> .                                                                                                                                                           |
| <b>item_text</b>   | An optional character vector of item texts corresponding exactly to the columns specified in <b>item_cols</b> . Required if <b>method = "text"</b> .                                                                                                               |
| <b>from_prefix</b> | A string matched literally at the start of a column name under <b>method = "number"</b> , before the item number. The default is the spelling this package's own PID-5 datasets used before they were renamed to match the exports. (default = "pid_")             |
| <b>prefix</b>      | A string pasted literally before each standardized item number, which is zero-padded to the width of the form's largest item number. NULL resolves to the form's own stem: "pid5_", "pid5sf_", "pid5bf_", "pid5bfpm_", "pid5irf_" or "pid5ffbf_". (default = NULL) |

## Value

A data frame with renamed column names for the matched PID-5 items. Columns that could not be matched keep their names. Under **method = "number"**, a column spelled like an item of the instrument whose number names no item of this form, and under **method = "text"**, an **item\_text** entry matching no item of this form, are skipped and named in a warning of class **hitop\_unmatched\_items**, which callers may catch or suppress by class. A column not spelled like an item number is left alone and not reported.

Two other warnings carry a class of their own. Under **method = "number"**, if no column at all is named **from\_prefix** followed by a number, nothing is renamed and the report is **hitop\_no\_columns\_matched**. Under either method, if some but not all of the form's items were renamed, the completeness report is **hitop\_incomplete\_rename**.

Under **method = "text"**, a call in which two columns match the same item is an error of class **hitop\_duplicate\_item\_match**, since both would take the same name. The message names the item and the columns. For the FFBF this happens when a data frame holds two texts of one item, for example its self-report and informant texts, or its English and German texts. Rename each form's columns in its own data frame, or give each call its own **prefix**.

## References

Markon, K. E., Quilty, L. C., Bagby, R. M., & Krueger, R. F. (2013). *The Personality Inventory for DSM-5—Informant Form (PID-5-IRF)—Adult*. American Psychiatric Association. The source of the informant wording that **version = "IRF"** matches under **method = "text"**. See also Markon et al. (2013), *Assessment*, 20(3), 370-383. doi:10.1177/1073191113486513

## Examples

```
# Rename columns named as this package's datasets were before the rename
```

```
df <- data.frame(pid_1 = c(0, 1), pid_2 = c(2, 3), age = c(30, 40))
names(suppressWarnings(rename_pid5_items(df, version = "FULL")))
```

---

score\_hitopbr

*Score the HiTOP-BR Instrument*


---

## Description

Create a data frame with scores on all the HiTOP-BR scales.

## Usage

```
score_hitopbr(
  data,
  items,
  srange = c(1, 4),
  prefix = "hbr_",
  missing = c("available", "complete"),
  calc_se = FALSE,
  append = TRUE
)
```

## Arguments

|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>data</b>   | A data frame containing all HiTOP-BR items (numerically coded).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>items</b>  | A vector of column names (as strings) or numbers (as integers) corresponding to the 45 HiTOP-BR items in order. Items must be supplied in instrument order; a misordered mapping silently scores the wrong items, so a warning is issued when the names share a common prefix and trailing number but those numbers are not ascending. Duplicated entries are an error. Each column must be numeric or logical, or character holding only numbers (blank cells and NA values count as missing, but the text "NA" is refused). A haven labelled column is read as its plain values. Any other column, such as the choice text of an on-line export or a factor, is an error of class <code>hitop_nonnumeric_items</code> . So is a 64-bit integer ( <code>integer64</code> ) column, and, in a UTF-8 session, a column holding text that is not valid UTF-8 (text marked Latin-1 is read as its text); convert such text with <code>iconv()</code> . So is an SPSS column ( <code>haven_labelled_spss</code> ) that holds a value it declares missing; turn those codes into NA with <code>haven::zap_missing()</code> first. A declared value that is blank is not refused, since blank cells count as missing. The SPSS class of haven before 2.0 ( <code>labelled_spss</code> ) is refused the same way, but <code>haven::zap_missing()</code> leaves it unchanged, so set the values its <code>na_values</code> or <code>na_range</code> attribute declares to NA first. |
| <b>srange</b> | An optional numeric vector specifying the minimum and maximum values of the HiTOP-BR items, used for reverse-coding. (default = <code>c(1, 4)</code> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>prefix</b>  | An optional string to add before each scale column name. If no prefix is desired, set to an empty string <code>"</code> . (default = <code>"hbr_"</code> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>missing</b> | A string selecting how missing item responses are handled when computing scale scores. <code>"available"</code> (the default) averages whatever items are present ( <code>rowMeans(na.rm = TRUE)</code> ); <code>"complete"</code> returns NA for any scale with a missing item ( <code>rowMeans(na.rm = FALSE)</code> ). (default = <code>"available"</code> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>calc_se</b> | <b>Deprecated.</b> This argument, and the <code>_se</code> columns it adds, will be removed in a future release; a call with <code>calc_se = TRUE</code> warns; the warning is classed <code>hitop_deprecated_calc_se</code> , so a caller can silence it by name. Use <code>interval_hitopbr()</code> for an interval around a respondent's true score. What it does while it lasts: an optional logical indicating whether to calculate a standard error for each scale score: the SD of the items the respondent actually answered divided by the square root of how many of those items they answered. Each one summarizes how much a respondent's answers varied within a scale. It is not a standard error of measurement — no reliability estimate enters it — so it does not give a confidence interval for a respondent's true score; for measurement precision see <code>reliability_hitopbr()</code> . (default = <code>FALSE</code> ) |
| <b>append</b>  | An optional logical indicating whether the new columns should be added to the end of the <code>data</code> input. (default = <code>TRUE</code> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Details

For per-scale reliability estimates (Cronbach's alpha, McDonald's omega), use `reliability_hitopbr()`.

**Errors.** With `append = TRUE`, a column of `data` whose name this call would also produce is an error rather than an overwrite or a duplicated column: the message names every colliding column. Re-run with `append = FALSE` to return only the new columns, or drop the colliding columns from `data` first. The condition is classed `hitop_append_collision`, so a caller can catch this refusal by name.

An item column that cannot be read as numbers (see `items`) is an error of class `hitop_nonnumeric_items`, raised before the collision check.

## Value

A `tibble` containing all scale scores and standard errors (if requested) and all original `data` columns (if requested).

## Examples

```
# Score all HiTOP-BR scales from the simulated data
score_hitopbr(sim_hitopbr, items = 1:45, append = FALSE)
```

score\_hitopsr

*Score the HiTOP-SR Instrument*

## Description

Create a data frame with scores on all the HiTOP-SR scales and, with `include_subscales = TRUE`, on its 17 subscales (fewer under a `module`).

## Usage

```
score_hitopsr(
  data,
  items,
  srange = c(1, 4),
  prefix = "hsr_",
  missing = c("available", "complete"),
  calc_se = FALSE,
  append = TRUE,
  module = NULL,
  layout = c("instrument", "printed"),
  include_subscales = FALSE,
  subset = NULL
)
```

## Arguments

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>data</b>  | A data frame containing the HiTOP-SR items (numerically coded): all 405 of them, or, when <code>module</code> is supplied, that module's items.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>items</b> | A vector of column names (as strings) or numbers (as integers) corresponding to the HiTOP-SR items held in <code>data</code> — all 405, or, when <code>module</code> is supplied, that module's items. Items must be supplied in instrument order, or in the form's printed order under <code>layout = "printed"</code> ; a mis-ordered mapping silently scores the wrong items, so a warning is issued when the names share a common prefix and trailing number but those numbers are not ascending. Under <code>layout = "printed"</code> , names whose trailing numbers equal the module's <code>item_order</code> element by element are in the printed order and pass with no warning. Zero padding does not matter. Other names that are not ascending still warn. Duplicated entries are an error. When <code>items</code> is omitted or <code>NULL</code> , the names on the <code>module</code> 's <code>columns</code> attribute are used, which <code>read_module()</code> returns from a descriptor that <code>generate_redcap_hitopsr()</code> or <code>generate_qualtrics_hitopsr()</code> wrote. A call with <code>items</code> omitted is an error if no <code>module</code> is supplied, if the module has no <code>columns</code> attribute, or under <code>layout = "printed"</code> . A supplied <code>items</code> is always used, whether or not the module has the attribute. Each column must be numeric or logical, or character holding only numbers (blank cells and <code>NA</code> values count as missing, but the text <code>"NA"</code> is refused). A haven labelled column is read as its plain |

values. Any other column, such as the choice text of an online export or a factor, is an error of class `hitop_nonnumeric_items`. So is a 64-bit integer (`integer64`) column, and, in a UTF-8 session, a column holding text that is not valid UTF-8 (text marked Latin-1 is read as its text); convert such text with `iconv()`. So is an SPSS column (`haven_labelled_spss`) that holds a value it declares missing; turn those codes into NA with `haven::zap_missing()` first. A declared value that is blank is not refused, since blank cells count as missing. The SPSS class of `haven` before 2.0 (`labelled_spss`) is refused the same way, but `haven::zap_missing()` leaves it unchanged, so set the values its `na_values` or `na_range` attribute declares to NA first.

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>srange</code>  | An optional numeric vector specifying the minimum and maximum values of the HiTOP-SR items, used for reverse-coding. (default = <code>c(1, 4)</code> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <code>prefix</code>  | An optional string to add before each scale column name. If no prefix is desired, set to an empty string <code>"</code> ". (default = <code>"hsr_"</code> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>missing</code> | A string selecting how missing item responses are handled when computing scale scores. <code>"available"</code> (the default) averages whatever items are present ( <code>rowMeans(na.rm = TRUE)</code> ); <code>"complete"</code> returns NA for any scale with a missing item ( <code>rowMeans(na.rm = FALSE)</code> ). (default = <code>"available"</code> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <code>calc_se</code> | <b>Deprecated.</b> This argument, and the <code>_se</code> columns it adds, will be removed in a future release; a call with <code>calc_se = TRUE</code> warns; the warning is classed <code>hitop_deprecated_calc_se</code> , so a caller can silence it by name. Use <code>interval_hitopsr()</code> for an interval around a respondent's true score. What it does while it lasts: an optional logical indicating whether to calculate a standard error for each scale score: the SD of the items the respondent actually answered divided by the square root of how many of those items they answered. Each one summarizes how much a respondent's answers varied within a scale. It is not a standard error of measurement — no reliability estimate enters it — so it does not give a confidence interval for a respondent's true score; for measurement precision see <code>reliability_hitopsr()</code> . (default = <code>FALSE</code> ) |
| <code>append</code>  | An optional logical indicating whether the new columns should be added to the end of the <code>data</code> input. (default = <code>TRUE</code> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <code>module</code>  | An optional <code>hitop_module</code> object, as returned by <code>hitop_module()</code> , describing a module of the instrument. When supplied, <code>data</code> and <code>items</code> hold only that module's item columns — in ascending instrument order, as the <code>generate*_hitopsr()</code> forms lay them out — and only that module's scales are scored. When <code>NULL</code> , all 405 items are expected and all 76 scales are scored. A module whose <code>items</code> , <code>nItems</code> , <code>camelCase</code> or <code>instrument</code> differ from a fresh <code>hitop_module()</code> build of its scales, as after an edit by hand, or that cannot be rebuilt from its <code>instrument</code> and <code>scales</code> , is refused with an error of class <code>hitop_module_mismatch</code> . (default = <code>NULL</code> )                                                                                    |
| <code>layout</code>  | The order the item columns are in. <code>"instrument"</code> (the default) is ascending HiTOP-SR order, as the <code>generate*_hitopsr()</code> forms lay the items out. <code>"printed"</code> is the order a shuffled Word form printed them: column <code>k</code> holds the answer to the form's printed item <code>k</code> . It needs a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

module carrying an `item_order` attribute, the record a module descriptor written by `generate_docx_hitopsr()` with `randomize = TRUE` keeps and `read_module()` returns; the columns are put back into instrument order through that attribute before scoring. A call with `layout = "printed"` and no module, a module with no `item_order`, or an `item_order` that is not a permutation of the module's items is an error. (default = "instrument")

#### include\_subscales

A logical. If `TRUE`, the 17 subscales in `hitopsr_subscales` are also scored, each as the mean of its items under the `missing` rule. Their columns are named `prefix` plus the subscale's `camelCase` name (for example `hsr_cynicism`) and follow the scale columns, in the row order of `hitopsr_subscales`. Under `calc_se = TRUE`, their `_se` columns follow the scale `_se` columns in the same order. With a module, only the subscales whose parent scale is in the module are scored. (default = `FALSE`)

#### subset

Deprecated. The former name of `module`; supplying it warns. Supplying both `module` and `subset` is an error. (default = `NULL`)

### Details

For per-scale reliability estimates (Cronbach's alpha, McDonald's omega), use `reliability_hitopsr()`.

**Errors.** With `append = TRUE`, a column of `data` whose name this call would also produce is an error rather than an overwrite or a duplicated column: the message names every colliding column. Re-run with `append = FALSE` to return only the new columns, or drop the colliding columns from `data` first. The condition is classed `hitop_append_collision`, so a caller can catch this refusal by name.

An item column that cannot be read as numbers (see `items`) is an error of class `hitop_nonnumeric_items`, raised before the collision check.

### Value

A `tibble` containing all scale scores, subscale scores (if requested with `include_subscales`), standard errors (if requested) and all original `data` columns (if requested).

### Examples

```
# Score all HiTOP-SR scales from the simulated data
score_hitopsr(sim_hitopsr, items = 1:405, append = FALSE)

# Score the 17 subscales too; their columns follow the 76 scale columns
score_hitopsr(sim_hitopsr, items = 1:405, include_subscales = TRUE,
  append = FALSE)

# Score data collected with a two-scale module. Select the item columns
# by name: `m$items` holds original HiTOP-SR numbers, which are column
# positions only in a data frame that is exactly the 405 items in order.
m <- hitop_module("hitopsr", scales = c("Agoraphobia", "Appetite Loss"))
collected <- sim_hitopsr[sprintf("hsr_%03d", m$items)]
score_hitopsr(collected, items = names(collected), module = m, append = FALSE)
```

```
# Score data entered off a shuffled form: the columns are in the order the
# form printed its items, recorded on the module's `item_order` attribute
# (here set by hand; a descriptor written with `randomize = TRUE` carries it).
attr(m, "item_order") <- c(144L, 202L, 66L, 389L, 260L, 109L, 291L, 118L)
printed <- collected[match(attr(m, "item_order"), m$items)]
score_hitopsr(printed, items = seq_along(printed), module = m,
               layout = "printed", append = FALSE)
```

score\_pid5

*Score the Personality Inventory for DSM-5*

## Description

Calculate scale scores on the Personality Inventory for DSM-5: full version (PID-5, 220 items), short form version (PID-5-SF, 100 items), brief form version (PID-5-BF, 25 items), modified brief form (PID5BF+M, 36 items; Bach et al., 2020), Informant Form (PID-5-IRF, 218 items; Markon et al., 2013), or Forensic Faceted Brief Form (PID-5-FFBF, 100 items; Niemeyer et al., 2022) from item-level data.

## Usage

```
score_pid5(
  data,
  items,
  version = c("FULL", "SF", "BF", "BFPM", "IRF", "FFBF"),
  srange = c(0, 3),
  prefix = "pid_",
  missing = c("apa", "available", "complete"),
  calc_se = FALSE,
  append = TRUE
)
```

## Arguments

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>data</b>  | A data frame containing (at least) all the PID items (numerically scored and in order).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>items</b> | A vector of column names (as strings) or numbers (as integers) corresponding to the PID items in order. Items must be supplied in instrument order; a misordered mapping silently scores the wrong items, so a warning is issued when the names share a common prefix and trailing number but those numbers are not ascending. Duplicated entries are an error. Each column must be numeric or logical, or character holding only numbers (blank cells and NA values count as missing, but the text "NA" is refused). A haven labelled column is read as its plain values. Any other column, such as the choice text of an online export or a factor, is an error of class <code>hitop_nonnumeric_items</code> . So is a 64-bit integer ( <code>integer64</code> ) column, and, in a UTF-8 session, a column holding text that is not valid UTF-8 |

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | (text marked Latin-1 is read as its text); convert such text with <code>iconv()</code> . So is an SPSS column ( <code>haven_labelled_spss</code> ) that holds a value it declares missing; turn those codes into NA with <code>haven::zap_missing()</code> first. A declared value that is blank is not refused, since blank cells count as missing. The SPSS class of <code>haven</code> before 2.0 ( <code>labelled_spss</code> ) is refused the same way, but <code>haven::zap_missing()</code> leaves it unchanged, so set the values its <code>na_values</code> or <code>na_range</code> attribute declares to NA first.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <code>version</code> | A string indicating the version of the PID to score: "FULL", "SF", "BF", "BFPM" (the 36-item PID5BF+M), "IRF" (the 218-item Informant Form), or "FFBF" (the 100-item Forensic Faceted Brief Form). Only a full name is accepted, in any letter case. Any other value, a start of a name such as "F" included, is an error of class <code>hitop_unknown_version</code> . (default = "FULL")                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <code>srange</code>  | An optional numeric vector specifying the minimum and maximum values of the items, used for reverse-coding. (default = <code>c(0, 3)</code> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <code>prefix</code>  | An optional string to add before each scale column name. If no prefix is desired, set to an empty string "". (default = "pid_")                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <code>missing</code> | A string selecting how missing item responses are handled when computing scale scores. "apa" (the default) follows the published APA scoring key: a facet or domain-item scale with more than 25% of its items unanswered is set to NA, and otherwise the raw score is prorated to the full item count and rounded to the nearest whole number before averaging (a FULL, SF, IRF, FFBF or BFPM domain is NA if any one of its three contributing facets is NA). The PID-5-IRF key prints this step as "round up to the nearest whole number". The package reads it as the nearest-whole-number rule that every other APA PID-5 key states, so an informant facet prorates exactly as the matching self-report facet does. A prorated half rounds away from zero, which is up for the default 0 to 3 coding and down for a negative score under a negative <code>srange</code> . "available" averages whatever items are present ( <code>rowMeans(na.rm = TRUE)</code> ). "complete" returns NA for any scale with a missing item ( <code>rowMeans(na.rm = FALSE)</code> ). With no missing items the three agree. (default = "apa")                                            |
| <code>calc_se</code> | <b>Deprecated.</b> This argument, and the <code>_se</code> columns it adds, will be removed in a future release; a call with <code>calc_se = TRUE</code> warns; the warning is classed <code>hitop_deprecated_calc_se</code> , so a caller can silence it by name. This package has no interval function for the PID-5, so there is no replacement for it on this instrument; for measurement precision see <a href="#">reliability_pid5()</a> . What it does while it lasts: an optional logical indicating whether to calculate a standard error for each scale score. For the facets, and for the brief form's domains and total, this is the SD of the items the respondent actually answered divided by the square root of how many of those items they answered. The FULL, SF, IRF, FFBF and BFPM domain scores are means of three facet scores rather than of items, so their standard errors are taken one level up: the SD of the three contributing facet scores divided by the square root of 3. Standard errors are NA wherever their scale score is NA. A BFPM facet scored from one answered item under <code>missing = "available"</code> has a score but an NA |

standard error, because the SD of one value is undefined. Each one summarizes how much a respondent's answers varied within a scale. It is not a standard error of measurement — no reliability estimate enters it — so it does not give a confidence interval for a respondent's true score; for measurement precision see `reliability_pid5()`. (default = FALSE)

**append** An optional logical indicating whether the new columns should be added to the end of the `data` input. (default = TRUE)

## Details

For the FULL, SF and IRF versions, the output includes the 25 facet scores followed by the 5 personality-trait domain scores; the FFBF version adds 2 forensic domains after them (see below). Following the APA scoring key (Step 3), each domain score is the mean of the average scores of its 3 primary facets (the map is stored in `pid_domains`). The BF version scores its 5 domains directly from its items, and adds a `total` score. By default (`missing = "apa"`) all versions apply the APA missing-data and proration rule; use `missing = "available"` or `missing = "complete"` for the traditional `rowMeans()` behaviors. For per-scale reliability estimates (Cronbach's alpha, McDonald's omega), use `reliability_pid5()`.

### The PID5BF+M:

`version = "BFPM"` scores the PID5BF+M of Bach et al. (2020), a 36-item form with 6 domains: the 5 PID-5 trait domains and Anankastia. Every item is a PID-5 item, and none is reverse-keyed. The output is 18 facets of 2 items each, then 6 domains, in the order of the form's key: Negative affectivity, Detachment, Antagonism, Disinhibition, Anankastia and Psychoticism. Each domain score is the mean of its 3 facet scores (the map is stored in `pid_bfpm_domains`). The 15 facets the form shares with the PID-5 keep their PID-5 column names. The three Anankastia facets are `perfectionism`, `rigidity` and `orderliness`. All six of their items are PID-5 Rigid Perfectionism items, but these facets are not parts of `rigidPerfectionism`, which this version does not score.

Scores are item means on the 0 to 3 scale, as for the other versions. The form's published key sums the 2 items of a facet and averages the facet sums for a domain. On complete data, the key's facet sum is  $2 * \text{pid\_}<\text{facet}>$  and its domain score is  $2 * \text{pid\_}<\text{domain}>$ . No missing-data rule is published for this form. Under the default `missing = "apa"`, the 25% rule applied to a 2-item facet means that any missing item makes the facet NA, and an NA facet makes its domain NA. So with whole-number responses "apa" gives the same output as "complete" here. (The APA rule rounds each scale's sum, so responses with decimals can differ.) Under `missing = "available"`, a facet can be scored from one item and a domain from one or two of its facets.

### The PID-5 Informant Form:

`version = "IRF"` scores the PID-5 Informant Form (PID-5-IRF; Markon et al., 2013), the APA's 218-item form on which an informant rates the person receiving care. Its output is the FULL version's: the same 25 facets and 5 domains, with the same column names and domain map (`pid_domains`). The form has no counterpart to self-report items 96 and 177, so its Anxiousness facet has 8 items and its Suspiciousness facet 6. Informant item `n` is self-report item `n` through 95, `n + 1` through 175, and `n + 2` after that; `pid_items$IRF` holds the mapping and `pid_items$TextIRF` the informant wording.

Fourteen items are reverse-scored: 7, 30, 35, 58, 87, 90, 96, 97, 130, 141, 154, 163, 208 and 213, the items the key's Facet Table marks R. The key's Step 1 also lists items 98

and 176, which the Facet Table does not mark and whose wording is not reversed; the package does not reverse them.

The key prints its proration step as "round up to the nearest whole number". The package applies the nearest-whole-number rule of every other APA PID-5 key, with a prorated half rounded away from zero (see `missing`). For a non-negative prorated raw score, the choice matters only under `missing = "apa"`, for a facet with at least one but no more than 25% of its items unanswered whose prorated raw score has a fractional part strictly between 0 and one half. There the package's facet score is  $1/n$  lower than a ceiling would give, for a facet of  $n$  items. Under a negative `srange` a negative prorated raw score can also differ from a ceiling at other fractions.

Informant scores have the full form's column names, and nothing in the output records the version. Do not pass them to `norm_pid5()` or `plot_pid5()` as `version = "FULL"`: those use self-report norms, and the informant norms (Markon et al., 2024, Tables A-10 and A-11) are not in `pid_norms`. `validity_pid5()` has no informant validity scales.

### The PID-5 Forensic Faceted Brief Form:

`version = "FFBF"` scores the PID-5 Forensic Faceted Brief Form (PID-5-FFBF; Niemeyer et al., 2022), an adaptation of the 100-item faceted short form for people in prison, with a self-report and an informant version. The form was validated in German. The English text in `pid_ffbf_items` is the authors' English version, and the study validated only the German version (p. 40). Items they did not adapt keep the APA PID-5 wording. Many items are rewritten for prisoners, and the authors numbered the form afresh, so its items are not the SF's: matched by number, 98 of the 100 SF items fall in a different facet. Facet  $k$ , in alphabetical order, holds items  $k$ ,  $k + 25$ ,  $k + 50$  and  $k + 75$ . Items 12 and 26 are reverse-scored.

The output is 25 facets, named and ordered as the SF's, then 7 domains: the 5 APA domains of `pid_domains` and the two domains of the paper's four-factor solution that are not APA domains, Disinhibited Aggression (Emotional Lability, Hostility, Impulsivity) and Insecurity (Separation Insecurity, Anxiousness, Perceptual Dysregulation). The paper's four-factor Antagonism and Detachment have the facets of the APA domains of the same names, so they are not repeated. `pid_ffbf_domains` holds the map. The four-factor structure comes from one exploratory study of 199 male prisoners, and the authors leave open whether Insecurity is needed (Niemeyer et al., 2022, p. 39). The seven domains share facets, so they are not independent scores.

**Missing data.** The paper prints no missing-data rule. Under `missing = "apa"` the package applies the full-form APA rule, as it does for the SF: a facet with 1 of its 4 items missing is prorated and rounded, a facet with 2 or more missing is NA, and a domain with an NA facet is NA. The authors' published analysis code scores differently. It takes the unrounded mean of the answered items for a facet with 1 item missing, and it scores a domain as the mean of its 12 items when up to 3 of them are missing, wherever they fall. With complete data the two rules agree. With missing items a facet can differ by up to  $1/12$  (for example 1.75 here against 1.67 for answers 0, 2 and 3), and a domain can be NA here where the code gives a value. The paper's descriptive statistics were computed under the code's rule. No `missing` mode reproduces it.

**Informant reports.** Informant data are scored with the same version. The paper averaged the responses of two informants item by item before scoring (p. 33), and the authors' code uses one informant's response where the other is missing; do that step first, for example with `rowMeans(cbind(x1, x2), na.rm = TRUE)` for each item, then set an item that both

informants skipped (NaN from that call) to NA. Averaged responses can be halves, and they score like any other values. Under `missing = "apa"` the proration step rounds them too: a facet with one item missing and answers 0.5, 1 and 1 scores 0.75, where `missing = "available"` gives 0.833. One informant's responses score directly.

`norm_pid5()`, `plot_pid5()` and `validity_pid5()` do not take the FFBF, because no FFBF norms or validity keys are published. The FFBF facet and APA domain columns carry the SF's names, so `norm_pid5()` converts them as `version = "SF"` with no version warning and `plot_pid5()` plots the result; do not do that, as it compares them with SF self-report norms from another population.

### The PID-5 child forms:

`version = "FULL"` scores the APA's 220-item PID-5 child form for ages 11 to 17, and `version = "BF"` scores its 25-item PID-5-BF child form (Krueger et al., 2013). The child forms print the adult forms' items in the same order, and their keys reverse the same items and assign them to the same facets and domains. So no separate version is needed, and data collected with `generate_docx_pid5child()`, `generate_qualtrics_pid5child()` or `generate_redcap_pid5child()` (or their `pid5bfchild` counterparts) score as adult data do. `pid_norms` holds no child norms, so `norm_pid5()` and `plot_pid5()` would compare child scores with norms from another population. The child forms print no validity scales, and no source on this package's shelf gives validity cut scores for them, so the cut scores `validity_pid5()` applies are not established for child data.

### The PID-5-BF total score:

`version = "BF"` returns a `total` column after its 5 domains. Markon et al. (2024, p. 23) define it as the item-level mean over **all 25 items**, not the mean of the 5 domain means: the total "can be computed by averaging the overall score by the total number of items in the measure (i.e., 25)". With five equal-sized domains the two definitions coincide on complete data and differ only when items are missing, where the published rule above governs.

The total is scored like any other scale, so `missing` applies to it at the 25-item level. Under `missing = "apa"` that means it is NA when more than a quarter of the 25 items are unanswered (7 or more) and prorated otherwise, independently of the domains. Because a 5-item domain is dropped at 2 unanswered items while the total tolerates 6, **a total can be reported alongside one or more NA domains** (at most 3 of the 5; blanking all five requires 10 unanswered items, which blanks the total as well). This is the published rule applied as written, not an oversight.

The FULL, SF, IRF, FFBF and BFPM versions have no total score: the PID-5 book defines one only for the brief form, and the PID5BF+M, PID-5-IRF and PID-5-FFBF sources define none.

**Errors.** With `append = TRUE`, a column of `data` whose name this call would also produce is an error rather than an overwrite or a duplicated column: the message names every colliding column. Re-run with `append = FALSE` to return only the new columns, or drop the colliding columns from `data` first. The condition is classed `hitop_append_collision`, so a caller can catch this refusal by name.

An item column that cannot be read as numbers (see `items`) is an error of class `hitop_nonnumeric_items`, raised before the collision check.

## Value

A [tibble](#) containing all scale scores and standard errors (if requested) and all original `data` columns (if requested)

## References

- Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2012). Initial construction of a maladaptive personality trait model and inventory for DSM-5. *Psychological Medicine*, 42, 1879-1890. doi:10.1017/s0033291711002674
- Anderson, J. L., Sellbom, M., & Salekin, R. T. (2016). Utility of the Personality Inventory for DSM-5-Brief Form (PID-5-BF) in the measurement of maladaptive personality and psychopathology. *Assessment*, 25(5), 596-607. doi:10.1177/1073191116676889
- Markon, K. E., Fossati, A., Somma, A., & Krueger, R. F. (2024). *Understanding the Personality Inventory for DSM-5 (PID-5)*. American Psychiatric Association Publishing. The source for the PID-5-BF total score's definition (p. 23) and for the normative tables in `pid_norms`.
- Maples, J. L., Carter, N. T., Few, L. R., Crego, C., Gore, W. L., Samuel, D. B., Williamson, R. L., Lynam, D. R., Widiger, T. A., Markon, K. E., Krueger, R. F., & Miller, J. D. (2015). Testing whether the DSM-5 personality disorder trait model can be measured with a reduced set of items: An item response theory investigation of the personality inventory for DSM-5. *Psychological Assessment*, 27(4), 1195-1210. doi:10.1037/pas0000120
- Bach, B., Kerber, A., Aluja, A., Bastiaens, T., Keeley, J. W., Claes, L., Fossati, A., Gutierrez, F., Oliveira, S. E. S., Pires, R., Riegel, K. D., Rolland, J.-P., Roskam, I., Sellbom, M., Somma, A., Spanemberg, L., Strus, W., Thimm, J. C., Wright, A. G. C., & Zimmermann, J. (2020). International assessment of DSM-5 and ICD-11 personality disorder traits: Toward a common nosology in DSM-5.1. *Psychopathology*, 53(3-4), 179-188. doi:10.1159/000507589 The source of the PID5BF+M.
- Markon, K. E., Quilty, L. C., Bagby, R. M., & Krueger, R. F. (2013). The development and psychometric properties of an informant-report form of the Personality Inventory for DSM-5 (PID-5). *Assessment*, 20(3), 370-383. doi:10.1177/1073191113486513
- Markon, K. E., Quilty, L. C., Bagby, R. M., & Krueger, R. F. (2013). *The Personality Inventory for DSM-5—Informant Form (PID-5-IRF)—Adult*. American Psychiatric Association. The scoring key for `version = "IRF"`.
- Niemeyer, L. M., Grosz, M. P., Zimmermann, J., & Back, M. D. (2022). Assessing maladaptive personality in the forensic context: Development and validation of the Personality Inventory for DSM-5 Forensic Faceted Brief Form (PID-5-FFBF). *Journal of Personality Assessment*, 104(1), 30-43. doi:10.1080/00223891.2021.1923522 The source of the PID-5-FFBF, its items (supplement Table S3) and its domains.
- Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2013). *The Personality Inventory for DSM-5 (PID-5)—Child Age 11–17* and *The Personality Inventory for DSM-5—Brief Form (PID-5-BF)—Child Age 11–17*. American Psychiatric Association. The child forms that `version = "FULL"` and `version = "BF"` also score.

## Examples

```
# Score the full PID-5 (25 facets + 5 domains) from the simulated data
```

```

score_pid5(sim_pid5, items = 1:220, version = "FULL", append = FALSE)

# Short form, using the item column names instead of positions
score_pid5(sim_pid5sf, items = sprintf("pid5sf_%03d", 1:100), version = "SF",
           append = FALSE)

# Brief form (5 domains + the total) with standard errors. `calc_se` is
# deprecated, so this call warns; the PID-5 has no interval function to
# replace it with.
score_pid5(sim_pid5bf, items = 1:25, version = "BF", calc_se = TRUE,
           append = FALSE)

# PID5BF+M (18 facets + 6 domains). No BF+M dataset ships, but every BF+M
# item is a PID-5 item, so take its 36 items from the full-form data in
# BF+M order.
bfpm_rows <- pid_items[!is.na(pid_items$BFPM), ]
bfpm_rows <- bfpm_rows[order(bfpm_rows$BFPM), ]
sim_bfpm <- sim_pid5[sprintf("pid5_%03d", bfpm_rows$FULL)]
score_pid5(sim_bfpm, items = 1:36, version = "BFPM", append = FALSE)

# PID-5 Informant Form (25 facets + 5 domains). No informant dataset ships;
# for illustration, take the 218 full-form items the informant form maps to.
irf_rows <- pid_items[!is.na(pid_items$IRF), ]
sim_irf <- sim_pid5[sprintf("pid5_%03d", irf_rows$FULL)]
score_pid5(sim_irf, items = 1:218, version = "IRF", append = FALSE)

# PID-5-FFBF (25 facets + 7 domains). No FFBF dataset ships; for
# illustration, simulate answers to its 100 items.
set.seed(1)
sim_ffbf <- as.data.frame(matrix(sample(0:3, 500, replace = TRUE), 5, 100))
score_pid5(sim_ffbf, items = 1:100, version = "FFBF", append = FALSE)

```

---

sim\_hitopbr

*Simulated HiTOP-BR Data*


---

## Description

Simulated responses to items on the HiTOP-BR (with 45 items). Note that this is a naive simulation where response options 1 to 4 are all equally likely and generated independently per item. Thus, responses are not clustered within scales, and these data can be used (eventually) to test validity tools intended to detect inconsistent/random responding.

## Usage

```
sim_hitopbr
```

## Format

A [tibble](#) with 100 rows and 45 columns.

**hbr\_01 to hbr\_45** Responses on each item

**Examples**

```
sim_hitopbr
```

---

```
sim_hitopsr
```

---



---

*Simulated HiTOP-SR Data*

---

**Description**

Simulated responses to items on the full HiTOP-SR (with 405 items). Note that this is a naive simulation where response options 1 to 4 are all equally likely and generated independently per item. Thus, responses are not clustered within scales, and these data can be used (eventually) to test validity tools intended to detect inconsistent/random responding.

**Usage**

```
sim_hitopsr
```

**Format**

A [tibble](#) with 100 rows and 405 columns.

**hsr\_\_001 to hsr\_\_405** Responses on each item

**Examples**

```
sim_hitopsr
```

---

```
sim_pid5
```

---



---

*Simulated PID-5 Data*

---

**Description**

Simulated responses to items on the full PID-5 (with 220 items).

**Usage**

```
sim_pid5
```

**Format**

A [tibble](#) with 100 rows and 220 columns.

**pid5\_\_001 to pid5\_\_220** Responses on each item

**Examples**

```
sim_pid5
```

---

`sim_pid5bf`*Simulated PID-5-BF Data*

---

**Description**

Simulated responses to items on the PID-5-BF (with 25 items).

**Usage**`sim_pid5bf`**Format**

A [tibble](#) with 100 rows and 25 columns.

**pid5bf\_01 to pid5bf\_25** Responses on each item

**Examples**`sim_pid5bf`

---

`sim_pid5sf`*Simulated PID-5-SF Data*

---

**Description**

Simulated responses to items on the PID-5-SF (with 100 items).

**Usage**`sim_pid5sf`**Format**

A [tibble](#) with 100 rows and 100 columns.

**pid5sf\_001 to pid5sf\_100** Responses on each item

**Examples**`sim_pid5sf`

---

validity\_pid5

---

*Score the Personality Inventory for DSM-5 Validity Scales*


---

## Description

Calculate validity scale scores on the Personality Inventory for DSM-5: full version (PID-5, 220 items), short form version (PID-5-SF, 100 items), or brief form version (PID-5-BF, 25 items) from item-level data and return alerts when when observations meet criteria for invalidity.

## Usage

```
validity_pid5(
  data,
  items,
  version = c("FULL", "SF", "BF"),
  srange = c(0, 3),
  prefix = "pid_",
  append = TRUE
)
```

## Arguments

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>data</b>    | A data frame containing (at least) all the PID items (numerically scored and in order).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>items</b>   | A vector of column names (as strings) or numbers (as integers) corresponding to the PID items in order. Items must be supplied in instrument order; a misordered mapping silently scores the wrong items, so a warning is issued when the names share a common prefix and trailing number but those numbers are not ascending. Duplicated entries are an error. Each column must be numeric or logical, or character holding only numbers (blank cells and NA values count as missing, but the text "NA" is refused). A haven labelled column is read as its plain values. Any other column, such as the choice text of an online export or a factor, is an error of class <code>hitop_nonnumeric_items</code> . So is a 64-bit integer ( <code>integer64</code> ) column, and, in a UTF-8 session, a column holding text that is not valid UTF-8 (text marked Latin-1 is read as its text); convert such text with <code>iconv()</code> . So is an SPSS column ( <code>haven_labelled_spss</code> ) that holds a value it declares missing; turn those codes into NA with <code>haven::zap_missing()</code> first. A declared value that is blank is not refused, since blank cells count as missing. The SPSS class of haven before 2.0 ( <code>labelled_spss</code> ) is refused the same way, but <code>haven::zap_missing()</code> leaves it unchanged, so set the values its <code>na_values</code> or <code>na_range</code> attribute declares to NA first. |
| <b>version</b> | A string indicating the version of the PID to score: "FULL", "SF", or "BF". Only a full name is accepted, in any letter case. Any other value, a start of a name such as "F" included, is an error of class <code>hitop_unknown_version</code> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

|               |                                                                                                                                               |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
|               | The PID5BF+M and the PID-5 Informant Form have no validity scales. (default = "FULL")                                                         |
| <b>srange</b> | An optional numeric vector specifying the minimum and maximum values of the items, used for reverse-coding. (default = <code>c(0, 3)</code> ) |
| <b>prefix</b> | An optional string to add before each scale column name. If no prefix is desired, set to an empty string "". (default = "pid_")               |
| <b>append</b> | An optional logical indicating whether the new columns should be added to the end of the <b>data</b> input. (default = TRUE)                  |

## Details

For the full PID-5, a score of 17 or higher on the INC is indicative of inconsistent responding. A score of 3 or higher on the ORS is indicative of overreporting. A score of 10 or lower on the PRD is indicative of positive impression management (underreporting rather than genuine responding) whereas a score of 21 or higher on the PRD is indicative of genuine responding (rather than positive impression management). A score of 11 or lower on the SD-TD is indicative of social desirability (rather than defensiveness), whereas a score of 19 or higher on the SD-TD is indicative of defensiveness (rather than social desirability). For the PID-5-SF, scores of 8 or more on the INC-S are indicative of inconsistent responding. Cut-scores for the ORS-S, PRD-S, and SD-TD-S have not yet been validated.

The PRD and SD-TD cut scores are raw sums compared to fixed thresholds that assume items are coded 0-3. Unlike the INC and ORS scales, they do not adapt to **srange**, so scoring items on another scale (e.g. 1-4) mis-flags respondents; a warning is issued when **srange** is not `c(0, 3)`. The BF version computes only the percent-missing (PNA) index and no cut-score scales.

**Errors.** With **append = TRUE**, a column of **data** whose name this call would also produce is an error rather than an overwrite or a duplicated column: the message names every colliding column. Re-run with **append = FALSE** to return only the new columns, or drop the colliding columns from **data** first. The condition is classed **hitop\_append\_collision**, so a caller can catch this refusal by name.

An item column that cannot be read as numbers (see **items**) is an error of class **hitop\_nonnumeric\_items**, raised before the collision check and the **srange** warning.

## Value

A **tibble** containing all validity scores and all original **data** columns (if requested)

## References

- Keeley, J. W., Webb, C., Peterson, D., Roussin, L., & Flanagan, E. H. (2016). Development of a Response Inconsistency Scale for the Personality Inventory for DSM-5. *Journal of Personality Assessment*, 98(4), 351-359. doi:10.1080/00223891.2016.1158719
- Sellbom, M., Dhillon, S., & Bagby, R. M. (2018). Development and validation of an overreporting scale for the Personality Inventory for DSM-5 (PID-5). *Psychological Assessment*, 30(5), 582-593. doi:10.1037/pas0000507

Bagby, R. M., & Sellbom, M. (2018). The Validity and Clinical Utility of the Personality Inventory for DSM-5 Response Inconsistency Scale. *Journal of Personality Assessment*, 100(4), 398–405. doi:10.1080/00223891.2017.1420659

Williams, M. M., Rogers, R., Sharf, A. J., & Ross, C. A. (2019). Faking Good: An Investigation of Social Desirability and Defensiveness in an Inpatient Sample With Personality Disorder Traits. *Journal of Personality Assessment*, 101(3), 253–263. doi:10.1080/00223891.2018.1455691

Lowmaster, S. E., Hartman, M. J., Zimmermann, J., Baldock, Z. C., & Kurtz, J. E. (2020). Further Validation of the Response Inconsistency Scale for the Personality Inventory for DSM-5. *Journal of Personality Assessment*, 102(6), 743–750. doi:10.1080/00223891.2019.1674320

## Examples

```
# Compute the PID-5 validity scales and flag likely-invalid responders.
# (The simulated data are random, so most rows are flagged.)
validity_pid5(sim_pid5, items = 1:220, version = "FULL", append = FALSE)
```

---

write\_module

*Save a Module to a File*

---

## Description

Writes a `hitop_module()` descriptor to a JSON file, so that a researcher can keep it beside the form they field and read it back at scoring time with `read_module()` instead of retyping every scale name.

The file records the scale names, not the keying: `read_module()` rebuilds the items and their reverse-keying flags from this package’s own tables. The recorded `items` are there for a human reader and as a cross-check, and a file that disagrees with what the package derives is an error rather than a silent preference for either side.

Before it writes, `write_module()` rebuilds the module with `hitop_module()` from its `instrument` and `scales`. A module whose `items`, `nItems`, `camelCase` or `instrument` differ from that rebuild, or that cannot be rebuilt from its `instrument` and `scales`, is refused with an error of class `hitop_module_mismatch`, and nothing is written. The file holds the rebuild’s fields. `read_module()` rebuilds the module from the file’s `scales`, so it returns a `hitop_module` with integer items. This is also true for a file written from the deprecated `hitop_subset` class, or from a module whose items are doubles.

## Usage

```
write_module(module, file)
```

## Arguments

|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>module</b> | A <code>hitop_module</code> object, as returned by <code>hitop_module()</code> . An <code>item_order</code> attribute, where present, is written as the file's <code>itemOrder</code> and must be a permutation of the module's items. A <code>columns</code> attribute, where present, is written as the file's <code>columns</code> . It must be a character vector with one distinct, non-empty name per module item. A bad attribute is refused before the file is opened. A module that is not the <code>hitop_module()</code> build of its own scales is refused with an error of class <code>hitop_module_mismatch</code> , as described above. |
| <b>file</b>   | A string giving the path to write to.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Value

The file path, invisibly.

## The descriptor format

The file is JSON, with these fields:

- format** The format version, a "major.minor" string. This release writes "1.0".
- package, packageVersion, buildDate** The package that wrote the file, its version, and the date it was written. Recorded for the reader; `read_module()` ignores all three.
- instrument** The instrument the module belongs to.
- scales** The module's scales, as they are printed on the instrument. **Required:** these are what the module is rebuilt from.
- items, nItems** The original instrument item numbers the module covers, and how many there are. `write_module()` writes them in ascending order, and the hitop-form web page requires that order, refusing a descriptor whose `items` are not ascending. Cross-checked on read: `read_module()` compares them as a set, so their order carries no meaning to it, but a repeated number is an error, and the printed order of a shuffled form belongs in `itemOrder` instead.
- itemOrder** The printed order of a shuffled form: a permutation of `items`. Optional — a form printed in instrument order carries none. `read_module()` returns it on the module's `item_order` attribute, the same attribute `generate_docx_hitopsr()` returns, and `write_module()` writes it back from that attribute, so a descriptor read and written again keeps the order it recorded. The generators' `descriptor` argument sets the attribute for you, and `score_hitopsr()` and `reliability_hitopsr()` read it under `layout = "printed"` to score columns entered in the form's printed order.
- columns** The names that an online export gives the module's items: one string per item, in ascending item-number order. Optional. `generate_redcap_hitopsr()`'s `descriptor` writes the dictionary's item field names here, and `generate_qualtrics_hitopsr()`'s writes the questions' `[[ID:]]` values. A Word form has no columns, so its descriptor has no field. `read_module()` returns the field on the module's `columns` attribute, and `write_module()` writes it back from that attribute as a JSON array. `score_hitopsr()` and `reliability_hitopsr()` use the attribute as `items` when `items` is omitted.

`format`, `instrument`, and `scales` are required. A reader of format "1.0" ignores a field it does not know, so release 0.2.0, the first with `read_module()`, and later releases read a file with `columns` and ignore the field. The fields and the version string are a public contract and change only deliberately.

### See Also

`read_module()` to read the file back; `hitop_module()` to build a module in the first place; the `descriptor` argument of `generate_docx_hitopsr()`, `generate_qualtrics_hitopsr()`, and `generate_redcap_hitopsr()`, which writes one of these files beside the instrument it builds.

### Examples

```
m <- hitop_module("hitopsr", scales = c("Agoraphobia", "Appetite Loss"))

f <- tempfile(fileext = ".json")
write_module(m, f)
cat(readLines(f), sep = "\n")

identical(read_module(f), m)

file.remove(f)
```

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