

Package: surveytable (via r-universe)

December 9, 2024

Title Formatted Survey Estimates

Version 0.9.5

Description Short and understandable commands that generate tabulated, formatted, and rounded survey estimates. Mostly a wrapper for the 'survey' package (Lumley (2004) <[doi:10.18637/jss.v009.i08](https://doi.org/10.18637/jss.v009.i08)> <<https://CRAN.R-project.org/package=survey>>) that identifies low-precision estimates using the National Center for Health Statistics (NCHS) presentation standards (Parker et al. (2017) <https://www.cdc.gov/nchs/data/series/sr_02/sr02_175.pdf>, Parker et al. (2023) <[doi:10.15620/cdc.124368](https://doi.org/10.15620/cdc.124368)>).

Date/Publication 2024-10-09 18:00:01 UTC

License Apache License (>= 2)

Encoding UTF-8

RoxygenNote 7.3.1

Depends R (>= 2.10)

LazyData true

LazyDataCompression bzip2

Imports assertthat, huxtable, kableExtra, lifecycle, magrittr, survey

Suggests knitr, rmarkdown

VignetteBuilder knitr

URL <https://cdcgov.github.io/surveytable/>,
<https://github.com/CDCgov/surveytable>

Language en-US

NeedsCompilation no

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Repository CRAN

Config/pak/sysreqs libfontconfig1-dev libfreetype6-dev make texlive
libicu-dev libpng-dev libxml2-dev

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codebook	<i>Create a codebook for the survey</i>
----------	---

Description

Create a codebook for the survey

Usage

```
codebook(all = FALSE, csv = getOption("surveytable.csv"))
```

Arguments

all	tabulate all the variables?
csv	name of a CSV file

Value

A list of tables.

Examples

```
set_survey(namcs2019sv)
codebook()
```

namcs2019sv	<i>Selected variables from the National Ambulatory Medical Care Survey (NAMCS) 2019 Public Use File (PUF)</i>
-------------	---

Description

Selected variables from a data system of visits to office-based physicians. Note that the unit of observation is visits, not patients - this distinction is important since a single patient can make multiple visits.

Usage

```
namcs2019sv
```

```
namcs2019sv_df
```

Format

An object of class `survey.design2` (inherits from `survey.design`) with 8250 rows and 33 columns.

An object of class `data.frame` with 8250 rows and 33 columns.

Details

`namcs2019sv_df` is a data frame.

`namcs2019sv` is a survey object created from `namcs2019sv_df` using `survey::svydesign()`.

Source

- SAS data: https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NAMCS/sas/namcs2019_sas.zip
- Survey design variables: https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NAMCS/sas/readme2019-sas.txt
- SAS formats: https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NAMCS/sas/nam19for.txt
- Documentation: https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NAMCS/doc2019-508.pdf
- National Summary Tables: https://www.cdc.gov/nchs/data/ahcd/namcs_summary/2019-namcs-web-tables-508.pdf

```
print.surveytable_table
      Print surveytable tables
```

Description

Print surveytable tables

Usage

```
## S3 method for class 'surveytable_table'
print(x, .output = NULL, ...)

## S3 method for class 'surveytable_list'
print(x, .output = NULL, ...)
```

Arguments

x	an object of class surveytable_table or surveytable_list.
.output	output type. NULL = auto-detect.
...	ignored

Value

x invisibly.

Examples

```
set_survey(namcs2019sv)
table1 = tab("AGER")
print(table1)
table_many = tab("MDDO", "SPECCAT", "MSA")
print(table_many)
```

rccsu2018	<i>National Study of Long-Term Care Providers (NSLTCP) Residential Care Community (RCC) Services User (SU) 2018 Public Use File (PUF)</i>
-----------	---

Description

A data system of RCC residents.

Usage

```
rccsu2018
```

Format

An object of class `survey.design2` (inherits from `survey.design`) with 904 rows and 81 columns.

Source

- SAS data: https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Datasets/NPALS/final2018rcc_su_puf.sas7bdat
- Documentation: <https://www.cdc.gov/nchs/npals/RCCresident-readme03152021vr.pdf>
- Codebook: https://www.cdc.gov/nchs/data/npals/final2018rcc_su_puf_codebook.pdf

set_opts	<i>Set certain options</i>
----------	----------------------------

Description

`set_opts()` sets certain options. `show_opts()` shows the options that have been set. More advanced users can also use [options\(\)](#) and [show_options\(\)](#) for more detailed control.

Usage

```
set_opts(
  mode = NULL,
  count = NULL,
  lpe = NULL,
  drop_na = NULL,
  max_levels = NULL,
  csv = NULL
)
```

```
show_opts()
```

Arguments

mode	"general" or "NCHS". See below for details.
count	round counts to the nearest: integer ("int") or one thousand ("1k")
lpe	identify low-precision estimates?
drop_na	drop missing values (NA)? Categorical variables only.
max_levels	a categorical variable can have at most this many levels. Used to avoid printing huge tables.
csv	name of a CSV file or "" to turn off CSV output

Details

If you are not setting a particular option, leave it as NULL.

mode can be either "general" or "NCHS" and has the following meaning:

- "general":
 - Round counts to the nearest integer – same as count = "int".
 - Do not look for low-precision estimates – same as lpe = FALSE.
 - Percentage CI's: use standard Korn-Graubard CI's.
- "nchs":
 - Round counts to the nearest 1,000 – same as count = "1k".
 - Identify low-precision estimates – same as lpe = TRUE.
 - Percentage CI's: adjust Korn-Graubard CI's for the number of degrees of freedom, matching the SUDAAN calculation.

Value

(Nothing.)

See Also

Other options: [set_survey\(\)](#), [show_options\(\)](#), [surveytable-options](#)

Examples

```
# Send output to a CSV file:
file_name = tempfile(fileext = ".csv")
suppressMessages( set_opts(csv = file_name) )
set_survey(namcs2019sv)
tab("AGER")
set_opts(csv = "") # Turn off CSV output

show_opts()
```

set_survey

Specify the survey to analyze

Description

You must specify a survey before the other functions, such as [tab\(\)](#), will work. To convert a `data.frame` to a survey object, see [survey::svydesign\(\)](#) or [survey::svrepdesign\(\)](#).

Usage

```
set_survey(design, csv = getOption("surveytable.csv"), ...)
```

Arguments

design	either a survey object (created with <code>survey::svydesign()</code> or <code>survey::svrepdesign()</code>); or, for an unweighted survey, a <code>data.frame</code> .
csv	name of a CSV file
...	arguments to <code>set_opts()</code> .

Details

Optionally, the survey can have an attribute called `label`, which is the long name of the survey. Optionally, each variable in the survey can have an attribute called `label`, which is the variable's long name.

Value

info about the survey

See Also

Other options: [set_opts\(\)](#), [show_options\(\)](#), [surveytable-options](#)

Examples

```
set_survey(namcs2019sv)
set_survey(namcs2019sv, mode = "general")
```

show_options

Show package options

Description

See [surveytable-options](#) for a discussion of some of the options.

Usage

```
show_options(sw = "surveytable")
```

Arguments

sw	starting characters
----	---------------------

Value

List of options and their values.

See Also

Other options: [set_opts\(\)](#), [set_survey\(\)](#), [surveytable-options](#)

Examples

```
show_options()
```

surveytable-options *Package options*

Description

Run `show_options()` to see available options. Here is a description of some notable options.

Details

Low-precision estimates.:

Optionally, all of the tabulation functions can identify low-precision estimates. Turn on this functionality using any of the following: `set_opts(lpe = TRUE)`, `set_opts(mode = "nchs")`, `set_survey(*, mode = "nchs")`, or `options(surveytable.find_lpe = TRUE)`.

By default, low-precision estimates are identified using National Center for Health Statistics (NCHS) algorithms. However, this can be changed, as described below.

Here is a description of the options related to the identification of low-precision estimates.

- `surveytable.find_lpe`: should the tabulation functions look for low-precision estimates? You can change this directly with `options()` or with either `set_opts()` or `set_survey()`.
- `surveytable.lpe_n`, `surveytable.lpe_counts`, `surveytable.lpe_percents`: names of 3 functions.

The argument for `surveytable.lpe_n` is a vector of the number of observations for each level of the variable.

The argument for `surveytable.lpe_counts` is a data frame with count-related estimates. Specifically, the data frame has the following variables:

- `x`: point estimates of counts
- `s`: SE
- `ll`, `ul`: CI
- `samp.size`: effective sample size
- `counts`: actual sample size
- `degf`: degrees of freedom

The argument for `surveytable.lpe_percents` is a data frame with percent-related estimates. Specifically, the data frame has the following variables:

- `Proportion`: point estimates of proportions (between 0 and 1)
- `SE`: SE
- `LL`, `UL`: CI
- `n numerator`: the number of observations for which the variable is TRUE
- `n denominator`: the total number of observations

Each of these functions must return a list with the following elements:

- `id`: the name of the algorithm used, such as "NCHS presentation standards"

- `flags`: a vector. For each level of the variable, short codes indicating the presence of low-precision estimates.
- `has.flag`: a vector of short codes that are present in `flags`.
- `descriptions`: a named vector. The names must be the short codes, the values are the longer descriptions.

For example, if a variable has 3 levels, `flags` might be `c("", "A1 A2", "")`. This indicates that for the first and third level, nothing was found, whereas for the second level, two different things were found, indicated by short codes A1 and A2. In this case, `has.flag = c("A1", "A2")`, `descriptions = c(A1 = "A1: something", A2 = "A2: something else")`.

Author(s)

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See Also

Useful links:

- <https://cdcgov.github.io/surveytable/>
- <https://github.com/CDCgov/surveytable>

Other options: [set_opts\(\)](#), [set_survey\(\)](#), [show_options\(\)](#)

survey_subset

Subset a survey, while preserving variable labels

Description

Subset a survey, while preserving variable labels

Usage

```
survey_subset(design, subset, label)
```

Arguments

<code>design</code>	a survey object
<code>subset</code>	an expression specifying the sub-population
<code>label</code>	survey label of the newly created survey object

Value

a new survey object

Examples

```
children = survey_subset(namcs2019sv, AGE < 18, "Children < 18")
set_survey(children)
tab("AGER")
```

svyciprop_adjusted *Confidence intervals for proportions, adjusted for degrees of freedom*

Description

A version of `survey::svyciprop()` that adjusts for the degrees of freedom when `method = "beta"`.

Usage

```
svyciprop_adjusted(
  formula,
  design,
  method = c("logit", "likelihood", "asin", "beta", "mean", "xlogit"),
  level = 0.95,
  df_method,
  ...
)
```

Arguments

<code>formula</code>	see <code>survey::svyciprop()</code> .
<code>design</code>	see <code>survey::svyciprop()</code> .
<code>method</code>	see <code>survey::svyciprop()</code> .
<code>level</code>	see <code>survey::svyciprop()</code> .
<code>df_method</code>	how df should be calculated: "default" or "NHIS".
<code>...</code>	see <code>survey::svyciprop()</code> .

Details

Written by Makram Talih in 2019.

`df_method`: for "default", `df = degf(design)`; for "NHIS", `df = nrow(design) - 1`.

To use this function in tabulations, call `set_survey()` or `set_opts()` with the `mode = "NCHS"` argument, or type: `options(surveytable.adjust_svyciprop = TRUE)`.

Value

The point estimate of the proportion, with the confidence interval as an attribute.

Examples

```
set_survey(namcs2019sv)
set_opts(mode = "NCHS")
tab("AGER")
set_opts(mode = "general")
```

tab	<i>Tabulate variables</i>
-----	---------------------------

Description

Tabulate categorical (factor), logical, or numeric variables.

Usage

```
tab(
  ...,
  test = FALSE,
  alpha = 0.05,
  p_adjust = FALSE,
  drop_na = getOption("surveytable.drop_na"),
  max_levels = getOption("surveytable.max_levels"),
  csv = getOption("surveytable.csv")
)
```

Arguments

...	names of variables (in quotes)
test	perform hypothesis tests?
alpha	significance level for tests
p_adjust	adjust p-values for multiple comparisons?
drop_na	drop missing values (NA)? Categorical variables only.
max_levels	a categorical variable can have at most this many levels. Used to avoid printing huge tables.
csv	name of a CSV file

Details

For categorical and logical variables, presents the estimated counts, their standard errors (SEs) and confidence intervals (CIs), percentages, and their SEs and CIs. Checks the presentation guidelines for counts and percentages and flags estimates if, according to the guidelines, they should be suppressed, footnoted, or reviewed by an analyst.

For numeric variables, presents the percentage of observations with known values, the mean of known values, the standard error of the mean (SEM), and the standard deviation (SD).

CIs are calculated at the 95% confidence level. CIs for count estimates are the log Student's t CIs, with adaptations for complex surveys. CIs for percentage estimates are the Korn and Graubard CIs.

Value

A list of tables or a single table.

See Also

Other tables: [tab_cross\(\)](#), [tab_rate\(\)](#), [tab_subset_rate\(\)](#), [total\(\)](#), [total_rate\(\)](#)

Examples

```
set_survey(namcs2019sv)
tab("AGER")
tab("MDDO", "SPECCAT", "MSA")

# Numeric variables
tab("NUMMED")

# Hypothesis testing with categorical variables
tab("AGER", test = TRUE)
```

tab_cross

Tabulate subsets or interactions

Description

Create subsets of the survey using one variable, and tabulate another variable within each of the subsets. Interact two variables and tabulate.

Usage

```
tab_cross(
  vr,
  vrby,
  max_levels = getOption("surveytable.max_levels"),
  csv = getOption("surveytable.csv")
)

tab_subset(
  vr,
  vrby,
  lvls = c(),
  test = FALSE,
  alpha = 0.05,
  p_adjust = FALSE,
  drop_na = getOption("surveytable.drop_na"),
  max_levels = getOption("surveytable.max_levels"),
  csv = getOption("surveytable.csv")
)
```

Arguments

vr	variable to tabulate
vrby	use this variable to subset the survey
max_levels	a categorical variable can have at most this many levels. Used to avoid printing huge tables.
csv	name of a CSV file
lvls	(optional) only show these levels of vrby
test	perform hypothesis tests?
alpha	significance level for tests
p_adjust	adjust p-values for multiple comparisons?
drop_na	drop missing values (NA)? Categorical variables only.

Details

tab_subset creates subsets using the levels of vrby, and tabulates vr in each subset. Optionally, only use the lvls levels of vrby. vr can be categorical (factor), logical, or numeric.

tab_cross crosses or interacts vr and vrby and tabulates the new variable. Tables created using tab_subset and tab_cross have the same counts but different percentages. With tab_subset, percentages within each subset add up to 100%. With tab_cross, percentages across the entire population add up to 100%. Also see [var_cross\(\)](#).

test = TRUE performs a test of association between the two variables. Also performs t-tests for all possible pairs of levels of vr and vrby.

Value

A list of tables or a single table.

See Also

Other tables: [tab\(\)](#), [tab_rate\(\)](#), [tab_subset_rate\(\)](#), [total\(\)](#), [total_rate\(\)](#)

Examples

```
set_survey(namcs2019sv)

# For each SEX, tabulate AGER
tab_subset("AGER", "SEX")

# Same counts as tab_subset(), but different percentages.
tab_cross("AGER", "SEX")

# Numeric variables
tab_subset("NUMMED", "AGER")

# Hypothesis testing
tab_subset("NUMMED", "AGER", test = TRUE)
```

tab_rate	<i>Calculate rates</i>
----------	------------------------

Description

Calculate the rates for categorical (factor) or logical variables.

Usage

```
tab_rate(
  vr,
  pop,
  per = getOption("surveytable.rate_per"),
  drop_na = getOption("surveytable.drop_na"),
  max_levels = getOption("surveytable.max_levels"),
  csv = getOption("surveytable.csv")
)
```

Arguments

vr	variable to tabulate
pop	either a single number or a data.frame with columns named Level and Population. Level must exactly match the levels of vr. Population is the population for that level of vr.
per	calculate rate per this many items in the population
drop_na	drop missing values (NA)?
max_levels	a categorical variable can have at most this many levels. Used to avoid printing huge tables.
csv	name of a CSV file

Value

A list of tables or a single table.

See Also

Other tables: [tab\(\)](#), [tab_cross\(\)](#), [tab_subset_rate\(\)](#), [total\(\)](#), [total_rate\(\)](#)

Examples

```
set_survey(namcs2019sv)
# pop is a data frame
tab_rate("MSA", uspop2019$MSA)

# pop is a single number
tab_rate("MDD0", uspop2019$total)
```

tab_subset_rate	<i>Calculate rates for subsets</i>
-----------------	------------------------------------

Description

Create subsets of the survey using one variable, and tabulate the rates of another variable within each of the subsets.

Usage

```
tab_subset_rate(
  vr,
  vrby,
  pop,
  lvls = c(),
  per = getOption("surveytable.rate_per"),
  drop_na = getOption("surveytable.drop_na"),
  max_levels = getOption("surveytable.max_levels"),
  csv = getOption("surveytable.csv")
)
```

Arguments

vr	variable to tabulate
vrby	use this variable to subset the survey
pop	a data.frame with columns named Level, Subset, and Population. Level must exactly match the levels of vr. Subset must exactly match the levels of vrby. Population is the population for that level of vr and vrby.
lvls	(optional) only show these levels of vrby
per	calculate rate per this many items in the population
drop_na	drop missing values (NA)?
max_levels	a categorical variable can have at most this many levels. Used to avoid printing huge tables.
csv	name of a CSV file

Value

A list of tables or a single table.

See Also

Other tables: [tab\(\)](#), [tab_cross\(\)](#), [tab_rate\(\)](#), [total\(\)](#), [total_rate\(\)](#)

Examples

```
set_survey(namcs2019sv)
tab_subset_rate("AGER", "SEX", uspop2019$`AGER x SEX`)
```

total	<i>Total count</i>
-------	--------------------

Description

Total count

Usage

```
total(csv = getOption("surveytable.csv"))
```

Arguments

csv	name of a CSV file
-----	--------------------

Value

A table

See Also

Other tables: [tab\(\)](#), [tab_cross\(\)](#), [tab_rate\(\)](#), [tab_subset_rate\(\)](#), [total_rate\(\)](#)

Examples

```
set_survey(namcs2019sv)
total()
```

total_rate	<i>Overall rate</i>
------------	---------------------

Description

Overall rate

Usage

```
total_rate(
  pop,
  per = getOption("surveytable.rate_per"),
  csv = getOption("surveytable.csv")
)
```


Arguments

pop	population
per	calculate rate per this many items in the population
csv	name of a CSV file

Value

A table

See Also

Other tables: [tab\(\)](#), [tab_cross\(\)](#), [tab_rate\(\)](#), [tab_subset_rate\(\)](#), [total\(\)](#)

Examples

```
set_survey(namcs2019sv)
total_rate(uspop2019$total)
```

uspop2019

US Population in 2019

Description

Population estimates of the civilian non-institutional population of the United States as of July 1, 2019. Used for calculating rates. For usage examples, see the *_rate functions.

Usage

```
uspop2019
```

Format

An object of class `list` of length 7.

var_all	<i>Are all the variables true? (Logical AND)</i>
---------	--

Description

Create a new variable which is true if all of the variables in a list of variables are true.

Usage

```
var_all(newvr, vrs)
```

Arguments

newvr	name of the new variable to be created
vrs	vector of logical variables

Value

Survey object

See Also

Other variables: [var_any\(\)](#), [var_case\(\)](#), [var_collapse\(\)](#), [var_copy\(\)](#), [var_cross\(\)](#), [var_cut\(\)](#), [var_not\(\)](#)

Examples

```
set_survey(namcs2019sv)
var_all("Medicare and Medicaid", c("PAYMCARE", "PAYMCAID"))
tab("Medicare and Medicaid")
```

var_any	<i>Is any variable true? (Logical OR)</i>
---------	---

Description

Create a new variable which is true if any of the variables in a list of variables are true.

Usage

```
var_any(newvr, vrs)
```

Arguments

newvr	name of the new variable to be created
vrs	vector of logical variables

Value

Survey object

See Also

Other variables: [var_all\(\)](#), [var_case\(\)](#), [var_collapse\(\)](#), [var_copy\(\)](#), [var_cross\(\)](#), [var_cut\(\)](#), [var_not\(\)](#)

Examples

```
set_survey(namcs2019sv)
var_any("Imaging services"
, c("ANYIMAGE", "BONEDENS", "CATSCAN", "ECHOCARD", "OTHULTRA"
, "MAMMO", "MRI", "XRAY", "OTHIMAGE"))
tab("Imaging services")
```

var_case

Convert factor to logical

Description

Convert factor to logical

Usage

```
var_case(newvr, vr, cases, retain_na = TRUE)
```

Arguments

newvr	name of the new logical variable to be created
vr	factor variable
cases	one or more levels of vr that are converted to TRUE. All other levels are converted to FALSE.
retain_na	for the observations where vr is NA, should newvr be NA as well?

Value

Survey object

See Also

Other variables: [var_all\(\)](#), [var_any\(\)](#), [var_collapse\(\)](#), [var_copy\(\)](#), [var_cross\(\)](#), [var_cut\(\)](#), [var_not\(\)](#)

Examples

```

set_survey(namcs2019sv)

var_case("Preventive care visits", "MAJOR", "Preventive care")
tab("Preventive care visits")

var_case("Surgery-related visits"
, "MAJOR"
, c("Pre-surgery", "Post-surgery"))
tab("Surgery-related visits")

var_case("Non-primary"
, "SPECCAT.bad"
, c("Surgical care specialty", "Medical care specialty"))
tab("Non-primary")
tab("Non-primary", drop_na = TRUE)

```

var_collapse

Collapse factor levels

Description

Collapse two or more levels of a factor variable into a single level.

Usage

```
var_collapse(vr, newlevel, oldlevels)
```

Arguments

vr	factor variable
newlevel	name of the new level
oldlevels	vector of old levels

Value

Survey object

See Also

Other variables: [var_all\(\)](#), [var_any\(\)](#), [var_case\(\)](#), [var_copy\(\)](#), [var_cross\(\)](#), [var_cut\(\)](#), [var_not\(\)](#)

Examples

```

set_survey(namcs2019sv)
tab("PRIMCARE")
var_collapse("PRIMCARE", "Unknown if PCP", c("Blank", "Unknown"))
tab("PRIMCARE")

```

var_copy	<i>Copy a variable</i>
----------	------------------------

Description

Create a new variable that is a copy of another variable. You can modify the copy, while the original remains unchanged. See examples.

Usage

```
var_copy(newvr, vr)
```

Arguments

newvr	name of the new variable to be created
vr	variable

Value

Survey object

See Also

Other variables: [var_all\(\)](#), [var_any\(\)](#), [var_case\(\)](#), [var_collapse\(\)](#), [var_cross\(\)](#), [var_cut\(\)](#), [var_not\(\)](#)

Examples

```
set_survey(namcs2019sv)
var_copy("Age group", "AGER")
var_collapse("Age group", "65+", c("65-74 years", "75 years and over"))
var_collapse("Age group", "25-64", c("25-44 years", "45-64 years"))
tab("AGER", "Age group")
```

var_cross	<i>Cross or interact two variables</i>
-----------	--

Description

Create a new variable which is an interaction of two other variables. Also see [tab_cross\(\)](#).

Usage

```
var_cross(newvr, vr, vrby)
```

Arguments

newvr	name of the new variable to be created
vr	first variable
vrby	second variable

Value

Survey object

See Also

Other variables: [var_all\(\)](#), [var_any\(\)](#), [var_case\(\)](#), [var_collapse\(\)](#), [var_copy\(\)](#), [var_cut\(\)](#), [var_not\(\)](#)

Examples

```
set_survey(namcs2019sv)
var_cross("Age x Sex", "AGER", "SEX")
tab("Age x Sex")
```

var_cut

Convert numeric to factor

Description

Create a new categorical variable based on a numeric variable.

Usage

```
var_cut(newvr, vr, breaks, labels)
```

Arguments

newvr	name of the new factor variable to be created
vr	numeric variable
breaks	see cut()
labels	see cut()

Value

Survey object

See Also

Other variables: [var_all\(\)](#), [var_any\(\)](#), [var_case\(\)](#), [var_collapse\(\)](#), [var_copy\(\)](#), [var_cross\(\)](#), [var_not\(\)](#)

Examples

```

set_survey(namcs2019sv)
# In some data systems, variables might contain "special values". For example,
# negative values might indicate unknowns (which should be coded as `NA`).
# Though in this particular data, there are no unknowns.
var_cut("Age group"
, "AGE"
, c(-Inf, -0.1, 0, 4, 14, 64, Inf)
, c(NA, "Under 1", "1-4", "5-14", "15-64", "65 and over"))
tab("Age group")

```

var_list

List variables in a survey.

Description

List variables in a survey.

Usage

```
var_list(sw = "", all = FALSE, csv = getOption("surveytable.csv"))
```

Arguments

sw	starting characters in variable name (case insensitive)
all	print all variables?
csv	name of a CSV file

Value

A table

Examples

```

set_survey(namcs2019sv)
var_list("age")

```

var_not	<i>Logical NOT</i>
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Description

Logical NOT

Usage

```
var_not(newvr, vr)
```

Arguments

newvr	name of the new variable to be created
vr	a logical variable

Value

Survey object

See Also

Other variables: [var_all\(\)](#), [var_any\(\)](#), [var_case\(\)](#), [var_collapse\(\)](#), [var_copy\(\)](#), [var_cross\(\)](#), [var_cut\(\)](#)

Examples

```
set_survey(namcs2019sv)  
var_not("Private insurance not used", "PAYPRIV")
```


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