

# Package: oldr (via r-universe)

September 11, 2024

**Title** An Implementation of Rapid Assessment Method for Older People

**Version** 0.1.1

**Description** An implementation of the Rapid Assessment Method for Older People or RAM-OP

<<https://www.helpage.org/resource/rapid-assessment-method-for-older-people-ramop-manual/>>.

It provides various functions that allow the user to design and plan the assessment and analyse the collected data. RAM-OP provides accurate and reliable estimates of the needs of older people. The method uses simple procedures, in a short time frame (i.e. about two weeks including training, data collection, data entry, and data analysis), and at considerably lower cost than other methods.

**License** GPL-3

**Depends** R (>= 3.0.1)

**Imports** bbw, car, withr, tibble, rmarkdown

**Suggests** testthat (>= 3.0.0), covr, DiagrammeR, dplyr, magrittr, knitr, kableExtra, spelling

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<https://github.com/rapidsurveys/oldr>

**BugReports** <https://github.com/rapidsurveys/oldr/issues>

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**Repository** <https://rapidsurveys.r-universe.dev>

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---

chart_adl	<i>Distribution of ADL (overall and by sex)</i>
-----------	---

---

### Description

Distribution of ADL (overall and by sex)

### Usage

```
chart_adl(  
  x,  
  save_chart = TRUE,  
  filename = paste(tempdir(), "chart", sep = "/")  
)
```

### Arguments

x	Indicators dataset produced by <a href="#">create_op_all</a>
save_chart	Logical. Should chart be saved? Default is TRUE.
filename	Prefix to add to output chart filename or a directory path to save output to instead of working directory. Defaults to a path to a temporary directory and a filename starting with chart. Ignored if save_chart is FALSE.

### Value

Bar plot of ADL in PNG format saved in current working directory or in a specified directory if filename is a path unless when save\_chart is FALSE in which case chart is shown in current graphic device.

### Examples

```
# Create chart using indicators.ALL dataset  
chart_adl(x = indicators.ALL)
```

---

chart_age	<i>Age by sex (pyramid plot)</i>
-----------	----------------------------------

---

### Description

A wrapper function to the [pyramid.plot](#) function to create an age by sex pyramid plot

### Usage

```
chart_age(  
  x,  
  save_chart = TRUE,  
  filename = paste(tempdir(), "populationPyramid", sep = "/")  
)
```

### Arguments

x	Indicators dataset produced by <a href="#">create_op_all</a>
save_chart	Logical. Should chart be saved? Default is TRUE.
filename	Prefix to add to output chart filename or a directory path to save output to instead of working directory. Default is a path to a temporary directory and a filename starting with populationPyramid. Ignored if save_chart is FALSE.

### Value

Age by sex pyramid plot in PNG format saved in the current working directory or in a specified directory if filename is a path unless when save.plot is FALSE in which case the plot is shown on current graphics device

### Examples

```
# Create age by sex pyramid plot using indicators.ALL dataset  
chart_age(x = indicators.ALL)
```

---

chart_csid	<i>Chart dementia screen (CSID) indicators</i>
------------	--

---

### Description

Chart dementia screen (CSID) indicators

**Usage**

```
chart_csid(
  x,
  save_chart = TRUE,
  filename = paste(tempdir(), "chart", sep = "/")
)
```

**Arguments**

x	Indicators dataset produced by <a href="#">create_op_all</a>
save_chart	Logical. Should chart be saved? Default is TRUE.
filename	Prefix to add to output chart filename or a directory path to save output to instead of working directory. Defaults to a path to a temporary directory and a filename starting with chart. Ignored if save_chart is FALSE.

**Value**

Bar plot of CSID in PNG format saved in current working directory or in a specified directory if filename is a path unless when save\_chart is FALSE in which case chart is shown in current graphic device.

**Examples**

```
# Create chart using indicators.ALL dataset
chart_csid(x = indicators.ALL)
```

---

chart\_dds

*Distribution of DDS (overall and by sex)*


---

**Description**

Distribution of DDS (overall and by sex)

**Usage**

```
chart_dds(
  x,
  save_chart = TRUE,
  filename = paste(tempdir(), "chart", sep = "/")
)
```

**Arguments**

x	Indicators dataset produced by <a href="#">create_op_all</a>
save_chart	Logical. Should chart be saved? Default is TRUE.
filename	Prefix to add to output chart filename or a directory path to save output to instead of working directory. Default is a path to a temporary directory and a filename starting with chart. Ignored if save_chart is FALSE.

**Value**

Barplot of dietary diversity score in PNG format saved in current working directory or in a specified directory if filename is a path unless when save\_chart is FALSE in which case chart is shown in current graphic device.

**Examples**

```
# Create DDS chart using indicators.ALL dataset
chart_dds(x = indicators.ALL)
```

---

chart_hhs	<i>Chart household hunger scale (HHS) indicators</i>
-----------	--

---

**Description**

Chart household hunger scale (HHS) indicators

**Usage**

```
chart_hhs(
  x,
  save_chart = TRUE,
  filename = paste(tempdir(), "chart", sep = "/")
)
```

**Arguments**

x	Indicators dataset produced by <a href="#">create_op_all</a>
save_chart	Logical. Should chart be saved? Default is TRUE.
filename	Prefix to add to output chart filename or a directory path to save output to instead of working directory. Defaults to a path to a temporary directory and a filename starting with chart. Ignored if save_chart is FALSE.

**Value**

Bar plot of HHS in PNG format saved in current working directory or in a specified directory if filename is a path unless when save\_chart is FALSE in which case chart is shown in current graphic device.

**Examples**

```
# Create chart using indicators.ALL dataset
chart_hhs(x = indicators.ALL)
```

---

chart_income	<i>Chart income indicators</i>
--------------	--------------------------------

---

**Description**

Chart income indicators

**Usage**

```
chart_income(
  x.male,
  x.female,
  save_chart = TRUE,
  filename = paste(tempdir(), "chart", sep = "/")
)
```

**Arguments**

x.male	Male subset of indicator dataset
x.female	Female subset of indicator dataset
save_chart	Logical. Should chart be saved? Default is TRUE.
filename	Prefix to add to output chart filename or a directory path to save output to instead of working directory. Defaults to a path to a temporary directory and a filename starting with chart. Ignored if save_chart is FALSE.

**Value**

Bar chart of sources of income by sex in PNG format saved in current working directory or in a specified directory if filename is a path unless when save\_chart is FALSE in which case chart is shown in current graphics device.

**Examples**

```
# Create chart using indicators.FEMALES and indicators.MALES
# dataset
chart_income(x.male = indicators.MALES,
             x.female = indicators.FEMALES)
```



---

chart_k6	<i>Distribution of K6 (overall and by sex)</i>
----------	--

---

**Description**

Distribution of K6 (overall and by sex)

**Usage**

```
chart_k6(x, save_chart = TRUE, filename = paste(tempdir(), "chart", sep = "/"))
```

**Arguments**

x	Indicators dataset produced by <a href="#">create_op_all</a>
save_chart	Logical. Should chart be saved? Default is TRUE.
filename	Prefix to add to output chart filename or a directory path to save output to instead of working directory. Defaults to a path to a temporary directory and a filename starting with chart. Ignored if save_chart is FALSE.

**Value**

Histogram of K6 score in PNG format saved in current working directory or in a specified directory if filename is a path unless when save\_chart is FALSE in which case chart is shown in current graphics device.

**Examples**

```
# Create chart using indicators.ALL dataset
chart_k6(x = indicators.ALL)
```

---

chart_mf	<i>Distribution of meal frequency (overall and by sex)</i>
----------	--

---

**Description**

Distribution of meal frequency (overall and by sex)

**Usage**

```
chart_mf(x, save_chart = TRUE, filename = paste(tempdir(), "chart", sep = "/"))
```

**Arguments**

x	Indicators dataset produced by <a href="#">create_op_all</a>
save_chart	Logical. Should chart be saved? Default is TRUE.
filename	Prefix to add to output chart filename or a directory path to save output to instead of working directory. Default is a path to a temporary directory and a filename starting with chart. Ignored if save_chart is FALSE.

**Value**

Barplot of meal frequency in PNG format saved in current working directory or in a specified directory if filename is a path unless when save\_chart is FALSE in which case chart is shown in current graphics device.

**Examples**

```
# Create meal frequency chart using indicators.ALL dataset
chart_mf(x = indicators.ALL)
```

---

chart_muac	<i>Distribution of MUAC (overall and by sex)</i>
------------	--

---

**Description**

Distribution of MUAC (overall and by sex)

**Usage**

```
chart_muac(
  x,
  save_chart = TRUE,
  filename = paste(tempdir(), "chart", sep = "/")
)
```

**Arguments**

x	Indicators dataset produced by <a href="#">create_op_all</a>
save_chart	Logical. Should chart be saved? Default is TRUE.
filename	Prefix to add to output chart filename or a directory path to save output to instead of working directory. Default is a path to a temporary directory and a filename starting with chart. Ignored if save_chart is FALSE.

**Value**

Histogram of MUAC distribution in PNG format and saved in the current working directory or in a specified directory if filename is a path unless when save\_chart is FALSE in which case chart is shown on current graphics device.

## Examples

```
# Create MUAC histogram using indicators.ALL dataset
chart_muac(x = indicators.ALL)
```

---

chart_wash	<i>Chart WASH indicators</i>
------------	------------------------------

---

## Description

Chart WASH indicators

## Usage

```
chart_wash(
  x,
  save_chart = TRUE,
  filename = paste(tempdir(), "chart", sep = "/")
)
```

## Arguments

x	Indicators dataset produced by <a href="#">create_op_all</a>
save_chart	Logical. Should chart be saved? Default is TRUE.
filename	Prefix to add to output chart filename or a directory path to save output to instead of working directory. Defaults to a path to a temporary directory and a filename starting with chart. Ignored if save_chart is FALSE.

## Value

Bar plot of ADL in PNG format saved in current working directory or in a specified directory if filename is a path unless when save\_chart is FALSE in which case chart is shown in current graphic device

## Examples

```
# Create chart using indicators.ALL dataset
chart_wash(x = indicators.ALL)
```

---

chart_wg	<i>Chart disability (Washington Group - WG) indicators</i>
----------	--

---

**Description**

Chart disability (Washington Group - WG) indicators

**Usage**

```
chart_wg(x, save_chart = TRUE, filename = paste(tempdir(), "chart", sep = "/"))
```

**Arguments**

x	Indicators dataset produced by <a href="#">create_op_all</a>
save_chart	Logical. Should chart be saved? Default is TRUE.
filename	Prefix to add to output chart filename or a directory path to save output to instead of working directory. Defaults to a path to a working directory and a filename starting with chart. Ignored if save_chart is FALSE.

**Value**

Bar plot of Disability Score in PNG format saved in current working directory or in a specified directory if filename is a path unless when save\_chart is FALSE in which case chart is shown in current graphic device.

**Examples**

```
# Create chart using indicators.ALL dataset
chart_wg(x = indicators.ALL)
```

---

create_op_adl	<i>Create older people indicators dataframe on activities of daily living from survey data collected using the standard RAM-OP questionnaire</i>
---------------	--

---

**Description**

Create older people indicators dataframe on activities of daily living from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_adl(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A dataframe of older people indicators on activities of daily living

**Katz "Index of Independence in Activities of Daily Living" (ADL) score**

The Katz ADL score is described in:

*Katz S, Ford AB, Moskowitz RW, Jackson BA, Jaffe MW (1963). Studies of illness in the aged. The Index of ADL: a standardized measure of biological and psychosocial function. JAMA, 1963, 185(12):914-9 doi:10.1001/jama.1963.03060120024016*

*Katz S, Down TD, Cash HR, Grotz, RC (1970). Progress in the development of the index of ADL. The Gerontologist, 10(1), 20-30 doi:10.1093/geront/10.4\_Part\_1.274*

*Katz S (1983). Assessing self-maintenance: Activities of daily living, mobility and instrumental activities of daily living. JAGS, 31(12), 721-726 doi:10.1111/j.15325415.1983.tb03391.x*

ADL01 Bathing

ADL02 Dressing

ADL03 Toileting

ADL04 Transferring (mobility)

ADL05 Continence

ADL06 Feeding

scoreADL ADL Score

classADL1 Severity of dependence 1

classADL2 Severity of dependence 2

classADL3 Severity of dependence 3

hasHelp Have someone to help with everyday activities

unmetNeed Need help but has no helper

**Author(s)**

Mark Myatt

**Examples**

```
# Create activities of daily living indicators dataset from RAM-OP survey
# data collected from Addis Ababa, Ethiopia
create_op_adl(testSVY)
```

---

```
create_op_adl_females Create female older people indicators dataframe for activities of daily living from survey data collected using the standard RAM-OP questionnaire
```

---

**Description**

Create female older people indicators dataframe for activities of daily living from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_adl_females(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A dataframe of female older people indicators on activities of daily living

**Examples**

```
# Create activities of daily living indicators dataset from RAM-OP survey
# data collected from Addis Ababa, Ethiopia
create_op_adl_females(testSVY)
```

---

```
create_op_adl_males Create male older people indicators dataframe for activities of daily living from survey data collected using the standard RAM-OP questionnaire
```

---

**Description**

Create male older people indicators dataframe for activities of daily living from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_adl_males(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A dataframe of male older people indicators on activities of daily living

**Examples**

```
# Create activities of daily living indicators dataset from RAM-OP survey
# data collected from Addis Ababa, Ethiopia
create_op_adl_males(testSVY)
```

---

create_op_all	<i>Create older people indicators dataframe from survey data collected using the standard RAM-OP questionnaire.</i>
---------------	---

---

**Description**

Create older people indicators dataframe from survey data collected using the standard RAM-OP questionnaire.

**Usage**

```
create_op_all(
  svy,
  indicators = c("demo", "food", "hunger", "disability", "adl", "mental", "dementia",
    "health", "income", "wash", "anthro", "oedema", "screening", "visual", "misc"),
  gender = c("m", "f")
)
```

**Arguments**

svy	A dataframe collected using the standard RAM-OP questionnaire
indicators	A character vector of indicator names
gender	Either an "m" for male or "f" for female; Whether to report indicators for males or females. If unspecified (default), both are reported.

**Value**

A tibble of older people indicators

**Examples**

```
create_op_all(svy = testSVY)
```

---

create_op_anthro	<i>Create older people indicators dataframe for anthropometry from survey data collected using the standard RAM-OP questionnaire.</i>
------------------	---

---

**Description**

Create older people indicators dataframe for anthropometry from survey data collected using the standard RAM-OP questionnaire.

**Usage**

```
create_op_anthro(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of older people indicators on anthropometry

**Anthropometry and screening**

MUAC Mid-upper arm circumference (mm)

**Author(s)**

Mark Myatt

**Examples**

```
# Create anthropometry indicators dataset from RAM-OP survey data collected  
# from Addis Ababa, Ethiopia  
create_op_anthro(testSVY)
```

---

create_op_anthro_females	<i>Create female older people indicators dataframe for anthropometry from survey data collected using the standard RAM-OP questionnaire</i>
--------------------------	---

---

**Description**

Create female older people indicators dataframe for anthropometry from survey data collected using the standard RAM-OP questionnaire



**Usage**

```
create_op_anthro_females(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of female older people indicators on anthropometry

**Examples**

```
# Create anthropometry indicators dataset from RAM-OP survey data collected  
# from Addis Ababa, Ethiopia  
create_op_anthro_females(testSVY)
```

---

```
create_op_anthro_males
```

*Create male older people indicators dataframe for anthropometry  
from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create male older people indicators dataframe for anthropometry from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_anthro_males(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of male older people indicators on anthropometry

**Examples**

```
# Create anthropometry indicators dataset from RAM-OP survey data collected  
# from Addis Ababa, Ethiopia  
create_op_anthro_males(testSVY)
```

---

create_op_dementia	<i>Create older people indicators dataframe for dementia from survey data collected using the standard RAM-OP questionnaire.</i>
--------------------	--

---

**Description**

Create older people indicators dataframe for dementia from survey data collected using the standard RAM-OP questionnaire.

**Usage**

```
create_op_dementia(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of older people indicators on dementia

**Brief Community Screening Instrument for Dementia (CSID)**

The CSID dementia screening tool is described in:

*Prince M, et al. (2010). A brief dementia screener suitable for use by non-specialists in resource poor settings - The cross-cultural derivation and validation of the brief Community Screening Instrument for Dementia. International Journal of Geriatric Psychiatry, 26(9), 899–907 doi:10.1002/gps.2622*

DS Probable dementia by CSID screen

**Author(s)**

Mark Myatt

**Examples**

```
# Create dementia indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_dementia(testSVY)
```

---

```
create_op_dementia_females
```

*Create female older people indicators dataframe for dementia from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create female older people indicators dataframe for dementia from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_dementia_females(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of female older people indicators on dementia

**Examples**

```
# Create dementia indicators dataset from RAM-OP survey data collected  
# from Addis Ababa, Ethiopia  
create_op_dementia_females(testSVY)
```

---

```
create_op_dementia_males
```

*Create male older people indicators dataframe for dementia from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create male older people indicators dataframe for dementia from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_dementia_males(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of male older people indicators on dementia

**Examples**

```
# Create dementia indicators dataset from RAM-OP survey data collected
# from Addis Ababa, Ethiopia
create_op_dementia_males(testSVY)
```

---

create_op_demo	<i>Create older people indicators dataframe for demography and situation from survey data collected using the standard RAM-OP questionnaire</i>
----------------	---

---

**Description**

Create older people indicators dataframe for demography and situation from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_demo(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A dataframe of older people indicators on demography and situation

**Demography and situation**

psu Primary sampling unit  
 resp1 Respondent is SUBJECT  
 resp2 Respondent is FAMILY CARER  
 resp3 Respondent is OTHER CARER  
 resp4 Respondent is OTHER  
 age Age of respondent (years)  
 ageGrp1 Age of respondent is between 50 and 59 years  
 ageGrp2 Age of respondent is between 60 and 69 years  
 ageGrp3 Age of respondent is between 70 and 79 years  
 ageGrp4 Age of respondent is between 80 and 89 years  
 ageGrp5 Age of respondent is between 90 years and older

```
sex1 Male
sex2 Female
marital1 Marital status = SINGLE
marital2 Marital status = MARRIED
marital3 Marital status = LIVING TOGETHER
marital4 Marital status = DIVORCED
marital5 Marital status = SEPARATED
marital6 Marital status = OTHER
alone Respondent lives alone
```

**Author(s)**

Mark Myatt

**Examples**

```
# Create demography and situation indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_demo(testSVY)
```

---

```
create_op_demo_females
```

*Create female older people indicators dataframe for demography and situation from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create female older people indicators dataframe for demography and situation from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_demo_females(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A dataframe of female older people indicators on demography and situation

**Examples**

```
# Create demography and situation indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_demo_females(testSVY)
```

---

```
create_op_demo_males  create_op_demo_males
```

---

**Description**

Create male older people indicators dataframe for demography and situation from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_demo_males(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A dataframe of male older people indicators on demography and situation

**Examples**

```
# Create demography and situation indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_demo_males(testSVY)
```

---

```
create_op_disability  Create older people indicators dataframe on disability from survey
data collected using the standard RAM-OP questionnaire
```

---

**Description**

Create older people indicators dataframe on disability from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_disability(svy)
```

### Arguments

svy                    A dataframe collected using the standard RAM-OP questionnaire

### Value

A tibble of older people indicators on disability

### Washington Group on Disability

See:

<https://www.washingtongroup-disability.com> [https://www.cdc.gov/nchs/washington\\_group/wg\\_documents.htm](https://www.cdc.gov/nchs/washington_group/wg_documents.htm)

for details.

wgVisionD0 Vision domain 0  
wgVisionD1 Vision domain 1  
wgVisionD2 Vision domain 2  
wgVisionD3 Vision domain 3  
wgHearingD0 Hearing domain 0  
wgHearingD1 Hearing domain 1  
wgHearingD2 Hearing domain 2  
wgHearingD3 Hearing domain 3  
wgMobilityD0 Mobility domain 0  
wgMobilityD1 Mobility domain 1  
wgMobilityD2 Mobility domain 2  
wgMobilityD3 Mobility domain 3  
wgRememberingD0 Remembering domain 0  
wgRememberingD1 Remembering domain 1  
wgRememberingD2 Remembering domain 2  
wgRememberingD3 Remembering domain 3  
wgSelfCareD0 Self-care domain 0  
wgSelfCareD1 Self-care domain 1  
wgSelfCareD2 Self-care domain 2  
wgSelfCareD3 Self-care domain 3  
wgCommunicatingD0 Communication domain 0  
wgCommunicatingD1 Communication domain 1  
wgCommunicatingD2 Communication domain 2  
wgCommunicatingD3 Communication domain 3  
wgP0 Overall 0  
wgP1 Overall 1  
wgP2 Overall 2  
wgP3 Overall 3  
wgPM Any disability

**Author(s)**

Mark Myatt

**Examples**

```
# Create disability indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_disability(testSVY)
```

---

```
create_op_disability_females
```

*Create female older people indicators dataframe for disability from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create female older people indicators dataframe for disability from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_disability_females(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of female older people indicators on disability

**Examples**

```
# Create disability indicators dataset from RAM-OP survey data collected
# from Addis Ababa, Ethiopia
create_op_disability_females(testSVY)
```



---

`create_op_disability_males`

*Create male older people indicators dataframe for disability from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create male older people indicators dataframe for disability from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_disability_males(svy)
```

**Arguments**

`svy` A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of male older people indicators on disability

**Examples**

```
# Create disability indicators dataset from RAM-OP survey data collected  
# from Addis Ababa, Ethiopia  
create_op_disability_males(testSVY)
```

---

`create_op_food`

*Create older people indicators for food intake from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create older people indicators for food intake from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_food(svy)
```

**Arguments**

`svy` A dataframe collected using the standard RAM-OP questionnaire

**Value**

A dataframe of older people indicators on food intake

**Dietary intake indicators**

These dietary intake indicators have been purpose-built for older people but the basic approach used is described in:

*Kennedy G, Ballard T, Dop M C (2011). Guidelines for Measuring Household and Individual Dietary Diversity. Rome, FAO <https://www.fao.org/3/i1983e/i1983e00.htm>*

and extended to include indicators of probable adequate intake of a number of nutrients / micronutrients.

MF Meal frequency

DDS Dietary Diversity Score (count of 11 groups)

FG01 Cereals

FG02 Roots and tubers

FG03 Fruits and vegetables

FG04 All meat

FG05 Eggs

FG06 Fish

FG07 Legumes, nuts and seeds

FG08 Milk and milk products

FG09 Fats

FG10 Sugar

FG11 Other

proteinRich Protein rich foods

pProtein Protein rich plant sources of protein

aProtein Protein rich animal sources of protein

pVita Plant sources of vitamin A

aVita Animal sources of vitamin A

xVita Any source of vitamin A

ironRich Iron rich foods

caRich Calcium rich foods

znRich Zinc rich foods

vitB1 Vitamin B1-rich foods

vitB2 Vitamin B2-rich foods

vitB3 Vitamin B3-rich foods

vitB6 Vitamin B6-rich foods

vitB12 Vitamin B12-rich foods

vitBcomplex Vitamin B1/B2/B3/B6/B12-rich foods

**Author(s)**

Mark Myatt

**Examples**

```
# Create food intake indicators dataset from RAM-OP survey data collected  
# from Addis Ababa, Ethiopia  
create_op_food(testSVY)
```

---

create\_op\_food\_females

*Create female older people indicators dataframe for food intake from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create female older people indicators dataframe for food intake from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_food_females(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A dataframe of female older people indicators on food intake

**Examples**

```
# Create food intake indicators dataset from RAM-OP survey data  
# collected from Addis Ababa, Ethiopia  
create_op_food_females(testSVY)
```

---

create_op_food_males	<i>Create male older people indicators dataframe for food intake from survey data collected using the standard RAM-OP questionnaire</i>
----------------------	---

---

**Description**

Create male older people indicators dataframe for food intake from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_food_males(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A dataframe of male older people indicators on food intake

**Examples**

```
# Create food intake indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_food_males(testSVY)
```

---

create_op_health	<i>Create older people indicators dataframe for health and health-seeking behaviours from survey data collected using the standard RAM-OP questionnaire.</i>
------------------	--

---

**Description**

Create older people indicators dataframe for health and health-seeking behaviours from survey data collected using the standard RAM-OP questionnaire.

**Usage**

```
create_op_health(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of older people indicators on health and health-seeking behaviour

**Health and health-seeking indicators**

- H1 Chronic condition
- H2 Takes drugs regularly for chronic condition
- H31 No drugs available
- H32 Too expensive / no money
- H33 Too old to look for care
- H34 Use traditional medicine
- H35 Drugs don't help
- H36 No-one to help me
- H37 No need
- H38 Other
- H39 No reason given
- H4 Recent disease episode
- H5 Accessed care for recent disease episode
- H61 No drugs available
- H62 Too expensive / no money
- H63 Too old to look for care
- H64 Use traditional medicine
- H65 Drugs don't help
- H66 No-one to help me
- H67 No need
- H68 Other
- H69 No reason given

**Author(s)**

Mark Myatt

**Examples**

```
# Create health and health-seeking behaviour indicators dataset from RAM-OP  
# survey data collected from Addis Ababa, Ethiopia  
create_op_health(testSVY)
```

---

```
create_op_health_females
```

*Create female older people indicators dataframe for health and health-seeking behaviours from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create female older people indicators dataframe for health and health-seeking behaviours from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_health_females(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of female older people indicators on health and health-seeking behaviours

**Examples**

```
# Create health and health-seeking behaviours indicators dataset from RAM-OP  
# survey data collected from Addis Ababa, Ethiopia  
create_op_health_females(testSVY)
```

---

```
create_op_health_males
```

*Create male older people indicators dataframe for health and health-seeking behaviours from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create male older people indicators dataframe for health and health-seeking behaviours from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_health_males(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of male older people indicators on health and health-seeking behaviours

**Examples**

```
# Create health and health-seeking behaviours indicators dataset from RAM-OP
# survey data collected from Addis Ababa, Ethiopia
create_op_health_males(testSVY)
```

---

create_op_hunger	<i>Create older people indicators for severe food insecurity from survey data collected using the standard RAM-OP questionnaire</i>
------------------	---

---

**Description**

Create older people indicators for severe food insecurity from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_hunger(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A dataframe of older people indicators on household hunger

**Household Hunger Scale (HHS)**

The HHS is described in:

*Ballard T, Coates J, Swindale A, Deitchler M (2011). Household Hunger Scale: Indicator Definition and Measurement Guide. Washington DC, FANTA-2 Bridge, FHI 360 <https://www.fantaproject.org/monitoring-and-evaluation/household-hunger-scale-hhs>*

HHS1 Little or no hunger in household

HHS2 Moderate hunger in household

HHS3 Severe hunger in household

**Author(s)**

Mark Myatt

**Examples**

```
# Create household hunger indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_hunger(testSVY)
```

---

```
create_op_hunger_females
```

*Create female older people indicators dataframe for household hunger from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create female older people indicators dataframe for household hunger from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_hunger_females(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A dataframe of female older people indicators on household hunger

**Examples**

```
# Create household hunger indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_hunger_females(testSVY)
```



---

```
create_op_hunger_males
```

*Create male older people indicators dataframe for household hunger from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create male older people indicators dataframe for household hunger from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_hunger_males(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A dataframe of male older people indicators on household hunger

**Examples**

```
# Create household hunger indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_hunger_males(testSVY)
```

---

```
create_op_income
```

*Create older people indicators dataframe for income from survey data collected using the standard RAM-OP questionnaire.*

---

**Description**

Create older people indicators dataframe for income from survey data collected using the standard RAM-OP questionnaire.

**Usage**

```
create_op_income(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of older people indicators on income

**Income and income sources**

M1 Has a personal income  
M2A Agriculture / fishing / livestock  
M2B Wages / salary  
M2C Sale of charcoal / bricks / &c.  
M2D Trading (e.g. market or shop)  
M2E Investments  
M2F Spending savings / sale of assets  
M2G Charity  
M2H Cash transfer / Social security  
M2I Other

**Author(s)**

Mark Myatt

**Examples**

```
# Create income indicators dataset from RAM-OP survey data collected from  
# Addis Ababa, Ethiopia  
create_op_income(testSVY)
```

---

```
create_op_income_females
```

*Create female older people indicators dataframe for income from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create female older people indicators dataframe for income from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_income_females(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of female older people indicators on income

**Examples**

```
# Create income indicators dataset from RAM-OP survey data collected from  
# Addis Ababa, Ethiopia  
create_op_income_females(testSVY)
```

---

create\_op\_income\_males

*Create male older people indicators dataframe for income from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create male older people indicators dataframe for income from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_income_males(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of male older people indicators on income

**Examples**

```
# Create income indicators dataset from RAM-OP survey data collected from  
# Addis Ababa, Ethiopia  
create_op_income_males(testSVY)
```

---

create_op_mental	<i>Create older people indicators dataframe for mental health from survey data collected using the standard RAM-OP questionnaire.</i>
------------------	---

---

### Description

Create older people indicators dataframe for mental health from survey data collected using the standard RAM-OP questionnaire.

### Usage

```
create_op_mental(svy)
```

### Arguments

svy                    A dataframe collected using the standard RAM-OP questionnaire

### Value

A tibble of older people indicators on mental health

### K6 Short form psychological distress score

The K6 score is described in:

*Kessler RC, Andrews G, Colpe LJ, Hiripi E, Mroczek, DK, Normand SLT, et al. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. Psychological Medicine, 32(6), 959–976 doi:10.1017/S0033291702006074*

K6 K6 score

K6Case K6 score > 12 (in serious psychological distress)

### Author(s)

Mark Myatt

### Examples

```
# Create mental health indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_mental(testSVY)
```

---

```
create_op_mental_females
```

```
Create female older people indicators dataframe for mental health  
from survey data collected using the standard RAM-OP questionnaire
```

---

**Description**

Create female older people indicators dataframe for mental health from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_mental_females(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of female older people indicators on mental health

**Examples**

```
# Create mental health indicators dataset from RAM-OP survey data collected  
# from Addis Ababa, Ethiopia  
create_op_mental_females(testSVY)
```

---

```
create_op_mental_males
```

```
Create male older people indicators dataframe for mental health from  
survey data collected using the standard RAM-OP questionnaire
```

---

**Description**

Create male older people indicators dataframe for mental health from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_mental_males(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of male older people indicators on mental health

**Examples**

```
# Create mental health indicators dataset from RAM-OP survey data collected
# from Addis Ababa, Ethiopia
create_op_mental_males(testSVY)
```

---

create_op_misc	<i>Create older people indicators dataframe for miscellaneous indicators from survey data collected using the standard RAM-OP questionnaire.</i>
----------------	--

---

**Description**

Create older people indicators dataframe for miscellaneous indicators from survey data collected using the standard RAM-OP questionnaire.

**Usage**

```
create_op_misc(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of older people miscellaneous indicators

**Miscellaneous indicators**

chew Problems chewing food  
 food Anyone in HH receives a ration  
 NFRI Anyone in HH received non-food relief item(s) in previous month

**Author(s)**

Mark Myatt

**Examples**

```
# Create miscellaneous indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_misc(testSVY)
```

---

```
create_op_misc_females
```

*Create female older people indicators dataframe for miscellaneous indicators from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create female older people indicators dataframe for miscellaneous indicators from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_misc_females(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of female older people miscellaneous indicators

**Examples**

```
# Create miscellaneous indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_misc_females(testSVY)
```

---

```
create_op_misc_males
```

*Create male older people indicators dataframe for miscellaneous indicators from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create male older people indicators dataframe for miscellaneous indicators from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_misc_males(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of male older people miscellaneous indicators

**Examples**

```
# Create miscellaneous indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_misc_males(testSVY)
```

---

create_op_oedema	<i>Create older people indicators dataframe for oedema prevalence from survey data collected using the standard RAM-OP questionnaire.</i>
------------------	---

---

**Description**

Create older people indicators dataframe for oedema prevalence from survey data collected using the standard RAM-OP questionnaire.

**Usage**

```
create_op_oedema(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of older people indicators on oedema prevalence

**Oedema prevalence**

oedema    Bilateral pitting oedema (may not be nutritional)

**Author(s)**

Mark Myatt

**Examples**

```
# Create oedema prevalence indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_oedema(testSVY)
```



---

```
create_op_oedema_females
```

*Create female older people indicators dataframe for oedema prevalence from survey data collected using the standard RAM-OP questionnaire*

---

### Description

Create female older people indicators dataframe for oedema prevalence from survey data collected using the standard RAM-OP questionnaire

### Usage

```
create_op_oedema_females(svy)
```

### Arguments

svy                    A dataframe collected using the standard RAM-OP questionnaire

### Value

A tibble of female older people indicators on oedema prevalence

### Examples

```
# Create oedema prevalence indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_oedema_females(testSVY)
```

---

```
create_op_oedema_males
```

*Create male older people indicators dataframe for oedema prevalence from survey data collected using the standard RAM-OP questionnaire*

---

### Description

Create male older people indicators dataframe for oedema prevalence from survey data collected using the standard RAM-OP questionnaire

### Usage

```
create_op_oedema_males(svy)
```

### Arguments

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of male older people indicators on oedema prevalence

**Examples**

```
# Create oedema prevalence indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_oedema_males(testSVY)
```

---

create_op_screening	<i>Create older people indicators dataframe for screening coverage from survey data collected using the standard RAM-OP questionnaire.</i>
---------------------	--

---

**Description**

Create older people indicators dataframe for screening coverage from survey data collected using the standard RAM-OP questionnaire.

**Usage**

```
create_op_screening(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of older people indicators on screening coverage

**Screening Coverage**

screened Either MUAC or oedema checked previously

**Author(s)**

Mark Myatt

**Examples**

```
# Create screening coverage indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_screening(testSVY)
```

---

```
create_op_screening_females
```

*Create female older people indicators dataframe for screening coverage from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create female older people indicators dataframe for screening coverage from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_screening_females(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of female older people indicators on screening coverage

**Examples**

```
# Create screening coverage indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_screening_females(testSVY)
```

---

```
create_op_screening_males
```

*Create male older people indicators dataframe for screening coverage from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create male older people indicators dataframe for screening coverage from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_screening_males(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of male older people indicators on screening coverage

**Examples**

```
# Create screening coverage indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_screening_males(testSVY)
```

---

create_op_visual	<i>Create older people indicators dataframe for visual impairment from survey data collected using the standard RAM-OP questionnaire.</i>
------------------	---

---

**Description**

Create older people indicators dataframe for visual impairment from survey data collected using the standard RAM-OP questionnaire.

**Usage**

```
create_op_visual(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of older people indicators on visual impairment

**Visual impairment by "Tumbling E" method**

The "Tumbling E" method is described in:

*Taylor HR (1978). Applying new design principles to the construction of an illiterate E Chart. Am J Optom & Physiol Optics 55:348*

poorVA Poor visual acuity (correct in < 3 of 4 tests)

**Author(s)**

Mark Myatt

**Examples**

```
# Create visual impairment indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_visual(testSVY)
```

---

```
create_op_visual_females
```

*Create female older people indicators dataframe for visual impairment from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create female older people indicators dataframe for visual impairment from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_visual_females(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of female older people indicators on visual impairment

**Examples**

```
# Create visual impairment indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_visual_females(testSVY)
```

---

```
create_op_visual_males
```

*Create male older people indicators dataframe for visual impairment from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create male older people indicators dataframe for visual impairment from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_visual_males(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of male older people indicators on visual impairment

**Examples**

```
# Create visual impairment indicators dataset from RAM-OP survey data
# collected from Addis Ababa, Ethiopia
create_op_visual_males(testSVY)
```

---

create_op_wash	<i>Create older people indicators dataframe for water, sanitation and hygiene from survey data collected using the standard RAM-OP questionnaire.</i>
----------------	---

---

**Description**

Create older people indicators dataframe for water, sanitation and hygiene from survey data collected using the standard RAM-OP questionnaire.

**Usage**

```
create_op_wash(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of older people indicators on water, sanitation and hygiene

**Water, sanitation and hygiene (WASH) indicators**

These are a (core) subset of indicators from: <https://washdata.org/monitoring/methods/core-questions>

W1 Improved source of drinking water

W2 Safe drinking water (improved source OR adequate treatment)

W3 Improved sanitation facility

W4 Improved non-shared sanitation facility

**Author(s)**

Mark Myatt

**Examples**

```
# Create water, sanitation and hygiene indicators dataset from RAM-OP survey
# data collected from Addis Ababa, Ethiopia
create_op_wash(testSVY)
```

---

```
create_op_wash_females
```

*Create female older people indicators dataframe for water, sanitation and hygiene from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create female older people indicators dataframe for water, sanitation and hygiene from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_wash_females(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of female older people indicators on water, sanitation and hygiene

**Examples**

```
# Create water, sanitation and hygiene indicators dataset from RAM-OP survey
# data collected from Addis Ababa, Ethiopia
create_op_wash_females(testSVY)
```

---

```
create_op_wash_males
```

*Create male older people indicators dataframe for water, sanitation and hygiene from survey data collected using the standard RAM-OP questionnaire*

---

**Description**

Create male older people indicators dataframe for water, sanitation and hygiene from survey data collected using the standard RAM-OP questionnaire

**Usage**

```
create_op_wash_males(svy)
```

**Arguments**

svy                    A dataframe collected using the standard RAM-OP questionnaire

**Value**

A tibble of male older people indicators on water, sanitation and hygiene

**Examples**

```
# Create water, sanitation and hygiene indicators dataset from RAM-OP survey
# data collected from Addis Ababa, Ethiopia
create_op_wash_males(testSVY)
```

---

estimate_classic	<i>Function to apply bootstrap to RAM-OP indicators using a classical estimator.</i>
------------------	--

---

**Description**

Function to apply bootstrap to RAM-OP indicators using a classical estimator.

**Usage**

```
estimate_classic(
  x,
  w,
  statistic = bbw::bootClassic,
  indicators = c("demo", "food", "hunger", "adl", "disability", "mental", "dementia",
    "health", "oedema", "screening", "income", "wash", "visual", "misc"),
  params = get_variables(indicators),
  outputColumns = params,
  replicates = 399
)
```

**Arguments**

x                    Indicators dataset produced by [create\\_op\\_all](#) with primary sampling unit (PSU) in column named PSU

w                    A data frame with primary sampling unit (PSU) in column named psu and survey weight (i.e. PSU population) in column named pop

statistic            A function operating on data in x; fixed to [bootClassic](#) function for means



indicators	A character vector of indicator set names to estimate. Indicator set names are demo, food, hunger, disability, adl, mental, dementia, health, income, wash, visual, and misc. Default is all indicator sets.
params	Parameters (named columns in x) passed to the function specified in statistic. This is equivalent to variables corresponding to the indicator sets specified in indicators. The function <a href="#">get_variables</a> is used to specify these variables.
outputColumns	Names of columns in output data frame. This defaults to values specified in params
replicates	Number of bootstrap replicates

**Value**

Tibble of boot estimates using bootClassic mean function

**Examples**

```
#
test <- estimate_classic(x = indicators.ALL,
                        w = testPSU,
                        replicates = 9)

test
```

---

estimate_op_all	<i>Estimate all standard RAM-OP indicators</i>
-----------------	--

---

**Description**

Estimate all standard RAM-OP indicators

**Usage**

```
estimate_op_all(
  x,
  w,
  indicators = c("demo", "anthro", "food", "hunger", "adl", "disability", "mental",
                "dementia", "health", "oedema", "screening", "income", "wash", "visual", "misc"),
  replicates = 399
)
```

**Arguments**

x	Indicators dataset produced by <a href="#">create_op_all</a> with primary sampling unit (PSU) in column named PSU
w	A data frame with primary sampling unit (PSU) in column named psu and survey weight (i.e. PSU population) in column named pop

indicators	A character vector of indicator set names to estimate. Indicator set names are demo, anthro, food, hunger, disability, adl, mental, dementia, health, income, wash, visual, and misc. Default is all indicator sets.
replicates	Number of bootstrap replicates. Default is 399.

**Value**

Tibble of boot estimates for all specified standard RAM-OP indicators

**Examples**

```
estimate_op_all(x = create_op_all(testSVY),
               w = testPSU,
               replicates = 9)
```

---

estimate_probit	<i>Function to apply bootstrap to RAM-OP indicators using a PROBIT estimator.</i>
-----------------	---

---

**Description**

Function to apply bootstrap to RAM-OP indicators using a PROBIT estimator.

**Usage**

```
estimate_probit(
  x,
  w,
  gam.stat = probit_gam,
  sam.stat = probit_sam,
  params = "MUAC",
  outputColumns = "MUAC",
  replicates = 399
)
```

**Arguments**

x	Indicators dataset produced by <a href="#">create_op_all</a> with primary sampling unit (PSU) in column named PSU
w	A data frame with primary sampling unit (PSU) in column named psu and survey weight (i.e. PSU population) in column named pop
gam.stat	A function operating on data in x to estimate GAM prevalence for older people. Fixed to probit_gam
sam.stat	A function operating on data in x to estimate SAM prevalence for older people. Fixed to probit_sam

params	Parameters (named columns in x) passed to the function specified in statistic; fixed to MUAC as indicator amenable to probit estimation
outputColumns	Names of columns in output data frame; fixed to MUAC
replicates	Number of bootstrap replicate case and non-case

**Value**

Dataframe of boot estimates using bootPROBIT function

**Examples**

```
#
test <- estimate_probit(x = indicators.ALL,
                        w = testPSU,
                        replicates = 3)

test
```

---

fullTable	<i>Fill out a one-dimensional table to include a specified range of values</i>
-----------	--

---

**Description**

Fill out a one-dimensional table to include a specified range of values

**Usage**

```
fullTable(x, values)
```

**Arguments**

x	A vector to tabulate
values	A vector of values to be included in a table

**Value**

A one-dimensional table with specified values

**Author(s)**

Mark Myatt

**Examples**

```
xTable <- fullTable(x = sample(x = 5,
                               size = 100,
                               replace = TRUE),
                    values = 1:5)

xTable
```

---

get_variables	<i>Function to get appropriate RAM-OP indicator variable names given a specified indicator set</i>
---------------	--

---

**Description**

Function to get appropriate RAM-OP indicator variable names given a specified indicator set

**Usage**

```
get_variables(
  indicators = c("demo", "food", "hunger", "adl", "disability", "mental", "dementia",
    "health", "income", "wash", "anthro", "oedema", "screening", "visual", "misc")
)
```

**Arguments**

indicators	A character vector of indicator set names. Indicator set names are demo, food, hunger, disability, adl, mental, dementia, health, income, wash, anthro, screening, visual, and misc. Default is all indicator sets.
------------	---

**Value**

A vector of variable names

**Examples**

```
get_variables(indicators = c("demo", "food"))
```

---

indicators.ALL	<i>RAM-OP Indicators Dataset - ALL</i>
----------------	--

---

**Description**

Indicators dataset calculated from a dataset collected from a RAM-OP survey conducted in Addis Ababa, Ethiopia in early 2014

**Usage**

```
indicators.ALL
```

**Format**

A data frame with 138 columns and 192 rows:

psu Cluster (PSU) identifier  
resp1 Respondent is SUBJECT  
resp2 Respondent is FAMILY CARER  
resp3 Respondent is OTHER CARER  
resp4 Respondent is OTHER  
age Age of respondents (years)  
ageGrp1 Age of respondent is between 50 and 59 years  
ageGrp2 Age of respondent is between 60 and 69 years  
ageGrp3 Age of respondent is between 70 and 79 years  
ageGrp4 Age of respondent is between 80 and 89 years  
ageGrp5 Age of respondent is 90 years or older  
sex1 Sex = MALE  
sex2 Sex = FEMALE  
marital1 Marital status = SINGLE  
marital2 Marital status = MARRIED  
marital3 Marital status = LIVING TOGETHER  
marital4 Marital status = DIVORCED  
marital5 Marital status = WIDOWED  
marital6 Marital status = OTHER  
alone Respondent lives alone  
MF Meal frequency  
DDS DDS (count of 11 groups)  
FG01 Cereals  
FG02 Roots and tubers  
FG03 Fruits and vegetables  
FG04 All meat  
FG05 Eggs  
FG06 Fish  
FG07 Legumes, nuts, and seeds  
FG08 Milk and milk products  
FG09 Fats  
FG10 Sugar  
FG11 Other  
proteinRich Protein rich animal sources of protein  
pProtein Protein rich plant sources of protein

aProtein Protein rich animal sources of protein  
 pVita Plant sources of vitamin A  
 aVita Animal sources of vitamin A  
 xVita Any source of vitamin A  
 ironRich Iron rich foods  
 caRich Calcium rich foods  
 znRich Zinc rich foods  
 vitB1 Vitamin B1-rich foods  
 vitB2 Vitamin B2-rich foods  
 vitB3 Vitamin B3-rich foods  
 vitB6 Vitamin B6-rich foods  
 vitB12 Vitamin B12-rich foods  
 vitBcomplex Vitamin B1/B2/B3/B6/B12-rich foods  
 HHS1 Little or no hunger in household  
 HHS2 Moderate hunger in household  
 HHS3 Severe hunger in household  
 ADL01 Bathing  
 ADL02 Dressing  
 ADL03 Toileting  
 ADL04 Transferring (mobility)  
 ADL05 Continence  
 ADL06 Feeding  
 scoreADL ADL score  
 classADL1 Severity of dependence = INDEPENDENT  
 classADL2 Severity of dependence = PARTIAL DEPENDENCY  
 classADL3 Severity of dependence = SEVERE DEPENDENCY  
 hasHelp Has someone to help with ADL  
 unmetNeed Unmet need (dependency with NO helper)  
 K6 K6 score  
 K6Case K6 score > 12 (in serious psychological distress)  
 DS Probable dementia by CSID screen  
 H1 Chronic condition  
 H2 Takes drugs regularly for chronic condition  
 H31 Main reason for not taking drugs for chronic condition: No drugs available  
 H32 Main reason for not taking drugs for chronic condition: Too expensive / no money  
 H33 Main reason for not taking drugs for chronic condition: Too old to look for care  
 H34 Main reason for not taking drugs for chronic condition: Use traditional medicine

- H35 Main reason for not taking drugs for chronic condition: Drugs don't help
- H36 Main reason for not taking drugs for chronic condition: No one to help me
- H37 Main reason for not taking drugs for chronic condition: No need
- H38 Main reason for not taking drugs for chronic condition: Other
- H39 Main reason for not taking drugs for chronic condition: No reason given
- H4 Recent disease episode
- H5 Accessed care for recent disease episode
- H61 Main reason for not accessing care for recent disease episode: No drugs available
- H62 Main reason for not accessing care for recent disease episode: Too expensive / no money
- H63 Main reason for not accessing care for recent disease episode: Too old to look for care
- H64 Main reason for not accessing care for recent disease episode: Use traditional medicine
- H65 Main reason for not accessing care for recent disease episode: Drugs don't help
- H66 Main reason for not accessing care for recent disease episode: No one to help me
- H67 Main reason for not accessing care for recent disease episode: No need
- H68 Main reason for not accessing care for recent disease episode: Other
- H69 Main reason for not accessing care for recent disease episode: No reason given
- M1 Has a personal income
- M2A Agriculture / fishing / livestock
- M2B Wages / salary
- M2C Sale of charcoal / bricks / etc
- M2D Trading (e.g. market or shop)
- M2E Investments
- M2F Spending savings / sale of assets
- M2G Charity
- M2H Cash transfer / Social security
- M2I Other
- W1 Improved source of drinking water
- W2 Safe drinking water (improved source OR adequate treatment)
- W3 Improved sanitation facility
- W4 Improved non-shared sanitation facility
- MUAC Mid-upper arm circumference (mm)
- oedema Presence of oedema
- screened Screened with oedema check and MUAC measurement in previous month
- poorVA Poor visual acuity
- chew Problems chewing food
- food Anyone in household receives a ration
- NFRI Anyone in HH received non-food relief item(s) in previous month

wgVisionD0 Vision domain 0  
wgVisionD1 Vision domain 1  
wgVisionD2 Vision domain 2  
wgVisionD3 Vision domain 3  
wgHearingD0 Hearing domain 0  
wgHearingD1 Hearing domain 1  
wgHearingD2 Hearing domain 2  
wgHearingD3 Hearing domain 3  
wgMobilityD0 Mobility domain 0  
wgMobilityD1 Mobility domain 1  
wgMobilityD2 Mobility domain 2  
wgMobilityD3 Mobility domain 3  
wgRememberingD0 Remembering domain 0  
wgRememberingD1 Remembering domain 1  
wgRememberingD2 Remembering domain 2  
wgRememberingD3 Remembering domain 3  
wgSelfCareD0 Self-care domain 0  
wgSelfCareD1 Self-care domain 1  
wgSelfCareD2 Self-care domain 2  
wgSelfCareD3 Self-care domain 3  
wgCommunicatingD0 Communicating domain 0  
wgCommunicatingD1 Communicating domain 1  
wgCommunicatingD2 Communicating domain 2  
wgCommunicatingD3 Communicating domain 3  
wgP0 Overall prevalence 0  
wgP1 Overall prevalence 1  
wgP2 Overall prevalence 2  
wgP3 Overall prevalence 3  
wgPM Overall prevalence

**Examples**

*indicators.ALL*



---

indicators.FEMALES      *RAM-OP Indicators Dataset - FEMALES*


---

### Description

Indicators dataset calculated from a dataset collected from a RAM-OP survey conducted in Addis Ababa, Ethiopia in early 2014. This indicator dataset is from the subset of women/females of the total sample.

### Usage

indicators.FEMALES

### Format

A data frame with 138 columns and 113 rows:

psu Cluster (PSU) identifier  
 resp1 Respondent is SUBJECT  
 resp2 Respondent is FAMILY CARER  
 resp3 Respondent is OTHER CARER  
 resp4 Respondent is OTHER  
 age Age of respondents (years)  
 ageGrp1 Age of respondent is between 50 and 59 years  
 ageGrp2 Age of respondent is between 60 and 69 years  
 ageGrp3 Age of respondent is between 70 and 79 years  
 ageGrp4 Age of respondent is between 80 and 89 years  
 ageGrp5 Age of respondent is 90 years or older  
 sex1 Sex = MALE  
 sex2 Sex = FEMALE  
 marital1 Marital status = SINGLE  
 marital2 Marital status = MARRIED  
 marital3 Marital status = LIVING TOGETHER  
 marital4 Marital status = DIVORCED  
 marital5 Marital status = WIDOWED  
 marital6 Marital status = OTHER  
 alone Respondent lives alone  
 MF Meal frequency  
 DDS DDS (count of 11 groups)  
 FG01 Cereals

FG02 Roots and tubers  
 FG03 Fruits and vegetables  
 FG04 All meat  
 FG05 Eggs  
 FG06 Fish  
 FG07 Legumes, nuts, and seeds  
 FG08 Milk and milk products  
 FG09 Fats  
 FG10 Sugar  
 FG11 Other  
 proteinRich Protein rich animal sources of protein  
 pProtein Protein rich plant sources of protein  
 aProtein Protein rich animal sources of protein  
 pVita Plant sources of vitamin A  
 aVita Animal sources of vitamin A  
 xVita Any source of vitamin A  
 ironRich Iron rich foods  
 caRich Calcium rich foods  
 znRich Zinc rich foods  
 vitB1 Vitamin B1-rich foods  
 vitB2 Vitamin B2-rich foods  
 vitB3 Vitamin B3-rich foods  
 vitB6 Vitamin B6-rich foods  
 vitB12 Vitamin B12-rich foods  
 vitBcomplex Vitamin B1/B2/B3/B6/B12-rich foods  
 HHS1 Little or no hunger in household  
 HHS2 Moderate hunger in household  
 HHS3 Severe hunger in household  
 ADL01 Bathing  
 ADL02 Dressing  
 ADL03 Toileting  
 ADL04 Transferring (mobility)  
 ADL05 Continence  
 ADL06 Feeding  
 scoreADL ADL score  
 classADL1 Severity of dependence = INDEPENDENT  
 classADL2 Severity of dependence = PARTIAL DEPENDENCY

c1assADL3 Severity of dependence = SEVERE DEPENDENCY  
hasHelp Has someone to help with ADL  
unmetNeed Unmet need (dependency with NO helper)  
K6 K6 score  
K6Case K6 score > 12 (in serious psychological distress)  
DS Probable dementia by CSID screen  
H1 Chronic condition  
H2 Takes drugs regularly for chronic condition  
H31 Main reason for not taking drugs for chronic condition: No drugs available  
H32 Main reason for not taking drugs for chronic condition: Too expensive / no money  
H33 Main reason for not taking drugs for chronic condition: Too old to look for care  
H34 Main reason for not taking drugs for chronic condition: Use traditional medicine  
H35 Main reason for not taking drugs for chronic condition: Drugs don't help  
H36 Main reason for not taking drugs for chronic condition: No one to help me  
H37 Main reason for not taking drugs for chronic condition: No need  
H38 Main reason for not taking drugs for chronic condition: Other  
H39 Main reason for not taking drugs for chronic condition: No reason given  
H4 Recent disease episode  
H5 Accessed care for recent disease episode  
H61 Main reason for not accessing care for recent disease episode: No drugs available  
H62 Main reason for not accessing care for recent disease episode: Too expensive / no money  
H63 Main reason for not accessing care for recent disease episode: Too old to look for care  
H64 Main reason for not accessing care for recent disease episode: Use traditional medicine  
H65 Main reason for not accessing care for recent disease episode: Drugs don't help  
H66 Main reason for not accessing care for recent disease episode: No one to help me  
H67 Main reason for not accessing care for recent disease episode: No need  
H68 Main reason for not accessing care for recent disease episode: Other  
H69 Main reason for not accessing care for recent disease episode: No reason given  
M1 Has a personal income  
M2A Agriculture / fishing / livestock  
M2B Wages / salary  
M2C Sale of charcoal / bricks / etc  
M2D Trading (e.g. market or shop)  
M2E Investments  
M2F Spending savings / sale of assets  
M2G Charity  
M2H Cash transfer / Social security

M2I Other  
W1 Improved source of drinking water  
W2 Safe drinking water (improved source OR adequate treatment)  
W3 Improved sanitation facility  
W4 Improved non-shared sanitation facility  
MUAC Mid-upper arm circumference (mm)  
oedema Presence of oedema  
screened Screened with oedema check and MUAC measurement in previous month  
poorVA Poor visual acuity  
chew Problems chewing food  
food Anyone in household receives a ration  
NFRI Anyone in HH received non-food relief item(s) in previous month  
wgVisionD0 Vision domain 0  
wgVisionD1 Vision domain 1  
wgVisionD2 Vision domain 2  
wgVisionD3 Vision domain 3  
wgHearingD0 Hearing domain 0  
wgHearingD1 Hearing domain 1  
wgHearingD2 Hearing domain 2  
wgHearingD3 Hearing domain 3  
wgMobilityD0 Mobility domain 0  
wgMobilityD1 Mobility domain 1  
wgMobilityD2 Mobility domain 2  
wgMobilityD3 Mobility domain 3  
wgRememberingD0 Remembering domain 0  
wgRememberingD1 Remembering domain 1  
wgRememberingD2 Remembering domain 2  
wgRememberingD3 Remembering domain 3  
wgSelfCareD0 Self-care domain 0  
wgSelfCareD1 Self-care domain 1  
wgSelfCareD2 Self-care domain 2  
wgSelfCareD3 Self-care domain 3  
wgCommunicatingD0 Communicating domain 0  
wgCommunicatingD1 Communicating domain 1  
wgCommunicatingD2 Communicating domain 2  
wgCommunicatingD3 Communicating domain 3  
wgP0 Overall prevalence 0  
wgP1 Overall prevalence 1  
wgP2 Overall prevalence 2  
wgP3 Overall prevalence 3  
wgPM Overall prevalence

**Examples**

indicators.FEMALES

indicators.MALES

*RAM-OP Indicators Dataset - MALES***Description**

Indicators dataset calculated from a dataset collected from a RAM-OP survey conducted in Addis Ababa, Ethiopia in early 2014. This indicator dataset is from the subset of men/males of the total sample.

**Usage**

indicators.MALES

**Format**

A data frame with 138 columns and 113 rows:

psu Cluster (PSU) identifier  
 resp1 Respondent is SUBJECT  
 resp2 Respondent is FAMILY CARER  
 resp3 Respondent is OTHER CARER  
 resp4 Respondent is OTHER  
 age Age of respondents (years)  
 ageGrp1 Age of respondent is between 50 and 59 years  
 ageGrp2 Age of respondent is between 60 and 69 years  
 ageGrp3 Age of respondent is between 70 and 79 years  
 ageGrp4 Age of respondent is between 80 and 89 years  
 ageGrp5 Age of respondent is 90 years or older  
 sex1 Sex = MALE  
 sex2 Sex = FEMALE  
 marital1 Marital status = SINGLE  
 marital2 Marital status = MARRIED  
 marital3 Marital status = LIVING TOGETHER  
 marital4 Marital status = DIVORCED  
 marital5 Marital status = WIDOWED  
 marital6 Marital status = OTHER  
 alone Respondent lives alone

MF Meal frequency  
DDS DDS (count of 11 groups)  
FG01 Cereals  
FG02 Roots and tubers  
FG03 Fruits and vegetables  
FG04 All meat  
FG05 Eggs  
FG06 Fish  
FG07 Legumes, nuts, and seeds  
FG08 Milk and milk products  
FG09 Fats  
FG10 Sugar  
FG11 Other  
proteinRich Protein rich animal sources of protein  
pProtein Protein rich plant sources of protein  
aProtein Protein rich animal sources of protein  
pVita Plant sources of vitamin A  
aVita Animal sources of vitamin A  
xVita Any source of vitamin A  
ironRich Iron rich foods  
caRich Calcium rich foods  
znRich Zinc rich foods  
vitB1 Vitamin B1-rich foods  
vitB2 Vitamin B2-rich foods  
vitB3 Vitamin B3-rich foods  
vitB6 Vitamin B6-rich foods  
vitB12 Vitamin B12-rich foods  
vitBcomplex Vitamin B1/B2/B3/B6/B12-rich foods  
HHS1 Little or no hunger in household  
HHS2 Moderate hunger in household  
HHS3 Severe hunger in household  
ADL01 Bathing  
ADL02 Dressing  
ADL03 Toileting  
ADL04 Transferring (mobility)  
ADL05 Continence  
ADL06 Feeding

scoreADL ADL score  
classADL1 Severity of dependence = INDEPENDENT  
classADL2 Severity of dependence = PARTIAL DEPENDENCY  
classADL3 Severity of dependence = SEVERE DEPENDENCY  
hasHelp Has someone to help with ADL  
unmetNeed Unmet need (dependency with NO helper)  
K6 K6 score  
K6Case K6 score > 12 (in serious psychological distress)  
DS Probable dementia by CSID screen  
H1 Chronic condition  
H2 Takes drugs regularly for chronic condition  
H31 Main reason for not taking drugs for chronic condition: No drugs available  
H32 Main reason for not taking drugs for chronic condition: Too expensive / no money  
H33 Main reason for not taking drugs for chronic condition: Too old to look for care  
H34 Main reason for not taking drugs for chronic condition: Use traditional medicine  
H35 Main reason for not taking drugs for chronic condition: Drugs don't help  
H36 Main reason for not taking drugs for chronic condition: No one to help me  
H37 Main reason for not taking drugs for chronic condition: No need  
H38 Main reason for not taking drugs for chronic condition: Other  
H39 Main reason for not taking drugs for chronic condition: No reason given  
H4 Recent disease episode  
H5 Accessed care for recent disease episode  
H61 Main reason for not accessing care for recent disease episode: No drugs available  
H62 Main reason for not accessing care for recent disease episode: Too expensive / no money  
H63 Main reason for not accessing care for recent disease episode: Too old to look for care  
H64 Main reason for not accessing care for recent disease episode: Use traditional medicine  
H65 Main reason for not accessing care for recent disease episode: Drugs don't help  
H66 Main reason for not accessing care for recent disease episode: No one to help me  
H67 Main reason for not accessing care for recent disease episode: No need  
H68 Main reason for not accessing care for recent disease episode: Other  
H69 Main reason for not accessing care for recent disease episode: No reason given  
M1 Has a personal income  
M2A Agriculture / fishing / livestock  
M2B Wages / salary  
M2C Sale of charcoal / bricks / etc  
M2D Trading (e.g. market or shop)  
M2E Investments

M2F Spending savings / sale of assets  
M2G Charity  
M2H Cash transfer / Social security  
M2I Other  
W1 Improved source of drinking water  
W2 Safe drinking water (improved source OR adequate treatment)  
W3 Improved sanitation facility  
W4 Improved non-shared sanitation facility  
MUAC Mid-upper arm circumference (mm)  
oedema Presence of oedema  
screened Screened with oedema check and MUAC measurement in previous month  
poorVA Poor visual acuity  
chew Problems chewing food  
food Anyone in household receives a ration  
NFRI Anyone in HH received non-food relief item(s) in previous month  
wgVisionD0 Vision domain 0  
wgVisionD1 Vision domain 1  
wgVisionD2 Vision domain 2  
wgVisionD3 Vision domain 3  
wgHearingD0 Hearing domain 0  
wgHearingD1 Hearing domain 1  
wgHearingD2 Hearing domain 2  
wgHearingD3 Hearing domain 3  
wgMobilityD0 Mobility domain 0  
wgMobilityD1 Mobility domain 1  
wgMobilityD2 Mobility domain 2  
wgMobilityD3 Mobility domain 3  
wgRememberingD0 Remembering domain 0  
wgRememberingD1 Remembering domain 1  
wgRememberingD2 Remembering domain 2  
wgRememberingD3 Remembering domain 3  
wgSelfCareD0 Self-care domain 0  
wgSelfCareD1 Self-care domain 1  
wgSelfCareD2 Self-care domain 2  
wgSelfCareD3 Self-care domain 3  
wgCommunicatingD0 Communicating domain 0  
wgCommunicatingD1 Communicating domain 1





---

probit_gam	<i>PROBIT statistics function for bootstrap estimation of older people GAM</i>
------------	--

---

**Description**

PROBIT statistics function for bootstrap estimation of older people GAM

**Usage**

```
probit_gam(x, params, threshold = 210)
```

**Arguments**

x	A data frame with primary sampling unit (PSU) in column named psu and with data column/s containing the continuous variable/s of interest with column names corresponding to params values
params	A vector of column names corresponding to the continuous variables of interest contained in x
threshold	cut-off value for continuous variable to differentiate case and non-case. Default is set at 210.

**Value**

A numeric vector of the PROBIT estimate of each continuous variable of interest with length equal to length(params)

**Examples**

```
# Example call to bootBW function:

probit_gam(x = indicators.ALL,
           params = "MUAC",
           threshold = 210)
```

---

probit_sam	<i>PROBIT statistics function for bootstrap estimation of older people SAM</i>
------------	--

---

**Description**

PROBIT statistics function for bootstrap estimation of older people SAM

**Usage**

```
probit_sam(x, params, threshold = 185)
```

**Arguments**

x	A data frame with primary sampling unit (PSU) in column named psu and with data column/s containing the continuous variable/s of interest with column names corresponding to params values
params	A vector of column names corresponding to the continuous variables of interest contained in x
threshold	cut-off value for continuous variable to differentiate an older people with SAM to those with no SAM. Default is set at 185.

**Value**

A numeric vector of the PROBIT estimate of each continuous variable of interest with length equal to length(params)

**Examples**

```
# Example call to bootBW function:

probit_sam(x = indicators.ALL,
           params = "MUAC",
           threshold = 185)
```

---

pyramid.plot

*Function to create a pyramid plot*


---

**Description**

Function to create a pyramid plot

**Usage**

```
pyramid.plot(
  x,
  g,
  main = paste("Pyramid plot of", deparse(substitute(x)), "by", deparse(substitute(g))),
  xlab = paste(deparse(substitute(g)), "(", levels(g)[1], "/", levels(g)[2], ")"),
  ylab = deparse(substitute(x))
)
```

**Arguments**

x	A vector (numeric, factor, character) holding age-groups
g	A binary categorical variable (usually sex)
main	Plot title
xlab	x-axis label
ylab	y-axis label

**Value**

Pyramid plot

**Author(s)**

Mark Myatt

**Examples**

```
##  
pyramid.plot(x = cut(testSVY$d2,  
                    breaks = seq(from = 60, to = 105, by = 5),  
                    include.lowest = TRUE),  
             g = testSVY$d3)
```

---

report\_op\_adl

*Create a report chunk for activities of daily living indicators*

---

**Description**

Create a report chunk for activities of daily living indicators

**Usage**

```
report_op_adl(format = "html")
```

**Arguments**

format            Either html, docx, or odt. Defaults to html.

**Value**

A reporting chunk for ADL indicators

**Author(s)**

Ernest Guevarra

**Examples**

```
report_op_adl()
```

---

report\_op\_anthro      *Create a report chunk for anthropometric indicators*

---

**Description**

Create a report chunk for anthropometric indicators

**Usage**

```
report_op_anthro(format = "html")
```

**Arguments**

format              Either html, docx, or odt. Defaults to html.

**Value**

A reporting chunk for anthropometric indicators

**Author(s)**

Ernest Guevarra

**Examples**

```
report_op_anthro()
```

---

report\_op\_dementia      *Create a report chunk for dementia indicators*

---

**Description**

Create a report chunk for dementia indicators

**Usage**

```
report_op_dementia(format = "html")
```

**Arguments**

format              Either html, docx, or odt. Defaults to html.

**Value**

A reporting chunk for dementia indicators

**Author(s)**

Ernest Guevarra

**Examples**

```
report_op_dementia()
```

---

report_op_demo	<i>Create a report chunk for demography indicators</i>
----------------	--

---

**Description**

Create a report chunk for demography indicators

**Usage**

```
report_op_demo(format = "html")
```

**Arguments**

format            Either html, docx or odt. Defaults to html.

**Value**

A reporting chunk for demographic indicators

**Author(s)**

Ernest Guevarra

**Examples**

```
report_op_demo()
```

---

report\_op\_disability    *Create a report chunk for disability indicators*

---

**Description**

Create a report chunk for disability indicators

**Usage**

```
report_op_disability(format = "html")
```

**Arguments**

format                Either html, docx, or odt. Defaults to html.

**Value**

A reporting chunk for disability indicators

**Author(s)**

Ernest Guevarra

**Examples**

```
report_op_disability()
```

---

report\_op\_docx                *Create a DOCX report document containing RAM-OP survey results*

---

**Description**

Create a DOCX report document containing RAM-OP survey results

**Usage**

```
report_op_docx(  
  estimates,  
  svy,  
  indicators = c("demo", "food", "hunger", "disability", "adl", "mental", "dementia",  
    "health", "income", "wash", "anthro", "oedema", "screening", "visual", "misc"),  
  filename = paste(tempdir(), "ramOPreport", sep = "/"),  
  title = "RAM-OP Report",  
  view = FALSE  
)
```

**Arguments**

estimates	A data.frame of RAM-OP results produced by <a href="#">merge_estimates</a> function.
svy	A data.frame collected using the standard RAM-OP questionnaire
indicators	A character vector of indicator names
filename	Filename for output document. Can be specified as a path to a specific directory where to output report document. Defaults to a path to a temporary directory and a filename ramOPreport.
title	Title of report
view	Logical. Open report in current environment? Default is FALSE.

**Value**

An DOCX in the working directory or if filename is a path, to a specified directory.

**Author(s)**

Ernest Guevarra

**Examples**

```
#
classicResults <- estimate_classic(x = create_op_all(testSVY),
                                  w = testPSU,
                                  replicates = 9)

probitResults <- estimate_probit(x = create_op_all(testSVY),
                                 w = testPSU,
                                 replicates = 9)

resultsDF <- merge_estimates(x = classicResults, y = probitResults)

report_op_docx(svy = testSVY,
               estimates = resultsDF,
               indicators = "mental",
               filename = paste(tempdir(), "report", sep = "/"))
```

---

report_op_food	<i>Create a report chunk for food indicators</i>
----------------	--

---

**Description**

Create a report chunk for food indicators

**Usage**

```
report_op_food(format = "html")
```



**Arguments**

format            Either html, docx, or odt. Defaults to html.

**Value**

A reporting chunk for food indicators

**Author(s)**

Ernest Guevarra

**Examples**

```
report_op_food()
```

---

report_op_health	<i>Create a report chunk for health and health-seeking behaviour indicators</i>
------------------	---

---

**Description**

Create a report chunk for health and health-seeking behaviour indicators

**Usage**

```
report_op_health(format = "html")
```

**Arguments**

format            Either html, docx, or odt. Defaults to html.

**Value**

A reporting chunk for health and health-seeking behaviour indicators

**Author(s)**

Ernest Guevarra

**Examples**

```
report_op_health()
```

---

report_op_html	<i>Create an HTML report document containing RAM-OP survey results</i>
----------------	--

---

**Description**

Create an HTML report document containing RAM-OP survey results

**Usage**

```
report_op_html(
  estimates,
  svy,
  indicators = c("demo", "food", "hunger", "disability", "adl", "mental", "dementia",
    "health", "income", "wash", "anthro", "oedema", "screening", "visual", "misc"),
  filename = paste(tempdir(), "ramOPreport", sep = "/"),
  title = "RAM-OP Report",
  view = FALSE
)
```

**Arguments**

estimates	A data.frame of RAM-OP results produced by <a href="#">merge_estimates</a> function.
svy	A data.frame collected using the standard RAM-OP questionnaire
indicators	A character vector of indicator names
filename	Filename for output document. Can be specified as a path to a specific directory where to output report document. Defaults to a path to a temporary directory and a filename ramOPreport.
title	Title of report
view	Logical. Open report in current browser? Default is FALSE.

**Value**

An HTML document in the working directory or if filename is a path, to a specified directory.

**Author(s)**

Ernest Guevarra

**Examples**

```
#
classicResults <- estimate_classic(x = create_op_all(testSVY),
  w = testPSU,
  replicates = 9)

probitResults <- estimate_probit(x = create_op_all(testSVY),
  w = testPSU,
```

```
replicates = 9)

resultsDF <- merge_estimates(x = classicResults, y = probitResults)

report_op_html(svy = testSVY,
               estimates = resultsDF,
               indicators = "mental",
               filename = paste(tempdir(), "report", sep = "/"))
```

---

report_op_hunger	<i>Create a report chunk for activities of food security indicators</i>
------------------	---

---

### **Description**

Create a report chunk for activities of food security indicators

### **Usage**

```
report_op_hunger(format = "html")
```

### **Arguments**

format            Either html, docx, or odt. Defaults to html.

### **Value**

A reporting chunk for food security indicators

### **Author(s)**

Ernest Guevarra

### **Examples**

```
report_op_hunger()
```

---

report\_op\_income      *Create a report chunk for income*

---

**Description**

Create a report chunk for income

**Usage**

```
report_op_income(format = "html")
```

**Arguments**

format              Either html, docx, or odt. Defaults to html.

**Value**

A reporting chunk for income

**Author(s)**

Ernest Guevarra

**Examples**

```
report_op_income()
```

---

report\_op\_mental      *Create a report chunk for mental health indicators*

---

**Description**

Create a report chunk for mental health indicators

**Usage**

```
report_op_mental(format = "html")
```

**Arguments**

format              Either html, docx, or odt. Defaults to html.

**Value**

A reporting chunk for mental health indicators

**Author(s)**

Ernest Guevarra

**Examples**

```
report_op_mental()
```

---

report_op_misc	<i>Create a report chunk for miscellaneous indicators</i>
----------------	---

---

**Description**

Create a report chunk for miscellaneous indicators

**Usage**

```
report_op_misc(format = "html")
```

**Arguments**

format            Either html, docx or odt. Defaults to html.

**Value**

A reporting chunk for miscellaneous indicators

**Author(s)**

Ernest Guevarra

**Examples**

```
report_op_misc()
```

---

report_op_odt	<i>Create a ODT report document containing RAM-OP survey results</i>
---------------	--

---

**Description**

Create a ODT report document containing RAM-OP survey results

**Usage**

```
report_op_odt(
  estimates,
  svy,
  indicators = c("demo", "food", "hunger", "disability", "adl", "mental", "dementia",
    "health", "income", "wash", "anthro", "oedema", "screening", "visual", "misc"),
  filename = paste(tempdir(), "ramOPreport", sep = "/"),
  title = "RAM-OP Report",
  view = FALSE
)
```

**Arguments**

estimates	A data.frame of RAM-OP results produced by <a href="#">merge_estimates</a> function.
svy	A data.frame collected using the standard RAM-OP questionnaire
indicators	A character vector of indicator names
filename	Filename for output document. Can be specified as a path to a specific directory where to output report document. Defaults to a path to a temporary directory and a filename ramOPreport.
title	Title of report
view	Logical. Open report in current environment? Default is FALSE.

**Value**

An ODT in the working directory or if filename is a path, to a specified directory.

**Author(s)**

Ernest Guevarra

**Examples**

```
#
classicResults <- estimate_classic(x = create_op_all(testSVY),
  w = testPSU,
  replicates = 9)

probitResults <- estimate_probit(x = create_op_all(testSVY),
  w = testPSU,
```

```
replicates = 9)

resultsDF <- merge_estimates(x = classicResults, y = probitResults)

report_op_odt(svy = testSVY,
              estimates = resultsDF,
              indicators = "mental",
              filename = paste(tempdir(), "report", sep = "/"))
```

---

report_op_oedema	<i>Create a report chunk for oedema</i>
------------------	---

---

## Description

Create a report chunk for oedema

## Usage

```
report_op_oedema(format = "html")
```

## Arguments

format            Either html, docx, or odt. Defaults to html.

## Value

A reporting chunk for oedema indicators

## Author(s)

Ernest Guevarra

## Examples

```
report_op_oedema()
```

---

report_op_screen	<i>Create a report chunk for screening indicators</i>
------------------	---

---

**Description**

Create a report chunk for screening indicators

**Usage**

```
report_op_screen(format = "html")
```

**Arguments**

format            Either html, docx, or odt. Defaults to html.

**Value**

A reporting chunk for screening indicators

**Author(s)**

Ernest Guevarra

**Examples**

```
report_op_screen()
```

---

report_op_table	<i>Create table of RAM-OP results</i>
-----------------	---------------------------------------

---

**Description**

Create table of RAM-OP results

**Usage**

```
report_op_table(estimates, filename = paste(tempdir(), "ramOP", sep = "/"))
```

**Arguments**

estimates        A data.frame of RAM-OP results produced by [merge\\_estimates](#) function.

filename         Prefix to append to report output filename. Can be specified as a path to a specific directory where to output tabular results CSV file. Defaults to a path to a temporary directory with a filename starting with ramOP.



**Value**

Report of tabulated estimated results saved in CSV format in current working directory or in the specified path

**Author(s)**

Mark Myatt

**Examples**

```
##  
x <- estimate_classic(x = create_op_all(testSVY),  
                     w = testPSU,  
                     replicates = 9)  
y <- estimate_probit(x = create_op_all(testSVY),  
                    w = testPSU,  
                    replicates = 9)  
z <- merge_estimates(x, y, prop2percent = TRUE)  
report_op_table(z)
```

---

report_op_visual	<i>Create a report chunk for visual acuity</i>
------------------	--

---

**Description**

Create a report chunk for visual acuity

**Usage**

```
report_op_visual(format = "html")
```

**Arguments**

format            Either html, docx, or odt. Defaults to html.

**Value**

A reporting chunk for visual acuity

**Author(s)**

Ernest Guevarra

**Examples**

```
report_op_visual()
```

---

report_op_wash	<i>Create a report chunk for water, sanitation and hygiene</i>
----------------	--

---

**Description**

Create a report chunk for water, sanitation and hygiene

**Usage**

```
report_op_wash(format = "html")
```

**Arguments**

format            Either html, docx, or odt. Defaults to html.

**Value**

A reporting chunk for water, sanitation and hygiene

**Author(s)**

Ernest Guevarra

**Examples**

```
report_op_wash()
```

---

testPSU	<i>RAM-OP Population Dataset</i>
---------	----------------------------------

---

**Description**

This is a short and narrow file with one record per PSU and just two variables

**Usage**

```
testPSU
```

**Format**

A data frame with 2 columns and 16 rows:

psu The PSU identifier. This must use the same coding system used to identify the PSUs that is used in the main RAM-OP dataset

pop The population of the PSU

The PSU dataset is used during data analysis to weight data by PSU population.

**Examples**

testPSU

testSVY

*RAM-OP Survey Dataset***Description**

Dataset collected from a RAM-OP survey conducted in Addis Ababa, Ethiopia in early 2014

**Usage**

testSVY

**Format**

A data frame with 91 columns and 192 rows:

ad2 Team number

psu PSU (cluster) number

hh Household identifier

id Person identifier

d1 Who is answering these questions?

d2 Age in years

d3 Sex

d4 Marital status

d5 Do you live alone?

f1 How many meals did you eat since this time yesterday?

f2a Tinned, powdered or fresh milk?

f2b Sweetened or flavoured water, soda drink, alcoholic drink, beer, tea or infusion, coffee, soup, or broth?

f2c Any food made from grain such as millet, wheat, barley, sorghum, rice, maize, pasta, noodles, bread, pizza, porridge?

f2d Any food made from fruits or vegetables that have yellow or orange flesh such as carrots, pumpkin, red sweet potatoes, mangoes, and papaya?

f2e Any food made with red palm oil or red palm nuts?

f2f Any dark green leafy vegetables such as cabbage, broccoli, spinach, moringa leaves, cassava leaves?

f2g Any food made from roots or tubers such as white potatoes, white yams, false banana, cassava, manioc, onions, beets, turnips, and swedes?

f2h Any food made from lentils, beans, peas, groundnuts, nuts, or seeds?

- f2i Any other fruits or vegetables such as banana, plantain, avocado, cauliflower, coconut?
- f2j Liver, kidney, heart, black pudding, blood, or other organ meats?
- f2k Any meat such as beef, pork, goat, lamb, mutton, veal, chicken, camel, or bush meat?
- f2l Fresh or dried fish, shellfish, or seafood?
- f2m Cheese, yoghurt, or other milk products?
- f2n Eggs?
- f2o Any food made with oil, fat, butter, or ghee?
- f2p Any mushrooms or fungi?
- f2q Grubs, snails, insects?
- f2r Sugar, honey and foods made with sugar or honey such as sweets, candies, chocolate, cakes, and biscuits?
- f2s Salt, pepper, herbs, spices, or sauces (hot sauce, soy sauce, ketchup)?
- f3 In the past four weeks, how often was there ever no food to eat of any kind in your home because of lack of resources to get food?
- f4 In the past four weeks, how often did you go to sleep at night hungry because there was not enough food?
- f5 In the past four weeks, how often did you go a whole day and night without eating anything at all because there was not enough food?
- f6 Are you or anyone in your household receiving a food ration on a regular basis?
- f7 Have you or another member of your household received non-food relief items such as soap, bucket, water container, bedding, mosquito net, clothes, or plastic sheet in the previous four weeks?
- a1 Have you or another member of your household received non-food relief items such as soap, bucket, water container, bedding, mosquito net, clothes, or plastic sheet in the previous four weeks?
- a2 Do you need help getting dressed partially or completely (not including tying of shoes)?
- a3 Do you need help going to the toilet or cleaning yourself after using the toilet or do you use a commode or bed-pan?
- a4 Do you need someone (i.e. not a walking aid) to help you move from a bed to a chair?
- a5 Are you partially or totally incontinent of bowel or bladder?
- a6 Do you need partial or total help with eating?
- a7 Is someone taking care of you or helping you with everyday activities such as shopping, cooking, bathing and dressing?
- a8 Do you have problems chewing food?
- k6a About how often during the past four weeks did you feel nervous – all of the time, most of the time, some of the time, a little of the time, or none of the time?
- k6b During the past four weeks, about how often did you feel hopeless – all of the time, most of the time, some of the time, a little of the time, or none of the time?
- k6c During the past four weeks, about how often did you feel restless or fidgety – all of the time, most of the time, some of the time, a little of the time, or none of the time?

- k6d During the past four weeks, about how often did you feel so depressed that nothing could cheer you up – all of the time, most of the time, some of the time, a little of the time, or none of the time?
- k6e During the past four weeks, about how often did you feel that everything was an effort – all of the time, most of the time, some of the time, a little of the time, or none of the time?
- k6f During the past four weeks, about how often did you feel worthless – all of the time, most of the time, some of the time, a little of the time, or none of the time?
- ds1 Point to nose and ask "What do you call this?"
- ds2 What do you do with a hammer?
- ds3 What day of the week is it?
- ds4 What is the season?
- ds5 Please point first to the window and then to the door.
- ds6a Child
- ds6b House
- ds6c Road
- h1 Do you suffer from a long term disease that requires you to take regular medication?
- h2 Do you take drugs regularly for this?
- h3 Why not?
- h4 Have you been ill in the past two weeks?
- h5 Did you go to the pharmacy, dispensary, health centre, health post, clinic, or hospital?
- h6 Why not?
- m1 Do you have a personal source of income or money?
- m2a Where does your income or money come from?: Agriculture, livestock, or fishing
- m2b Where does your income or money come from?: Wages or salary
- m2c Where does your income or money come from?: Sale of charcoal, bricks, firewood, poles, etc.
- m2d Where does your income or money come from?: Trading (e.g. market, shop)
- m2e Where does your income or money come from?: Private pension, investments, interest, rents, etc.
- m2f Where does your income or money come from?: Spending savings; Sale of household goods, personal goods, or jewellery; Sale of livestock, land, or other assets
- m2g Where does your income or money come from?: Aid, gifts, charity (e.g. from church, mosque, temple), begging, borrowing, or sale of food aid or relief items
- m2h Where does your income or money come from?: Cash transfer (NGO, UNO, government); State pension, social security, benefits, welfare program
- m2i Where does your income or money come from?: Other
- w1 What is your main source of drinking water?
- w2 What do you usually do to the water to make it safer to drink?
- w3 What kind of toilet facility do members of your household usually use?
- w4 Do you share this toilet facility with other households?

- as1 Mid-upper arm circumference (mm)
- as2 Has someone measured your arm like this in the previous month?
- as3 Bilateral pitting oedema
- as4 Has someone examined your feet like this in the previous month?
- va2a Tumbling Es: first time
- va2b Tumbling Es: second time
- va2c Tumbling Es: third time
- va2d Tumbling Es: fourth time
- wg1 Do you have difficulty seeing, even if wearing glasses?
- wg2 Do you have difficulty hearing, even if using a hearing aid?
- wg3 Do you have difficulty walking or climbing steps?
- wg4 Do you have difficulty remembering or concentrating?
- wg5 Do you have difficulty with self-care such as washing all over or dressing?
- wg6 Using your usual (customary) language, do you have difficulty communicating, for example understanding or being understood?

**Examples**

testSVY

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