

```

readr haven      readr      tidyverse

#
pacman::p_load(
  here,
  readr, # csv      tidyverse
  haven  # sav, dta, sas
)

```

CSV

read.csv

```

# read.csv csv
d_csv_1 <- read.csv("data/raw/u001.csv")
#
head(d_csv_1)

```

	caseid	sex	ybirth	mbirth	ZQ03	JC_1	JC_41	ZQ08A	ZQ08B	ZQ08C	ZQ08D	ZQ08E	ZQ08F
1	10001	1	1976	10	1	2	12	4	1	3	4	4	4
2	10002	1	1972	1	1	2	9	6	2	2	4	6	6
3	10003	1	1975	4	1	2	9	6	6	6	3	6	6
4	10004	2	1974	11	1	2	7	6	1	1	5	1	1
5	10005	1	1978	1	2	10	88	6	2	2	4	1	2
6	10006	1	1984	2	2	10	88	6	1	2	6	3	6
	ZQ08G	ZQ08H	ZQ11_A	ZQ11_B	ZQ11_C	ZQ11_D	ZQ11_E	ZQ11_F	ZQ11_G	ZQ11_H	ZQ11_I		
1	5	3	2	2	2	2	2	2	2	2	2	2	
2	6	5	2	2	2	2	2	1	2	2	2	2	
3	4	6	2	2	2	2	1	1	1	2	2	2	
4	4	2	2	2	2	2	2	2	2	2	2	2	
5	5	1	2	2	2	2	1	2	2	2	2	2	

6	6	6	2	2	2	2	2	2	2	2	2	2	
	ZQ11_J	ZQ11_K	ZQ11_L	ZQ11_M	ZQ11_N	ZQ11_O	ZQ12	ZQ14_1A	ZQ14_1B	ZQ14_1C			
1	2	2	2	2	2	2	2	0	0	1			
2	2	2	2	2	2	2	2	0	0	0			
3	2	2	2	2	2	2	4	0	0	0			
4	2	2	2	2	2	2	3	1	1	0			
5	1	2	1	2	2	2	4	2	0	0			
6	1	2	2	2	1	2	2	0	0	1			
	ZQ14_1D	ZQ23A	ZQ23B	ZQ23C	ZQ23D	ZQ24	ZQ25	ZQ26A	ZQ26B	ZQ26C	ZQ26D	ZQ26E	ZQ26F
1	0	5	5	5	4	1	1	4	5	3	5	3	4
2	1	3	5	2	2	1	3	5	5	2	5	1	5
3	0	3	2	2	2	1	3	5	5	4	5	3	5
4	0	3	5	2	2	1	2	3	5	2	4	2	4
5	0	5	8	5	5	1	2	3	3	4	3	3	4
6	0	4	8	3	2	1	4	3	4	3	4	3	5
	ZQ30D	ZQ35	ZQ39A	ZQ42	ZQ43	ZQ47A	ZQ47B	ZQ47C	ZQ50	ZQ52A	ZQ52Y	ZQ54A	ZQ54B
1	2	4	4	9	2	6	5	8	2	2	51	1	2
2	1	5	3	1	1	9	5	10	2	2	51	1	2
3	1	4	5	9	4	6	3	6	2	2	56	3	5
4	2	5	3	3	3	6	8	9	2	2	48	6	1
5	4	5	4	2	2	1	99	99	1	8	888	8	8
6	4	7	4	2	3	2	15	10	1	8	888	8	8
	ZQ54C	ZQ54D	ZQ61_A	ZQ61_B	ZQ61_C	ZQ61_D	ZQ61_E	ZQ61_F	ZQ61_G	ZQ61_H	ZQ61_I		
1	9	9	1	2	2	2	2	2	2	2	2	2	
2	2	4	1	2	2	2	2	2	2	2	2	2	
3	3	2	1	2	2	2	2	2	2	2	2	2	
4	5	4	1	2	2	2	2	2	2	2	2	2	
5	8	8	2	2	2	1	2	2	2	2	2	2	
6	8	8	1	2	2	2	2	2	2	2	2	2	
	ZQ62												
1	3												
2	2												
3	2												
4	4												
5	1												
6	2												

```
#
class(d_csv_1)
```

```
[1] "data.frame"
```

read_csv

```
# read_csv csv
d_csv_2 <- read_csv("data/raw/u001.csv")

Rows: 1000 Columns: 72
-- Column specification -----
Delimiter: ","
dbl (72): caseid, sex, ybirth, mbirth, ZQ03, JC_1, JC_41, ZQ08A, ZQ08B, ZQ08...

i Use `spec()` to retrieve the full column specification for this data.
i Specify the column types or set `show_col_types = FALSE` to quiet this message.

#
head(d_csv_2)

# A tibble: 6 x 72
  caseid  sex ybirth mbirth  ZQ03  JC_1 JC_41 ZQ08A ZQ08B ZQ08C ZQ08D ZQ08E
  <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>
1 10001     1  1976     10     1     2    12     4     1     3     4     4
2 10002     1  1972      1     1     2     9     6     2     2     4     6
3 10003     1  1975      4     1     2     9     6     6     6     3     6
4 10004     2  1974     11     1     2     7     6     1     1     5     1
5 10005     1  1978      1     2    10    88     6     2     2     4     1
6 10006     1  1984      2     2    10    88     6     1     2     6     3
# i 60 more variables: ZQ08F <dbl>, ZQ08G <dbl>, ZQ08H <dbl>, ZQ11_A <dbl>,
#   ZQ11_B <dbl>, ZQ11_C <dbl>, ZQ11_D <dbl>, ZQ11_E <dbl>, ZQ11_F <dbl>,
#   ZQ11_G <dbl>, ZQ11_H <dbl>, ZQ11_I <dbl>, ZQ11_J <dbl>, ZQ11_K <dbl>,
#   ZQ11_L <dbl>, ZQ11_M <dbl>, ZQ11_N <dbl>, ZQ11_O <dbl>, ZQ12 <dbl>,
#   ZQ14_1A <dbl>, ZQ14_1B <dbl>, ZQ14_1C <dbl>, ZQ14_1D <dbl>, ZQ23A <dbl>,
#   ZQ23B <dbl>, ZQ23C <dbl>, ZQ23D <dbl>, ZQ24 <dbl>, ZQ25 <dbl>, ZQ26A <dbl>,
#   ZQ26B <dbl>, ZQ26C <dbl>, ZQ26D <dbl>, ZQ26E <dbl>, ZQ26F <dbl>, ...

#
class(d_csv_2)

[1] "spec_tbl_df" "tbl_df"      "tbl"         "data.frame"
```

dta (Stata)

```
# read_dta dta
d_dta <- read_dta("data/raw/u001.dta")
#
head(d_dta)

# A tibble: 6 x 72
  caseid sex    ybirth mbirth ZQ03    JC_1    JC_41    ZQ08A    ZQ08B    ZQ08C
  <dbl> <dbl>+1 <dbl> <dbl> <dbl>+1 <dbl>+1b <dbl>+1b <dbl>+1 <dbl>+1 <dbl>+1
1 10001 1 [mal~ 1976    10 1 [ ~ 2 [ ~ 12    ~ 4 [ ~ 1 [ ~ 3 [ ~
2 10002 1 [mal~ 1972    1 1 [ ~ 2 [ ~ 9    ~ 6 [ ~ 2 [ ~ 2 [ ~
3 10003 1 [mal~ 1975    4 1 [ ~ 2 [ ~ 9    ~ 6 [ ~ 6 [ ~ 6 [ ~
4 10004 2 [fem~ 1974   11 1 [ ~ 2 [ ~ 7    ~ 6 [ ~ 1 [ ~ 1 [ ~
5 10005 1 [mal~ 1978    1 2 [ ~ 10 [ ~ 88 [ ~ 6 [ ~ 2 [ ~ 2 [ ~
6 10006 1 [mal~ 1984    2 2 [ ~ 10 [ ~ 88 [ ~ 6 [ ~ 1 [ ~ 2 [ ~
# i 62 more variables: ZQ08D <dbl>+1b1>, ZQ08E <dbl>+1b1>, ZQ08F <dbl>+1b1>,
#   ZQ08G <dbl>+1b1>, ZQ08H <dbl>+1b1>, ZQ11_A <dbl>+1b1>, ZQ11_B <dbl>+1b1>,
#   ZQ11_C <dbl>+1b1>, ZQ11_D <dbl>+1b1>, ZQ11_E <dbl>+1b1>, ZQ11_F <dbl>+1b1>,
#   ZQ11_G <dbl>+1b1>, ZQ11_H <dbl>+1b1>, ZQ11_I <dbl>+1b1>, ZQ11_J <dbl>+1b1>,
#   ZQ11_K <dbl>+1b1>, ZQ11_L <dbl>+1b1>, ZQ11_M <dbl>+1b1>, ZQ11_N <dbl>+1b1>,
#   ZQ11_O <dbl>+1b1>, ZQ12 <dbl>+1b1>, ZQ14_1A <dbl>+1b1>, ZQ14_1B <dbl>+1b1>,
#   ZQ14_1C <dbl>+1b1>, ZQ14_1D <dbl>+1b1>, ZQ23A <dbl>+1b1>, ZQ23B <dbl>+1b1>, ...
```

```
#
class(d_dta)
```

```
[1] "tbl_df"      "tbl"        "data.frame"
```

sav (SPSS)

```
# read_sav sav
d_sav <- read_sav("data/raw/u001.sav")
#
head(d_sav)
```

```
# A tibble: 6 x 72
  caseid sex    ybirth mbirth ZQ03    JC_1    JC_41    ZQ08A    ZQ08B    ZQ08C
  <dbl> <dbl>+l> <dbl> <dbl> <dbl>+l> <dbl>+lb> <dbl>+lb> <dbl>+l> <dbl>+l> <dbl>+l>
1 10001 1 [mal~ 1976    10 1 [ ~ 2 [ ~ 12    ~ 4 [ ~ 1 [ ~ 3 [ ~
2 10002 1 [mal~ 1972    1 1 [ ~ 2 [ ~ 9    ~ 6 [ ~ 2 [ ~ 2 [ ~
3 10003 1 [mal~ 1975    4 1 [ ~ 2 [ ~ 9    ~ 6 [ ~ 6 [ ~ 6 [ ~
4 10004 2 [fem~ 1974   11 1 [ ~ 2 [ ~ 7    ~ 6 [ ~ 1 [ ~ 1 [ ~
5 10005 1 [mal~ 1978    1 2 [ ~ 10 [ ~ 88 [ ~ 6 [ ~ 2 [ ~ 2 [ ~
6 10006 1 [mal~ 1984    2 2 [ ~ 10 [ ~ 88 [ ~ 6 [ ~ 1 [ ~ 2 [ ~
# i 62 more variables: ZQ08D <dbl>+l>, ZQ08E <dbl>+l>, ZQ08F <dbl>+l>,
#   ZQ08G <dbl>+l>, ZQ08H <dbl>+l>, ZQ11_A <dbl>+l>, ZQ11_B <dbl>+l>,
#   ZQ11_C <dbl>+l>, ZQ11_D <dbl>+l>, ZQ11_E <dbl>+l>, ZQ11_F <dbl>+l>,
#   ZQ11_G <dbl>+l>, ZQ11_H <dbl>+l>, ZQ11_I <dbl>+l>, ZQ11_J <dbl>+l>,
#   ZQ11_K <dbl>+l>, ZQ11_L <dbl>+l>, ZQ11_M <dbl>+l>, ZQ11_N <dbl>+l>,
#   ZQ11_O <dbl>+l>, ZQ12 <dbl>+l>, ZQ14_1A <dbl>+l>, ZQ14_1B <dbl>+l>,
#   ZQ14_1C <dbl>+l>, ZQ14_1D <dbl>+l>, ZQ23A <dbl>+l>, ZQ23B <dbl>+l>, ...
```

```
#
class(d_sav)
```

```
[1] "tbl_df"      "tbl"        "data.frame"
```