Title

mi describe — Describe mi data

Description

mi query reports whether the data in memory are mi data and, if they are, reports the style in which they are set.

mi describe provides a more detailed report on mi data.

Menu

Statistics > Multiple imputation

Syntax

mi query

mi describe [, *describe_options*]

describe_options	Description
detail	show missing-value counts for $m = 1$, $m = 2$, ...
noupdate	see [MI] **noupdate option**

Options

detail reports the number of missing values in $m = 1$, $m = 2$, ..., $m = M$ in the imputed and passive variables, along with the number of missing values in $m = 0$.

noupdate in some cases suppresses the automatic mi update this command might perform; see [MI] **noupdate option**.

Remarks and examples

Remarks are presented under the following headings:

> *mi query*
> *mi describe*

mi query

mi query without `mi data` in memory reports

```
. mi query
(data not mi set)
```

With `mi data` in memory, you see something like

```
. mi query
data mi set wide, M = 15
last mi update 20jan2017 15:30:20, approximately 5 minutes ago
```

mi query does not burden you with unnecessary information. It mentions when `mi update` was last run because you should run it periodically; see [MI] **mi update**.

mi describe

mi describe more fully describes `mi data`:

```
. mi describe
Style:  mlong
        last mi update 20jan2017 15:30:20, approximately 2 minutes ago
Obs.:   complete           90
        incomplete         10   (M = 20 imputations)
        ─────────────────────────
        total             100
Vars.:  imputed:  2; smokes(10) age(5)
        passive: 1; agesq(5)
        regular: 0
        system:  3; _mi_m _mi_id _mi_miss
        (there are 3 unregistered variables; gender race chd)
```

mi describe lists the style of the data, the number of complete and incomplete observations, M (the number of imputations), the registered variables, and the number of missing values in $m = 0$ of the imputed and passive variables. In the output, the line

```
    Vars.:  imputed:  2; smokes(10) age(5)
```

means that the `smokes` variable contains 10 missing values in $m = 0$ and that `age` contains 5. Those values are soft missings and thus eligible to be imputed. If one of `smokes`' missing values in $m = 0$ were hard, the line would read

```
    Vars.:  imputed:  2; smokes(9+1) age(5)
```

mi describe reports information about $m = 0$. To obtain information about all m's, use `mi describe, detail`:

```
. mi describe, detail
Style:  mlong
        last mi update 20jan2017 15:30:20, approximately 3 minutes ago
Obs.:   complete            90
        incomplete          10   (M = 20 imputations)
        ────────────────────────
        total              100
Vars.:  imputed:  2; smokes(10; 20*0) age(5; 20*0)
        passive: 1; agesq(5; 20*0)
        regular: 0
        system: 3; _mi_m _mi_id _mi_miss
        (there are 3 unregistered variables; gender race chd)
```

In this example, all imputed values are nonmissing. We can see that from

```
Vars.:  imputed:  2; smokes(10; 20*0) age(5; 20*0)
```

Note the 20*0 after the semicolons. That is the number of missing values in $m = 1$, $m = 2$, ..., $m = 20$. In the smokes variable, there are 10 missing values in $m = 0$, then 0 in $m = 1$, then 0 in $m = 2$, and so on. If $m = 17$ had two missing imputed values, the line would read

```
Vars.:  imputed:  2; smokes(10; 16*0, 2, 3*0) age(5; 20*0)
```

16*0, 2, 3*0 means that for $m = 1$, $m = 2$, ..., $m = 20$, the first 16 have 0 missing values, the next has 2, and the last 3 have 0.

If smokes had $9 + 1$ missing values rather than 10—that is, 9 soft missing values plus 1 hard missing rather than all 10 being soft missing—and all 9 soft missings were filled in, the line would read

```
Vars.:  imputed:  2; smokes(9+1; 20*0) age(5; 20*0)
```

The 20 imputations are shown as having no soft missing values. It goes without saying that they have 1 hard missing. Think of 20*0 as meaning 20*(0+1).

If smokes had $9 + 1$ missing values and two of the soft missings in $m = 18$ were still missing, the line would read

```
Vars.:  imputed:  2; smokes(9+1; 16*0, 2, 3*0) age(5; 20*0)
```

Stored results

mi query stores the following in r():

Scalars
    r(update)   seconds since last mi update
    r(m) m if r(style)=="flongsep"
    r(M) M if r(style)!="flongsep"
Macros
    r(style)   *style*
    r(name)   *name* if r(style)=="flongsep"

Note that mi query issues a return code of 0 even if the data are not mi. In that case, r(style) is ``''.

`mi describe` stores the following in `r()`:

Scalars
    `r(update)`   seconds since last `mi update`
    `r(N)`   number of observations in $m=0$
    `r(N_incomplete)`   number of incomplete observations in $m=0$
    `r(N_complete)`   number of complete observations in $m=0$
    `r(M)` M

Macros
    `r(style)`   *style*
    `r(ivars)`   names of imputed variables
    `r(_0_miss_ivars)` $\#=.$ in each `r(ivars)` in $m=0$
    `r(_0_hard_ivars)` $\#>.$ in each `r(ivars)` in $m=0$
    `r(pvars)`   names of passive variables
    `r(_0_miss_pvars)` $\#\geq.$ in each `r(pvars)` in $m=0$
    `r(rvars)`   names of regular variables

If the `detail` option is specified, for each m, $m = 1, 2, \ldots, M$, also stored are

Macros
    `r(_m_miss_ivars)` $\#=.$ in each `r(ivars)` in m
    `r(_m_miss_pvars)` $\#\geq.$ in each `r(pvars)` in m

Also see

[MI] **intro** — Introduction to mi