Package ‘stddiff’

Type Package

Title Calculate the Standardized Difference for Numeric, Binary and Category Variables

Version 3.0

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Description Contains three main functions including stddiff.numeric(), stddiff.binary() and stddiff.category(). These are used to calculate the standardized difference between two groups. It is especially used to evaluate the balance between two groups before and after propensity score matching.

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LazyData TRUE

NeedsCompilation no

Repository CRAN

Date/Publication 2019-12-16 07:00:02 UTC

R topics documented:

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  Calculate the Standardized Difference for Numeric, Binary and Category Variables

Description

Contains three main functions including stddiff.numeric(), stddiff.binary() and stddiff.category(). These are used to calculate the standardized difference between two groups. It is especially used to evaluate the balance between two groups before and after propensity score matching.
Usage

stddiff.numeric(data,gcol,vcol)
stddiff.binary(data,gcol,vcol)
stddiff.category(data,gcol,vcol)

Arguments

data         a dataframe

gcol         a column number of group variable in data, 0 for control group, 1 for treatment
group

vcol         one or more column numbers of different types variables in data

Details

stddiff.numeric() is used for numeric variables. stddiff.binary() is used for binomial variables. std-
diff.category() is used for categorical variables. stddiff should be less than 0.2 or 0.1.

Value

for stddiff.numeric function:

mean.c        the mean of control group
sd.c          the standard deviation of control group
mean.t        the mean of treatment group
sd.t          the standard deviation of treatment group
missing.c     the counts of missing value of control group
missing.t     the counts of missing value of treatment group
stddiff       the standardized difference between two groups
stddiff.l     the lower limit of the 95 percentage confidence interval of standardized differ-
cence
stddiff.u     the upper limit of the 95 percentage confidence interval of standardized differ-
cence

for stddiff.binary function:

p.c           the proportion of last level in the control group
p.t           the proportion of last level in the treatment group
missing.c     the counts of missing value of control group
missing.t     the counts of missing value of treatment group
stddiff       the standardized difference between two groups
stddiff.l     the lower limit of the 95 percentage confidence interval of standardized differ-
cence
stddiff.u     the upper limit of the 95 percentage confidence interval of standardized differ-
cence
for stddiff.category function:

- **p.c** the proportion of each level in the control group
- **p.t** the proportion of each level in the treatment group
- **missing.c** the counts of missing value of control group
- **missing.t** the counts of missing value of treatment group
- **stddiff** the standardized difference between two groups
- **stddiff.l** the lower limit of the 95 percentage confidence interval of standardized difference
- **stddiff.u** the upper limit of the 95 percentage confidence interval of standardized difference

**Note**

Update:
version 2.0: Avoiding the negative number for the 'stddiff' of stddiff.numeric() and stddiff.binary()
version 3.0: Fixing the incorrect format in the results of stddiff.category()

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**References**


**See Also**

nothing

**Examples**

```r
#set.seed(2016)
#treat<-round(abs(rnorm(100)+1)*10,0) %% 2
#numeric<-round(abs(rnorm(100)+1)*10,0)
#binary<-round(abs(rnorm(100)+1)*10,0) %% 2
#category<-round(abs(rnorm(100)+1)*10,0) %% 3
#data<-data.frame(treat,numeric,binary,category)
#stddiff.numeric(data=data,gcol=1,vcol=c(2,2))
#stddiff.binary(data=data,gcol=1,vcol=c(3,3))
#stddiff.category(data=data,gcol=1,vcol=c(4,4))
```
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