

Package ‘pm3’

July 23, 2025

Type Package

Title Propensity Score Matching for Unordered 3-Group Data

Version 0.2.0

Maintainer Qiang LIU <dege857@163.com>

Description You can use this program for 3 sets of categorical data for propensity score matching.

Assume that the data has 3 different categorical variables. You can use it to perform propensity matching of baseline indicator groupings.

The matching will make the differences in the baseline data smaller.

This method was described by Alvaro Fuentes (2022) <[doi:10.1080/00273171.2021.1925521](https://doi.org/10.1080/00273171.2021.1925521)>.

License GPL-3

Depends R (>= 4.2.0)

Encoding UTF-8

LazyData true

RoxygenNote 7.2.1

Imports tableone

NeedsCompilation no

Author Qiang LIU [aut, cre]

Repository CRAN

Date/Publication 2024-07-22 09:20:02 UTC

Contents

datach	2
pm3	2
pm3datalist	3
pm3fit	4
prematurity	4

Index	5
--------------	----------

 datach

datach

Description

Generate new data and define the data.

Usage

```
datach(data, x)
```

Arguments

data	A data entry is required.
x	The 3 categorical variables that you make matches for.

Value

A list with data.

 pm3

pm3

Description

Propensity score matching for unordered 3-group data

Arguments

data	need a dataframe
x	Enter the 3 categorical variables to be matched.If x is a number, it must be of type 1,2,3.
y	Enter the outcome variable for your study.
covs	Covariates. Usually the other fitted variables of the model.This is also usually the baseline variable you need to match.
factor	Define the categorical variables in your data.
CALIP	The number used to match. Usually you don't need to change it. The default is 0.5.

Details

You can use this program for 3 sets of categorical data for propensity score matching. Assume that the data has 3 different categorical variables. You can use it to perform propensity matching of baseline indicator groupings. The matching will make the differences in the baseline data smaller.

Value

A list with data.

Examples

```
bc<-prematurity
####Generate data lists and extract data
g<-pm3(data=bc,x="race",y="low",covs=c("age","lwt","ptl"),
factor=c("ui","low","smoke"))
mbc<-g[["mbc"]]
####Compare before and after matching
library(tableone)
allVars <-c("age", "lwt", "ptl")
fvars<-c("ht")
tab2 <- CreateTableOne(vars = allVars, strata = "race" ,
data = bc, factorVars=fvars,addOverall = TRUE )
print(tab2,smd = TRUE)
tab1 <- CreateTableOne(vars = allVars, strata = "race" ,
data = mbc, factorVars=fvars,addOverall = TRUE )
print(tab1,smd = TRUE)
```

pm3datalist

pm3datalist

Description

Identification and formatting of data.

Usage

```
pm3datalist(data, x, y, covs, factor = NULL)
```

Arguments

data	A data entry is required.
x	The 3 categorical variables that you make matches for.
y	Your result variable.
covs	Enter the relevant covariates.
factor	Define categorical variables.

Value

A data.

pm3fit

pm3fit

Description

Generate propensity scores and generate the data to be matched.

Arguments

data	A data entry is required.
x	The 3 categorical variables that you make matches for.
y	Your result variable.
covs	Enter the relevant covariates.
factor	Define categorical variables.

Value

A list with data.

prematurity

A data on indicators for premature newborns.

Description

A data on indicators for premature newborns.

Usage

```
data(prematurity)
```

Format

An object of class `data.frame` with 189 rows and 11 columns.

Examples

```
data(prematurity)
```

Index

* **datasets**

prematurity, [4](#)

datach, [2](#)

pm3, [2](#)

pm3datalist, [3](#)

pm3fit, [4](#)

prematurity, [4](#)