Package: PSpower (via r-universe)

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Type Package

Title Sample Size Calculation for Propensity Score Analysis

Version 0.1.0

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Description Sample size calculations in causal inference with observational data are increasingly desired. This package is a tool to calculate sample size under prespecified power with minimal summary quantities needed.

Depends ggplot2

License GPL-3

Encoding UTF-8

LazyData true

RoxygenNote 7.3.2

Repository https://laubok.r-universe.dev

RemoteUrl https://github.com/laubok/pspower

RemoteRef HEAD

RemoteSha 86c43b6074d8c489e43ddf8ccdaf43336a730892

Contents

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plot.PSpower   *Plots PSpower object*

Description

Plots PSpower object

Usage

```
## S3 method for class 'PSpower'
plot(x, power = seq(0.6, 0.99, length.out = 100), ...)
```

Arguments

x	PSpower object
power	a range of powers to plot the power curve
...	ignored

Examples

```
obj <- PSpower(1, 0.05, 0.956, 0.5, 0.99, -1.74, -2.74, 19.86, 20.12, 0.14, 0.14)
plot(obj)
```

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print.PSpower   *Prints PSpower object*

Description

Prints PSpower object

Usage

```
## S3 method for class 'PSpower'
print(x, ...)
```

Arguments

x	PSpower object
...	ignored

PSpower   *Calculate sample size needed to achieve a prespecified power*

Description

Calculate sample size needed to achieve a prespecified power

Usage

```
PSpower(
  tau,
  alpha,
  beta,
  r,
  phi,
  E1,
  E0,
  S1,
  S0,
  R1,
  R0,
  test = "two-sided",
  estimand = "ATE"
)
```

Arguments

tau	the estimated treatment effect $E[Y(1) - Y(0)]$
alpha	the significance level
beta	the power to achieve
r	the proportion of treated units
phi	the overlap coefficients
E1, E0, S1, S0, R1, R0	
	the summary quantities
test	whether one-sided or two-sided test is considered
estimand	the estimand (ATE, ATT, ATC or ATO), or a customized tilting function

Value

an object with the calculated sample size

Examples

```
PSpower(1, 0.05, 0.956, 0.5, 0.99, -1.74, -2.74, 19.86, 20.12, 0.14, 0.14)
```

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