Package: mergedblocks (via r-universe)

November 6, 2024

Type Package

Title Merged Block Randomization

Version 1.1.1

Description Package to carry out merged block randomization (Van der
Pas (2019), <doi:10.1177/1740774519827957>), a restricted
randomization method designed for small clinical trials (at
most 100 subjects) or trials with small strata, for example in
multicentre trials. It can be used for more than two groups or
unequal randomization ratios.

Imports randomizeR

License GPL-3

Encoding UTF-8

RoxygenNote 7.2.3

Suggests knitr, rmarkdown

VignetteBuilder knitr

NeedsCompilation no

Author Stephanie van der Pas [aut, cre]

Maintainer Stephanie van der Pas <s.l.vanderpas@amsterdamumc.nl>

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Config/pak/sysreqs make libicu-dev libxml2-dev libssl-dev libnode-dev

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Description

Function to carry out merged block randomization, a restricted randomization method designed for small clinical trials (at most 100 subjects) or trials with small strata, for example in multicentre trials. It can be used for more than two groups or unequal randomization ratios.

Usage

```
mergedblocks(n, ratio = c(1, 1), labels = as.character(1:length(ratio)))
```

Arguments

n	The number of subjects to randomize.
ratio	The desired randomization ratio, given as a vector. Default is 1:1 randomization, but more groups or unequal ratios are possible as well. E.g. for 1:1:2 randomization, use c(1, 1, 2).
labels	The labels for the assignments, given as a vector, e.g. c("treatment", "placebo"). The length of labels should match the length of ratio. Default is to use numeric labels.

Value

Allocation of the subjects, given as a vector.

References

S.L. van der Pas (2019). Merged block randomisation: a novel randomisation procedure for small clinical trials. Clinical Trials 16(3):246-252.

See Also

mergedblocksmulti to create allocations for multiple strata at the same time.

Examples

```
#Randomize 20 patients, 1:1 allocation, with labels "1" and "2".
mergedblocks(20)

#Randomize 50 patients, 1:1 allocation with labels "treatment" and "placebo".
mergedblocks(100, labels = c("treatment", "placebo"))

#Randomize 100 patients, 1:2:2 allocation with labels "placebo",
#"treatment 1", and "treatment 2".
mergedblocks(100, c(1, 2, 2), c("placebo", "treatment 1", "treatment 2"))
```

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mergedblocksmulti *Merged block randomization for multiple strata*

Description

Function to carry out merged block randomization, for multiple strata.

Usage

```
mergedblocksmulti(
  K,
  n,
  ratio = c(1, 1),
  labels = as.character(1:length(ratio))
)
```

Arguments

K	The number of strata.
n	The number of subjects to randomize. May be given as a single number, for the same number of subjects per stratum, or as a vector or length K in case the desired sample size varies per stratum
ratio	The desired randomization ratio, given as a vector. Default is 1:1 randomization, but more groups or unequal ratios are possible as well. E.g. for 1:1:2 randomization, use c(1, 1, 2).
labels	The labels for the assignments, given as a vector, e.g. c("treatment", "placebo"). The length of labels should match the length of ratio. Default is to use numeric labels.

Value

Allocation of the subjects, given as a dataframe, with one column per stratum. Padded with NAs in case of different sample sizes per stratum.

References

S.L. van der Pas (2019). Merged block randomisation: a novel randomisation procedure for small clinical trials. Clinical Trials 16(3):246-252.

See Also

mergedblocks for a version for a single stratum.

Examples

```
#Four strata, randomize 20 patients for each stratum, 1:1 allocation,
#with labels "1" and "2".
mergedblocksmulti(K = 4, n = 20)

#Three strata, randomize 30, 40 and 50 patients for each stratum,
#1:2 allocation, with labels "placebo" and "treatment".
mergedblocksmulti(K = 3, n = c(30, 40, 50), ratio = c(1, 2), labels = c("placebo", "treatment"))
```

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