

Package: dumbbell (via r-universe)

October 5, 2026

Type Package

Title Displaying Changes Between Two Points Using Dumbbell Plots

Version 0.2

Description Creates dumbbell plots to visualize changes between two measurements for the same observations. The package provides customization options for labels, colors, arrows, delta values, and paired statistical test annotations.

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Encoding UTF-8

Imports dplyr, ggplot2, grid, rlang, tidyr, utils

URL <https://github.com/foocheung/dumbbell>

BugReports <https://github.com/foocheung/dumbbell/issues>

NeedsCompilation no

RoxygenNote 7.3.3

Collate 'global.R' 'dumbbell.R'

Suggests knitr, rmarkdown

VignetteBuilder knitr

Config/pak/sysreqs libicu-dev

Repository <https://foocheung.r-universe.dev>

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RemoteUrl <https://github.com/foocheung/dumbbell>

RemoteRef HEAD

RemoteSha e7c32eec284b5b3795237e981d4dd6948b66f610

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dumbbell*Dumbbell Plot*

Description

Draws a dumbbell plot, essentially a dot plot with two series of data.

Usage

```
dumbbell(  
  xdf,  
  id,  
  key,  
  column1,  
  column2,  
  lab1 = "Addlab1",  
  lab2 = "Addlab2",  
  title = "",  
  pointsize = 1,  
  textsize = 2,  
  segsize = 1,  
  expandx = 0.05,  
  expandy = 1,  
  p_col1 = "red",  
  p_col2 = "blue",  
  leg = "",  
  col_seg1 = "gray80",  
  col_seg2 = "gray80",  
  col_lab1 = "black",  
  col_lab2 = "black",  
  pt_alpha = 1,  
  arrow_size = 0.2,  
  arrow = 0,  
  pt_val = 0,  
  delt = 0,  
  pval = 0  
)
```

Arguments

xdf	A data frame containing at least four columns: an id column, a key/grouping column, and two numeric columns to compare.
id	Name of the column containing the id variable used to label the y axis, e.g. id = "id".
key	Name of the column containing the key/facet variable, e.g. key = "key".

column1, column2	Names of the first and second numeric columns, e.g. column1 = "Control", column2 = "Test".
lab1, lab2	Labels for the two data series, e.g. lab1 = "Control", lab2 = "Test".
title	Plot title, e.g. title = "This is a plot title".
pointsize	Point size, e.g. pointsize = 3.
textsize	Numeric value specifying the text size, e.g. textsize = 3.
segsz	Numeric value specifying the segment width, e.g. segsz = 1.
expandx	Add space to both ends of the x axis, e.g. expandx = 0.6.
expandy	Add space to both ends of the y axis, e.g. expandy = 1.
p_col1, p_col2	Colors for the first and second points, e.g. p_col1 = "red".
leg	Legend title, e.g. leg = "Group".
col_seg1, col_seg2	Colors for segments in each direction, e.g. col_seg1 = "red".
col_lab1, col_lab2	Colors for text labels below each dumbbell, e.g. col_lab1 = "red".
pt_alpha	Point transparency, e.g. pt_alpha = 0.6.
arrow_size	Size of arrows, e.g. arrow_size = 0.2.
arrow	Add an arrow to one end of the dumbbell. Use arrow = 1 to show arrows.
pt_val	Add point-value labels to the plot. Use pt_val = 1 to show values.
delt	Add a delta column to the plot. Use delt = 1 to show the difference.
pval	Add p-value to the key/facet label. Use pval = 1 for a paired Wilcoxon test or pval = 2 for a paired t-test.

Value

A ggplot object.

Author(s)

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Examples

```
library(dumbbell)
library(ggplot2)
z <- data.frame(
  Group = c(rep("A", 20), rep("B", 20)),
  Subject = c(paste0("sub_", 1:20), paste0("sub_", 1:20)),
  result = sample(1:100000, 40, replace = TRUE),
  analysis = c(rep("a", 10), rep("b", 10), rep("b", 10), rep("a", 10))
)
b <- z[z$Group == "A", ]
c <- z[z$Group == "B", ]
d <- merge(b, c, by = "Subject")
dumbbell(xdf = d, id = "Subject", key = "analysis.x", column1 = "result.x", column2 = "result.y")
```

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