Package ‘dumbbell’

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Type Package
Title Displaying Changes Between Two Points Using Dumbbell Plots
Version 0.1
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Description Creates a Dumbbell Plot.
License MIT + file LICENSE
Encoding UTF-8
LazyData true
Imports dplyr, tidyr, tidyverse, ggplot2, rlang, utils, data.table, rstatix
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NeedsCompilation no
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Collate 'global.R' 'dumbbell.R'
Suggests knitr, rmarkdown
VignetteBuilder knitr
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Dumbbell Plot

Description

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

Usage

dumbbell(
  xdf, id, key, column1, column2, lab1, lab2, title, pointsize, textsize, segsize, expandx, expandy, p_col1, p_col2, leg, col_seg1, col_seg2, col_lab1, col_lab2, pt_alpha, arrow_size, arrow, pt_val, delt, pval
)

Arguments

xdf data a data frame, xdf = data frame A data frame containing at least four columns corresponding, respectively, to (1) the first variable containing the "id", (2) the second variable containing the "key", (3) the third variable containing the start of the point "column1", the first data series, (4) the fourth variable containing the end of the point "column2", the second data series

id is the name of the column containing the id variable which will label the y axis eg(subject1,subject2 etc) eg id = "id"
key is the name of the column containing the key variable telling us which measure we use in each row eg key = "key"

column1, column2
    first and second series of data eg column1 = "Control" column2 = "Test"

lab1, lab2
    labels for data series eg lab1 = "Test" lab2 = "Control"

title
    Adds title to the plot eg title = "This is a plot title"

pointsize
    Adds points size to the points eg pointsize = 3

textsize
    numeric value specifying the text size eg textsize = 3

segsize
    numeric value specifying the segment width eg segsize = 1

expandx
    Add space to the both ends of the x axis eg expandx = 0.6

expandy
    Add space to the both ends of the y axis eg expandy = 1

p_col1, p_col2
    colors for start and end points eg pcol1 = "red"

leg
    Add legend title legend = "legend title"

col_seg1, col_seg2
    Adds a color to each arrow in each direction eg col_seg1 = "red"

col_lab1, col_lab2
    color text below each dumbbell eg col_lab1 = "red"

pt_alpha
    Add transparency to points pt_alpha = 0.6

arrow_size
    Add size to arrows arrow_size = 0.2

arrow
    Adds an arrow to one end of the dumbbell eg arrow = 1

pt_val
    Add option to show the point values eg pt_val = 1

delt
    Add a delta column to the plot eg delt = 1

pval
    Adds pvalue to the facet label, from using a wilcox paired test eg pval = 1 or a paired t_test eg pval = 2 (requires to use facet_wrap).

Value
    Dumbbell plot

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Examples
    library(tidyverse)
    library(ggplot2)
    library(rlang)
    library(utils)
    library(data.table)
    library(dumbbell)
    ## create data
    z<-data.frame(Group = c(rep("A",20),rep("B",20)),
    # Subject = c(paste("sub_",1:20,sep=""),paste("sub_",1:20,sep="")),
    Subject = c(paste(1:20,sep=""),paste(1:20,sep="")),
    # Value = c(paste("Val_",1:20,sep=""),paste("Val_",1:20,sep="")),
    # n = c(paste("n_",1:20,sep=""),paste("n_",1:20,sep="")),
    # Power = c(paste("Pow_",1:20,sep=""),paste("Pow_",1:20,sep="")))
    # plot(z, style = 1, key = "key", column1 = column2, lab1 = lab1, lab2 = lab2, title = "This is a plot title
col = "red", pt_alpha = 0.6, arrow_size = 0.2, arrow = 1, pt_val = 1, delt = 1, pval = 1, 
# facet_wrap(~Group), facet_grid(~Group ~ Subject))
result = c(sample(1:100000, 40, replace=TRUE)),
analysis = c(rep("a",10),rep("b",10),rep("b",10),rep("a",10))

b<-z %>% filter(Group == 'A')
c<-z %>% filter(Group == 'B')
d<-merge(b,c, by.x="Subject", by.y = "Subject")
e<-d %>% mutate("diff"=result.x-result.y) %>% arrange(diff)
d$Subject<-factor(d$Subject, levels = e$Subject)

## Basic plot
dumbbell(xdf=d,id= "Subject",key="analysis.x",column1 = "result.x",column2 = "result.y")
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