wmw_odds function Valdiation

Comparing to known values and to genodds package

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```
library(genodds)
library(testthat)
library(effectsize)
```

Sleep Dataset

```
y1 = subset(sleep, group == 1)$extra
x1 = subset(sleep, group == 2)$extra

my = wmw_odds(x = x1,
         y = y1)

other = genodds(response = sleep$extra,
        group = sleep$group)


test_that("sleep data",
          {
            expect_equal(my$odds,other$results$`All data`$odds)
            expect_equal(my$CI_low, other$results$`All data`$conf.int[1])
            expect_equal(my$CI_high, other$results$`All data`$conf.int[2])
          })
```

```
Test passed
```

Reversed

```
y1 = subset(sleep, group == 2)$extra
x1 = subset(sleep, group == 1)$extra

my = wmw_odds(x = x1,
         y = y1)

other = genodds(response = sleep$extra,
        group = sleep$group)

# Inverse
odds = 1/my$odds
high_ci = 1/my$CI_low
low_ci = 1/my$CI_high

test_that("sleep data",
          {
            expect_equal(odds,other$results$`All data`$odds)
            expect_equal(low_ci, other$results$`All data`$conf.int[1])
            expect_equal(high_ci, other$results$`All data`$conf.int[2])
          })
```

```
Test passed
```

Iris: 1

```
y1 = subset(iris, Species == "virginica")$Petal.Width
x1 = subset(iris, Species == "versicolor")$Petal.Width
lenx1 = length(x1)
leny1 = length(y1)

my = wmw_odds(x = x1,
         y = y1)

other = genodds(response = c(y1,x1),
        group = c(rep("x",lenx1),rep("y",leny1)))


test_that("iris data",
          {
            expect_equal(my$odds,other$results$`All data`$odds)
            expect_equal(my$CI_low, other$results$`All data`$conf.int[1])
            expect_equal(my$CI_high, other$results$`All data`$conf.int[2])
          })
```

```
Test passed
```

Reversed

```
y1 = subset(iris, Species == "virginica")$Petal.Width
x1 = subset(iris, Species == "versicolor")$Petal.Width
lenx1 = length(x1)
leny1 = length(y1)

my = wmw_odds(x = y1,
         y = x1)

other = genodds(response = c(y1,x1),
        group = c(rep("y",lenx1),rep("x",leny1)))


test_that("iris data",
          {
            expect_equal(my$odds,other$results$`All data`$odds)
            expect_equal(my$CI_low, other$results$`All data`$conf.int[1])
            expect_equal(my$CI_high, other$results$`All data`$conf.int[2])
          })
```

```
Test passed
```

Iris: 2

```
y1 = subset(iris, Species == "virginica")$Petal.Length
x1 = subset(iris, Species == "versicolor")$Petal.Length
lenx1 = length(x1)
leny1 = length(y1)

my = wmw_odds(x = x1,
         y = y1)

other = genodds(response = c(y1,x1),
        group = c(rep("x",lenx1),rep("y",leny1)))


test_that("iris data",
          {
```

```
  expect_equal(my$odds,other$results$`All data`$odds)
  expect_equal(my$CI_low, other$results$`All data`$conf.int[1])
  expect_equal(my$CI_high, other$results$`All data`$conf.int[2])
})
```

```
Test passed
```

Reversed

```
y1 = subset(iris, Species == "virginica")$Petal.Length
x1 = subset(iris, Species == "versicolor")$Petal.Length
lenx1 = length(x1)
leny1 = length(y1)

my = wmw_odds(x = y1,
         y = x1)

other = genodds(response = c(y1,x1),
        group = c(rep("y",lenx1),rep("x",leny1)))


test_that("iris data",
          {
            expect_equal(my$odds,other$results$`All data`$odds)
            expect_equal(my$CI_low, other$results$`All data`$conf.int[1])
            expect_equal(my$CI_high, other$results$`All data`$conf.int[2])
          })
```

```
Test passed
```

One sample

```
test_that("One sample/paired",{


  vec = c(0, rep(1, 9))

  odds = wmw_odds(x = vec)
  expect_equal(odds_to_probs(as.numeric(odds$odds)),
               .95)

    vec = c(rep(0,100))

  odds = wmw_odds(x = vec)
  expect_equal(odds_to_probs(as.numeric(odds$odds)),
               .5)
```

```
  vec = c(1,1,rep(0,98))

  odds = wmw_odds(x = vec)
  expect_equal(odds_to_probs(as.numeric(odds$odds)),
               0.51)
}
)
```

```
Test passed
```