

gof_clerids.R

John

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# gof_clerids.R
# Goodness-of-fit test for T. dubius data

# Load necessary libraries
library(DescTools)

## Warning: package 'DescTools' was built under R version 3.5.1

# Data values
obsfreq <- c(60,70)

# Probabilities and expected frequencies under H0
p0 <- c(0.5,0.5)
expfreq <- sum(obsfreq)*p0

# Observed and expected frequencies
rbind(obsfreq,expfreq)

##           [,1] [,2]
## obsfreq    60   70
## expfreq    65   65

# X2 goodness-of-fit test
chisq.test(obsfreq,p=p0)

##
## Chi-squared test for given probabilities
##
## data:  obsfreq
## X-squared = 0.76923, df = 1, p-value = 0.3805

# X2 exact test using simulation
chisq.test(obsfreq,p=p0,simulate.p.value=TRUE)

##
## Chi-squared test for given probabilities with simulated p-value
## (based on 2000 replicates)
##
## data:  obsfreq
## X-squared = 0.76923, df = NA, p-value = 0.4348

# G2 goodness-of-fit test
GTest(obsfreq,p=p0)

##
## Log likelihood ratio (G-test) goodness of fit test
##
## data:  obsfreq
## G = 0.76999, X-squared df = 1, p-value = 0.3802
```