

# Mann-Kendall Analysis for the Incidence of Both Age Groups

2024-04-11

```
install.packages("trend")

## Installing package into '/cloud/lib/x86_64-pc-linux-gnu-library/4.3'
## (as 'lib' is unspecified)

install.packages("Kendall")

## Installing package into '/cloud/lib/x86_64-pc-linux-gnu-library/4.3'
## (as 'lib' is unspecified)

library(trend)
library(Kendall)

# 3 MONTHS TO 5 YEARS INCIDENCE DATA: MANN KENDALL STATISTICAL TEST
incidence_data <- data.frame(
  Year = 2006:2016,
  Incidence = c(21.64424083, 26.10040806, 22.70523303,
                13.79289857, 8.700136019, 11.45871573,
                6.790350064, 10.39772354,
                8.27573914, 9.336731338, 7.426945382))

# Loading the required package for Mann-Kendall test
if (!requireNamespace("Kendall", quietly = TRUE)) {
  install.packages("Kendall")
  library(Kendall)
}

# Mann-Kendall test for trend
result <- MannKendall(incidence_data$Incidence)

# Print the result
print(result)

## tau = -0.636, 2-sided pvalue =0.0081234

# 5 YEARS TO 15 YEARS INCIDENCE DATA: MANN KENDALL STATISTICAL TEST
library(Kendall)

# Create the data as vectors
year <- c(2006:2016)
incidence <- c(7.214746943, 4.24396879, 5.517159427, 3.182976592,
               3.819571911, 9.336731338, 6.365953185, 3.607373471,
               6.365953185, 3.819571911, 1.273190637)

data <- data.frame(year, incidence)

# Perform the Mann-Kendall trend test
```

```
result <- MannKendall(data$incidence)

# Display the results
print(result)

## tau = -0.278, 2-sided pvalue =0.27283

# Print the results
print(result)

## tau = -0.278, 2-sided pvalue =0.27283
```