Package 'AudioScatter'

June 5, 2025

Type Package

Title Audiogram Scattergrams

Version 0.1.0

Description Creates pre- and post- intervention scattergrams based on audiometric data. These scattergrams are formatted for publication in Otology & Neurotology and other otolaryngology journals. For more details, see Gurgel et al (2012) <doi:10.1177/0194599812458401>, Oghalai and Jackler (2016) <doi:10.1177/0194599816638314>.

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Encoding UTF-8

LazyData true

Imports tidyverse, ggplot2, dplyr, scales

RoxygenNote 7.3.2

Suggests testthat (>= 3.0.0)

Config/testthat/edition 3

NeedsCompilation no

Author Dorothy W. Pan [aut, cre],
John S. Oghalai [aut]

Maintainer Dorothy W. Pan <dorothy.pan@med.usc.edu>

Depends R (>= 3.5.0)

Repository CRAN

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Contents

AudioData *AudioData*

Description

An example dataset containing the preop PTA, preop WRS, postop PTA, and postop WRS. You can load your own dataset containing the preop PTA, preop WRS, and potentially postop PTA and postop WRS. The variables are as follows:

Usage

```
data(AudioData)
```

Format

A data frame with rows and 4 columns

Details

- PrePTA. preop pure tone average
- PreWRS. preop word recognition score
- PostPTA. postop pure tone average
- PostWRS. postop word recognition score

CalcChange *Post-treatment change in PTA and WRS Calculate change in PTA Calculate change in WRS create new columns relating the change in WRS to the correct column for the scattergram. create new columns relating the change in PTA to the correct row for the scattergram. Calculate Change between Post and Pre PTA and WRS and put in appropriate column and row for scattergram.*

Description

Post-treatment change in PTA and WRS Calculate change in PTA Calculate change in WRS create new columns relating the change in WRS to the correct column for the scattergram. create new columns relating the change in PTA to the correct row for the scattergram. Calculate Change between Post and Pre PTA and WRS and put in appropriate column and row for scattergram.

Usage

```
CalcChange(dTable)
```

Arguments

dTable	table loaded from csv file including PrePTA, PreWRS, and possibly PostPTA, PostWRS.

dTable — *# load example dataset to dTable.*

Description

load example dataset to dTable.

Usage

```
dTable
```

Format

An object of class `tbl_df` (inherits from `tbl`, `data.frame`) with 58 rows and 4 columns.

dTablePost — *Calculate the audiogram changes and write to new table dTablePost*

Description

Calculate the audiogram changes and write to new table dTablePost

Usage

```
dTablePost
```

Format

An object of class `tbl_df` (inherits from `tbl`, `data.frame`) with 58 rows and 8 columns.

SavePostScatter — *SavePostScatter*

Description

SavePostScatter

Usage

```
SavePostScatter(dTablePost)
```

Arguments

`dTablePost`	table resulting from CalcChange with change in PTA and WRS, dPTA and dWRS, respectively, as well as the column and row dPTA and dWRS should go.

Value

png file of postop scattergram

`SavePreScatter` *SavePreScatter*

Description

SavePreScatter

Usage

```
SavePreScatter(dTable)
```

Arguments

`dTable`	table loaded from csv file including PrePTA, PreWRS, and possibly PostPTA, PostWRS.

Value

png file for preop scattergram. Pre-treatment PTA vs WRS

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