Package ‘pedalfast.data’

October 14, 2022

Title    PEDALFAST Data
Version  1.0.0
Description Data files and documentation for PEDiatric vALidation of vAriableS in TBI (PEDALFAST). The data was used in `Functional Status Scale in Children With Traumatic Brain Injury: A Prospective Cohort Study` by Bennett, Dixon, et al (2016) <doi:10.1097/PCC.0000000000000934>.
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**fss_as_factor**

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### fss_as_factor

#### Functional Status Scale Categories

<table>
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<tr>
<th>Description</th>
<th>Mapping FSS Total scores (integer values) to categorical values.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Usage</strong></td>
<td>fss_as_factor(x, long_label = FALSE, ...)</td>
</tr>
<tr>
<td><strong>Arguments</strong></td>
<td>x an integer vector</td>
</tr>
<tr>
<td></td>
<td>long_label logical if the score range should be prepended to the label.</td>
</tr>
<tr>
<td></td>
<td>... not currently used.</td>
</tr>
<tr>
<td><strong>Details</strong></td>
<td>FSS scores are integer values from 6 to 30.</td>
</tr>
<tr>
<td></td>
<td>The a mapping of ranges of integer values to categories is</td>
</tr>
<tr>
<td></td>
<td>• FSS 6, 7: Good</td>
</tr>
<tr>
<td></td>
<td>• FSS 8, 9: Mildly abnormal</td>
</tr>
<tr>
<td></td>
<td>• FSS 10, 11, 12, 13, 14, 15: Moderately abnormal</td>
</tr>
<tr>
<td></td>
<td>• FSS 16, 17, 18, 19, 20, 21: Severe abnormal</td>
</tr>
<tr>
<td></td>
<td>• FSS 22, 23, 24, 25, 26, 27, 28, 29, 30: Very severely abnormal</td>
</tr>
<tr>
<td><strong>Value</strong></td>
<td>A factor of equal length to the input x with labels for the categorical ranges of FSS.</td>
</tr>
</tbody>
</table>
| **Examples**         | x <- seq(5, 32)
|                      | data.frame(x = x, short_label = fss_as_factor(x),
|                      |     long_label = fss_as_factor(x, long_label = TRUE))            |
Description

Functions for mapping integer values to GCS labeled factor and visa versa

Usage

gcs_as_integer(x, scale, ...)  
## S3 method for class 'factor'  
gcs_as_integer(x, scale, ...)  
## S3 method for class 'character'  
gcs_as_integer(x, scale, ...)  

gcs_as_factor(x, scale, long_label = FALSE, highest_first = FALSE, ...)  
## S3 method for class 'character'  
gcs_as_factor(x, scale, long_label = FALSE, highest_first = FALSE, ...)  
## S3 method for class 'numeric'  
gcs_as_factor(x, scale, long_label = FALSE, highest_first = FALSE, ...)  

gcs_ll

Arguments

- x: a integer, factor, or character vector.
- scale: a character string to denote eye, motor, or verbal GCS scale.
- ...: not currently used.
- long_label: logical to prepend the numeric value to the label of a factor.
- highest_first: logical if the factor levels should be ordered with the highest GCS score as the reference level, else the lowest GCS score as the reference level.

Format

An object of class list of length 3.

Value

- gcs_as_factor returns a factor of equal length to x.
- gcs_as_integer returns an integer vector of equal length to x.
Examples

########################################
# Mapping from numeric values to factor:
nums <- c(0:7, 2.3)

# with short labels
data.frame(nums = nums,
    eye = gcs_as_factor(nums, scale = "eye"),
    motor = gcs_as_factor(nums, scale = "motor"),
    verbal = gcs_as_factor(nums, scale = "verbal"))

# with long labels
data.frame(nums = nums,
    eye = gcs_as_factor(nums, scale = "eye", long_label = TRUE),
    motor = gcs_as_factor(nums, scale = "motor", long_label = TRUE),
    verbal = gcs_as_factor(nums, scale = "verbal", long_label = TRUE))

########################################
# Mapping from factors/characters to numeric values
# A quick way to access the labels and numeric values
pedalfast.data::gcs_ll

all_levels <- do.call(c, lapply(pedalfast.data::gcs_ll, names))
data.frame(lvls = all_levels,
    eye = gcs_as_integer(all_levels, scale = "eye"),
    motor = gcs_as_integer(all_levels, scale = "motor"),
    verbal = gcs_as_integer(all_levels, scale = "verbal")
)

########################################
# Order of the levels:
# The data values are the same, but the order of the levels differs.
gcs_as_factor(1:4, "eye", highest_first = FALSE)
gcs_as_factor(1:4, "eye", highest_first = TRUE)

onezero  1/0 Flags

Description

Turns Yes/No variables into 1/0 integers

Usage

onezero(x)
Arguments
x a character vector

Details
The input is forced to lowercase and only the first character, the "y" or "n", is used to map to the 1/0 integer values. The function allows for "1" and "0" to be in the character vector as well.

Value
an integer vector

Examples

``` R
flag <- c("Y", "No", "NO", "no", "n", "YES", "Yes", "yEs", "1", "0")
onezero(flag)
```

pedalfast PEDALFAST Data

Description
Single data frame for the PEDALFAST data.

Usage
pedalfast

Format
An object of class data.frame with 388 rows and 103 columns.

Details
pedalfast is one data frame with the whole of the exported data.

See Also
vignette("datasets", package = "pedalfast.data")
Description

A flavor of the base function factor but aimed to use specific default values for levels and labels based on the information in the pedalfast_metadata object.

Usage

```
pedalfast_factor(x, variable, label_with_level = FALSE, ...)  
```

Arguments

- `x` a vector of data
- `variable` character string identifying the variable name in pedalfast_metadata defining the levels and labels for the factor.
- `label_with_level` (default to FALSE) labels will include the integer value. See examples.
- `...` not currently used.

Value

An object of class factor

References


Examples

```
data(pedalfast, pedalfast_metadata, package = "pedalfast.data")

# The Motor GCS in the emergency department is reported as an integer value.
str(pedalfast$gcsmotored)

# Each integer value a specific meaning
pedalfast_metadata[grepl("gcsmotored", pedalfast_metadata$variable), ]

# Creating the factor in base R
pedalfast_factor(x = c(1, 3, 2), variable = "gcsmotored")
pedalfast_factor(x = c(1, 3, 2), variable = "gcsmotored", label_with_level = TRUE)
```
### pedalfast_metadata

**Description**

*pedalfast_metadata* provides documentation for each of variables in the *pedalfast*.

**Usage**

```r
pedalfast_metadata
```

**Format**

An object of class `data.frame` with 103 rows and 3 columns.

**See Also**

```r
vignette("datasets", package = "pedalfast.data")
```

---

### round_age

**Round Age**

**Description**

Round age per FITBIR guidelines

**Usage**

```r
round_age(x, type = "character")
```

**Arguments**

- `x` : a numeric vector
- `type` : defaults to character (default), also accepts numeric.
Details

FITBIR Definition for the "AgeYrs" data element: Value for participant’s subject age, calculated as elapsed time since the birth of the participant/subject in years. The subject's age is typically recorded to the nearest full year completed, e.g. 11 years and 6 months should be recorded as 11 years.

Guidelines & Instructions: The subject’s age is typically recorded to the nearest full year completed, e.g. 11 years and 6 months should be recorded as 11 years. For subject’s which are under 1 year old, use decimal points and use the following convention: record 1 month as 0.083 (1/12), 2 months as 0.166 (2/12), 3 months as 0.25 (3/12), 4 months as 0.333 (4/12), 5 months as 0.416 (5/12), 6 months as 0.5 (6/12), 7 months as 0.583 (7/12), 8 months as 0.666 (8/12), 9 months as 0.75 (9/12), 10 months as 0.833 (10/12), 11 months as 0.916 (11/12) and 12 months as 1 year. For the individuals 90 or older, in order to preserve PII, please submit "150" and make a note this in the "general notes" column.

Value

a character or numeric vector depending on the value of type.

Examples

ages <- c(92, 12.12, 89 + 10/12, 9.12, 9.73, 1.1, 1.75, (1:11 + 0.05) / 12, 2, 90)

round_age(ages)
round_age(ages, "numeric")

<table>
<thead>
<tr>
<th>yesno</th>
<th>Yes No Flags</th>
</tr>
</thead>
</table>

Description

Turns 1/0 into "Yes"/"No"

Usage

yesno(x)

Arguments

x an integer vector

Value

a character vector
Examples

```r
flag <- c(0, 1, 0, 0, 0)
yesno(flag)
```
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