

# Package ‘ggrcs’

March 2, 2023

**Type** Package

**Title** Draw Histograms and Restricted Cubic Splines (RCS)

**Version** 0.2.8

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**Description** You can use this function to easily draw a combined histogram and restricted cubic spline. The function draws the graph through 'ggplot2'. RCS fitting requires the use of the `rcs()` function of the 'rms' package. Can fit cox regression, logistic regression. This method was described by Per Kragh (2003) <[doi:10.1002/sim.1497](https://doi.org/10.1002/sim.1497)>.

**License** GPL-3

**Depends** R (>= 4.2.0)

**Imports** rms, ggplot2, scales

**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 7.2.1

**NeedsCompilation** no

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**Repository** CRAN

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 ggrcs
 

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 ggrcs
 

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### Description

A Function to Draw Histograms and Restricted Cubic Splines (RCS)

### Arguments

data	need a dataframe
fit	You need the fitted model. Must be lrm or coxph.
x	The target variable you wish to fit. It is displayed on the X-axis when plotting.

### Details

You can use this function to easily draw a combined histogram and restricted cubic spline. The function draws the graph through ggplot2. RCS fitting requires the use of the rcs function of the RMS package. Can fit cox regression, logistic regression and linear regression models.

### Value

a picture

### Examples

```
library(rms)
library(ggplot2)
library(scales)
dt<-smoke
dd<-datadist(dt)
options(datadist='dd')
fit<- cph(Surv(time,status==1) ~ rcs(age,4)+gender, x=TRUE, y=TRUE,data=dt)
###single group
ggrcs(data=dt,fit=fit,x="age")
##two groups
ggrcs(data=dt,fit=fit,x="age",group="gender")
```

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 predata
 

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 predata
 

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### Description

Generate the predicted data for the function. This is needed for drawing.

### Usage

```
predata(fit, variables, y, group = NULL)
```

**Arguments**

<code>fit</code>	Model function required for prediction.
<code>variables</code>	variable name.
<code>y</code>	the value of the variable.
<code>group</code>	Variables that need to be grouped.

**Value**

Data required for plotting.

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<code>predata.coxph</code>	<i>predata.coxph</i>
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**Description**

Generate the predicted data for the function. This is needed for drawing.

**Usage**

```
## S3 method for class 'coxph'  
predata(fit, variables, y, group = NULL)
```

**Arguments**

<code>fit</code>	Model function required for prediction.
<code>variables</code>	variable name.
<code>y</code>	the value of the variable.
<code>group</code>	Variables that need to be grouped.

**Value**

Data required for plotting.

---

```
predata.lrm          predata.lrm
```

---

**Description**

Generate the predicted data for the function. This is needed for drawing.

**Usage**

```
## S3 method for class 'lrm'
predata(fit, variables, y, group = NULL)
```

**Arguments**

fit	Model function required for prediction.
variables	variable name.
y	the value of the variable.
group	Variables that need to be grouped.

**Value**

Data required for plotting.

---

```
predata.ols          predata.ols
```

---

**Description**

Generate the predicted data for the function. This is needed for drawing.

**Usage**

```
## S3 method for class 'ols'
predata(fit, variables, y, group = NULL)
```

**Arguments**

fit	Model function required for prediction.
variables	variable name.
y	the value of the variable.
group	Variables that need to be grouped.

**Value**

Data required for plotting.

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`smoke`*A data on age and smoking rates.*

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**Description**

A data on age and smoking rates.

**Usage**

```
data(smoke)
```

**Format**

An object of class `data.frame` with 995 rows and 5 columns.

**Examples**

```
data(smoke)
```

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