

How can I change the axis labels of a boxplot in R?

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The process of changing the axis labels of a boxplot in R involves modifying the default labels assigned to the x and y axes. This can be done by using the "xlab" and "ylab" parameters in the boxplot function, which allows users to specify custom labels for the respective axes. By providing appropriate labels, users can effectively communicate the data being represented in the boxplot and enhance the overall visual presentation of the plot. This is a simple and straightforward approach to customizing the axis labels of a boxplot in R.

Change Axis Labels of Boxplot in R (With Examples)

You can use one of the following methods to change the x-axis labels on a boxplot in R:

Method 1: Change Axis Labels of Boxplot in Base R

```
boxplot(df, names=c('Label 1', 'Label 2', 'Label 3'))
```

Method 2: Change Axis Labels of Boxplot in ggplot2

```
levels(df_long$variable) <- c('Label 1', 'Label 2', 'Label 3')
```

```
ggplot(df_long, aes(variable, value)) +  
geom_boxplot()
```

The following examples show how to use each method in practice with the following data frame in R:

```
#make this example reproducible
```

```
set.seed(0)
```

```
#create data frame
```

```
df <- data.frame(A=rnorm(1000, mean=5),  
B=rnorm(1000, mean=10),  
C=rnorm(1000, mean=15))
```

```
#view head of data frame
```

```
head(df)
```

```
A B C
```

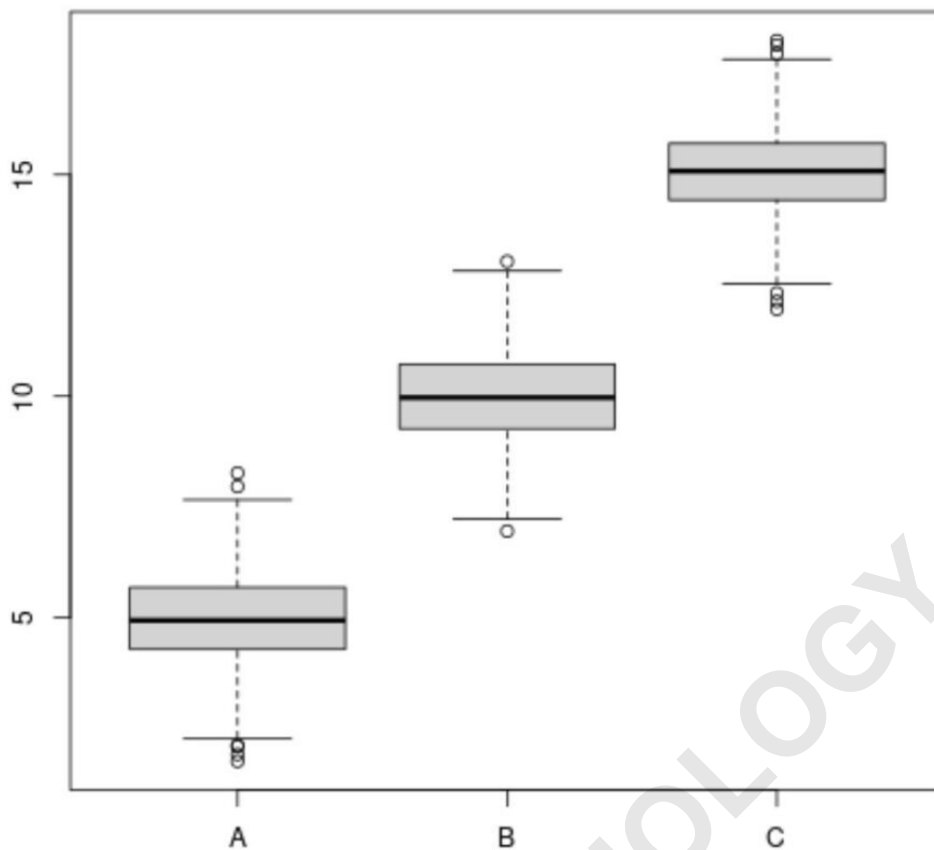
```
1 6.262954 9.713148 15.44435  
2 4.673767 11.841107 15.01193  
3 6.329799 9.843236 14.99072  
4 6.272429 8.610197 14.69762  
5 5.414641 8.526896 15.49236  
6 3.460050 9.930481 14.39728
```

Example 1: Change Axis Labels of Boxplot in Base R

If we use the `boxplot()` function to create boxplots in base R, the column names of the data frame will be used as the x-axis labels by default:

```
#create boxplots
```

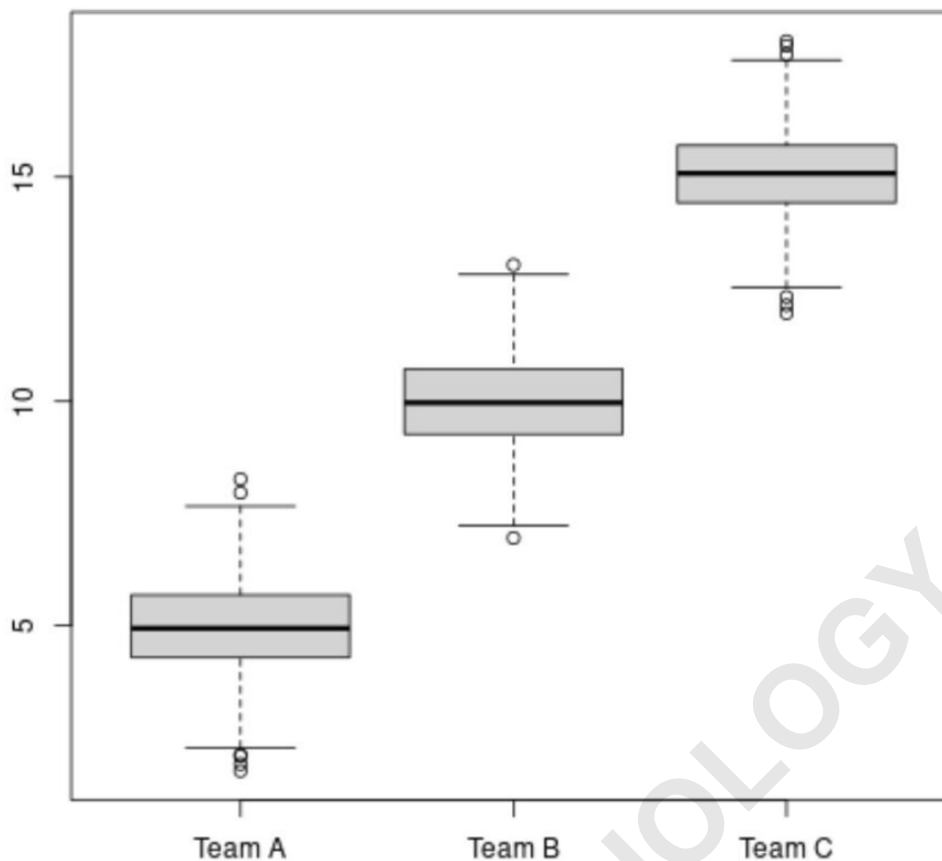
```
boxplot(df)
```



However, we can use the `names` argument to specify the x-axis labels to use:

#create boxplots with specific x-axis names

boxplot(df, names=c('Team A', 'Team B', 'Team C'))



Notice that the labels we specified in the names argument are now used as the x-axis labels.

Example 2: Change Axis Labels of Boxplot in ggplot2

Before we can create boxplots in ggplot2, we must use the `melt()` function from the `reshape2` package to "melt" the data frame into a long format:

```
library(reshape2)
```

```
#reshape data frame to long format
```

```
df_long <- melt(df)
```

```
#view head of long data frame
```

```
head(df_long)
```

```
variable value
```

```
1 A 6.262954
```

```
2 A 4.673767
```

```
3 A 6.329799
```

```
4 A 6.272429
```

```
5 A 5.414641
```

```
6 A 3.460050
```

We can then use the `levels()` function to specify the x-axis labels and the `geom_boxplot()` function to actually create the boxplot in `ggplot2`:

```
library(ggplot2)
```

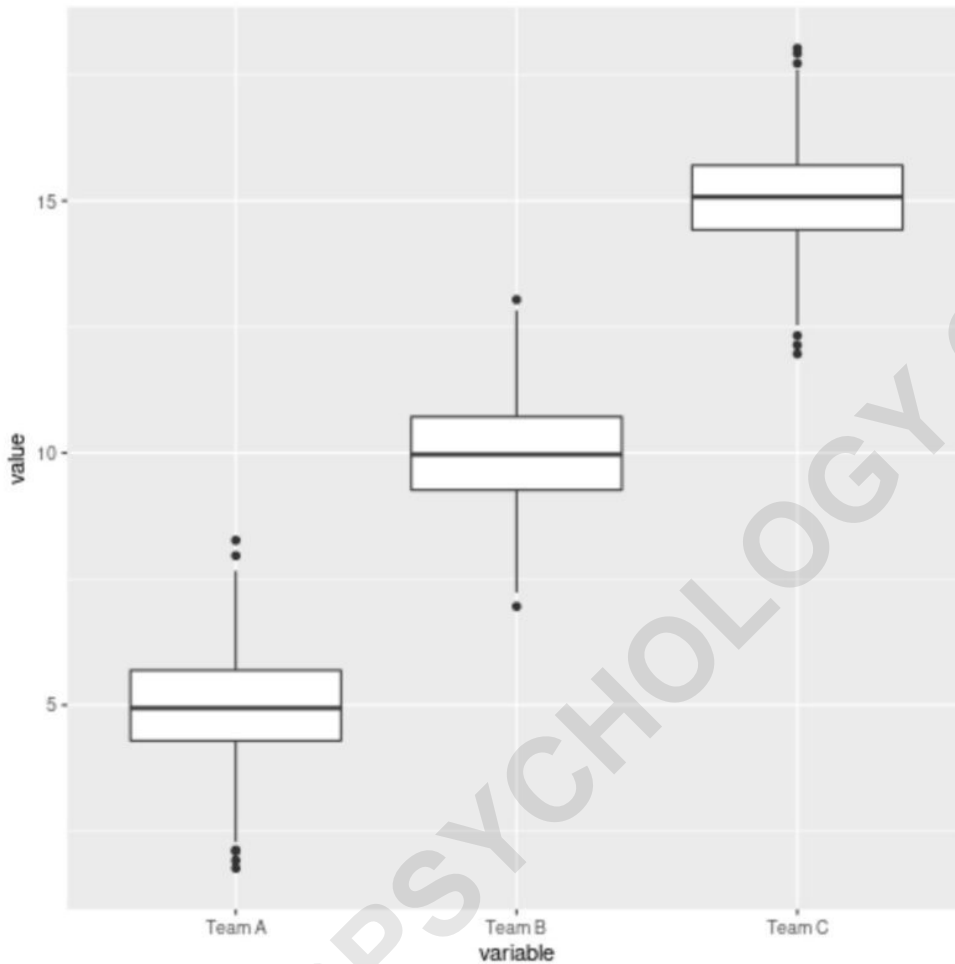
```
#specify x-axis names to use
```

```
levels(df_long$variable) <- c('Team A', 'Team B', 'Team C')
```

```
#create box plot with specific x-axis labels
```

```
ggplot(df_long, aes(variable, value)) +
```

geom_boxplot()



Notice that the labels we specified using the levels function are now used as the x-axis labels.