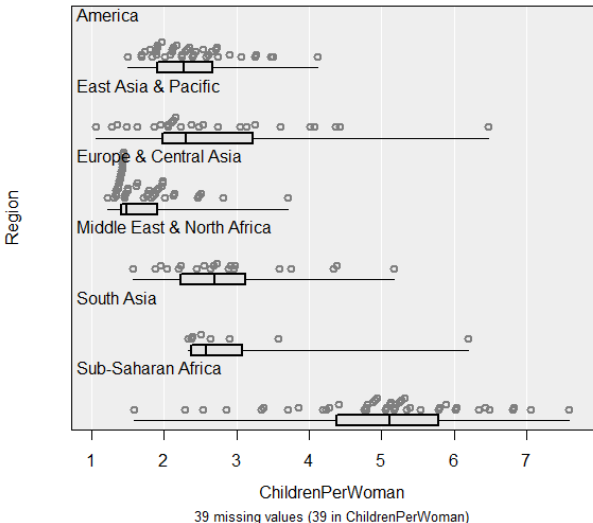


2.13 Exercise: Comparing groups – R version

Note: Copying and pasting text (e.g. R code) from a pdf is not reliable. For that reason we have also provided this file in [Word format \(.docx\)](#) and also the code in [a text file](#)

We are going to use the `gapminder_2008` data in the `FutureLearnData` package and look at the values of `ChildrenPerWoman` for each of the countries broken out by **Region**.

# R CODE	COMMENTARY or OUTPUT
<pre> # Setup library(iNZightPlots) library(FutureLearnData) data(gapminder_2008) names(gapminder_2008) iNZightPlot(ChildrenPerWoman, data=gapminder_2008) </pre>	<p><i>Commentary</i></p> <p>Make <code>gapminder_2008</code> inside <code>FutureLearnData</code> available for analysis</p> <p>Useful for checking on the spellings of variable names</p> <p>Dot plot for <code>ChildrenPerWoman</code></p>
<pre> # Now break out by Region iNZightPlot(ChildrenPerWoman, Region, data=gapminder_2008) </pre>	<p>ChildrenPerWoman by Region</p>  <p>39 missing values (39 in ChildrenPerWoman)</p>

Get Summary of ChildrenPerWoman broken out by Region

getPlotSummary(ChildrenPerWoman, Region, data=gapminder_2008)

```
-----
Primary variable of interest: ChildrenPerWoman (numeric)
Secondary variable: Region (categorical)

Total number of observations: 225
Number omitted due to missingness: 39 (39 in ChildrenPerWoman)
Total number of observations used: 186
-----
```

Summary of ChildrenPerWoman by Region:

```
-----
```

	Min	25%	Median	75%	Max	Mean	SD	Sample Size
America	1.498	1.908	2.264	2.668	4.119	2.377	0.5779	40
East Asia & Pacific	1.050	1.979	2.295	3.226	6.479	2.685	1.2292	26
Europe & Central Asia	1.218	1.410	1.482	1.898	3.703	1.713	0.4700	48
Middle East & North Africa	1.570	2.223	2.703	3.125	5.163	2.893	0.9310	20
South Asia	2.323	2.381	2.574	3.069	6.196	3.113	1.3125	8
Sub-Saharan Africa	1.579	4.377	5.117	5.785	7.588	4.990	1.2674	44

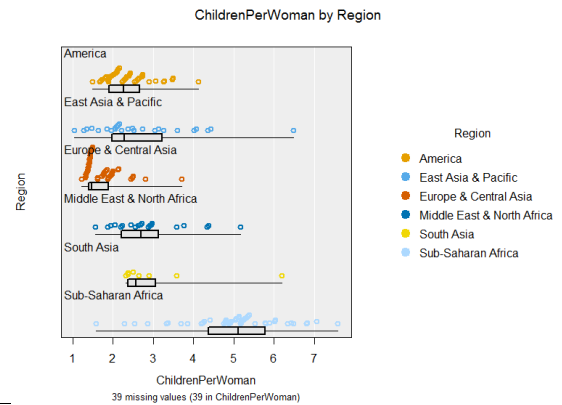
```
-----
```

Colour by Region

iNZightPlot(ChildrenPerWoman, Region, data=gapminder_2008, colby=Region)

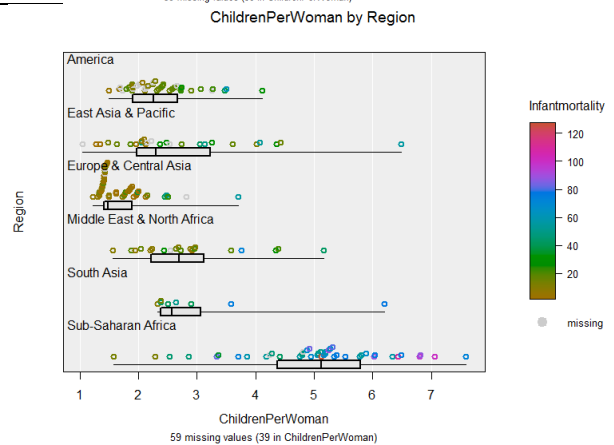
Try also

iNZightPlot(ChildrenPerWoman, Region, data=gapminder_2008, colby=Region, cex.text=.3)
iNZightPlot(ChildrenPerWoman, Region, data=gapminder_2008, colby=Region, hide.legend = TRUE)



Colour by Infantmortality

iNZightPlot(ChildrenPerWoman, Region, data=gapminder_2008, colby=Infantmortality)



- **What do you see in the last graph?**
- **Also try colouring by other variables you think might help explain the Regional differences.**

Cont. over ...

Optional: Try this new feature (interactive web graphics)

We will export an iNZightPlot graph as an *Interactive HTML* file and open this file up in our default browser. If that is a modern browser like Chrome, Firefox or Safari (but not Internet Explorer) this will then give you an interactive version of the graph that lets you query it in various ways like hovering over the points or clicking them. Click on the box plot and it will display the numerical values.

The save process can be slow if there are a lot of dots to be drawn.

The save window allows other variables to be exported along with the plot. This is particularly useful for hover-over if you have a variable that gives the names of the people or objects.

You can give such files to others. They do not need to be connected to iNZight to work.

Here is sample code:

```
# Make a plot and also store the output in myplot
myplot = iNZightPlot(ChildrenPerWoman, Region, data=gapminder_2008)

# Specify a location to store an Interactive HTML file. I will call my file "myintplot.html"
# You will have to change the path to the file because this one is to a location on my desktop!
filepath = "C:/Users/myusername/Desktop/myintplot.html"

exportHTML(myplot, filepath)
browseURL(filepath) #open the file up in my default browser
```

To discuss issues related to this Exercise,

go to <https://gitter.im/iNZightVIT/d2i-R-discussion>

To be able to post to the list you will have to set up a (free) account on **Github**
<https://github.com/login>

If your question relates to an Exercise, say which one you are talking about!