Using R as a Research Tool.
Part 2: Basic statistics and report writing.

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1 Introduction

This practical will follow on from the previous practical in data manipulation and visualisation, exploring how to write reports in **R** Markdown and how to conduct simple statistical tests in **R**. By the end of the practical, you should be able to:

- Create data visualisations for statistical tests.
- Carry out basic statistics, including:
  - Linear regression with `lm()`
  - 2-sample t-test with `t.test()`
  - Chi-squared test with `chisq.test()`
- Write, embed and render code and results into an HTML document.

2 The basics of R Markdown.

R Markdown is a tool for writing, reproducible reports in **R**. It can be used to produce documents with embedded code and figures in HTML, Word and PDF format, and can also be used to create webpages and slideshows.

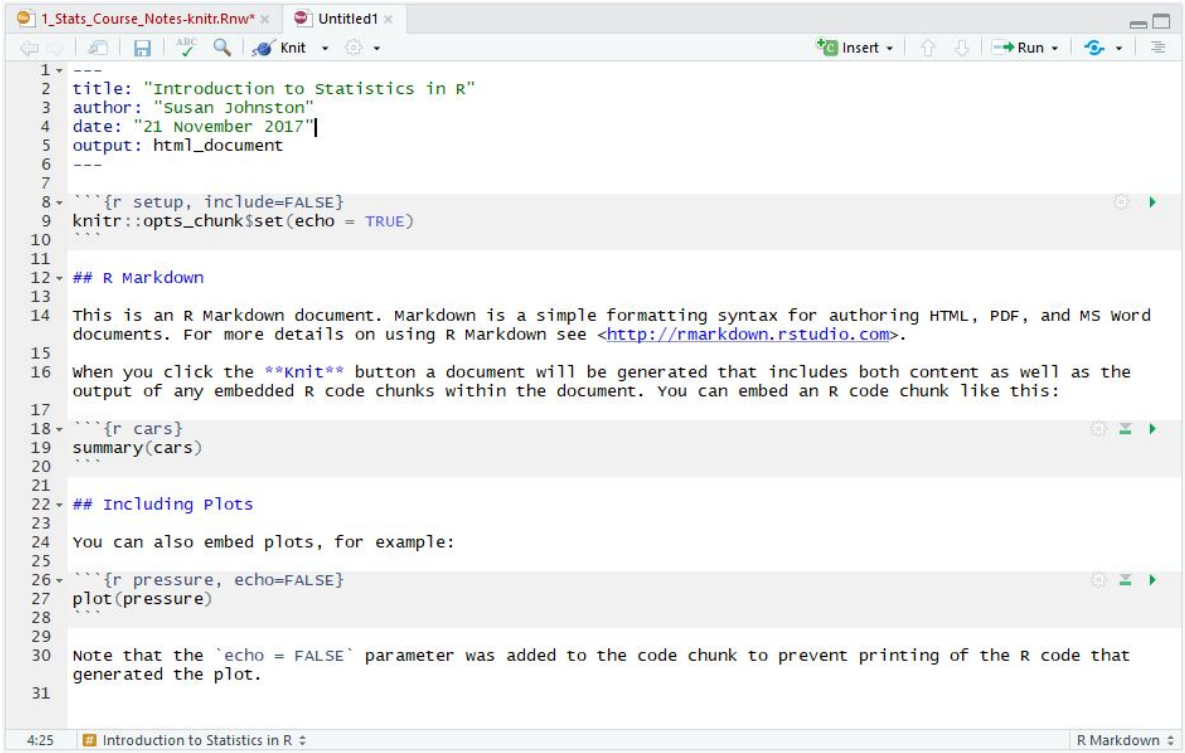

Figure 1: R Markdown Template.

2.1 Creating an R Markdown Document.

Create a new document by going to **File > New File > R Markdown...**. In the window, name your document, select **HTML** and click **OK**. RStudio should automatically create a template as in Figure 1. Don't worry if not - it is saved in the file R_Markdown_Template.Rmd. To render the document, click the button that says **Knit**. You may have to save it first.
As you can see