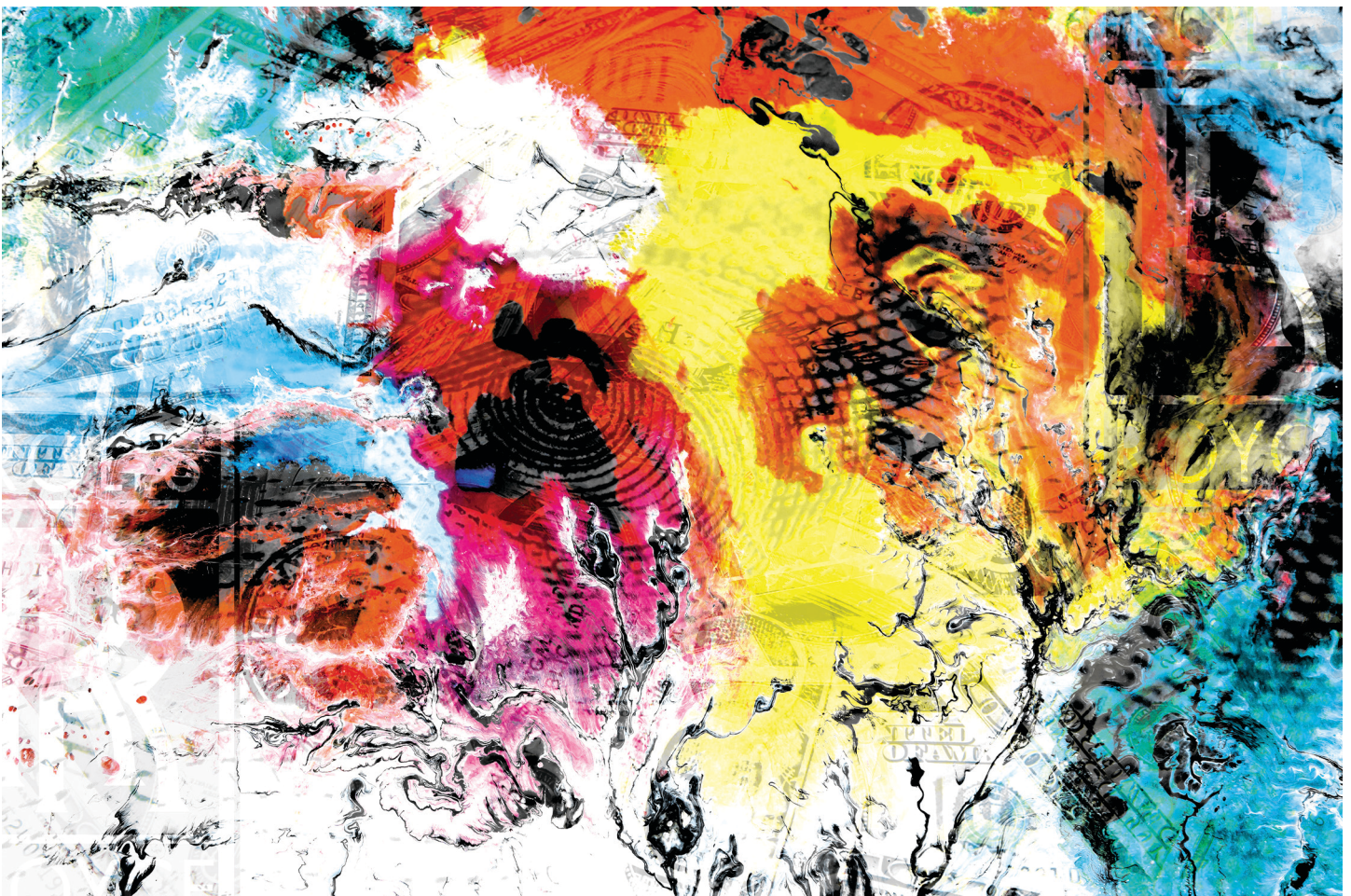


## Getting started with Jamovi



This item contains selected online content. It is for use alongside, not as a replacement for the module website, which is the primary study format and contains activities and resources that cannot be replicated in the printed versions.

Unless otherwise stated, copyright © 2026 The Open University, all rights reserved.

## Contents

|                                    |    |
|------------------------------------|----|
| Introduction                       | 3  |
| Learning outcomes                  | 5  |
| 1 The Jamovi tutorials             | 6  |
| 2 How to start Jamovi              | 8  |
| 3 Using the menus                  | 9  |
| 4 Adding variables                 | 10 |
| 5 Obtaining Descriptive Statistics | 12 |
| 6 Correlation                      | 14 |
| 7 Scatterplots                     | 16 |
| 8 Independent t-tests              | 18 |
| 9 Repeated measures t-tests        | 20 |
| Conclusion                         | 22 |
| Acknowledgements                   | 23 |

# Introduction

The aim of this OpenLearn course is to provide a step-by-step introduction to some of the most commonly used statistics in the social sciences, alongside one piece of software that is increasingly being used to carry out these analyses: Jamovi. This course is designed for students, researchers, tutors, and professionals who are new to both statistics and statistical software.

For many learners, statistics can feel intimidating... either because they have had little previous experience with data analysis, or because they are concerned about the maths involved. These interactive tutorials are designed to help you become familiar with the basic statistical techniques commonly used in research, while building your confidence and reducing any anxieties you may have about studying statistics.

The good news is that, in modern social science research, very little statistical analysis is carried out by hand. Instead, statistical software performs most of the calculations for us. In this course, we use Jamovi: a free, open-source, and user-friendly statistical software package designed to make data analysis more accessible and intuitive.

In recent years, Jamovi has become more and more popular across the social sciences, health sciences, and education sectors due to its zero-cost model, transparency, accessibility, and ease of use. Unlike some traditional statistical software packages, Jamovi can be used across a wide range of devices and operating systems, including Chromebooks and tablets, and it offers improved accessibility features such as compatibility with screen readers. As a result, it is particularly well suited to teaching and learning environments.

While statistical software can reduce the amount of manual calculation required, learning how to use a new programme can sometimes feel like an additional challenge. These tutorials have therefore been developed to guide you through Jamovi step by step, helping you learn both the fundamentals of the software and the statistical concepts behind the analyses. You do not need any prior experience with statistics or Jamovi to complete this course.

Throughout the course, you will take part in a series of practical activities and tutorials. These will introduce you to the basics of navigating Jamovi, managing and exploring data, carrying out descriptive and inferential statistical analyses, and interpreting your results. By the end of the course, you will have developed the confidence to apply statistical techniques to real-world data using Jamovi.

This course is intended for a wide audience. It may be particularly useful for:

- students beginning a research methods or statistics module
- tutors supporting students in quantitative methods
- researchers interested in switching to open-source statistical tools
- professionals seeking accessible and cost-effective data analysis software.

The course also supports the growing move towards open-source statistical software within higher education. As institutions increasingly transition from proprietary software packages to accessible open-source alternatives, Jamovi provides an effective and pedagogically suitable platform for teaching and learning statistics.

Other statistical software packages are also available for carrying out quantitative research and data analysis. The Open University does not endorse any particular software package, and the links below are provided simply to illustrate some of the alternatives available. (When clicking on links, open them in a new tab or window so that you can refer back to the course when you are ready.)

- [IBM SPSS Statistics](#)

- [The R Project for Statistical Computing](#)
- [SAS Statistical Software](#)
- [Minitab Statistical Software](#)

## Learning outcomes

After studying this course, you should be able to:

- understand how to open, navigate, and use the main features and menus within Jamovi
- enter, organise, and manage different types of data within the software
- produce and interpret basic descriptive statistics and scatterplots to summarise and explore datasets
- carry out and interpret a range of inferential statistical analyses, including correlations and t-tests, to investigate research hypotheses.

# 1 The Jamovi tutorials

This online tutorial is designed to help you become familiar with the statistical software package Jamovi and learn the basics of quantitative data analysis. To complete the course, you should work through the activities in the order presented.

Each activity includes demonstrations, explanations, and opportunities for you to practise using Jamovi yourself. Some activities may include short questions or prompts to encourage you to reflect on what you have learned, while others will guide you through key features and statistical procedures within the software.

Most tutorials in this course are provided as video demonstrations. You can engage with the videos in whichever way best supports your learning. For example, you may wish to:

- watch the video and follow along in Jamovi at the same time; or
- watch the video first and then reproduce the steps independently afterwards using Jamovi.

Where data files are needed, these will be provided within the activity so that you can practise the analyses demonstrated in the videos.

All course materials are accessed online, but you are encouraged to download and install Jamovi so that you can practise the techniques demonstrated throughout the course. Jamovi is a free, open-source software and is available across multiple operating systems and devices.

The activities are designed to help you become familiar with the software and develop confidence carrying out basic statistical analyses using Jamovi. Each activity should take approximately 20 minutes to complete, and are summarised below:

|                                              |                                                                                                                                                                                                                         |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activity 1: Getting started with Jamovi      | This activity is recommended if you have little or no experience using Jamovi or statistical software. It introduces the Jamovi interface and explains how to open and navigate the programme.                          |
| Activity 2: Exploring the Jamovi menus       | This activity provides an overview of the main menu options and analysis tools available in Jamovi. It is designed to help you feel more comfortable and confident using the software.                                  |
| Activity 3: Adding variables in Jamovi       | In most statistical analyses, you will first need to enter, import, or manage data within the software. This activity introduces variables, data entry, and basic data management in Jamovi.                            |
| Activity 4: Obtaining descriptive statistics | One of the first steps in data analysis is understanding what your data looks like and being able to summarise it clearly. This activity shows you how to produce and interpret basic descriptive statistics in Jamovi. |
| Activity 5: Correlation                      | Correlation is one of the simpler and most commonly used statistical techniques. In this activity, you will learn how to carry out and interpret a correlation analysis in Jamovi.                                      |
| Activity 6: Scatterplots                     | Scatterplots are a simple and useful way of visually exploring the relationship between two variables. In this activity, you will learn how to produce and interpret a scatterplot in Jamovi.                           |

|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activity 7: Independent samples t-tests | This activity introduces the independent samples t-test. This test is used when comparing two separate groups of participants, for example when examining differences between an experimental group and a control group.                                                                                                                                                                                        |
| Activity 8: Repeated measures t-tests   | This activity introduces the repeated measures t-tests. This test is used to compare scores from the same group of participants in two different conditions. For example, the same people might complete a task before and after an intervention, or under two different sets of conditions. It can also be used when participants are matched in pairs, such as in studies involving twins or matched samples. |

## 2 How to start Jamovi

Before carrying out statistical analyses in Jamovi, it is important to become familiar with the software and learn some of the basic skills needed to work with data. In this activity, you will begin developing confidence using Jamovi by learning how to install the software, open it on your device, and navigate the programme.

### Activity 1: Getting started with Jamovi

 Allow 20 minutes

The materials in this activity provide a practical introduction to Jamovi and are designed to help you become comfortable using the software before moving on to more advanced topics later in the course.

If you have not yet installed Jamovi, you should begin by working through the installation guide below. The guide includes step-by-step instructions for both Windows and Mac devices, including advice for users who may have restricted permissions on their computer. Remember to open the link in a new tab or window so you can refer back to the course as you go through the document.

Please note, if the images in the activities or tutorials look slightly different from what you see on your screen, or the version numbers do not match, don't worry. Jamovi is updated from time to time, so its appearance may change a little. The key steps should still be the same.

File: [Installing Jamovi](#)

Once Jamovi has been installed, you can then work through the second handout, which explains how to locate and open the software on either a Windows or Mac device. It also provides information about Jamovi Cloud for learners who are unable to install the software locally.

File: [Getting started with Jamovi](#)

As you work through these materials, we recommend that you open Jamovi on your own device and follow along with the instructions in real time. Alternatively, you may prefer to read through the guides first and then practise the steps independently afterwards.

Once you have successfully installed and opened Jamovi, you will be ready to begin exploring the software and working with data in the next activities.

## 3 Using the menus

This activity builds on the previous one by encouraging you to explore the menus available in Jamovi. It guides you through each of the main menu options, providing a brief overview of their purpose and the different tasks they allow you to carry out.

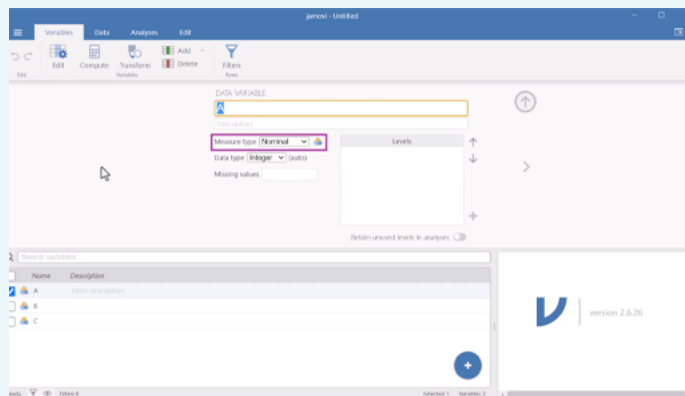
### Activity 2: Exploring the Jamovi menus

 Allow 20 minutes

By becoming more familiar with the layout and features of the software, we hope you will feel more confident and less anxious about using Jamovi in your own work.

Video content is not available in this format.

Video 1: Overview of menus in Jamovi



File: [Overview of menus in Jamovi](#)

## 4 Adding variables

Before carrying out statistical analyses in Jamovi, you first need to understand how to organise and enter data correctly. In this activity, you will learn how to create variables, define different types of data, and enter information into a dataset using Jamovi.

You may want to watch the video and follow along in Jamovi at the same time; or watch the video first and then reproduce the steps yourself afterwards.

### Activity 3: Adding variables in Jamovi

 Allow 20 minutes

The video in this activity uses a simple fictional research example based on the concept of *social facilitation*: the idea that people may perform differently when they are being observed by others. In this example, participants are asked to complete a simple word-generation task either in the presence of an audience or while alone. The activity demonstrates how this information can be organised within Jamovi by creating variables for the experimental condition, participant performance, and basic demographic information.

As you watch the video, you will be guided through the process of:

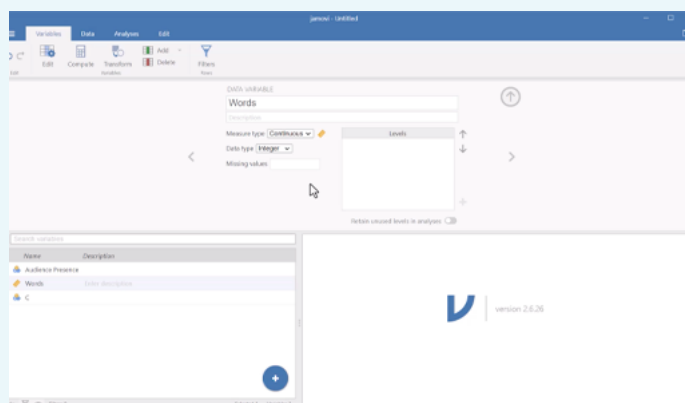
- defining variables in Jamovi
- selecting appropriate measure types and data types
- creating categories (or 'levels') for categorical variables
- entering participant data into the spreadsheet
- saving your completed dataset.

You may wish to watch the video first to become familiar with the process before attempting it yourself. Alternatively, you can open Jamovi and follow along step by step as the video progresses. Practising the steps yourself is strongly recommended, as becoming confident with data entry and variable creation is an essential foundation for later statistical analyses.

By the end of this activity, you should feel more confident creating your own datasets and entering data into Jamovi.

Video content is not available in this format.

Video 2: Adding variables



You can download a PDF copy of this tutorial here: [Adding variables into Jamovi](#)

Now you have seen how to create variables and enter data into Jamovi, you can practise these skills yourself using the additional dataset provided in PDF format below. Remember to open the link in a new tab or window so you can refer back to the course as you go through the document.

File: [Entering data into Jamovi](#) exercise

This practice activity will give you the opportunity to create your own variables and enter participant data into Jamovi independently, helping to reinforce the steps demonstrated in the video.

## 5 Obtaining Descriptive Statistics

Before carrying out more advanced statistical analyses, it is important to understand how to explore and summarise your data. In this activity, you will learn how to produce descriptive statistics in Jamovi and how these statistics can help you identify patterns within a dataset.

### Activity 4: Obtaining descriptive statistics

 Allow 20 minutes

The video uses a fictional research example loosely based on the evaluation of a schools linking programme designed to encourage positive contact between pupils from different communities. The example dataset includes demographic information, measures of enjoyment, and questionnaire scores relating to respect for others before and after participation in the programme.

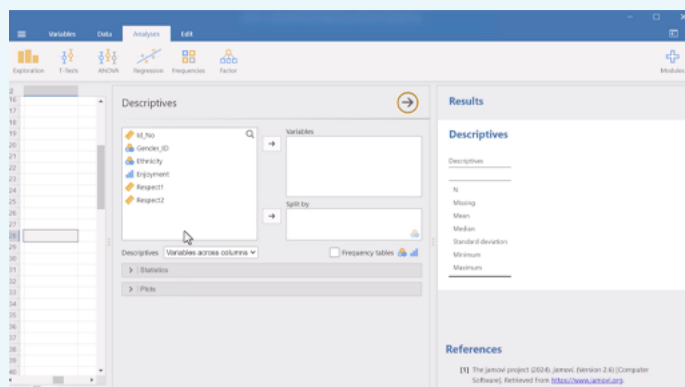
As you work through the activity, you will learn how to:

- identify different types of variables in a dataset
- produce descriptive statistics in Jamovi
- interpret common descriptive statistics such as the mean, median, standard deviation, and range
- explore how data can be summarised for different groups of participants.

The video will guide you through the process of selecting variables, generating descriptive statistics using the *Descriptives* menu in Jamovi, and interpreting the output produced by the software.

Video content is not available in this format.

Video 3: Descriptive statistics



File: [Descriptive statistics](#)

Now you have seen how to produce descriptive statistics in Jamovi, you can practise these skills yourself using the example dataset provided alongside this activity. Try reproducing the descriptive statistics shown in the video and explore some of the additional options available within the *Descriptives* menu. You can download a PDF version of this tutorial, and the dataset used in it below:

File: [Descriptive statistics](#)

File: [Descriptive statistics dataset](#)

Practising these techniques yourself will help you become more confident both in using Jamovi and in understanding how descriptive statistics help researchers summarise and interpret data.

## 6 Correlation

In previous activities, you learned how to enter data into Jamovi and produce descriptive statistics to help summarise and explore a dataset. In this activity, you will move on to one of the most commonly used inferential statistical techniques in the social sciences: correlation.

In research, inferential statistical tests are often used to test *hypotheses*. A hypothesis is a prediction about what researchers expect to find in their data based on theory, previous evidence, or observation. For example, a researcher may predict that higher stress levels will be associated with poorer sleep quality; that increased age may be related to poorer memory; or that increased exercise will be linked to higher wellbeing.

Correlation analyses are used when researchers want to investigate whether two variables are *related* to one another. They examine whether changes in one variable are associated with changes in another. Relationships may be positive (both variables increase together) or negative (as one variable increases, the other decreases).

### Activity 5: Correlation

 Allow 20 minutes

The video uses a fictional research example investigating the relationship between mood and serotonin levels. In the example, participants complete a standardised questionnaire measuring depression, while serotonin levels are assessed using blood samples. The aim is to investigate whether lower serotonin levels are associated with higher levels of depressed mood. Specifically, the hypothesis predicts that 'there is a negative correlation between serotonin and depression score'.

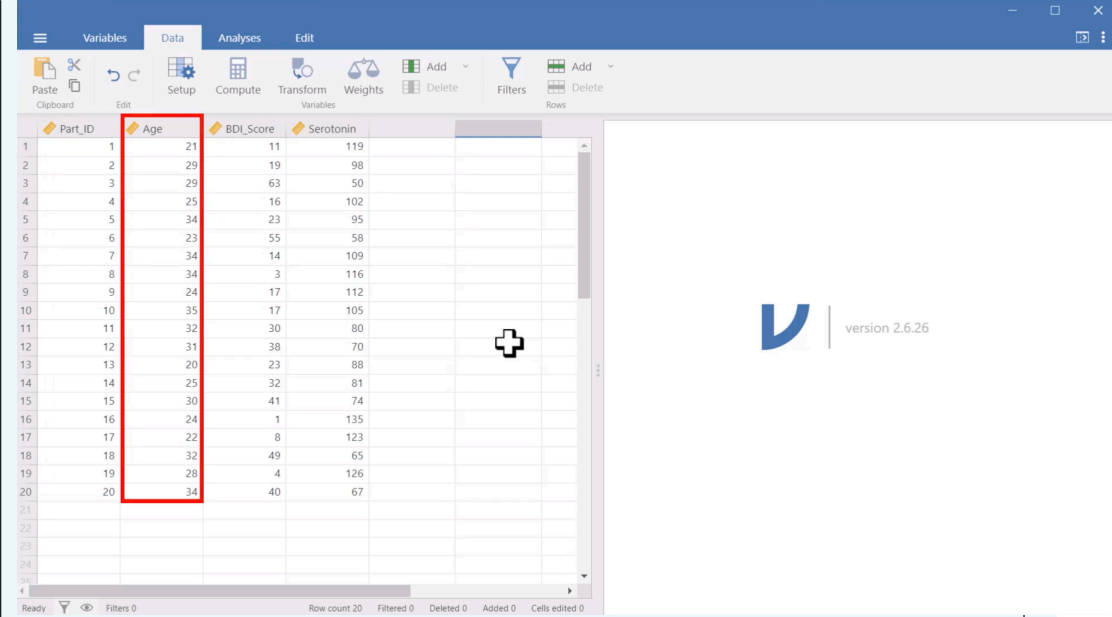
As you work through the activity, you will learn how to:

- run a correlation analysis in Jamovi
- select variables for analysis
- interpret the direction and strength of a correlation
- understand statistical significance within the correlation output
- report and interpret correlation results appropriately.

The video will guide you through the process of carrying out a Pearson correlation using the *Correlation Matrix* option in Jamovi, as well as explaining how to interpret the output produced by the software.

Video content is not available in this format.

Video 4: Correlation



|    | Part_ID | Age | BDI_Score | Serotonin |
|----|---------|-----|-----------|-----------|
| 1  | 1       | 21  | 11        | 119       |
| 2  | 2       | 29  | 19        | 98        |
| 3  | 3       | 29  | 63        | 50        |
| 4  | 4       | 25  | 16        | 102       |
| 5  | 5       | 34  | 23        | 95        |
| 6  | 6       | 23  | 55        | 58        |
| 7  | 7       | 34  | 14        | 109       |
| 8  | 8       | 34  | 3         | 116       |
| 9  | 9       | 24  | 17        | 112       |
| 10 | 10      | 35  | 17        | 105       |
| 11 | 11      | 32  | 30        | 80        |
| 12 | 12      | 31  | 38        | 70        |
| 13 | 13      | 20  | 23        | 88        |
| 14 | 14      | 25  | 32        | 81        |
| 15 | 15      | 30  | 41        | 74        |
| 16 | 16      | 24  | 1         | 135       |
| 17 | 17      | 22  | 8         | 123       |
| 18 | 18      | 32  | 49        | 65        |
| 19 | 19      | 28  | 4         | 126       |
| 20 | 20      | 34  | 40        | 67        |

File: [Correlation](#)

Now you have seen how to carry out a correlation analysis in Jamovi, you can practise these skills yourself using the example dataset activity which you can download below and open using the File menu in Jamovi. Try reproducing the same analysis and explore what happens when you include additional variables in the correlation matrix. You can download a PDF version of this tutorial, and the dataset used in it below:

File: [Correlation tutorial](#)

File: [Correlation dataset](#)

Practising these techniques yourself will help you become more confident both in using Jamovi and in understanding how correlations can be used to investigate relationships between variables in research.

## 7 Scatterplots

In the previous section, you learned how to carry out a correlation analysis using Jamovi. In this activity, you will take this a step further by learning how to visualise the relationship between two variables using a scatterplot.

### Activity 6: Scatterplots

 Allow 20 minutes

The video uses the same example as Activity 5, where we explored the relationship between mood and serotonin levels. This time, you will use the same data to produce one of the most common types of graph used to examine relationships between variables in social science research: a **scatterplot**.

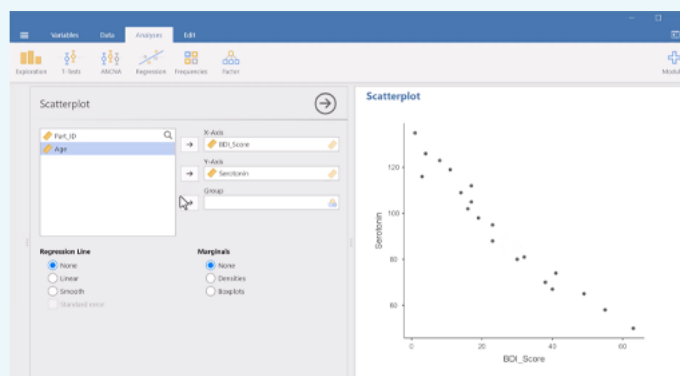
In the previous activity, the correlation analysis showed a negative relationship between mood and serotonin levels. This means that as scores on one variable increase, scores on the other tend to decrease. But what does this relationship actually **look like** in the data?

A scatterplot allows us to see this. Each point on the graph represents a pair of scores, showing us how values on the two variables relate to one another. Looking at the overall pattern of points can help us identify both the **direction** and **strength** of a relationship.

The video will guide you through how to produce a scatterplot in Jamovi and explain how to interpret what you see.

Video content is not available in this format.

Video 5: Scatterplot



Please note: later versions of Jamovi may look slightly different. You can find the options you need to produce a regression line under the 'General Options' menu.

Now that you have seen how to carry out a correlation analysis and produce a scatterplot in Jamovi, try these skills yourself using the example dataset provided alongside the previous activity.

You can download a PDF version of this tutorial, and the dataset used in it below:

File: [Scatterplot tutorial](#)

File: [Correlation dataset](#)

Start by reproducing the analysis shown in the video. You can then explore the data further by including additional variables in the correlation matrix and looking at their scatterplots. What patterns can you identify? Are the relationships positive or negative? Do some relationships appear stronger than others?

Practising these techniques will help you become more confident using Jamovi and, importantly, help you understand how numerical correlations and scatterplots work together to tell us about relationships between variables in research.

## 8 Independent t-tests

In previous activities, you learned how to enter data into Jamovi, explore datasets using descriptive statistics, and investigate relationships between variables using correlations. In this activity, you will learn how to carry out an independent samples t-test in Jamovi.

Like correlations, t-tests are used to test research hypotheses. A hypothesis is a prediction about what researchers expect to happen in a study. In experimental research, hypotheses often predict that there will be a *difference* between groups or conditions.

While correlations investigate *relationships* between variables, t-tests investigate *differences* between groups or conditions. For example, researchers may wish to compare whether one group scores higher or lower than another, or whether participants perform differently before and after an intervention.

An independent samples t-test is used when researchers want to compare the average scores of two separate groups or conditions. This type of test is commonly used in experiments and other studies where different participants take part in each condition.

### Activity 7: Independent samples t-tests

 Allow 20 minutes

The video uses a fictional research example based on a study investigating how people respond when witnessing a conflict between two individuals. Participants are shown one of two versions of a video depicting an argument and are then asked to rate how willing they would be to intervene. The study explores whether participants respond differently depending on whether they believe the individuals are strangers or in a relationship.

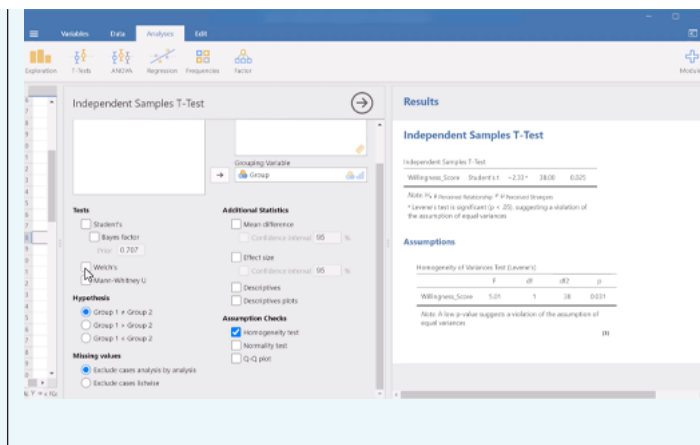
As you work through the activity, you will learn how to:

- identify the independent and dependent variables in an independent groups design
- run an independent samples t-test in Jamovi
- check assumptions such as homogeneity of variance
- interpret descriptive and inferential statistics from the output
- report and interpret the results of an independent samples t-test appropriately.

The video will guide you through selecting variables for analysis, choosing the correct t-test options, and interpreting the output produced by Jamovi, including means, standard deviations, t-values, p-values, and effect sizes.

Video content is not available in this format.

Video 6: Independent t-test



File: [Independent t-test](#)

Now you have seen how to carry out an independent samples t-test in Jamovi, you can practise these skills yourself using the example dataset provided alongside this activity. Try reproducing the same analysis and explore how changing different options within the t-test menu affects the output. You can download a PDF version of this tutorial, and the dataset used in it below:

File: [Independent t-test tutorial](#)

File: [Independent t-test dataset](#)

## 9 Repeated measures t-tests

In this activity, you will learn how to carry out a repeated measures t-test in Jamovi. Unlike the independent samples t-test, which compares scores for two separate groups of participants, a repeated measures t-test is used when the same participants provide data in both experimental conditions.

### Activity 8: Repeated measures t-tests

 Allow 20 minutes

The video uses a fictional research example inspired by studies examining the so-called 'Hungry Judges' effect – the idea that hunger may influence decision-making. In this example, participants rate the severity of fictional crimes before and after a lunch break, allowing researchers to investigate whether sentencing decisions differ depending on hunger levels.

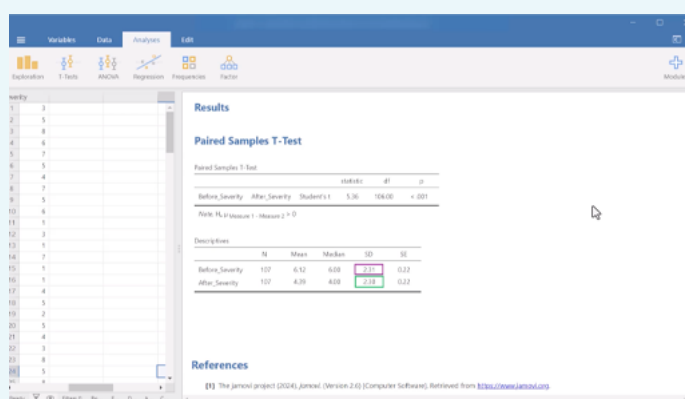
As you work through the activity, you will learn how to:

- recognise when a repeated measures design is being used
- understand how repeated measures datasets are organised in Jamovi
- run a paired samples t-test in Jamovi
- interpret descriptive and inferential statistics from the output
- report and interpret repeated measures t-test findings appropriately.

The video explains how repeated measures data differs from independent groups data, demonstrates how to select paired variables for analysis, and guides you through interpreting the resulting output, including the means, standard deviations, t-values, degrees of freedom, and significance values produced by Jamovi.

Video content is not available in this format.

Video 7: Repeated measures t-test



File: [Repeated measures t-test](#)

Now you have seen how to carry out a repeated measures t-test in Jamovi, you can practise these skills yourself using the example dataset provided alongside this activity. Try reproducing the same analysis and explore how the output changes when different options are selected.

You can download a PDF version of this tutorial, and the dataset used in it below:

File: [Repeated measures t-test tutorial](#)

File: [Paired t-test dataset](#)

## Conclusion

In this course, you have been introduced to Jamovi and the foundations of quantitative data analysis. Through a series of guided activities and practical examples, you have learned how to install and navigate the software, create and manage datasets, produce descriptive statistics, and carry out a range of commonly used statistical analyses.

You should now feel more confident:

- opening and navigating Jamovi
- defining variables and entering data correctly
- exploring and summarising datasets using descriptive statistics
- investigating relationships between variables using correlations and scatterplots
- comparing groups and conditions using independent and repeated measures t-tests.

Alongside learning how to use Jamovi itself, you have also developed an understanding of how statistical analyses are applied within real research scenarios in the social sciences and psychology. Importantly, you have had opportunities to practise interpreting statistical output and thinking about what the results mean in the context of research questions and hypotheses.

Learning statistics and statistical software can feel challenging at first, but confidence develops through practice and experimentation. One of the advantages of Jamovi is that it provides an accessible and user-friendly environment in which to explore data and learn statistical techniques without needing to carry out complex calculations by hand.

We encourage you to continue practising the skills introduced throughout this course by revisiting the datasets, exploring additional options within the software, and applying these techniques to your own research questions and assignments.

By completing this course, you have taken an important first step towards developing practical data analysis skills using open-source statistical software.

Explore more on OpenLearn:

- [Critically exploring psychology](#)
- [Making sense of ourselves](#)
- [Investigating psychology](#)

If you enjoyed this course, you might be interested in exploring the following Open University courses:

- [D120: Encountering psychology in context](#)
- [D810: Critically exploring psychology 1](#)
- [D811: Critically exploring psychology 2](#)
- [DE200: Investigating psychology 2](#)
- [DE300: Investigating psychology 3](#)
- [BSc \(Honours\) Psychology](#)
- [MSc in Psychology \(Conversion\)](#)

## Acknowledgements

This free course is an adapted extract from the courses DE200 and D810. Whilst this course features Jamovi, other statistical software packages are also available for carrying out quantitative research and data analysis. The Open University does not endorse nor recommend any particular software package.

Except for third party materials and otherwise stated (see [terms and conditions](#)), this content is made available under a

[Creative Commons Attribution-NonCommercial-ShareAlike 4.0 Licence](#).

The material acknowledged below is Proprietary and used under licence (not subject to Creative Commons Licence). Grateful acknowledgement is made to the following sources for permission to reproduce material in this free course:

### Image

Course image: izusek/Getty Images

### Videos

Videos 1–7: © The Open University (2026) created using Jamovi free software package.

### Text

Accompanying files/tutorials to the videos: © The Open University (2026) created using Jamovi free software package.

Every effort has been made to contact copyright owners. If any have been inadvertently overlooked, the publishers will be pleased to make the necessary arrangements at the first opportunity.

### Don't miss out

If reading this text has inspired you to learn more, you may be interested in joining the millions of people who discover our free learning resources and qualifications by visiting The Open University – [www.open.edu/openlearn/free-courses](http://www.open.edu/openlearn/free-courses).