EXPLORING STATISTICS
TALES OF DISTRIBUTIONS
13TH EDITION

Using jamovi
Chapter 1
Introduction

Welcome to using jamovi!

We're excited about incorporating the use of jamovi in the latest edition of Exploring Statistics: Tales of Distributions. We think jamovi is a good statistical software program to start with because the interface is simple to use; it is similar to other statistical packages, so familiarity with it will help you no matter what statistical software packages you encounter later in your life; and jamovi, itself, is free.

Chapter 1 of Exploring Statistics provides an introduction to the field of statistics and covers some basic definitions necessary for understanding statistics. There is not a lot of need to use a computer to understand this information.

One thing that can be confusing, though, is that you will learn different ways to categorize variables in Chapter 1 of the textbook, such as quantitative (continuous or discrete) vs. categorical (or qualitative). You will also learn the difference between nominal, ordinal, interval, and ratio scales.

In jamovi, however, there are only four choices for you to categorize your variables: Nominal, Ordinal, Continuous, and ID. In research, it is common to assign ID numbers or labels to participant responses to protect confidentiality, so that's what the ID label is used for. Take a look at the variable categories from class and decide how you think they will map onto the remaining jamovi options. Then, check yourself on the next page.

Exploring Statistics Category	jamovi Choice
Categorical (Qualitative)	Nominal
Quantitative Continuous	Continuous
Quantitative Discrete	Continuous
Nominal	Nominal
Ordinal	Ordinal
Interval	Continuous
Ratio	Continuous

Our data file

One of the really exciting things about using a computer program as you learn statistics is you can work with problems using real data from real studies that have a lot of participants. When you work a problem by hand, we rarely give you more than 10 or so participants in any group, meaning it is hardly ever real data. With the help of jamovi, you will get to learn from real data. Throughout these modules, we are going to rely on some data from the Emerging Adulthood Measured at Multiple Institutions-2 (EAMMi2). We hope you find the variables interesting, especially because they are from real participants.

There is a description and codebook of this data set that explain the data file we will use to accompany each chapter of the textbook that incorporates jamovi output. You should familiarize yourself with the codebook before continuing with this module.

Then, continue with the two exercises that begin on the next page.

Exercise 1:
For the following variables, determine whether you would select "Nominal", "Ordinal", "Continuous", or "ID" in jamovi to categorize the variable. Then, check your work on the last page of this module.

Variable Name	Brief Description	Response Options
Duration	How many minutes it took each participant to finish the survey	Duration automatically recorded from survey website
NoLongerHome	Extent to which participant has moved out of parents' home	1 = no; 2 = somewhat; 3 = yes
Adult	Answer to "Are you an adult?"	1 = yes; 2 = maybe; 3 = no
Exploration **Negativity** **Identity** **BetweenStages**	Responses to the Inventory of Dimensions of Emerging Adulthood. For each 2-item subscale, participants rated the extent to which this period of their life was a time for exploration, negativity, identity formation, and feeling between stages of life	Each item was rated on a scale of 1 (*strongly disagree*) to 4 (*strongly agree*). Each subscale score represents the average rating across two items.
Politics	Self-reported political views	1 (extremely liberal) to 7 (extremely conservative)
PoliticsDichotomous	Self-reported political views, dichotomized into liberal (score of 1-3 on Political_views) and conservative (score of 5-7 on Political_views)	1 = liberal; 2 = conservative
SWLS	Answers to the 5-item Satisfaction with Life Scale. Sample item: "In most ways my life is close to my ideal."	Each item was rated on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*). The final SWLS score represents the <u>sum</u> of all 5 items.
Belonging	Agreement with statement "I feel like I belong"	1 (*not at all*) to 5 (*very much*)
Gender	Self-reported gender identity	1 = male; 2 = female; 3 = another identity
Age	Age of the participant, in years	Responses span ages 18-29

Exercise 2:
Let's now explore the jamovi interface. Open jamovi and then open our data set by clicking on the three lines in the top left-hand corner of the screen. From there, click "Open" and locate your saved EAMMi2-REDUCED.omv data file using the "Browse" function.
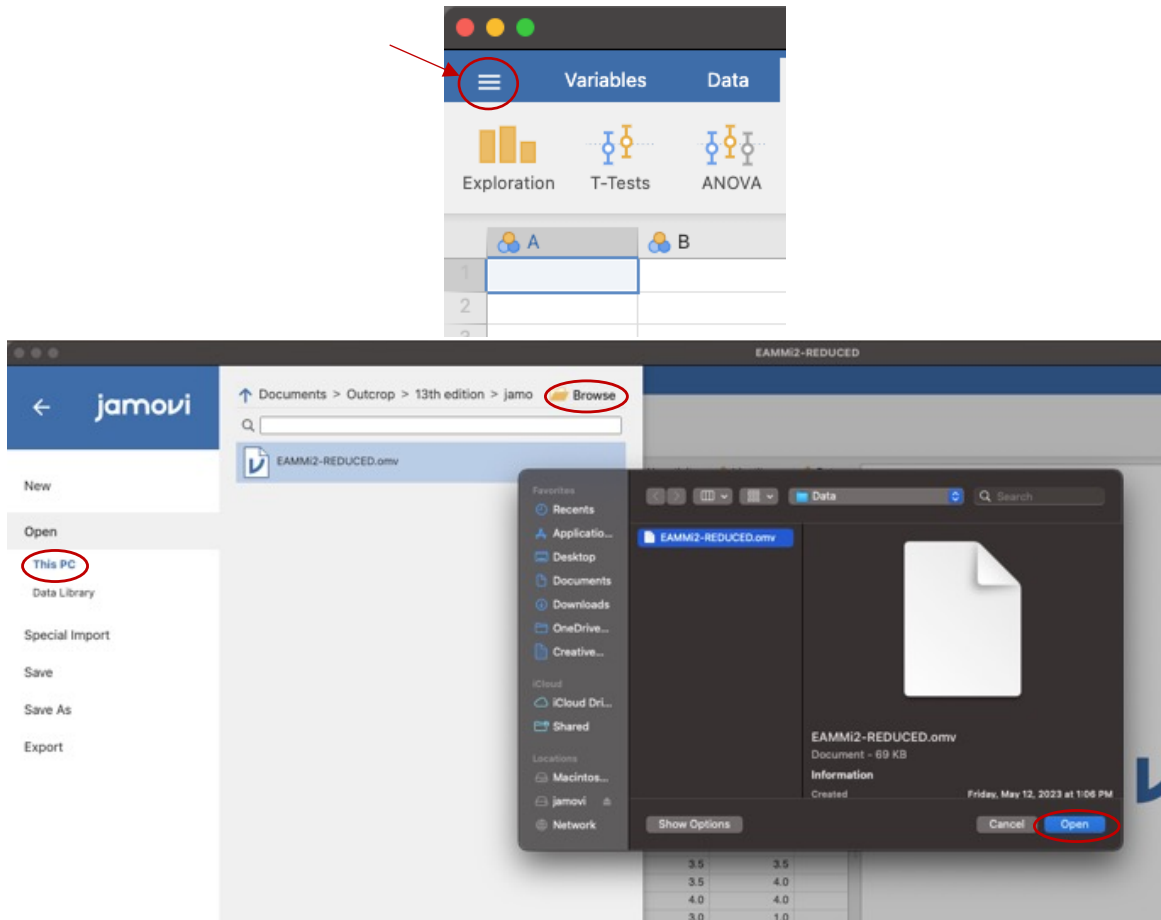
Once you have the data set open, notice that there are four tabs at the top of jamovi: Variables, Data, Analyses, and Edit. **Click through each of these tabs and make note of what each tab is for.** You can check your work at the end of this module.
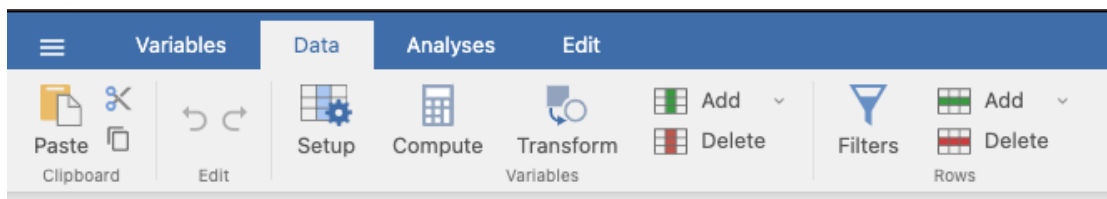
Finally, using information in the Variables tab and the Data tab, answer the following questions.
You can check your work at the end of this module.
1. How many variables are in our data set?
2. How many participants are in our data set?

Check Your Work

Exercise 1:
Note: Statisticians often debate and disagree about whether the variables with * should be coded as ordinal or continuous. We will lean towards a more liberal approach and say continuous.

Variable Name	Brief Description	jamovi categorization
Duration	How many minutes it took each participant to finish the survey	Continuous
NoLongerHome	Extent to which participant has moved out of parents' home	Ordinal
Adult	Answer to "Are you an adult?"	Ordinal
Exploration Negativity Identity BetweenStages	Responses to the Inventory of Dimensions of Emerging Adulthood. For each 2-item subscale, participants rated the extent to which this period of their life was a time for exploration, negativity, identity formation, and feeling between stages of life	Continuous*
Politics	Self-reported political views	Continuous*
PoliticsDichotomous	Self-reported political views, dichotomized into liberal (score of 1-3 on Political_views) and conservative (score of 5-7 on Political_views)	Nominal
SWLS	Answers to the 5-item Satisfaction with Life Scale. Sample item: "In most ways my life is close to my ideal."	Continuous
Belonging	Agreement with statement "I feel like I belong"	Continuous*
Gender	Self-reported gender identity	Nominal
Age	Age of the participant, in years	Continuous

Exercise 2:
*What are the different tabs for?*
- The Variables tab lists all of your variables in order and presents the description of each. If you double-click on the name of one of your variables, additional information about the variable (e.g., measure type, levels) will appear.
- The Data tab shows the full spreadsheet of your data. Variables are represented as columns and participants are represented as rows. Each cell contains a data point. If you double-click on the name of one of your variables, additional information about the variable (e.g., measure type, levels) will appear. You may also see a right-hand pane labeled "Results." This is where the results from any statistical analyses you perform on your data will appear.
- The Analyses tab presents you with statistical techniques for analyzing your data. You will engage more with this tab as you progress through these modules. You may also see a right-hand

pane labeled "Results." This is where the results from any statistical analyses you perform on your data will appear.

- The Edit tab opens an interface for you to edit the content of your "Results" pane. Sometimes, researchers find it helpful to add extra notes to themselves as they perform analyses (e.g., Test of Hypothesis 1) or need to go back and delete analyses. You can do all of this through the Edit tab.

How many variables are in our data set?
39 – you can easily find this information under the Variables tab
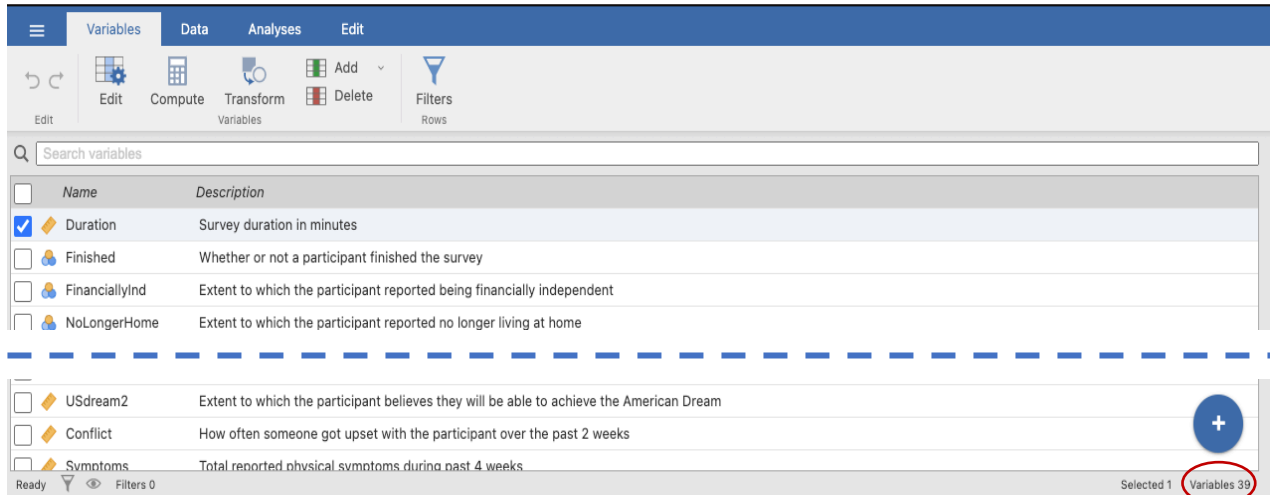
How many participants are in our data set?
2,073 – you can easily find this information under the Data tab