

Psi Beta National Research Study

Analyze your data file!

March 4th 2022



ACKNOWLEDGEMENTS



Psi Beta's National Research Committee

- **Heather Schoenherr** (Committee chair & Rocky Mt. Vice President)
- **Liza Veliz** (Southwest Vice President & National President-Elect)
- **Elizabeth Arnot-Hill** (Midwest Vice President)
- **Jerry Rudmann** (Psi Beta's Executive Director)

Access To and Use of Psi Beta's National Research Study Data Files



The files presented or mentioned in this presentation can be downloaded from the Psi Beta website. Psi Beta's URL is www.psibeta.org

The on the Psi Beta homepage menu,

- Click on “Research” – top right of page
- From the dropdown menu, click on “Help Guide to Preparing Data....”



Help Guide to Preparing & Using the NRP Data

I. Tips for preparing your data file – covered in the February 25th webinar

Key files you'll want to download

Please [CLICK HERE](#) to download the raw data file (2.16.2022 raw data download)

Please [CLICK HERE](#) to download the codebook

Please [CLICK HERE](#) to download a PDF copy of the research questionnaire that participants responded to

Please [CLICK HERE](#) to download a PDF copy of former Psi Beta National Study information on Campus Connectedness and Shyness

Please [CLICK HERE](#) to download a copy of the PowerPoint used to present the webinar on data preparation and analysis

Please [CLICK HERE](#) to access a video replay of the February 25th webinar on preparing the national research study data file

Steps to prepare the raw data file before you can analyze it

- 1- Identify and remove cases with missing data.
- 2- Remove cases that do not connect the participant to a Psi Beta college (e.g. "Test" and "Attend another college").
- 3- Use the codebook to rename the variables on the spreadsheet.
- 4- Recode any variables having words instead of numbers.
- 5- Reverse code variables that need to be reverse coded.
- 6- Save the file as a CSV file.
- 7- Import the CSV file into JASP.

Brief step-by-step videos to help you prepare the raw data for analysis – each title below is a hot link

- [Renaming variables – video clip](#)

Research Resources

[Psi Beta's Annual National
Research Project \(2021-2022\)](#)

[Help Guide to Preparing &
Using the NRP Data](#)

[Student Research Journal
Information](#)

[Poster Help](#)

[Visit Psi Beta's Journal](#)

The Scales and Demographics

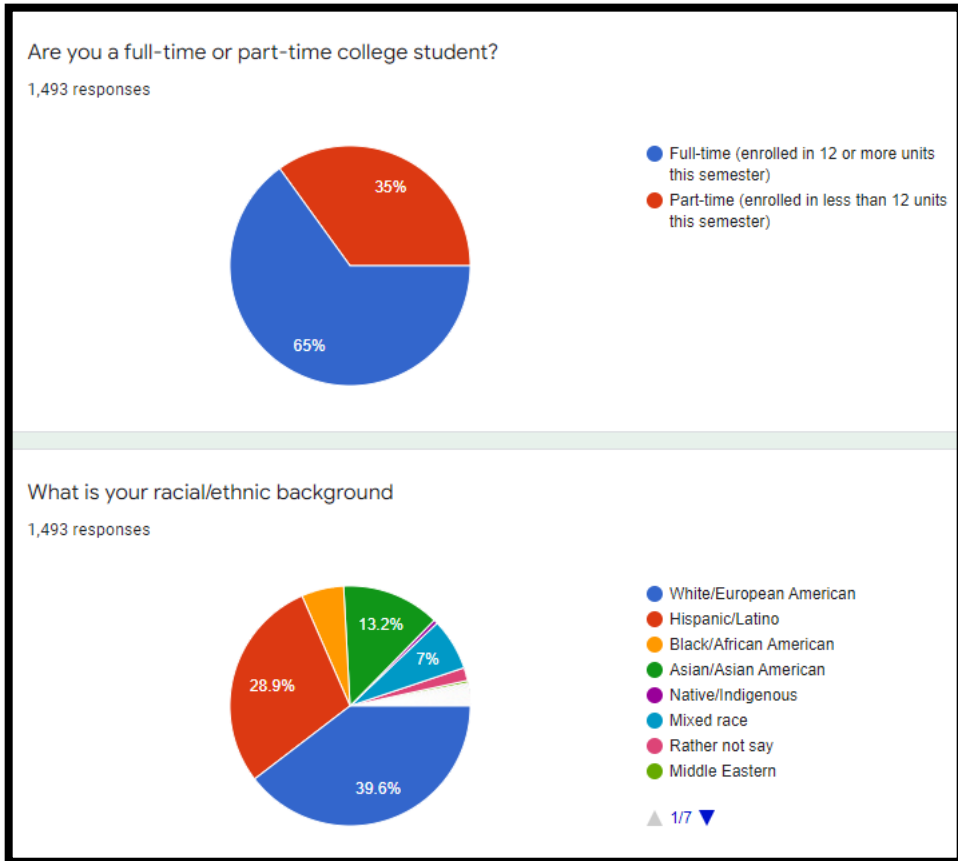
Scales

1. Self-efficacy for initiating conversations
2. Interest in learning interpersonal communication skills
3. Efficacy for facilitating balanced two-way conversations
4. Interpersonal competence during COVID-19
5. College connectedness
6. Ten-item Big 5 Inventory
7. Shyness
8. Social media usage aims
9. Social media use questionnaire
10. Most preferred social media platform (a single item, not a scale)
11. Estimated time spent on favorite social media platform per day (a single item, not a scale)

Demographic Variables

- Sex
- Age
- # semesters in college
- FT / PT student
- Racial/ethnic background
- Mother attend college
- Father attend college
- Any sibling attend college
- Intended academic major
- Honor society member

Simple way to get most demographic information



Some demographics from the Google Form response view –

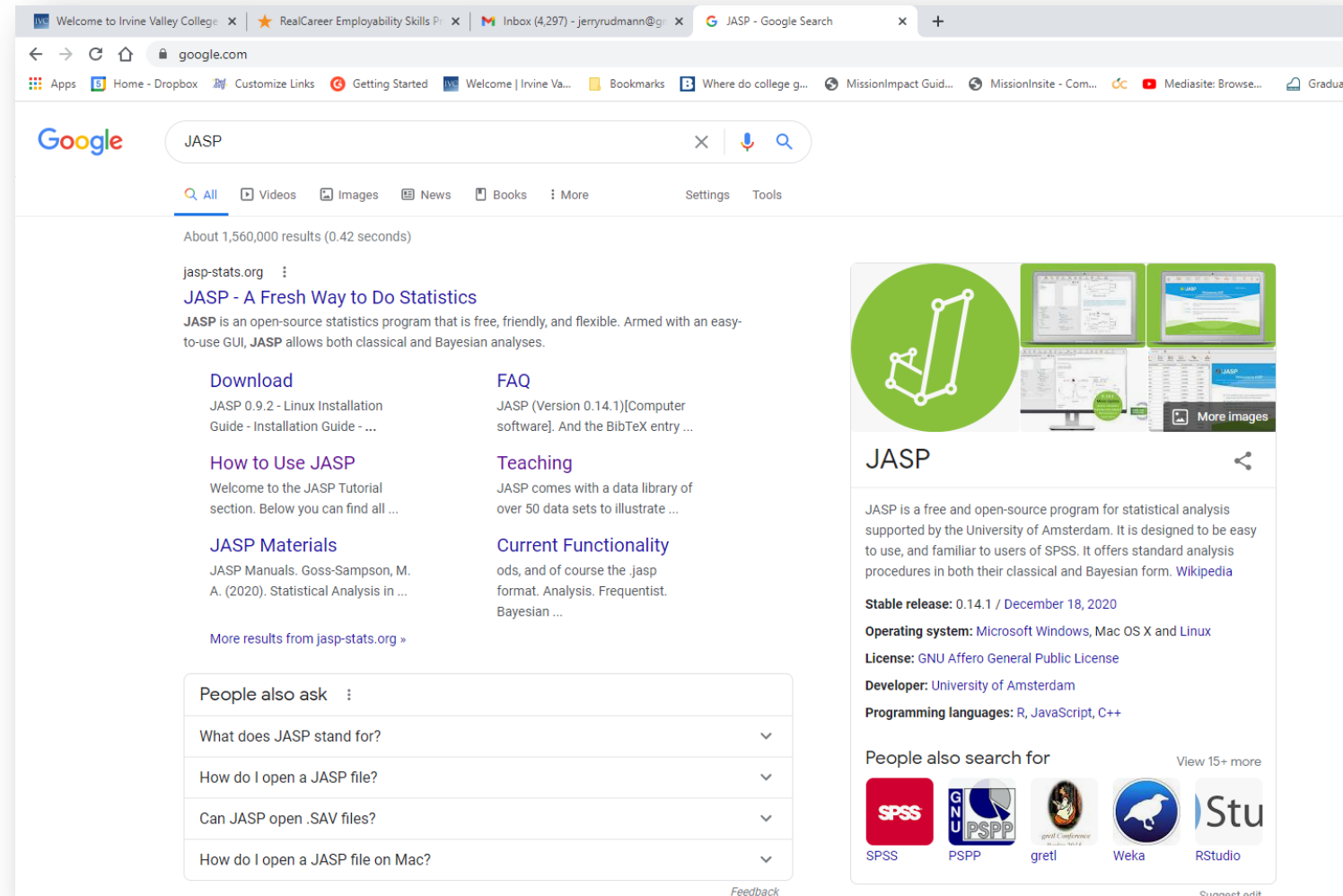
- Ethnicity
 - White/European American (39.6%)
 - Hispanic/Latino (28.9%)
 - Asian/Asian American (13.2%)
 - Black/African American (5.7%)
 - Other / rather not say (12.6%)
- # different colleges (students from 15 different campuses participated)
- Fulltime / parttime (65% are fulltime – 12 or more units)
- Sex
 - Female (74%)
 - Male (24%)
 - Other (2%)

Steps for Analyzing the National Research Study Datafile

1. Open JASP
2. Open the CSV-formatted data file
3. Set each numerical item to “scale” instead of “nominal”
4. Use JASP to compute new variables (e.g., Connectedness total score, Shyness total score, etc.)
Be sure to include recoded items (not the original items that you had to recode) when you compute Shyness and the Big-Five scales
5. Use JASP to compute reliability coefficients (Cronbach) for your scales
7. Finally, use JASP to test your research hypotheses

Using JASP

- Download JASP at jasp-stats.org
- Save your cleaned up Excel file as a CSV file
- Start JASP and open the CSV file
- In JASP
 - Convert all variables to “scale”
 - Use JASP to compute all new variables (e.g., scale scores for Shyness, Connectedness, Extraversion, etc.)
 - Use JASP for analyzing your datafile



JASP's Opening Screen



Moving Around JASP's Screens

NRP_JASP_All_Items_set to Scale_2.27.2022 (C:\Users\17143\Desktop\NRS_FILES)

Descriptives T-Tests ANOVA Mixed Models Regression Frequencies Factor Reliability

	College	E1	E2	E3	E4	E5	E6	E7	E8	E9	I1	I2	I3	I4	I5	C1	
1	Motlow State Community College - Fayetteville Campus	3	3	3	3	4	3	3	3	3	3	3	3	3	3	4	4
2	Golden West College	2	1	1	1	3	1	5	1	1	5	5	5	5	5	5	5
3	San Diego Mesa College	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
4	Golden West College	2	2	2	3	3	3	4	4	4	3	4	4	4	4	3	2
5	San Diego Mesa College	5	4	3	3	4	4	4	4	4	5	5	5	5	5	5	5
6	San Diego Mesa College	4	3	3	4	4	4	4	4	4	3	4	3	3	3	5	5
7	Eckerd College	5	5	5	5	5	4	5	5	5	1	1	1	1	2	5	4
8	Motlow State Community College - Smyrna Campus	5	5	5	5	5	5	5	5	5	1	1	1	1	1	5	5
9	Quinsigamond Community College	4	4	3	3	3	5	4	4	4	4	4	4	4	4	4	4
10	San Diego Mesa College	5	5	3	4	5	3	4	4	4	4	4	4	4	4	3	3
11	Quinsigamond Community College	3	3	2	2	3	2	3	3	3	4	3	3	3	3	3	4
12	Saddleback College	4	3	4	4	5	4	4	4	3	5	5	4	4	5	4	5
13	South Texas College	3	3	3	3	4	2	1	2	3	4	5	5	4	5	3	4
14	San Diego Mesa College	1	1	1	1	1	3	1	1	1	3	3	3	3	3	5	5
15	St. Petersburg College - Seminole Campus	4	4	3	3	3	3	3	3	4	3	3	2	2	2	4	3
16	Motlow State Community College - McMinnville Campus	5	5	5	5	5	5	5	5	5	2	2	2	2	2	5	5
17	Quinsigamond Community College	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
18	Motlow State Community College - McMinnville Campus	5	5	5	5	5	5	5	5	5	1	1	1	1	1	5	5
19	Golden West College	4	5	3	4	5	5	1	3	1	5	5	5	5	5	5	5
20	Orange Coast College	4	4	3	3	2	3	3	4	4	5	5	5	5	5	4	5
21	Paradise Valley Community College	5	5	4	4	5	5	5	5	5	3	2	2	2	5	5	5
22	Quinsigamond Community College	4	3	3	3	3	2	3	4	5	5	5	5	5	5	5	5
23	Government high school Diedo Douala	5	5	5	5	5	4	4	5	5	4	4	3	4	4	5	3
24	St. Petersburg College - Seminole Campus	5	5	4	4	4	4	5	5	5	2	2	2	2	2	3	4
25	San Diego Mesa College	5	5	4	5	4	4	5	5	4	4	4	4	5	5	4	5
26	Golden West College	3	1	1	1	3	2	2	4	3	4	4	4	4	4	4	5
27	Paradise Valley Community College	4	3	2	3	2	4	3	2	3	4	4	4	4	4	3	4
28	San Diego Mesa College	2	5	2	2	3	2	1	2	2	4	5	4	4	4	2	5
29	Quinsigamond Community College	3	3	1	1	4	3	1	1	2	5	5	4	4	4	4	4

NRP_JASP_All_Items_set to Scale_2.27.2022* (C:\Users\17143\Desktop\NRS_FILES)

Descriptives T-Tests ANOVA Mixed Models Regression Frequencies Factor Reliability

Descriptive Statistics

College

E1 E2 E3 E4 E5 E6 E7 E8 E9 I1 I2 I3 I4 I5 C1 C2

Variables

Split

Trans Descriptives table

Frequency tables

Show data

Stem and leaf tables

scale 1

Plots

Statistics









Results


Descriptive Statistics


Descriptive Statistics	
Valid	.
Missing	.
Mean	.
Std. Deviation	.
Minimum	.
Maximum	.


E7	E8	E9	I1	I2	I3	I4	I5	C1	+
4	5	4	4	4	5	5	5	3	
3	3	5	5	5	5	5	5	5	
3	3	1	1	1	1	1	4	2	
3	3	3	4	3	3	4	3	3	
3	3	4	4	4	4	4	3	4	
2	2	3	3	2	2	2	4	3	
5	5	5	5	5	5	5	5	5	
2	1	3	4	4	4	4	5	5	
3	5	4	4	4	4	4	5	5	
4	3	5	4	4	4	5	5	4	
5	5	5	5	5	5	5	5	5	
3	2	3	2	2	2	4	4	4	
5	5	5	5	5	5	5	5	5	
4	4	4	4	5	5	5	5	4	
3	1	5	2	2	5	5			
2	2	5	5	5	5	5	4	4	
1	1	5	5	5	5	5	3	4	
5	5	5	5	5	2	5	5	5	
3	3	4	4	1	1	4	4	4	
2	2	5	5	4	3	4	4	5	
3	4	5	5	5	5	5	4	5	
2	3	5	5	5	5	5	5	5	
1	1	4	4	4	4	4	3	3	
3	1	2	2	2	2	2	3	5	
1	2	4	3	4	4	4	3	3	
4	4	3	3	3	3	3	4	4	
5	5	5	5	5	5	5	5	5	
4	5	4	4	4	4	5	5	5	
2	2	4	4	4	4	4	4	4	





Change all numerical variables to “Scale”

Compute column								
	 Q1	 Q2	 Q3	 Q4	 Q5	 Q6	 Q7	 Q8
	4	6	5	5	5	5	4	3
	5	6	7	7	6	5	4	5
	4	5	6	5	4	3	2	3
	5	4	6	6	4	6	3	5
	3	3	4	4	4	2	5	5
	5	7	6	6	4	5	6	5
	2	4	6	5	4	5	2	4
	6	6	7	6	3	5	7	7
	4	7	7	7	1	4	6	3

 Scale

 Ordinal

 Nominal

Compute column				
	 Q1	 Q2	 Q3	 Q4
	4	6	5	5
	5	6	7	7
	4	5	6	5
	5	4	6	6
	3	3	4	4


To Create New Variables in JASP, follow this guide

COMPUTED VARIABLES		
Computed Variable	Items in that scale	What it measures
E_SCALE	(E1+E2+E3+E4+E5+E6+E7+E8+E9)	Confidence for initiating conversations.
I_Scale	(I1+I2+I3+I4+I5)	Interest in learning effective interpersonal communication skills.
C_Scale	(C1+C2+C3+C4+C5+C6)	Confidence for having a balanced (two-way) conversation.
CC_Scale*	(CC1.....CC14)*(7/5)	College connectedness.
EXTRAVERSION	(T1+T6R)	Extraversion
AGREEABLENESS	(T2R+T7)	Agreeableness
CONSCIENTIOUSNESS	(T3+T8R)	Conscientiousness
EMOTIONAL_STABILITY	(T4R+T9)	Emotional Stability
OPENNESS	(T5+T10R)	Openness to Experiences
Shyness	(S1 through S19) NOTE: Be sure to use reverse coded items in place of S4, S7, S10, S13, S16, & S18	Overall Shyness
SM_Scale	(SM1 through SM31)	Social media usage aims
SMU_Scale	(SMU1 through SMU9)	Social media use
SMC_Scale	(SMC1+SMC2+SMC3)	Social media changes during the pandemic
<p>*Note that the CC scale computation includes a correction factor (7/5) in order to make the scale's values comparable to the 2010-11 study. The earlier study used a 7 point Likert scale. This year's study used a 5 point Likert scale.</p>		

I5	C1	C	+
3	4	4	
5	5	5	
5	5	5	
4	3	2	
5	5	5	

Create Computed Column

Name:

R 

☒ Scale ☐ Ordinal ☐ Nominal ☐ Text

NRP_JASP_All_Items_set to Scale_2,27.2022* (C:\Users\17143\Desktop\NRS_FILES)

Descriptives T-Tests ANOVA Mixed Models Regression Frequencies Factor Reliability

Computed Column: E_scale

#Enter your R code here :)
(E1+E2+E3+E4+E5+E6+E7+E8+E9)

Compute column

	College	E1	E2	E3	E4	E5	E6	E7	
1	Motlow State Community College - Fayetteville Campus	3	3	3	3	4	3	3	3
2	Golden West College	2	1	1	1	3	1	5	1
3	San Diego Mesa College	5	5	5	5	5	5	5	5
4	Golden West College	2	2	2	3	3	3	4	4
5	San Diego Mesa College	5	4	3	3	4	4	4	4
6	San Diego Mesa College	4	3	3	4	4	4	4	4
7	Eckerd College	5	5	5	5	5	4	5	5
8	Motlow State Community College - Smyrna Campus	5	5	5	5	5	5	5	5
9	Quinsigamond Community College	4	4	3	3	3	5	4	4
10	San Diego Mesa College	5	5	3	4	5	3	4	4
11	Quinsigamond Community College	3	3	2	2	3	2	3	3
12	Saddleback College	4	3	4	4	5	4	4	4
13	South Texas College	3	3	3	3	4	2	1	2
14	San Diego Mesa College	1	1	1	1	1	3	1	1
15	St. Petersburg College - Seminole Campus	4	4	3	3	3	3	3	3

$f_x E_scale$	+
28	
16	
45	
27	
35	
34	
44	
45	
34	
27	

NRP_JASP_All_Items_set to Scale_All_scales_created_2.27.2022 (C:\Users\17143\Desktop\NRS_FILES)

	Descriptives	T-Tests	ANOVA	Mixed Models	Regression	Frequencies	Factor	Reliability											
	f_x CONNECTEDNESS_SCALE	f_x EXTRAVERSION	f_x AGREEABLENESS	f_x CONSCIENTIOUSNESS	f_x EMOTIONAL_STABILITY	f_x OPENNESS	f_x SHYNESS	f_x SM_SCALE	f_x SMU_SCALE										
1	60.2	8	11	12	9	9	56	51	9										
2	49	6	11	11	6	12	55	43	10										
3	58.8	13	13	14	5	8	28	102	10										
4	58.8	8	8	6	10	11	55	66	17										
5	70	9	11	11	11	14	42	64	9										
6	63	11	7	14	6	6	29	48	17										
7	42	14	12	14	7	11	23	31	9										
8	36.4	14	14	14	7	13	21	87	25										
9	81.2	9	13	14	13	13	47	112	13										

After all computed variables (scales) have been created, it is time to analyze your data.

NRP_JASP_All_Items_set to Scale_2.27.2022* (C:\Users\17143\Desktop\NRS_FILES)

Descriptives T-Tests ANOVA Mixed Models Regression Frequencies Factor Reliability

Descriptive Statistics

Variables: Age

Split:

☐ Transpose descriptives table

☒ Frequency tables
Maximum distinct values: 10

☐ Stem and leaf tables
scale: 1

Plots

Statistics

Central Tendency

- ☒ Mode
- ☒ Median
- ☒ Mean

Dispersion

- ☐ S. E. mean
- ☐ Coefficient of Variation
- ☐ MAD Robust
- ☐ Variance
- ☒ Minimum

Quantiles

- ☐ Quartiles
- ☐ Cut points for: 4 equal groups
- ☐ Percentiles:

Distribution

- ☒ Std. deviation
- ☐ MAD
- ☐ IQR
- ☐ Range
- ☒ Maximum
- ☐ Skewness
- ☐ Kurtosis
- ☐ Shapiro-Wilk test
- ☐ Sum

Results

Descriptive Statistics

Descriptive Statistics	
Valid	.
Missing	.
Mean	.
Std. Deviation	.
Minimum	.
Maximum	.

Descriptive Statistics

Descriptive Statistics	
Valid	1409
Missing	0
Mode	19.000
Median	20.000
Mean	23.871
Std. Deviation	7.923
Minimum	18.000
Maximum	66.000

Frequency Tables

Level	Frequency	Percent	Valid Percent	Cumulative Percent
.

Note: All variables have more than 10 distinct values

Descriptive Statistics ▼

Descriptive Statistics ▼

Age	
Valid	1409
Missing	0
Mode	19.000
Median	20.000
Mean	23.871
Std. Deviation	7.923
Minimum	18.000
Maximum	66.000

FT/PT and Ethnicity

1. Make sure FT/PT and Ethnic are set as nominal variables.
2. Select on Frequencies -> Classical -> Contingency Tables
3. Drag Ethnic to “Rows”
4. Drag FT/PT to columns
5. Under percentages, check “Row”

NRP_JASP_All_Items_set to Scale_2,27,2022* (C:\Users\17143\Desktop\NRS_FILES)

Descriptives T-Tests ANOVA Mixed Models Regression Frequencies Factor Reliability

Contingency Tables

Rows: ETHNIC

Columns: FT_PT

Counts: ☐ Expected

Percentages: ☒ Row ☐ Column ☐ Total

Options

ETHNIC	1	2	Total
African american/white	1	0	1
Arab	0	2	2
Arabic	0	1	1
Asian	1	0	1
Asian/Asian American	49	137	186
Black/African American	34	44	78
Black/west african	0	1	1
Egyptian	1	0	1
Hispanic/European	0	1	1
Hispanic/Latino	143	276	419
Hispanic/white	0	1	1
Iranian, so white...?	0	1	1
Jordanian	1	0	1
Mexican	0	1	1
Middle Eastern	1	4	5
Middle Eastern (Iranian)	0	1	1
Middle Eastern (Kurdish)	0	1	1
Middle eastern	1	1	2
Mixed race	31	69	100
Native American	0	1	1
Native Hawaiian Pacific Islander	0	1	1
Native/Indigenous	3	5	8
Pacific Islander	1	1	2
Pakistani	0	1	1
Persian	0	2	2
Person of color	1	0	1
Rather not say	9	16	25
SWANA/MENA	0	1	1
Samoan	0	1	1
South East Asian (Indian)	0	1	1
Vietnamese	0	1	1
White Latino	0	1	1
White/European American	194	352	546
hispanic, white, sicilian, native american, irish	0	1	1
indian	0	1	1
middle eastern	0	2	2
other asian	0	1	1
pacific islander	0	1	1
persian	0	2	2
quarter Panamanian	0	1	1
sdsdssds	1	0	1
tattooed	1	0	1
white	0	2	2
Total	473	936	1409

Run Pearson coefficient of correlation tests...

The screenshot shows the SPSS software interface. The top menu bar includes Descriptives, T-Tests, ANOVA, Mixed Models, Regression, Frequencies, Factor, and Reliability. The main window is titled "NRP_JASP_All_Items_set to Scale_All_scales_created_2.27.2022*" (C:\Users\17143\Desktop\NRS_FILES). The "Correlation" dialog box is open, showing a list of variables on the left: BLANK_CELLS, E_SCALE, I_SCALE, C_SCALE, EXTRAVERSION, AGREEABLENESS, CONSCIENTIOUSNESS, EMOTIONAL_STABILITY, OPENNESS, and SM_SCALE. The "Variables" box contains CONNECTEDNESS_SCALE and SHYNESS. The "Condition on" box is empty. Under "Sample Correlation Coefficient", "Pearson's r" is selected. Under "Additional Options", "Report significance" and "Flag significant correlations" are selected. Under "Plots", "Scatter plots" is selected. The "Results" window shows the "Correlation" output. It displays Pearson's Correlations for the selected variables. The table shows the Pearson's r and p-value for the correlation between CONNECTEDNESS_SCALE and SHYNESS. The p-value is less than .001, indicating a significant negative correlation.

Correlation

Pearson's Correlations

Variable	CONNECTEDNESS_SCALE	SHYNESS
1. CONNECTEDNESS_SCALE	Pearson's r —	—
	p-value —	—
2. SHYNESS	Pearson's r -0.175***	—
	p-value < .001	—

Note. All tests one-tailed, for negative correlation
* p < .05, ** p < .01, *** p < .001, one-tailed

One-sample t-test

Descriptives

T-Tests

ANOVA

Mixed Models

Regression

Frequencies

Factor

Reliability

Correlation

One Sample T-Test

major

Ho1r_Society

Mom_College

Dad_College

Sib_College

BLANK_CELLS

E_SCALE

I_SCALE

C_SCALE

EXTRAVERSION

Variables

CONNECTEDNESS_SCALE

Tests

☒ Student

☐ Wilcoxon signed-rank

☐ Z Test

Test value: 57.55

Std. deviation: 1

Alt. Hypothesis

☐ ≠ Test value

☐ > Test value

☒ < Test value

Assumption checks

☐ Normality

Additional Statistics

☐ Location estimate

☐ Confidence interval 95.0 %

☒ Effect Size

☐ Confidence interval 95.0 %

☐ Descriptives

☐ Descriptives plots

Confidence interval 95.0 %

☐ Raincloud plots

☐ Horizontal display

☐ Vovk-Sellke maximum p-ratio

Missing Values

☒ Exclude cases per dependent variable

☐ Exclude cases listwise

Results

Correlation

One Sample T-Test

Pearson's Correlations

Variable	CONNECTEDNESS_SCALE	SHYNESS
1. CONNECTEDNESS_SCALE	Pearson's r p-value	— —
2. SHYNESS	Pearson's r p-value	-0.175*** < .001

Note. All tests one-tailed, for negative correlation
* p < .05, ** p < .01, *** p < .001, one-tailed

One Sample T-Test

	t	df	p	Cohen's d
CONNECTEDNESS_SCALE	-6.684	1408	< .001	-0.178

Note. For the Student t-test, effect size is given by Cohen's d.
Note. For the Student t-test, the alternative hypothesis specifies that the mean is less than 57.55.
Note. Student's t-test.

Connectedness mean in 2010 study was 57.55

Scale reliability

NRP_JASP_All_Items_set to Scale_All_scales_created_2.27.2022* (C:\Users\17143\Desktop\NRS_FILES)

Descriptives T-Tests ANOVA Mixed Models Regression Frequencies Factor Reliability

Correlation

One Sample T-Test

Unidimensional Reliability

College

- I1
- I2
- I3
- I4
- I5
- C1
- C2
- C3
- C4
- C5
- C6
- CC1
- CC2
- CC3
- CC4
- 25. Are you taking any performan...

Variables

- E1
- E2
- E3
- E4
- E5
- E6
- E7
- E8
- E9

Analysis

Scale Statistics

- ☐ Confidence Interval 95.0 %
- ☐ McDonald's ω
- ☒ Cronbach's α
- ☐ Guttman's λ_2
- ☐ Guttman's λ_6
- ☐ Greatest lower bound
- ☐ Average interitem correlation
- ☐ Mean ☐ SD
 - of participants' sum scores
 - of participants' mean scores

Individual Item Statistics

- ☐ McDonald's ω (if item dropped)
- ☒ Cronbach's α (if item dropped)
- ☐ Guttman's λ_2 (if item dropped)
- ☐ Guttman's λ_6 (if item dropped)
- ☐ Greatest lower bound (if item dropped)
- ☐ Item-rest correlation
- ☐ Mean
- ☐ Standard deviation

Reverse-Scaled Items

Pearson's Correlations

Variable		CONNECTEDNESS_SCALE	SHYNESS
1. CONNECTEDNESS_SCALE	Pearson's r	—	—
	p-value	—	—
2. SHYNESS	Pearson's r	-0.175***	—
	p-value	< .001	—

Note. All tests one-tailed, for negative correlation
* p < .05, ** p < .01, *** p < .001, one-tailed

One Sample T-Test

One Sample T-Test

	t	df	p	Cohen's d
CONNECTEDNESS_SCALE	-6.684	1408	< .001	-0.178

Note. For the Student t-test, effect size is given by Cohen's d.
Note. For the Student t-test, the alternative hypothesis specifies that the mean is less than 57.55.
Note. Student's t-test.

Unidimensional Reliability

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α
Point estimate	0.933

Frequentist Individual Item Reliability Statistics

Item	If item dropped Cronbach's α
E1	0.922
E2	0.926
E3	0.923
E4	0.921
E5	0.934
E6	0.928
E7	0.928
E8	0.922
E9	0.926

Does honor society membership relate to greater college connectedness?

NRP_JASP_All_Items_set to Scale_All_scales_created_2.27.2022* (C:\Users\17143\Desktop\NRS_FILES)

Descriptives T-Tests ANOVA Mixed Models Regression Frequencies Factor Reliability

Independent Samples T-Test

Dependent Variables: CONNECTEDNESS_SCALE

Grouping Variable: Ho1r_Society

Tests:
☒ Student
☐ Welch
☐ Mann-Whitney

Additional Statistics:
☐ Location parameter
☐ Confidence interval 95.0 %
☒ Effect Size
☒ Cohen's d
☐ Glass' delta
☐ Hedges' g
☐ Confidence interval 95 %
☒ Descriptives
☐ Descriptives plots
Confidence interval 95.0 %
☐ Raincloud plots
☐ Horizontal display
☐ Vovk-Sellke maximum p-ratio

Alt. Hypothesis:
☐ Group 1 ≠ Group 2
☐ Group 1 > Group 2
☒ Group 1 < Group 2

Assumption Checks:
☐ Normality
☐ Equality of variances

Missing Values:
☒ Exclude cases per dependent variable
☐ Exclude cases listwise

Results

Independent Samples T-Test

Independent Samples T-Test

	t	df	p	Cohen's d
CONNECTEDNESS_SCALE	-7.223	1407	< .001	-0.581

Note: For all tests, the alternative hypothesis specifies that group 1 is less than group 2.
Note: Student's t-test.

Descriptives

Group Descriptives

	Group	N	Mean	SD	SE
CONNECTEDNESS_SCALE	1	1232	54.118	13.562	0.386
	2	177	61.956	13.053	0.981

Correlations between variables

Correlation

COVID_1

COVID_2

COVID_3

SMC1

SMC2

SMC3

FT_PT

ETHNIC

Major

Mom_College

Variables

CONNECTEDNESS_SCALE

EXTRAVERSION

SHYNESS

Ho1r_Society

Condition on

Sample Correlation Coefficient

☒ Pearson's r

☐ Spearman's rho

☐ Kendall's tau-b

Additional Options

☐ Display pairwise

☒ Report significance

☐ Flag significant correlations

☐ Confidence intervals

Interval %

☐ From bootstraps

☐ Vovk-Sellke maximum p-ratio

☐ Sample size

Alt. Hypothesis

☒ Correlated

☐ Correlated positively

☐ Correlated negatively

Plots

☐ Scatter plots

☐ Densities for variables

☐ Statistics

Correlation

Pearson's Correlations

Variable		CONNECTEDNESS_SCALE	EXTRAVERSION	SHYNESS	Ho1r_Society	E_SCALE
1. CONNECTEDNESS_SCALE	Pearson's r	—				
	p-value	—				
2. EXTRAVERSION	Pearson's r	0.226	—			
	p-value	< .001	—			
3. SHYNESS	Pearson's r	-0.175	-0.627	—		
	p-value	< .001	< .001	—		
4. Ho1r_Society	Pearson's r	0.189	-0.002	-0.006	—	
	p-value	< .001	0.948	0.816	—	
5. E_SCALE	Pearson's r	0.322	0.695	-0.712	0.014	—
	p-value	< .001	< .001	< .001	0.609	—

Multiple regression – using more than one X variable to predict Y

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Descriptives T-Tests ANOVA Mixed Models Regression Frequencies

Linear Regression

Dependent Variable: CONNECTEDNESS_SCALE

Method: Enter

Covariates: EXTRAVERSION, Ho1r_Society, SHYNESS

Factors:

WLS Weights (optional):

Model:

Components: EXTRAVERSION, Ho1r_Society, SHYNESS

Model Terms: EXTRAVERSION, Ho1r_Society, SHYNESS

Include intercept: ☒

Statistics:

Regression Coefficients:

☒ Estimates ☒ Model fit

☐ From 5000 bootstraps ☐ R squared change

☐ Confidence intervals 95.0 % ☒ Descriptives

☐ Covariance matrix ☐ Part and partial correlations

☐ Vovk-Sellke maximum p-ratio ☒ Collinearity diagnostics

Model Summary - CONNECTEDNESS_SCALE

Model	R	R ²	Adjusted R ²	RMSE
H ₀	0.189	0.036	0.035	13.499
H ₁	0.298	0.089	0.087	13.132

Note. Null model includes Ho1r_Society

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
H ₀	Regression	9507.270	1	9507.270	52.170	< .001
	Residual	256406.489	1407	182.236		
	Total	265913.759	1408			
H ₁	Regression	23607.496	3	7869.165	45.629	< .001
	Residual	242306.264	1405	172.460		
	Total	265913.759	1408			

Note. Null model includes Ho1r_Society

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p	Collinearity Statistics	
							Tolerance	VIF
H ₀	(Intercept)	46.280	1.273		36.347	< .001		
	Ho1r_Society	7.838	1.085	0.189	7.223	< .001	1.000	1.000
H ₁	(Intercept)	42.405	2.736		15.499	< .001		
	EXTRAVERSION	0.834	0.140	0.194	5.943	< .001	0.607	1.647
	Ho1r_Society	7.838	1.056	0.189	7.425	< .001	1.000	1.000
	SHYNESS	-0.047	0.030	-0.052	-1.587	0.113	0.607	1.647

Descriptives

	N	Mean	SD	SE
CONNECTEDNESS_SCALE	1409	55.103	13.743	0.366
EXTRAVERSION	1409	7.693	3.200	0.085
Ho1r_Society	1409	1.126	0.332	0.009
SHYNESS	1409	54.073	15.163	0.404

Collinearity Diagnostics

Variance Proportions

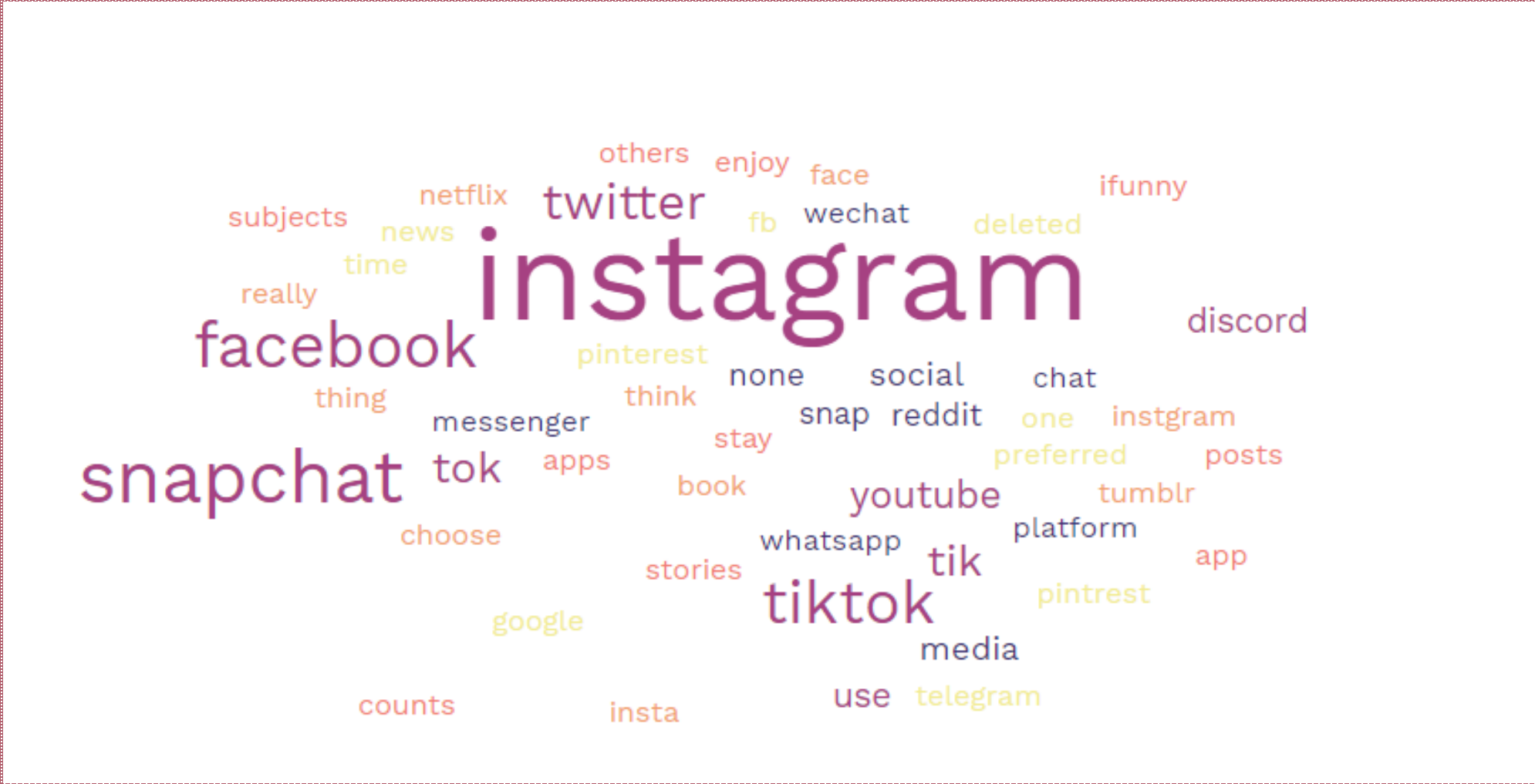
Links to some video tutorials for simple regression (review) and for understanding and doing multiple regression

- Basic linear regression (1 predictor) - <https://www.youtube.com/watch?v=vKGphOrzze8>
- Introduction to multiple linear regression (several predictors)
 - <https://www.youtube.com/watch?v=-QYFCYwAwTw><https://www.youtube.com/watch?v=nGolbykJRp8>
 - <https://www.youtube.com/watch?v=-QYFCYwAwTw>
- Clear explanation about interpreting multiple linear regression results
<https://www.youtube.com/watch?v=p9GJkdNMmjQ>
 - The collective contribution of the predictors
 - The unique contribution of each predictor

Word Cloud for Major



Word Cloud for Favorite Social Media Platform



Thank you!



See you next Friday...Jerry Rudmann
jrudmann@gmail.com

