Practice with Variables, Bivariate Stats, Hypotheses & SPSS

The Story

A social psychologist wanted to examine how students select their friends. In particular, she wanted to begin to understand things related to how someone decides whether or not to befriend an "odd person". Twenty-four volunteers from an Introductory Psychology class participated in the study. Each was asked to report their **birth sex** (1=male 2=female), **age**, and to indicate the type of person they were most likely to become friends with (**friend**: 1=someone with shared interests, 2=someone interesting to be around). Also, each person completed the Odd Friends Scale (**OFS**: the author claims persons with higher scores are more likely to have odd friends, 30 items).

The last part of the questionnaire included a vignette. There were two versions of this **vignette**, and 12 participants were randomly assigned to receive each version. Both versions contained a story about a new neighbor who had moved in next door and describes them as having a job as "an independent deep sea giblet recovery expert, with hobbies that all involve imminent death or dismemberment". One version (coded 1) of the questionnaire tells that this new neighbor makes a concerted and polite effort to "become friends", while the other version (coded 2) tells that they are "quite standoffish". After reading the story, each participant was asked to rate the likelihood (**likerate**)of their befriending this new neighbor, using a 10-point scale (on which a "10" means they would certainly want to make friends with this person and a "1" means they would definitely not want to make friends with this person).

Each of the participants came back one week later to complete a follow-up data collection session. First they were asked to remember the vignette they had read and to again rate the likelihood of their befriending this new neighbor, using the same scale (**likerat2**). Then they read two additional vignettes that described new neighbors who had different "senses of humor" and rated the likelihood of turning each neighbor over to the police for their actions (using a 10-point for which a "10" meant they would definitely inform the police and a "1" meant they would definitely not inform the police). The first vignette (the "Joker vignette") told of a neighbor who loved practical jokes -- harmless things like putting your car in a tree or kidnapping your child for a day or two. The second vignette (the "Borrower vignette") described a neighbor who had a tendency to borrow things and take them to his house without asking -- small things such as your refrigerator or your bed. In the dataset, these variables are referred to as **jokepol** and **borowpol**, respectively. They were also asked whether or not they had ever called the police to report a neighbor (**polever)**. Finally they were asked to tell the number of close friends they had that were the same major as they (**majfrnd**) and the number of friends they had that were a different major than they (**diffrnd**).

1. Identify the type (qualitative or quantitative) of each variable

Variable	Type		Variable	Type
birth sex			**likerat2**	
age			**jokepol**	
friend			**borowpol**	
OFS			**polever**	
vignette			**majfrnd**	
likerate			**diffrnd**	

2. The hypotheses & statistical tests

a. There will be lower likelihood ratings given by those folks who read the vignette that described the new neighbor as "quite standoffish" than those who read the vignette that described te new neighbor as "friendly" (use the rating data collected during the first session).

Draw the boxes.

Proper statistical test

Variables to use

H0:

b. The researcher hypothesized that younger folks are more likely to befriend the new neighbor (i.e., give a higher likelihood rating -- use the rating data collected during the first session).

Draw the boxes.

Proper statistical test

Variables to use

H0:

c. People will give lower likelihood during the follow-up session than during the original session.

Draw the boxes.

Proper statistical test

Variables to use

H0:

d. Males are more likely than females to have reported a neighbor to the police.

Draw the boxes.

Proper statistical test

Variables to use

H0:

3. The SPSS output…

a.

Descriptives

RATING

	N	Mean	Std. Deviation
1.00	12	3.6667	2.18812
2.00	12	6.0833	2.77843
Total	24	4.8750	2.73960

ANOVA

RATING

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	35.042	1	35.042	5.603	.027
Within Groups	137.583	22	6.254		
Total	172.625	23			

Retain or Reject H0: Do these results support the RH:

b.

Correlations

		RATING	AGE
RATING	Pearson Correlation	1	-.061
	Sig. (2-tailed)	.	.777
	N	24	24
AGE	Pearson Correlation	-.061	1
	Sig. (2-tailed)	.777	.
	N	24	24

Retain or Reject H0:

Do these results support the RH:

c.

Descriptive Statistics

	Mean	Std. Deviation	N
RATING	4.8750	2.73960	24
RATING2	6.9583	2.15647	24

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
TIME	Sphericity Assumed	52.083	1	52.083	41.427	.000
Error(TIME)	Sphericity Assumed	28.917	23	1.257		

Retain or Reject H0: Do these results support the RH:

d.

		Birth Sex		
		Male	Female	Total
POLEVER	At least once	6	1	7
	never	6	11	17
	Total	12	12	24

Chi-square Tests

	Value	df	Asymp Sig (2-sided)
Pearson Chi-square	5.042	1	.025

Retain or Reject H0: Do these results support the RH: