Frankfort-Nachmias and Leon-Guerrero: *Social Statistics for a Diverse Society, Seventh Edition*

Chapter 2 SPSS Solutions

1.

MARITAL STATUS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MARRIED	717	47.8	47.8	47.8
	WIDOWED	133	8.9	8.9	56.7
	DIVORCED	237	15.8	15.8	72.5
	SEPARATED	44	2.9	2.9	75.4
	NEVER MARRIED	369	24.6	24.6	100.0
	Total	1500	100.0	100.0	

   a.   15.8% of the sample is divorced.

   b.   47.8% are married.

   c.   Currently single includes those in the following response categories: widowed, divorced, and never married: 8.9 + 15.8 + 24.6 = 49.3%

2.

IMMIGRANTS TAKE JOBS AWAY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	AGREE STRONGLY	44	2.9	9.1	9.1
	AGREE	157	10.5	32.6	41.8
	NEITHER AGREE NOR DISAGREE	105	7.0	21.8	63.6
	DISAGREE	139	9.3	28.9	92.5
	DISAGREE STRONGLY	36	2.4	7.5	100.0
	Total	481	32.1	100.0	
Missing	IAP	1012	67.5		
	CANT CHOOSE	4	.3		
	NA	3	.2		
	Total	1019	67.9		
Total		1500	100.0		

IMMIGRANTS INCREASE CRIME RATES

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	AGREE STRONGLY	25	1.7	5.2	5.2
	AGREE	110	7.3	23.0	28.2
	NEITHER AGREE NOR DISAGREE	123	8.2	25.7	54.0
	DISAGREE	179	11.9	37.4	91.4
	DISAGREE STRONGLY	41	2.7	8.6	100.0
	Total	478	31.9	100.0	
Missing	IAP	1012	67.5		
	CANT CHOOSE	6	.4		
	NA	4	.3		
	Total	1022	68.1		
Total		1500	100.0		

IMMIGRANTS GOOD FOR AMERICA

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	AGREE STRONGLY	29	1.9	6.1	6.1
	AGREE	204	13.6	42.6	48.6
	NEITHER AGREE NOR DISAGREE	125	8.3	26.1	74.7
	DISAGREE	108	7.2	22.5	97.3
	DISAGREE STRONGLY	13	.9	2.7	100.0
	Total	479	31.9	100.0	
Missing	IAP	1012	67.5		
	CANT CHOOSE	6	.4		
	NA	3	.2		
	Total	1021	68.1		
Total		1500	100.0		

b. Each variable is an ordinal measurement. [Review the definitions of levels of measurement.] The higher value (5) indicates strong disagreement to the statement. Overall, respondents express positive attitudes toward immigrants. Most believe that immigrants are good for America (48.6% agree or strongly agree to the statement) and disagree that immigrants increase crime rates (46% disagree or strongly disagree). However, almost 41.7% agree or strongly agree that immigrants take away jobs.

3.

a. RACIDIMP is an ordinal measure (a four point scale).

b. RACIDIMP may vary by respondent's racial identity (RACECEN1 and RACECEN2), whether the respondent lives in racially diverse neighborhood (RACLIVE) or the number of family generations in the household (FAMGEN).

4. Students are encouraged to determine on their own how to recode the variable. Students should consider how the years of education is related to degree attainment, for example: 12 years = high school graduate or 16 years = college graduate.

5. We recoded labor force participation rates into four categories: 1 – 25% and below, 2 – 25.01-50%, 3 – 50.01-75% and 4 – 75.01% and above. Our recoded variables are presented in the following tables.

From the data we can conclude that labor participation is higher for males than females. There were no countries where the male labor force participation rate was 50% or less. Out of the 70 countries, all the

reported labor rate was 50.01% or higher. The largest category was 50.01-75 (75.7% of all cases). For women, the largest category was 50.01-75% (60% of all cases).

claborratemale Categorical Labor Rate Male

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.00	17	24.3	24.3	24.3
	4.00	53	75.7	75.7	100.0
	Total	70	100.0	100.0	

claborfemale Categorical Labor Rate Female

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	7	10.0	10.0	10.0
	2.00	10	14.3	14.3	24.3
	3.00	42	60.0	60.0	84.3
	4.00	11	15.7	15.7	100.0
	Total	70	100.0	100.0	

Chapter 2 – Answers to Exercises

1. a. Race is a nominal variable. Class is an ordinal variable, since the categories can be ordered from lower to higher status.

    b. Frequency Table for Race

Race	Frequency (f)
White	17
Nonwhite	13
Total (N)	30

Frequency Table for Class

Class	Frequency (f)
Lower	3
Working	15
Middle	11
Upper	1
Total (N)	30

2.

Class	Percentage

Lower	10.0%
Working	50.0%
Middle	36.7%
Upper	3.3%
Total	100%

    a.   The smallest perceived class is the upper class, composing only 3.3% of the survey.

    b.   Together, the working and middle class compose 86.7% of the survey.

3.

Number of traumas	Frequency (f)
0	15
1	11
2	4
Total (N)	30

Trauma is an interval or ratio-level variable, since it has a real zero point and a meaningful numeric scale.

    b.   People in this survey are more likely to have experienced no traumas last year (50% of the group).

    c.   The proportion who experienced one or more traumas is calculated by first adding 36.7% and 13.3% = 50%. Then divide that number by 100 to obtain the proportion, 0.50, or half the group.

4.   a.   interval-ratio

        b.

educ HIGHEST YEAR OF SCHOOL COMPLETED

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	2	.3	.3	.3
	2	2	.3	.3	.5
	3	1	.1	.1	.6
	4	4	.5	.5	1.2
	5	2	.3	.3	1.4
	6	8	1.0	1.0	2.5
	7	7	.9	.9	3.4
	8	15	1.9	1.9	5.3
	9	23	3.0	3.0	8.3
	10	33	4.2	4.3	12.5
	11	38	4.9	4.9	17.4
	12	207	26.6	26.7	44.1
	13	58	7.5	7.5	51.6
	14	102	13.1	13.2	64.8
	15	33	4.2	4.3	69.0
	16	127	16.3	16.4	85.4
	17	30	3.9	3.9	89.3
	18	36	4.6	4.6	93.9
	19	17	2.2	2.2	96.1
	20	30	3.9	3.9	100.0
	Total	775	99.7	100.0	
Missing	99 NA	2	.3		
Total		777	100.0		

c. 5.3% of the sample has 8 years of education or less, which corresponds to 41/775.

d.

	Frequency	Percent	Cumulative Percent
Less Than High School	135	17.4	17.4
High School Grad-no college	207	26.7	44.1
Some College	193	24.9	69.0
College Grad	240	31.0	100.0
Total	775	100.0	

31% of the sample has graduated from college.

17.4% of the sample has not graduated from high school. This category includes all those with 11 years or less.

5.   Ranking them from highest to lowest level of support: Strong Democrats, Strong Republicans and Independents. Support does vary by group, however, the majority of strong Democrats (56.8%) and strong Republicans (50%) agree/strongly agree with the statement. The group with the lowest level of support is Independents with 42.3%.

6.

Email hours per week	Frequency	Cf	%	C%
0	19	19	19	19
1	20	39	20	39
2	13	52	13	52
3	5	57	5	57
4	2	59	2	59
5	6	65	6	65
6	5	70	5	70
7	2	72	2	72
8	3	75	3	75
9	1	76	1	76
10 or more	23	99	23	99
Total	99		99%	

b.   .575 (57/99) spent 3 hours or less on email per week.
c.   This group includes 5+2+3+1+23= 34 respondents. The proportion is 34/99 or .343.

7.   a.

For whites.

Education	f	%	C%
Less than high school	72	12.3	12.3
High school graduate	272	46.5	58.8
Junior college	46	7.9	66.7
Bachelor	118	20.2	86.9
Graduate	77	13.2	100.1
TOTAL	585		

For blacks.

Education	f	%	C%
Less than high school	26	22.0	22.0
High school graduate	59	50	72.0
Junior college	10	8.5	80.5
Bachelor	16	13.6	94.1
Graduate	7	5.9	100.0
TOTAL	118		

For males.

Education	f	%	C%
Less than high school	46	14.0	14.0
High school graduate	151	45.9	59.9
Junior college	24	7.3	67.2
Bachelor	65	19.8	87
Graduate	43	13.1	100.1
TOTAL	329		

For females.

Education	f	%	C%
Less than high school	67	15.0	15.0
High school graduate	214	47.8	62.8
Junior college	37	8.2	71.0
Bachelor	81	18.1	89.1
Graduate	49	10.9	100.0
TOTAL	448		

b. 40.2% of males attended school beyond high school. A lower percentage of females (37.2%) did the same.

c. 58.8% for whites and 72.0% for blacks.

d. Cumulative percentages are more similar for men and women than for white and blacks. Inequality appears to be larger between racial groups. A larger percentage of whites complete bachelor or graduate degrees than do blacks.

8. For both groups, the rate of infection can be ranked in the order presented. Rates are highest for blacks, followed by Hispanics and whites. Infection rates are higher for men than they are for women. The infection rate for black men is more than 2.5x the rate for black women.

9.

a. Interval-ratio

b. 33.7% of males and 34.9% of females had 3 children or more.

c. Based on the cumulative percentages, a higher percentage of males have fewer children (0-1) than females (44.6% vs. 36.7%).

	Males (f)	%	C(%)	Females (f)	%	C(%)
0	94	28.7	28.7	92	20.6	20.6
1	52	15.9	44.6	72	16.1	36.7

2	71	21.7	66.3	127	28.4	65.1
3	47	14.4	80.7	91	20.4	85.5
4	30	9.2	89.9	38	8.5	94
5 or more	33	10.1	100	27	6.0	100
Total (N)	327			447		

10. Please note: the data is replicated in the exercise as it was reported by the Bureau of Justice Statistics. Percentages do not equal 100.

	All Males (%)	C(%)	All Females (%)	C(%)
18-19	1.5	1.5	.9	.9
20-24	12.4	13.9	11.2	12.1
25-29	16.3	30.2	17.4	29.5
30-34	16.5	46.7	17.5	47
35-39	13.7	60.4	14.8	61.8
40-44	12.5	72.9	14.1	75.9
45-49	11.0	83.9	11.8	87.7
50-54	7.7	91.6	7.0	94.7
55-59	4.2	95.8	3.2	97.9
60-64	2.2	98	1.4	99.3
65+	1.8	99.8	.9	100.2

11. a. Victimization rates are highest for those 12-17 years of age.
   b. Victimization rates have been declining since 1994-1998. In the last time period, 2005-2010, all rates are below 5 per 1,000 females. Across the three time periods, victimization rates are highest for females age 12-17 (11.3 to 4.1). Second highest rates are among females age 18-34 year (7.0 to 3.7).

12.   For sex and age: Women were more likely than men to indicate that same-sex marriage should be legal. There was an increase in both age groups for men and women. The highest increase was among men ages 18-49 years. For age: There is an increase in support across all three age groups. The largest increase was among those 18-34 years of age (70-54 = 16%). For political affiliation: There was an increase in the percent indicating support for the legalization of same-sex marriage among Democrats and Independents. No change among Republicans. For political views: There was an increase in support for same-sex marriage among all political affiliation categories. The percent increases can be ranked from high to low: moderates (9%), liberals (8%) and conservatives (3%).

13.   a.   SEX: nominal
                  RACE: nominal
                  AGE: ordinal
                  EDUCATION: ordinal
                  INCOME LEVEL: ordinal
                  RELIGIOUS AFFILIATION: nominal
         b.   Based on the Gallup data, we know that the majority of female voters, total nonwhite and non-Hispanic black voters, young (18-29) voters, voters with post graduate degrees and lower income voters

supported President Obama and Vice President Biden. Governor Romney and Senator Ryan had strongest support among men, non-Hispanic whites, seniors (65 years and older), college graduates or those with some college, and voters who earned $36,000 or more.

14. Native born individuals are more likely to be educated than foreign born. Fifty nine percent of the native born has some college or higher (28% had a bachelor's degree or higher). In comparison, 46% foreign born has some college or higher (27% percent had a bachelor's degree or higher).