SPSS Assignment

Part 1. Create SPSS Data File

The following data was from a class of students. Create an SPSS data file, and use the features in SPSS Data Editor to create the data with proper naming for each variable and proper labeling for each category of the categorical variables. There are missing data in this data set which is not unusual. Use 0, 1 for coding binary data and 1, 2, 3, … for coding categorical data that has more than two categories, then label them with proper labels. For instance, the Sex variable will use a value of 1 for male and 0 for female.

Data Sheet

ID	Sex	GPA	Study Hours	Your Birth Date	Pulse Rate	BMI	Favorite Number
1	b	3.51	d	0626	72	22.00	6
2	b	4.00	d	0514	70	26.60	7
3	b	3.94	c	0430		23.00	6
4	b	4.00	b	0729		23.00	7
5	b	3.00	d	1110		19.00	4
6	a	4.00	e	1202	68	20.68	4
7	a	3.50	c	1127	68	27.00	5
8	a	3.48	d	1104	80	27.00	7
9	b	3.50	e	0916	60	25.00	3
10	b	2.80	c	1019	70	20.00	7
11	a	3.50	b	0128	74	21.24	3
12	b	3.70	d	1003	92	20.00	4
13	a		d	1104		20.00	8
14	b	2.74	c	1113	75	16.00	9
15	a	3.91	d	0630	60	27.00	6
16	a	4.00	d	0507	80	21.28	3
17	a	3.74	d	0611		32.00	10
18	b	4.00	d	0827	80	21.00	8
19	b	4.00	b	0328	92	21.95	8
20	b	3.77	c	0925	74	17.00	2
21	a	3.28	a	1129	83	21.00	7
22	b	4.00	d	0413	82	20.80	7
23	b	3.91	b	0724	74	21.00	7
24	b	3.71	c	0213	63	17.00	4
25	b	3.75	c	1222	84	21.92	7
26	b	3.80	c	0813	60	20.00	7
27	b	2.75	c	0629	108	25.00	7
28	b	3.25	d	0406	76	20.00	7
29	b	3.20	d	0722	70	20.00	2
30	b	3.11	b	1112	64	27.00	7
31	a	4.00	b	0615	70	28.00	6

Sex Variable Coding
a - Male
b - Female

Study hours coding
a - 1 to 5 hrs
b - 5 to less than 10 hrs
c - 10 to less than 20 hrs
d - 20 to less than 40 hrs
e - More than 40

Part 2. Descriptive Statistics

The goal of this assignment is to **understand a class of students** using the data above. Use the data that you created in Part 1 to perform

1. univariate analyses for quantitative variables, GPA, Pulse Rate, and BMI. (show frequency distribution tables and bar charts)
2. univariate analyses for qualitative variables, Sex, Study Hours, and Favorite Number. (show histograms)
3. a bivariate analysis for qualitative variables, Sex and Study Hours, (show cluster bar chart)
4. a bivariate analysis for quantitative variables, Pulse Rate and BMI, (show scatter plot), and
5. a bivariate analysis between one quantitative variable, BMI, and one qualitative variable, Sex, to see if there is significant difference in BMI between male and female students. (Show side-by-side boxplot)

For univariate analysis, please show frequency distribution tables (use APA style) and bar charts for categorical variables, and make histograms for quantitative variable. Each chart should take no more than half a page.

Right below each chart in your paper, you need to write at least one line of your own comment to describe the variable(s) that you observed from that chart. At the end, you need to write a general summary statement about this class of students based on the statistics that you presented in the paper. All graphs and tables in your paper should be properly labeled (see next page).

Grading: 40% - SPSS Descriptive Statistics; 40% - Writing; 20% - Organization.

Assignment Submission:

Use your first and middle initials and your last name to name your data file and the report file and submit them through Assignment Dropbox before due date.

Get a copy of SPSS Instructions for Exploratory Analysis for reference.
The web address is: http://www.cc.ysu.edu/~ghchang/SPSSE/SPSS_EDA.pdf

Note: Each chart or table in your assignment needs to have proper number and title. (See the following example.)

A Project Paper Example:

Project: Pulse Rates Analysis

Student Name: John Smith
Major: Mathematics

Part I: Univariate Analysis

A: Explore Quantitative Variable

1. The graphs, charts and tables in your report need to be all properly numbered and labeled with proper title. The example in the Figure 1 is for showing a histogram created with SPSS and that you wish to use it to explain or answer a question. Your graph should be large enough so that the information in the chart is readable. But, don't let a chart take up more than half a page.

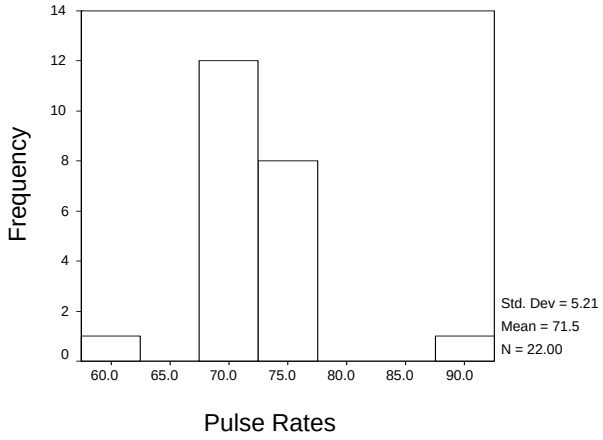


Figure 1: Histogram for Pulse Rates

2. If a table is presented in your paper, you should also label it with proper numbering and title as in Table 1 shown below. Don't copy the whole table that SPSS produced in the output window into your report. Retrieve only the necessary information that you wish to describe in your paper.

Table 1: Descriptive Statistics for Pulse Rate Variable

Statistics	***Pulse Rate***
Mean	71.5
Standard Deviation	5.11

Use page number when your report is more than one page. Always use MS-WORD or other word processor to prepare SPSS related project assignment.

Few tips on MS-WORD

1) Use [Ctrl] + [Shift] + [=] (press them at the same) to type superscript, and do the same to go back to normal text. Example: X^2

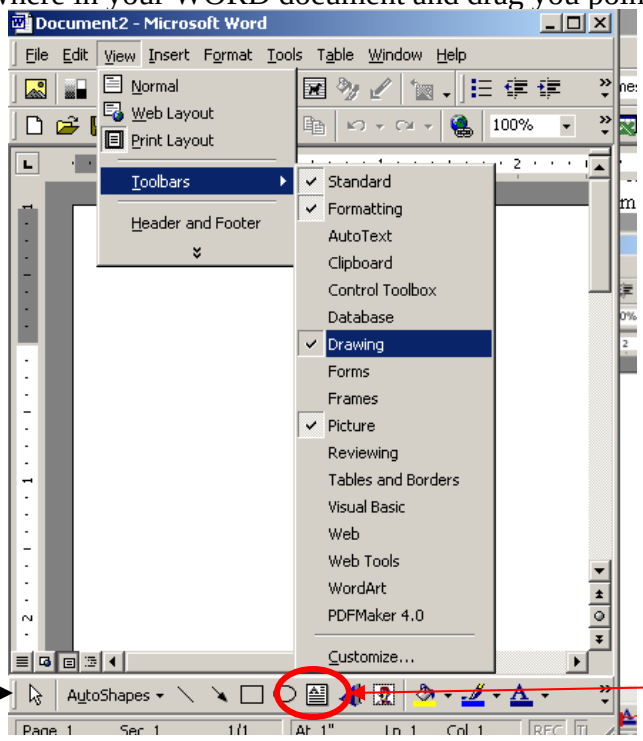
2) Use [Ctrl] + [=] to type subscript, and do the same to go back to normal text.

   Example: X_2

3) For Greek letters and math symbols, from the MS-WORD menu bar, click and select through the following sequence: **Insert / Symbol**. You can insert symbols like:μ σ Φ Ω ≠ ≈ ⊗ ⊆ ⊃ ± ≤ and more …

4) Click and select through the following sequence for inserting page number:
   Insert / Page Number …

5) Use Text Box for charts and tables. Creating text box and pasting charts into the text box will help you to have better control in arranging charts in your report. To view drawing box that contains the text box button, click and select through View / Toolbar / Drawing. Drawing tool bar is the bar near the bottom of the picture show below. To create a text box, simply click on the text box button, and then click anywhere in your WORD document and drag you pointer to create a box.



To format the text box: Right click on the edge of the text box and select **Format Text Box** to format the box. My prefer settings are: for Colors and Lines: **no color fill** and **no line fill** Layout: **In front of text**. After the text box is made, one can drag and move the box in any where of the document.

Drawing tool bar

Click this button in the drawing tool bar for text box.

6) Click and select through the following sequence to produce a mathematical equation with mathematical symbols: **Insert / Object / Microsoft Equation**

   Example: $\sum_{i=1}^{n} \sqrt{x_i}$