MAT 3312 Homework 1/ Computing exercise Spring 21

Name: Student7 Date: February 24, 2021

Use SAS on demand to answer the following questions regarding descriptive statistics. You may place your results from SAS below. **Please copy and paste your SAS code to the end of your assignment.**

Import the Hospital dataset from the course data in SAS on demand. **Use the dataset to questions 1-8.**

Question 1: Mean and Median for duration.

Mean: 8.6

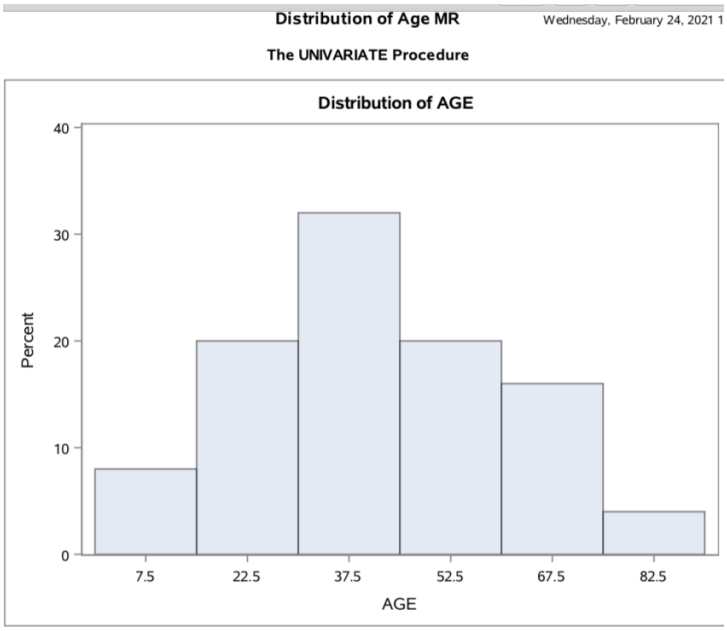
Median: 8.000

Question 2. Standard Deviation and Range for duration.

Standard Deviation: 27.000

Range: 5.715

Question 3. Graphically display the distribution of the variable age and add a title to your graphical display using SAS. Please include your initials in the title. Example "Distribution of Age FS"



Question 4. Describe the distribution of the variable age based on the graphical display you created in question 3.

From the graph in question 3, I can conclude that the variable age is symmetrical. This graph looks like it can be a normal distribution.

Question 5. Find the five-number summary of the variable first temp following admission?

Min: 96.8

Q1: 98.0

M(Q2): 98.2

Q3: 98.6

Max: 99.5

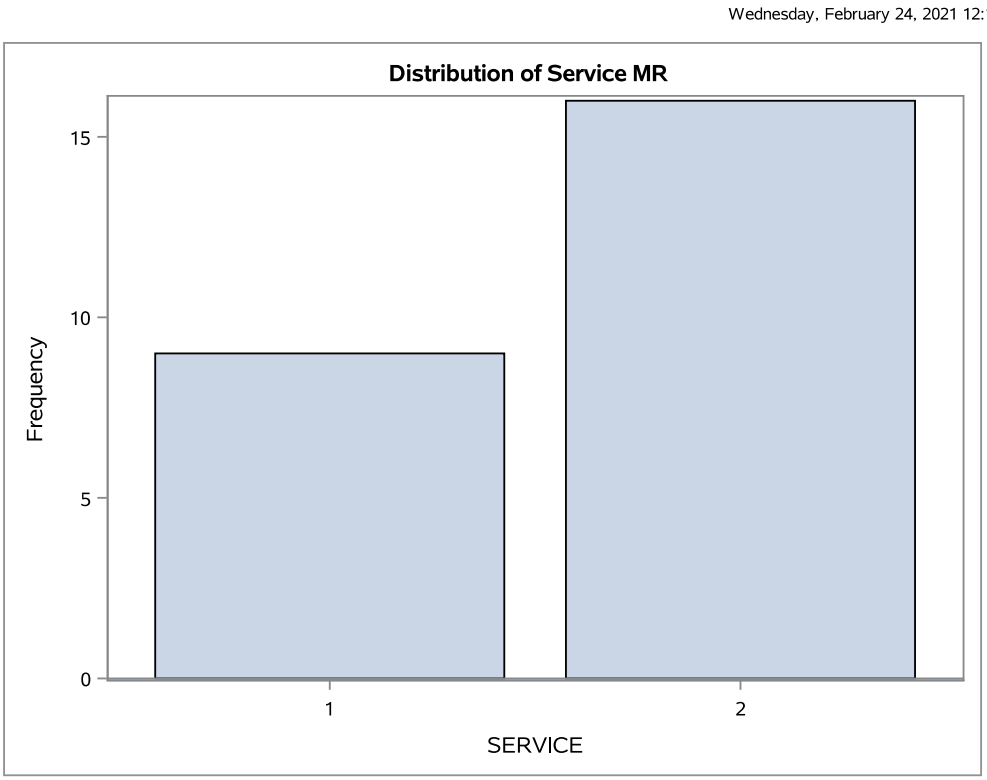
Question 6. What is the range, mode, and IRQ of the variable white blood cell count (WBC)?

Range: 11.0000

Mode: 5.0000

IRQ: 6.0000

Question 7. Graphically display the distribution of the variable service and add a title to your graphical display using SAS. Please include your initials in the title.



Question 8. Describe the distribution of the variable service based on the graphical display you created in question 7.

From the graph in question 7, I can conclude that the patients at the hospital rather go with number 2 than 1. You can also conclude that this graph is skewed to the left so most of the data is on the right side of the graph.

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Use the data containing baseline information of subjects entering a health study below to answer questions 9 and 10.

Sex	Age	Cholesterol level	Smoking status
F	50	178	Y
M	61	146	Y
M	72	208	N
M	55	147	Y
F	59	202	N
M	65	215	N
F	68	184	N
F	59	208	Y
F	63	206	N
M	52	169	N

Question 9. Convert the raw data into a SAS data file. Print the data below.

Question 10. What is the mean and standard deviation of the variable cholesterol? Is there no variability, small or a lot of variability for this variable?

Mean: 186.3

Standard Deviation: 25.695

From the graph I created, I can tell that the variability of cholesterol is small. Most of the data is on the right side of the graph. Therefore this data set for cholesterol does not have much variability.

CODE:

```
LIBNAME datalib "~/my_shared_file_links/griffinfr0" access=readonly;

/*Question 1 & 2*/
proc univariate data= datalib.hospital;
var dur_stay;
run;

/*Question 3*/
proc univariate data= datalib.hospital;
var age;
histogram age;
title 'Distribution of Age MR';
run;

/*Question 5*/
proc contents data=datalib.hospital;
run;

proc univariate data= datalib.hospital;
var temp;
```

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run;

/*Question 6*/
proc univariate data= datalib.hospital;
var WBC;
run;

/*Question 7*/
proc sgplot data= datalib.hospital;
vbar service;
title 'Distribution of Service MR';
run;

/*Question 9*/
data healthstudy;
input sex $ age CL smoking $;
cards;
F 50 178 Y
M 61 146 Y
M 72 208 N
M 55 147 Y
F 59 202 N
M 65 215 N
F 68 184 N
F 59 208 Y
F 63 206 N
M 52 169 N
;
run;

/*Question 10*/
proc univariate data=healthstudy;
var CL;
run;

proc univariate data=healthstudy;
var CL;
histogram CL;
run;
```