1. Females made up 60% of the population whereas, men made up the remaining 40%. The average age for the sample was approximately 45 years old and precisely 44.84; the average ages of both men and women were approximately 45 years old as well- 44.91 for women, and 44.73 for men. The average number of hours of sleep for the sample was 7.51, females usually slept for 7.31 hours per night whereas men usually slept for 7.82 hours per night. The average depression score for the sample was 13.67, females averaged 14.36 on the PHQ-9 scale, and men averaged 12.65on the scale.

2.

		Depression Severity		
Variables	*All Respondents*	*Minimal/Mild*	*Moderate*	*Moderate/Severe*
Drinks	3.13	2.21	2.30	4.83
Dreams	3.16	2.17	2.65	4.85
Nightmares	3.23	2.50	2.15	4.73

3. Is there a correlation between depression scores and number of days a person remembers their dreams per week? & Does average number of nightmares a person remembers per week vary based on depression severity?

4. B: Correlation, D: ANOVA

Correlation

Research Question: Is there a correlation between depression scores and number of days a person remembers their dreams per week?

Methodology: Because depression (DEPRESSION) and dreams (DREAMS) are both continuous, I will use correlation analysis. I am using the World95 data. The independent variable is "dreams" and dependent variable is "depression."

Independent Variable: dreams (DREAMS)
Dependent Variable: depression (DEPRESSION)

Null hypothesis: There isn't a correlation between a person's depression score and the amount of dreams that they are able to remember per week.

Research hypothesis: There is a correlation between a person's depression score and the amount of dreams that they are able to remember per week.

Results:

Pearson's 'r' = 0.860
p-value = 0.000 <a(0.001)

The scatter plot and regression line indicate the presence of a positive relationship between DEPRESSION and DREAMS.

Conclusion:

We fail to reject the null and accept the research hypothesis, based on p-value (<0.05). This indicates the presence of a significant positive relationship between the variables. **As a person's ability to remember their dreams per week increases, their depression scores increase**. The strength of this relationship is strong to perfect positive.

ANOVA

Research Question:

An ANOVA analysis was conducted to examine whether the average number of nightmares that a person remembers per week varies based on depression severity. This analysis was performed at a=0.05.

Methodology:

The variables are DEPRESSIONSEVERITY and NIGHTMARES from the "GSS93 subset" data. The continuous variable is NIGHTMARES and nominal variable DEPRESSION SEVERITY has three categories: minimal/mild, moderate, moderate/severe. Given the levels of measurement of the variables used, an ANOVA test was conducted.

Hypotheses:

Null Hypothesis (H0): There is no significant difference between the average number of nightmares that a person remembers per week and their depression severity.

Research Hypothesis (H1): There is a significant difference between the average number of nightmares that a person remembers per week and their depression severity.

Results:

Mean nightmares for Minimal/mild: 1.43 per week
Mean nightmares for Moderate: 2.50 per week
Mean nightmares for Moderate/severe: 4.71 per week

F = 77.285
dfB = 2
dfW = 147
p = 0.000

Since p (0.000) < a (0.05), we will reject H0 and accept H1. Thus, there is at least one significant difference between the means of the 3 groups of depression.

Minimal/mild and Moderate/severe depression varies significantly for the average number of nightmares that individuals remember per week.
(p = 0.000)

Conclusion:

The group means indicate those who suffer depression minimally/moderately (1.43) significantly have different mean levels of remembering their nightmares per week than those who suffer depression severely (4.71). From this, we can conclude that there is a

difference in the average number of nightmares that an individual remembers. People that suffer depression moderately/severely tend to remember their nightmares more than those who suffer minimally or moderately.