Homework 4

For each problem, write down the hypothesis and also write your conclusion. You should also attach the codes. The level of significance is 0.05.

1. The following table shows results when subjects were asked “Do you think a person has the right to end his or her own life if this person has an incurable disease?” and “When a person has a disease that cannot be cured, do you think doctors should be allowed to end the patient’s life by some painless means if the patient and his family request it?” The table refers to these variables as “suicide” and “let patient die”.

|  |  |  |
| --- | --- | --- |
| Suicide | Let Patient Die | |
| Yes | No |
| Yes | 1097 | 90 |
| No | 203 | 435 |

*Source: 1994 General Social Survey, National Opinion Research Center*

Based on the data, whether there is proportion difference among “suicide” and “let patient die”? Perform the formal statistics test.

1. Each week Variety magazine summarizes reviews of new movies by critics in several cities. Each review is categorized as pro, con, or mixed, according to whether the overall evaluation is positive, negative, or a mixture of the two. The following table summarizes the rating from April 1995 through September 1996 for Chicago file critics Gene Siskel and Roger Ebert.

|  |  |  |  |
| --- | --- | --- | --- |
| Siskel | Ebert | | |
| Con | Mixed | Pro |
| Con | 24 | 8 | 13 |
| Mixed | 8 | 13 | 11 |
| Pro | 10 | 9 | 64 |

Use formal statistical measure to measure the agreement between Siskel and Ebert.

Use the HELP study dataset (you can find it in the same assignment folder) for problems 3 to 5.

1. Test normality assumption of Mental Component Score(variable “mcs”) and Physical Component Score (Variable “pcs”)
2. Construct the 95% confidence interval of µ, the average number of drinks consumed per day (variable “i1”).
3. Assess gender difference in baseline age using a t test. Notice there is a variable called “female”, which is to indicate the gender with 0 means male and 1 means female. The baseline age is the variable “age”.