Seneca Peklo

Math Project 3

My test is focusing on the number of men vs. the number of women that vote democrat. My hypothesis is that more women vote democrat then men due to the democratic party supporting more liberal ideas such as equal pay, reproductive rights, birth control coverage under Obama Care, and Planned Parenthood. This data could be used by people campaigning or predicting the outcome of an upcoming election.

I chose a random sample of 40 people and chose 20 women and 20 men to do this with. From my random sample I found 9 women voted Democrat and 5 men voted democrat. I used a random number table to get this data and selected data of the first 20 men and the first 20 women to pop up. P is the number of Democrats. My claims are:

H0: $P\_{w}\leq P\_{m}$

Ha: $P\_{w}>P\_{m}$

I use 2PROPZTEST because I am testing a proportion. Through this, the data I got was Z=1.326 and P=.0924. Because my P value is greater than .05, I fail to reject H0. There is not statistically significant evidence to support my claim that more women vote democrat then men. This answer does seem reasonable to me because when finding data, I found that a lot of men voted for other liberal parties such as the green party and the libertarian party making it likely that they would vote for a more moderate liberal party like the democratic party.

Pm is between -.1799 and .57988 smaller then Pw with a 99% confidence interval. Pm is between -.0891 and .48905 smaller then Pw with a 95% confidence interval. Pm is between -.0426 and .44258 smaller then Pw with a 90% confidence interval. This seems realistic to me because the intervals are not to large.

A factor that could have created incorrect results was my use of the random number table. I lost my place a couple of times and I picked up where I thought I left off, but I may have gone to the wrong place which would have skewed the data I chose. I also could have had a type 1 error and rejected H0 even though it was correct.

My data states that there is no statistic evidence to prove a difference in the amount of men vs. the number of women that vote democrat.