

Bivariate Hypothesis Testing

CoD Survey Data

Below are a variety of hypothesis test based off the data received from the CoD Modern Warfare Survey.

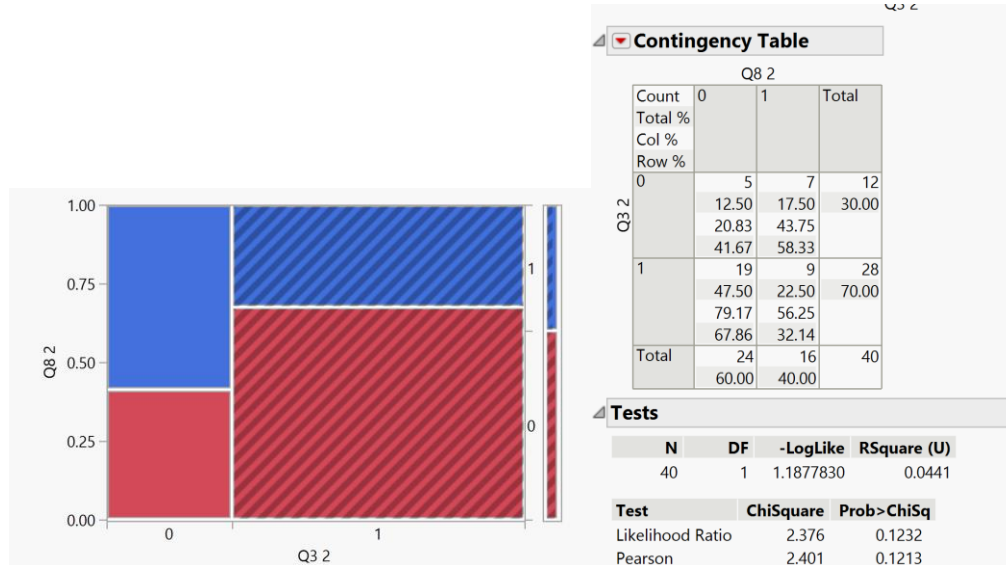
CoD Modern Warfare Survey

1. Which 2nd perk are you most likely to use while playing HQ, Domination, or Hardpoint?
 - Overkill, Ghost, Hardline, High Alert, Restock, Pointman
2. Which 2nd perk are you most likely to use while playing Search and Destroy?
 - Overkill, Ghost, Hardline, High Alert, Restock, Pointman
3. While playing HQ, Domination, and/or Hardpoint, do you typically use either a UAV or Personal Radar?
 - Yes, No
4. Which field upgrade are you most likely to use in HQ, Domination, and/or Hardpoint?
 - Dead Silence, Munitions Box, Trophy System, Deployable Cover, EMP drone, Stopping Power, Tactical Insertion
5. Which field upgrade are you most likely to use while playing Search and Destroy?
 - Dead Silence, Munitions Box, Trophy System, Deployable Cover, EMP drone
6. While playing Search and Destroy, do you use either a UAV or Personal Radar?
 - Yes, No
7. While playing HQ, Domination, and/or Hardpoint, is Advanced UAV a part of your killstreak rotation?
 - Yes, No
8. While playing HQ, Domination, and Hardpoint, do you typically play the Objective or go for Kills?
 - Objective, Kills
9. Whenever you are having a bad game and your K/D is negative, how likely are you to leave or timeout of the game?
 - Very likely, Likely, Neither Likely nor Unlikely, Unlikely, Very Unlikely

Question 3 & 8

H_0 : Personal Radar/UAV and Objective/Kills are independent

H_1 : Personal Radar/UAV and Objective/Kills are not independent

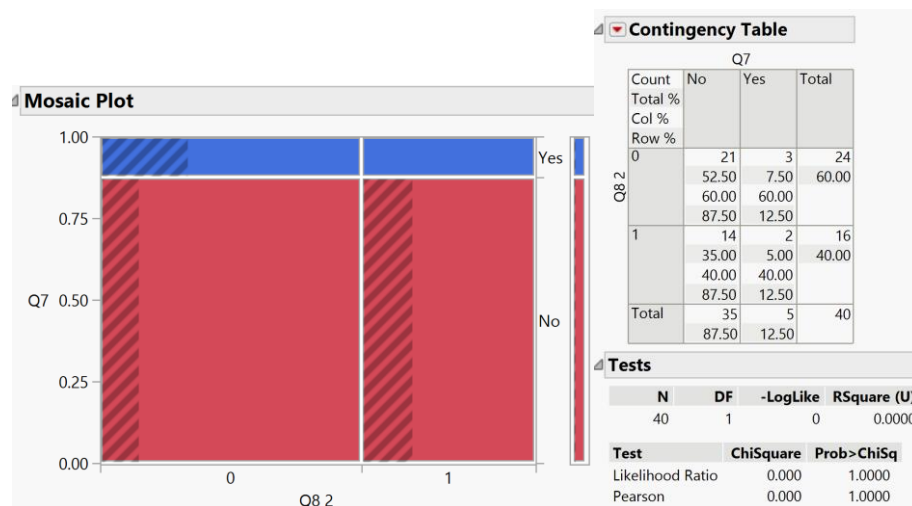


Based upon our data, we have evidence that supports the null hypothesis stating that using Personal Radar/UAV is independent of playing for either objective or kills.

Question 7 & 8

H_0 : Objective/Kills and use of Advanced UAV are independent.

H_1 : Objective/Kill and use of Advanced UAV are not independent.

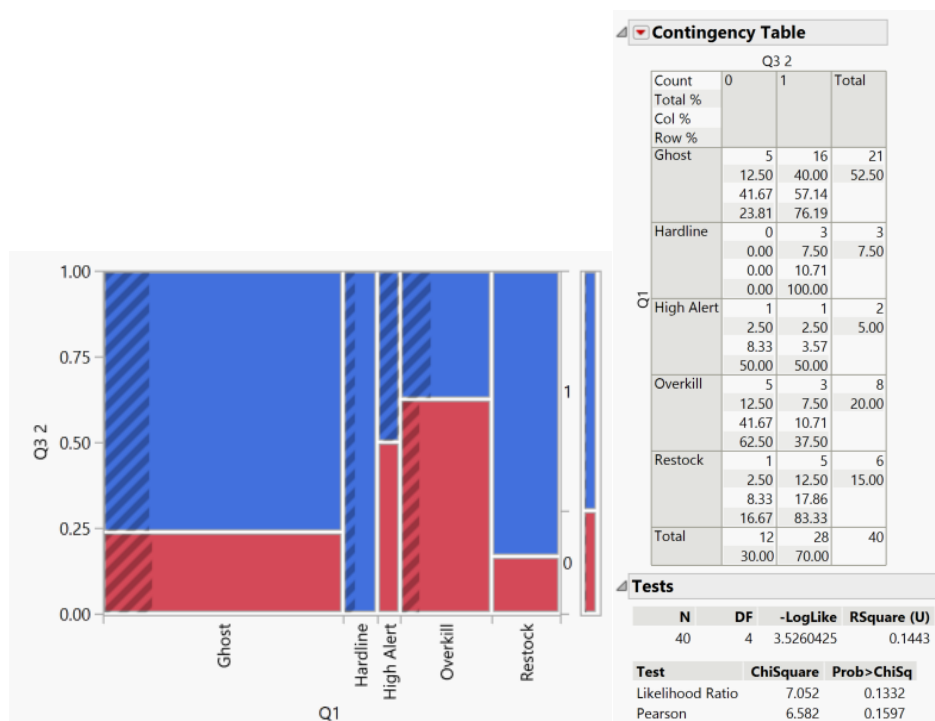


Based upon our data, we have evidence that supports the null hypothesis stating that playing for objective/kills is independent of using an Advanced UAV.

Question 3 & 1

H_0 : Personal Radar/UAV and 2nd perk (HQ, Dom, HP) are independent.

H_1 : Personal Radar/UAV and 2nd perk (HQ, Dom, HP) are not independent.

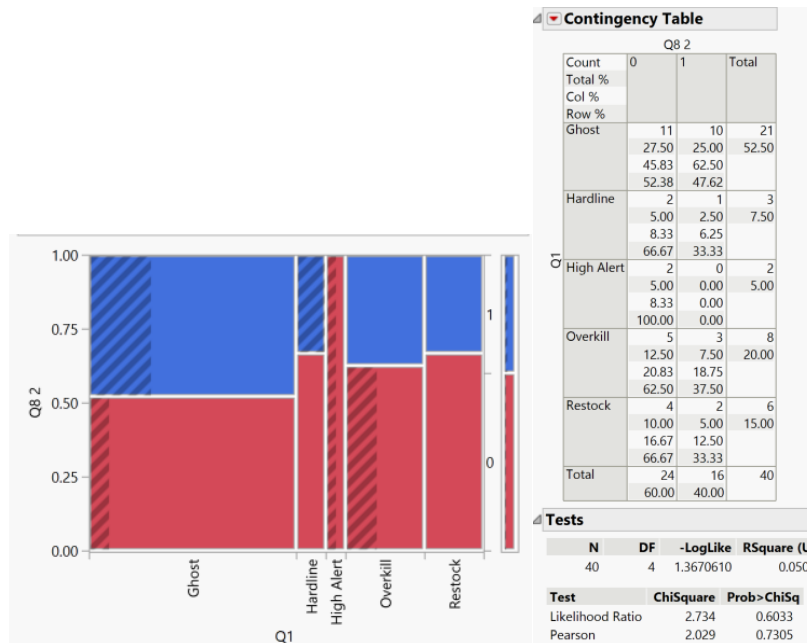


Based upon our data, we have evidence that supports the null hypothesis stating that players who use Personal Radar/UAV in the HQ, Dom, and HP game modes do not result in the selection of particular 2nd perks within the same game mode.

Question 8 & 1

H_0 : Objective/Kills and 2nd perk (HQ, Dom, HP) are independent.

H_1 : Objective/Kills and 2nd perk (HQ, Dom, HP) are not independent.



Based upon our data, we have evidence that supports the null hypothesis stating that playing for objective/kills in the HQ, Dom, and HP game modes do not result in the selection of particular 2nd perks within the same game mode.

Conclusion

After further analysis, it seems as if none of my theories hold any value. Because the p-values for all observations of the Chi-Square test are greater than an alpha of .05, I must fail to reject the null hypotheses stating that the variables are independent of each other. This leaves for the interpretation that reason players use certain perks, killstreaks, or play for kills/objective over the other, whether that be by game mode or objective, are not dependent upon each other and therefore may have no relation. Dependent relationships might be found if the number of participants were increased, the questions reordered, or other sampling biases were addressed.