Statistics Project

Statistical Question: Valid statistical question that is clearly stated, focused, and interesting.

I know that playing first person shooters is addictive and hard to stop. I think that since people play them so much it changes their state of mind to be more violent and hostile, especially to the people who eventually make them stop playing those games, parents. So my question was: "Do first person shooters affect the way you act?" And so I decided to also ask the students I was collecting data from to answer these two questions. "Do you play first person shooters?" and "How many times have you yelled at your parents this week?" I believe this will answer my question because I think that the people who play first person shooters will be more aggressive and yell at their parents more.

Data Collection: Evidence of direct data collection by students. Data were collected in an appropriate manner (simple random sample) to answer the statistical question. Raw data are included along with a clear description of the sampling method.

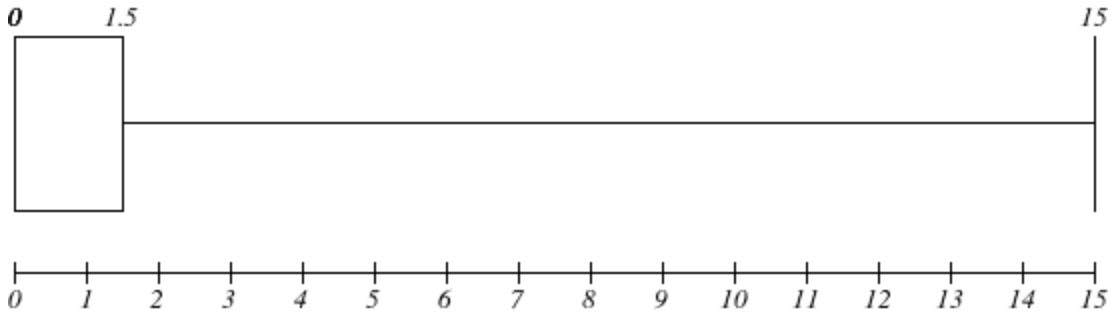
I used a random number generator to pick 30 people to survey on. What I had them do is I made a google form and had two questions on it: "Do you play first person shooters?" and "How many times have you yelled at your parents this week?" I put a yes or no answer for the first question and for the second one I had it where they could write their own answer. This was effective because it was short and simple. I believe it collected legitimate, true data that will contribute effectively toward my project.

Do You Play First Person Shooters?	How Many Times Have You Yelled At Your Parents This Week?
No	0
No	1
No	0
Yes	0
Yes	5
No	0
No	0
No	0
No	0

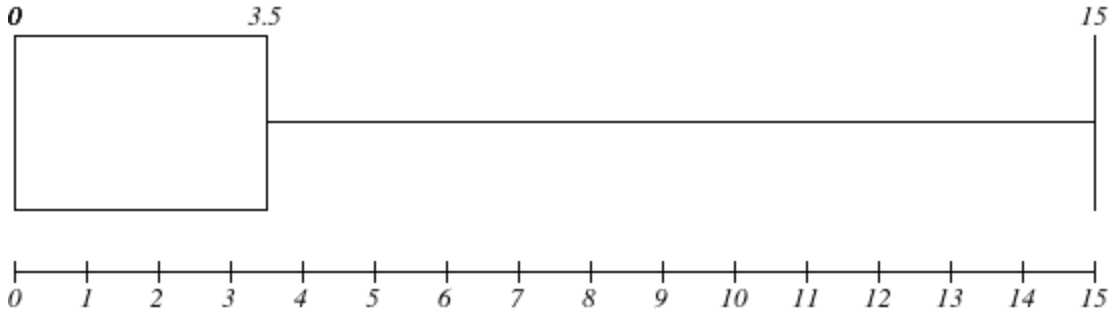
No	3
No	5
No	2
Yes	0
Yes	0
Yes	0
No	0
Yes	0
Yes	0
No	0
Yes	2
Yes	0
No	0
No	2
No	0
Yes	15
No	2
No	1

Data Display: Includes appropriate, well-labeled, accurate displays (graphs and tables) of the data. One display is a boxplot and the other is the choice of the student.

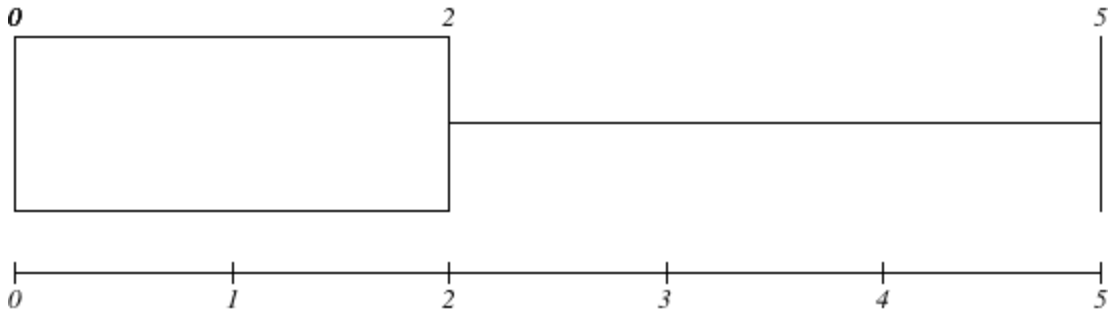
Boxplot results for everyone:



Box Plot For people who said yes



Box plot for people who said no



Data Analysis: Includes mean, median, mode, range, interquartile range, and mean absolute deviation. Analysis of the data is accurate, thorough, and appropriate.

Results for everybody:

Mean: 1.3 0+0+0+0+0+0+0+0+0+0+0+0+0+0+0+0+0+0+1+1+2+2+2+3+4+5+5+15= 40/28= 1.4

Median: 0 I got it by adding up the two middle numbers(0 and 0) and divided by 2

Mode: 0 It is the most common number

Range: 15 0-15=15

Interquartile Range: 0 It is the same as the median

Mean Absolute Deviation: It is the average distance between each set of data so you would subtract the mean by the number

Number	Mean	Mean Absolute Deviation
0	1.4	1.4
0	1.4	1.4
0	1.4	1.4
0	1.4	1.4
0	1.4	1.4
0	1.4	1.4
0	1.4	1.4
0	1.4	1.4
0	1.4	1.4
0	1.4	1.4
0	1.4	1.4
0	1.4	1.4
0	1.4	1.4
0	1.4	1.4
0	1.4	1.4
0	1.4	1.4
0	1.4	1.4
0	1.4	1.4
1	1.4	.4
1	1.4	.4
2	1.4	.6
2	1.4	.6
2	1.4	.6

3	1.4	1.6
4	1.4	2.6
5	1.4	3.6
5	1.4	3.6
15	1.4	13.6

Results for people who said yes:

Mean: 0+0+0+0+0+0+2+5+15= 22\9= 2.4
Median: 0 I got it by adding up the two middle numbers(0 and 0) and divided by 2
Mode: 0 It is zero because zero is the most common number
Range: 15 0-15
Interquartile range: 0 It is the same as the median
Mean Absolute Deviation: It is the average distance between each set of data so you would subtract the mean by the number

Number	Mean	Mean Absolute Deviation
0	2.4	2.4
0	2.4	2.4
0	2.4	2.4
0	2.4	2.4
0	2.4	2.4
0	2.4	2.4
2	2.4	.4
5	2.4	3.6
15	2.4	12.6

Results for people who said no:

Mean: 0+0+0+0+0+0+0+0+0+0+0+1+2+2+2+3+5= 15/17= 1.1
Median: 0 I got it by adding up the two middle numbers(0 and 0) and divided by 2
Mode: 0 It is zero because zero is the most common number
Range: 5 0-5=5
Interquartile Range: 0 It is the same as the mean

Mean Absolute Deviation: It is the average distance between each set of data so you would subtract the mean from the number

Number	Mean	Mean Absolute Deviation
0	1.1	1.1
0	1.1	1.1
0	1.1	1.1
0	1.1	1.1
0	1.1	1.1
0	1.1	1.1
0	1.1	1.1
0	1.1	1.1
0	1.1	1.1
0	1.1	1.1
0	1.1	1.1
1	1.1	.1
2	1.1	.9
2	1.1	.9
2	1.1	.9
3	1.1	1.9
5	1.1	3.9

Conclusion: Conclusion includes a clear answer to the statistical question that is consistent with the data analysis and method of data collection.
In conclusion, I have found that playing first person shooters does not affect your mood and how you act and does not make you more hostile. The reason why is because of those who said they hadn't yelled at their parents, 6 of them were people that played first person shooters, and only 3 who played first person shooters said they had yelled at their parents. So my data shows that first person shooters doesn't affect the majority and average of people like I thought it would, because I thought killing things would make people more aggressive, but apparently, it doesn't in most cases.

Reflection on Process: Gives a good overall picture of the project, including what went well and what didn't-and includes ideas for further study.
I think what what went well is that I got a lot of data but a couple people didn't take it seriously so if they took it seriously the data could've been varied but I think overall the data I collected was legitimate and if I were to further study it I would probably collect a couple more samples because the 2-3 that weren't legitimate, like someone said "Probs 15". If I were to replace that with a legitimate answer the data would be different and I only got 28 responses out of the 30 people I sent the survey to so I would have them answer it. This project was a success and I think I collected a good set of data that helped answer my problem question.