# Video Game Addiction

1. **Introduction**

Ever since video games made its way into the households of many family, many people lacked any restrictions when it came to turning on the console with the click of a button unlike before, when it costed coins to access an arcade machine. Now with consoles being easily accessible, it can easily become addicting when we can play anything at any time regardless of our responsibilities. For some, they are unfortunate to gain the addiction of video games, not only sacrificing their time but many only aspects of their life. Due to this, we decided to formulate our own questions to determine what can we classify as an addict and around what certain age do they all have the same response. We hypothesize that as the person gets older, any kind of addiction that they may have form previously as a teen potentially decreased compared to someone in their teenage years thus resulting in a moderate negative correlation. We expect that there will be a moderate negative correlation because as we get older, there are more responsibilities that we must deal with, either more or less than other individuals but it’s still more compared to the average teenage. Regardless, adults may find time to play video games and not let go of any previous habits by being on top of things.

1. **Population**

We want to see if there’s any correlation between age and their addiction towards video games so we’re targeting students from Aviation High School and students from City Tech who are gamers to balance out the age gap. For students in high school, we targeted students who were 13 years or older respectively to see if there’s a point where our addiction pique. For students at city tech, we targeted students with the same restrictions but adding a cap for age, 30.

1. **Variables**

For Variables, we’ve decided to use the scores from the survey and the age of each student for our project. The range of possible scores will be from 0 to 36. 0 is the score that determined that the student doesn’t show any signs of addictions whereas 36 determined various signs of addictions for a student. To make a checkpoint for each classification, we decided to use 0-14 as “Not addicted,” 15-29 as “Possibly addicted,” and 30-36 as “Most likely Addicted.”

1. **Data Collection**

For Data collection, we created a survey to distribute an even amount of survey (15 per location) between high school and college. The survey contained 14 questions with each having either the same or their own individual points depending on choice given. To have a more accurate result between the correlation of age and video game addiction, I surveyed students at Aviation High School whereas my partner surveyed people at City Tech. We avoided having either less or more high school students or college students to be fair on the distributed amount. As well, we didn’t take gender into consideration since addiction can occur to anyone of any age and it doesn’t relate to our data since we’re more fixated on the age. Our samples can be debated whether it represents the population or not because there are things that can considered into the result such as the school’s difficulty, workload outside of school, any obligations, or time restraints so it won’t be an accurate result. Raw Data can be referred to Appendix A. Survey used for video game addiction can be referred to Appendix B.

1. **Study Design**

For our statistical analysis, we used the age of the students as our explanatory variable and the survey score as the dependent (response) variable. The age will be around the same depending on location we surveyed but the score will differ and depend on the student conducting the survey. It allows us to see which student at what age are more prone to video game addiction based on the two variables listed. The scatter plot will prove us that there is a direct correlation (negative) between video game addiction and age. We expect it to start from a high score at an early age and the score to start declining at a steady pace (As the age gets higher, the survey score gets smaller). For our descriptive statistics, we formatted our histogram to contain the survey scores as the explanatory variable and the frequency of the student’s result as the dependent variable (response). The frequency of the student’s result will depend on the survey scores in this scenario. Despite not having the age implemented into this histogram/frequency chart, we’re using this to get a rough estimate of how many people are most likely not addicted, somewhat addicted, and highly addicted.

1. **Results: Descriptive Statistics**

Sample size: 30

Mean age: 18.1

Mean scores: 12.9

Standard deviation scores: 8.159403291

Standard deviation ages: 3.56564063

5# summary scores

Min: 2

Median: 11.5

Max: 32

Q1: 6.25

Q3: 17.75

5# summary age

Min: 13

Median: 18.5

Max: 27

Q1: 15.25

Q3: 20

**Five number Summary**



* + First number summary is based on the survey scores and the second number summary is based on the age.
1. **Results: Statistical Analysis**
2. Scatterplot with a graph of the regression line
3. Value of the correlation coefficient r and interpretation of its meaning

R = -0.37

* Moderate Negative Correlation
* Trendline is going slightly downwards
1. Equation of regression line

Y = -0.8563x + 28.398

1. An Example of a prediction using the regression equation

Y = -0.8563x+28.398 (x=13)

 Y = -0.8563(13) + 28.398 = 17.26

1. Discussion of the slope of the regression line and its meaning
* For example, as previously states in Part 7. Section D, on average, if someone’s age is 13 years, then based on the regression equation, they will approximately have a video game addiction score of 17.26 ~ 17.
* It represents the rate of change in the survey score as the student’s age increase.
* Y value (survey score) is dependent on the X value (student’s age) because it’s the explanatory variable.
1. Value of r^2 for the regression model and interpretation of its meaning

r^2 = 0.14

* Since r^2 is 0.14, at most 14% of the student’s video game addiction may be attributed to age.

In regard to this result, there are much more information to be considered but varies too much. Example such as annual income, location or condition of home, and work

1. Indication of significance of correlation, with discussion of significance level
* Since the correlation between the two variable is proven to be moderate and not strong, it means that the age doesn’t affect the amount of video game addiction the student as much as it’s expected.
* As the age increase, the survey score decreases on average by 0.37 on the trendline.
* This plays a role for us to understand that age doesn’t affect how much our addiction is by much, rather it requires a lot more background information of an individual to get a more accurate result.
1. **Findings & Discussion**

The analyses support our expected findings. Overall it answers that as the student’s age increases, the amount of video game addiction decrease, giving us a moderate negative correlation. We could detect that we have a moderate negative correlation because our results gave an r value of -0.37. Anything between 0.3 and 0.7 or -0.3 and -0.7 will determine it to be a moderate correlation, since we have a negative r value, it’s going to be a moderate negative correlation. Our slope of the regression line gives us a better understanding on how much is the correlation between the two variables in terms of contribution. The value of r^2 contributes to our findings by showing us that at most 14% of the student’s video games addiction may be attributed to age, thus no matter what scenario, our age could have an impact on the consumption of video games.

1. **Conclusion**

As a result, we can confirm that the younger someone is, the more prone they are to video game addiction compared to someone who is older. In this case, even though there were a few older participants that had a higher survey score compared to the younger participants, it doesn’t outweigh the consistency between the age and survey scores for the younger participants. I learned that despite our age, there are many factors that can contribute to video game addictions such as stress that I haven’t considered. It could’ve influenced the result greatly or wouldn’t have changed anything at all. Regardless, it was interesting to notice that younger students were more consistent to the video game addiction score compared to the older students that were a bit spread out. If there weren’t many factors to be considered, maybe our age would have a stronger correlation between video game addiction based on my responses. Despite only obtaining a small amount of results, it does show human’s addictive nature can come out at any age for a feeling that we might not understand at all.