NUMBER OF HOURS SPENT BETWEEN MALE AND FEMALE OF STUDENTS IN VIDEO GAMES

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This study talks about the number of hours spent between male and female students in video games per day. The researchers selected thirty (30) female and thirty (30) male students, with the total of 60 respondents, and let them answer a survey asking for their number of hours spent in video games and their preferred video game. The gathered data will be used to determine how many hours do male and female students spend in video games and who spends the longest.

NATURE OF DATA

UNGROUPED

	Frequency	Percentage Frequency
Male	30	50%
Female	30	50%
Total	60	100%

Table 1. Frequency and Percentage of the Respondents according to Gender

GROUPED DATA

Number of Hours	Frequency	Percentage Frequency
0-2	2	6.67%
2-4	5	16.67%
4-6	6	20.00%
6-8	3	10.00%
8+	14	46.67%
TOTAL	30	100 %

Table 2. Frequency and Percentage of the Male according to the Number of hours spent in video games

GROUPED DATA

Number of Hours	Frequency	Percentage Frequency
0-2	11	36.67%
2-4	6	20.00%
4-6	11	36.67%
6-8	1	3.33%
8+	1	3.33%
TOTAL	30	100 %

Table 3. Frequency and Percentage of the Female according to the Number of hours spent in video games

GROUPED DATA

Figure 1. Distribution of Respondents according to Gender

Figure 1 reveals the distribution of respondents according to their gender. It shows that 50% of the respondents are male with a frequency of 30. It also shows that 50% of the respondents are female with the frequency of 30.

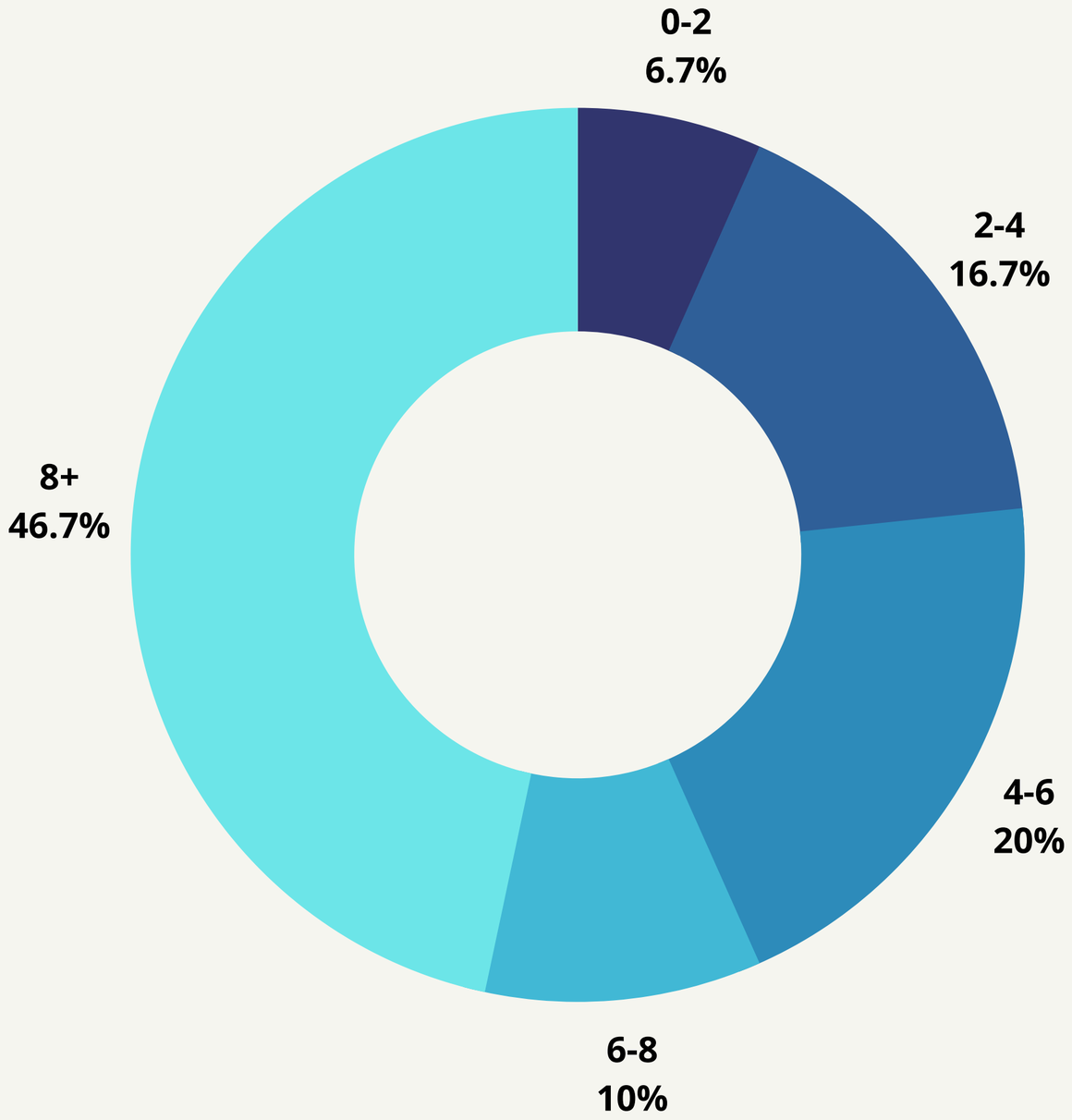

Figure 2. Distribution of Male Students according to their number of hours spent in Video Games

Figure 2 shows the pie chart of the distribution of male students according to their number of hours spent in video games. It shows that 14 out of 30 male students or 47% of them spend 8+ hours in video games. 6.7%, 16.7%, 20%, and 10% of male respondents spend 0-2, 2-4, 4-6, and 6-8 hours, respectively, in video games per day.

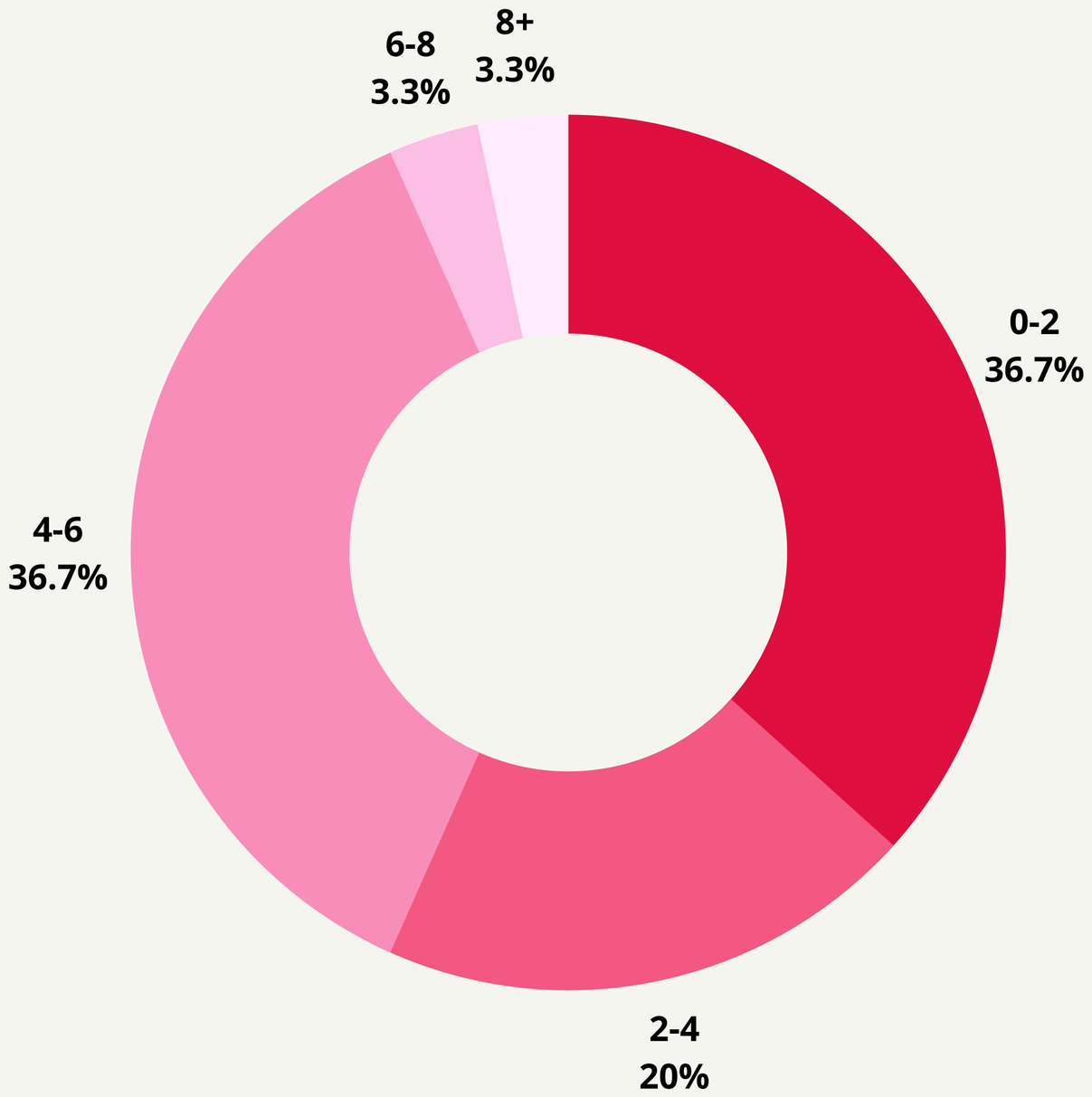

Figure 3. Distribution of Female Students according to their number of hours spent in Video Games

Figure 3 reveals the pie chart of the distribution of female students according to their number of hours spent in video games. Its shows that 36.7% of them, or 11 out of 30, spend 0-2 hours in video games and another 36.7% for 4-6 hours. Meanwhile, 20% of them spend 2-4 hours and 3.3% for 6-8 hours and another 3.3% for 8+ hours.

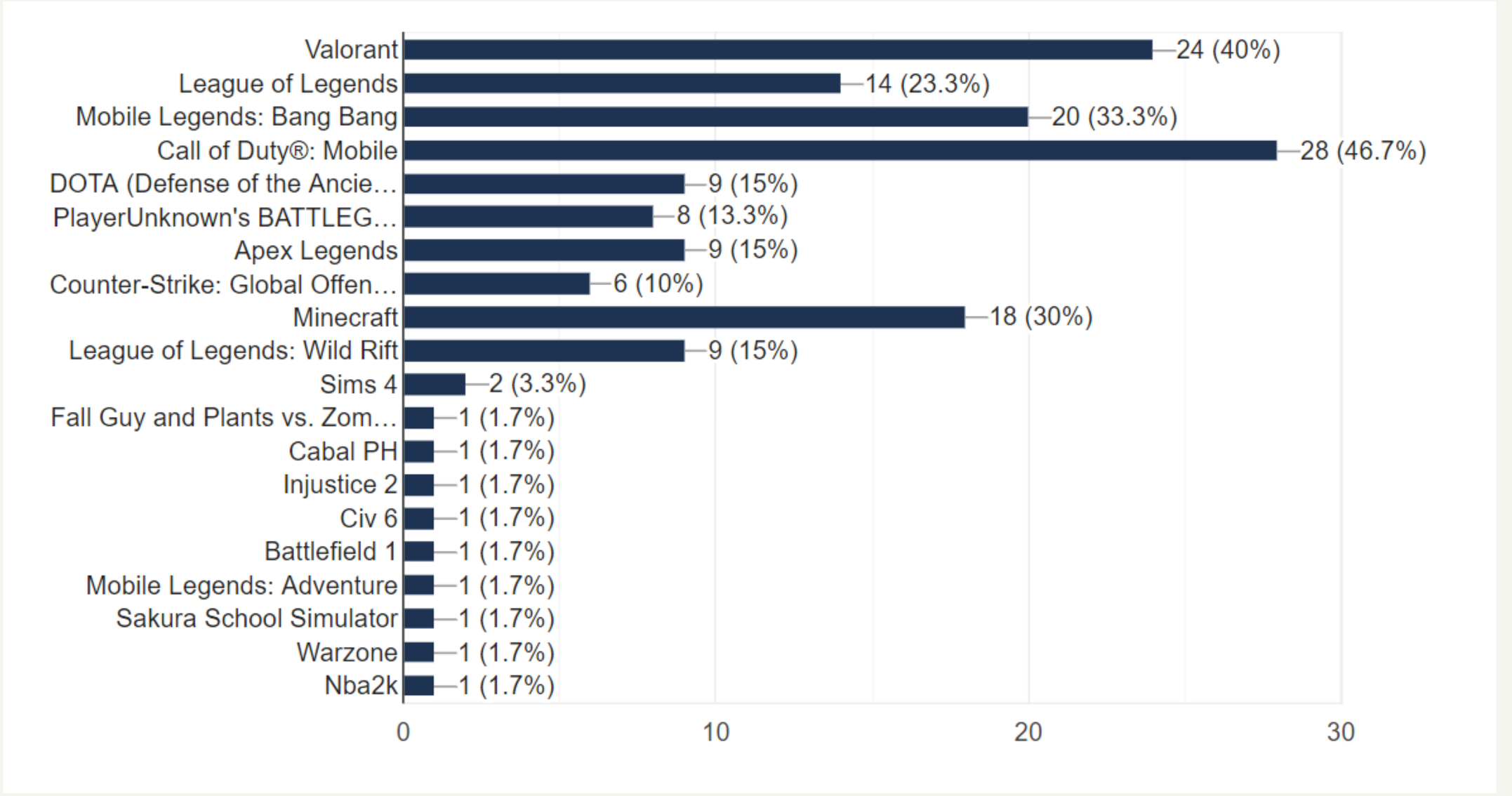

Figure 4. Distribution of Respondents to their Video Games

Figure 4 shows the frequency and percentage of the student's preferred video games. They are asked to select one or many video games. This affect the number of hours that a student might spent during playing due to the amount of minutes required in playing the said game. Take for instance, playing Unrated and Competitive mode in Valorant might cost you 30-45 mins per game. But due to the scope of the study, the researchers, in the data processing stage, did not include the preference of the students in video games to the findings itself, rather, they included it in the presentation for future references.

Since the data is grouped, the researchers made use of midpoints for each range. Below is the table of the number of hours and their respective midpoints. Figure 5 shows the formula for the midpoint. The number of hours had slight revisions, The last choice was infinite which cannot have a result in a midpoint. Hence, the researchers assumed that the average student sleeps 8 hours a day and played with a maximum of 16 hours per day.

No. of Hours	Midpoint
0-2	1
2-4	3
4-6	5
6-8	7
8-16	12

Table 4. Number of Hours and their Midpoints

$$midpoint = \frac{Lower\ value + Upper\ Value}{2}$$

Figure 5. Formula for Midpoint

MEASURE OF CENTRAL TENDENCY

	Mean	Median	Mode
Male	7.87	Between 4-6	Approx. between 8-16
Female	3.43	Between 0-2	Approx. between 0-2 and 4-6

Table 5. Measure of Central Tendency of the Study

Table 5 shows the mean, median, and mode of the study. The researchers used the formula for the mean for the grouped data as seen in figure 6. The median is determined with the use of cumulative frequency. The mode was determined by looking for the number of hours with the highest response.

$$mean = \frac{\sum[f \cdot m]}{\sum f}$$

Figure 6. Formula for the Mean if the Data is Grouped.

MEASURES OF VARIABILITY

	Standard Deviation
Male	7.87
Female	2.49

Table 6. Measure of Variability of the Study

Table 6 shows the standard deviation of the study. It presents that the male respondents have a high standard deviation with 7.87 that the female respondents with only 2.49. A different formula was used in this data due to its nature. Figure 7 shows the formula used by the researchers. It involves the mean and the midpoints of the study.

$$s = \sqrt{\frac{\sum f(\mathrm{m} - \bar{x})^2}{n - 1}}$$

Figure 7. Formula of the Standard Deviation used in the study.

The study reveals that male respondents received 7.87 as their standard deviation and the female have 2.49. Therefore, the researchers conclude that male students spent more time playing in video games per day as opposed to the female students.

CONCLUSION

Appendix A: Raw Data

	Gender	Number of Hours	Video games
2	Male	4-6	Valorant
3	Male	8+	League of Legends
4	Female	2-4	Minecraft, Fall Guy and Plants vs. Zombies
5	Male	8+	Valorant, League of Legends, Mobile Legends: Bang Bang, Call of Duty®: Mobile, DOTA (Defense of the Ancients), Minecraft, League of Legends: Wild Rift
6	Female	8+	Mobile Legends: Bang Bang, Call of Duty®: Mobile, PlayerUnknown's BATTLEGROUNDS (PUBG), Minecraft
7	Male	2-4	Valorant
8	Female	0-2	Mobile Legends: Bang Bang
9	Male	2-4	Valorant, League of Legends, Cabal PH
10	Male	4-6	Call of Duty®: Mobile
11	Male	8+	Valorant, League of Legends, Mobile Legends: Bang Bang, Call of Duty®: Mobile, DOTA (Defense of the Ancients), PlayerUnknown's BATTLEGROUNDS (PUBG), Counter-Strike: Global Offensive (CSGO), League of Legends: Wild R
12	Female	0-2	Counter-Strike: Global Offensive (CSGO)
13	Male	0-2	Injustice 2
14	Male	4-6	Call of Duty®: Mobile, Minecraft
15	Female	4-6	Mobile Legends: Bang Bang, Call of Duty®: Mobile, PlayerUnknown's BATTLEGROUNDS (PUBG), Minecraft
16	Male	8+	Valorant, League of Legends, Call of Duty®: Mobile, Minecraft, League of Legends: Wild Rift
17	Female	2-4	Mobile Legends: Bang Bang, Call of Duty®: Mobile, PlayerUnknown's BATTLEGROUNDS (PUBG), Minecraft
18	Male	4-6	League of Legends, Minecraft, Civ 6
19	Male	8+	Valorant, Apex Legends, Battlefield 1
20	Male	8+	Valorant, League of Legends, Apex Legends, Minecraft, League of Legends: Wild Rift
21	Female	6-8	Valorant
22	Female	4-6	Valorant, League of Legends, Call of Duty®: Mobile, Apex Legends
23	Male	8+	Valorant, Mobile Legends: Bang Bang, Apex Legends
24	Female	0-2	Call of Duty®: Mobile, Minecraft
25	Male	8+	Call of Duty®: Mobile, League of Legends: Wild Rift
26	Female	0-2	Call of Duty®: Mobile
27	Female	2-4	Mobile Legends: Bang Bang, Call of Duty®: Mobile
28	Male	2-4	Valorant, League of Legends, Mobile Legends: Bang Bang, Call of Duty®: Mobile, DOTA (Defense of the Ancients), PlayerUnknown's BATTLEGROUNDS (PUBG), Apex Legends, Counter-Strike: Global Offensive (CSGO), Minecraft, L
29	Male	6-8	Mobile Legends: Bang Bang, Call of Duty®: Mobile, PlayerUnknown's BATTLEGROUNDS (PUBG), League of Legends: Wild Rift
30	Female	4-6	Call of Duty®: Mobile, Minecraft
31	Male	4-6	Valorant, Mobile Legends: Bang Bang, DOTA (Defense of the Ancients), Counter-Strike: Global Offensive (CSGO)
32	Male	6-8	Call of Duty®: Mobile
33	Female	4-6	Call of Duty®: Mobile, Minecraft, Sims 4
34	Female	4-6	Call of Duty®: Mobile

Appendix A: Raw Data

35	Female	4-6	Call of Duty®: Mobile
36	Female	0-2	Mobile Legends: Bang Bang, Call of Duty®: Mobile, Mobile Legends: Adventure
37	Female	4-6	Mobile Legends: Bang Bang, Call of Duty®: Mobile, PlayerUnknown's BATTLEGROUNDS (PUBG), League of Legends: Wild Rift, Sakura School Simulator
38	Male	8+	Valorant, DOTA (Defense of the Ancients), Apex Legends, Counter-Strike: Global Offensive (CSGO), Warzone
39	Male	8+	Valorant, League of Legends, DOTA (Defense of the Ancients)
40	Male	8+	Mobile Legends: Bang Bang, Call of Duty®: Mobile, DOTA (Defense of the Ancients), Apex Legends, Minecraft
41	Male	2-4	Valorant, League of Legends
42	Male	6-8	Valorant, League of Legends, Mobile Legends: Bang Bang, Call of Duty®: Mobile, DOTA (Defense of the Ancients), PlayerUnknown's BATTLEGROUNDS (PUBG), Apex Legends, Counter-Strike: Global Offensive (CSGO), Minecraft
43	Male	0-2	Nba2k
44	Female	2-4	Mobile Legends: Bang Bang
45	Male	8+	Minecraft, League of Legends: Wild Rift
46	Male	2-4	Mobile Legends: Bang Bang, Call of Duty®: Mobile
47	Female	4-6	Call of Duty®: Mobile, Minecraft, Sims 4
48	Male	4-6	Valorant, League of Legends, Mobile Legends: Bang Bang, DOTA (Defense of the Ancients)
49	Female	4-6	Valorant
50	Male	8+	Valorant
51	Male	8+	Valorant
52	Female	2-4	Mobile Legends: Bang Bang
53	Female	0-2	Call of Duty®: Mobile
54	Female	4-6	Valorant
55	Female	0-2	Apex Legends
56	Female	0-2	Mobile Legends: Bang Bang
57	Female	0-2	Valorant
58	Female	0-2	Minecraft
59	Female	4-6	Call of Duty®: Mobile
60	Female	2-4	League of Legends
61	Female	0-2	Valorant

Appendix B: Excel Printouts for the Solution for the Study

FEMALE								
No. of Hours	***f***	***m***	***f*m***	***cf***	***mean(x)***	***m-x***	***(m-x)^2***	***f(m-x)^2***
0-2	11	1	11	11	3.43	-2.43	5.90	64.95
2-4	6	3	18	17	3.43	-0.43	0.18	1.11
4-6	11	5	55	28	3.43	1.57	2.46	27.11
6-8	1	7	7	29	3.43	3.57	12.74	12.74
8-16	1	12	12	30	3.43	8.57	73.44	73.44
TOTAL	**30**		**103**					**179.37**
30/2=	**15**							
MALE								
No. of Hours	***f***	***m***	***f*m***	***cf***	***mean***	***m-x***	***(m-x)^2***	***f(m-x)^2***
0-2	2	1	2	2	7.87	-6.87	47.20	94.39
2-4	5	3	15	7	7.87	-4.87	23.72	118.58
4-6	6	5	30	13	7.87	-2.87	8.24	49.42
6-8	3	7	21	16	7.87	-0.87	0.76	2.27
8-16	14	12	168	30	7.87	4.13	17.06	238.80
TOTAL	**30**		**236**					**503.47**