The Impact of Online Games on Junior High School Students in the North-Eastern Region

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***Abstract*—** The objective of this research paper was to study the impact of online games on junior high school students in the north-eastern region. The sample group was 600 students in Udonthani and Nongkhai Provinces. A questionnaire was used as the data collection tool, and the statistical tests used to analyze the data were t-test, ANOVA, and Pearson's correlation coefficient.

The result of the study showed that female students were affected by playing online games more than male students were ($\overline{X}_f$ = 22.61, $\overline{X}_m$= 20.97 respectively).There was no significant differently about impact of playing online game among class level. The students who spend different times on playing game per week showed significant differently

Students girls affected by the game overall than students male ($\overline{X}_g$=22.61,$\overline{X}_b$=20.97) respectively Students different levels class affected by the game as a whole is not different. Student average that is played per week different symptoms feel frustrated annoyed, Can not do anything because nerves taut and symptoms heart beats strongly different Student that have number played per day different have symptoms insomnia or nervousness because thinking and can not do anything because nerves taut differently student the number of hours average time to play differently have symptoms insomnia or nervousness because thinking can not do anything because nerves taut and feeling numb or dizziness were significantly different statistically. The results showed that factors associated with symptoms and significant. Is about, The play game average per week, The number of times a day to play.(r = .081 and .086 respectively)

***Keywords*—** Junior High School Students, Online Games, The Impact, the North-Eastern

I. INTRODUCTION

Problem Child online game addiction is a problem of teachers, parents and students. Children game addiction is difficult to stop. He feels that just because one day it will stop making them, as friends left behind. Game addiction problem children tended to increase with severity in Thailand and around the world. The impact or penalties incurred in the form of both physical health and mental health, including health, social life, such as school drop lose jobs or lose their relationship with those around me. [1].

The research abroad found that children who play computer games a lot, perhaps it was to be an insane. Children who play 3 hours per day with 15 consecutive weeks or longer, the secretion of substances with amphetamine as a drug addict who send out [2].

To Comparison of symptoms with time found that the game students were insomnia time to play the game more. Average of insomnia was increases. To summarize the trend of other symptoms is not clear. The study of relationship between the variables was correlated between the low number of players per day and per week with symptoms as a whole. It's should be study further information.

Be caused by dominant online gaming may be affected by the matter of gambling involved is likely trend to express anxiety and guilt. The people who play most of the reason for playing is that "To pass the time" and are more likely to install online computer game[4]

Information technology and development programs do not stop. Form of communication that are developments have occurred in the period of change. "Game" has been developed in the past only the game press and video game, but now the game has evolved and been invented by new format to attract the child wants to play the game which is "I want to know, I want to try". The fun in the game which may cause players installed the game without knowing it. Form of the game has been developed continuously. But today is a popular online game. The game is being developed as a matter of images, sounds, colors and characters in the game has been developed to reality, content of the game and the scene in the game was developed to be beautiful and fascinating, it was difficult to make children stopped playing. Most children spend on the computer screen for several hours a day without doing other behavioral and emotional changes, such as clearly bad mood or want to judge something by only win or lose with no compromise [6].The study of game playing behavior and game addiction often occur in local growth, especially in big cities. The Northeast is the land of the social conditions that differ from urban communities. Especially in the high school kids to learn about the game and the effect is not clear information. This study will make the information as a guide for those involved in solving social problems continue.

II. THE PURPOSE OF THE RESEARCH

To study the effects of online game play of Junior High School Students in the North-Eastern Region

III. TOOLS

A tool used in this study was a questionnaire about the behavior of online gamers.

IV. SAMPLE

The subjects included junior high school in Udon Thani and Nong Khai of 600 peoples.

V. DATA ANALYSIS

The analysis of impact on the overall of gender classification, by t-test Comparison of levels, comparing symptoms among students with different playing time per week and number of hours of play per time difference. With analysis of variance ANOVA Table 1-6 Relationship between symptoms include using formulas Huachiew as table 7.

VI. RESULTS

The study of symptoms effects of the students from playing game in Udon Thani and Nong Khai.

TABLE 1
THE SYMPTOMS CAUSED BY PLAYING GAMES OF JUNIOR HIGH SCHOOL STUDENTS IN UDON THANI AND NONG KHAI AS SHOWN, PERCENTAGE OF STUDENTS IN TABLE 1.

Symptoms	$\overline{X}$	S.D.	Level of symptoms
insomnia cause with thinking too much	1.96	1.08	low
feel edgy or feel annoyed	2.18	1.11	low
cannot do much activities because the nervous tension	1.78	.98	low
be serious	1.91	1.03	low
The avoidance of social contact	1.66	.99	low
migraine or having brow ache	2.05	1.21	low
Feel a lack of concentration	2.23	1.14	low

be exhausted and do not anything	1.96	1.05	low
Pounding heart	1.72	.98	low
subsequently by pain in the occipital bone or back or shoulders	2.19	1.23	low
drowsiness or dizziness	2.19	1.22	low

Table 1 reports the research's results on the deleterious effects of playing games computer of junior high school students in Udonthani and Nongkhai that they are not critical. The average of all effects is from 1.66 to 2.33. In this study, the highest effect of playing games computer is a lack of concentration($\overline{X}$=2.23) and followed subsequently by pain in the occipital bone or back or shoulders, having a headache or a feeling of giddiness, having feel edgy or feel annoyed and migraine or having brow ache ($\overline{X}$= 2.19, 2.19, 2.18 and 2.05 respectively). The lowest effect is the avoidance of social contact ($\overline{X}$= 1.66).

The results of the study on comparison of deleterious effects of playing games computer of junior high school students and gender are reported in Table 2.

	Sex	**N**	**Mean**	**SD**	**t-test**
Symptoms	male	274	20.98	8.03	2.223*
	female	326	22.61	9.67	

* P < .05

Table 2 reports that t-value (t-test) is statistically significant which signifies that overall deleterious effects of playing games of male and female are significant different. According to the average of the effects, female students are more affected by playing games than male students.

The results of the study on overall deleterious effects of playing games of junior high school students, classified as Matthayom 1, Matthayom 2 and Matthayom 3, with analysis of variance (ANOVA), are reported in Table 3.

TABLE 3
ANALYSIS OF VARIANCE (ANOVA) FOR OVERALL DELETERIOUS EFFECTS OF PLAYING GAMES OF JUNIOR HIGH SCHOOL STUDENTS CLASSIFIED BY SCHOOL LEVELS

	Sum of Squares	**df**	**Mean Square**	**F**
Between Groups	31.38	2	15.69	.19
Within Groups	48388.14	597	81.05	
Total	48419.52	599		

According to Table 3, F-value (F-test) is not statistically significant which signifies that overall deleterious effects of playing games of junior high school students classified by school level are not statistically significant difference.

The study on the deleterious effects and the frequency of playing games of junior high school students per week which classified to 5 levels as follows: 1. Less than 1 time per week 2. 1-2 days per week 3. 3-4 days per week 4. 5-6 days per week 5. Everyday, with analysis of variance (ANOVA) is reported in Table 4.

TABLE 4
ANALYSIS OF VARIANCE (ANOVA) FOR COMPARISON OF DELETERIOUS EFFECTS AND THE FREQUENCY OF PLAYING GAMES OF JUNIOR HIGH SCHOOL STUDENTS PER WEEK

Symptom	source of variance	Sum of Squares	df	Mean Square	F
insomnia cause with thinking too much	Between Groups	6.40	4	1.60	1.37
	Within Groups	696.79	595	1.17	
	Total	703.19	599		
feel edgy or feel annoyed	Between Groups	12.87	4	3.22	2.63 *
	Within Groups	726.96	595	1.22	
	Total	739.83	599		
cannot do much activities because the nervous tension	Between Groups	11.55	4	2.88	3.02 *
	Within Groups	568.85	595	.96	
	Total	580.39	599		
be serious	Between Groups	5.28	4	1.32	1.23
	Within Groups	639.39	595	1.07	
	Total	644.66	599		
The avoidance of social contact	Between Groups	.79	4	.19	.19
	Within Groups	596.87	595	1.00	
	Total	597.66	599		
migraine or having brow ache	Between Groups	1.81	4	.45	.31
	Within Groups	879.37	595	1.48	
	Total	881.18	599		

Feel a lack of concentration	Between Groups	8.11	4	2.03	1.55
	Within Groups	780.69	595	1.31	
	Total	788.79	599		
Be exhausted and do not anything	Between Groups	9.11	4	2.28	2.05
	Within Groups	661.93	595	1.11	
	Total	671.04	599		
Pounding heart	Between Groups	9.68	4	2.42	2.51 *
	Within Groups	573.28	595	.96	
	Total	582.96	599		
subsequently by pain in the occipital bone or back or shoulders	Between Groups	6.70	4	1.68	1.11
	Within Groups	899.64	595	1.51	
	Total	906.34	599		
drowsiness or dizziness	Between Groups	8.59	4	2.15	1.43
	Within Groups	896.19	595	1.51	
	Total	904.79	599		

P > .05, *P < .05

According to Table 4, F-value (F-test) is statistically significant when compare the frequency of playing games of junior high school students per week and the following deleterious effects: 1. Feeling in bad mood; 2. Stress; 3. Pounding heart, while the other deleterious effects are not statistically significant difference. The research's results show that the average of feeling in bad mood and stress are increased when the frequency of playing games is up to 5-6 days per week and decreased latterly ($\bar{x}$= 2.88 and 0.96 respectively). For the average of pounding heart, it is increased when the frequency of playing games is up to both 3-4 days per week and everyday but decreased when the frequency is up to 5-6 days per week ($\bar{x}$= 2.42 and 0.96 respectively).

The study on the deleterious effects and frequency of playing games of junior high school students per day which classified to 3 levels as follows: 1. 1 time per day 2. 2-5 times per day 3. More than 5 times per day, with one-way ANOVA is reported in Table 5.

TABLE 5
COMPARISON OF SYMPTOMS BY THE NUMBER OF TIMES A DAY TO PLAY THE GAME USING TEST OF VARIANCE (ANOVA).

Symptom	source of variance	Sum of Squares	df	Mean Square	F
insomnia cause with thinking too much	Between Groups	9.84	2	4.92	4.24*
	Within Groups	693.35	597	1.16	
	Total	703.19	599		
feel edgy or feel annoyed	Between Groups	8.77	2	4.38	3.58*
	Within Groups	731.07	597	1.23	
	Total	739.83	599		
cannot do much activities because the nervous tension	Between Groups	9.21	2	4.60	4.81*
	Within Groups	571.19	597	.96	
	Total	580.39	599		
be serious	Between Groups	2.01	2	1.01	.93
	Within Groups	642.65	597	1.07	
	Total	644.67	599		
The avoidance of social contact	Between Groups	5.24	2	2.62	2.64
	Within Groups	592.43	597	.99	
	Total	597.67	599		
migraine or having brow ache	Between Groups	1.15	2	.57	.39
	Within Groups	880.04	597	1.47	
	Total	881.18	599		
Feel a lack of concentration	Between Groups	1.53	2	.76	.58
	Within Groups	787.27	597	1.32	
	Total	788.79	599		
Be exhausted and do not anything	Between Groups	4.29	2	2.15	1.92
	Within Groups	666.74	597	1.12	
	Total	671.04	599		
Pounding heart	Between Groups	2.54	2	1.27	1.31
	Within Groups	580.42	597	.97	
	Total	582.96	599		
subsequently by pain in the occipital bone or back or shoulders	Between Groups	1.37	2	.68	.45
	Within Groups	904.97	597	1.52	
	Total	906.34	599		

drowsiness or dizziness	Between Groups	3.32	2	1.66	1.10
	Within Groups	901.47	597	1.51	
	Total	904.79	599		

P > .05, *P < .05

Table 5 The results showed that variance is significant when comparing the number of time a day that students use to play the games at a time and insomnia cause with thinking too much or too nervous and cannot do much activities because the nervous tension and drowsiness or dizziness. The study show the average value that when the number of played games per day increase, the average value of insomnia. ($\bar{x}$=1.85, 2.09 and 2.19) and feel edgy or feel annoyed ($\bar{x}$ =2.07, 2.32 and 2.33) increased. The average value of do nothing symptoms cause by nervous tension is up and down. ($\bar{x}$=1.68, 1.94 and 1.83, respectively. The other issues, the diverse is not significant statistically.

The study of symptoms with time (Hours) that students use to play the game at a time divided into four groups are played less than 2 hours, played from 2 hours but less than 4 hours, played from 4 to 6 hours but not more than 6 hours and played more than 6 hours using one-way analysis of variance in Table 6.

TABLE 6
COMPARISON OF SYMPTOMS BY TIME (HOURS) THAT STUDENTS USE TO PLAY ONLINE GAME AT A TIME USING TEST OF VARIANCE (ANOVA)

Symptom	source of variance	Sum of Squares	df	Mean Square	F
insomnia cause with thinking too much	Between Groups	16.58	3	5.53	4.79*
	Within Groups	686.62	596	1.15	
	Total	703.19	599		
feel edgy or feel annoyed	Between Groups	7.32	3	2.44	1.98
	Within Groups	732.51	596	1.23	
	Total	739.83	599		
cannot do much activities because the nervous tension	Between Groups	7.79	3	2.59	2.70*
	Within Groups	572.61	596	.96	
	Total	580.39	599		
be serious	Between Groups	7.64	3	2.55	2.38
	Within Groups	637.02	596	1.07	
	Total	644.67	599		
The avoidance of social contact	Between Groups	2.11	3	.70	.70
	Within Groups	595.56	596	.99	
	Total	597.67	599		
migraine or having brow ache	Between Groups	6.84	3	2.28	1.55
	Within Groups	874.34	596	1.47	
	Total	881.19	599		
Feel a lack of concentration	Between Groups	4.46	3	1.49	1.13
	Within Groups	784.34	596	1.32	
	Total	788.79	599		
Be exhausted and do not anything	Between Groups	1.56	3	.52	.46
	Within Groups	669.48	596	1.12	
	Total	671.04	599		
Pounding heart	Between Groups	2.31	3	.77	.79
	Within Groups	580.65	596	.97	
	Total	582.96	599		
subsequently by pain in the occipital bone or back or shoulders	Between Groups	9.33	3	3.11	2.06
	Within Groups	897.01	596	1.51	
	Total	906.34	599		
drowsiness or dizziness	Between Groups	12.72	3	4.24	2.83*
	Within Groups	892.07	596	1.49	
	Total	904.79	599		

P > .05, *P < .05

Table 6 The results showed that Variance is significant when comparing the time (hours) that students use to play the game at a time and insomnia cause with thinking too much or too nervous and cannot do much activities because the nervous tension and drowsiness or dizziness is diverse. The study show the average value that the more time of playing increasing, the more of insomnia increases. ($\bar{x}$ = 1.79, 2.05, 2.08 and 2.28). The average value of do nothing symptoms cause by nervous tension is an increase when time of playing increased from less than 2 hours to 6 hours at a time, then the symptoms will decrease($\bar{x}$=1.67, 1.68, 2.0 and 1.8). The average value of drowsiness or dizziness symptoms when time of playing increase is will be up and down ($\bar{x}$ = 2.10, 2.37, 2.28 and 1.95, respectively). The other issues, the diverse is not significant statistically.

To study of relationship between the experiences of playing the game, the number of players per week, how many times he plays the game per day, the amount of time (hours) that students used to play online games at a time, and all symptoms are using coefficients correlation Pearson (Pearson Product. Moment Correlation Coefficient) in Table 7.

TABLE 7
THE CORRELATION COEFFICIENT FACTOR ASSOCIATED WITH ALL SYMPTOMS

	X_1	X_2	X_3	X_4	X_5
Experience in play games online X_1	1.000	.401** .000	.352** .000	.495** .000	-.021 .606
Players per week X_2		1.000	.465** .000	.419** .000	.081* .046
Players per day X_3			1.000	.512** .000	.086* .035
The amount of time (hours) that students used to play online games per time X_4				1.000	.036 .384
Symptoms include X_5					1.000

Table 7 the results showed that Pearson correlation factors that are associated with statistically significant. Symptoms include a significant effect of the correlation coefficient between the number of players per week with all symptoms shows as lowest value (r =. 081) and the correlation coefficient between the number of times a day to play with all symptoms shows as maximum value (r =. 086).

VII. DISCUSSION

Online gaming is another form of interactive electronic games which allows players to play together throughout the world via the Internet. Online games are one of the most addictive activities, especially teenagers and children [7]. The study about the impact of playing game in high school games found that students have some symptoms from time to time. Despite a few symptoms but symptoms appear to be for player in different ways. Girls who play games will have some symptoms than boys. This may be because boys has the left hemisphere of the brain are very familiar with the challenges that exist in the game than girls interested in the emotions and feelings [5]. Students who play a different number of times will feel edgy, feel annoyed and cannot do much activities, because the nervous tension difference. When you play often or too much will be emotional behavioral change clearly, such as bad mood, easily irritated and insomnia because of you have an anxiety in mind. [6]. When emotion is not constant health problems will come up such as ache at the wrist, a migraine headache, a backache [3].and the mental health is lose cause relationships with people around the problem. [1]. Based on the average of the symptoms was found that some symptoms increased with the increase in playing time such as insomnia. So parents and teachers should take care of children not to play game for a long time until symptoms occurred.

The results showed that the number of times a player is correlated with symptoms and a positive correlation. They should care and control to avoid having to play too often.

The results of other symptom which to summarize is not clear. Therefore, it should be study further.

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