THE EFFECT OF ONLINE GAMING ON STUDENTS' MENTAL HEALTH, FINANCE AND ACADEMIC PERFORMANCE

By

MOHAMAD DHOIYAUL MUKMIN AL- MUIYNUDDIN BIN BERHIM H20A1214

NAJAH BINTI MOHD NOOR H20A1330

NOR HAZWANI BINTI ANUAR H20A1383

Bachelor of Entrepreneurship (Wellness) With Honors

A report submitted in partial fulfillment of the requirement for the degree of
Bachelor of Entrepreneurship (Wellness) With Honors

Faculty Of Hospitality, Tourism and Wellness
UNIVERSITI MALAYSIA KELANTAN

2023

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ABSTRACT

Online gaming refers to the activity of playing video games over the internet either with or against other players. It involves connecting to a server or game platform using a computer or mobile device with an internet connection. Online gaming has grown significantly with the advancement of technology and the popularity of multiplayer games. Online games go beyond entertainment and leisure. It has become an important aspect of modern game culture and has created new avenues for social interaction, communication, and collaboration. The purpose of this study is to examine the relationship between online games and mental health, finances, and academic performance among university students. The main objective of this study is the effect online gaming on mental health, finance, and academic performance among university students. This study has used quantitative methods to achieve the main objective of the study. Researchers have used Google Form to survey the questionnaire which contains 3 parts to 384 respondents. Data was collected and analyzed using the Statistical Package for Social Science (SPSS) software. SPSS addresses the entire process of statistical analysis such as planning, data collection, analysis, reporting for better decision making and performance. Pearson's coefficient was used in this research to investigate the relationship between online games on mental health, finances and academic performance among university students. The results of the study show the strong of the relationship on mental health, finances and academic performance among students. Pearson's coefficient was used in this research to investigate the relationship between online games on mental health, finances and academic performance among university students. The results of the study show the strength of the relationship on mental health, finances and academic performance among students.

Keywords: Online games among university students, mental health, finance and academic performance

ABSTRAK

Permainan dalam talian merujuk kepada aktiviti bermain permainan video melalui internet sama ada dengan atau menentang pemain lain. Ia melibatkan penyambungan ke pelayan atau platform permainan menggunakan computer atau peranti mudah alih dengan sambungan internet. Permainan dalam talian telah berkembang dengan ketara dengan kemajuan teknologi dan populariti permainan berbilang pemain . permainan dalam talian melangkaui hiburan dan masa lapang. Ia telah menjadi satu aspek penting dalam budaya permainan moden dan telah mencipta jalan baharu untuk interaksi sosial, komunikasi dan kerjasama.Tujuan kajian ini dilakukan adalah untuk mengkaji hubungan permainan atas talian terhadao kesihatan mental, kewangan dan academic performance dikalangan pelajar. Objektif utama kajian ini adalah untuk mengkaji The effect online gaming on mental health,finance and academic performance among university students. Kajian ini telah menggunakan kaedah kuantitatif bagi mencapai objectif utama kajian. Penyelidik telah menggunakan google form untuk meninjau borang soal selidik yang mengandungi 3 bahagian kepada 384 respondent. Data dikumpul dan dianalisis menggunakan Perisian Statistical Package for Social Science (SPSS). SPSS menangani keseluruhan proses analisis statistic seperti perancangan, pengumpulan data, analisis, pelaporan untuk membuat keputusan dan prestasi yang lebih baik. Pekali pearson digunakan dalam penyelidikan ini untuk menyiasat hubungan antara permainan atas talian terhadap kesihatan mental, kewangan dan academic performance dikalangan university students. Hasil kajian menunjukkan kekuatan hubungan terhadap kesihatan mental, kewangan dan academic performance dikalangan pelajar. Pekali pearson digunakan dalam penyelidikan ini untuk menyiasat hubungan antara permainan atas talian terhadap kesihatan mental, kewangan dan prestasi akademik dikalangan university students. Hasil kajian menunjukkan kekuatan hubungan terhadap kesihatan mental, kewangan dan pencapaiaan pelajar dalam prestasi akademik.

Kata kunci: Permainan atas talian dalam kalangan pelajar university, kesihatan mental, kewangan and prestasi akademik

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

This chapter will elaborate the background, problem statement, research questions and objective of this study. This chapter will explain in detail the study's background, problem statement, research objectives, research questions, study significance, definition of terms, and summary.

1.2 BACKGROUND OF THE STUDY

Online gaming is an electronic game played over a network of computers and smartphones, especially over the Internet. The world of electronic gaming has generated billions of dollars, with millions of players worldwide battling, buying, crafting, and selling in various online environments (Michael Ray 2020). However, addiction to online gaming is now becoming more serious and worrying especially among students who spend a lot of their time playing online games, especially those who are staying up at night to play these games. This is said to be so because an individual feels pleasure from doing the activity because it can eliminate the boredom that is in them (Team, 2022).

The effects of online gaming have a negative impact on students, especially on their mental health (Qaisar, 2021) The social life of students who are addicted to online gaming is

troubling because they don't socialize with the outside world. Among the negative effects of online gaming on mental health are eye strain, obesity, fatigue, drug abuse, and decreased sleep quality (Sidik, 2020). Even more serious addiction to online gaming leads to a tendency to commit suicide. We can see this in June 2020, when three cases of suicide have occurred because of addiction to playing online games, as reported in Pakistan (Nawawi 2021).

In addition, the effect of using social media has caused waste from a financial point of view (TheInspirasi, 2021). For example, the use of money is channeled to pay electricity bills and buy the internet data. Financial waste also occurs when students use their money to buy heroes who are more advanced in gaming or coins that are available in online games to increase their power. This purchase causes them to spend most of their money on online gaming rather than other essential items.

Online gaming has a negative effect on students who use them incorrectly. For example, the effect of online games will disturb their process of learning (The Inspirasi, 2021). This is because, in their free time, they no longer review their studies but instead spend time playing games. With that, indirectly, they could not complete the assignment that had been given to them by the lecturer because they were too focused on playing games. This caused their pointer to decrease and affect their learning. Data studies show that Malaysia ranks third behind the Philippines and Hong Kong in terms of internet addiction rates, including online gaming, (Ye, 2016).

1.3 PROBLEM STATEMENT

Studies show that nowadays the phenomenon of online gaming, better known as E-sports, has become a big phenomenon for young people, especially students (Daniel Kane, 1998). The advancement of information and communication technology (ICT) is growing rapidly and has created various online games such as Mobile Legends, PUBG, and many more. This game only uses smartphones and laptops.

According to Ahmad Farid (2021), the effects of video games had an impact on mental health. For example, a young man killed a woman simply because he wanted to experience killing in the real world. This is all due to the influence of video games that have elements of

violence. A series of such things is very worrying because situations like this can happen to students if someone is too obsessed with games that have elements of violence and war. Roshilawati Md. Raieh (2021) has found that those who are addicted to mobile gaming are more likely to face depression, anxiety, and loneliness. This is very worrying if this situation continues without supervision and self-awareness.

The phenomenon of playing video games also causes students to become excessively addicted to online games. This demonstrates that they spent a significant amount of time each day with smartphones and laptop computers. According to Siti NurHamiyah Mail (2020), on average, students have spent eight hours a day using technology equipment such as smartphones. Maulana Ramadhan (2021) said that a young man in Mumbai, India, had spent 10 lakh rupees (RM53,483.38) of his mother's bank savings, on online gaming. If the addiction to "online gaming" continues for a long time, it will have a very negative impact and have led to a practice of unknowingly wasting money.

Online gaming is one factor that causes impairment in learning due to addiction. According to The Inspirasi (2021), students are more likely to spend time playing online games than reviewing learning. Playing video games for hours has affected my performance as a student. Studies show that more time spent playing games on the screen can be linked to lower academic performance. According to Sherina Mohd Sidik (2020), video game newcomers should be cautious about the consequences of this activity. Without recognising it, a student's behavior pattern toward a video game activity can evolve to the point of addiction after starting off with the excitement of trying it out. According to Máté Smohai, (2017) gamers' physical, psychological, and social functioning may be impacted by video game addiction. Stress, alterations in food and sleeping habits, a lack of focus when studying or working, and a decrease in social interaction are all symptoms of addiction. Addiction's most severe side consequences include interpersonal and employment failures, as well as academic failure.

1.4 RESEARCH OBJECTIVES

The objective of this study is:

i.   To examine the effect of online gaming on mental health among students.

ii.   To examine the effect of online gaming on the burden of among students.

iii.   To investigate the effect of online gaming on academic performance among

students.

1.5 RESEARCH QUESTIONS

The problem statement, which is developed to direct the research concerns and identify

the issue addressed by the research study, ultimately leads to the research question. A research

question is, in essence, a query that clearly expresses the problem the researcher is trying to

solve. The research questions are:

i.   Does online gaming affect the mental health among students?

ii.   Does online gaming have an impact on student's finances?

iii.   What is the effect of online gaming on students' academic performance?

1.6 SIGNIFICANCE OF THE STUDY

This study is related to the extent to which online gaming affects students. There are several negative effects that have impacted online gamers. As a result of previous study, it has had a bad effect and even a long-lasting effect on the players, for example, from the point of view of learning deterioration. Therefore, the results of this study are expected to benefit many readers, new researchers, and students at the university level, especially those at the University of Malaysia Kelantan. This study is very suitable for all ages to be used as reference material because all the information contained in it is authentic and accurate. This study can help solve problems and high impact so that online game players are aware that activities that are not curbed and well controlled will leave a bad impact and will even bring harm to themselves, the community, and those around them.

1.7 DEFINITION OF TERMS

There are terms used in this research study. Below is a definition for each term:

1.7.1   Mental Health

According to the World Health Organization, Mental health refers to the state of mind in which an individual realizes their own abilities, can face the normal pressures of life, can work productively, and contribute to society (WHO 2007). However, the effects of uncontrolled online gaming can be addictive. For example, addiction to the use of computers, smartphones and laptops is the result of increased computer games. This addiction contributes to health problems such as mental, psychological, physical health and anxiety (Juthamanee and Gunawan, 2021).

1.7.2   Finance

Financial in online gaming related to extravagant spending is also a negative effect of playing online games. According to the International Online Gaming Federation (IOGF) Online gaming has become the largest gaming market in the world with industry revenue expected to reach $76.7 billion by the end of 2020 and there are 2.2 million mobile players worldwide (Techjury, 2020). These online games encourage players to spend their savings to buy virtual gadgets or upgrade the game. This happens when they are too obsessed with the game they are playing and are willing to spend money to improve the strength and quality of the game to easily win it.

1.7.3   Academic Performance

In his investigation into the meaning of education, Mark K. Smith (2015) suggests that it is a process of encouraging truth and potential. Education is a form of intellectual training that should be based on the idea that everyone should have the opportunity to participate in life. By improving people's ability to process information and, consequently, their level of health consciousness (allocative efficiency), education has a direct impact on health outcomes. It can also improve the efficiency of medical therapies. For instance, those with higher education are more rapid to seek diagnosis and more conscientious about adhering to treatment (Goldman and Lakdawalla, 2001; Goldman and Smith, 2002). An extensive study of 3034 primary school pupils was carried out in Singapore, and the findings revealed that online games have an adverse influence on connections with family, friends, and school. These side effects, which are extremely troubling, include depression, anxiety, and social phobias (Wang et.al, 2021).

1.8   SUMMARY

This chapter describes the study conducted by researchers related to the effectiveness of online gaming on the students. This chapter also explains the background of the study until the end which is closing with the definition of terms. The next chapter will describe the literature

review. It is about literature on mental health, finance, and education. And followed by hypothesis, conceptual framework and closed by summary.
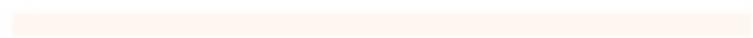
CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter contains a literature review. It starts with describing the literature review, it consists of two variables in this study: online gaming as a dependent variable (DV) and mental health, finance, and education are independent variables (IV). Continually with hypotheses, conceptual framework and ended by the summary of this chapter.

2.2 LITERATURE REVIEW

2.2.1 Mental Health

Studies in America show that 5% of teenagers aged 8-18 years suffer from symptoms of online gaming addiction which leads to pathological behaviour including mental and emotional problems (Emria Fitri, 2018). According to Yong (2011), The obsession with online gaming in Malaysia that results in addiction syndrome must be further studied in the field of pathological psychology, which is a part of psychology that deals with mental health. This is because over time there is an increase in the excessive use of the internet which invites symptoms of depression and results in problems in relationships and social interactions. The impact of the increase in surfing the internet to the extreme, the subjective well-being of teenagers is also affected because many teenagers seem to be active in the cyber world but in the real world these teenagers are silent.

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Addiction to online gaming has a negative impact on a person's mental and physical health. Millions of players worldwide can communicate with each other through the platform thanks to the readily available online gaming of today, which can be accessed via technology and social media (Columb et al., 2019). The consequences of this online gaming addiction can lead to anxiety, depression, lack of activity and social phobia (González-Bueso et al., 2018). Moreover, study by Van Rooij et al. (2014) showed that the potential of individuals addicted to online games to engage in drug and alcohol abuse is twice as high as individuals not involved in online gaming addiction.

2.2.2 Finance

Extravagant spending is also a negative effect of playing online games. Online gaming has become the largest gaming market in the world with industry revenue reaching $76.7 Billion at the end of 2020 and there are 2.2 million mobile players worldwide (TheInspirasi, 2021). The phenomenon of online gaming penetrates young people and even adults in Indonesia including North Sulawesi. There are various kinds. Some are offered for free, while others need payment. Economist Victor Lengkong said online games have become one of the triggers of increasing poverty in Indonesia. "Consciously or not, things like this weaken the income of individuals including the head of the family," said Lengkong as quoted from Manado.

According to (Facette, 2023), This is the hidden meaning of poverty for individual workers in North Sulawesi. This situation occurs in most of the middle- and lower-class communities in North Sulawesi. It's different from families who are less fortunate or whose lives just go by without being influenced by gadgets. "However, their school fees are free, health is also free. If their daily salary is only Rp 100,000 but without deductions and credit payments, then their lives will be more prosperous than individual families earning Rp 5 million to Rp 7 million per month with various poor expenses,"

Meanwhile, North Sulawesi sociologist Lidya Kandowangko (2019) added that the phenomenon of online gaming is becoming more popular not only for children and teenagers but also for adults. "This addiction can have adverse effects if not controlled and interfere with productive activities," said Lidya (2019). Of course, playing online requires a lot of money to rent computer equipment at an internet cafe or buy a quota. Society's consumption patterns may shift towards consumption ness to fulfill hobbies that do not match income. "So don't be

surprised if there are children or teenagers who prefer buying internet quota vouchers rather than buying food," said Lidya (2019). This social observer also emphasized that if the cost of basic needs is used to buy quotas, then this can lead to poverty without realizing it. This is because people's income is not allocated to productive activities but to consumptive activities. He asked the public to pay serious attention to this phenomenon because it can reduce the quality of work, lack of desire to learn, lack of communication and family togetherness. "It can also impoverish," he concluded.

2.2.3   Academic Performance

Online games are very popular among teenagers nowadays, especially with the use of increasingly sophisticated technology. According (Kuss, 2012) These online games can reduce stress, bring relaxation, competition and even escape from the real-world mentality and teenagers are merely having fun when they play online games. They play not only out of seriousness but also out of a desire to simply feel liberated from all the issues. Due to the amount of homework, they have students often feel anxious during school hours. Playing will relieve their stress.

The results obtained from learning or activity in the form of effects are learning performance which results in changes in the individual because of the learning process or activity (Djamarah 2012). What we can see is that almost half of the students admit that they also often play games in their study sessions (Jones, 2003). However, these college students see the time they spend with these games as a positive aspect of their lives. This shows the difference with the term stated in the research literature which is a more negative effect. Across these findings, Jones states that college students who choose an online gaming environment do so to participate in something that is highly social, but that activity is just one part of many other tasks.

In addition, according to Dennis's study. et., al (2018) this game leads to goodness. This is where it can help students learn to make decisions in difficult situations. For example, in mobile legend games, they learn how to think strategically and always be alerted to defeat the opponent in the game. According to the students' educational performance, the results of the

respondents show that out of 126 responses, most of the students who play online games get a grade range of 86-90 interpreted as "Good" which gets 68 or 53.97%. 49 respondents, or 38.89%, chose "satisfactory," which was followed by the grade range of 81 to 85. Following that comes the grade between 91 and 95, which had the second-lowest number of "Very Good" responses (7 respondents, or 5.56%), and the final group, consisting of 2 respondents, or 1.59%, is the grade between 75 and 80. This demonstrates that despite playing online games, students' education is still in a steady state. However, monitoring needs to continue to be done to students so that their education does not become more and more depressed.

2.3 HYPOTHESIS

Four hypotheses of this research had been developed to study the relationship between the dependent variable, the effect of online gaming and three independent variables which are mental health, finance, and education.

H1: There is a significant relationship between online gaming and mental health among students.

H2: There is a significant relationship between online gaming and the burden of finance among students.

H3: There is a significant relationship between online gaming and academic performance among students.

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2.4 CONCEPTUAL FRAMEWORK

INDEPENDENT VARIABLE (IV)		DEPENDENT VARIABLE (DV)

MENTAL HEALTH	

FINANCE		ONLINE GAMING

ACADEMIC PERFORMANCE	
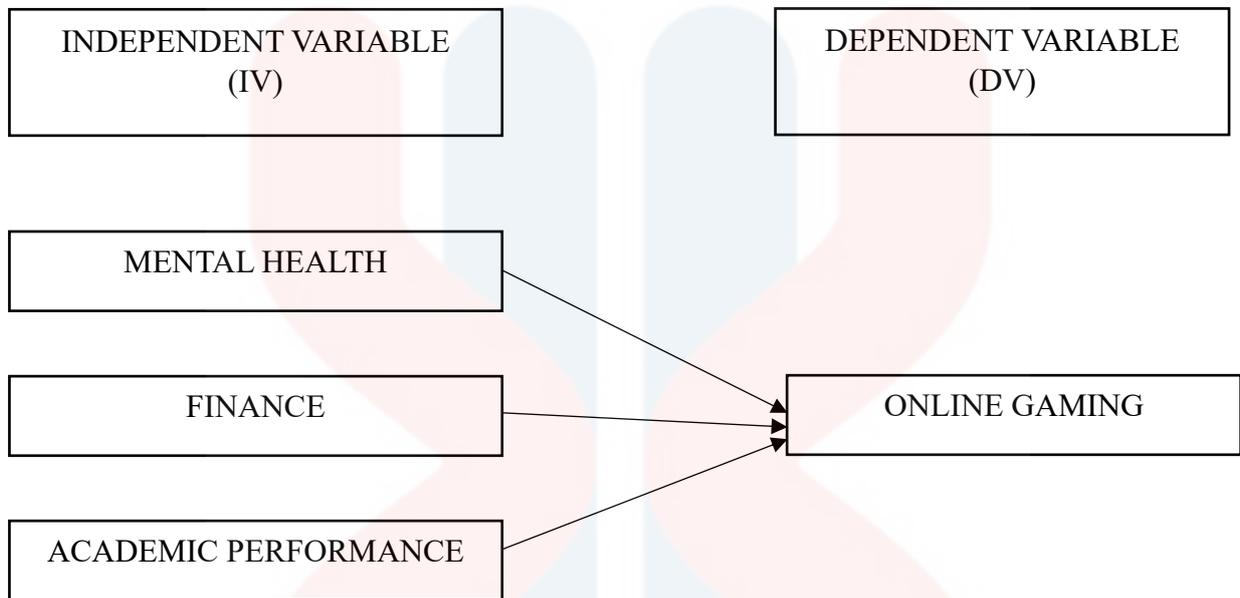
Figure 2.1: Conceptual framework of Mental Health, Finance and Academic Performance towards online gaming among students.

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2.5 SUMMARY

This chapter explains the effect of online gaming on mental health, finance, and education. The effect towards the students was given the bad effect on mental health, finance, and education. It can be found that, effective on mental health, 5% of teenagers aged 8-18 years suffer from symptoms of online game addiction which leads to pathological behavior including mental and emotional problems in America (Emria Fitri, 2018). Also effective on finance, online games have become one of the triggers of increasing poverty in Indonesia. Education is also impressed with online gaming which shows the results obtained from the learning process or activity in the form of effects are learning performance which results in changes in the individual because of the learning process or activity (Djamarah ,2012). Besides this chapter also explain the literature review, hypothesis, conceptual framework until the end which is the summary. The next chapter will describe the methodology of this study. It is about methodology and will start with introduction followed by research design, population of students at public universities of Malaysia, sample size, sampling method, data collection procedure, research instrument, data analysis also closed by summary.

CHAPTER 3

METHODOLOGY

3.1 INTRODUCTION

This chapter will cover the research design, population, sample size, sampling method, data collection procedure, research instrument, data analysis, and summary before revealing the research design of this study.

3.2 RESEARCH DESIGN

A research design is to make sure the data collected can be used to solve the research topic effectively and unambiguously (Sacred Heart University Library, 2011). Research design refers to the overall technique decided upon by researchers to be implemented in their study to achieve their study's aims (Kumar, Abdul Talib & Ramayah, 2013).

There are two types of research design: quantitative and qualitative. In qualitative research, beliefs, experiences, attitudes, behaviors, and relationships of people are explored and understood through techniques like focus groups and interviews. Statistical examination of numerical data gathered through extensive survey research, employing techniques like questionnaire or structured interview, is the primary emphasis of quantitative research. (Mukesh Kumar, 2012).

For this study, quantitative methods are selected to study the effect of online gaming on mental health, finance, and education among students. Benefits of quantitative analysis are that of generalization of research findings to the population through statistical analysis (Mukesh Kumar, 2012). In contrast to qualitative research, quantitative research uses systematic and

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simple data collection methods to demonstrate how variables can be assessed through observation and coding, for instance. (Farnsworth, 2019).

3.3 POPULATION

Population refers to the entire community of people, activities, or object of interest to be examined by researchers (Kumar, 2011). The population of this research are local students in Malaysia. Based on Statistic Higher Education Malaysia (2020), bachelor's degree of students was projected at 369,312 in 2020 which is 139,285 for male and 230,027 for female. Then, the total statistic in 2021 was projected at 378,806 which is 143,541 for male and 235,265 for female. The following table (3.1) is the population size of bachelor's degree students in Malaysia from 2020 to 2021. (See table 3.1)

2	Sarjana Master	IPTS Private HEIs	4,486	4,569	9,055	14,532	13,574	28,106	2,261	1,961	4,222
3	Diploma Lepasan Ijazah Postgraduate Diploma	UA Public universities	316	854	1,170	590	1,422	2,012	352	410	762
4	Sarjana Muda Bachelor Degree	UA Public universities	37,522	63,579	101,101	139,285	230,027	369,312	23,201	45,405	68,606
		IPTS Private HEIs	33,771	36,277	70,048	130,938	140,392	271,330	19,677	21,994	41,671
		Politeknik Polytechnics	103	79	182	304	243	547	118	103	221
5	Diploma Lanjutan Advanced Diploma	UA Public universities	0	0	0	0	0	0	10	79	89
		IPTS	76	90	166	739	496	1,235	86	52	138

2020

2	Sarjana Master	UA Public universities	8,122	13,113	21,235	22,147	34,460	56,607	6,139	9,582	15,721
		IPTS Private HEIs	6,279	5,918	12,197	15,823	15,101	30,924	3,609	3,387	6,996
3	Diploma Lepasan Ijazah Postgraduate Diploma	UA Public universities	584	1,143	1,727	578	1,361	1,939	545	989	1,534
4	Sarjana Muda Bachelor Degree	UA Public universities	38,195	64,379	102,574	143,541	235,265	378,806	31,984	61,955	93,939
		IPTS Private HEIs	31,570	34,614	66,184	123,801	134,974	258,775	24,761	28,618	53,379
		Politeknik Polytechnics	73	72	145	300	252	552	70	56	126
5	Diploma Lanjutan Advanced Diploma	UA Public universities	3	51	54	3	51	54	0	0	0
		IPTS									

2021

Table 3.1: Populations Size of bachelor's degree of students in Malaysia

Source: Statistic Higher Education Malaysia

Therefore, the population of this study is the number of bachelor's degree students in Malaysia. The total target population in 2020 is 369,312 and in 2021 is 143,541.

3.4   SAMPLE SIZE

The sample size must be substantial or unrepresentative, and it must be proportional to the size of the population it is drawn from. Researchers confirm that when using a non-probability sample, they choose the sample size based on the number of subgroups, general guidelines, and financial constraints. Every research investigation with the intention of drawing conclusions about a population from a sample must take the sample size into consideration (Pamela S. Schindler and Donald R. Cooper, 2011). A random sample must be of sufficient size to generalize from it without bias or sampling errors (Hamed Taherdoost, 2017). Based on the sampling method, the sample size is 384 respondents based on 369,312 students for 2020 and 378,806 students for 2021. Both students are our target population from the Statistic Higher Education Malaysia 2020 and 2021. (Refer table 3.2)
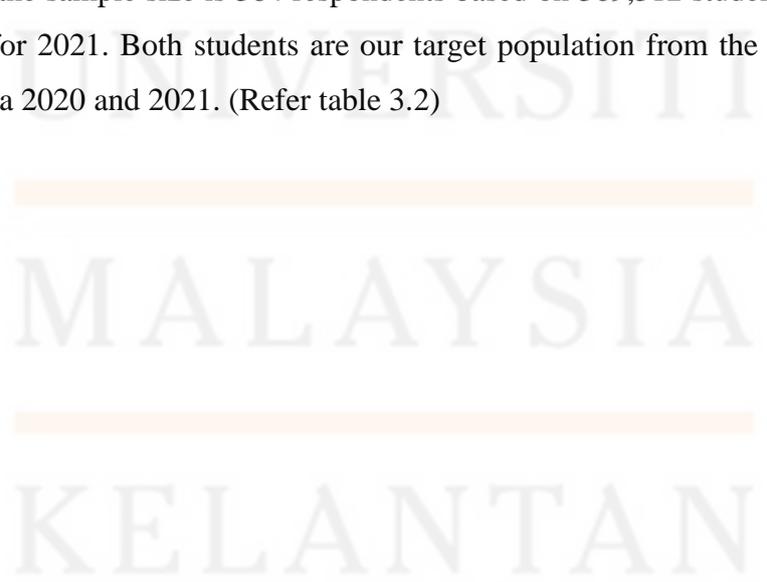
Table 3.1

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size   Source: Krejcie & Morgan, 1970

Table 3.2 Determining sample size of a known population.

(Sources: Krejcie and Morgan,1970)

3.5   SAMPLING METHOD

Sampling refers to the process of sampling from the population (Alvi, 2016). There are two types of sampling method that can be used in this research which is probability and non-probability sample. (Donald R.Cooper and Pamela S. Schindler, 2011). Because it is simpler to apply and more affordable, non-probability sampling is used in this investigation. Non-probability sampling is appropriate for use in exploratory and descriptive research and studies that seek to provide a general overview of the phenomena present in the study population and act as a guide for more in-depth researchers (Al-Mansor Abu Said, 2015). Convenience sampling, purposive sampling (judgment sampling and quota sampling), snowball sampling, and random sampling are the four (4) types of non-probability sampling. (2011) Donald R. Cooper and Pamela S. Schindler.

3.6   DATA COLLECTION PROCEDURE

The collection of data, social scientists make use of a few different data collection strategies. (Hox, 2005). The researcher will apply two methods of data collection and will use a method of quantitative research.

3.6.1 Primary Data

Primary data are ones that are gathered expressly for the subject of the study at hand utilizing techniques that are most effective for that research issue. The social knowledge base grows with each new piece of primary data that is collected. The expanding availability of this work done by other academics for reuse by the greater research community is referred to as secondary data (Hox, 2005). Surveys, observations, experiments, questionnaires, focus groups, and interviews are some of the main data sources. Respondents are given questionnaires as part of the primary data collection in this study. (Admin, 2017). As the main method of gathering data for this study, questionnaires will be distributed to participants. Universiti Malaysia Kelantan students Respondents are chosen as the respondents for this study.

3.6.2 Secondary Data

Secondary data refers to information that has been already gathered by someone (individual or agencies) and readily available to the researcher. Secondary data sources like books, journals, articles, webpages, and blogs. The secondary data in this study are based on online information from the department of statistics, Higher Education Minister and other online and offline resources to get information. The data can produce information that is more accurate than that found from primary research. plays a significant part during the research's exploratory phase, when it is necessary to define the research problem and provide hypotheses. Data can be very helpful in both identifying the population and laying out the sample that will be taken. (Mukesh Kumar, 2012).

3.7   RESEARCH INSTRUMENT

A research instrument is a tool used to collect, measure, and analyse data related in a study. It is significant because it may be utilized to produce research that is credible and valid. Surveys, tests, questionnaires, and interviews are just a few examples of research instruments. For example, demographic profile of respondents, effect of online gaming on mental health, finance, and education among students.

In this study, information is gathered from respondents, through a set of questionnaires (Table 3.3). Additionally, an online questionnaire is undertaken to save costs and simplify the work of researchers. The created questionnaire has three sections that respondents must complete. The information that researchers gather for this study comes from respondents' responses.

Section	Factors	Content	Questions
Section A	Demographic profile of respondents	Gender	• Male • Female
		Age	• 19-20 years old • 21-22 years old • 23-24 years old • 25-26 years old • 27 years old and above
		Race	• Malay • Indian • Chinese • Other
		Status	• Married • Single • Other
		University	• Universiti Malaysia Kelantan (Umk) • Universiti Malaya (Um) • Universiti Sains Malaysia (Usm) • Universiti Kebangsaan Malaysia (Ukm) • Universiti Putra Malaysia (Upm) • Universiti Islam Antarabangsa Malaysia (Uiam) • Universiti Utara Malaysia (Uum) • Universiti Malaysia Sarawak (Unimas) • Universiti Malaysia Sabah (Ums) • Universiti Pendidikan Sultan Idris (Upsi) • Universiti Teknologi Mara (Uitm) • Others
		Faculty	• Need to list
		Years of study	• Years 1 • Years 2 • Years 3 • Years 4
		I played the online gaming for	• *Example: 4 hour a day*

		I will spend money to play online gaming around	• *Example: RM100 a month
Section B	Dependent Variables	The effect of online gaming	1. I like to play online gaming nonstop every day. 2. Sometimes i think about the negative impact video games will have on my daily life. 3. I play online games just to fill free time. 4. I like playing online gaming more than studying. 5. I feel this online gaming does not affect my academic performance. 6. I feel that playing online gaming can relieve stress. 7. Sometimes online gaming makes me bored
Section C	Independent Variables	The effect of online gaming on mental health.	1. I feel anxious when I do not play online gaming for a day. 2. These online games cause me to do less useful activities. 3. I am happy because I have more friends online than real life. 4. I become anxious and depressed because of playing online games. 5. Sometimes I feel like I want to be violent like a character in an online game. 6. This online game causes me not to want to do recreation activities. 7. I have problems with life stress as a result of playing games too often.
		The effect online gaming on finance	1. Online games are my sources of income. 2. I feel this online game helps me to learn finance easier and faster. 3. I prefer to buy internet data than daily necessities. 4. I am willing to obtain people for the purpose of playing games online.

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			5. I feel my money is dwindling because I spend too much money on an online game. 6. I do not have enough money to save. 7. I am willing to spend my money on online games versus lessons.
		The effect of online gaming on academic performance	1. Online games cause my academic performances to decrease. 2. Sometimes I feel online games help me make good decisions. 3. Online games cause me to often postpone the assignment given by the lecturer. 4. I play online games so much that I feel less enthusiastic to learn. 5. Since I am playing online games, my academic achievement is down. 6. Online games because I do not have time to study. 7. These online games have made me smarter part time to play and learn.

Table 3.3: Questionnaire of the study

In this study, a questionnaire will be based on Likert scale and a measurement scale that will be used is Likert scale. Likert scales were developed in 1932 as the familiar five-point bipolar response that most people are familiar with today (Likert, 1932). Respondents must use the Likert scale to indicate whether they concur or disagree with each series of statements. Five-Point Likert scales are included, one for each section of the questionnaires. The measurements on the 5-Likert Scale are as follows: 1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, and 5-Strongly Agree.

1 (Strongly Disagree)	2 (Disagree)	3 (Neutral)	4 (Agree)	5 (Strongly Agree)
•	•	•	•	•

Table 3.4: Table of Measurement of Likert Scale

3.8   DATA ANALYSIS

This study will apply the Statistical Package for Social Science (SPSS) for data analysis. The SPSS programme aids analysts in selecting the most effective measurable approach to employ. Measurements based on SPSS data include mean, variance, standard deviation, and the reliability test.

This study chooses a straightforward descriptive analysis to evaluate the data. One variable is considered at a time in a frequency distribution, which is a mathematical distribution. The frequencies will be gathered, and a comparison will be made using the information provided. The objective is to count the number of respondents who are partners of different values of one variable and to quantify this count as a percentage. This approach was chosen in this study because it makes it simple to comprehend and analyse the data. Additionally, this approach yields a prompt and precise result.

3.8.1 Descriptive Statistic

Descriptive statistics define the basic characteristics in analyzing the data. Descriptive analysis can support data researchers to interpret data by using samples and measures briefly (Bush, 2020). Descriptive statistics provide a brief overview of samples and measurements. With simple graph analysis, they can form the basis for any quantitative data analysis. Then, descriptive statistics are also used by researchers in need of controlled quantitative addition. Descriptive statistics can also help researchers to obtain a large variety of big data logically.

3.8.2 Reliability Test

Reliability refers to how much it relies on or how consistent the test is to measure a feature. Reliability is synonymous with the consistency of a test, survey, observation, or other measuring devices. This test is reliable to test whether the test score is consistent, usable, or repeatable, and is a function whose score is independent of measurement error. In this study, a reliability test will be based on Cronbach Alpha test to assess the consistency among items.

3.8.3 Inferential Statistics (Correlation)

Pearson Correlation Coefficient when two continuous variables are compared, their linear relationship's strength and direction are evaluated using the standard deviation's components as the coefficient. The correlation indicates how much the two variables change as a result. Only the states of a linear dependency are measured by the Pearson coefficient. This correlation was used to demonstrate how strong or weak/positive or negative it is. Pearson correlation also known as r, R, or Pearson's r. A calculation of the linear relationship between two variables in intervals or ratios. It has a value between $+1$ and -1, where 1 is a total positive linear correlation, 0 is no linear correlation, and -1 is a total negative linear correlation. It is like the point-biserial correlation, this is a calculation of the interaction between yes or no, male or female, and the vector period or ratio of the dichotomy. It occurs when a variable's value increases while the other variable decreases and forms a straight line on the scatter chart.

Value of the correlation Coefficient	Strength of Correlation
1	Perfect
0.7-0.9	Strong
0.4-0.6	Moderate
0.1-0.3	weak
0	Zero

Table 3.5: Value of Correlation Coefficient

3.9 SUMMARY

This chapter describes the methodology and design of the research study. The main purpose of this survey design is to study the effects of online games on students. Methods used in this study is a quantitative method that is we prepare a questionnaire through google form. The researcher used convenience sampling to select respondents in this study.

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CHAPTER 4

DATA ANALYSIS

4.1   INTRODUCTION

This chapter will include the findings of the descriptive analysis for the demographic profile, dependent variable, and independent variable, the findings of the reliability test, the findings of the inferential analysis, a discussion based on the study objective, and a summary. This chapter also examines the findings and results of the analysis, which was conducted using data from the questionnaire. All questionnaires were delivered to 284 IPTA students who responded. A software program called Statistical Package for Social Science (SPSS) was used to analyze the questionnaire data. Before administering the official questionnaire, a pilot test was conducted. The total number of pilot testing is 30, with reliability tests done to determine the validity of the variables.

4.2   RESULT OF DESCRIPTIVE ANALYSIS

Descriptive analysis was performed using data obtained from 384 respondents on section A for background and expenditure information summaries in respondents' demographic profiles.

4.2.1 Gender

Table 4.1 below shows the gender distribution sum of 384 respondents collected from the data collection through questionnaire.

Table 4.1: The gender of the 384 respondents

Gender	Frequency (n)	Percentage (%)
Male	105	27.3
Female	279	72.7
Total	**384**	**100.0**
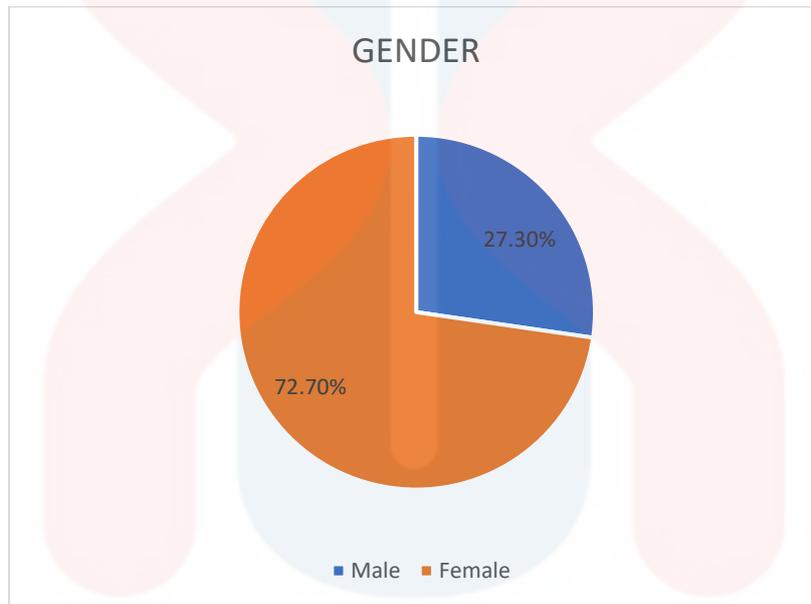
Figure 4.1: Percentage of Gender

Based on figure 4.1 above, the pie chart shows the gender distribution of a total 384 respondents. The pie chart shows that there are 27.3% (n=107) of male respondents compared to the female respondents which is 72.70% (n=279). The female more attracts and expend their time to answer our questionnaire than male.

4.2.2 Age

Table 4.2 below shows the age distribution sum of 384 respondents collected from the data collection through questionnaire.

FYP FHPK

Table 4.2 The age of the 384 respondents

Age	Frequency (n)	Percentage (%)
19-20 Years Old	33	8.6
21-22 Years Old	156	40.6
23-24 Years Old	181	47.1
25-26 Years Old	13	3.4
27 Years Old and Above	1	0.3
Total	**384**	**100.0**
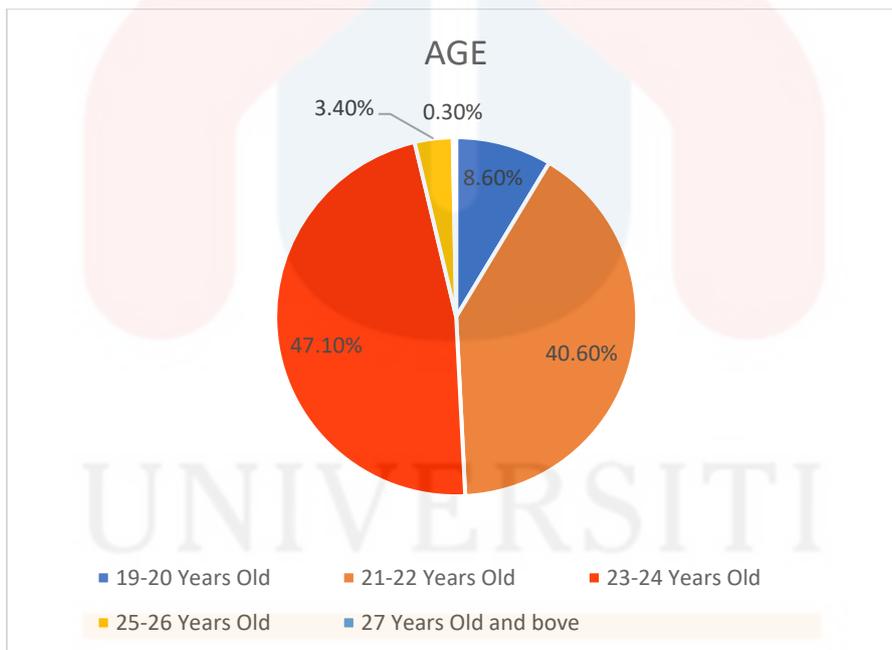
Figure 4.2: Percentage of Age

The total respondents by age were shown in Table 4.2 and Figure 4.2 above. There were 384 responders, divided into five categories. The age group with the highest percentage of students that play online gaming is 23 to 24 years old (47.10% (n=181). The next highest age group is 21 to 22 years old, with 40.60% (n=156). The third highest age group was 19 to 20

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years old, with 8.6% (n=33). 3.4% (n=13) of the population is between the ages of 25 and 26. The lowest rate is 0.3% (n=1) for people aged 27 and above.

The reason that 23- to 24-year-olds had the highest rate is that people of all ages need to release tension. Meanwhile, people aged 27 and up have the lowest rate because they are normally focused on doing research for their undergraduate degrees at this age.

4.2.3 Race

Table 4.3 below shows the race distribution sum of 384 respondents collected from the data collection through questionnaire.

Table 4.3 The race of the 384 respondents

Race	Frequency (n)	Percentage (%)
Malay	334	87.0
Indian	19	4.9
Chinese	11	2.9
Others	20	5.2
Total	**384**	**100.0**
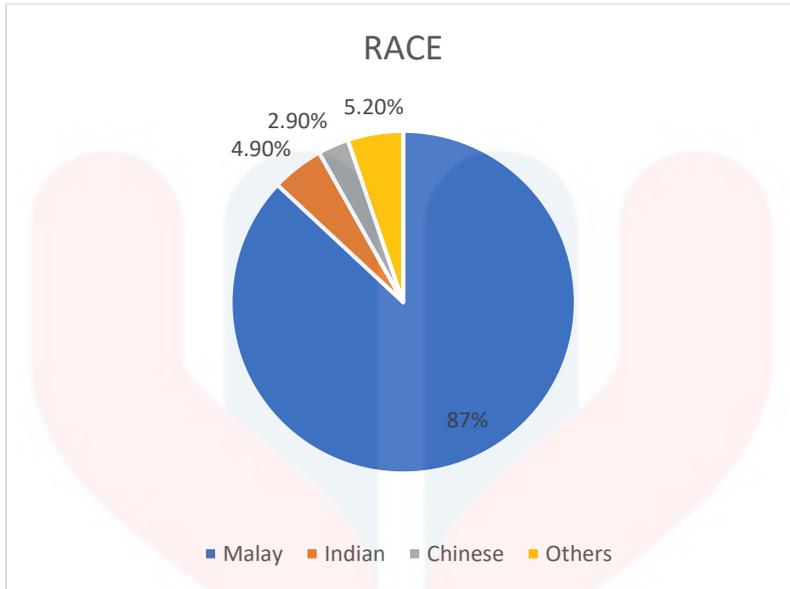
Figure 4.3: Percentage of Race

Figure 4.3 shows that the highest percentage is Malay, which is 87% (n = 334), and the lowest is Chinese, which is 2.90% (n = 11). This result is more favorable to Malay because the population of students at IPTA is predominantly Malay.

4.2.4 Status

Table 4.4 below shows the status distribution sum of 384 respondents collected from the data collection through questionnaire.

Table 4.4 The status of the 384 respondents

Status	Frequency (n)	Percentage (%)
Married	15	3.9
Single	367	95.6
Others	2	0.5
Total	**384**	**100.0**
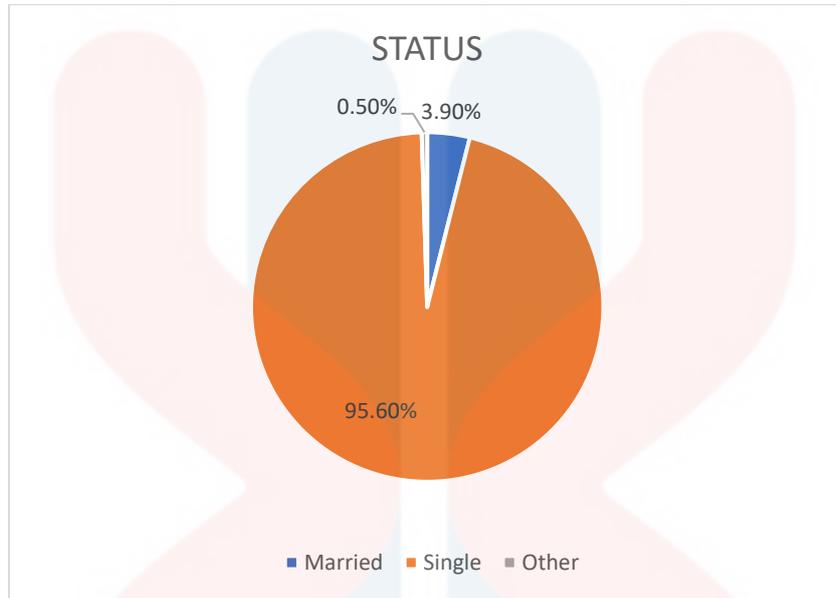
Figure 4.4: Percentage of Students

Figure 4.4 shows that the highest percentage is single, which is 95.6% (n = 367). This result shows single status because more students are unmarried at IPTA. Married and other people showed a lower result because they were mostly not interested in online gaming.

4.2.5 University

Table 4.5 below shows the University distribution sum of 384 respondents collected from the data collection through questionnaire.

Table 4.5 The University of the 384 respondents

University	Frequency (n)	Percentage (%)
Umk	298	77.6

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Um	7	1.8
Usm	2	0.5
Ukm	7	1.8
Uiam	4	1.0
Uum	8	2.1
Unimas	1	0.3
Upsi	22	5.7
Uitm	27	7.0
Umt	3	0.8
Unisza	2	0.5
Usim	2	0.5
Politeknik Arau	1	0.3
Total	**384**	**100.0**
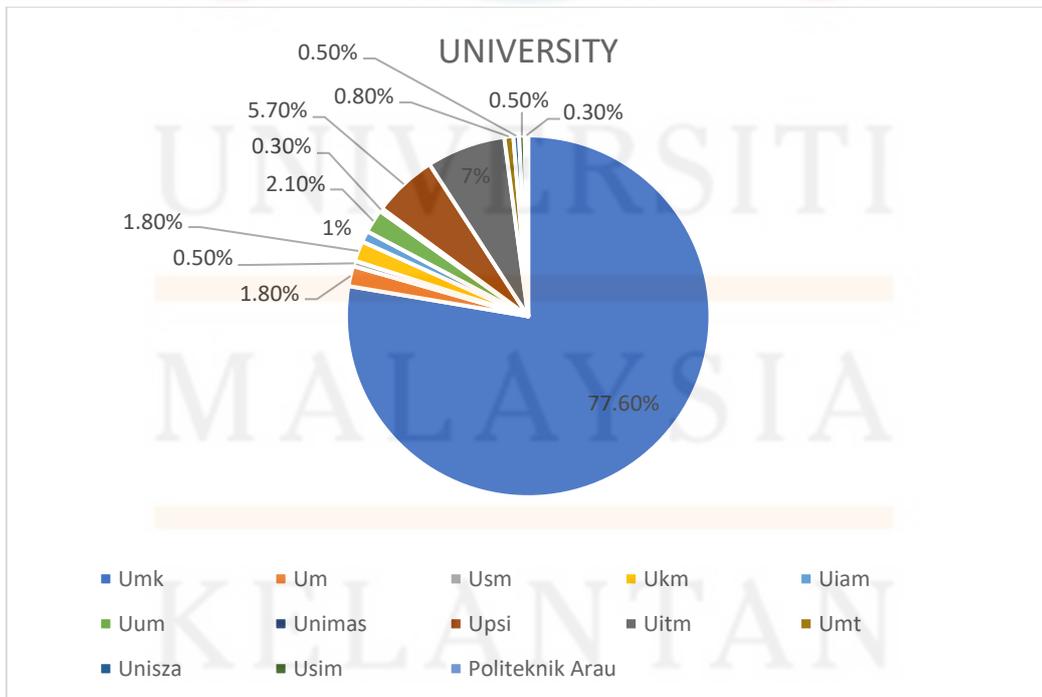
Figure 4.5: Percentage of University

Figure 4.5 shows that the highest percentage of universities is UMK, which is 77.60% (n = 298). The lower percentages are UNIMAS and POLITEKNIK ARAU, which are 0.3% (n = 1). Data collected is higher than other IPTAs because the researchers have more contact at UMK.

4.2.6 Faculty

Table 4.6 below shows the faculty distribution sum of 384 respondents collected from the data collection through questionnaire.

Table 4.6: The Faculty of the 384 respondents

Faculty	Frequency (n)	Percentage (%)
Fakulti Hospitali, Pelancongan Dan Kesejahteraan	193	50.3
Fakulti Keusahawanan Dan Perniagaan	82	21.4
Fakulti Industri Asas Tani	4	1.0
Fakulti Pembangunan Manusia	2	0.5
Fakulti Sains Kemasyarakatan	2	0.5
Jabatan Elektrik	1	0.3
Fakulti Sains Kemanusiaan	8	2.1
Islamic Revealed Knowledge	1	0.3
Fakulti Bisnes Dan Pengurusan	2	0.5

Fakulti Teknologi Kejuruteraan Kelautan Dan Informatik	1	0.3
Fakulti Teknikal Dan Vokasional	1	0.3
Fakulti Sains Dan Kejuruteraan	1	0.3
Fakulti Biokejuruteraan Dan Teknologi	6	1.6
Fakulti Teknologi Kreatif Dan Warisan	7	1.8
Fakulti Sains Bumi	4	1.0
Fakulti Bahasa Dan Pembangunan Insan	3	0.8
Fakulti Pengurusan Hotel Dan Pelancongan	2	0.5
Fakulti Sains Sukan Dan Rekreasi	9	2.3
Fakulti Sains Kesihatan	4	1.0
Fakulti Kejuruteraan Mekanikal	3	0.8
Fakulti Pendidikan	5	1.3
Fakulti Pengajian Melayu	1	0.3
Fakulti Kontemporari Islam	3	0.8
Fakulti Al-Quran Dan Al-Sunnah	4	1.0
Fakulti Bahasa Dan Komunikasi	7	1.8
Fakulti Business Management	1	0.3
Fakulti Pengajian Islam	2	0.5
Fakulti Komunikasi Dan Bahasa Moden	3	0.8

Fakulti Seni Bina	3	0.8
Fakulti Syariah Dan Undang-Undang	1	0.3
Fakulti Sains Data	3	0.8
Fakulti Pengurusan Perniagaan	2	0.5
Fakulti Perubatan Veterinar	2	0.5
Fakulti Reka Bentuk Animasi	1	0.3
Fakulti Perniagaan, Ekonomi Dan Pembangunan Sosial	2	0.5
Fakulti Sains Dan Matematik	3	0.8
Fakulti Perubatan	1	0.3
Fakulti Undang-Undang	3	0.8
Fakulti Perikanan Dan Sains Makanan	1	0.3
Total	**384**	**100.0**

FACULTY

- Fakulti Hospitali, Pelancongan Dan Kesejahteraan
- Fakulti Keusahawanan Dan Perniagaan
- Fakulti Industri Asas Tani
- Fakulti Pembangunan Manusia
- Fakulti Sains Kemasyarakatan
- Jabatan Elektrik
- Fakulti Sains Kemanusiaan
- Islamic Revealed Knowledge
- Fakulti Bisnes Dan Pengurusan
- Fakulti Teknologi Kejuruteraan Kelautan Dan Informatik
- Fakulti Teknikal Dan Vokasional
- Fakulti Sains Dan Kejuruteraan
- Fakulti Biokejuruteraan Dan Teknologi
- Fakulti Teknologi Kreatif Dan Warisan
- Fakulti Sains Bumi
- Fakulti Bahasa Dan Pembangunan Insan
- Fakulti Pengurusan Hotel Dan Pelancongan
- Fakulti Sains Sukan Dan Rekreasi
- Fakulti Sains Kesihatan
- Fakulti Kejuruteraan Mekanikal
- Fakulti Pendidikan
- Fakulti Pengajian Melayu
- Fakulti Kontemporari Islam
- Fakulti Al-Quran Dan Al-Sunnah
- Fakulti Bahasa Dan Komunikasi
- Fakulti Business Management
- Fakulti Pengajian Islam
- Fakulti Komunikasi Dan Bahasa Moden
- Fakulti Seni Bina
- Fakulti Syariah Dan Undang-Undang
- Fakulti Sains Data
- Fakulti Pengurusan Perniagaan
- Fakulti Perubatan Veterinar
- Fakulti Reka Bentuk Animasi
- Fakulti Perniagaan, Ekonomi Dan Pembangunan Sosial
- Fakulti Sains Dan Matematik
- Fakulti Perubatan
- Fakulti Undang-Undang
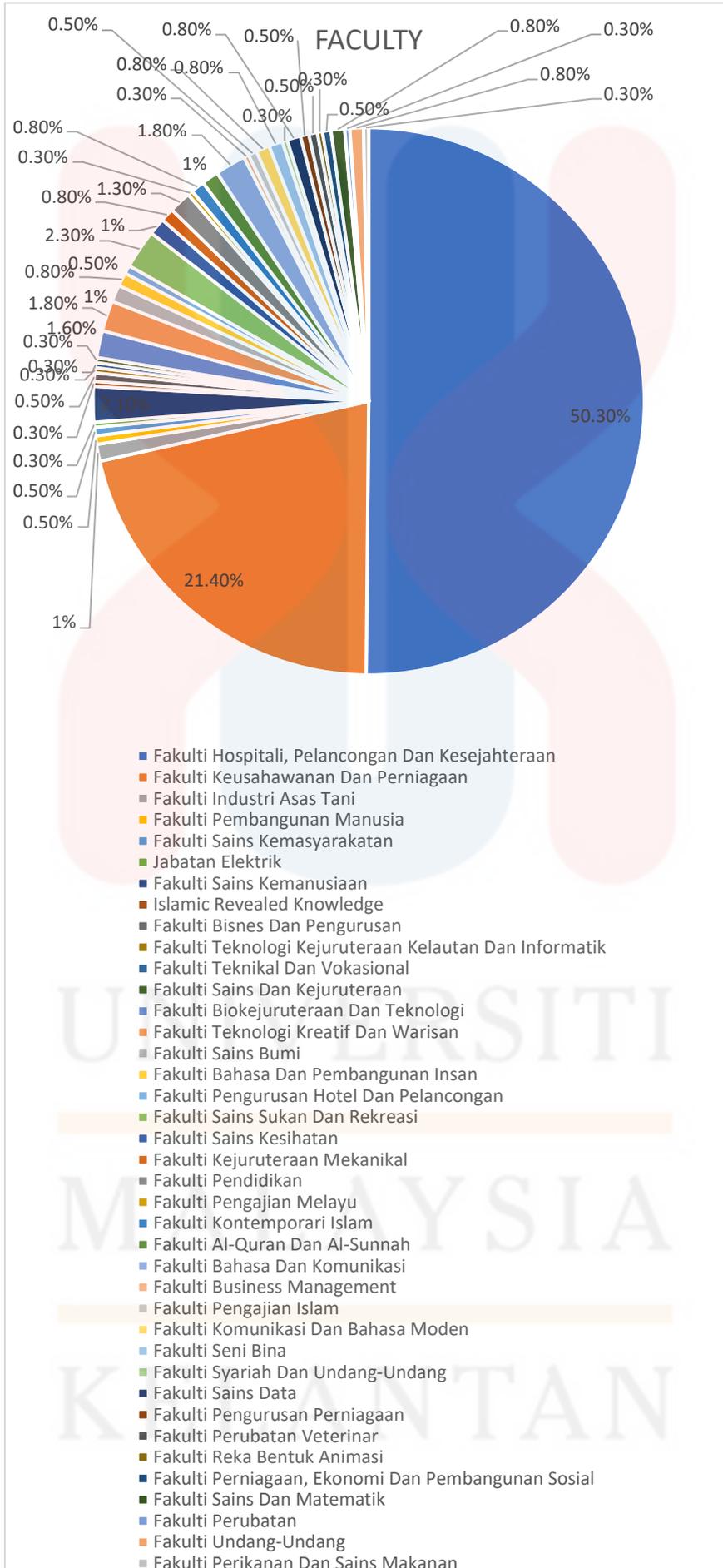- Fakulti Perikanan Dan Sains Makanan

Figure 4.6: Percentage of Faculty

Table 4.6 and Figure 4.6 above show the total respondents by faculty. There were 384 respondents and thirty-nine categories. Among these categories of faculty, the faculty with the highest percentage of students who play online gaming is *Fakulty Hospitaliti, Pelancongan, and Kesejahteraan*, which is 50.3% (n = 193). The second highest is *Fakulty Keusahawanan and Perniagaan* with 21.4% (n = 82). The third highest faculty is *Fakulti Sains Sukan dan Rekreasi* with 2.3% (n = 9). followed by others, which range from 0.3% to 2.1%.

The reason *Fakulti Hospitaliti, Pelancongan, and Kesejahteraan* had the highest percentage is because they are more interested in playing online gaming. Other than that, the results show that students in this course are spending more time with online gaming than faculty.

4.2.7 Year of Study

Table 4.7 below shows the year of study distribution sum of 384 respondents collected from the data collection through questionnaire.

Table 4.7 The year of study of the 384 respondents

Year Of Study	Frequency (n)	Percentage (%)
Year 1	83	21.6
Year 2	68	17.7
Year 3	206	53.6
Year 4	26	6.8
Bachelor	1	0.3
Total	**384**	**100.0**

YEAR Of STUDY

0.30%
6.80%
21.60%
17.70%
53.60%

■ Year 1   ■ Year 2   ■ Year 3   ■ Year 4   ■ Sarjana
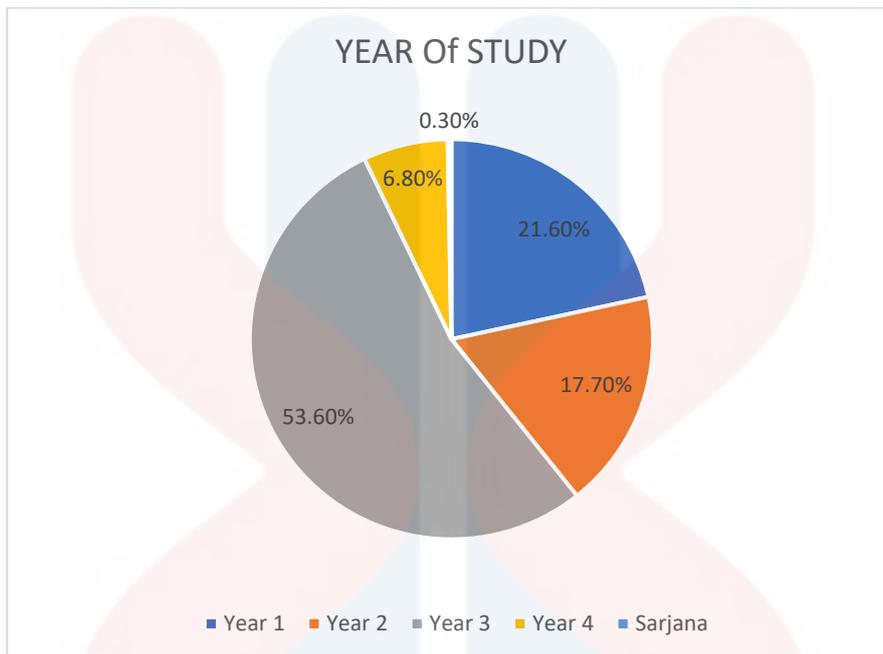
Figure 4.7 The year of study of the 384 respondents

Table 4.7 and Figure 4.7 above show the total respondents by year of study. There were 384 respondents in five categories. Among these categories of years of study, the year with the highest percentage of students who play online gaming is year 3, which is 53.60% (n = 206). The second highest is year 1 with 21.6% (n = 83). The third highest year is year 2 with 17.70% (n = 68). followed by year 4 with 6.80% (n = 26) and Sarjana with 0.3% (n = 1).

Year 3 showed they had the highest score because those categories needed more release stress due to more assignments and having core subjects that semester. Sarjana had the lowest score because, in that year, they were not interested in online gaming anymore.

4.2.8 I Played the Online Gaming For

Table 4.8 below shows the time students played the online gaming distribution sum of 384 respondents collected from the data collection through questionnaire.

Table 4.8 The time students played online gaming of the 384 respondents.

Played the Online Gaming	Frequency (n)	Percentage (%)
<1 hour per day	95	24.7
>1 hour per day	100	26.0
>2 hour per day	76	19.8
>3 hour per day	42	10.9
>4 hour per day	24	6.3
>5 hour per day	27	7.0
>6 hour per day	12	3.1
>7 hour per day	5	1.3
>8 hour per day	2	0.5
>9 hour per day	1	0.3
Total	**384**	**100.0**
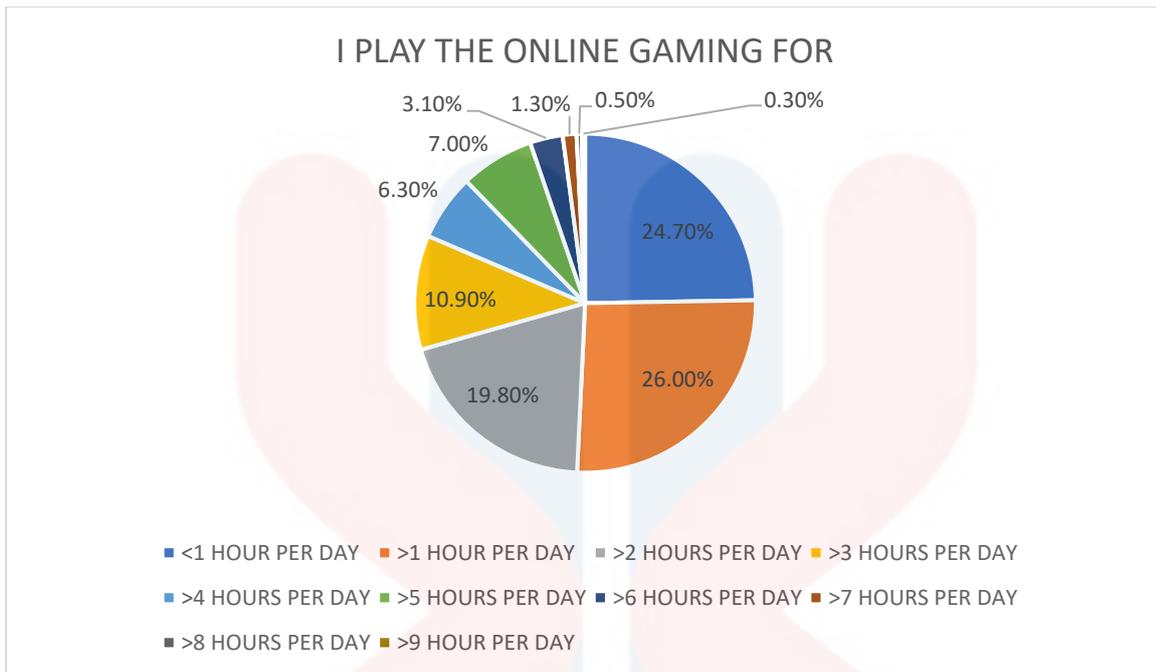
Figure 4.8: The time students played online gaming of the 384 respondents.

Table 4.8 and figure 4.8 show the result that the students will play online gaming below that 10-hour per day. The highest time students will play online gaming for more than 1 hour per day is 26% (n = 100). The second highest is less than 21 hours per day, at 24.7% (n = 95). The third highest is more than 2 hours per day, at 19.40% (n = 76).

This result shows that more students just spend their time at leisure and to release stress. And then they always make studying their priority.

4.2.9 I Will Spend Money to Play Online Gaming Around

Table 4.9 below shows the students will spend their money to play online gaming distribution sum of 384 respondents collected from the data collection through questionnaire.

Table 4.9: The students will spend their money to play online gaming of the 384 respondents.

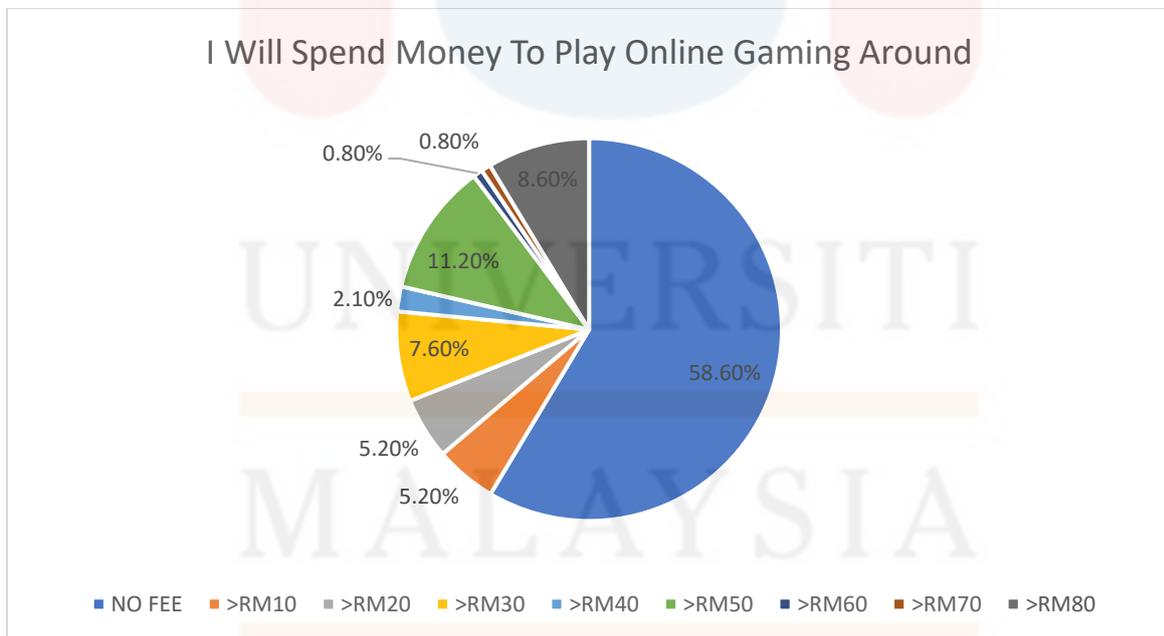| Spend the Money	Frequency (n)	Percentage (%)
No Fees	225	58.6
>Rm10	20	5.2
>Rm20	20	5.2
>Rm30	29	7.6
>Rm40	8	2.1
>Rm50	43	11.2
>Rm60	3	0.8
>Rm70	3	0.8
>Rm80	33	8.6
Total	**384**	**100.0**

Figure 4.9: The students will spend their money to play online gaming of the 384 respondents.

Table 4.9 and Figure 4 show that the students will spend money on online gaming. The highest result when the students spent their money on online gaming was free. There are no fees to pay to play online gaming. Is 58.6% (n = 225). The second highest is their spending more than RM50, which is 11.20% (n = 42). The third highest is more than RM80, at 8.6% (n = 33).

This result shows that more students just play online gaming for free with no fees. So they do not waste their money, and they proved that online gaming did not have a negative effect on low-income students.

4.3 RESULT OF REALIBILITY TEST (PILOT TEST)

Reliability test consistency is used to determine whether a test score is dependable (Pressbook, 2017). The idea of reliability is used to evaluate research quality. They demonstrate the precision with which a method, methodology, or test measure something. A measure's consistency is referred to as its reliability, whilst its accuracy is referred to as its validity (Fiona Middleton, 2019). Cronbach's alpha was used to evaluate the reliability analysis. The correlation coefficient has a measure value ranging from 0 to 1. The correlation strength from zero to perfect.

Table 4.10 Result Reliability of the Pilot Test of the 30 Respondents

Variables	Number of Item	Cronbach's Alpha Coefficient	Strength of Association
Online Gaming	7	0.478	Moderate
Mental Health	7	0.894	Strong
Finance	7	0.966	Strong
Academic Performance	7	0.960	Strong

The result of the reliability coefficient alpha based on dependent and independent variables is shown in table 4.10. That amounted to seven questions for each variable. The outcome was 0.4 or higher. It is the question's strength and is regarded reliable.

Online gaming is the dependent variable. Cronbach's Alpha was 0.478, indicating a modest level of dependability. As a result, that variable is dependable.

Mental health, finances, and educational success are the next independent variables. To begin, Cronbach's Alpha for mental wellness is 0.894. It is 0.966 for money and 0.960 for academic performance. As a result, all the independent factors had high relationships. As a result, that question is quite dependable.

4.4   RESULT OF INFERENTIAL ANALYSIS

4.4.1 Univariate Analysis

This section shows the results of univariate analysis performed on each variable report item in the form of frequency, mean, and standard deviation. All the independent variables, as well as the dependent variables, were measured using the same approach, which is a (5) Likert scale with a value of strongly disagree (SD) disagree (D), neutral (N), agree (A) and strongly agree (SA)

Table 4.11 Descriptive Analysis for Online Gaming

Items		SD	D	N	A	SA	Mean	S. D
Q1	I like to play online gaming non-stop everyday	146 38.0%	60 15.6%	68 17.7%	39 10.2%	71 18.5%	2.55	1.525
Q2	Sometimes I think about the negative impact video games	19 4.9%	24 6.3%	54 14.1%	91 23.7%	196 51.0%	4.10	1.158

	will have on my daily life						
Q3	I play online games just to fill free time	20 5.2%	12 3.1%	55 14.3%	97 25.3%	200 52.1%	4.16	1.112
Q4	I like playing online gaming more than studying	100 26.0%	64 16.7%	90 23.4%	41 10.7%	89 23.2%	2.88	1.495
Q5	I feel this online gaming does not affect my academic performance	104 27.1%	51 13.3%	96 25.0%	58 15.1%	75 19.5%	2.87	1.462
Q6	I feel that playing online gaming can relieve stress	24 6.3%	16 4.2%	77 20.1%	103 26.8%	164 42.7%	3.96	1.165
Q7	Sometimes online gaming makes me bored	79 20.6%	26 6.8%	74 19.3%	104 27.1%	101 26.3%	3.32	1.455

Table 4.11 shows the results of frequency, mean, and standard deviation to measure the dependent variables of online gaming. There are seven questions. The result shows many students were playing for a while. Like in question one (1), there are strong disagreements with playing nonstop. So that they just play for free time and relieve stress. The mean show Q3 was the highest result with 4.16 with because the students just played online gaming to fill their free time. There are 20 students with 5.2% who strongly disagree, 12 students with 3.1% who disagree, 55 students with 14.3% who neutral, 97 students with 25.3% who agree, and 200 students with 52.1% who strongly agree. So, they agree with that question.

Table 4.12 Descriptive Analysis for Mental Health

Items		SD	D	N	A	SA	Mean	S. D
Q1	I feel anxious when I do not play an online game for a day	172 44.8%	54 14.1%	55 14.3%	31 8.1%	72 18.8%	2.42	1.560
Q2	These online games cause me to do less useful activities	64 16.7%	39 10.2%	69 18.0%	76 19.8%	136 35.4%	3.47	1.472
Q3	I spend more time playing games more than physical interaction with my friends	120 31.3%	51 13.3%	80 20.8%	43 11.2%	90 23.4%	2.82	1.552
Q4	I become anxious and depressed because of playing online games	150 39.1%	61 15.9%	78 20.3%	44 11.5%	51 133.3%	2.44	1.435
Q5	Sometimes I feel want to be violent like a character in an online game	190 49.5%	48 12.5%	54 14.1%	42 10.9%	50 13.0%	2.26	1.478
Q6	This online game causes me not to want to do recreation activities	116 30.2%	52 13.5%	62 16.1%	60 15.6%	94 24.5%	2.91	1.574
Q7	I become angry when I am	106 27.6%	55 14.3%	71 18.5%	48 12.5%	104 27.1%	2.97	1.569

	interrupted while playing games online.							

Table 4.12 shows the results of frequency, mean, and standard deviation to measure the independent variables of mental health. There are seven questions. The mean of Q2 was the highest result with 3.47. There are 64 students with 16.7% who strongly disagree, 39 students with 10.2% who disagree, 69 students with 18.0% who are neutral, 76 students with 19.8% who agree, and 136 students with 35.4% who strongly agree. For the questions Q1, Q3, Q4, Q5, Q6, and Q7 with 2.42, 2.82, 2.44, 2.26, 2.91, and 2.97 of each.

Table 4.13 Descriptive Analysis for Finance

Items							Mean	S. D
		SD	D	N	A	SA		
Q1	My monthly expenditure increased because of playing games online.	160 41.7%	44 11.5%	51 13.3%	40 10.4%	89 23.2%	2.62	1.636
Q2	Online games the cause I cannot manage the finance properly	151 39.3%	42 10.9%	58 15.1%	40 10.4%	93 24.2%	2.69	1.633
Q3	I prefer to buy internet data than daily necessities	123 32.0%	56 14.6%	62 16.1%	47 12.2%	96 25.0%	2.84	1.590
Q4	I am willing to obtain people for the purpose of	212 55.2%	27 7.0%	39 10.2%	28 7.3%	78 20.3%	2.30	1.639

		SD	D	N	A	SA	Mean	S. D
	playing games online							
Q5	I feel my money is getting less because I spend a lot on online games.	152 39.6%	48 12.5%	59 15.4%	35 9.1%	90 23.4%	2.64	1.618
Q6	Because playing online games causes me not to have enough money to save.	157 40.9%	40 10.4%	56 14.6%	42 10.9%	89 23.2%	2.65	1.631
Q7	I am willing to spend my money on online games versus lessons	178 46.4%	46 12.0%	50 13.0%	28 7.3%	82 21.4%	2.45	1.615

4.13 shows the results of frequency, mean, and standard deviation to measure the independent variables of mental health. There are seven questions. The mean of Q3 was the highest result with 2.84. There are 123 students with 32.0% who strongly disagree, 56 students with 14.6% who disagree, 62 students with 16.1% who are neutral, 47 students with 12.2% who agree, and 96 students with 25% who strongly agree. For the questions Q1, Q2, Q4, Q5, Q6, and Q7 with 2.62, 2.69, 2.30, 2.64, 2.65 and 2.45 of each. The result also shows the students spend more money to buy data on the internet. But they will not waste their money on online gaming rather than education.

Table 4.14 Descriptive Analysis for Education Performance

Items						Mean	S. D
	SD	D	N	A	SA		

Q1	Online games cause my academic performance to decrease	107 27.9%	49 12.8%	79 20.6%	48 12.5%	101 26.3%	2.97	1.557
Q2	Sometimes feel that online games make me unable to make good decisions.	110 28.6%	48 12.5%	81 21.1%	56 14.6%	89 23.2%	2.91	1.530
Q3	Online games cause me often to postpone the assignments given by the lecturer	89 23.2%	39 10.2%	70 18.2%	75 19.5%	111 28.95	3.21	1.531
Q4	I play online games so much that I feel less enthusiastic to learn	99 25.8%	63 16.4%	72 18.8%	56 14.6%	94 24.5%	2.96	1.525
Q5	Since I am playing online games, my academic achievement is down	110 28.6%	58 15.1%	81 21.1%	46 12.0%	89 23.2%	2.86	1.526
Q6	Online games due I do not have time to study	96 25.0%	54 14.1%	71 18.5%	65 16.9%	98 25.5%	3.04	1.528
Q7	This online game has caused me to be not good at part of the time to play and learn	101 26.3%	59 15.4%	66 17.2%	57 14.8%	101 26.3%	2.99	1.552

Table 4.14 shows the results of frequency, mean, and standard deviation to measure the independent variables of mental health. There are also seven questions. The mean of Q3 was the highest result with 3.21. There are 89 students with 23.2% who strongly disagree, 39 students with 10.2% who disagree, 70 students with 18.2% who are neutral, 75 students with 19.5% who agree, and 111 students with 28.95% who strongly agree. For the questions Q1, Q2, Q4, Q5, Q6, and Q7 with 2.97, 2.91, 2.96, 2.86, 3.04 and 2.99 of each. The students strongly agree that online gaming is so effective that they always postpone the assignments given by the lecturer just to play the games.

2.1 DISCUSSION BASED ON RESEARCH OBJECTIVE

Table 4.15: Summary of hypothesis testing

	Hypothesis	Person correlation result	
H1	A positive hypothesis relationship between the online gaming with mental health	(r = .482**, p < .000)	Supported
H2	A positive hypothesis relationship between the online gaming with finance	(r = .365**, p < .000)	Supported
H3	A positive hypothesis relationship between the online gaming with education performance	(r = .380**, p < .000)	Supported

Based on Table 4.15, the Pearson Correlation hypothesis analysis was significant. The hypothesis is based on effective online gaming's effects on mental health, finance, and education performance.

4.6   SUMMARY

Chapter 4 discussed the results of descriptive analysis, reliability tests, and inferential analysis. Also discussed were the research objectives.

CHAPTER 5

CONCLUSION

5.1   INTRODUCTION

This study discusses recapitulation of the study, finding and discussion about the relationship between online gaming of mental health, finance and academic performance among university students. In addition, this chapter discussed of study's limitation and made several suggestions for future research.

5.2   RECAPITULATION OF THE FINDINGS

The purpose of this study was to discover the effect of online gaming on mental health, finance, and academic performance among university students. The purpose of this research is to determine the association between online gaming and mental health, financial, and academic achievement among university students. In this example, primary data was collected, and respondents were polled using a pre-designed questionnaire. The sample of 384 respondents was chosen using the table developed by Krejcie and Morgan (1970). This study also looked at the impact of online gaming on mental health, finances, and academic achievement among university students.

The population of this study was among university students. The number of IPTA students in Malaysia. For example, University Malaysia Kelantan (UMK), University Sultan Idris (UPSI), University Technology Mara (UITM) and other. The sample size is determining from table Krejcie & Morgan (1970). Thus, the sample size for this study is 384 respondents. Questionnaires consisted of 3 part which included demographic of respondent, independent variable and dependent variable. The data collected from respondents was proceed with the

Statistical Package for the Social Sciences (SPSS) and the analysis of data included the descriptive analysis, reliability test and Pearson Correlation analysis. This study conducted to examine a relationship between mental health, finance, and academic performance among university students.

5.3   DISCUSSION ON RESEARCH QUESTION

5.3.1 Relationship Between Online Gaming on Mental Health Among University Students

Research question 1 of this study asked the relationship between online gaming with mental health among university students. This also answers the first objective and hypothesis.

Tables 5.1: Research Objective 1, Question 1 and Hypothesis 1

No	Research Objective (RO)	Research Question (RQ)
1	To examine the effect of online gaming on mental health among university students.	Does online gaming effect the mental health among university students?
	H1- There is the significant relationship between the effect on online gaming with mental health among university students.	

The results of hypothesis, H1 in Chapter 4 reviewed to answer RQ1. H1 stated that there is a significant relationship between online gaming with mental health among university students. The findings show that there is positively strong correlation coefficient value is .482** while the p-value .000 which is less than the highly significant level .001. Therefore, H1 accepted.

5.3.2 Relationship Between Online Gaming on Finance Among University Students

The second research question is to identify the relationship between online gaming with finance among university students. This research question can answer the second objective and hypothesis.

Table 5.2: Research Objective 2, Research Question 2 and Hypothesis 2

No	Research Objective (RO)	Research Question (RQ)
2	To examine the effect of online gaming on finance of among university students.	Does online gaming have impact on university student's finance?
	H2 - There is the significant relationship between the effect on online gaming with finance among university students.	

The second objective is to examine the effect of online gaming on finance among university students. Based on the finding in data analysis, the results of hypothesis H2 in Chapter 4 reviewed to answer research question 2 (RQ2). The findings show that there is a positively strong correlation coefficient value is .385**. The p-value on the online gaming with finance among university students is .000 which less that the significant level at .001. Thus, there is a significant relationship between the effect of online gaming on finance among university students. Therefore, H2 accepted.

4.1 Relationship Between Online Gaming with Academic Performance Among University Students

The last research question for the research is to recognize the relationship between online gaming with academic performance among university students. The results of the research have answered both objectives and the early hypothesis of the research.

Table 5.3: Research Objective 3, Research Question 3 and Hypothesis 3

No	Research Objective (RO)	Research Question (RQ)
3	To investigate the effect of online gaming on education performance among university students.	What is the effect of online gaming on the university student in academic performance?
	H3 - There is the significant relationship between the effect on online gaming with academic performance among university students.	

The last research objective for this research is to study the relationship between online gaming with academic performance among university students. Depending on result of the data analysis, the research question 3 (RQ3) in the previous chapter will be aligned with the hypothesis (H3). The relationship between the effect of online gaming with academic performance among university students shown based on the finding is moderate positive with a correlation coefficient value is **.380**. The p value on the online gaming with academic performance among university students is .000 which is less than the very significant level at

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.001. Thus, there is a significant relationship between online gaming with academic performance among university students. Thus, the hypothesis 3 has been proved and support by previous studies.

5.4 LIMITATION

Other A beneficial and meaningful method for completing the research has been experienced throughout the full investigation. Even yet, there are some inevitable constraints to allowing the research process to go smoothly.

The first constraint is that some respondents were unfamiliar with the questionnaire. As a result, the researcher should describe the questionnaire and how to administer it. Furthermore, some respondents felt that the time required to complete the questionnaire was excessive, even though the time limit are 5 to 7 minutes.

The study only looks at three independent variables: mental health, finance, and academic achievement, as well as one dependent variable: online gaming among university students.

Finally, the study's drawback is that it is quantitative. Quantitative research is concerned with gathering and assessing numerical data. It can be used to detect patterns and averages, make forecasts, conduct causal tests, and generalise results to a larger population. The study established that quantitative research is concerned with quantifying and assessing variables in order to obtain results. This research cannot be better understood by the other researcher.

5.5   RECOMMENDATION

This study still needs to be improved for future research. As a result, several recommendations for future studies have been created so that the output can be produced even better. The first recommendation is that this study be conducted utilising both qualitative and quantitative methodologies. This is because it can help researchers obtain more accurate and high-quality results in the future.

Aside from that, if survey questionnaires are distributed online, researchers must do so in a more formal manner. Furthermore, the surveys must be accompanied by a letter of confirmation from the university or superiors in order to perform the study. As the survey is included with the confirmation letter, the responder will believe and will not hesitate to answer the surveys issued. In addition, instead of responding the scaling questionnaire online, use an interview method or generate open-ended questions for respondents. The interview method allows the researcher to achieve a high response rate, clarify ambiguities, and follow up on partial answers immediately. As a result, this strategy can eliminate misunderstanding and yield better study findings.

Furthermore, for future researchers, the target respondent or more specific respondent can be further expanded to a smaller scope. This is to ensure that the title of the study is appropriate and to avoid the occurrence of imbalances in the respondent when the survey results are released. Returning to the first advice, researchers can obtain more accurate results when they define the characteristics of the respondents.

Finally, some recommendations are offered for future investigations, which can help researchers improve the study to be made.

5.6   SUMMARY

In conclusion, this study was conducted to investigate the impact of online gaming on university students' mental health, finances, and academic achievement. The conceptual framework is developed utilising the studied literature. The researcher planned to investigate the relationship between these independent variables and the dependent variables.

This survey, which was done via an online questionnaire (Google Form), received 384 responses. The data was collected and analysed using descriptive statistics, reliability analysis, and correlation analysis using SPSS software version 16. According to the findings of the reliability analysis, the overall variable and the result reported are reliable and can be used in this study.

The purpose of the study is to determine the association between online gaming and mental health, financial, and academic achievement among university students. The research objectives, which are to examine the association between online gaming and mental health, financial, and academic achievement among university students, have been accepted. Meanwhile, the impact of online gaming on university students' mental health, finances, and academic achievement may be expected.

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