AN EXPLORATION STUDY OF FAMILY FUNCTIONING, PARENT-CHILD RELATIONSHIP, AND ONLINE GAME ADDICTION AMONG MALAYSIAN YOUNG ADOLESCENTS

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Abstract - This research aims to understand better the Malaysian young adolescents' online gaming profiles (i.e., family environment, lifestyles, and gaming habits) and explore parents' views and challenges in dealing with online gaming in their children's lives. The research is a cross-sectional quantitative questionnaire survey among 373 youth of varying ethnicity, aged 10-14 years, to characterize Malaysian youth's gaming profile, lifestyles, gaming usage, and behaviours. The contributors for the quantitative questionnaire survey comprised 199 male and 174 female students from public schools (64.1%), private schools (29.8%), International schools (4.3%), and home-schooled (1.9%). The survey was presented online, via various social media using Qualtrics digital survey platform, and in the more old-fashioned "pencil and paper format. Multi-player (MMORPGs) games were reported as the most common, with relaxing and releasing stress the most common motivations given. Various gadgets are used to play online and offline games, with a high percentage of youths acquiring their first digital "gadgets" at an early age (7-9). Males spent a much higher percentage of time gaming online than females. The results show a correlation between the family quality of life, particularly mother-child relationships, and the level of gaming addiction in adolescents. The study result shows that higher satisfaction in a mother-child relationship is associated with a higher risk of online gaming addiction among young adolescents.The strengths of this research program lie in the importance of its focus on the topical, growing modern digital gaming phenomena and there being little prior work on this in Malaysia. The information from the present study has its potential to contribute useful insights for policy-makers and mental health practitioners around optimizing the benefits of these technologies, plus dealing with the downsides when gaming usage can become problematic and addictive.

Keywords - Family functioning, parent-child relationship, online game addiction, Malaysian young adolescent

I. INTRODUCTION

Malaysia Communications and Multimedia Commission (MCMC) in 2020 reported that Internet addiction among Malaysians had reached an alarming rate. Malaysian parents are becoming aware of their children's obsession to gameplay and voice concerned that their children's online life was interfering with their home and school obligations and that their children choose computer time over basic social activities. Online game addicts are not addicted to the Internet; instead, they heavily use the Internet as a vehicle to feed their gaming addiction (Pontes & Griffiths, 2014).

The use of the Internet is more prevalent in every household during the Covid-19 pandemic lockdown as daily school-learnings are conducted online. Adolescents are regularly staying active online to stay connected with their friends. Hence, detecting an online gaming addiction is challenging because the increasing use of the Internet can be masked by realistic and practical use for schoolwork and need to stay connected with family members and friends (Young, 2009).

Without doubt, internet gaming problem is severe and is considered as a psychiatric disorder, which strongly calls for scientific studies on online gaming addiction. Combing through the works of literature, the study on the prevalence of online gaming addiction, specifically on adolescents is limited. Nonetheless, within the limited survey findings, prevalence estimations for adolescents with online game addiction across Western and non-Western countries ranges from 1.6% and 28.6%. To date, there was no study found on the prevalence of online gaming addiction among Malaysian adolescents within the age range 10 to 14 years old. Local studies on prevalence tended to focus on secondary school-going adolescents (Hashim, Kaur & Ng, 2016). The findings of the prevalence of online gaming addiction in adolescents meant there is a pressing need to understand better online gaming activities in the adolescents' world.

Online gaming may be more problematic than offline gaming because 'at risk' individuals may experience more difficulties in overcoming gaming addiction as compared to offline gamers (Griffiths & Meredith, 2009). Given that adolescents are the higher at-risk age group to online gaming addiction and are the most enthusiastic technology adapter, this paper hopes to gather a good understanding of the profile and environment of this group. This paper will also explore the family environment of the youth as the family is the primary unit socialization for adolescents. The findings from the study could benefit the Governmental bodies, professional mental health practitioners, and school counsellors to use as

a guide to tailor a more culturally and relatable prevention programs to support healthy gaming lifestyles among Malaysian young adolescents

II. METHODOLOGY

This research will employ sequential explanatory mixed methods to collect data. The design of this study will be carried out in two phases. Phase 1 is a quantitative study to obtain an understanding of the sample profile and online gaming activities. In phase 2, a qualitative study via interviews will be conducted aimed to explore the family environment, parental experiences, and areas for improvement to curb, prevent and reduce the level of online gaming addiction among adolescents.

A sample size of 389 was an acceptable sample for the study following the sample size formula. The acceptable error level would be 5% and 95% confidence level with an estimated 50% response distribution outcome. A total of 500 physical copy of the surveys were handed out to education institutions (Governmental and private), and an online survey was also made available to the public via the Qualitrics platform. This study used a convenient sampling technique. A total of 410 responds (paper and pen, n=352, online, n=58) were collected. The final sample size of n=373 was collected, with 329 participants from paper and pen survey and 44 respondents from the online survey. The researcher rejected 37 surveys (paper and pen, n=23, online, n=14) that are found with errors made by participants during the filling up of the surveys, including incomplete forms, double entries, and participants reported never having played online games.

2.1. Instruments (Assessment tools)

Instruments used for data collection includes Demographic Questionnaires, Family Functioning (AGPAR), Family Quality of Life, Parent-Child Relationship (PACHIQ-R); and Game Addiction Scale for Adolescents.

2.2. Demographic Questionnaires

We collected participants' sociodemographic details, namely, gender, age, ethnicity, and religion. Other information gathered also include, school experience (e.g. relationship with teachers and friends, academic enjoyment) and gaming experience (e.g. gaming hours, type of online games played).

2.3. Family Functioning Index (APGAR)

The Family Functioning Index (APGAR) is to measure the level of satisfaction with various family functions. Developed by Smilksten (1978), the measure consists of five parameters of family functioning: Adaptability, Partnership, Growth, Affection, and Resolve. (The acronym "APGAR" is comprised of the first letter of each parameter.) The response options were designed to describe the frequency of feeling satisfied with each parameter on a 5-point scale ranging from 1 (hardly ever) to 5 (almost always). The higher score indicates greater satisfaction with family function. This is a self-reported questionnaire, which takes less than 5 minutes to complete. The internal reliability of the scale and subscale in the original study ranged from .80 and .85 and validity of .64 (Smilkstein, 1978).

2.4. Parent-Child Relationship (PACHIQ-Child version)

The PACHIQ-Child version aim is to assess how children evaluate their relationship with their parents, namely focusing on conflict resolution (behaviour) and acceptance (feelings). This self-reported 42-items were designed using Likert-scale ranging from 'Always' to 'Never' to assess how the children evaluate their relationship with the parents. 21 items access the child's satisfaction on his or her relationship with the father, and another 21-items evaluating the mother-child relationship. The internal reliability of the scale and subscale of this study is .78 to .95 and validity of .70 (Lange, Evers, Jansen, & Dolan, 2002)

2.5. Game Addiction Scale (GAS-A)

GAS-A was developed by Lemmens et al. (2009) to measure computer and video game addiction for adolescents. There are 21-item questions, with each question measuring the seven items of DSM-based gaming addiction criteria, salience, tolerance, mood modification, relapse, withdrawal, conflict, and problems. Each statement is scored on a 5-point Likert scale (1, never, to 5, very often). The higher the score indicates, the more likely the person is addicted to gaming. The GAS-A has good construct validity and high reliability. The 21-items showed strong internal reliability with a Cronbach's α value of .94 and .92 in the scale and subscale of this study (Lemmens et al. 2009).

2.6 Procedures

In May 2019, Monash University Human Research Ethics Committee (MUHREC approval code - 189657) provided the ethical approval for the study. The survey questionnaires posted online using the Qualtrics Platform, and hard copies were available as well. The survey took approximately 30 minutes to complete. The data collection process rolled out between the month of October 2019 to February 2020.

III. RESULTS AND DISCUSSION

The purpose of this study is to examine the prevalence of online gaming addiction among Malaysian adolescents and to establish a better understanding of the profile of these young gamers.

3.1. Prevalence of online gaming addiction among study samples

This study has examined the prevalence of online gaming addiction among early Malaysian adolescents (between age 10 to 14 years old). This study found 1.9% (n=7) of the participating adolescents are addicted to online gaming, fulfilling all the seven criteria of addiction as stated by Lemmens et al. (2009) using the monothetic diagnostic criteria. Male gamers scored high in all the seven criteria than female gamers. This prevalence rate is very close to the median prevalence of 2.0% across ten countries worldwide for IGD (Paulus, Ohmann, Gontard&Popow, 2018). However, compared to previous studies, the percentage in the present finding is much lower than other reported countries, for example, the prevalence of online gaming addiction in Austria is 2.7% a, 3.0% in Germany, and 1.6% in the Netherlands (Muller et al., 2015).

While the disparities of data could be attributed to socio-cultural difference and the criteria differences (for example, age, methods use), nonetheless the findings demonstrated that online gaming addiction is an ongoing occurring phenomenon among adolescents. To date, there is no local study found on the prevalence of online gaming addiction among adolescents. The most recent and close-related study of Malaysian adolescents ($Mean_{age}$=13.89) found was a study by Hashim, Kaur and Ng (2016) who reported the prevalence of Internet Addiction (IA) 28.6%. As such, there is a strong need for researchers, mental health practitioners, educators, policymakers and parents to work together to prevent this issue from worsening.

3.2. Online Gaming Addiction and Gender difference

The findings from the study indicated that male gamers (Mean=2.66) are more susceptible to online gaming addiction than female gamers (Mean=1.69). The idea put forth to explain this finding is that female engage in gaming to pass the time and not to re-enact negative emotions, hence shorter duration on online gaming and screen time (Wei, Chen, Huang & Bai, 2012). Males are prone to pathological online gaming because their game choice is influenced by games that are closer to their behavioural and identity styles. For example, Griffiths, Davies and Chappell (2004) found that adolescents male tended to engage in games that are very masculine type characters. The high number of gamers (66%, n=247), showed that the two games responsible for the problematic use were Massively Multi-player Online Role-Playing (MMORPGs) game and first shooter games. Of these, 60% were boys. Simulation and Massively-Multiplayer Online Role-Playing (MMORPG) games, such as 'ArcheAge', 'Lord of the Rings Online', and 'Star Wars: One explanation for this choice was that these vulnerable male adolescents may be insecure about their own identity in reality and may still be developing their own identity. Young (2009) stated that adolescents like role-playing to allow them to pretend living as 'someone' through a game character with extraordinary powers of a skilled warrior or be an artsy Machiavellian.

3.3. Online Gaming Addiction and Associated Growth-Stage Development

The participants (69.1%) in this study indicated that they play online games with their friends from schools, clubs, and social gathering. A likely explanation for this finding was the importance of social connection during adolescent development. Baumeister and Leary (1995) (cited by Allen, Ryan, Gray, McInerney, & Waters, 2014) describe that human need for a sense of belonging is as strong as a need for food, thus the pressure to seek and provide belongingness from and to others. Adolescents always seek to relate and need to be accepted by others. Playing a similar online game with a group of gamers with similar values, beliefs, and interests do facilitate the opportunities for the adolescent to interact and feel a part of one or more social groups.

On the other hand, Gapsiso and Wilson (2015) revealed that there is a positive relationship between people who spent a great deal of time online and increased feelings of loneliness and anxiousness. The term 'cyberostracism' was introduced to explain an exclusion from a group while playing games. The study compared the effects of cyberostracism across three age groups: 8- to 9-year-olds, 13- to 14-year-olds, and adults found adolescents may be more strongly affected by cyberostracism. The effect of cyberostracism disrupts the balance between social connectedness and self-identity that resulted in loneliness in oneself. Loneliness could have adverse effects on psychological wellbeing Gapsiso and Wilson (2015). Relying on digital media for social connectedness is most likely not recommended, especially in adolescents who are hyper-sensitive to rejection and exclusion in a group at their development stage. The adverse effects may be more harmful to psychologically and destructive to adolescents who are still developing a sense of self.

3.4. Online Gaming Addiction and associated early gaming experiences

The third finding from this study is that a large percentage of the participants (n=377, 95.1%) reported to own electronic gadgets. 85.4% of the respondents reported owning mobile phones, laptops or computers (45.8%), tablets (33.4%), and game consoles (28.0%). In the recent SpeedTest survey, Malaysia ranked 3rd in the download Internet speed. With the infiltration of high-speed Internet and computer-powered smartphones, adolescents can easily access online games at any time and anywhere. Young children, when having easy access to Internet

technologies and spend long hours on the Internet, are susceptible at-risk to internet addiction (Leung, 2004). Ling and Haddon (2008)shared that compulsive use of mobile phones for Internet gaming will subsequently result in addiction among adolescents. However, the finding from this study found no association between early-years gadget exposures to the level of online gaming addiction among the sample group. One possible explanation for this outcome would be parental attitudes towards the child, e.g. where parents demonstrate a high degree of care and are more involved in their supervision on their child's gadget use and content. Ko et al. (2014) shared that one of the key protective factors for IGD is parents who practice high psychological autonomy (e.g. respecting personal boundaries) at the same communicate clear gaming-schedule rules. He emphasized that male adolescents, in particular, would benefit significantly from this.

Another interesting find from this study is that the age between 6 to 9 years old seems to be parent's preferred age to introduce their children to gadget activities, in terms of owning a gadget, played a game for the first time using a gadget, and playing an online game. One possible explanation for the scenario is that children at that age group were physically more active and need for attention. This finding can be viewed that Malaysian children have inactive lifestyles. This conclusion is congruent with Lee et al. (2015) 's study that Malaysian children have sedentary lifestyles, and spent their free time on screen-related activities, such as playing online games.

The study also suggested that a higher percentage of Malaysian children (68%) exceeds the recommended 2h/day screen time compared to children in the United States (44%) and Australia (59%). Griffiths (2010) observed that that young people were less involved in physical activities as parents are busy at work, the need to keep the child safe indoor, increasing urbanization, and traditional games are forgotten. Sedentary lifestyles may have adverse effects on physical health, such as obesity and malnutrition (Sherina& Ahmad, 2004). There is a need for policymakers and parent to consider promoting physical activities and healthy lifestyles to mitigate this issue.

3.5. Online Gaming Addiction association with Family Quality of Life

Fourth, this study revealed that an adolescent's level of satisfaction with the family quality of life significantly predicts their online gaming addiction. In this study, the researcher measured adolescent's satisfaction on his and her family quality of life, focusing mainly on the attaintment of family support and family relationship. A healthy family quality generally attempts to develop and maintain the family relationship by building trust on each other, have a sense of belonging, and supporting each other at the time of trouble. Family members often engage in activities together as a family. Living in a family environment where family members are emotionally detached, disconnected, and self-serving can be depressing and lonely for an adolescent who seeks social connection. Lemmens, Valkenburg & Peter (2009) viewed that loneliness is strongly linked to game addiction.

Also, it is apparent that the less family support is, the more severe gaming addiction becomes As this study has indicated, adolescents who feel supported, loved, and cared about by the people around them are generally satisfied with their family quality of life and is less likely to indulge in online gaming for social connection. Given that family is the central socialization unit for a child, it is evident that family connectedness and family support has a critical impact on the feeling of loneliness. Therefore, the finding of this study is in support of Woog (2016) 's suggestion that family support and guidance is vital for the process of recovering from game addiction.

3.6. Online Gaming Addiction association with Mother-Child Relationship

This study also revealed that there is a significant difference between female participants and male participants in terms of the mother-child relationship. Female gamers (Mean=72.39) reported a higher satisfaction relationship with their mother, just a small difference with male gamers (Mean=70.52). The finding suggests the possibility that the level of satisfaction in mother-child may predict the level of gaming addiction in online gamers, which is consistent with a study by Szwedo, Mikamii& Allan (2011) that found problematic mother-child relationship was predictive to adolescent internet use problem. Previous studies reported 'low maternal care' as a predictor factor to addiction in adolescents (Ko et al., 2014).

The explanation for this was adolescents reported poor mother-child relationship as they feel the mother was not supportive in their search for independence and autonomy. However, previous studies (Griffiths, Davies, & Chappell, 2004; Peng & Liu, 2010) state that negative parent-child relationship is the consequence of excessive video gaming, rather than a predictor of it. The finding from this study agrees with Choo et al. (2015); Kwon, Chung, and Lee (2011) and Walters (1999) view that male participants experienced a higher level of online gaming addiction and they reported lower satisfaction in the mother-child relationship. The possible explanation for lower satisfaction is that the mother and child may experience frustration and dispute in response to the mother trying to control the child's gaming time. In general, youth gamers have a better

relationship with their mothers than fathers (Da Charlie, HyeKyung, & Khoo, 2011). It would seem the mother's role is significant counselling when doing intervention work with pathological youth gamers.

IV. CONCLUSION

In conclusion, the finding of this study indicates that the prevalence of online gaming addiction among Malaysian adolescents is at 1.9%. Male gamers (Mean=2.66) are reported to be more susceptible to online gaming addiction than female gamers (Mean=1.69). Choice of the game genre is also a predicting factor to online gaming addiction, as revealed in this study. Multi-player Online Role-Playing Games (MMORPGs) recorded highest in games choice (n=247, 66%), of which 60% were boys. Many literature studies concede that MMORPGs is the most addictive online game to date. This study is also congruent with other study findings that family quality of life and parent-child relationship, especially mother-child relationship, have a positive role in managing the level of online gaming addiction among adolescents.

The possible explanation could be because the family is the central unit socialization for many adolescents. The mother role seems to have a significant influence on the adolescent's level of online gaming. The study on family and especially the role of mother in child's online gaming activities could perhaps help researchers, policymakers, mental health practitioners and medical experts develop programs and counselling treatment approaches that would help prevent and mitigate the level of online gaming addiction in adolescents.

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