



INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES



Digital Addiction and Mental-Physical Health: A Scenario in Asia

Norazmi Anas, Nurul Hidayah Aziz, Amin Che Ahmat & Engku Ahmad Zaki Engku Alwi

To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v13-i1/15900> DOI:10.6007/IJARBSS/v13-i1/15900

Received: 13 November 2022, **Revised:** 16 December 2022, **Accepted:** 30 December 2022

Published Online: 17 January 2023

In-Text Citation: (Anas et al., 2023)

To Cite this Article: Anas, N., Aziz, N. H., Ahmat, A. C., & Alwi, E. A. Z. E. (2023). Digital Addiction and Mental-Physical Health: A Scenario in Asia. *International Journal of Academic Research in Business and Social Sciences*, 13(1), 1682–1690.

Copyright: © 2023 The Author(s)

Published by Human Resource Management Academic Research Society (www.hrmars.com)

This article is published under the Creative Commons Attribution (CC BY 4.0) license. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this license may be seen at: <http://creativecommons.org/licenses/by/4.0/legalcode>

Vol. 13, No. 1, 2023, Pg. 1682–1690

<http://hrmars.com/index.php/pages/detail/IJARBSS>

JOURNAL HOMEPAGE

Full Terms & Conditions of access and use can be found at
<http://hrmars.com/index.php/pages/detail/publication-ethics>



INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES



www.hrmar.com

ISSN: 2222-6990

Digital Addiction and Mental-Physical Health: A Scenario in Asia

Norazmi Anas¹, Nurul Hidayah Aziz¹, Amin Che Ahmat¹ & Engku Ahmad Zaki Engku Alwi²

¹Academy of Islamic Contemporary Studies, Universiti Teknologi MARA, Perak Branch, Tapah Campus, 35400 Tapah Road, Perak, Malaysia, ²Faculty of Contemporary Islamic Studies, Universiti Sultan Zainal Abidin, Gong Badak Campus, 21300 Kuala Nerus, Terengganu, Malaysia

Abstract

The World Health Organization (WHO) has classified digital addiction as a mental illness that affect negatively on the health of the users and it is a life threatening. The era of media convergence has integrated media varieties and enhances the work of printing, audio, video, and interactive digital media organizations. This article discusses the issue of digital addiction in the era of media convergence, also its impact on mental-physical health of the users, and the reflection of scenarios occurs in Asia. The qualitative content analysis are performed in this study by focusing on the theme of global digital addiction, spesific to asian region nevertheless. The result visibly demonstrates the excessive used of digital devices affects brain function and user's physicality where leads to violent, stress, depression and mental confusion. In Asia, online video games, for example Myu, World of Warcraft, Defense of the Ancients, Diablo 3 and Ghost Recon have caused serious digital addiction as a result of engagement in 22 to 40 hours of nonstop playing, especially to teenagers aged between 15 to 30 years, unfortunately causing death. Therefore, the use of digital devices should be controlled, and government should clarify enforcement, so that the death rate due to digital addiction can be reduced gradually.

Keywords: Digital Addiction, Mental-Physical Health, Media Convergence

Introduction

Mental health is defined as a state of well-being that allows one to realize his potential, knows how to handle stress, be able to work productively, and thus play a role of oneself to society (World Health Organization, 2018). Meanwhile, Newman (2017) states that mental health refers to cognitive, behavioral and emotional well-being referring to the way we think, feel and behave, as well as absence from mental disorders. Indeed, Manwell et al (2015) defines mental health as a condition that also includes biological, psychological or social factors that contribute to an individual's mental state, and his ability to perform according to a situation. In addition, it also includes intellectual, emotional and spiritual development, as well as positive self-perception, self-esteem and harmonious bond between physical and

intrapersonal health. The media convergence era focuses on the integration of various media which enhances its ability, and it's a trend through strategic philosophy, a union of culture and operations of printing, audio, video along with interactive digital media organizations (Zheng, 2016). Uncontrolled and excessive centralization of digital media is causing the symptoms of digital addiction that are contagious and rampant in today's world society.

- Hence, this study aims to discuss the issue of digital addiction in the era of media convergence, also its impact on mental-physical health of the users, and the reflection of scenarios occurs in Asia.

Digital Addiction in the Era of Media Convergence

Addiction is a common situation involves continuous relationship between human and objects, experienced by individuals of their own preferences that eventually cause stress, while digital addiction is seen as a threat to real life due to instabilities of a person's heart, emotions, identity and personality (Dilci, 2019). The World Health Organization (WHO) has declared that digital addiction is a kind of mental illness that creates a pattern of 'repetitive and constant gambling' attitudes, in fact it becomes a priority over other interests (Reed et al., 2019; Degenhart et al., 2018; Smart, 2017). Statistics show that 10% -15% of young people in Asian suffer from this problem and followed by European at 1% -10% (Saunders et al., 2017), and the statistics are increasing each year. In Asia, digital addiction occurs due to the desire of being free from parental control and teachers' command; nevertheless modern gadgets have interactive visual effects that draw the attention and interest of the young people (Lee & Morgan, 2018). Even so, digital addictions engender negative impact as a result of extreme practice, where disruption of livelihood is caused by the failure to be in real world (Hoque, 2018) such as playing compulsively and isolating oneself from social relationships (Omar, 2017). In addition, it also stimulates impulse control disorders triggered from the failure of time management and loss of interest in other activities (Irmak & Erdogen, 2016).

The young people however are exposed to browse pornographic websites that can be accessed directly through free Wi-Fi facilities (Nahar et al., 2018) which further increasing the birth rate of illegitimate children, sexual transmitted diseases aside from mental illness. Therefore, a method of intervention is needed to treat this kind of digital addiction, so that it can be curbed, not to persist by the society (Manap et al., 2016). Digital addictions provide negative impact on life tolerance, and lag in life (Ali, 2018; Johnson & Keane, 2017) which specific to the young people who are excessive in using digital media (Griffiths & Kuss, 2017). For adults, these symptoms affect physical health (Verma & Kumari, 2016), followed by increase the risk of headache, abdominal pain, vision and overweight problems, moreover aging in children (Smahel, 2015) due to socio-economic impact (Ali et al., 2015). It is in line with the study of Al-Mazmi et al (2013) who formulated some negative effects of digital addiction namely (i) limitation of development progress and external activities that cause obesity and various health problems, (ii) time-consuming, (iii) sleep disorders and insufficient sleeping period, (iv) self-satisfaction that leads to addiction, (v) malnutrition, (vi) poor language proficiency and lack of social skills including inability to understand body language and (vii) coerce to violent, stress, depression and confusion.

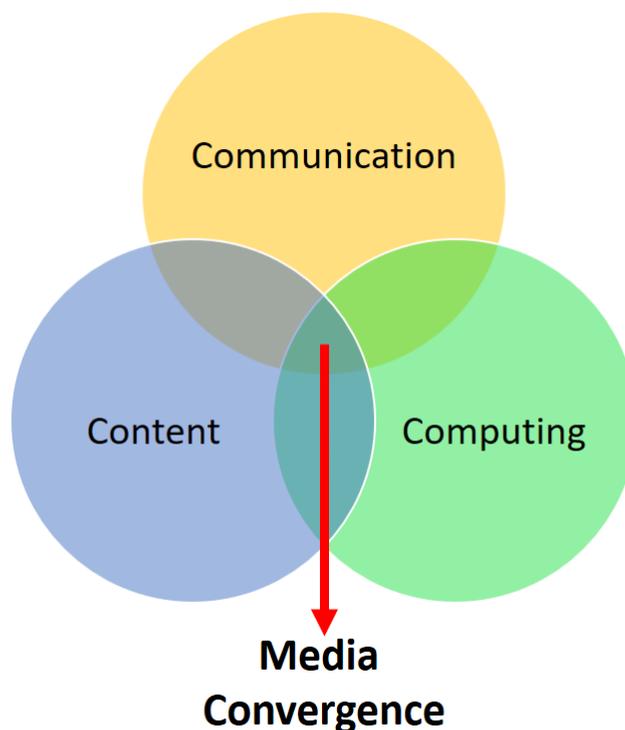


Figure 1: 3C's of Media Convergence (<https://leverageedu.com/blog/media-convergence/>)

Digital Addiction and Mental-Physical Health

The World Health Organization (WHO) has identified that the ability to contribute to the society and individual success is the effect of mental health stability where one manages to deal with his potential, control tension, thus enhance productivity (https://www.who.int/features/factfiles/mental_health/en/). It is in line with Manwell et al. (2015) view who also adds it as a condition that also includes biological, psychological or social factors that contribute to an individual's mental state and ability to act according to the environment. In addition, it also includes intellectual, emotional and spiritual development, positive self-perception, feelings of self-esteem and well-balanced between physical and intrapersonal health. The National Health and Morbidity Survey Report (Institute for Public Health 1996; 2006; 2011) found that mental health problems among Malaysians are increasing yearly, involving adults and children from 12% to 20%, while Berita Harian websites on 28th September 2016 stated that about 30% or 4.2 million Malaysians aged between 16 and above issued mental health problems. It is an apprehensive statistical figure because the trend is upward along, and influencing the development of human capital (Samsudin & Hong, 2016). According to Naslund et al. (2016), a serious mental health patient often enjoys social media as a medium of disclosing problems with society that invites a universal concern. Therefore, digital technology that is used excessively causes addiction which in turn creates problems and affects the development of the community, society and the country.

Users did get pleasure from the activity which they feel is necessary to stay online, however causing their body to release endorphin (Idris, 2017). Rapid internet access contributes to the factor of digital addiction as studies conducted to medical students from several countries (Al Qadasi et al., 2018). In Malaysia, it shows that physiological factors are the main factors that cause generation Y to become addicted to mobile phones, followed by psychological factors and social networks (Hassan et al., 2017) which causing poor

psychological health (Hadi et al., 2019) further affecting health, depression, sleep disturbances, dizziness and loneliness (Hassan et al., 2017). The World Health Organization (WHO) health experts state that Gaming Disorder is a term given to those who are addicted to video games who neglect their lives, oneself, education, employment, family and so on, for 12 consecutive months. This online video game addiction has proven to have serious negative effects that can be endangering. The International Classification of Diseases (ICD-11) which serves as an international standard states that video game addiction is included in the category of “mental disorders, behaviors or brain development” (Mymetro, 2017). From a neuroscience point of view, neuron imaging research has found the addiction practice stake the equivalent volume of brain activation as drug addiction. This suggests that the addiction practice shares similar characteristics as drug addiction. Research thru magnetic resonance imaging (MRI) is useful for identifying neuronal responses between the addictive devices based on stimuli of specific brain areas, thus help researchers to diagnose potential individuals (Kassim, 2016). Studies show that digital addiction is closely related to the Orbitofrontal Cortex (OFC) which serves as an impulse control and reward process (Peper & Harvey, 2018). A study by Nasser et al. (2019a; 2019b) showed that smartphone addiction of social networking applications affects brain areas related to attention, and it correlates with the questionnaire scores regarding addiction.

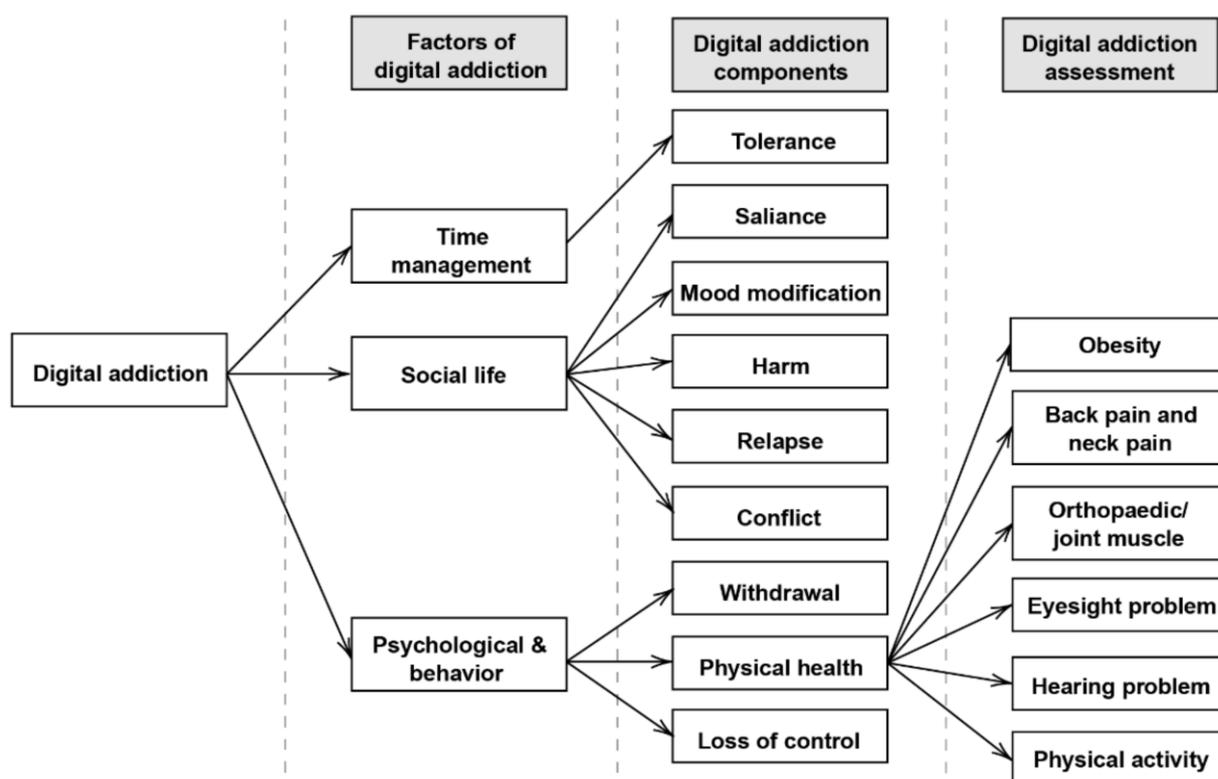


Figure 2: Relationship Diagram of Digital Addiction (Aziz et al., 2021)

Digital Addiction Scenario in Asia

South Korea has reported the world's first death toll because of excessive practice computer games for four consecutive days. A citizen aged 24 years unexpectedly died at internet cafes while playing game of "Myu", with minimal rest and fast food intake. The cause of death is due to prolonged sitting facing the computer (Korea SBS News, 2004). An autopsy report by

Lee (2004) revealed a pulmonary thromboembolism occurs to the deceased's pulmonary blood vessels, unfortunately caused sudden death. The reports also show that the pulmonary blood vessels are clogged when the blood through the pulmonary arteries is abruptly blocked. Small blood clots from the blood vessels of the leg veins are detached, then the clot pass through the cardio and attaches to the blood vessels of the lungs. This pulmonary blood vessel can happen after prolonged sitting in various positions such as enduring long flights, partaking car trips and even sitting at the cinema. After 10 deaths related to the pulmonary vascular, and a murder involving computer game users, South Korea recognizes gaming addiction as a national issue and is the most serious mental illness concern (Lee & Morgan, 2018).

Cases in China show that a citizen died of exhaustion after playing non-stop "World of Warcraft" games for 19 hours at an internet cafe in Shanghai. A 17 years old Russian named Rustam, died after continually playing game of "Defense of the Ancients" for more than 22 days with a break for snacks and just a short nap. A Taiwanese citizen died at an internet cafe in the same position while playing the game "Diablo 3" for more than 40 hours. In addition, digital addiction especially game addiction has stimulated aggressive attitude of a 16 years old boy that killed both of his parents after his video game CD was confiscated. A 28 years old father from Philadelphia was sentenced to 22 years in prison for beating his 17 month son to death for his son overturning and damaging the "Ghost Recon" game console. A 17 years old Filipino teenager killed his 68 years old grandmother for disturbing him playing the game "Defense of the Ancients" at internet cafe (Aziz et al., 2018). Shocking deaths associated to other video games are increasing each year in various countries. Also, news portals report many cases related to digital addiction especially video game addiction. For example, a teenager in Bangkok who spent his school holidays playing video games and was found dead in his room (Mymetro, 2019). A teenager in Jakarta was also reported died while playing video games in a *cybercafé*; however the cause of his death is remained unknown (Mymetro, 2016). A teenager in the southern province of China, i.e. Hunan, reportedly tried to jump from the seventh floor of a school building after his mobile phone was confiscated while playing a game (Mymetro, 2018). Digital addiction is a serious mental health issue that we should be wary of due to the increasing number of deaths associated to constant playing online games for an extended time.

Digital addiction including internet addiction has shown an increase of accidents and violence cases in Malaysia (Sinar Harian, 2019). Therefore, digital addiction is considered a threat to the young people or general population of the country, which causes social problems. Attempts to overcome digital addiction are indeed is challenging. Therefore, preventions are the most effective action to be taken. Internet addiction is studied widely in Malaysia, by specific in Terengganu. Though students of Universiti Malaysia Terengganu have a high level of internet addiction, it does not affect their academic achievement (Tom & Tohalib, 2018). Students of Sultan Mizan Polytechnic Zainal Abidin (PSMZA) are moderately affected to the excessive use of WhatsApp application (Ariffin & Idris, 2018). Similar to the study of internet addiction conducted to the student of Kuala Terengganu Community College (KKKT) where the results is still constraint (Mohamad, 2013). A study performed by Hassan & Rashid (2012) shows that the level of internet used among young aged 16 year olds is under controlled and moderate. The issue pertaining to the impact of online games, such as addiction has attracted the interest of researchers and governments of several countries. For example, the Chinese government inevitable has shuts down internet cafes at certain hours, and Australia government enforces the identification of certain games before they are allowed to play on (Ididi et al., 2017).

Conclusion

In general, extreme digital addiction among the community, especially teenagers, increases the risk of mental-physical health and can lead to death. In Asia, online video games, for example Myu, World of Warcraft, Defense of the Ancients, Diablo 3 and Ghost Recon have caused serious digital addiction as a result of engagement in 22 to 40 hours of nonstop playing, especially to teenagers aged between 15 to 30 years, unfortunately causing death. Therefore, the use of digital devices should be controlled, and government should clarify enforcement, so that the death rate due to digital addiction can be reduced gradually.

Acknowledgement

The study was funded by the Ministry of Education (MOE) under FRGS grant research funds with reference code FRGS/1/2019/SSI03/UITM/03/4 entitled 'Model Intervensi Spiritual Islam terhadap Ketagihan Digital Era Pemusatan Media'

Corresponding Author

Nurul Hidayah Aziz

Academy of Contemporary Islamic Studies (ACIS), Universiti Teknologi MARA, Perak Branch, Tapah Campus, 35400 Tapah Road, Perak, Malaysia

Email: nurul863@uitm.edu.my

References

- Al Qadasi, F. A., Al Jaber, N. A., Al Moa'ayn, E. A., Al Zandani, R. A., Al Aji, S. A., Al Jabri, W. M., Ali, Z. F., and Muthana, Z. M., (2018). Prevalence of Internet Addiction and Its Associated Factors among Medical Students, Yemen. *International Journal of Public Health Research*, 8(2), 965-974.
- Ali, R. (2018). Digital Motivation, Digital Addiction and Responsibility Requirements. In *2018 1st International Workshop on Affective Computing for Requirements Engineering (AffectRE)* (pp. 27-27). IEEE.
- Ali, R., Jiang, N., Phalp, K., Muir, S., & McAlaney, J. (2015). The emerging requirement for digital addiction labels. In *International working conference on requirements engineering: Foundation for software quality* (pp. 198-213). Springer, Cham.
- Aziz, N., Iida, H., Ariffin, M., Akhir, E. A. P., & Sugathan, S. K. (2018). Massively Multiplayer Online Game (MMOG) impact towards Malaysian youth's time management, social life and psychology. *Advanced Science Letters*, 24(3), 1754-1757.
- Aziz, N., Nordin, M. J., Abdulkadir, S. J., & Salih, M. M. M. (2021). Digital addiction: systematic review of computer game addiction impact on adolescent physical health. *Electronics*, 10(9), 996.
- Degenhardt, L., Bharat, C., Bruno, R., Glantz, M. D., Sampson, N. A., Lago, L., ... & Caldas-de-Almeida, J. M. (2018). Concordance between the diagnostic guidelines for alcohol and cannabis use disorders in the draft ICD-11 and other classification systems: analysis of data from the WHO's World Mental Health Surveys. *Addiction*.
- Dilci, T. (2019). A Study on Validity and Reliability of Digital Addiction Scale for 19 Years or Older. *Universal Journal of Educational Research*, 7(1), 32-39.
- Griffiths, M. D., & Kuss, D. (2017). Adolescent social media addiction (revisited). *Education and Health*, 35(3), 49-52.
- Hadi, A. A., Nawawi, H. M. M., Shamsuri, N., Rahim, N. N., & Pasi, H. (2019). Smartphone Addiction and Its Relationship with Psychological Health among Clinical Years Medical

- Students of International Islamic University Malaysia (IIUM), Kuantan. *IIUM Medical Journal Malaysia*, 18(2).
- Hassan, J., & Rashid, R. S. R. A. (2012). Ketagihan penggunaan internet di kalangan remaja sekolah tingkatan 4 di bandaraya Johor Bahru. *Journal of Technical, Vocational & Engineering Education*, 6, 23-43.
- Hassan, N. M., Kassim, E. S., Maon, S. N., Demong, N. A. R., & Kholed, S. N. S. (2017). Technology, Social network, Physiology and Psychology as Risks Factors to Mobile Phone Addiction. *PERTANIKA JOURNAL OF SOCIAL SCIENCE AND HUMANITIES*, 25, 341-349.
- Hoque, A. S. M. M. (2018). DIGITAL DEVICE ADDICTION EFFECT ON LIFESTYLE OF GENERATION Z IN BANGLADESH. *Asian People Journal (APJ)*, 1(2), 21-44.
- Ididi, I. O., Abd Ghani, A. A., & Ali, N. M. (2017). Counselling Agent in Online Game Design for Excessive and Addictive Gaming Control. *Journal of Telecommunication, Electronic and Computer Engineering (JTEC)*, 9(2-12), 45-50.
- Idris, N. A. (2017). Remaja dan ketagihan. *MyHEALTH*. Retrived from <http://www.myhealth.gov.my/remaja-dan-ketagihan-internet/>
- Institute for Public Health. (1996). National Health and Morbidity Survey 2011: Non-communicable Diseases. Kuala Lumpur: Ministry of Health Malaysia.
- Institute for Public Health. (2006). National Health and Morbidity Survey 2011: Non-communicable Diseases. Kuala Lumpur: Ministry of Health Malaysia.
- Institute for Public Health. (2011). National Health and Morbidity Survey 2011: Non-communicable Diseases. Kuala Lumpur: Ministry of Health Malaysia.
- Irmak, A. Y., & Erdogan, S. (2016). Digital Game Addiction Among Adolescents and Young Adults: A Current Overview. *Turkish Journal of Psychiatry*.
- Johnson, N. F., & Keane, H. (2017). Internet addiction? Temporality and life online in the networked society. *Time & Society*, 26(3), 267-285.
- Kassim, N. (2016). Pengimejan Resonans Magnetik (MRI). *MyHEALTH*. Diperoleh daripada <http://www.myhealth.gov.my/pengimejan-resonans-magnetik-mri/>
- Korea SBS News. (2004). Computer death: World's first case. (Akses Online: 10 Mac 2020), Retrieved from https://news.sbs.co.kr/news/endPage.do?news_id=N0311617389
- Lee, G. L., & Morgan, H. (2018). Understanding Children's Attraction Toward Digital Games and Preventing Their Gaming Addiction. *US-China Education Review*, 8(1), 11-17.
- Lee, H. (2004). A new case of fatal pulmonary thromboembolism associated with prolonged sitting at computer in Korea. *Yonsei Medical Journal*, 45, 349-351.
- Manap, J., Hamzah, M. R., Amin, A. S., Izani, M> N. N., Idris, F., Hamjah, S. H., & Tambi, N. (2016). Penggunaan dan Implikasi Media Sosial Terhadap Remaja Generasi Z. In *International Conference on Social and Economic Development, (November)* (pp. 1-12).
- Manwell, L. A., Barbic, S. P., Roberts, K., Durisko, Z., Lee, C., Ware, E., & McKenzie, K. (2015). What is mental health? Evidence towards a new definition from a mixed methods multidisciplinary international survey. *BMJ open*, 5(6), e007079.
- Mohamad, F. (2013). SIKAP PELAJAR KOLEJ KOMUNITI KUALA TERENGGANU TERHADAP PENGGUNAAN DAN KETAGIHAN INTERNET. *Persidangan Kebangsaan Penyelidikan dan Inovasi Dalam Sistem Pendidikan dan Latihan Teknikal dan Vokasional CiE-TVET 2013*, 322-345.
- Nahar, N., Sangi, S., Rosli, N., & Abdullah, A. H. (2018). IMPAK NEGATIF TEKNOLOGI MODEN DALAM KEHIDUPAN DAN PERKEMBANGAN KANAK-KANAK HINGGA USIA REMAJA

- (NEGATIVE IMPACT OF MODERN TECHNOLOGY TO THE CHILDREN'S LIFE AND THEIR DEVELOPMENT). *UMRAN-International Journal of Islamic and Civilizational Studies*, 5(1).
- Naslund, J. A., Aschbrenner, K. A., Marsch, L. A., & Bartels, S. J. (2016). The future of mental health care: peer-to-peer support and social media. *Epidemiology and psychiatric sciences*, 25(2), 113-122.
- Nasser, N. M. A., Mohamad, M., Suppiah, S., Fong, C. L., Ismail, W. S. W., Osman, S. S., Hamid, A. I. A. & Tein, S. S. (2019a). Brain Activation Pattern on Internet Gaming Video: A Preliminary Study. *Malaysian Journal of Youth Studies*, 21-35.
- Nasser, N. S., Sharifat. H., Rashid, A. A., Mohamed, M., Hamid, S. A., Rahim, E. A., Mustafa, S., Mooi, C. S., Tyagi, R., & Suppiah, S. (2019b). Smartphone Addiction Among Undergraduate Students In UPM: A Functional Magnetic Resonance Imaging Study. *Malaysian Journal of Youth Studies*, 151-171.
- Omar, A. (2017). Permainan Mudah Alih dan Kanak-kanak. *Ideology*, 2(1), 137-149.
- Peper, E., & Harvey, R. (2018). Digital addiction: Increased loneliness, anxiety, and depression. *Neuro Regulation*, 5(1), 3-3.
- Reed, G. M., First, M. B., Kogan, C. S., Hyman, S. E., Gureje, O., Gaebel, W., ... & Claudino, A. (2019). Innovations and changes in the ICD-11 classification of mental, behavioural and neurodevelopmental disorders. *World Psychiatry*, 18(1), 3-19.
- Samsudin, S., & Hong, K. T. C. (2016). Hubungan Antara Tahap Kesihatan Mental dan Prestasi Pelajar Sarjana Muda: Satu Kajian di Universiti Utara Malaysia. *Jurnal Sains Kesihatan Malaysia (Malaysian Journal of Health Sciences)*, 14(1).
- Saunders, J. B., Hao, W., Long, J., King, D. L., Mann, K., Fauth-Bühler, M., ... & Chan, E. (2017). Gaming disorder: Its delineation as an important condition for diagnosis, management, and prevention. *Journal of behavioral addictions*, 6(3), 271-279.
- Smahel, D., Wright, M. F., & Cernikova, M. (2015). The impact of digital media on health: children's perspectives. *International journal of public health*, 60(2), 131-137.
- Smart, G. L. (2017). Virtual Addiction: Is Internet Gaming Addiction Fact or Fantasy?.
- Tom, A. K. C., & Tohalib, Z. (2018). Hubungan Antara Ketagihan Internet Dengan Pencapaian Akademik Dalam Kalangan Pelajar Universiti Malaysia Terengganu (UMT). *Prosiding Konvensyen Kepengetuaan dan Felo Penghuni Kolej Kediaman Universiti Awam Kebangsaan*, 420-428.
- Verma, J. Y. O. T. S. N. A., & Kumari, A. R. C. H. A. N. A. (2016). A Study on Addiction to Social Networking Sites and Psychological Well Being among Working Adults. *International Journal of Humanities and Social Sciences*, 5, 151-160.
- World Health Organization. (2018). Mental health: strengthening our response. Retrived from <https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response>
- Zheng, H. (2016). Movie Art Innovation and Its New Aesthetic Dimension in the Media Convergence Era. In *2nd International Conference on Arts, Design and Contemporary Education*. Atlantis Press.