

## HEALTHY ESPORT ENGAGEMENT FOR ESPORT ATHLETES: A PROPOSAL FOR A RESEARCH FRAMEWORK

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### Abstract

The global spread of Covid19 poses a challenge to the business landscape at a magnitude we have not seen before. Covid19 was declared a “public health emergency of international concern” by the International Health Regulations Emergency Committee of the World Health Organization (WHO) on January 30, 2020. Less than two months later, the WHO declared COVID-19 as a pandemic. The situation of lockdown and movement restrictions has resulted in the emergence of online related activities on digital platforms such as online businesses, online learning and also the online gaming that is now known as eSport. Online gaming or eSport has become very popular among the public, including university students. Hence, excessive involvement in eSport activities will have negative effects not only to the students’ health but also to their quality of life. Despite a growing research interest in eSport, a void knowledge exists regarding the healthy eSport lifestyle. To address the gap in research, this paper aims to take an initial step by proposing a framework for a holistic model to determine the attributes of a balanced quality of life for eSport athletes. The framework combines two approaches from both health and sports literature and methodically will be using both qualitative and quantitative approaches for its investigation. The framework can help eSports athletes, especially students, to maintain a balanced quality of life despite their engagement in eSport activities.

### Research paper

**Keywords:** eSport; healthy engagement; quality of life; lifestyle; athletes

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## **Introduction**

The COVID-19 pandemic has led to an unprecedented situation, with incalculable health, social, and economic consequences. At the start of the outbreak, the financial markets collapsed, although not all sectors suffered equally. The gaming and eSport industry is one of those that has suffered the least from the fall in the markets (López-Cabarcos, 2020). Millions of people locked up at home, bored, stressed, and anguished. Out of a sudden the gaming and eSports companies growing their prominence throughout the first half of 2020 (López-Cabarcos, 2020; Gomez and Raizada, 2020). The electronic gaming industry which now is been known as eSport has suddenly boomed.

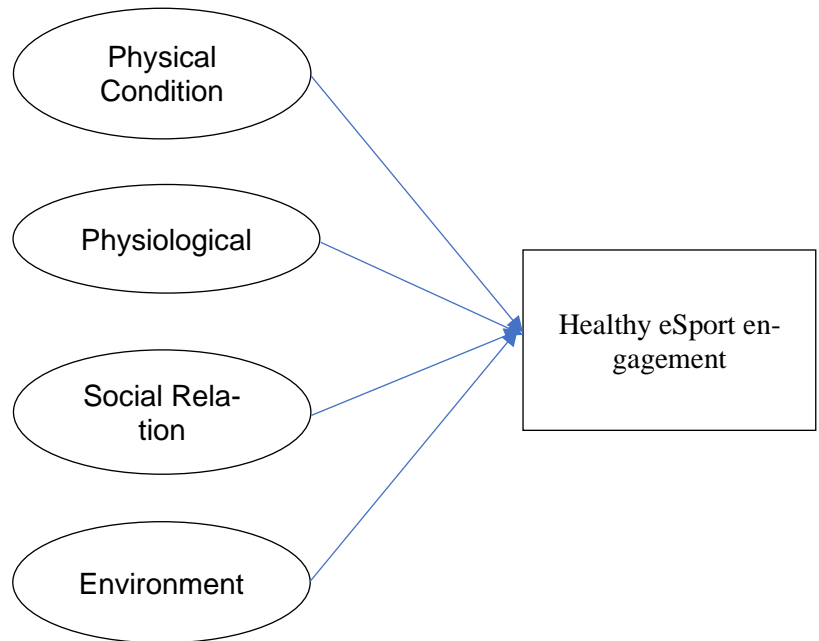
Global eSport economy has surpassed USD 1 billion annually since the year 2019 (Newzoo, 2019). Due to its global expansion, eSport in Malaysia also are becoming very rapid in development at all levels of groups. There has also been a growing interest on eSport research in the country such as by Yusof and Basri (2021) on socialization process among Malaysian women eSport players and Ching et al. (2019) on motivational factors for online gaming. However, there is at the moment a very scant studies focusing on eSport and its impacts towards the balance in quality of life of the eSports athletes especially among the university students. Covid19 pandemic has forced all of us into lockdowns including the university students who are now have to fully engaged in online distance learning at home. As a result, a large part of these students engaged in online gaming and eSport activities, as what youth and teenagers normally do (Salo, 2017). In fact, according to Hellstrom et al. (2015), online video gaming and eSport activities tend to be very addictive, hence, getting too much engaged in eSport might be detrimental not only to

their health, but also to their quality of life as a university student. Thus, it is critical for them towards balancing their career as a student and an eSport athlete.

Therefore, to address the gap in research, this paper aims to take an initial step by proposing a framework for a new holistic model to determine the attributes of healthy eSport engagement in Malaysia. Specifically, this article focused on a proposal of a research project that underlines the following objectives; 1. to propose a healthy eSport model that can contribute to balance quality of life; 2. to come out with the valid and reliable instrument to assess healthy eSports engagement; 3. to investigate the contribution of the healthy eSport attributes to eSport athletes; and 4. to examine the scores of eSport athletes on the identified attributes and to propose strategies to overcome the limitations.

Two approaches will be used in this proposed study which are qualitative research design and quantitative research design. By using qualitative research design focusing on a focus group, it is expected that this study would come out with a model comprising of healthy eSports attributes. Then, the valid and reliable instrument to assess these attributes will be constructed (Naderibeni et al., 2020; Dana et al., 2022). Quantitative research design will then be applied to test the instrument in terms of its convergent/divergent and concurrent validity (Salamzadeh, 2020; Rahman et al., 2022). It is expected that the research project can contribute to producing healthy and balance quality of life in the higher learning institutions and subsequently will contribute to the growth of Malaysia eSports economy and this new lifestyle.

Therefore, based on the research objectives of this study, a research framework is proposed as shown below.



**Figure 1.** Proposed research framework

## Literature Review

According to Russ (2019), the eSport economy has surpassed USD 1 billion in 2019, where eSport industry has shown a steady growth ever since. It is expected that the eSport industry will be worth USD 1.8 billion in 2022, and this massive growth has been boosted by equally impressive growth in the eSports audience from 120 million to 495 million over the last five years (Dujmovic, 2020). As a result, the eSport activities in Malaysia are also becoming very rapid in its development at all levels of groups.

Increased stress, sleep problems, obesity, and behavioural issues are a few of the frequently discovered negative health effects associated with es-

ports and gaming. In a similar vein, playing video games is connected to sedentary behaviour, which has been related to an increased risk of non-communicable diseases (Smith et al., 2019) (Peracchia and Curcio, 2018) (DiFrancisco-Donoghue et al., 2020; Soleimani et al., 2021; Yin et al., 2020; Rudolf et al., 2020; Bailey et al., 2019). The potential of improper Internet use is also there for esports competitors (Argyriou et al., 2017). However, it seems more advisable to comprehend this phenomenon and take advantage of the opportunities it provides rather of only highlighting the negative side effects and public health consequences. Depressive, musculoskeletal, and psychosomatic symptoms are associated with addictive effect of excessive online gaming among teenagers (Hellstrom et.al. 2015). On the other hand, Salo (2017) proposed a research framework for eSport athletes as well, but his major concern was towards the athletes' career transitions.

In general, sport is any sort of physical exercise that, through ad-hoc or planned participation, enhances sports performance at any level while also helping to grow or improve one's physical and mental health. Accordingly, the study shows that professional and high-level esports players engage in physical activity as well, with those who are 18 years of age and older working out more than three times daily recommendations of 21 minutes of physical activity from the World Health Organization.

There are very few studies has been done on the comprehensive framework of eSport in sustaining quality of life especially as a university student. There have been some literature or framework on eSport athlete however all of them are only focusing on the health aspect of the eSport athlete. There is still lack of research on healthy eSport lifestyle focusing on balance quality of life. Most studies were done focusing on adoption of online gaming

using existing specific framework related to health effect such as by DiFrancisco-Donoghue, et al. (2018).

Recently, eSport has received industry recognition in competitive gaming, leading to rapid development of its applications and regulations by the governing bodies (Funk et al., 2018). The popularity of eSport is observed by the increasing numbers of athletes and spectators (Cunningham 2018). Nonetheless, this phenomenon captures the attention of the media, resulting in the growing eSport competitions organised by the public and private agencies (Cunningham et al., 2018; DiFrancisco-Donoghue et al., 2019). In 2016, three prominent industry players: Microsoft, Samsung and Red Bull fuelled almost \$350 million for global eSport industry with projected revenues of \$696 million in 2017 (Funk et al., 2018; Newzoo, 2019).

While revenues and profits have become the main antecedents toward the development of eSport, this contemporary form of sport complements the basic foundation of sports in promoting fairness, teamwork, excitement and healthy lifestyle (Jenny et al., 2017). This includes gender and race equality, reduced societal issues and improved well-being. Despite this absence of agreement towards the definition of eSport, a working definition is required to enable the foundation of eSport studies and identify the constructs or domains to be examined further.

Funk et al. (2018) elucidated eSport as organised video game competitions. eSport is also known as cybersport, virtual sport, and competitive gaming (Jenny et al., 2017). It is worth noting that eSport is most often in the context of organised and structured tournament (Pizzo et al., 2018; Jenny et al., 2017). The predominant notion of eSport model relies on the competitive gaming events before live, online and broadcast audiences (Funk et al., 2018).

In other words, eSport is focusing on the online gaming competition such as fighting games (e.g., Street Fighter), first-person shooters or wars (e.g., Counter-Strike, DOTA and PUBG), real-time strategy games (e.g., StarCraft II), multiplayer online battle arenas (e.g., League of Legends and Mobile Legends BangBang), and sport-based video games (e.g., FIFA 21 and Pro-Evolution Soccer).

Given the importance of the eSport industry, it is crucial to examine its contribution towards economic, environment and social sustainability. Consistent with the United Nations sustainable development goals (SDGs), the healthy lives and well-being of all eSport activities shall be emphasised to balance the three thrusts of the sustainability elements (United Nations, 2020). Nonetheless, to capture the global SDGs needs, recent studies should also focus on strengthening the capacity of all countries, in particular developing countries including Malaysia, for early warning, risk reduction and management of national and global health risks (United Nations, 2020). This situation has led to a proliferation of studies emphasising the antecedents and the outcomes of the UN's SDG.

Unfortunately, while the interest of eSport has recently growing, the body of literature fails to address the SDGs issues, particularly relating to the health and well-being of eSport athletes. The potential impact that an eSports program could have on a university student, coupled with the growing interest that universities are showing in such a program, combine to make this line of research relevant in sport literature, particularly related to eSport aspects. For example, the University of Pikeville offered scholarships for eSport programs. In the same vein, Robert Morris University provided scholarships to

33 students (Schaeperkoetter et al., 2017). In line, the Government of Malaysia provides RM20 millions for eSport industry development for 2019 onwards (Ying, 2020). However, before cultivating excessively eSport industry, it is first important to describe the health-related issues of eSports engagement especially among the university students. This is to ensure that the health condition and well-being of the students, afterwards athletes, are not compromised. Hence, this study aims to minimise the gaps in the current literature by providing the foundation and model in assessing healthy eSport, which contributing towards the healthy engagement and athletes' well-being.

The eSport development in Malaysia has largely been dominated by its demand and growth among eSport athletes and audiences. The eSport industry has never been on a structured and focused agenda of nation, at least not until very recently when the government introduced a five-year strategic plan for eSport development (Gamezo, 2019). For example, there has never been any eSport tournament focusing on a specific group of audience such as in April 2019 where a subsidiary of Malaysia media conglomerate known as Media Prima Digital backed by the main sponsor Celcom Axiata Berhad has established the first specific eSport tournament for higher learning institution students in Malaysia known as “CELCOM XPAX KEK” (Kejohanan Esukan Kampus) or ‘eSport Campus Tournament’. This tournament was made exclusively for students in higher learning institutions with major aim to explore eSport athletes among colleges and university students including those in the polytechnics from both public and private higher education institutions. The first series of this “Kejohanan E-Sukan Kampus” commenced on April 2019 and was continued by its subsequent second and third series on October 2019 and May 2020 respectively (Mohd Khir et al., 2019). The tournament has



since become the largest gathering of eSport student athletes from Malaysian public and private universities and colleges.

Therefore, this research project is proposed to address the limitations of the existing models and to propose the holistic model to determine the attributes of balance quality of life for eSport athlete.

## **Research Methodology**

This paper also outlined the methodology that will be used in the proposed research study. There will be two main research questions to be addressed by this study which is how can the condition of eSport athlete be assessed before their participation in eSport tournament and why do managing eSport athlete matter? In order to answer these questions, six hypotheses were established as an attempt to develop an instrument to gauge the involvement of eSport athletes in terms of their involvement in eSport activities towards a healthy and balance lifestyle: physical conditions contribute to healthy eSport engagement; physiological contributes to healthy eSport engagement; social relation contributes to healthy eSport engagement; environment contributes to healthy eSport engagement; spiritual contributes to healthy eSport engagement; level of independence contributes to healthy eSport engagement.

This scale-based instrument will enable the assessment of the healthy eSports engagement so that improvement can be done to overcome their limitations in order to pursue a career as an eSport professional athlete. The proposed research project can be regarded as exploratory in nature as it is intended to model balance quality of life for eSport athlete that can help them to be successful in their campus life. With this purpose in mind, the project

will be divided into two main categories; qualitative approach by conducting a focus group study in determining the eSport balance quality of life attributes, and quantitative approach by performing a survey to examine the contribution of each attribute in ensuring healthy lifestyle.

For the first category, a group of selected active eSport athletes from among university students will be gathered. They will share their experience and give opinion on what determines their healthy lifestyle and how these factors help them. They will also share their expectations on the current policies and practices of the relevant authorities in helping and encouraging their participation to be successful in the local eSport industry. At the end of the succession, they will provide suggestions on how to overcome the challenges faced by eSport athlete in balancing their student life and their eSport activities. Data analysis involves thematic content analysis where certain themes will be created to reflect the responses given by the focus group respondents. By using this analysis, correct themes or attributes can be determined for use in the next stage of the study.

The findings from this focus group discussion will be verified by the industry experts in this area of study (panel experts from the eSport industry). The identified themes or attributes of healthy eSport engagement will be discussed by these panels. After the final list of attributes has been determined, the next stage involves the creation of the items to assess each attribute. This activity involves the collection of existing items from the literature or published previous research work and suggestions from the recruited sample respondents consisting of the panels of experts. The process will be carried out repeatedly until the final agreed upon instrument has been determined. The

findings will then be used to develop a set of questionnaires for the data collection at the quantitative phase.

The next stage involves the validation of the newly created instrument to measure healthy eSport engagement attributes through a pilot testing. A sample size of between 150 to 200 respondents will be recruited from among the active eSport athletes participating in any eSport tournament. A minimum of 150 samples are required to allow for the analysis to be conducted using Structural Equation Modelling (SEM). Through SEM, measurement and structural model of the proposed attributes can be determined. For the quantitative part of the study, an estimate sample of 300 respondents will be selected from the database comprising of approximately 700 athletes who has previously participated in the “Kejohanan Esukan Kampus” (KEK) series one up until the third series. At this stage, a survey will be done using the validated newly developed instrument that will be personally distributed to the selected eSport athletes.

Data analysis would involve; first descriptive analysis to determine the respondents' profile; second, exploratory factor analysis using SPSS; and third, confirmatory factor analysis using SEM. Descriptive analysis will also be used to gauge the respondents' scores on each attribute. All the processes are meant to develop a validated newly developed instrument to assess healthy eSport engagement attributes and success so that attributes can be assessed and these attributes can be empirically linked to healthy eSport lifestyle. The whole process will address both research question 1 and 2 simultaneously.

## **Conclusion**

As been mentioned, eSport is a growing industry both in terms of revenues generated and in terms of capturing audience attention which in particular mostly of them are young people (Garcia and Murillo, 2020). This research will focus on a large segment of these young people comprising university and college students, now known as varsity eSport athletes. Garcia and Murillo (2020) also found that age, gender and education are important variables in eSport participation, hence, this would further explore their findings as students in higher learning institutions were mostly well educated. The findings would be significant, justifying the increased attention to eSport by researchers in sports and other related fields (Funk et al., 2018).

This study also would be able to identify the specific attributes that would be significant towards a healthy eSport engagement among eSport athletes towards a balance quality of life. It is expected that this would contribute towards the wellbeing of eSport athletes especially among university students to be more aware of their needs for a balance involvement in eSport activities and their learning or studying tasks at hand. On another note, the framework also can be useful for eSport student athletes who intend to embark their career transitions from a student into a fulltime or professional eSport athletes as suggested by Salo (2017).

The proposed model or research framework developed will then serve as the reference or guidelines for future endeavours to come out with specific modules to groom athletes on each identified balance quality of life attributes. Later on, the outcome of the study can be expanded from only benefiting eSport student athletes towards a larger group of athletes out there at each and different level of eSport community engagement. It can help the government

devise relevant programs for eSport athletes so that they can equip themselves with the required attributes to be successful in their careers. In fact, the outcome of the study can be the input for the government to develop eSport rules and regulations focusing on the wellbeing of eSport athlete in Malaysia.

The number of eSport athletes has grown rapidly, and many teenagers aspire to have a career in eSports. However, eSports athletes' careers involve many problems, such as career-entry difficulties, straining life habits, burn-out, premature retirement, and post-career dilemmas (Salo, 2017). Despite a growing research interest in eSports, the literature outline in this paper clearly exposed a void of knowledge exists regarding eSports athletes' health aspects, especially in managing their eSport activities and balance quality of life. Hence, the proposed framework later can help eSports athletes, coaches, and other stakeholders to have and maintain a balance quality of life despite their continuous involvement in eSport activities.

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