

# Sport, Exercise, Recreation and e-Sport Participation in Malaysia

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**Abstract** The Malaysian Sports Culture Index (MSCI) is the baseline index for reporting on the achievement of Malaysians in practicing sports activities with the availability of its ecosystem. MSCI'22 is a continuation of the study which was first initiated by the Institute for Youth Research Malaysia (IYRES) in 2018. This index is the basis for the formation of the National Sports Vision 2030 and serves as a guideline for monitoring sports culture programs throughout the country. MSCI'22 succeeded in gathering 3,735 respondents from various backgrounds according to age group, gender, ethnicity, and location. In terms of location, the research used the Population Census 2020, with 720 Counting Blocks (CB) and 7200 Places of Residence (PR). The proportionate random stratified sampling method was used, and samples were taken based on the CB and PR population data of 23 million Malaysian citizens aged 13 years and above. IYRES developed a special research system (online and offline) for the purpose of data collection. The findings of the study revealed that 48% of respondents were involved in sports-related

activities. Among these, only 13.6% (n = 1,781) were at the active level, while 65.7% were moderately active, and 20.7% were less active. Most Malaysians were interested in sports activities (55.5%), followed by exercise (37.0%) and recreation (21.6%). The most popular sports activities were football (11.6%), futsal (11.0%), and badminton (8.5%). For exercise, jogging (23.1%) was the most dominant, likely because it does not require special facilities and can be done in residential areas. In terms of recreation, cycling (10.4%) and hiking (6.1%) were the preferred activities. The study also indicated that 22.4% of Malaysians were involved in e-sports, while 77.6% were not involved. In conclusion, several factors, such as facilities, financial support, environment, and motivation, contribute to an active lifestyle. However, the study also highlighted that self-awareness plays a crucial role in encouraging sports, exercise, and recreation participation among Malaysians. Overall, the MSCI'22 study provides valuable insights into the current state of sports culture in Malaysia and can be used to shape and improve national

sports initiatives and programs.

**Keywords** Sports Culture Index, Sport Ecosystem, Sports, Exercise, Recreation, E-sports

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## 1. Introduction

The Malaysian Sports Culture Index is the baseline index for reporting on the achievement of Malaysians in practicing sports culture with the availability of its ecosystem. MSCI'22 is a continuation of the study that was first initiated by IYRES in 2018. This index serves as the basis for the formation of the National Sports Vision 2030 and acts as a guideline for monitoring sports and cultural programs throughout the country [1]. The MSCI'22 measures the level of participation of Malaysians in sports-related activities based on two domains, namely the participation domain and the sporting spirit domain. There is one indicator under the participation domain: activeness, and there are four indicators under the sporting spirit domain: volunteering, dedication, expenditure, and contribution [2].

Sports are activities that are played either cooperatively or competitively in the form of games [3]. Most exercises and recreational activities are played cooperatively, while individual and team sports are competitive. Sports such as badminton, football, volleyball, golf, etc., encompass elements of play, games, cooperation, competition, mentality, physicality, rules, skills, and environmental challenges [4]. Exercise is an activity involving the systematic movements of the body. It includes warm-up, stretching, walking, jogging, weight training, yoga, etc. Regular exercise raises the level of fitness and health of an individual. Recreation is a free time activity that is constructive and fun. Physical recreation includes hiking, climbing, cycling, kayaking, etc., and non-physical recreation is among them sightseeing, picnicking, and watching games [5].

E-sports (electronic sports) fall under the non-physical sports category. E-sports are video game competitions played online between players using electronic devices like computers and smartphones. E-sports often take the form of organized, multiplayer competitions between professional or amateur players, individually or as teams [6]. E-sports have their pros and cons. On the positive side, players can enhance their mental skills and knowledge of the sport. On the negative side, players can become aggressive and addicted to the extent that they spend an excessive amount of time gaming. Factors that drive sports participation are elements that contribute to an outcome. Factors such as personal, health, social, and economic issues influence the enculturation of sports among Malaysians. On the other hand, barrier factors are those that restrict and obstruct participation in sports, including weather, time, facilities, and social circumstances.

This paper aims to investigate and analyze the level of

Malaysian engagement in various sports and physical activities, encompassing sports, exercise, recreation, and e-sports. The study examines the characteristics of participation in each category, focusing on factors such as timing, location, and companionship during these activities. Moreover, the research delves into e-sports participation, exploring the types of e-sports engaged in, the frequency of involvement, and the duration of screen time dedicated to e-sports-related activities.

## 2. Materials and Methods

The survey used was the quantitative method, in which a self-designed questionnaire by IYRES was used for the data collection. The questionnaire was distributed by the IYRES Community Enumerator (ICE) via the IYRES Research System. The time taken for the study was eight months, starting from April to December 2022. Data collection was conducted from 27 October to 31 December 2022. The Standard Operating Procedures (SOP) were complied with during the data collection and research administration process. The proportionate random stratified sampling method was used, and samples were taken based on the CB and PR population data of 23 million Malaysian citizens aged 13 years and above. MSCI'22 succeeded in gathering 3,735 respondents from various backgrounds based on age group (13 years old and above), gender, ethnicity (Malay, Chinese, Indian, and Pribumi), and location (urban and rural). In terms of location, the researchers used the Population Census 2020 (Department of Statistics Malaya, DOSM, 2020) with 720 Counting Blocks (CB) and 7200 Places of Residence (PR) [7]. IYRES developed a special research system (online and offline) for the purpose of data collection. The system was uploaded on devices and used by 114 IYRES Community Enumerators (ICE) and 29 supervisors according to the set samplings that were set.

## 3. Findings

### Participation

The findings of the MSCI'22 study show that 48.0% of Malaysians are involved in sports, exercise, and recreational activities. Out of the 48.0%, only 13.6% were active, 65.7% moderately active, and 20.7% less active based on WHO (2020) definition. Another 52.0% of Malaysians are still not involved in sports activities or only do physical activities occasionally. The target of participation in sports by 50.0% which was set by the Ministry of Youth and Sports in the 11th Malaysia Strategic Plan 2016-2020 (2015) has not been achieved yet. The participation rate for 2022 is attributed to the constraints caused by the pre and post Covid-19 pandemic three years ago. This approach likely provides a more accurate representation of the population's dedication to physical activities that go beyond minimal effort.

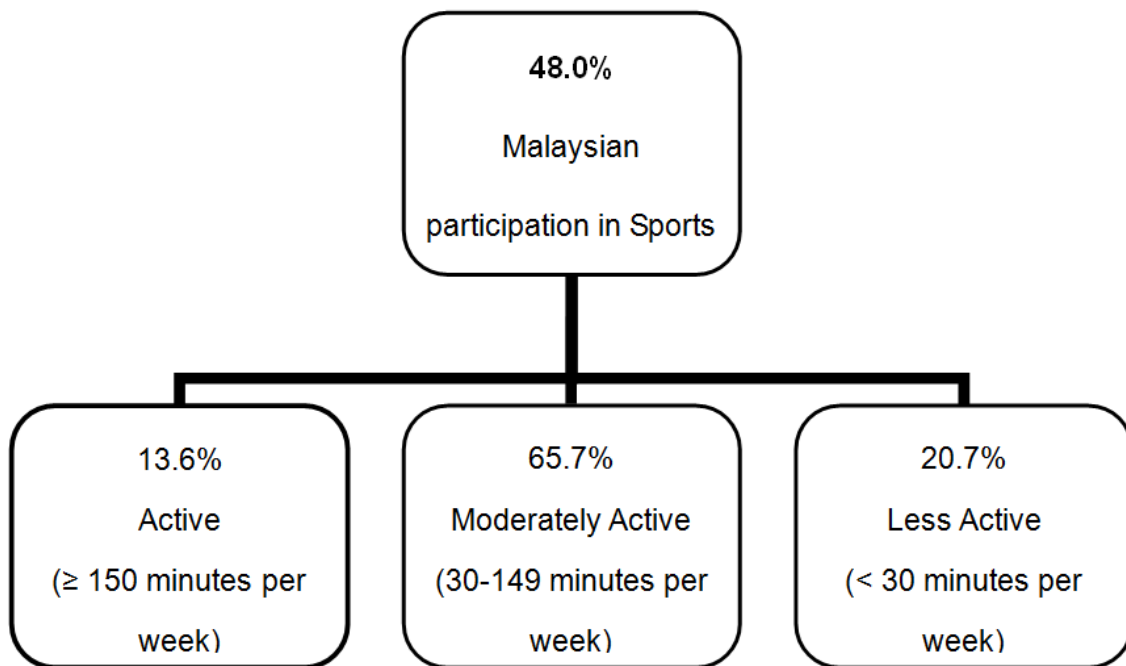


Figure 1. Malaysian participation in sports

It is also noteworthy that most Malaysians fall into the moderately active category. This indicates that while not everyone might be extremely active, the population generally maintains a positive attitude towards participating in sport-related activities. This positive attitude can have numerous benefits for overall health and well-being (Figure 1).

**Participation by Sports Category: Sport, Exercise, and Recreation**

Majority of Malaysians engage in sports (55.5%), exercise (37.0%) and recreational activities (21.6%). Football, futsal, and badminton seem to be the most popular sports. Involvement in jogging is a dominant exercise choice due to its accessibility. Cycling and hiking are preferred recreational activities because of the natural environment around their residential areas (Table 1 and Table 2).

Table 1. Participation by sport categories

Sports category	Percent (%)
Sports	55.5
Exercise	37.0
Recreational	21.6

Table 2. Participation by type of activities

Category	Types	Percent (%)
Sports	Football	11.6
	Futsal	11.0
	Badminton	8.5
	Netball	5.7
	Volleyball	5.2
	Athletics	4.2
	Sepaktakraw	3.2
Exercise	Bowling	2.9
	Table tennis	2.6
	Jogging	23.1
	Aerobic exercise	6.3
	Gym	3.8
Recreation	Yoga	2.7
	Walking	1.1
	Cycling	10.4
	Hiking	6.1
	Jungle trekking	4.7
	Motorsports	0.4

### Characteristics of Sports, Exercise, and Recreation Participation in Malaysia

This study provided an analysis of sports, exercise, and recreation participation in Malaysia based on various aspects such as the timing of activities, the demographic groups involved, and the preferred locations for these activities. Evenings are a popular time for individuals to be physically active (62.4%). Morning time is 21.0%, at night is 15.1% especially in urban areas, and only 1.5% involve the afternoon.

**Table 3.** The Time for Sport Activities

Time	Percent (%)
Evening	62.4
Morning	21.0
Night	15.1
Afternoon	5

In Malaysia, 38.1% prefer to do sports activities with friends and 18.3% to do sports activities with family members. They do not prefer to do sports alone (17.2%). This indicates that friends and family members are key factors in motivating people to participate in sports, exercise, and recreation.

**Table 4.** With Whom to Do Sport Activities

With Whom to Do Sport Activities	Percent (%)
Friends	38.1
Family	18.3
Alone	17.2

### Location

The table below shows that there are various locations and facilities for sports activities in Malaysia. Public facilities (23.7%), recreational parks (14.9%), multipurpose halls (12.2%), neighborhoods (11.4%) and homes (10.0%) are the top five choices for sports engagement. Apparently, most Malaysians do not prefer sport-specific facilities, sports facilities provided at workplaces (2.8%) and homes (4.8%), They also prefer nature-based facilities like recreational parks and forest areas.

**Table 5.** Locations and facilities to do sport activities in Malaysia

Location for Sports Activities	Percent (%)
Public facilities	23.7
Recreational Park	14.9
Multipurpose hall	12.2
Neighborhoods	11.4
Home	10.0
Sports complex	8.4
Private futsal court	5.5
Sports and recreational club	5.2
Educational institution facility	4.8
Workplace facility	2.8
Friend's house	2.7
Extreme Park	2.3
Private gymnasium	2.1
Outdoor gymnasium	1.8
Public gymnasium	1.2
Shopping complex	0.9

### Characteristic of Sports, Exercise, and Recreation Participation in Malaysia

E-sports are played online between players using electronic devices like computers, consoles, or mobile devices such as smartphones and tablets. E-sports have both positive and negative effects. On the positive side, players can enhance their mental skills and knowledge of the sports. On the negative side, players can become aggressive and addicted to the extent that they spend an excessive amount of time gaming. The table below shows that 22.4% of Malaysian are actively involved in e-sports and 77.6% are not.

**Table 6.** E-sports participation.

Participation in E-Sports (n=836)	Percent (%)
Yes	22.4
No	77.6

In terms of frequency of play, the following table shows that 9.7% of respondents exceeded five times per day; 17.5% played 4-5 times per day; 45.3% played 2-3 times per day and 27.5% played at least once a day.

**Table 7.** Frequency in E-sports participation

Frequency	Percent (%)
At least once a day	27.5
2-3 times a day	45.3
4-5 times a day	17.5
>5 times a day	9.7

In 2022, the most popular e-sports fans in Malaysia is Battlegrounds (65%), previously known as Player Unknown's Battleground (PUBG). PUBG is a player versus player shooter game where up to 100 players can compete on the same platform (battle royale). It is a combat game where players compete to be the last player to remain in the battle. Players can choose to participate solo, in pairs, or with a small team of up to four people. The last individual or team to remain alive wins the competition.

Mobile Legends is a free-to-play multiplayer online battle arena (MOBA) application for the Android system. The game, which made its debut in 2016, received instant success in Southeast Asia and is the second choice (48.0%) of e-sports fans in Malaysia, in 2022. Pro Evolution Soccer (PES) or football is the 3rd most popular game among e-sports fans (31.9%) in Malaysia. It is a series of video stimulation football games developed and published by Konami, in 1995. The series comprises 18 levels that players must be completed by players.

The E-sports Dota Series consists of four games that require more than one competitive player online. Its original mode, defense of the ancients, is a Warcraft III game mode, which is a community creation developed with Warcraft III World Editor and first published in 2003. The franchise name is an acronym that originates from the original model, DotA. This game is the 4th most popular among e-sports fans (29.8%).

**Table 8.** Period of Access to E-Sports

Period of Access to E-Sports related screen	Percent (%)
< 1 hour a day	21.7
1 – 2 hours a day	47.4
3 – 4 hours a day	20.8
> 4 hours a day	10.1

Time spent on e-sports-related screens shows that 10.1% of respondents' access e-sports screens exceeded 4 hours per day, 20.8% access for 3-4 hours per day, 47.4% access for 1-2 hours per day, and 21.7% less than 1 hour in a day.

## 4. Discussion

Malaysian population's participation in sports activities is still low level and requires some drastic strategies to

enhance sports participation by creating an environment that encourages and supports people to engage in sports activities, whether at an individual, community, or organizational level. Increasing awareness of the benefits of sports participation, such as physical fitness, mental health improvement, social interaction, and skill development should be the focus. Various media platforms, community events, and educational programs should be carried out to motivate the Malaysian population since young [5&6]. The stakeholders should ensure that sports facilities, equipment, and opportunities are accessible and affordable to people of all backgrounds. Everyone should feel comfortable participating regardless of their gender, age, ethnicity, or ability. Family-oriented sports activities can increase participation. Sports clubs and organizations need to encourage families to participate in sports together and organize family-oriented events or programs that promote physical activity and bonding [4&8].

Malaysia is a country with a diverse population that has shown interest in various sports, exercises, and recreational activities. Football is the most popular sport in Malaysia. The country has a strong football culture, where both men and women are equally interested in the game. Badminton is another highly popular sport in Malaysia. The country has produced world-class badminton players who have achieved significant success in international competitions. The spirit of Malaysians to be active in sports, has become the driving factor for well-being and a healthy lifestyle. Organizing sports events, tournaments, and leagues within the community can create a sense of camaraderie and healthy competition, motivating people to participate [5&9].

Jogging and running activities are also routine for Malaysians. Virtual running events and marathons have gained popularity in recent years [10]. Many cities host annual marathons that attract both local and international participants. Recreational activities such as hiking, cycling, and adventure sports should be organized frequently at the weekend so more people will join and actively participate [11]. Malaysians prefer sports activities in the evening compared to other times. Organizing sports activities in the evening can be an effective way to accommodate the working schedules of Malaysians and encourage greater sports participation. Sports clubs, organizations, and employers can facilitate evening sports activities [1].

Participating in e-sports has become increasingly popular and offers various opportunities for both competitive gaming and recreational play. E-sports require skill and practice. The players need to dedicate time to improving gameplay, learning strategies, and mastering game mechanics. The participants need to keep up with the latest news and updates in the e-sports world, follow professional players, teams, and organizations on social media, and stay informed about upcoming events and tournaments that require more time compared to physical games [6&9]. Becoming an expert in e-sports, whether as a

player or in other roles, often requires dedication, hard work, and continuous learning. It is also important to maintain a healthy lifestyle and a well-balanced ratio between gaming and other aspects of life [12].

## 5. Conclusions

In conclusion, everyone can influence their family and community to participate in sports. Starting with awareness and followed by actions, everyone can play a role in promoting sport for well-being anywhere, anytime. It is important to understand, however, that the activeness indicator might not show the real situation. Factors like cultural preferences, accessibility to sports facilities, time constraints, and other socioeconomic factors can influence people's ability to participate in physical activities. The level of participation in physical activities can have numerous positive effects on individuals and society, including improved physical fitness and mental well-being. Understanding the characteristics of sports, exercise, and recreation participation is considered as a foundation for proposing a new policy framework for sport participation. Participating in sports has a positive influence in many areas. It supports positive mental health and improves social skills. Participating in sports develops healthy living habits that provide physical benefits. Enhancing sports participation is a long-term effort that requires dedication, collaboration, and adaptability.

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