A SURVEY ON THE PHYSICAL ACTIVITY INVOLVEMENT AMONG UNIVERSITI SAINS MALAYSIA HEALTH CAMPUS STUDENTS

SITI NURSYAIMA BINTI ABD WAHAB

SCHOOL OF HEALTH SCIENCES

UNIVERSITI SAINS

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by

SITI NURSYAIMA BINTI ABD WAHAB

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ABSTRAK

Aktiviti rekreasi adalah aktiviti riadah, yang biasanya dilakukan untuk mengurangkan tekanan, hiburan, kesenangan, dan kebaikan untuk kesihatan. Objektif utama kajian ini adalah untuk menentukan penyertaan dalam aktiviti rekreasi di kalangan pelajar Kampus Kesihatan Universiti Sains Malaysia (USMKK). Dalam kajian keratan rentas ini, 86 peserta (N = 86) direkrut dengan 29 pelajar lelaki dan 57 pelajar perempuan. Penyertaan dalam kajian ini dilakukan secara sukarela. Data kajian ini dikumpulkan menggunakan soal selidik Global Physical Activity Questionnaire (GPAQ) yang diubahsuai yang diedarkan melalui platform dalam talian dan dianalisis menggunakan ujian deskriptif Statistical Package for Social Sciences (SPSS) versi 26. Hasil kajian menunjukkan, intensiti-tinggi aktiviti rekreasi luar, 38 peserta (44.2%) tidak terlibat manakala 48 (55.8%) peserta lain terlibat. Aktiviti rekreasi luar intensiti-sederhana, 14 peserta (16.3%) tidak terlibat, 72 peserta (83.7%) terlibat. Kegiatan rekreasi dalaman intensiti-tinggi, 46 peserta (53.5%) tidak terlibat, 40 peserta (46.5%) terlibat. Aktiviti rekreasi dalaman intensiti-sederhana, 31 peserta (36.0%) tidak terlibat, 55 peserta (64.0%) terlibat. Masa yang dihabiskan oleh pelajar USMKK untuk melakukan aktiviti fizikal juga menepati masa yang disarankan oleh Pertubuhan Kesihatan Sedunia (WHO). Kesimpulannya, kebanyakan pelajar mengambil bahagian dalam aktiviti rekreasi sama ada intensiti-tinggi, intensiti-sederhana, dalaman atau luaran.

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ABSTRACT

Recreational activity is an activity of leisure, which is usually done to reduce stress, amusement, pleasure, and good for health benefits. The main objective of this study is to determine participation in recreational activities among Universiti Sains Malaysia Health Campus (USMKK) students. In this cross-sectional study, 86 participants (N=86) were recruited with 29 male students and 57 female students. Participations in this study were on voluntarily basis. The data of this study were collected using a modified Global Physical Activity Questionnaire (GPAQ) questionnaire that was distributed via the online platform and was analysed using descriptive test of Statistical Package for Social Sciences (SPSS) version 26. The results showed, vigorous-intensity outdoor recreational activities, 38 participants (44.2%) did not involve while the other 48 (55.8%) participants did. Moderate-intensity outdoor recreational activities, 14 participants (16.3%) did not involve, 72 participants (83.7%) involved. Vigorous-intensity indoor recreational activities, 46 participants (53.5%) did not involve, 40 participants (46.5%) involved. Moderate-intensity indoor recreational activities, 31 participants (36.0%) did not involve, 55 participants (64.0%) involved. The time spends by USMKK students on physical activities also complies with the physical activity recommended by World Health Organization (WHO). In conclusion, most of the students participated in recreational activities either it was vigorous-intensity, moderate-intensity, indoor, or outdoor.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Recreational is a relaxing and fun activity that was done during free or leisure time, it is a voluntary activity that is done to fulfil need and satisfaction. Nowadays people are more aware of their health status and tend to practice a proper diet and do some exercises for a healthy lifestyle. Recreational activity is an activity of leisure, which is usually done to reduce stress, amusement, pleasure and for health benefits and it is considered to be enjoyable (Sawangmek, 2019). Recreational activity can help improve individual health mentally and physically (Aksoy et al., 2017). The benefits of these activities are good for students and this study is to assess the student's participation in recreational activities mainly physical and outdoor recreational. According to Scott A. Forrester, 2014,the top health and wellness benefits students attributed to their participation in campus recreation facilities and programs include- feeling of well-being, overall health, fitness level, physical strength, stress management, athletic ability, weight control, self-confidence, balance/coordination, and concentration. This activity is divided into different types or categories, for examples of recreational activities are sports and exercise activities, outdoor activities and it is not limited to physical activities only which make social activities is also included as recreational activities (Metin et al., 2017). An individual can participate in any type of recreational activities that they preferred.

Physical activity is defined as any physical movement produced by skeletal muscles that require energy expenditure and includes activities outside and day-to-day routine (Caspersen, Powell, 1985). Examples of physical activities are exercise and sports including slow walk, jogging, basketball, tennis, badminton, soccer, and other types of

sports. Based on the current situation, the participation in physical activities are decreasing because of COVID-19 pandemic and most of the country been through a lockdown and practising new norm which is physical distancing which becomes one of a barrier for physical activities. The facilities only can be used by a certain number of people at the same time, sports and exercise which normally done in a group can no longer be done.

The effect of the current pandemic situation increases the amount of sedentary lifestyle among all groups of people including children, teenagers, adults, and the elderly. People spend their time at home due to lockdown and Movement Control Order (MCO), by watching television shows, playing video games, and scrolling through their phones. Lack of physical activities for a long time will show a negative impact on an individual. Supposedly people need to physically active during the day because current situations lead to emotional unstable, increase the number of stress and depression. Involvement in physical activities can help to reduce stress and help to stabilize the emotion thus helping individuals become healthier.

Sports and exercise activities can reduce the risk of getting a certain disease. At least 30 minutes of moderate-intensity physical activity five days a week reduces the risk of several common non-communicable diseases (NCDs) like cardiovascular disease, stroke, type-II diabetes mellitus, colon cancer, and breast cancer (Muttappallymyalil et al., 2010). Staying physically active can helps individuals maintain their strength, endurance also flexibility as they are getting older.

Activities related to the interaction of individuals with nature and performed in the natural environment are called outdoor recreation (Plummer, 2009). This outdoor activity is interesting, people that love the feeling surrounded by nature tend to do this

type of recreation. Examples of outdoor activities including camping, hiking, fishing, picnic, and many more.

The individual involved in outdoor activities not only able to improve their health status, but they are also gain knowledge and experience regarding nature, many things can be learned when participating in outdoor activities, including survival skills and problem-solving skills. For example, when facing a dangerous or high-risk situation, facing perceived danger may help individuals overcome their fears, gain self-confidence, and enhance their ability to cope with the situations.

Social activities are useful to improve individual social skills. According to Metin et al., (2017), there are a few examples of social activities including participation in drama club, musical club, meeting, and visiting friends. These activities are mainly involved in social interaction thus will help an individual to gain self-confidence and courage to speak out and interact with people.

Joining social activities does not mean that an individual need to go out of his or her home, nowadays the advancement of technologies helps to connect people from a long distance. With current technology, people can continue being active in their clubs or meeting by interacting via social media. There is a lot of benefits by participating in social activities including improved social skill, give a positive attitude, increased self-esteem, and connect to the community and club.

Students are precious assets because they are the future of the country. It is a student's responsibility to study and striving to achieve the best performance, most of their free time will be used for studying. Although studying is very important, the student also needs to take care of their health physically and mentally. Today's students are weaker in terms of health and physical traits compared to older generations because this

new generation tends to spend their time on gadgets and social media which making them physically less active.

Sports and exercise activities can help students to stay active. Sports is not limited to athletes only, but any students can participate in sports during their free time or even make it a hobby. Sports and exercise can make students become more alert and active both mentally and physically. Some students did not participate in these activities because they did not like staying outdoor, but sports and exercises are not limited to outdoor-only because many types of sports and exercise can be done indoor such as badminton, squash, table tennis, and as for exercise, there is the gym where there are many types of equipment for exercise. Other than that, students can do a simple exercise on their own in their room. Moreover, a student needs to do some exercise so that they can ease the soreness of their bodies.

Using free time by doing recreational activities is a wise way to spend the time because recreational such as sports, exercise, and outdoor activities can give benefits to students from *both aspects, physically and mentally. Students must take care of their health physically to be able to study in a good condition. Other than that*, mental health is important to students as they need to stay focus and alert in class also during doing their homework. Unstable mental health can cause a student to become less focused and lack ideas. Outdoor activities will improve self-esteem, nature also can help student reduce their stress. Other than that, it is the best way to get vitamin D which will increase the immune system because vitamin D is not only important for bones and teeth, but it also assists in increasing the immune system to protect our body.

Some students might prefer to stay alone instead of involved in any activities, but social isolation can cause depression. Depression can get worse if the students keep on doing social isolation, students need to interact with other people to ease depression.

For students that love doing activities with clubs, they can participate in social activities. Although social activities might seem like did not give many benefits, but it is good for students as they need to build their social and interaction skill which is very important in the future. Social skill is assumed compulsory for students as they need to interact with people especially when going for an intern or an interview for scholarship and also a job interview.

1.2 Problem Statement

Although most of the students already know that recreational activities are one of a good way to spend their time and they will get many benefits by doing so. Nowadays there are a lot of advertisements, talks and tv shows that provide and spread the information about it, but somehow not all students spend their time on physical or outdoor recreational. Most people spend their time on gadgets by scrolling through social media or playing games. Physical inactivity increases the risks of non-communicable disease such as diabetes, stroke, cancer, and cardiovascular diseases (Cheah and Poh, 2014).

The time spent doing recreational activities also plays a crucial part. To get the benefits from the participation in recreational activities the students must at least reach the minimum of 150 minutes per week for moderate activities and 75 minutes for vigorous activities (World Health Organisation, 2020). If they exercise 3 times a week, the duration for one moderate exercise around 50 minutes per day, and 25 minutes for vigorous activities Moderate intensity is 50% to 70% of the maximum heart rate and vigorous intensity is 70% to 85% of the maximum heart rate.

Both male and female students participate in recreational activities, but the number is different between males and females participation. Based on the previous study, the numbers of male students who participate in recreational activities are slightly higher than females students (Salamudin and Harun, 2013).

1.3 Study Objective

1.3.1 General Objective

To conduct a survey on the participation in recreational activities among Universiti Sains Malaysia Health Campus (USMKK) students

1.3.2 Specific Objectives

i. To identify the percentage of male and female students' participation in moderate-intensity recreational activities (indoor and outdoor activities) in a week.

ii. To identify the percentage of male and female students' participation in vigorous-intensity recreational activities (indoor and outdoor activities) in a week.

iii. To identify the average time spent by the students on physical activities in a week.

1.4 Research Question

Question 1

What is the percentage of male and female students' participation in moderate-intensity recreational activities (indoor and outdoor activities) in a week?

Question 2

What is the percentage of male and female students' participation in vigorous-intensity recreational activities (indoor and outdoor activities) in a week?

Question 3

What is the average time spent by the students on physical activities in a week?

1.5 Significant of study

There are a few studies that are similar to this study. The difference between this study from other studies is that this study evaluates the students from USMKK only. This study is to survey the participation in recreational activities among Universiti Sains Malaysia Health Campus (USMKK) students.

CHAPTER 2

LITERATURE REVIEW

2.1 Recreational Activities

Recreational activities are one way to help people to have a better health status. A better health status meaning that a healthier mind and body. Previous research found that a higher number of male students participate in recreational activities compare to female students and also suggested that colleges or universities should provide more facilities in order the increase the number of female students to participate in recreational activities (A. Sivakumar, n.d.). Recreational activities are usually done during free time whether it is alone, with family, or with friends. It is not limited to physical activities only, there are many other types of recreational that individuals could choose according to their preferences. According to Selvakumar and Vikkraman, (2012) and Kotarska et al., (2021), male and female students have different recreational entertainment preferences. Students preferred sports activities as their recreational because involvement in sports provides provide satisfaction for free time and also students participating in these activities become fit because they do exercise.(Kotarska et al., 2021).

2.2 Physical Activities

Physical activity is any bodily movement produced by skeletal muscles that result in energy expenditure. Physical activity in daily life can be categorized into occupational, sports, conditioning, household, and other activities (Caspersen, Powell, 1985). Doing moderate physical activities more than 3 times a week such as brisk walks,

and gardening can help reduce the risk of getting the non-communicable disease (Willett, Koplan, Measham, 2006). Doing physical activity regularly has been reported to lower blood pressure in adults with hypertension (Ishikawa et al., 1999). Other than that, physical activity helps in weight loss or a reduction in visceral fat, which could reduce blood pressure.

Physical inactivity has been identified as the fourth leading risk factor for global mortality (6% of deaths globally), the highest risk factor for global mortality is high blood pressure (13%) following by tobacco use (9%), high blood glucose (6%), overweight and obesity (5%) (WHO, 2009). According to previous study done by Nyangiwe et al., (2020), although the students knows the benefits of physical activities, but the finding shows a significant decline in physical activity participation and an increase in sedentary behaviour among university students. The previous researcher found that there are insufficient physical activities and an unbalanced diet among university students (Aceijas et al., 2017). Due to the high percentage of inactivity, the *Global action plan on physical activity 2018–2030* set a target to reduce physical inactivity by 15% by 2030 (WHO, 2020). However, according to Graham et al.,(2011), research, adolescent engagement in physical exercise is beneficial, and they are expected to become more active in the future. Thus, physical education in schools appears to be important to be implemented in schools to stimulate teenage interest in physical activity. It can be said that university or college students are expected to be more physically active than school students. Students that are exposed to physical activities, students from a health department and, students from the sports department show a higher number of participation in physical activities compare to other students.

Table 2.1 Previous Study about Students Physical Activities (PA) Pre and Post Confinement

Title: Physical Activity and Sedentary Lifestyle in University Students: Changes during Confinement Due to the COVID-19 Pandemic (Romero-Blanco et al., 2020)	Pre		Post	
n=213 Male(n=41) Female (n=172)	Mean	SD	Mean	SD
Days of Vigorous PA	0.98	1.33	2.19	2.02
Days of moderate PA	1.74	1.56	3.15	2.05
Minutes of vigorous PA	42.81	54.13	30.66	30.94
Minutes of moderate PA	42.81	48.44	47.74	50.80
Total minutes of weekly PA	223.30	305.47	383.17	438.90
Daily sitting time	418.59	201.58	525.35	194.57

Findings: Students' participation in physical activities was higher during post confinement due to COVID-19 Pandemic than pre confinement. The number of students that participated in moderate PA was higher than vigorous PA.

2.4 Sports and Exercise Activities among Students

Increased educational pressure and major transitions in the life experienced by college students lead to high stress levels and decreased physical activity levels (Muttappallymyalil et al., 2010). Individuals will gain psychological, physiological, social, educational, and aesthetic benefits through recreational activities (Eskiler and Ayhan, 2019). To gain benefits from participation in sports activities, time taken for doing

the sports activities must be following the guidelines provided by World Health Organisation which is the minimum time spend must be at least 150 minutes per week for moderate activities and 75 minutes per week for vigorous activities (World Health Organisation, 2020).

Previous research that was conducted in public universities in Malaysia, stated that students involved in sports mostly are the students who already aware of the positive effect of sports participation (Lim Khong Chiu, 2015). In another research that was done by Salamudin and Harun, (2013), Malaysian youth age 18-25 years old is in the intermediate category which suggests that the Malaysian youth have sedentary to a moderately active lifestyle, which means that they usually did physical activity three times a few for at least 30 minutes for a session and higher numbers of males participating in physical activity compared to females.

2.5 Outdoor Activities and Student

Instead of using the time for other activities, students spend their free time doing the assignment and study until late at night, which is a good thing, but it is also can be considered as bad things at the same time because they did not aware of their health mentally and physically. Some students might stress with their work and cannot study or do their assignments, lab reports, or presentation properly due to a lack of ideas and inspiration. Other than that, mentally unhealthy will increase the risk of depression, Cardiovascular Disease (CVD), and obesity (Hunt and Eisenberg, 2010). Stay in a room for quiet sometimes is not good for mental health, students need to go out and take some air by doing the outdoor activities

Outdoor recreation is voluntary participation in free time, it occurs outdoors and involves interaction with the natural resources and environment (Mohd et al., 2017). This outdoor activity can give positive values and enhanced individual quality and skill to face

the struggle and challenges in their life (Barton et al., 2012). Other than that, recreational activity can increase life quality including improving physical function, good health, stress management, and enjoyment (Berger, 2007).

Table 2.2 Previous Research Related to This Study

	Tittle	Sample Size	Results (Mean/n)	Conclusion
1.	Taiwanese University Students' Perceived Freedom and Participation in Leisure (Wu et al., 2010)	N= 1019 Male(n=336) Female (n=683)	(Mean) Mass media =2.99 Social activity = 2.48 Personal hobby =2.23 Cultural activities =2.17 Outdoor recreation = 2.00 Sport activity =1.97	The results show that gender or year of study poses no effects impacting perceived freedom in leisure among students while the major area of study, monthly allowances, and means of transportation services as important factors influencing their perceived freedom in leisure.
2	An Assessment of Students' Recreation Participation (Akoğlan Kozak and Doğantan, 2016)	N=268 Male(n=150) Female(n=115)	(Mean) Social recreation =2.46 Cultural recreation =2.33 Artistic recreation = 2.36 Physical recreation =1.96	Train the youth to have a physically, mentally, and socially healthy future, universities should emphasize recreation support applications that provide active recreation opportunities and enable sustainable participation in these activities.
3.	Physical Activity among Preclinical Medical Students at The University	N=250 Male(n=150) Female(n=100)	(n) Jogging=51 Badminton=37 Swimming=29	Being physically active is an essential part of a healthy lifestyle. Health

	of Malaya, Malaysia (Asousi, 2016)		Football=28 Basketball=22 Tennis=22 Walking=13 Others=39	benefits of physical activity include improved fitness, strength, and overall feeling better. Therefore, all medical professionals should maintain being physically active to remain healthy and become role models for their patients to motivate them towards physical activity
4.	Physical Activity Level Among Undergraduate Students in Terengganu, Malaysia Using Pedometer (S. Ganeson, K. F. Ismail, 2018)	N=95 Male(n=27) Female(n=68)	Male(n) Sedentary=10 Low active=13 Active=3 Highly active=1 Female(n) Sedentary=53 Low active=14 Active=0 Highly active=0	In summary, based on the physical activity levels obtained using a pedometer, most of the respondents in our study were sedentary. This study also showed that males were more active than females. Furthermore, this study provided a link between daily steps count and body fat percentage among subjects.

CHAPTER 3

METHODOLOGY

3.1 Participants and Selection Criteria

The participants recruited for this study are the students from University Sains Malaysia Kubang Kerian (USMKK).

The inclusion criteria:

- USMKK student
- Age between 18 to 40 years old.

The exclusion criteria:

- Have chronic health problem or injury
- Unable to perform activities

3.2 Sample Size Calculation

The sample size for this study was calculated using G*Power software (version 3.1.9.6). The total sample is 84.

t tests - Means: Difference between two independent means (two groups)			
Analysis:	A priori: Compute required sample size		
Input:	Tail(s)	=	Two
	Effect size d	=	0.8
	α err prob	=	0.05
	Power (1-β err prob)	=	0.95
	Allocation ratio N2/N1	=	1
Output:	Noncentrality parameter δ	=	3.6660606
	Critical t	=	1.9893186
	Df	=	82
	Sample size group 1	=	42
	Sample size group 2	=	42
	Total sample size	=	84
Actual power = 0.9518269			

Figure 3.1 Sample size calculation

3.3 Participant Recruitment and Location of Data Collection

All participants in this study were recruited voluntarily. The questionnaire was distributed online to all participants. This study was conducted at University Sains Malaysia Campus Kubang Kerian (USMKK).

3.4 Study Design

The study employed a cross-sectional design. The data was collected using the modified Global Physical Activity Questionnaire (GPAQ).

3.5 Material

The questionnaire that was used for this study is the modified Global Physical Activity Questionnaire (GPAQ). This questionnaire was developed by the World Health Organization (WHO) in 2002. This questionnaire was developed to assess physical activity and sedentary behaviour. The GPAQ questionnaire was previously used to assess the students' physical activity level (Shah, 2016).

3.6 Data Collection

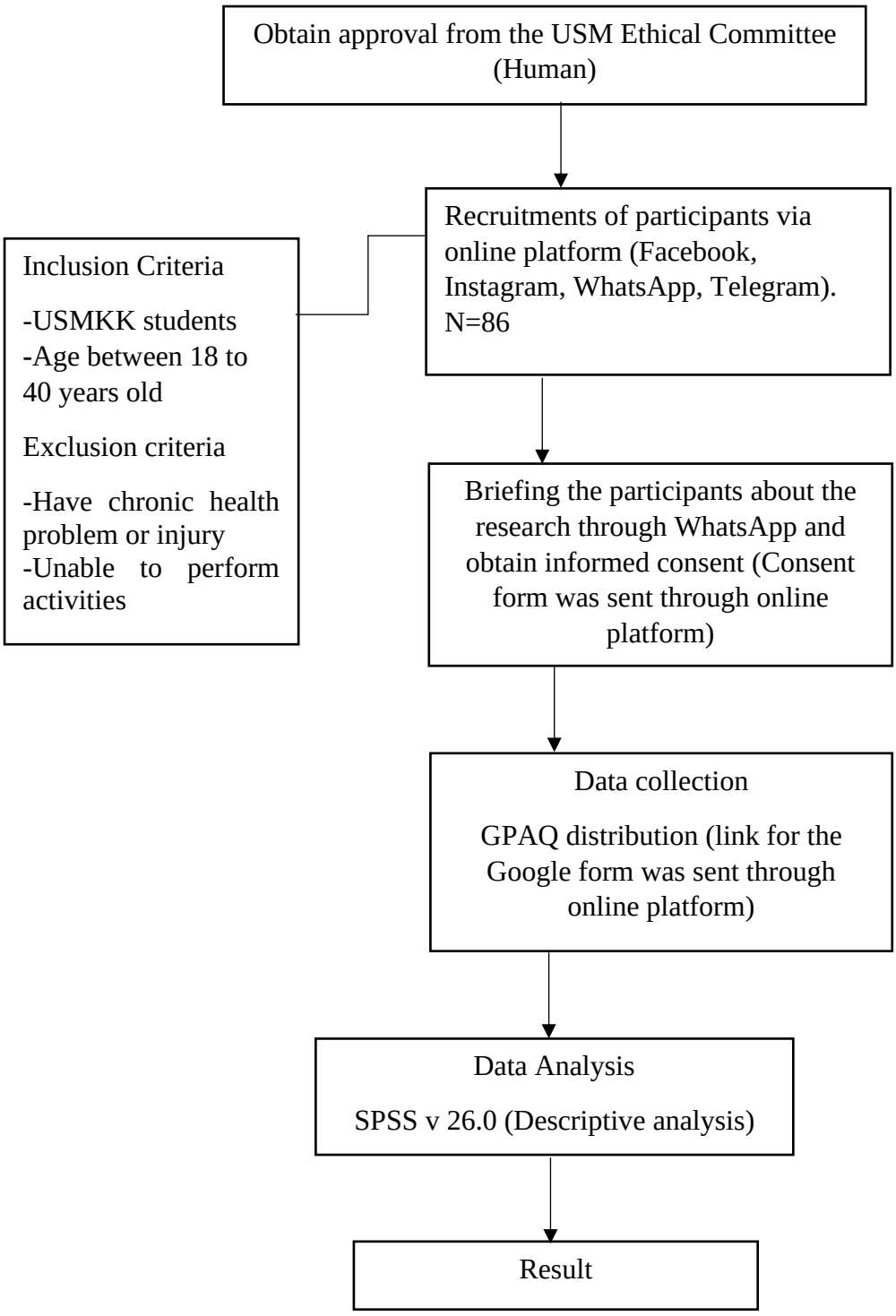
The participants of this study were briefed about this study via online platform. Students that meet the selection criteria voluntarily participated in this study. Data collected in this study were strictly confidential and will not publicize unless it is required by law. The consent form (Appendix D) was included in the Google form along with the questionnaire (Appendix A and B). After agreed with the consent form provided, the questionnaire was answered by participants using their available gadgets such as phones, laptops, or tablets. The link of the questionnaire was distributed to participants through

the online platform via WhatsApp, Telegram, Facebook, and Instagram. The participants answered the questionnaire at their own time and place. The questionnaire was distributed in early April until mid-Mei 2021, the participants answered the questionnaire once it was distributed. An online questionnaire was chosen for this research due to the current pandemic situation which is COVID-19 infection. This viral infection could be transmitted via direct or indirect contact with an infected person through their secretion including saliva, respiratory secretion, and droplets (Health et al., 2020). An online questionnaire is the safest way to reduce the risk of infection.

3.7 Statistical Analysis

All statistical analyses for this study were performed using the Statistical Package for Social Sciences (SPSS) version 26. Descriptive analysis was performed to determine student participation in recreational activities and to assess the percentage of student awareness about recreational activities. The p-value <0.05 was considered statistically significant. The result was reported in mean ± standard deviation (SD) and frequency.

3.10 Flowchart



CHAPTER 4

RESULTS

As shown in the Table 4.1, the total number of participants was 86 (N=86) with 29 male students and 57 female students.

Table 4.1 Total of the participant.

Gender	n	Percentage
Male	29	33.7
Female	57	66.3
Total	86	100.00

As shown in the Table 4.2, 80 participants were from School of Health Sciences, 5 participants from School of Medical Sciences and 1 participant from School of Dental Sciences.

Table 4.2 School of study

	Frequency
School of Health Sciences	80
School of Medical Sciences	5
School of Dental Sciences	1
Total	86

As shown in Table 4.3, Most of the participants that participated in this study were age 22 years old and the least age was 28 years old.

Table 4.3 Age of participants

Age	Frequency
20	9
21	12
22	38
23	13
24	5
25	3
26	3
27	2
28	1
Total	86

Table 4.2 shows that 38 out of 86 participants (44.2%) did not involve in vigorous-intensity outdoor recreational activities in a week while the other 48 (55.8%) participants did.

Table 4.2 Frequency of the participants involved in vigorous-intensity outdoor recreational activities.

	Mean	n	% of Total n
none	1.76	38	44.2%
1 to 2 days, 5 to 10 minutes	1.70	10	11.6%
1 to 2 days, 15 to 20 minutes	1.89	9	10.5%
1 to 2 days, 25 to 30 minutes	1.50	10	11.6%
1 to 2 days, 45 to 50 minutes	1.67	3	3.5%
1 to 2 days, more than 1 hour	1.67	3	3.5%
3 to 4 days, 25 to 30 minutes	1.40	5	5.8%
3 to 4 days, 35 to 40 minutes	1.00	1	1.2%
3 to 4 days, more than 1 hour	1.00	1	1.2%
5 to 6 days, 25 to 30 minutes	1.00	1	1.2%
5 to 6 days, 35 to 40 minutes	1.50	2	2.3%
5 to 6 days, 45 to 50 minutes	1.00	1	1.2%
5 to 6 days, more than 1 hour	2.00	1	1.2%
7 day, 45 to 50 minutes	1.00	1	1.2%
Total	1.66	86	100.0%

Table 4.3 shows that 14 participants (16.3%) did not involve in moderate-intensity outdoor recreational activities while the other 72 participants (83.7%) involved in moderate-intensity outdoor recreational activities in a week.

Table 4.3 Frequency of the participants involved in moderate-intensity outdoor recreational activities.

	Mean	**n**	**% of Total n**
none	1.71	14	16.3%
1 to 2 days, 5 to 10 minutes	1.78	9	10.5%
1 to 2 days, 15 to 20 minutes	1.75	12	14.0%
1 to 2 days, 25 to 30 minutes	1.60	10	11.6%
1 to 2 days, 35 to 40 minutes	2.00	3	3.5%
1 to 2 days, 45 to 50 minutes	2.00	2	2.3%
1 to 2 days, more than 1 hour	1.75	4	4.7%
3 to 4 days, 5 to 10 minutes	2.00	1	1.2%
3 to 4 days, 15 to 20 minutes	1.80	5	5.8%
3 to 4 days, 25 to 30 minutes	1.25	8	9.3%
3 to 4 days, 35 to 40 minutes	1.60	5	5.8%
3 to 4 days, 45 to 50 minutes	1.50	2	2.3%
5 to 6 days, 5 to 10 minutes	1.00	1	1.2%
5 to 6 days, 15 to 20 minutes	1.67	3	3.5%
5 to 6 days, 25 to 30 minutes	2.00	1	1.2%
5 to 6 days, 35 to 40 minutes	1.50	2	2.3%
5 to 6 days, 45 to 50 minutes	1.00	1	1.2%
7 day, 5 to 10 minutes	2.00	1	1.2%
7 day, 25 to 30 minutes	1.50	2	2.3%

Table 4.4 shows 46 participants (53.5%) did not involve in vigorous-intensity indoor recreational activities while the other 40 participants (46.5%) involved in vigorous-intensity indoor recreational activities in a week.

Table 4.4 Frequency of the participants involved in vigorous-intensity indoor recreational activities.

	Mean	n	% of Total n
none	1.78	46	53.5%
1 to 2 days, 5 to 10 minutes	1.67	9	10.5%
1 to 2 days, 15 to 20 minutes	1.43	7	8.1%
1 to 2 days, 25 to 30 minutes	1.83	6	7.0%
1 to 2 days, 45 to 50 minutes	1.00	1	1.2%
1 to 2 days, more than 1 hour	1.00	2	2.3%
3 to 4 days, 5 to 10 minutes	2.00	1	1.2%
3 to 4 days, 25 to 30 minutes	1.50	4	4.7%
3 to 4 days, 35 to 40 minutes	1.40	5	5.8%
3 to 4 days, more than 1 hour	1.00	1	1.2%
5 to 6 days, 35 to 40 minutes	1.50	2	2.3%
5 to 6 days, 45 to 50 minutes	1.00	1	1.2%
5 to 6 days, more than 1 hour	2.00	1	1.2%
Total	1.66	86	100.0%