MOTIVATION AND PRACTICE OF PHYSICAL ACTIVITY AMONG UNDERGRADUATE STUDENTS AT SCHOOL OF HEALTH SCIENCES, UNIVERSITI SAINS MALAYSIA

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by

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134152

Dissertation submitted in partial
fulfilment of the
requirements for the degree
of Bachelor of Nursing (Honours)

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CERTIFICATE

This is to certify that the dissertation entitled Motivation and Practice of Physical Activity Among Undergraduate Students at School of Health Sciences, Universiti Sains Malaysia is the bona fide record of research work done by Ms Nurul Syamimi Athirah Binti Zulkipli during the period from September 2019 to June 2020 under my supervision. I have read this dissertation and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation to be submitted in partial fulfillment for the degree of Bachelor of Nursing (Honours).

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DECLARATION

I hereby declare that this dissertation is the result of my own investigations except where otherwise stated and duly acknowledged. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at Universiti Sains Malaysia or other institutions. I grant Universiti Sains Malaysia the right to use the dissertation for teaching, research and promotional purposes.

Signature

…….

(NURUL SYAMIMI ATHIRAH BINTI ZULKIPLI)

DATE:

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I really grateful because I managed to complete my thesis with title Motivation and Practice of Physical Activity Among Undergraduate Students at School of Health Sciences, Universiti Sains Malaysia. Special thanks to my main supervisor, Dr. Dariah Mohd Yusoff and my co supervisor, Dr. Erica Kueh Yee Cheng for their guidance and encouragement in finishing this study. Finally, I would like to express my gratitude to my family and friends for their support, and also thanks to all the participants for their involvement and willingness to spend time to fill in the questionnaire

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ABSTRAK

Aktiviti fizikal adalah komponen penting dalam mempromosikan badan yang sihat kerana dapat memberi lebih banyak manfaat seperti menjaga berat badan, mengurangkan risiko kesihatan seperti diabetes jenis 2 dan sindrom metabolik, menguatkan badan dan otot, meningkatkan kekuatan untuk melakukan aktiviti harian, dan meningkatkan peluang hidup lebih lama (Bahagian Pemakanan, Aktiviti Fizikal, dan Obesiti, Pusat Nasional Pencegahan Penyakit Kronik dan Promosi Kesihatan, 2020). Semua ini hanya dapat diperoleh melalui aktiviti fizikal teratur. Namun, banyak kajian melaporkan bahawa pelajar universiti masih kurang melakukan aktiviti fizikal kerana terlalu sibuk dengan jadual belajar, terpaksa membuat tugasan dan ada di antara mereka yang berkomitmen untuk industri yang lebih lama berlatih. Kajian ini bertujuan untuk menilai tahap aktiviti fizikal pelajar universiti, motivasi mereka untuk melakukan aktiviti fizikal, perkaitan antara ciri sosiodemografi pelajar dan motivasi mereka untuk melakukan aktiviti fizikal. Data dikumpulkan menggunakan satu set soal selidik yang dikendalikan sendiri. Data mengenai motivasi dikumpulkan menggunakan Skala Aktiviti Fizikal dan Motivasi Riadah (PALMS). Sementara itu, data mengenai tahap aktiviti fizikal diperoleh dengan menggunakan International Physical Activity Questionnaires (IPAQ). Semua data dianalisis menggunakan SPSS versi 24. Secara keseluruhan, 126 pelajar dari Sekolah Sains Kesihatan terlibat dalam tinjauan rentas ini. Motivasi tertinggi untuk melakukan aktiviti fizikal adalah keadaan fizikal (14.36%). Manakala tahap amalan aktiviti fizikal di kalangan pelajar dalam kajian ini adalah sederhana (49.1%). Hanya satu persatuan yang signifikan yang ditunjukkan antara persaingan/ego dan aktiviti fizikal latihan ($p = 0.02$). Kesimpulannya, terdapat keperluan untuk mendorong aktiviti fizikal secara berkala di kalangan pelajar universiti kerana dapat meningkatkan tubuh dan emosi yang sihat sebagai pelajar.

ABSTRACT

Physical activity is an important component in promoting a healthy body since it can give more benefits such as maintain weight, reduce health risk for example type 2 diabetes and metabolic syndrome, strengthen body and muscle, improve strength to do daily activities, and increase the chances to live longer (Division of Nutrition, Physical Activity, and Obesity, National Center for Chronic Disease Prevention and Health Promotion, 2020). Indeed, all these can only be obtained through regular physical activity However, many studies reported that university students were still lacking in practicing physical activity because they are too busy with their study scheduled, had to do assignments and some of them committed to a longer industrial practice. This study aims to assess university students' level of physical activity, their motivation to practice physical activity, the association between the students' sociodemographic characteristics and their motivation to perform physical activity. Data was collected using a set of self-administered questionnaires. Data on motivation was gathered using the Physical Activity and Leisure Motivation Scale (PALMS). While data on level of physical activity was obtained using the International Physical Activity Questionnaires (IPAQ). All data were analysed using SPSS version 24. Altogether, 126 students from School of Health Sciences involved in this cross-sectional survey. The highest motivation to practice physical activity is physical condition (14.36%). While the practice level of physical activity among the students in this study is moderate (49.1%). Only one significant association was indicated which is between competition/ego and the practice physical activity (p= 0.02). In conclusion, there is a need to encourage regular physical activity among university students because it could promote good healthy body and emotions being students.

Chapter 1: INTRODUCTION

1.1 Background of Study

Physical activity (PA) is an important component for health and related to morbidity and mortality (Kasim et al., 2016). Physical activity can be defined as any movement of the body and required energy expenditure (Kansas State University, 2017). Physical activity means any motion that people do through the day excluding sitting still or lying down. For example, walking to the class, taking the stairs, mowing the lawn, and even cleaning the house can be considered as physical activity. Physical activity, however, is different from exercise. Exercise can be defined as a planned, structured, and repetitive activity with the purpose of improving or maintain physical fitness. Exercise however, is a type of physical activity but not every physical activity is exercise (Kansas State University, 2017).

There are four types of physical activity include being extra active through the day, aerobic exercise, resistance training and stretch exercise. The less sedentary, the more benefit the person will get. Adding extra activity is a relatively easy way to fit physical activity into the daily routine. For example, park the car or motorcycle far end of the car park to walk the rest of the way, taking the stairs instead of the elevator, get out with kids or friends in the evening after working or after class and playing any light sports like kick a ball or pass over the ball (Diabetes Care Community, 2019). Aerobic exercise is one of the physical activities that involves the major muscles, including the lungs and heart. It helps to carry oxygen around the body and pump more bloods to heart. This helps the heart and lungs become stronger, along with other muscles. The examples of aerobic physical activities are brisk walking, running, jogging, dancing, cycling and aerobic classes at the gym (MedicineNet, 2020).

According to the Centre for Disease Control, (2019), six in 10 Americans live with at least one chronic disease, such as heart disease and stroke, cancer or diabetes. These chronic disease and other chronic diseases are the leading causes of death and disability in America. Besides, this condition also a leading driver of health care costs. They also emphasized that most chronic diseases can be prevented by eating well, being physically active, avoiding tobacco and drink plenty of plain water and getting regular screenings (Centre for Disease Control, 2019).

There are many important benefits of physical activity such as helps with weight loss, build and maintain muscles and bones, increase energy level, reduce the risk of chronic disease such as heart disease, stroke, high blood pressure, type 2 diabetes and osteoporosis, improve mental health (morale and self-esteem), brain function, protect memory and thinking skills (Arlene Semeco, 2017; Canadian Physical Activity Guidelines, 2019; Ben Martynoga, 2016; Lee & Kim, 2019). Furthermore, a study by Robert Wood Johnson Foundation, (2015) indicated that regular participation in physical activity and higher levels of physical fitness have been linked to improved academic performance and brain functions, such as attention and memory. The brain functions are the foundation for learning.

However, a few studies reported that physical activity was not routinely practice by most university students. For example, in a study by Hazra, (2016), it is indicated that only 30% of Presidency University, in Bangladesh did physical activity on a regular basis. This shows that they had lack of awareness about the benefits of physical activity. While in other study conducted in King Khalid University in Saudi Arabia reported that more than half (57.3%) of the students did not practice heavy activity, 30.3% did moderate activity and 43.0% students walk every day about 15 min (Gad, Arrab, & Alsayed, 2018). Besides that, in a study by

Maryam, (2016), the result showed that 76% students were physically active at different levels while the remaining were not exercising.

Some studies looked at the relationship between levels of physical activity and obesity (Yousif, Kaddam & Humeda, 2019; Chukwudi, 2016 and Radzi et al., 2019). The study by Mogre, Nyaba, Aleyira, & Sam, 2015 stated that the engagement in vigorous physical activity and being male were negatively associated to general overweight/obesity and abdominal obesity respectively. For example in a study by Yousif, Kaddam, & Humeda, (2019) from Al-Neelain University, they had indicated that the prevalence of obesity among students was 6.5% and overweight was 22.2%. Their study showed that 44.9% of medical students had low physical activity level. While 32% of students had moderate activity level and only 23.1% had high physical activity level. Meanwhile, in other study by Chukwudi, (2016) showed that the overweight and obesity is prevalent among student population with 20% of the participants being overweight and 9.5% obese. In Malaysia, a study by Radzi et al., 2019 was conducted involving 940 students from five universities. It was indicated that 57 (6.1%) were underweight, 502 (53.4%) were in the normal range, 216 (23.0%) (of 940) overweight and 165 (17.6%) were obese.

Additionally, the study by Maureira Cid, (2017) give account of the physical activity as a new tool for cognitive improvement and give responsibility to the professional of the physical activity, not only conscious of the improvement of the physical qualities and motor capacities, but also of an active and related role of the student's academic improvement. Besides, a study by Nayak et al., (2016) showed that most students in the study agreed that there is a correlation between physical activity and academic performance. This study also showed that the students who participated in physical activities scored average (55%) and above average marks (28%).

Meanwhile, students who did not practicing any physical activities mostly scored average (68%) and passing marks of (21%) (Nayak et al., 2016).

1.2 Problems Statement

The statistics of obesity people in Malaysia is getting serious day by day. The World Health Organization (WHO) survey (2010) ranked Malaysia as the sixth in Asia with higher rate of obesity. Meanwhile, the statistic from the Malaysian National Health and Morbidity Survey in 2006 showed that about 43% of Malaysian adults were obese or overweight (Webmaster Support, 2019). Obesity can be both a cause and a consequence of physical inactivity. Physical inactivity on the other hand, is associated with impaired sensitivity to hormones involved in metabolism and satiety, loss of lean muscle mass, and a reduction in total energy expenditure (Eirik, 2016).

However, obesity is preventable (WHO, 2018). Body mass index (BMI) is a simple index of weight-for-height that is commonly used to classify overweight and obesity in adults. The BMI can be calculated by dividing a person's weight in kilograms by the square of his height in meters (kg/m2). Table 1.1 below shows the BMI categories by WHO.

Table 1.1: Categories of Body Mass Index, BMI (WHO, 2018)

BMI	Nutritional status
Below 18.5	Underweight
18.5–24.9	Normal weight
25.0–29.9	Pre-obesity
30.0–34.9	Obesity class I
35.0–39.9	Obesity class II
Above 40	Obesity class III

The question is why university students lacking in physical activity? According to Chan Sun, (2013), lack of time-management skill among university students has been identified as the main constraints in engaging in leisure-time physical activity (LTPA). This study also claimed that improvement in physical health and physical appearance were the main motivations of university students to engage in LTPA (Chan Sun, 2013).

Furthermore, based on the researcher's own observation as a university student, many undergraduate students had put on weight started from their second year of university life. Although numbers there are numbers of people were seen performing physical activity in the evening after class, it is not known whether they are among these students or outsiders. This is because the university areas are open to the nearby community for routine physical activity. This phenomenon is in line with the result of other studies. For examples in Ranasinghe et al., (2016),

they observed physical activity levels among university students using the International Physical Activity Questionnaire (IPAQ) categorical score and the result showed lower physical activity among undergraduate students with a higher percentage of 'Inactive' (48.7%) and only 15.9% were considered as 'Highly active'.

Indeed, regular physical activity promotes health, prevents disease, and improves quality of life. According to National Physical Activity Plan (2016), healthcare providers are trusted and can be an effective advocates and educators for physical activity for their patients. Thus, as the future health care professionals, it is very important to increase the students of School of Health Sciences awareness on the importance of performing regular physical activity.

There are many related studies being done in Malaysia so far. For example, study to determine physical activity level among 95 undergraduate students in Universiti Sultan Zainal Abidin (UniSZA). The result showed results showed that 66.4% of the students were classified as sedentary. Barriers to physical activities among university undergraduates had been investigated in Saleem et al., (2018) resulting in 184 (38.3%) of the students agreed that they cannot include physical activity in their daily activities because of their busy schedule. On the other hand, 199 (41.5%) of the students reported tiredness and exhaustion as a key reason for physical inactivity and, lack of motivation was found as the barrier to physical activity (n=259, 54.0%). Thus, this study was done to assess the motivation to practice physical activity among undergraduate students in School of Health Sciences of Universiti Sains Malaysia.

1.3 Significance of Study

This study will provide information on motivation and practice of physical activity among undergraduate students. It is hope that the finding of this study helps to increase the students' awareness on the benefits of physical activity towards their academic achievement and motivate them to practice physical activity regularly. Some potential benefits and motivation that can be gained by the students after the completion of this study are through the motivation to practice physical activity, practice of physical activity and the association between the students' sociodemographic characteristics and their motivation to physical activity on practice of physical activity.

1.4 Research Questions

1. What is the motivation factors to practice physical activity among undergraduate students at the School of Health Sciences, Universiti Sains Malaysia (USM).
2. What is the practice level of physical activity among undergraduate students at the School of Health Sciences, Universiti Sains Malaysia (USM).
3. Is there any association between the association between the students' sociodemographic characteristics (gender) and their motivation to physical activity on practice of physical activity among undergraduate students at the School of Health Sciences, Universiti Sains Malaysia (USM).

1.5 Research Objectives

1.5.1 General Objective

The general objective of this study is to determine the motivation factors and practice level of physical activity among undergraduate students at the School of Health Sciences, University Sains Malaysia (USM).

1.5.2 Specific Objectives

1. To assess the motivation level to practice physical activity among undergraduate students at the School of Health Sciences, Universiti Sains Malaysia (USM).
2. To determine the practice of physical activity among undergraduate students at the School of Health Sciences, Universiti Sains Malaysia (USM).
3. To assess the association between the students' sociodemographic characteristics (age, gender, ethnicity, educational status, programme of study and BMI) and their motivation to physical activity on practice of physical activity among undergraduate students at the School of Health Sciences, Universiti Sains Malaysia (USM).

1.6 Research Hypothesis

Null Hypothesis, HO1: There is no significant association between the students' socio-demographic characteristics (age, gender, ethnicity, educational status, programme of study and

BMI) and their motivation to practice physical activity among undergraduate students at the School of Health Sciences, Universiti Sains Malaysia (USM).

Alternative Hypothesis, HO2: There is significant association between the students' socio-demographic characteristics (gender) and their motivation to perform physical activity among undergraduate students at the School of Health Sciences, Universiti Sains Malaysia (USM).

1.7 Conceptual and Operational Definitions

Term	**Conceptual**	**Operational**
1.6.1 Metabolism	Metabolism is the total of the chemical reactions that take place within each cell of living organism and that provide energy for important processes and for synthesizing new organic material. The energy product will be used to carry out activities such as movement, growth and development and reproduction. (Hans Kornberg, 2019).	In this study, metabolism will be assessed based on the Body Mass Index (BMI) of the students. In doing so, The weight and height data of the sample will be collected.
1.6.2 Physical activity	Physical activity simply means movement of the body that uses energy. Walking, gardening, briskly pushing a baby stroller, climbing the stairs, playing soccer, or dancing the night away are all good examples of being active (ChooseMyPlate,2019)	In this study, the physical activity is the level of physical activity that practiced by the students. The physical activity will be included the mild, moderate and vigorous physical activity
1.6.3 Motivation	Motivation is the internal and external factors that stimulate desire and energy in person to be consistently interested and	In this study, motivation is the factor or reason in practicing physical activity

	committed to a role or subject, or to make effort to achieve the goal. The result of motivation from the interaction of both conscious and unconscious factors such as the intensity of desire, incentive or reward value of the goal and the expectations of the individual and of his or her peers. (Business dictionary, 2019)	among undergraduate students.
1.6.4 Motive	The psychological feature that arouses an organism to action toward a desired goal, the reason for the action, that which gives purpose and direction to behaviour. (vocabulary.com, 2019)	In this study, motives are a reason that cause motivation of students in practicing physical activity.
1.6.5 Practice	Practice is performing any activity or exercise continuously or repeatedly in order to improve or maintain proficiency or competency. (Oxford Dictionary, 2019).	In this study, practice is performing the physical activity in different level of physical activity (mild, moderate and vigorous).
1.6.6 Undergraduate student	A student who is studying for their first degree and diploma at a college or university (Cambridge Dictionary, 2019)	In this study, the undergraduate student is the sample of the population at School of Health sciences. The age of participants in this study will be range 18-24 years old.

Chapter 2: LITERATURE REVIEW

2.1 Introduction

This chapter will include all related information related to motivation and practice of physical activity among undergraduate students. The literature search is done by using the main keywords including motivation and practice of physical activity and its associated factors. This chapter also discusses the theoretical framework that was used in this study.

2.2 Motivation to practice physical activity.

In terms of motivation on physical activity, the researcher found limited studies looking at this issue among university students. Therefore, for the purpose of this review, the researcher had included such studies that was conducted in other population.

With regard to motivation to perform physical activity the study by Diehl, Fuchs, Rathmann, & Hilger-Kolb, (2018) reported that the students' performed physical activity "because it makes me feel good" (56.7%), "because it is fun" (55.8%), "to stay fit" (54.1%), and "to achieve balance in daily life" (51.0%). While in Kumar et al., (2014) majority of students (82.4%) perceived health related benefits of physical activity as their motivating factors rather than prevention of chronic non-communicable diseases. Most of them 72.3% have enrolled in lifestyle modification activities like yoga, going to gymnasium, etc.

In other study by Abdllah et. Al., (2018), 400 students in Universiti Kebangsaan Malaysia (UKM) showed that skills and expertise (44%), interest and enjoyment (35%) and

health and fitness (18%) contributed to the impact of their involvement to practice physical activity.

2.3 The practice of physical activity

Similar to motivation, the researcher also had difficulty to find studies looking at the practice of physical among university students. There are only four studies found on the practice of physical activity among other population and included as part of the references of this study (Serrano, Abarca-sos, & Villar, 2015; Hashim et al., 2011, Kasim, et al., 2017, El Ansari, Khalil, Crone, & Stock, 2014). In a study by Rajappan, Selvaganapathy, & Liew, 2015, a total of 100 university students participated in the study. The findings indicated that 40% students had higher level of physical activity, 38% moderate and 22% low level of physical activity. While in another study by Dirks-Naylor, Griffits & Bush (2018), on three Schools of Pharmacy existed in North Carolina with 246 students. The finding indicated that most students (57%) did not routinely practice physical activity (3-5 days/week).

In Malaysia, a study conducted in Universiti Sultan Zainal Abidin (UniSZA) reported the practice level of physical activity among the students based on three main ethnicities. The result showed low physical activity in Malay (25.9%), Indians (14.7%), Chinese (36.4%) and of other races (11.8%). While in moderate physical activity, 48.2% was indicated in Malay, 23.5% Indians, 27.2% Chinese and 64.7% of other races. Finally higher level of physical activity was indicated in 25.9% Malay, 61.8% Indians, 36.4% Chinese and 23.5% other races students (Rajappan et al., 2015).

Additionally in a study by Kubaisy, Mohamad, Ismail, & Abdullah, (2015) in Shah Alam among 495 participants, they found that female participants exhibited highest rate (55.6%) in walking than male (44.4%). However, males exhibited highest rate (63.6%) in practicing other sport activities (football, festal, tennis, golf, badminton, etc.) than females (36.4%).

2.4 Motivations factor to practice physical activity

There were several articles reporting the association between socio-demographic characteristics and motivation to practice physical activity (Molanorouzi, Khoo, & Morris, 2015, Groffik, 2014 and Hoare, Stavreski, Jennings, & Kingwell, 2017). Most socio-demographic characteristics covered in these studies were age, gender and the body mass index that influencing the motivation to practice physical activity. The results were presented as follows.

For the purpose of this study, however the researcher would more focus on selected socio-demographic criteria such as age, gender, ethnicity, educational status, programme of study and BMI. All of the socio-demographic characteristics factors are discussed further in the following sections.

2.4.1 Age

Discriminant Function Analysis (DFA) is to determine the motives that distinguished each type of activity. The study by Molanorouzi, Khoo, & Morris, (2015) DFA revealed a significant canonical function (Wilks' Lambda = .590, $p < .001$), revealing that young and

middle aged adults could be effectively discriminated by the motivational sub-scales measured. In the case of young and middle-aged adults, 83% of the sample was correctly classified according to age category. Meanwhile, the study that involves adult age 25-54 years by Hoare, Stavreski, Jennings, & Kingwell, (2017) showed that the most frequently selected responses for physical activity motivation were to lose or maintain weight (36.6%), avoid or manage health condition (17.8%), and improve appearance (12.8%). Other motivations selected were to improve athletic performance and/or strength (11.5%) and improve mood (7.9%).

2.4.2 Gender

Different gender also can influence different motivation to practice physical activity. According to Groffik, (2014), the result showed that the most heavily mentioned motive in girls was “because I want to look or maintain weight, so I look better” (72.5%) of girls. Statements such as “because I like to do this activity” or “because I enjoy this activity” were similarly endorsed by boys (72.6%). The second most heavily cited motive for girls was the statement “because I want to improve my body shape” (rated by 80.7%) and for boys was “because I want to be physically fit” and “because I want to exercise my muscles to look better” (72.8%). In contrast, the least endorsed answers were “because I will feel physically unattractive if I don’t” (8.7% for girls and 14.5% for boys) and “because my friends want me to” (33.3%) for girls and (32.4%) for boys, which ranked last for both boys and girls.

2.4.3 Body mass index

The different of body mass index such as underweight, normal, overweight and obese could influence different motivation to practice physical activity. A study by Groffik, (2014) showed that the most strongly statement from female participants with normal BMIs was “because I want to be physically fit” (66.1%); the second most endorsed item was “because I want to maintain my physical health and well-being” (67.3%), and the third was a tie among several items describing interest and enjoyment “I like to do this activity” (64.6%), “I enjoy this activity” (65%), and “it makes me happy” (65.6%). The most strongly endorsed item for overweight girls was “because I want to look better or maintain weight so I look better” (89.7%); the second most endorsed item was “because I want to improve my appearance” (84.6%), whereas the third most endorsed motive dealt with improving body shape (84.6%). The most strongly endorsed item for boys with normal BMIs was “because I like to do this activity” (74.9%); the second and third most strongly endorsed items were “because I want to be physically fit” (75.7%) and “because it makes me happy” (51.7%). For overweight boys, the most strongly endorsed item was “because I want to define my muscles so I look better” (75%); the second most strongly endorsed was “because I want to maintain my physical health and well-being” (76.4%), whereas the third most strongly endorsed were the motive that physical activity makes a person happy (72.2%) and the item “because I want to look or maintain weight so I look better” (75%).

2.5 Theoretical Framework

The Self-Determination Theory (SDT) was utilized as the conceptual framework for this study. The Self-determination theory (SDT) was a theoretical perspective that have been used in health behavior intervention contexts and introduced by the psychologist Edward Deci and Richard Ryan in their 1985 book *Self-Determination and Intrinsic Motivation in Human Behaviour* (Patrick & Williams, 2012). Edward Deci and Richard Ryan were growing out of research on intrinsic motivation, or the internal desire to do something for person own sake and not for external reward (Cynthia Vinney, 2019). The self-determination theory has focused on the social-contextual conditions that facilitate versus forestall the natural processes of self-motivation and healthy psychological development. Precisely, the factors have been examined that enhance versus undermine intrinsic motivation, self-regulation and well-being (Bosco Bharathy, 2015).

Instead, Teixeira, Carraça, Markland, Silva, & Ryan, (2012) argued that the review provides good evidence for the value of SDT in understanding and promoting physical activity behaviour. The clearest finding of this review concerns the beneficial role of developing autonomous self-regulation, be it predominantly via autonomous forms of extrinsic regulation (i.e., identified and integrated regulation) or enhanced intrinsic motivation. Meanwhile, the success theory can be attributed to its degree of comprehensiveness and testability. The SDT outlines very clear, detailed, dynamic, and verifiable propositions that apply to needs and motivations across life spheres, including classrooms, organizations, families, teams, clinics, and cultures. SDT is therefore both broad and specific, as it provides detailed accounts of how social and cultural forces impact personality development and global motivational orientation, as well as behavioural responses within particular domains and tasks (Legault, 2019).

The SDT states that people were driven by three basic psychological needs which comprises of autonomy, competence, and relatedness. The theory emphasizes the benefits of acting out of internal, instead of external, drives. It views the individual as active and agentic, and therefore able to take actions based on personal goals and values (Cynthia Vinney, 2019). The basic psychology needs as shown in Figure 2.1 which is the conceptual framework of motivation was adapted from Amy Bucher, (2013). The model of autonomy suggest that people need to be in control of their own behaviour and goals which means involves the self-initiation and self-regulation in practicing any types of physical activity. Meanwhile, the second basic psychology need which is competence suggest that a person need to understand how to attain different internal and external outcome and being efficacious in practicing any physical activity. So, a person needs to gain the skill of the physical activity that they doing. The relatedness suggests that a person need to stay connected with other people and also the environment.

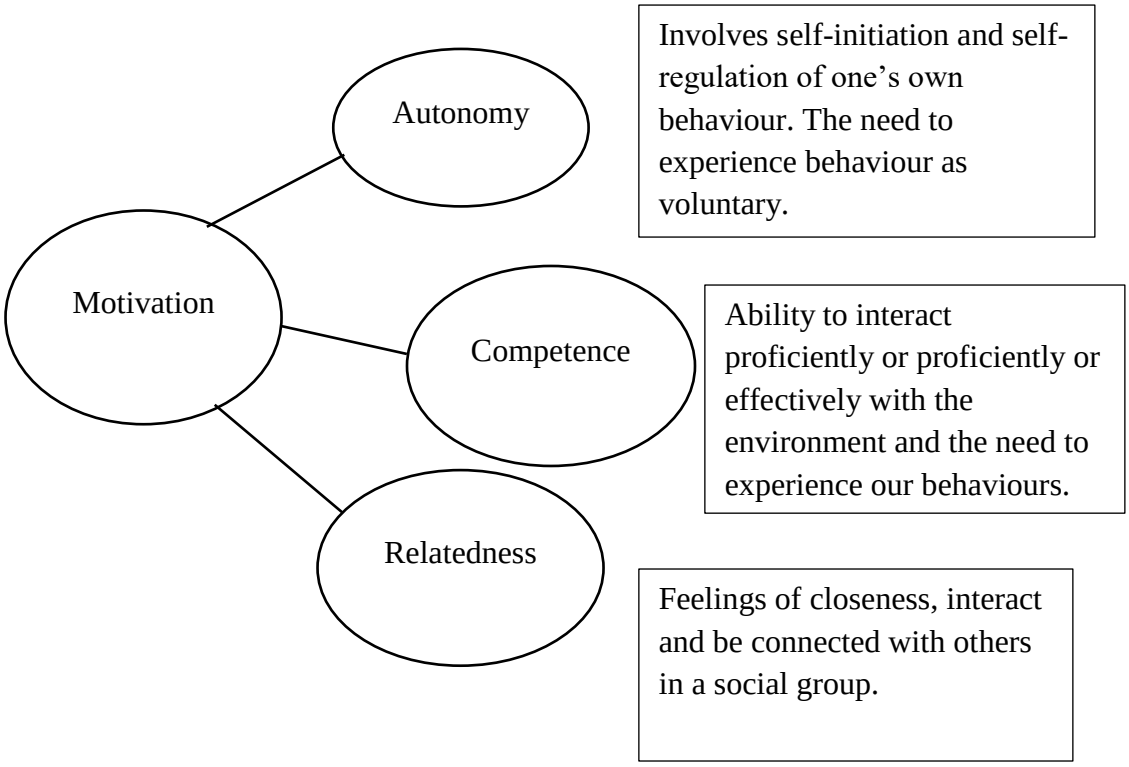

Figure 2.1 Conceptual Framework of SDT

(Adapted from Amy Bucher, Ph.D., 2013)

The SDT has been used in this study to help guide the researcher to understand the undergraduate student's motivation towards practicing any types of physical activity. Figure 2.2 shows the conceptual framework of motivation in practicing physical activity modified from SDT among undergraduate students. The study by Laroche, Roussel, Cury, & Boiché, 2019 stated that attaining health-related gains are favourable to autonomy and the development of self-determined motivations toward physical activity (intrinsic motivation, integrated regulation, and identified regulation), whereas concerns about avoiding health-related losses are associated with a practice based on a feeling of external pressures (external regulation) and an

incapacity to value the activity or its outcomes (amotivation). Meanwhile, in the study by Teixeira et al., 2012 shows that consistent support for a positive relation between more autonomous forms of motivation and physical activity, with a trend towards identified regulation predicting initial/short-term adoption more strongly than intrinsic motivation, and intrinsic motivation being more predictive of long-term exercise adherence. The literature is also consistent in that competence satisfaction and more intrinsic motives positively predict physical activity participation across a range of samples and settings. Mixed evidence was found concerning the role of other types of motivations (e.g., health/fitness and body-related), and also the specific nature and consequences of introjected regulation.

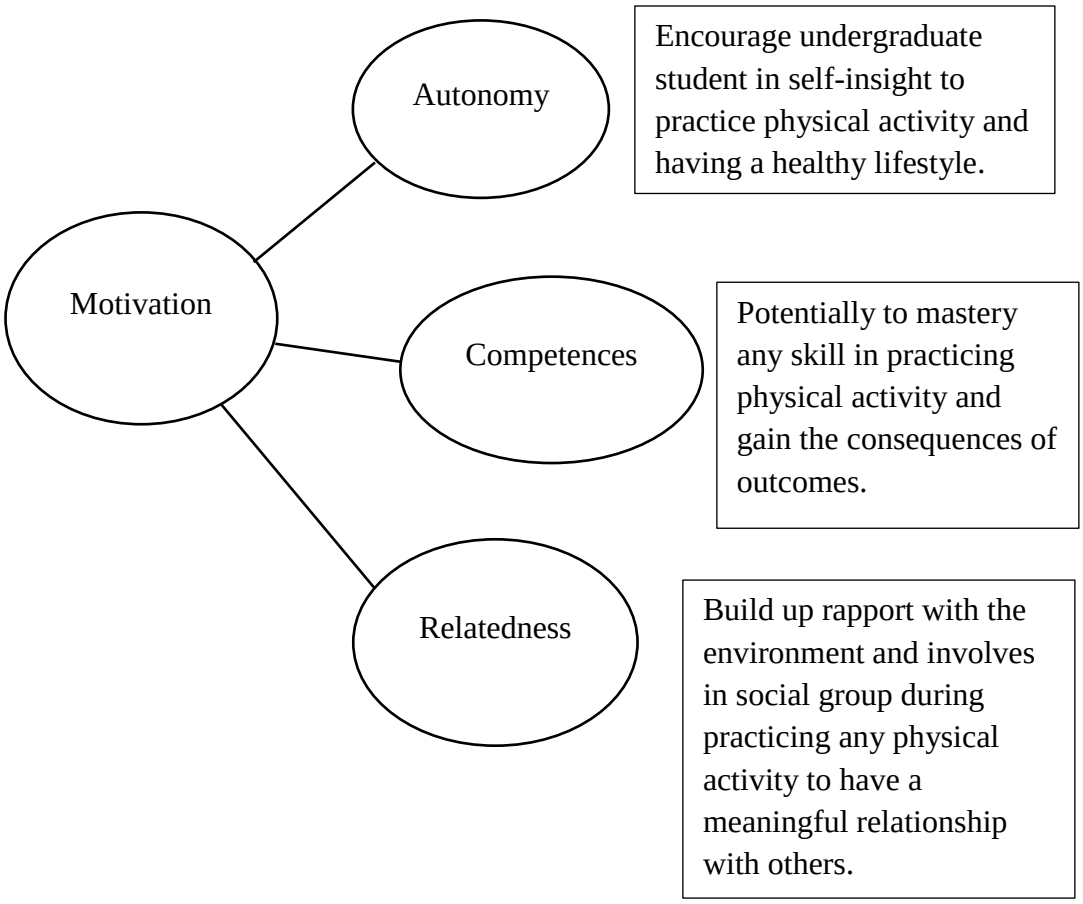

Figure 2.2 Conceptual Framework of Motivation in Practicing Physical Activity modified from SDT

Chapter 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter introduced all the information about the study in terms of research design, the population and setting of the study, the sampling method, variables, instrumentations, ethical consideration, and data collection plan and finally the data analysis plan.

3.2 Research Design

This study is descriptive in nature and was conducted through cross-sectional survey using self-administered questionnaires.

3.3 Research Location

The location of this study at PPSK, School of Health Sciences, Universiti Sains Malaysia (USM) area.

3.4 Research Duration

This study was conducted in the period of a month from February and March 2020.

3.5 Research Population

The population of this study was among undergraduate students from 11 programmes of School of Health Sciences, Universiti Sains Malaysia (USM).

3.6 Sampling Criteria

3.6.1 Sample

The sample of this study was among undergraduate students who fulfilled the inclusion criteria as follows:

3.6.1.1 Inclusion criteria:

1. Male and female undergraduate students of all 11 programmes in School of Health Sciences, Universiti Sains Malaysia (USM), Kubang Kerian Kelantan
    a. Year 1 and Year 2 of Audiology, Biomedicines, Dietician, Degree Nursing, Diploma Nursing, Environment Health, Speech Pathology, Nutrition, Sport Science, Forensic Science and Medical Radiation programmes
    b. Year 3 of Biomedicines, Degree Nursing, Diploma Nursing, Environment Health, Sport Science and Forensic Science programmes
2. Physically active. (Walking, gardening, briskly pushing a baby stroller, climbing the stairs, playing soccer, or dancing the night away are all good examples of being active. For health benefits, physical activity should be moderate or

vigorous intensity) (ChooseMyPlate, 2020). The practice of physical activity is at least in walking.

3.6.1.2 Exclusion criteria:

1. Year 4 students of all programmes in School of Health Sciences.
2. Year 3 of Speech, Audiology, Medical Radiation, Nutrition and Dietician programmes.
3. All Year 4 students of all programmes as well as Year 3 students of Speech, Audiology, Medical Radiation, Nutrition, Nursing and Dietician students were excluded from this study because they had their industrial training and clinical placement outside of the campus during the data collection period. Postgraduate students of University Sains Malaysia (USM).
4. Undergraduate students who are physically disable.

3.7 Sample Size Estimation

The overall population of the undergraduate students in Health Campus except final year undergraduate students and year three of Speech, Audiology, Medical Radiation, Nutrition, Dietician and Diploma Nursing students is 868 Hence, sampling size is important because samples that are too large may lead to wasting time, money and energy while too small sample size may lead to inaccurate results (Six Sigma, 2012). Sampling size have been calculated in each objective and the largest sampling size was chosen as sample size estimation which is 147.

3.7.1 Objective 1

Sampling Size for Objective No. 1

The sample size calculation was done by using Calculator Version 2.0 (School of Medical Sciences, Universiti Sains Malaysia). The one mean formula with two-tailed will be used.

The Standard deviation, SD of motivation was 1.24 (Yazıcı, 2016)

The Precision: 5, Significant Level: 0.05

After adding Drop-out: 10%, the total sample size is 2 of undergraduate students.

B3	1 mean – Estimation		
	Standard deviation (σ)	1.240	
	Precision	5.000	
d	Significance level (α)	0.050	Two-tailed
	Drop-out	10%	
	Sample size	1	
	Sample size (with drop-out)	2	

3.7.2 Objective 2

Sampling Size for Objective No. 2

Similar to the first objective, the sample size calculation for the second objective was done by using Calculator Version 2.0 (School of Medical Sciences, Universiti Sains Malaysia 2016). The one mean formula with two-tailed will be used to determine the motivation.

The standard deviation, SD amount of PA = 29.3 (Phing et al., 2016)

The Precision: 5, Significant level: 0.05

After adding 10% drop-out, the total sample size is 147 of undergraduate students

B3	1 mean – Estimation		
	Standard deviation (σ)	29.300	
	Precision	5.000	
d	Significance level (α)	0.050	Two-tailed
	Drop-out	10%	
	Sample size	132	
	Sample size (with drop-out)	147	

3.7.3 Objective 3

Sampling Size for Objective No.3

The third objective, the sample size calculation was done by using Calculator Version 2.0 (School of Medical Sciences, Universiti Sains Malaysia 2016). The two means formula with two-tailed will be used to determine the motivation.