

MOTIVATION TO PHYSICAL EXERCISE: IS IT DIVERSE WITH DIFFERENT SOCIODEMOGRAPHIC CHARACTERISTICS PARTICULARLY THE GENDER?

Waqar Al-Kubaisy, PhD

Mariam Mohamad, MPH

Zaliha Ismail, MPH

Nik Nairan Abdullah, MPH

Mazlin Mohamad Mokhtar, PhD candidate

Universiti Teknologi MARA (UiTM) Faculty of Medicine, Malaysia

Abstract

Engagement in physical exercise differs with different socio-demographic status. Females exhibit lower levels of physical exercise performance, it seems that their motivation to exercise is differ. Various types of motivation that influence exercise performance regularly were recognized. This study aims to determine the relationship between 21 motivating reasons and sociodemographic factors, concentrating more on the gender difference. **Method:** A study was conducted on 501 adults performing exercise. Participants were interviewed using a questionnaire comprises of 21 motivating reasons. Each reason was measured on a five-point scale as, strongly disagree (1) to strongly agree (5). The sum, and mean score of all the 21 reasons was used as the dependent variable versus each socio-demographic factor. The mean score of each item was used as the dependent variable versus gender. **Results:** Significant inverse correlations were detected between motivating reasons score with; age ($r=-0.122$, $p=0.007$), BMI ($r=-0.091$, $p=0.042$), and household income ($r=-0.095$, $p=0.036$). Unmarried or free of chronic diseases respondents showed, significantly higher motivating mean score ($p=0.032$, 0.010 respectively). No significant difference in the mean score with level of education and gender. However, males showed significantly higher means score in two motivating reasons to; *have a positive effect on the sex life* (4.18 ± 1.01 , $p < 0.001$), *have more energy to go about the daily chores* ($4.62 \pm .63$, $p = 0.027$). No significant gender difference in the mean score for other motivating reasons. **Conclusion:** young, unmarried, lower income, lower

BMI and no chronic illness individuals have higher motivating reasons. Both genders were almost equally motivated in performing exercises.

Keywords: Gender, Motivating reasons, Physical exercises, Socio-demographic factor

Introduction

The Epidemiologic study of any concept or event requires the item under investigation to be defined and measured. The common and professional use of the term "exercise" has been used interchangeably with "physical activity". Exercise, however is not synonymous with physical activity: it is a subcategory of physical activity. Exercise is a physical activity that is planned, structured, repetitive, and purposful with an objective for improvement or maintenance of one or more components of physical fitness (Carl, Kenneth, & Gregory,1985). Two main groups of components contributed to physical fitness: one related to health and the other related to skills that are relevant more to athletic ability. The health-related components of physical fitness are five (cardio respiratory endurance, muscular endurance, muscular strength, body composition, and flexibility) and more important to public health than the components related to athletic ability (Pate, 1983).

Engagement in regular physical exercise is an important part of a healthy lifestyle. In order to achieve the health benefits of physical activity it is important to exercise regularly, (Aura, Silvia, & Sorin, 2014; Sabina, Alina, & Bogdan, 2014). The 2008 Physical Activity Guidelines for Americans (U.S.A. Department of Health and Human, 2008) recommends that healthy adults should get a minimum minutes per week as 150 of moderate-intensity or 75 as vigorous-intensity aerobic exercise, or a combination of the two (two days doing 20 - 25 minutes of vigorous exercise and two days doing 30 minutes of moderate exercise).

Unfortunately, previous generations were more active naturally through manual labour and work. However, with the use of modern technologies that considerably decreased physical activity at home, at work, and even during leisure time. A sedentary lifestyle appears to be the rule in most developed countries.

Several researchers, (Gulap, 2014; Sabina et al., 2014; Ebru, 2013; Lindsay, Craig, Philip,& Jenny,2010) stated, that regular exercise is linked to the prevention of cardio-vascular disease, type 2 diabetes mellitus (DM), cancer, obesity, hypertension, osteoporosis, and depression. There is a body of evidence regarding the effectiveness of regular physical exercise in the primary and secondary prevention of several chronic diseases (Lindsay et al. 2010). Interestingly, Jennifer (2004), stated that, it has been proven

medically that people who do regular physical exercises have a lower risk of up to; 50% type 2DM, 50% colon cancer, 35% coronary heart disease and stroke, 20% breast cancer a 30% early death, 83% osteoarthritis, 30% depression, 30% dementia. In addition, Lindsay et al. (2010) reported that the medications used for diabetes, hypertension and Low density lipoprotein (LDL) have an inverse relationship with vigorous physical exercise.

In spite of the huge number of researches that had confirmed the link between physical exercise and health, only about 30 % of adult Americans reported they got regular physical exercise and about 40 % got no physical exercise at all. While 63% of Canadians were not sufficiently got physical exercise, (Lindsay et al., 2010).

One important factor which may contribute to continue regular exercise is his or her motivation to exercise,(Duncan, Craig, Philip & Jenny 2010). Generally, Deci & Ryan (2000) stated that according to the Self-Determination Theory, the motivation towards regular physical exercise can be; extrinsically or intrinsically motivation. The extrinsic motivation involves motivation towards physical exercise in order to avoid negative feelings or to satisfy an external requirement (e.g. rewards, sanctions, expectations). So, the individuals will likely feel pressured to perform the physical exercise. Whereas, the intrinsic motivation represents the most self-determined type of motivation and refers to engaging in the activity for its sake. An intrinsically motivated person considers the physical exercise inherently enjoyable, interesting and challenging.

Several authors (Hopkins, Davis, Van Tieghem, Whalen & Bucci, 2012; Silberner, & Joanne, 2010;Trost, Owen, Bauman, Sallis, & Brown 2002) categorised the motivation to exercise as follows: a-demographic and biological factor (gender, body weight), b- psychological, cognitive and emotional factors (enjoyment, improve cognition and memory and decrease the risk for dementia and anxiety), c- behavioural attributes and skills (sleep, smoking, improves their quality of life), d- social and cultural, (family or friends support) and e- physical environment and/or physical activity (satisfaction access to exercise facilities watching others exercises) characteristics.

Understanding how different types of motivation contribute to exercise behavior is an important first step in identifying ways to increase exercise among individuals.Changes in physical exercise performance were noted in relation to the influence of marital status, obesity, smoking, lack of time, past exercise behavior, and other environmental variables. Diyanah, Hafazah, & Mohd, 2012; Trost et al. 2002), detected the reasons why people engaged in physical exercise were different during different age period. The reasons were related to the changing in; values, life tasks, goals, and health circumstances over time.

Gender differences in physical exercise performance among adults are well documented by Jennifer (2004) who detected that, females typically exhibit lower levels of physical exercise performance than males. It seems that gender factor motivating people differently in performing regular exercise. Therefore, identifying these variations may help in the implementation of interventions aimed at promoting physical exercise across the lifespan. We hypothesized that there is a variation in the motivating reasons for performing physical exercise with different socio demographic factors. Man and woman also possessing different motivating reasons for performing regular physical exercise. The current study employs self-determination theory as a framework to examine how motivation for performing physical exercise is affected by various socio demographic characteristics and gender in particular.

Aims

1-To investigate the relationship between socio demographic factors and the motivating reasons for performing physical exercise.

2-To study the relationship between the sex of the individual with the motivating reasons for performing physical exercise

Methodology

A pilot study was carried out prior to embarking on the main project, for testing the reliability and validity of the questionnaire. The cronbach's alpha was 0.92.

A Cross sectional study was conducted among adult individuals performing physical exercise in Shah Alam. Five recreational areas / parks in Shah Alam were chosen randomly. Each selected area was visited during weekdays as well as weekend within the period of study (2013-2014). A sample of 501 adults aging 18 years and above, who were performing exercise in one of those five chosen areas was collected. Formal consent was obtained from each participant. All participants were face-to-face interviewed, using well structured, validated questionnaire. Information was obtained from each participant, socio demographic characteristics (age, sex, marital status, ethnicity, religion, education level, employment status, working hours per day, working days per week), smoking behaviour (non-smoker, current smoker, or ex-smoker) and medical status (presence and type of chronic disease).

In addition, this questionnaire includes 21 items referring to various kinds of motivation reasons for getting involved in a regular physical exercise. These items were categorised into four main domains: i. biophysical to; *increase the chances of living longer, control weight, obtain the weight-loss benefits, have stronger muscles and bone, have flexible body movement,*

have positive effect on the sex life". ii- psychological, cognitive and emotional to; feel better about my appearance, boost the confidence and improve self-esteem, decrease the risk of depression, feel happier, feel more relaxed, connect with family or friend in a fun social setting. iii- medical to; prevent high blood pressure, decrease the risk of stroke, decrease the risk of arthritis, decrease the risk of diabetes mellitus (DM), decrease the risk of cancer or recommended by the doctor", iv- behavioural to; improve the quality of life, have more energy to go about the daily chores, fall asleep faster and deeper".

Each item was measured on a five-point - scale, from (1) strongly disagree to (5) strongly agree. The sum score of the 21 reasons was then used as the dependent variable versus each sociodemographic characteristic. Moreover, for each item of these 21 reasons, the mean score was calculated, and used as a dependent variable versus the gender of the participant.

Each participant was asked to indicate his/her weight and height for the body mass index (BMI) calculation.

Descriptive statistics (frequency, percentage, and means) was carried out. χ^2 , ANOVA and correlation regression tests were used to assess the relationship between causes of motivation and sociodemographic factors. While independent t test was used to detect the significant variation in the motivating means score between the gender. Statistical analyses were done using the SPSS version 21.

Results

Out of 501 questionnaires, 495 were in a complete status. The descriptive socio-demographic characteristics for the study participants (495) are provided in table 1. The majority were Malay (92.1%), Muslim (93.3%), free of chronic diseases (80.8%). More than 3/4 (76.8%) were never smoked in his or her life. More than half (53.7%) of the participants were females. The respondent's mean age was 32.66 years (range 18-67 years). High percentage (72.5%) of the respondents were with high level of education, including university (57.8%) and college (14.7%) while only 9 (1.8%) had no formal education. More than 2/3 (64.6%) were employed at the time of enrolment, working with a mean of 8.6 hours /day. About half of our sample (49.3%) was unmarried. The mean BMI for all participants was 24.64 kg/m² ranging 11.07-48.8. kg / m².

The association between the independent (socio-demographic) variables and the mean score of the 21 motivating reasons of physical exercise is provided in table 1. Significantly, higher motivating means score were (7.588) detected among non-Malay compared to (5.562) Malay ($t=1.716$, $p<.05$.), unmarried responders (6.582) compared to married (4.954) and divorced /widow groups (3.714) $F=3.783$, $p=0.023$. Similarly, the mean

score was significantly higher (9.8) among the non-employed compared to (6.971) students or (3.2) retired, ($F=3.374$, $p=0.01$). The participants who have no chronic diseases their mean scores was (6.056) significantly greater than (4.316) those having one or more chronic disease, $t= 2.155$, $p=0.01$. On the other hand, insignificant greater score mean was (7.767), detected among non-Muslims than (5.590) Muslim respondents, $t=1.631$ $p>.05$. Similarly, females showed insignificant higher mean score (6.01) compared to the male participants $t= 0.967$, $p=0.306$. The motivating mean score for those 73 currently smoker, was (7.110) higher than the ex-smoker (4.273) or non-smoker participants (5.6), however, this difference statically was not

Table 1. The relationship between physical exercise motivating reasons' scores and socio-demographic characteristics

Socio demographic characteristics:		No (%)	Mean score	Test of sign..	P value
Ethnic	Malay	456 (92,1)	5.562	$t= 1.716$	0.001
	Non Malay	39 (7,9)	7.588		
Gender	Male	229 (46,3)	5.389	$t=0.967$	0.306
	Female	266 (53,7)	6.01		
Religion	Muslim	465 (94)	5.590	$t=1.631$	0.001
	Non Muslim	30 (6)	7.767		
Marital status	Married	237 (47,9)	4.954	$F=3.783$	0.023
	Un Married	244 (49,3)	6.582		
	Divorced/widow	14 (2,8)	3.714		
Education	No formal education	9 (1,8)	6.333	$F=0.204$	0.936
	Primary	9 (1,8)	7.667		
	Secondary	118 (23,8)	5.602		
	College	73 (14,7)	5.548		
	University	286 (57,8)	5.734		
Occupation	Retired	21 (4,2)	3.810	$F=3.374$	0.01
	Housewife	29 (5,9)	4.724		
	Employed	320 (64,6)	5.272		
	Students	105 (21,2)	6.971		
	Not employed	20 (4)	9.8		
Smoking status	Current smoker	73 (14,7)	7.110	$F=2.363$	0.095
	Never smoked	378 (76,4)	5.647		
	Ex-smoker	44 (8,9)	4.273		
Health status	Have chronic disease	95 (19,2)	4.316	2.155	0.01
	No chronic disease	400 (80,8)	6.056		
Days performing exercise	Weekdays only	48 (9,7)	5.958	$F=1.109$.331
	Weekend only	203 (41)	6.237		
	Both	244 (49,3)	5.246		
Age (years)		495 (100)		$r=-.122$	0.007
Income/ month		495 (100)		$r=-0.094$	0.036
BMI kg/m^2 .		495 (100)		$r=-0.091$	0.042

significant, $F=2.363$, $p=0.095$. Participants, with primary school as a

maximal educational attainment showed the greatest motivating score mean (7.667), followed by those having no formal education (6.333). While those participant with the secondary school, college or university, their motivating reasons' score means were almost similar (5.602, 5.548, 5.734 respectively). However, these variations were statistically not significant $F=0.204$, $p=.936$. Most of the participants were performing physical exercise during the weekend, and only 48 individuals used the week days. Those who perform physical exercise during week days showed insignificant lower mean scores (5.958) than (6.237) those who perform exercise during the weekends. However, this difference was not significant, $t=0.236$.

Interestingly, we found that with the increasing of the BMI level as well as the monthly household family income, the motivating reasons' scores were decreased steadily, reflecting statistically the indirect significant inverse correlation with the BMI ($r=-0.091$ $p=0.042$) and household income ($r=-0.094$, $p=0.036$). Similarly, a significant indirect inverse correlation was detected between increasing age of a participant and motivating reasons' scores level ($r=-.122$ $p=0.007$), table 1.

In respect to the 21 motivational reasons and their relation with gender, the rate and mean were calculated for each item. Table 2, displays the rates of positive citation of the 21 items which ranging from 41.2% (*recommended by Doctors*) to 89.7 % (*to feel more relaxed*). More than 85% of the individuals were cited positively to the six motivating reasons which included, in sort of descending, *to; feel more relaxed* (89.7%), *have more energy to go about the daily chores* (88.3%), *have strong muscles and bones* (86.7%), *have flexible body movement* (85.5%) *feel happier* (85.3%), *connect with family or friend in a fun social setting* (85.1%). While all other reasons were mentioned by less than 85% of the individuals tested. On the other hand, less than 75% of the participants were cited positively to the following (most of them related to health issues) five items, *to decrease the risk of; DM* (73.9%), *cancer* (70.7%), *to increase chance of living longer* (71.5%), *to have a positive effect on the sex life* (63.2%), and *recommended by doctors* (41.2%).

The means score of the 21 motivating reasons were ranging from 3.19-4.57. The highest motivating reason's score means was (4.57) cited for the item, "*to feel more relaxed*", while the lowest (3.19) was given to the item "*recommended by doctors*". Interestingly, all the motivating reasons (except two) demonstrating a high (>4) mean score. Those two reasons with low means were; "*recommended by doctors*" (3.19 ± 1.361), and "*to have a positive effect on the sex life*", (3.94 ± 1.133), table 2.

Table –2- The score means and rates of the 21 motivation's reasons

	Motivating Causes to;	% Agree	Mean	±SD
1.	improve the quality of life	83.4	4.46	0.833
2.	live longer	71.5	4.08	0.959
3.	control weight,	84.8	4.42	0.850
4.	obtain weight-loss benefit,	81.6	4.33	0.937
5.	feel better about my appearance	83.2	4.35	0.922
6.	boost the confidence and improve self-esteem	84.4	4.40	0.853
7.	prevent blood pressure	81.8	4.35	0.876
8.	decrease the risk of stroke	82.6	4.36	0.842
9.	decrease the risk of arthritis,	77.8	4.25	0.932
10.	decrease the risk of DM	73.9	4.19	0.993
11.	decrease the risk of depression,	84.4	4.41	0.873
12.	decrease the risk of cancer,	70.7	4.08	1.041
13.	have strong muscles and bones	86.7	4.52	0.791
14.	have flexible body movement	85.5	4.46	0.860
15.	feel happier,	85.3	4.56	2.011
16.	feel more relaxed,	89.7	4.57	0.742
17.	have more energy to go about the daily chores	88.3	4.55	0.736
18.	fall asleep faster and deeper	75.4	4.24	1.013
19.	have effect on the sex life	63.2	3.94	1.133
20.	connect with my family or friend in a fun social setting	85.1	4.46	0.877
21.	Recommended by Dr.	41.2	3.19	1.361

The mean score for each of those 21 motivating reasons was used as a dependent variable for each gender to study the relationship between the two variables. Table 3, exhibits that female participants showed higher means score than males in seven motivating reasons *to; control the weight* ($4.48 \pm .82$ vs $4.39 \pm .83$) *obtain weight-loss benefit* ($4.35 \pm .93$ vs $4.32 \pm .9$), *decrease the risk of arthritis* ($4.29 \pm .91$ vs $4.20 \pm .96$), *decrease the risk of depression* ($4.41 \pm .89$ vs $4.40 \pm .87$), *decrease the risk of cancer* (4.11 ± 1.04 vs 4.09 ± 1.0), *feel happier* (4.63 ± 2.67 vs $4.47 \pm .76$), *feel more relaxed* ($4.58 \pm .75$ vs $4.56 \pm .71$). However, statistically, these differences were not significant, $t=.69, .12, 1.08, .12, .11, .78, .11, p=.49, .90, .28, .90, .92, .43, .92$, respectively. On the other hand, males exhibited higher means score compared to the females in the following 14 motivating reasons, *to; improve quality of life increase chance of living longer, feel better about my appearance, boost confidence and improve the self-esteem, prevent blood pressure increase, decrease the risk of stroke, decrease the risk of DM, have strong muscles and bones, have*

more energy to go about the daily chores, fall asleep faster and deeper sleep, effect on the sex life, connect with family or friend in a fun social setting, recommended by Dr. Statistically, the differences of all these means score were not significant except two; *to have more energy to go about the daily chores* ($4.62 \pm .63$ vs $4.49 \pm .81$, $p=.027$) and *to have an effect on the sex life* (4.18 ± 1.01 vs 3.72 ± 1.18 , $p=.000$) where males significantly showed greater means scores than females, table 3.

Table –3- Comparing the means score of the 21 motivational reasons between gender of respondents

Motivating Causes to;	Mean \pm (SD)		t test	P value
	Male	Female		
improve the quality of life	4.48 (.80)	4.45 (.84)	.70	.49
increase my chance of living longer	4.10 (.94)	4.07 (.96)	.50	.62
control my weight,	4.39 (.83)	4.48 (.82)	.69	.49
obtain weight-loss benefit,	4.32 (.92)	4.35 (.93)	.12	.90
feel better about my appearance	4.43(.79)	4.30 (.99)	1.87	.06
boost the confidence and improve self-esteem	4.42 (.83)	4.39 (.85)	.57	.57
prevent blood pressure increase	4.40 (.83)	4.34 (.90)	.75	.46
decrease the risk of stroke	4.38 (.83)	4.34 (.85)	.79	.43
decrease the risk of arthritis,	4.20 (.96)	4.29 (.91)	1.08	.28
decrease the risk of DM	4.19(1.01)	4.18 (.98)	.26	.80
decrease the risk of depression,	4.40 (.87)	4.41 (.89)	.12	.90
decrease the risk of cancer,	4.09 (1.0)	4.11(1.04)	.11	.92
have strong muscles and bones	4.56 (.73)	4.48 (.82)	1.16	.25
have flexible body movement	4.52 (.76)	4.42 (.92)	1.48	.14
feel happier,	4.47 (.76)	4.63(2.67)	.78	.43
feel more relaxed,	4.56 (.71)	4.58 (.75)	.11	.92
have more energy to go about the daily chores	4.62 (.63)	4.49 (.81)	2.21	.027
fall asleep faster and deeper	4.29 (.99)	4.19(1.04)	1.12	.27
have effect on the sex life	4.18(1.01)	3.72(1.18)	4.65	.000
connect with family or friend in a fun social setting	4.53 (.85)	4.41 (.88)	1.78	.08
Recommended by Dr.	3.25(1.33)	3.12(1.37)	.92	.36

Discussion

Lack of motivation is the reason behind many people drop out of their physical exercise routines and then find it hard to start them up again. The primary purpose of this study was to examine whether the sociodemographic factors effecting differently on the motivating reasons for performing the physical exercise.

The 2008 Physical Activity Guidelines for Americans which published by the U.S.A. Department of Health and Human Services, stated that one of the factors negatively associated with adult physical activity is advancing age. Several studies (Rodríguez-Romo, et al 2011; Ruth et al 2011; Trost et al 2002), identified that older people were less likely to perform regular physical exercise, while Margot, Marieke, Mai, & Marijke

(2011) from their systematic review found no evidence for an association between age and physical exercise performance. However, the inverse correlation between age and motivating scores observed in our study are consistent with previous research done by Bergman, Grijbovski, Hagströmer, Bauman, & Sjöström (2008) who confirmed that (by using univariable & multivariable linear regression analysis) younger age were more likely to have higher physical exercise. Also, Trost et al (2002) detected, that young individuals having almost 2 times odds of engaging in physical exercise than the old ones. The explanations for such results could be that, older adults may have; perception of great effort needed for exercise, perception of poor health, overweight or obese, or being disabled due to physical, emotional, and psychological problems. In addition, lack of social support, lack of transportation to facilities or inaccessibility of facilities, fear of injury and the difficulties of managing physical injury faced by elderly people may act as barriers that keep them far from being physically exercise. The chronic as well as serious diseases may also be contributed.

The inverse correlation that we detected between household income and motivations to physical exercise contradicting the Physical Activity Guidelines for Americans (2008) which pointed out that low income is negatively associated factor with adult physical exercises. However, we support several other studies done by; Sebastião, Cristina Diogo, Luís, & Adilson, 2011; Rodríguez-Romo et al 2011; Bergman et al. 2008) detected a significant higher prevalence of inactivity among people with high socio-economic status (SES). Moreover, Bergman, et al (2008) by a univariable & multivariable linear regression analysis gave evidence that lower SES groups were more likely to have higher physical exercise. Best explanations for such results, those subjects with higher SES cited more desire to do other things, as well as lack of time (Sebastião et al 2011), overweight or obesity which is more prevalent among population with high income. In concordance with other authors (Bergman et al 2008; Margot et al 2011) who found that the body mass index (BMI) was inversely associated with the physical exercise performance. Interestingly, we found a significant inverse correlation of the motivating reasons' scores with BMI. With the increasing in the BMI level the motivating reasons' scores decreased. This could be partly explained that, high level of physical activity seem to be associated with long term weight maintenance and low BMI, or leaner individuals may spend less time reflecting on their physical exercise motivation levels than more overweight individuals. Another explanation, the potential for angst when wearing a sport's costume in the presence of others' was expressed, particularly amongst those considering themselves overweight.

The highest significantly mean scores of motivating reasons among non-employed individuals in our study is in agreement with Bergman et al

(2009) as they detected by univariable & multivariable linear regression analysis and contradicts Schuit, Feskens, & Seidell (1999) who found that physical inactivity was more common in unemployed subjects. lack of time is the best explanation for our result. About 21% of our respondents were students with an almost 7 mean score is identical with Rodríguez-Romo et al (2011) who reported that one in five students met the physical exercise recommendation guideline.

Controversial opinion had been given, regarding the relation between physical exercise and educational levels. Our study revealed no significant variation in means score of physical exercise motivating among different educational groups. However, several authors, Rabiatal, Sabarinah, & Azni (2013; Trost et al 2002) documented, that, subjects with the lowest educational level had a significantly lower level of physical exercise. While, Bergman et al (2008) detected, that subjects with a college/university degree were less likely to perform physical exercise regularly than those with basic education. The variation in these findings could be related to socioeconomic status, lacking of time, expectation of benefits, belief in ability to exercise, social support from peers, diseases associated (physical or psychological) among different level of education. In addition, it has been suggested that factors of an unhealthy lifestyle such as smoking and fast food eating as well as sedentary life styles may have a contribution, (Trost et al 2002).

Almost half (49.3%) of our participants were unmarried and showing significantly the highest mean score compared to their counter groups. This finding goes with the, Activity Guide Lines for Americans (2008) and supporting Trost et al (2002) who reported that being single was positively associated with achieving the physical exercise guidelines. On the contrary, Bergman et al (2008) showed that marital status was not related to the physical exercise performance. Best explanation for our result is the availability of more time, and less responsibility, particularly where 1/3 of our sample was students and high percentage were females.

Margot et al (2011), stated that adherence to exercise was best predicted by health and health indicators, such as being non-smoking, no chronic conditions and diseases. Contradicting the other researchers (Ruth et al 2011& Trost et al 2002) who reported that smokers were less likely to participate in regular physical exercise compared to non-smokers, our study revealed that the difference in means scor of the motivating reason was not significant among different smoking status. This could be explained that the high percentage of our study group was females, and students. In agreement with Margot et al (2011) who provided an evidence for a negative association between chronic conditions or diseases and exercise performance. The participants with no chronic diseases in our study, their motivating reasons score mean was significantly greater than those having

one or more chronic disease(s). This finding may be related to the age, smoking , and physical fitness of the individuals.

Contradicting to Tudor, Grigore, & Tudor M. (2014) and in concurrence with Trost, et al. (2002), a high, rate (85.4%) and mean score (4.46) were detected in the study for the item *to connect with my family or friend in a fun*. This may be explained as, watching others doing exercise may help to motivate people to continue with their exercise plan. Also, spending time with friends, meeting new people help to build these social support networks.

Several authors (Gulap, 2014; Jennifer, 2004) considered exercise as one important technique for preventing and (or) treating mild forms of depression. They stated that regular physical exercise can positively affect mental health, boost self-esteem and reduce the risk; of stress, depression, anxiety and, dementia. Additionally, the exercise can be more effective when it is performed with other people. In concurrence with the above mentioned studies, we noticed high rates and score means related to the psychological, cognitive and emotional items, *to; feel happier, feel more relaxed, boost the confidence and improve self-esteem, decrease the risk of depression*". Best explanation for such results is that the physical exercise increases; the blood and oxygen flow to the brain, the growth factors that assist to create new nerve cells, also the chemicals that help cognition, such, norepinephrine endorphins and serotonin in the brain. Therefore, the levels of circulating serotonin and endorphins are increased. Interestingly, these levels can stay elevated for several days even if the activity is discontinued.

Supporting other studies, (Rabiatul, et al., 2013) which stated that regular physical exercise have a significant effect on the quality of life improvement, people be more active, feeling more energetic, and increases mechanical productivity in the body, our study revealed that the motivating reason" *to make me have more energy to go about my daily chores*" occupied the second highest rate and mean score with a significant greater score mean among males. This may be attributed that, males were more likely to be engaged in work or job, so exercise performance could provide the energy needed.

Amazingly, in our study, the item "*recommended by Doctors*" showed the lowest motivating, rate (41.2) and score mean (3.19) behind performing a physical exercise. This reflects that the extrinsic motivation is low, where a small number of participants exercised to make peace with their physician. This is a good positive healthy indicator, which means that most of the population were engaging in the physical exercise for its own sake, because they enjoy the real feeling of performing the exercise.

Strong evidence was given by several researchers (Szostak & Laurant , 2011; Sabina, et al., 2014; Jennifer, 2004) considering physical

exercise as a highly effective way to delay or avert the development of diabetes mellitus depending on the fact that exercise is an insulin-independent stimulus for increased glucose uptake by the working muscle cells. Additionally, the skeletal muscle contraction during exercise plays a role in mediating the athero protective effect which prevents the development of plaque and fatal lesions. Furthermore, the concentrations of high-density lipoprotein (HDL) will be increased while low-density lipoprotein will be decreased. Contradicting Tudor et al. (2014) who found the need for healthcare is second ranking cause for physical exercise performance. Interestingly, we noticed that all motivating factors related to the disease prevention through physical exercise "*to decrease the risk of; cancer, DM, arthritis, stroke, high blood pressure, and increase chance of living longer*" showed lower rates and small motivating means score. This result may indicate that the participants were intrinsically motivating people particularly, when we detected that "*to feel more relaxed*" was associated with the highest rate (89.7) of respondents as well as with the greatest mean score (4.57), with no significant difference between the two genders. In addition, several evidences interpretate these findings. First, the majority were young, free of any disease (80%), non-smokers, and employed. On the other hand, this finding could be considered as a negative sign, as our population are not fully aware for the medical and preventive values of the physical exercise. This indicates their lack of knowledge regarding the health benefits of physical exercise, which needs to be more emphasized in the future.

Ebru, (2013) from his study concluded that the physical exercise is one of the key components in obesity treatment and one of the best predictors of long-term maintenance of weight loss. Unfortunately, we found that motivation to maintain or decrease body weight (*control weight, obtain weight-loss benefit*) were cited by 84.8% and 81.6 %. Most probably this could be attributed that our study population's mean BMI was (24.64 kg/m²) within the normal range of BMI.

Exercise can be a healthy, safe and inexpensive way to achieve deep and better sleep. Jennifer, (2004) suggested that the exercise in general improves sleep for the most people and helps to manage sleep disorders such as insomnia. Surprisingly, about $\frac{3}{4}$ of our respondents believe that the physical exercise improves sleep. Our result may justify that our respondents are having no sleep disorder problems in which the majority of them were young, healthy, and employed.

The reasons, why people engage in physical exercises, may differ within different age group, as a result of changing values, life tasks, goals, and health circumstances over time,(Diyanah et al. 2012). However, what is still less well understood is the extent to which these variable motivational

factors contribute to the gender disparity in a regular physical exercise performance. Gender contributes differently to the physical exercise performance. This study examined whether factors of motivations contributed differently in the gender of the individuals to performing physical exercises regularly. Contradict with previous works, (Clare, Alexandra, Youjeong, Brian, Michael, & Freda, 2012; Mohd, Hafazah & Syed,2012; Sebastião et al. 2011; Bergman et al. 2008) which reported that, men were significantly more likely to perform physical exercise regularly, and they attributed their findings that women facing many barriers as lack of time, cost, the desire to do other things, as well as to greater involvement in domestic chores. The result in our study found that more than half (53.7%) of the participants were females. They showed higher motivation to physical exercise performance than males. This finding consistent with Stevinson and Hickson (2013) who stated that the highest proportion (53.8%) in performing exercises were females. This finding could be explained that females may experience a sense of pride associated with exercise or some degree of guilt or shame if they do not exercise (Wilson, Rodgers, Fraser, & Murray,2004). Additionally, females were more interested in their body images; specifically, we noticed that the mean scores for *controlling body weight and decreasing body weight* were higher among females. Further, the males were more likely to be engaged in work or job, as well as having a desire to do other tasks.

When this relationship was examined in the gender difference statistically, the differences of all these score means (except two) were not significant. Males exhibited significantly higher mean score for two motivation items “*to have effect on the sex life*” and “*to feel better about my appearance*”. These findings support Allison et al (2005), who found that the central concern of adolescent males was impressing others, and building relationships particularly with females through focusing on the physical appearance of their bodies. Therefore, males are more likely to be subjected to higher pressure. In contrast, such reasons for engaging in physical exercise do not appear as prominent among females. Moreover, these findings are supporting Li F (1999), who stated that females showed a higher level of intrinsic motivation while males were more externally motivated.

Conclusion

Those who are young, unmarried, lower income, lower BMI and no chronic illness have higher motivating reasons in doing physical exercise.

Physical exercise motivations in both gender were equal, since the variation of all the motivation score's means (except two) were not significant between the genders. Males exhibited higher levels of extrinsic motivations. All motivating factors related to the disease prevention through

physical exercise showed lower rates and small score means. This may indicate that our participants were intrinsically motivating people. On the other hand, this finding could be considered as a negative sign where our respondents are not fully aware of the medical and preventive values of the physical exercise. Therefore, this lacking of knowledge among our population regarding the health benefits of physical exercise needs to be more emphasized in the future.

Limitation

The height & weight were indicated by participants, not measured by the researcher. In addition, our populations were adults only. However, one of this study's strengths, it may be considered as the first study to investigate the motivating factors in performing physical exercises.

Acknowledgements

The Author would like to take this opportunity to thank the faculty of Medicine for funding this research by UiTM. My thanks extended to all my colleagues who support in conducting this project.

References:

- Allison** Kenneth R., Adlaf Edward M., Irving Hyacinth M., Hatch Janelle L., Trevor F. Smith, Dwyer John J.M.,& Goodman Jack, (2005). Relationship of vigorous physical activity to psychologic distress among adolescents. *Journal of Adolescent Health*, 37 (2), 164–166
- Aura** B.,SilviaT.,& Sorin Ş. (2014). Unified Sports a Social Inclusion Factor in School Communities for Young People with Intellectual Disabilities. *Procedia-Social and Behavioral Sciences*, 117, 21-26
- Bergman** P, Grjibovski AM, Hagströmer M, Bauman A,& Sjöström M. Adherence to physical activity recommendations and the influence of socio-demographic correlates - a population-based cross-sectional study.*BMC Publ Health* 2008, 8, 367
- Carl** J. Caspersen, Kenneth E. Powell, & Gregory M. Christenson (1985). Physical activity, exercise, and physical fitness: definitions and distinctions for health-related research. *Public Health Rep.* 100 (2),126-31.
- Clare** M. Lenhart, Alexandra Hanlon, Youjeong Kang, Brian P. Daly, Michael D. Brown, & Freda Patterson. (2012). Gender Disparity in Structured Physical Activity and Overall Activity Level in Adolescence: Evaluation of Youth Risk Behavior Surveillance Data. *ISRN Public Health* Volume 2012 <http://dx.doi.org/10.5402/2012/674936>.
- Deci**, EL, & Ryan RM. (2000).The "what" and "why" of goal pursuits: Human needs and the self- determination of behavior. *Psychol Inquiry*, 11, 227-268.

- Diyanah** I. A., Hafazah A. K., & Mohd Z. M. (2012). Comparing the walking behaviour between urban and rural residents. *Procedia -Social and Behavioral Sciences*, 68,406-416.
- Duncan**, Craig R Hall, Philip M Wilson & Jenny O. (2010). Exercise motivation: a cross-sectional analysis examining its relationships with frequency, intensity, and duration of exercise. *International Journal of Behavioral Nutrition and Physical Activity*,7, 7
- Ebru** Cubukcu (2013). Walking for Sustainable Living. *Procedia-Socialand Behavioral Sciences*, 85, 33–42
- Gulap** Monica. (2014). Study on the Importance of Physical Education in Fighting Stress and a Sedentary Lifestyle among Students at the University of Bucharest. *Procedia -Social and Behavioral Sciences* 117, 104-109
- Hopkins** M.E., DavisF.C., Van Tieghem M.R.,Whalen P.J.& Bucci D.J.(2012) Differential effects of acute and regular physical exercise on cognition and affect. *Neuroscience.*, 215 (26), 59-68
- Jennifer** D. Irwin (2004) Prevalence of University Students' Sufficient Physical Activity: A Systematic Review. *Perceptual and Motor Skills*. 98, 927-943.
- Li F.** (1999). The exercise motivation scale: Its multifaceted structure and construct validity, *Journal of Applied Sports Psychology*, 11, 97-115
- Lindsay** R Duncan, Craig R Hall, Philip M Wilson, & Jenny O, (2010) . Exercise motivation: a cross-sectional analysis examining its relationships with frequency, intensity, and duration of exercise *International Journal of Behavioral Nutrition and Physical Activity*,7:7 doi:10.1186/1479-5868-7-7,
- Margot** A Koeneman, Marieke W Verheijden, Mai J M Chinapaw, & Marijke Hopman-Rock (2011). Determinants of physical activity and exercise in healthy older adults: A systematic review. *Int J Behav Nutr Phys Act*. 8: 142
- Mohd** R.N., Hafazah A.K.,& Syed S. Z. (2012). Human Behaviour and Activities in Relation to Shah Alam Urban Park during Nighttime. *Procedia-Social and Behavioral Sciences*, 68, 427–438
- Pate** R. (1983).A new definition of youth fitness. *Physician Sports Med*.11: 77-83
- Rabiatul** A. N., Sabarinah S. A. & Azni Z. A.(2013). Physical Activity and Human Comfort Correlation in an Urban Park in Hot and Humid Conditions, *Procedia -Social and Behavioral Sciences*, 105, 598-609
- Rodríguez-Romo** G, Cordente CA, Mayorga JI, Garrido-Muñoz M, Macías R, Lucía A,& Ruiz JR. (2011). Influence of socio-demographic correlates on the adherence to physical activity recommendations in adults aged from 15- to 74 years Madrid, Spain. *Rev Esp Salud Publica.*, 85 (4): 351-62.
- Ruth** Sullivan mail, Sanjay Kinra, Ulf Ekelund, Bharathi A.V., Mario Vaz, Anura Kurpad,..... Hannah Kuper (2011). Socio-Demographic Patterning

of Physical Activity across Migrant Groups in India: Results from the Indian Migration Study. *PLoS ONE*, 6 (10): e24898. doi:10.1371/journal.pone.0024898

Sabina M., Alina A. T., & Bogdan I.V.(2014).Theoretical Approaches to Building a Healthy Lifestyle through the Practice of Physical Activities. *Procedia-Social and Behavioral Sciences*, 117, 86–91

Schuit AJ, Feskens EJ. & Seidell JC. (1999). Physical activity in relation to sociodemographic variables and health status of adult men and women in Amsterdam, Doetinchen and Maastricht. *Ned Tijdschr Geneesk.* 24;143 (30),1559-64

Sebastião Sequeira, Cristina Cruz, Diogo Pinto, Luís Santos, & Adilson Marques(2011). Prevalence of barriers for physical activity in adults according to gender and socioeconomic status *Br J Sports Med*, ;45: A18-A19 doi:10.1136/bjsports-2011-090606.59.,

Silberner Joanne (2010) "100 Years Ago, Exercise Was Blended Into Daily Life". *npr.org*. 2010. Retrieved 23 November

Stevinson, M. Hickson (2013). Exploring the public health potential of a mass community participation event. *J Public Health* doi: 10.1093/pubmed/dfd t082

Szostak J, & Laurant P. (2011), The forgotten face of regular physical exercise: a 'natural' anti-atherogenic activity. *Clin Sci* 121(3), 91-106.

Trost SG, Owen N, Bauman AE, Sallis JF, & Brown W. (2002). Correlates of adults' participation in physical activity: review and update. *Med Sci Sports Exerc.*;34 (12), 1996-2001.

Tudor I-D., Grigore V., & Tudor M. (2014). The Importance of Group Sports Activities in Adult Lifelong Education and in Improving the Quality of Life, *Procedia - Social and Behavioral Sciences*, 117, 9–15.

U.S.A. Department of Health and Human,(2008). *The 2008 activity guidelines for Americans*. Washington, DC: U.S.A.

Wilson PM, Rodgers WM, Fraser SN. & Murray TC. (2004). Relationships between exercise regulations and motivational consequences in university students. *Research Quarterly for Exercise and Sport*, 75(1):8191. PubMed Abstract.