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Original Research Article

Is Female Having Different Motivating Reasons for Performing Physical Exercise?

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Abstract

One important factor that may contribute to regular exercise performance is a motivation to exercise. Women typically exhibit lower levels of physical exercise performance. It seems that gender factor motivating people differently in performing exercise. Identifying these variations may help in promoting physical exercise across the lifespan. A cross sectional study was conducted. A sample of 501 adults were interviewed using a questionnaire containing 21 reasons for doing exercise. Each reason was measured on a five-point scale, and then the mean score of each reason was used as the dependent variable. Two reasons demonstrated a highest rate and mean score were to; *feel relaxed* (89.7%, 4.57), *have energy for daily chores* (88.3%, 4.55). While three reasons showed the lowest rates and means score were *to; decrease the risk of cancer* (70.7%, 4.08), *effect on sex life* (63.2%, 3.94) and recommended by Dr (41.2%, 3.19). Males showed significantly higher means score in two motivating reasons, to; *effect on sex life* (4.18), *have energy for daily chores* (4.62), p.000,.049 respectively. Others19 reasons showed no significant difference of between genders. Significantly higher rate of; walking (55.6%), among female p =0.049, while sports activities (63.6%) among males, p =0.000. Almost both sex having same motivating reasons in doing physical exercise.

Keywords: Exercises types, Female, Motivation, Physical exercises, Reasons

INTRODUCTION

Physical exercise and physical activity are used interchangeably in some times, however, physical activity is not synonymous with exercise (Caspersen et al., 1985). Hirano et al. (2011) Specified that, physical exercise is a subcategory of physical activity it is planned, structured, repetitive, and purposive in the objective to improve or maintain one or more components of physical fitness.

Siddiqui et al. (2010) categorized physical exercise into three types as; aerobic "cardiovascular exercise", here the large muscle groups moves with alternate contraction and relaxation, lead to deep breath, heart to pump more blood with adequate tissue oxygenation examples as; walking, running, jogging, and swimming...etc. The anaerobic type; here there is vigorous contraction of muscle with stretching, usually mechanically aided, examples as; weight lifting, pulling, pushing, etc. Flexibility exercise is one type of stretching exercise to improve the movements of muscles, joints and ligaments.

Engagement in physical exercise is an important part of a healthy lifestyle. several authors (Macovei et al., 2014; Monica, 2014; Cubukcu, 2013; Lee et al., 2012; and Baert et al., 2011), mentioned that exercise, has a fundamental role in the treatment and prevention of various health related conditions including obesity, depression, anxiety, hypertension, type 2 diabetes, cardiovascular disease, osteoporosis, stroke and breast

and colon cancers. Additionally, several authors (Bota et al., 2014; Macovei et al., 2014), stated that in order to achieve the health benefits of physical exercise it is important to perform regularly.

The World Health Organization (WHO) 2010, as well as the U.S.A Department of Health and Human Services (2008) recommends that adults should do at least 150 minutes of moderate-intensity physical activity each week 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).

Interestingly Duncan (2010), stated that it has been proven medically that people who do regular physical exercises have lower risk of up to; 50% type 2 diabetes, 50% colon cancer, 35% coronary heart disease and stroke, 20% breast cancer and 30% premature death, 83% osteoarthritis, 30% depression, and 30% dementia. Moreover a significant dose–response relationship between vigorous-intensity physical exercise and cardiorespiratory fitness improvement was confirmed by Andrew, et al (2015).

Pedersen, (2013) demonstrated that most of the exercise‘s benefits were mediated through the role of skeletal muscle. With the muscles contraction, myokines will be released, which promoting, the growth of new tissue, tissue repair, and multiple anti-inflammatory functions, which in turn reduce the risk of developing various inflammatory diseases.

Despite the well-documented physical, psychological, and social benefits of regular physical exercise, WHO, (2015), reported, that, Physical inactivity is a global phenomenon, with estimates of one in four adults not being active enough. While about two-thirds of the industrialized world does not performing exercise regularly (Macove et. al., 2014). Interestingly, WHO, (2010) reported that Physical inactivity is now recognised as the fourth leading cause, for global mortality, accounting for 6% of all deaths. Moreover Physical inactivity has a nation financial impact. In the UK, Allender et al. (2007), reported, that, during 2002, the estimated cost of inactivity to National Health Service was £1.06 billion not accounting for the indirect costs of days lost due to sickness absence, private healthcare costs and home care.

One important factor that may contribute to an individual's regular physical exercise performance is his or her motivation to exercise as (Wilson and Brookfield 2009). Motivation is associated with feelings of deep personal awareness and positive self-perception, and being associated with the positive reputation after completing a exercise are regarded as important sources of motivation (Allende et al., 2007).

According to the Self-Determination Theory, generally, the motivation towards regular physical exercise can be; extrinsically or intrinsically motivation. The extrinsic motivation involves motivation 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 own sake. An intrinsically motivated person considers the physical exercise inherently enjoyable, interesting and challenging (Deci and Ryan, 2000; Duncan et al., 2010).

Trost et al., (2002), categorized the motivation towards regular physical exercise generally into five major motivating group: i-demographic and biological factors, (gender, bodyweight) ii-psychological, cognitive and emotional factors, (enjoyment, improve cognition and memory, and decrease the risk for dementia and anxiety), iii- behavioural attributes and skills, (sleep, smoking, etc..) iv- social and cultural, (family or friends support), v-physical environment and/or physical activity characteristics (satisfaction, safe and easy access to exercise facilities) are may or may not associate with exercise adherence.

Many articles have been published addressing factors and interventions associated with physical activity in older people (Allender et al., 2006). Variation in the physical exercise performance among different ages groups were related to the personal, social, economical, and environmental factors (The USA Department of Health and Human Services 2008) or may be attributed to the changing values, life tasks, goals, and health circumstances over time (Azmi et al., 2012).

However, from study done by Irwin et al. (2004) revealed that, there are gender differences in physical exercise performance where females are less active than males. Therefore; it seems that gender factor motivating people differently in performing regular physical exercise. It is mandatory to understand the relationship between genders and motivating factors to physical exercises performances since identifying, this relationship may help for optimal life-style campaigns in the implementation of interventions, aimed at promoting physical exercise across the lifespan. So we hypothesized that man and woman possessing different motivating reasons for performing regular physical exercise. To testify this hypothesis, the current study pursued to study the relationship between gender of the individual and motivation reasons for physical exercise performance and type of physical exercise among adult

MATERIALS AND METHODS

A pilot study was carried out on 25 administrative staff of the faculty prior to embarking on the main project, for testing reliability and validity of the questionnaire. Thecronbach's alpha was 0.92.

Ethical approval was obtained from the Ethical committee, Universti Teknologi MARA (UiTM). Out of 14

recreational areas / parks in Shah Alam city (capital of Selangor state, Malaysia) five were chosen randomly. These areas are located at sections; 1, 2, 7, 9, and 14. Each selected area was visited during weekdays as well as weekend within the period of study (March 2013- Jun 2014). Cross sectional study was conducted among adult individuals aging 18 years and above, to identify the variations of physical exercise motivating reasons between genders.

A sample of 501 adult persons who were performing exercise in one of those five recreational areas/ park areas was collected. Volunteering formal consent was provided by each participant to be involved in this study. All participants were interviewed face to face, using a well-constructed validated questionnaire; the cronbach's alpha was 0.92. This questionnaire includes 21 items referring to the reasons of motivation for getting involved in a physical exercise regularly. These items were categorized into four main domains: (a) psychological, cognitive and emotional (6 items) 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*" (b) biophysical (6 items) *to have*; *chances of living longer*, *weight control, weight-loss benefits*, *stronger muscles and bone*, *flexible body movement*, *positive effect on the sex life*" (c) behavioural (3 items) to; *improve the quality of life, have more energy to go about the daily chores, fall asleep faster and deeper"* (d) *medical* (6 items) to*; prevent high blood pressure, decrease the risk of stroke, decrease the risk of arthritis, decrease the risk of diabetes, decrease the risk of Cancer or it is recommended by the doctor"*. Each item of these 21 reasons, was measured on a five-point - scale, from (1) strongly disagree to (5) strongly agree. The mean score of each item was calculated, and then used as the dependent variable versus the gender of the participant. In addition, the socio-demographic information was collected, including; age, sex, marital status, education. Medical history information and the tobacco smoking status of each participant were recorded. Each participant was asked to indicate his/her weight and height for the body mass index (BMI) calculation as Kg/m^2.

All statistical analyzes were conducted using SPSS 21. Descriptive statistics (frequency, percentage, and means) was carried out. Independent t-test was used to evaluate the mean score differences between the gender variables.

RESULTS

Only 495/501 questionnaires were in a complete status. Those 495 respondents their age was ranging 18-67 years, with a mean age as 32.66 years. The majority (92.1%) were Malay (7.1%, Non-Malay), with high level of education (72.5%), including university (57.8%) and college (14.7%) attainment. Secondary 23.8%, while each of the primary, or no formal education consisted of (1.8%). About 2/3 (64.6%) were employed at the time of enrollment, working with a mean of 8.6 hours /day. More than half (53.7%) of the participants were females, about half of our study group, (49.3%) was unmarried. More than three- quarters (76.8%) were never smoked in his or her life. Only 14.7% were smoker currently. About 80.8% of participants were health and free of any chronic disease. The mean BMI of all participants was 24.64 kg/m^2 ranging from, 11.07-48.8. Kg/m^2.

The rates of positive citation for the 21 motivation's reasons items were ranging from 41.2 % (recommended *by Doctors*) to 89.7 % (*to feel more relaxed*) as seen in table 1. More than 85% of all participants were cited positively to the six item's 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 (Table 1).

On the other hand, five items (most of them related to health issues) were cited positively by less than 75% of the participants, these items are*, to; decrease the risk of (DM) Diabetes Mellitus (*73.9%), *increase chance of living longer* (71.5%), *decrease the risk of cancer* (70.7%), *have a positive effect on the sex life* (63.2%), and *recommended by doctors* (41.2%), (Table 1).

The means score of the 21 motivating reasons were ranging from 3.19-4.57. The highest motivating reason's score mean 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 reason's items (except two) demonstrating a high (>4) mean score. Those two motivating reason's items were; *recommended by doctors (*3.19±1.36)*,* and *to have a positive effect on the sex life* (3.94±1.13) (Table 1).

To study the relationship between gender's participant and the motivating reasons, the mean score for each of those 21 motivating reasons was used as a dependent variable for each gender. Female participants showed higher mean score than males in seven motivating reasons *to; feel happier (*4.63±2.67 vs 4.47±.76), *feel more relaxed (*4.58±.75 vs 4.56±.71). *control weight (*4.48±.82vs 4.39 ±.83), *decrease the risk of depression (*4.41±.89 vs. 4.40±.87), *obtain weight-loss benefit (*4.35±.93vs 4.32±.92), *decrease the risk of arthritis (*4.29±.91vs 4.20±.96), *decrease the risk of cancer (*4.11±1.04vs 4.09±1.0), However, statistically, these differences were not significant, t = .78, .11 .69, .12, .12, 1.08, .11, p=43, .92, .49, 90, .90, .28, .92. respectively,

Table 1. Score means and rates of the 21 motivation's reasons among 495 participants and in relation to the gender of e respondents

	Motivating Causes to;	% Agree	Mean ±(SD)	Mean± (SD)		t test	P value
				Male	Female		
1	improve the quality of life	83.4	4.46 (0.83)	4.48(.80)	4.45 (.84)	.70	.49
2	increase the chance of living longer	71.5	4.08(0.96)	4.10(.94)	4.07 (.96)	.50	.62
3	control weight,	84.8	4.42(0.85)	4.39(.83)	4.48 (.82)	.69	.49
4	obtain weight-loss benefit,	81.6	4.33(0.94)	4.32 (.92)	4.35 (.93)	.12	.90
5	feel better about my appearance	83.2	4.35(0.92)	4.43(.79)	4.30(.99)	1.87	.06
6	boost the confidence and improve self-esteem	84.4	4.40(0.85)	4.42 (.83)	4.39(.85)	.57	.57
7	prevent high blood pressure	81.8	4.35(0.88)	4.40(.83)	4.34(.90)	.75	.46
8	decrease the risk of stroke	82.6	4.36(0.84)	4.38 (.83)	4.34(.85)	.79	.43
9	decrease the risk of arthritis,	77.8	4.25(0.93)	4.20 (.96)	4.29(.91)	1.08	.28
10	decrease the risk of diabetes mellitus (DM)	73.9	4.19(0.99)	4.19(1.0)	4.18(.98)	.26	.80
11	decrease the risk of depression	84.4	4.41(0.87)	4.40 (.87)	4.41(.89)	.12	.90
12	decrease the risk of cancer	70.7	4.08(1.04)	4.09(1.00)	4.11(1.04)	.11	.92
13	have strong muscles and bones	86.7	4.52(0.79)	4.56 (.73)	4.48 (.82)	1.16	.25
14	have flexible body movement	85.5	4.46(0.86)	4.52 (.76)	4.42 (.92)	1.48	.14
15	feel happier	85.3	4.56(2.01)	4.47 (.76)	4.63(2.67)	.78	.43
16	feel more relaxed,	89.7	4.57(0.74)	4.56 (.71)	4.58 (.75)	.11	.92
17	have more energy to go about the daily chores	88.3	4.55(0.74)	4.62 (.63)	4.49 (.81)	2.21	.027
18	fall asleep faster and deeper	75.4	4.24(1.01)	4.29 (.99)	4.19(1.04)	1.12	.27
19	have a positive effect on the sex life	63.2	3.94(1.13)	4.18(1.01)	3.72(1.18)	4.65	.000
20	connect with family or friend in a fun social setting	85.1	4.46(0.88)	4.53 (.85)	4.41 (.88)	1.78	.08
21	Recommended by Doctor	41.2	3.19(1.36)	3.25 (1.33)	3.12(1.37)	.92	.36

Table 2. Male and Female in relation to types of Physical exercise performance (n= 495).

Types of Exercise		№ (%)		X^2	Pvalue
		Male	Female		
Walking	Yes	187 (44.4)	234 (55.6)	3.85	<0.05
	No	42 (56.8)	32 (43.2)		
Swimming	Yes	40 (49.4)	41 (50.6)	0.38	0.538
	No	189 (45.7)	225(54.3)		
Running/Jogging	Yes	130 (47.4)	144 (52.6)	0.35	0.557
	No	99 (44.8)	122 (55.2)		
Cycling	Yes	27 (40.9)	39 (59.1)	0.81	0.368
	No	199 (46.7)	227 (53.2)		
Aerobic	Yes	33 (40.7)	48 (59.3)	1.1	0.295
	No	193 (47.1)	218 (52.9)		
Sports activities football festal tennis, golf, badminton, etc.	Yes	96 (63.6)	55 (36.4)	26.39	<0.001
	No	130 (38.3)	211 (61.6		
Work-out or exercise in a gymnasium	Yes	39 (56.5)	30 (43.5)	3.72	0.054
	No	181 (44)	230 (56)		
Others	Yes	10 (50)	10 (50)	0.15	0.696
	No	210	251		

(Table 1). On the other hand male participants exhibited higher means score compared to the females in 14 motivating reasons, to; *improve the quality of life, increase chance of living longer, feel better about my appearance, boost confidence and improve self-esteem, prevent high blood pressure, 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, 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±63vs4.49 ±.81, p.027) *and to have a positive effect on the sex life* (4.18±1.01vs 3.72±1.18, p 0.000) were males significantly showed greater means scores than females (Table 2).

The highest rate of the population was (85.1%) performing walking as a type of physical exercise, followed by (55.4%) the rate of running/jogging. Female participants exhibited higher rates of physical exercise performance than males in almost all types (except two). However, these variations in rates were not significant except the walking exercise, which showed a significantly higher rate (55.6%) among females compared to (44.4%) males x^2 = 3.85, p, <.05. On the other hand, the male participants showed only significantly higher (63.6%) rate in performing other sport activities (football, festal, tennis, golf, badminton etc.) than (36.4%) females, x^2=26.39, p=0.0001 (Table 2).

DISCUSSION

Many articles conclude that different age group may have diverse reasons, in physical exercises engagement, due to changing in life tasks, values, goals, and health circumstances over time. However, the extent to gender factors contribute to the disparity in a regular physical exercise motivation performance is still less well understood. Thus, the primary purpose of this study was to examine whether gender factor of the individuals contributed differently in the motivations to performing physical exercises regularly.

Contradicting with Lenhart et al. (2012) and Ngesan et al. (2012) Who demonstrated that males were significantly more likely to do physical exercise, our study found that more than half (53.7%) of the participants were females. This finding could be explained, that, females were more interesting in their body images, particularly, we noticed that the mean scores for *controlling body weight and decreasing body weight* were higher among females than males. Furthermore, Wilson et al (2004) reported that females may experience a sense of pride associated with exercise or some degree of guilt or shame if they do not exercise. Additionally, the males were more likely to be engaged in work or job, as well as having a desire to do other tasks.

In Contradicting to Iulian-Doru et al. (2014) and concurrence with several researchers (Clare et al., 2016; Trost et al., 2002; and Dishman and Buckworth, 1996), who stated that continuous involvement in physical exercise performance, is more to be expected if there is opportunity to implement as a group, rather than alone, our study detected a high, rate (85.4%) and mean score (4.46) for the reason *to connec*t *with the family or friend in a fun.* This may be explained that, 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 social networks (Clare et al., 2016)

Several authors (Clare et al 2016; Monica 2014; and Irwin 2004), demonstrated that regular physical exercise can positively affect mental health, and boost self-esteem. They considered exercise as an important practice for treating and/or preventing mild forms of depression, stresses, anxiety and, dementia. Moreover, the exercise can be more effective in reducing stress when it is performed with other people. In concurrence with the above studies, we noticed a high, score's means and rates related to the psychological, cognitive and emotional items "*to; feel more relaxed, feel happier, decrease the risk of depression, boost the confidence and improve self-esteem."* Such results scientifically could be explained that the physical exercise increases; the blood and oxygen flow to the brain, the growth factors that assist to create new nerve cells. In addition, increases in the chemicals that help cognition, such, as serotonin and endorphins in the brain. Therefore, the circulating levels of both serotonin and endorphins are increased. Interestingly these levels can stay elevated for several days even if the activity is discontinued (Monica, 2014)

Remarkably the item "*recommended by Doctors*" in our study, showed the lowest motivating, rate (41.2%) and score mean (3.19) as a reason in performing a physical exercise. This is a good positive, healthy indicator, which reflects that the extrinsic motivation is low. On another word, this mean 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. While only a small number of participants exercised to make peace with their physicians.

Supporting, Nasir et al., 2013; and Hirano et al., 2011, who reported that regular physical exercise have a significant positive effect on the quality of life, people feeling more energetic, more active, and increases in the body mechanical productivity. We found that the motivating reason"*to have more energy to go about the daily chores*" ranking the second highest rate and mean score, with a significant greater score mean among males than females. This may be attributed, that, males were more likely to be engaged in work or job, so exercise performance could provide the energy need.

Contradicting Iulian-Doru et al. (2014), who found the need for healthcare is a second ranking cause in 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"* having lower rates and small motivating means

score. This result may indicate that our 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) and with no significant difference between males and females. Several factors can help with the interpretation of these findings, the majority of our population were, young age, free of any disease (80%), non-smokers, and employed. On the other hand, this finding could be considered as a negative sign reflecting that, our population were deficient in the health benefits knowledge of physical exercise and not fully conscious about the medical and preventive values of the physical exercise which need to be more emphasized in the future.

Cubukcu, (2012) stated that physical exercise is one of the best predictors of long-term maintenance of weight loss and it is a key in obesity treatment. From current study, we found that motivation to maintain or decrease body weight (*control weight, obtain weight-loss benefit*) was cited by less than 85% of the respondents. Most probably this could be attributed that the mean BMI of our population was (24.64 kg/m^2) within the normal range of BMI.

Exercise can be a healthy, safe and inexpensive way to attain deep and better sleep. Evidence being provided by Irwin (2004), that, exercise improves sleep and helps to manage sleep disorders such as insomnia. Surprisingly, about ¾ of our respondents believe that the physical exercise improves sleep. The justification for such finding, that our respondents are having no sleep disorder problems in which the majority of them were young, healthy, and employed.

Males demonstrated significantly higher mean score for the two motivation reasons "*to feel better about my appearance*" and "*to have effect on the sex life"*. These findings support Allison et al (2005), who found that, in performing physical exercises the essential concern of adolescent males was for 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 higher levels of intrinsic motivation while males were more externally motivated.

A study done by Sapawi et al. (2013) revealed that no relationship between gender and walking exercise. Contradicting other researchers (Julie and Bobbi, 2016; Karim and Azmi 2013; and Azmi et al., 2012), our study detected that women showed significantly higher rate in performing walking exercise compared to men The reason may be due to that walking is, easy to perform, safe, effective, does not require any training or equipment and less chance of injury. In addition, Ariffin and Zahari, (2013) stated that walking assigned as an economic exercise and increases interaction and community cohesion.

CONCLUSION

Male and females almost having equal motivation to Physical exercise performance, since the variation of all the motivation score's means (except two) were not significant. Males demonstrated extrinsic motivations in greater levels. 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 weight and height were not measured ,but recorded by participants. However, one of this study's strengths, that can be considered as the first study evaluating the motivating factors in physical exercises performance.

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Competing interests

The authors declare that they have no competing interests'. Financial and non-financial competing interests.

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