

Physical Activity and Health-Related Quality of Life among Staff in UiTM Pahang

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ABSTRACT

Physical activity plays an important role in promoting health and increasing the quality of life for all segments of society. Therefore, this cross-sectional study was conducted to determine the relationship between physical activity status and health-related quality of life (HRQOL) among the staff in UiTM Pahang. A questionnaire was distributed to 65 staff during "Health-Screening Program" which was organized by Health Unit, UiTM Pahang. The physical activity index (PAI) was determined using General Practice Physical Activity Questionnaire (GPPAQ) while health-related quality of life was assessed by using self-rating Center for Disease Control and Prevention HRQOL-4 tools. The association between gender and physical activity index were observed while no association had been observed between physical activity index and health status measure and other three HRQOL measure (recent physical health, recent mental health and recent activity limitation) among staff in UiTM Pahang. In conclusion, the staff in UiTM Pahang had a high self-rating of HRQOL regardless the physical activity index.

Keywords: *physical activity, physical activity index, health-related quality of life, UiTM Pahang*

Introduction

The evidence linking physical activity to reduce risk for disease conditions (Durstine et al., 2013) but also improving mental health (Happel et al., 2012) is today well documented. Physical activity benefits many parts of the body such as heart, skeletal muscles, bones, blood (for example, cholesterol levels), the immune system and the nervous system (Durstine et al., 2013). The benefit of physical activity has been shown to be effective across the lifespan, among young and old alike. Among older adults, engagements in routine exercise on a regular basis lead to improved functional abilities such as mobility, and is related to increase longevity. This demonstrates a positive dose-response, in other words, that the benefits of physical activity increase as the amount and intensity of the activity increases. In addition, when there are many benefits for health of physical activity, recent analysis has suggested that reaching the recommended minimum level of physical activity compared with no activity was found to lead to a reduction in all-cause mortality of 19 percent – and this rises to 24 percent if an hour a day is spent in physical activity (Woodcock et al., 2011). Previous study shows physical inactivity is the fourth-leading risk factor for global mortality and it is the principal cause of type-2 diabetes and ischemic heart disease, while active individuals experience 31 percent lower risk for all-cause mortality (Warburton et al., 2010). Therefore, physical activity prolongs optimal health and without regular physical activity, the body slowly loses its strength, stamina and ability to function well and for each hour of regular exercise it gain about two hours of additional life expectancy, even if one starts from middle age.

There are also numerous studies which look at the relationship between physical activity and quality of life either in general (Vallance et al., 2012; Vuillemin et al., 2005) or clinical populations (Chu et al., 2013; Okosun et al., 2013). Health-related quality of life (HRQOL) is referred to as overall quality of life which can affect health either physical or mental (Gandek et al., 2004) which include physical and social functioning, emotional well-being, role activities, and individual health perceptions (Rejeski and Mihalko, 2001). Physical activity, as part of a healthy lifestyle, tends to improve the quality of life, physical and psychological well-being, and these results in reduced levels of depression and anxiety (Netz et al., 2005). Physical activity contributes to the reduction of psychological distress among the elderly because it promotes psychosocial interaction, improves self-esteem, helps in the maintenance and improvement of cognitive

functions, and serves to reduce the frequency of relapses of depression and anxiety (Netz et al., 2005). From a public health perspective, a better understanding of how healthy lifestyles, such as uptake of physical activity, can influence HRQOL might help to inform policy intended to incentivize physical activity in the general population.

This study examines the physical activity levels and health-related quality of life among UiTM Pahang staffs. By understanding the nature of the physical activity and health related quality of life among staff, it will contribute to awareness or maintaining the attitude by offering some strategies and technique towards a greater and healthier lifestyle. The far-reaching goal of the study would be for the benefits of the staff themselves. They can realize that the natures of daily activities will extend their health factors. Staff may discover the strategies in physical activity after having known the origin of their health related quality of life.

Methods

Participants

All staff who attended the “Health-Screening Program” which was organized by the Health Unit, UiTM Pahang was invited to participate in present study. Informed consent was obtained from all participants.

Physical Activity Index Measurement

The General Practice Physical Activity Questionnaire (GPPAQ) is used to determine the physical activity index (PAI) among participants. The GPPAQ consists of several questions which provide a simple, four-levels of PAI (inactive; moderately inactive; moderately active and active) which reflect an individual’s current activity level. Furthermore, the GPPAQ is also known to correlate cardiovascular risk and reflect the importance of a physical activity dose-response relationship (Weiler and Stamatakis, 2010). The instrument is designed for adults (16 to 74 years of age) without longstanding illnesses or disability and it just takes less than a minute to be completed. The validity and feasibility study of the GPPAQ had been carried out by Khaw et al. (2006) and recommended the usage of GPPAQ in clinical and public health practice.

Health-Related Quality of Life Measures

The health-related quality of life among participants was measured using Center for Disease Control and Prevention Health Related Quality of life instrument, known as CDC HRQOL-4. The CDC HRQOL-4 measures (also known as the Healthy Days measures) demonstrate to be reliable and valid for population health surveillance (Moriarty et al., 2003). The CDC HRQOL-4 consists of participant’s self-rated general health (excellent, very good, good, fair and poor) besides asking participant’s physically unhealthy days, mentally unhealthy days and activity limitation days. In this study, general health status was dichotomized into (i) Poor overall health (fair or poor) and (ii) Good overall health (good or very good or excellent). Values of 14 days or more was characterized as poor physical health and mental health (Okosun et al., 2013) as well as impaired activity (Li et al., 2008).

Statistical Analysis

Descriptive statistics, frequency and percentage were calculated. The χ^2 -test was used to compare categorical variables. The Fisher’s exact test was used if the number of cells with expected count (EC) less than five and more than 20 percent. Significance was set at 5 percent level ($p < 0.05$). The statistical analysis were performed with the Statistical Package for the Social Sciences (SPSS), version 19.

Results

Demographic Characteristics

A sample of 65 UiTM staffs including 27 (41.5%) males and 38 (58.5%) females participated in the study. Fifty-nine percent of the participants were professional and managerial staff including lecturers and officers,

while 41 percent were supporting staff. The age of the participants ranged between 18 to 24 years (n=3); 25 to 34 years (n=28); 35 to 44 years (n=19); 45 to 54 years (n=13) and more than 55 years age (n=2).

Physical Activity Index and Health-Related Quality of Life

The present study found a significant association between gender and physical activity index, $\chi^2(3, N=65) = 8.91, p=0.031$ where female staff tend to be moderately inactive and inactive rather than the male staff (Table 1).

Table 1 Association between gender and physical activity index (PAI) in 65 participants

Gender	Physical activity index (PAI) n(%)				P-value
	Active	Moderately active	Moderately inactive	Inactive	
Males	10 (15.4)	2 (3.1)	7 (10.8)	8 (12.3)	0.031 ^a
Females	3 (4.6)	7 (10.8)	14 (21.5)	14 (21.5)	

^a χ^2 test, $p < 0.05$ significant at 95% Confident Interval

However, both males and females did not show any significant association with self-rated perceived health in the HRQOL-4 (Table 2).

Table 2 Association between gender and self-rated general health in 65 participants

Gender	Self-rated General Health n(%)		P-value
	Good	Poor	
Males	24 (36.9)	3 (4.6)	0.131 ^a
Females	28 (43.1)	10 (15.4)	

^a χ^2 test (1, N=65) = 2.28, $p > 0.05$

There was no association between modified PAI and HRQOL measures (recent physical health, recent mental health and activity limitation days) as in Table 3.

Table 3 Association between modified PAI and HRQOL measures (general health, recent physical health, recent mental health and activity limitation days)

HRQOL measures	Modified PAI (n)		P-value
	Active	Inactive	
General Health			
Good	17	35	1.000 ^a
Poor	4	8	
Physical Health			
Good	22	42	1.000 ^a
Poor	0	1	
Mental Health			
Good	20	42	0.263 ^a
Poor	2	1	
Impaired Activity			
< 14 days	22	41	0.545 ^a
≥ 14 days	0	2	

^a Fisher exact test, $p > 0.05$

Discussion

The current study provides novel findings on the association between gender and physical activity index among staff in UiTM Pahang. Male staff tend to be more active compared to female staff. This finding was

parallel with previous studies (Chu and Moy, 2013; Farah Wahida et al., 2011; Dan et al., 2007) which had reported that males possessed higher physical activity score as well as total energy expenditure compared to females among Malaysian adults. A study, carried out by Go et al. (2013), as reported by the American Heart Association, also found inactivity in females was higher than males. This may be due to socio-demographic and psychosocial factors as reported in Siti Affira et al. (2011). Moreover, intention, self-efficacy, and facilities for physical activity also may contribute to inactivity among young adults in Malaysia (Sreeramareddy et al., 2012).

Both male and female staff in UiTM Pahang perceived their general health as good. Previous studies showed a good self-rated general health associated with low level of mortality (DeSalvo et al., 2006; Idler & Benyamini, 1997), functional limitations (Idler et al., 2000; Idler and Kasl, 1995) and chronic diseases (Ferraro et al., 1997; Moller et al., 1996). Study which had been carried out by Onadja et al. (2013) found that the condition of individual's physical health tend to interfered perception's of their health status. In other words, if an individual physical condition was good, they usually perceived their health status as good as well regardless mental health.

There was no association found between modified PAI and HRQOL measures. In general, both male and female staff in UiTM Pahang showed a good quality of life. The result of this analysis contradicted with previous studies which found a higher HRQOL among active individuals compared to sedentary individuals (Anokye et al., 2012; Bize et al., 2007; Vuillemin et al., 2005; Brown et al., 2003). Moreover, the physical activity index was estimated using the self-reported questionnaire and inaccuracy of estimation of physical activity level and recall bias might have happened in this study. This is the limitation of the study. Nevertheless, Farid and Dabiran (2012) suggested that the different socio-demographic characteristics and baseline health status contributed to the difference in the outcomes. On the other hand, Gill et al. (2013) stated that the quality of life did not just rely on perceived physical and mental health exclusively, but also on holistic approaches of defining quality of life need to be considered which include social, physical, emotional, spiritual and cognitive well-being.

Conclusion

In conclusion, males are more likely to be active compared to female staff in UiTM Pahang. However, both genders show relatively better HRQOL. Further studies need to be done to unravel the relationship between HRQOL and the body's biochemical markers as well as anthropometric measurements.

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