

Motivation and Hesitation Factors associated with Physical Activity (PA) among Adults in Kuantan,

Siti Zuhaidah Shahadan^{1*}, Effah Zali², Mohamad Firdaus Mohamad Ismail³ & Nurvita Risdiana⁴

¹Department of Medical Surgical Nursing, Kulliyyah of Nursing, International Islamic University Malaysia, Pahang, Malaysia.

²Department of Nursing, Gleneagles Hospital Medini Johor, Johor, Malaysia.

³Department of Professional Nursing Studies, Kulliyyah of Nursing, International Islamic University Malaysia, Pahang, Malaysia.

⁴School of Nursing, Faculty of Medicine and Health Sciences, Universitas Muhammadiyah Yogyakarta, Indonesia.

ABSTRACT

Background: Physical inactivity is among the highest contributor to obesity and mortality in adults worldwide. On the other hand, increased physical activity is likely associated with body fitness and reduced risk of cardiometabolic diseases. Limited evidence on the understanding of factors associated with motivation and hesitation towards PA in a specific community of adults. Hence, this study aimed to determine the level of physical activity and the factors associated with motivation and hesitation factors towards physical activity among adults in Kuantan.

Method: A cross-sectional study with 217 adults in Kuantan, Pahang, completed the online questionnaires. The questionnaires include three parts; sociodemographic, International Physical Activity Questionnaires-short form (IPAQ-SF) and perceived factors associated with physical activity scale among adults in Kuantan. Data analysis was done by using SPSS version 20.0. Independent sample T-test and One-way ANOVA test were used to analyze the data.

Result: The majority of adults in Kuantan, Pahang, were physically inactive (47%), while 33.6% of the respondents engaged in moderate physical activity, and only 19.4% were physically active. Reducing stress was perceived to be the key motivating factor for PA, while lack of time was perceived to be the major hesitation factor towards PA among adults in Kuantan. The findings also revealed that there is a significant association between age and motivating factors elements which are having fun and relaxing the mind ($p < 0.05$).

Conclusion: This study concludes that knowing the motivation and hesitation factors towards PA in adults may benefit the relevant authorities in planning fitness activities and programs. Incorporating PA into working environments may increase participation. A future study with a larger sample size and gender-specific is recommended.

Keywords: Motivation factor, Hesitation, Physical activity level, Community adults.

*Corresponding author

Dr. Siti Zuhaidah Shahadan
Department of Medical Surgical Nursing,
Kulliyyah of Nursing,
International Islamic University Malaysia,
Jalan Sultan Ahmad Syah, Bandar Indera Mahkota,
25200, Kuantan, Pahang Darul Makmur, Malaysia.
E-mail: sitizuhaidah@iium.edu.my

Article History:

Submitted: 16 September 2022
Accepted: 23 November 2022
Published: 30 November 2022

DOI: 10.31436/ijcs.v5i3.272
ISSN: 2600-898X

INTRODUCTION

The World Health Organization defines physical activity (PA) as "any bodily movement produced by skeletal muscles that necessitate the expenditure of energy" (1). PA is also defined as all movement caused by muscle contractions that increase energy consumption above resting metabolic rate and is distinguished by modality, frequency, intensity, duration, and context of practice" (2). In other words, PA refers to all energy-consuming movement, including during leisure time, while travelling to and from locations, or physical exercise. However, any PA, whether it be mild or vigorous, can lead to an improvement in health.

On the other hand, physical inactivity can be defined as an individual's failure to meet the recommended level of physical activity (3). According to the Ministry of Health (MOH) Malaysia's guidelines, adults were considered physically active if they engaged in at least 150 minutes of moderate or 60 minutes of vigorous activity each week (4). The rising prevalence of obesity globally can be attributed mainly to persistent physical inactivity. According to estimates, 600 million adults worldwide are obese, and 1.9 billion are overweight (5). Obesity is typically linked to poor health outcomes (6,7). Cheah and Poh stated that physical inactivity is a significant global risk factor for mortality, responsible for 3 million deaths annually (4). Other than that, physical inactivity can also affect the psychological wellbeing of an adult by increasing their risk of adverse mental health outcomes (8). Henceforth, physical activity may enhance an adult's wellbeing, whereas inactivity may result in an increased risk of early death.

Motivation and hesitation are two major factors in maintaining physical activity. Recognizing the motivation and hesitancy factors for physical activity among the adult population allows for a better understanding of a community's behaviour, which can then help other researchers, healthcare professionals, and policymakers make plans and decisions for future endeavours. According to Molanorouzi et al., self-determination theory includes intrinsic and extrinsic factors that are important in motivating people to engage in PA. The term intrinsic motivation refers to doing something

for the pleasure and satisfaction it provides. In contrast, extrinsic motivation refers to doing something for a specific reason, such as external pressures or rewards. Intrinsically motivated people have few opportunities for optimal challenge or autonomy (9). Hence, this study aims to determine the sociodemographic factors associated with motivation and hesitation towards PA among adults in Kuantan.

METHODS

Study design

This is a cross-sectional study conducted among 217 adults in Kuantan.

Data Collection and Sampling

The Kuliyah of Nursing Postgraduate and Research Committee (KNPGRC) and IIUM Research Ethics Committee (IREC2021-KON/UG08) has approved this study. The respondent recruitment strategy used by the researcher is convenience sampling. The inclusion criteria for the respondents were i) Adults who are between 15 to 64 years old, ii) living in Kuantan, Pahang, iii) willing to participate in this study and able to respond to the questionnaire, iv) able to understand English as well as v) able to provide informed consent. On the other hand, the exclusion criteria are any disability that might limit the ability of the individual to participate in PA. Once the inclusion and exclusion criteria were met, the electronic self-administrated questionnaire was distributed to be completed by the respondents. The potential respondents are targeted through email and social media platforms such as Facebook, Instagram, and WhatsApp.

Study Instruments

The questionnaires used in this study are divided into three sections: section A, section B, and section C. The sociodemographic information, including age, gender, race, level of education, marital and employment status, is in Section A. Section B, a validated and self-administered questionnaire, covers the International Physical Activity Questionnaires short-form version (IPAQ-SF). Seven questions make up the questionnaire, which asks

respondents about the types of physical activity they engage in daily and how much time they spent doing the PA over the previous seven days. The IPAQ-SF measures activity at four different intensities: 1) vigorous activity, 2) moderate activity, 3) walking, and 4) sitting. The raw data of the PA obtained were converted into energy expenditure estimated as the total metabolic equivalent (MET) using published values and suggestions from the IPAQ scoring protocol to determine the total scope of PA. Next, the perceived-on factor related to the PA is covered in Section C. Six items comprise Section C, which addresses the motivation and hesitation to engage in PA. On a 5-point Likert scale, responses to each question were rated from 0 (strongly disagree) to 4 (completely agree).

Statistical Analysis

The data obtained from the electronic self-administered questionnaire was keyed into IBM SPSS. Before statistical analysis, the data were screened for errors, such as missing data. A descriptive statistic was performed to describe the respondents' sociodemographic characteristics and PA level status. An independent sample T-test and one-way ANOVA were used to determine the association between the sociodemographic background and the mean score of the components in motivation and hesitation factors to physical activity among adults in Kuantan. A p-value of less than 0.05 was considered statistically significant.

Level of physical activity	Frequency (N)	Percentage (%)
Low	46	18.9
Moderate	82	33.7
Vigorous	115	47.3

RESULTS

Sociodemographic background and the physical activity level

A total of 217 respondents were included in the analysis, and their sociodemographic backgrounds are shown in **Table 1**. Most of the respondents are males (49.3%), aged between 15 to 31 years old (64.5%), and Malay (79.6%). Concerning the highest educational level, most respondents are matriculation or STPM holders (34.8%). Furthermore, the respondents' marital

status shows that most are single (48.9%), and the employment status revealed that 81% of the respondents work full-time.

Table 1: The sociodemographic background of study respondents (n=217).

Variables	Frequency (N)	Percentage (%)
Gender		
Male	109	49.3
Female	101	45.7
Age (years)		
15-31	140	64.5
32-48	57	26.3
49-64	20	9.2
Race		
Malay	176	79.6
Non-Malay	12	5.4
Educational level		
Certificate/SPM	62	28.1
Foundation/STPM	77	34.8
Degree	62	28.1
Master	14	6.3
PhD	2	0.9
Marital status		
Single	108	48.9
Married	88	40.6
Employment status		
Fulltime	179	81
Part-time	38	17.2

Level of physical activity

Based on the IPAQ-SF, **Table 2** indicates the level of PA among adults in Kuantan. The majority of respondents (47%) have low PA levels, whereas 19.4 % have high PA levels. 33.6% of respondents engage in moderate levels of PA.

Table 2: The level of physical activity of study respondents (n=217)

Level of physical activity	Frequency (n)	Percentage (%)
High	42	19.4
Moderate	73	33.6
Low	102	47

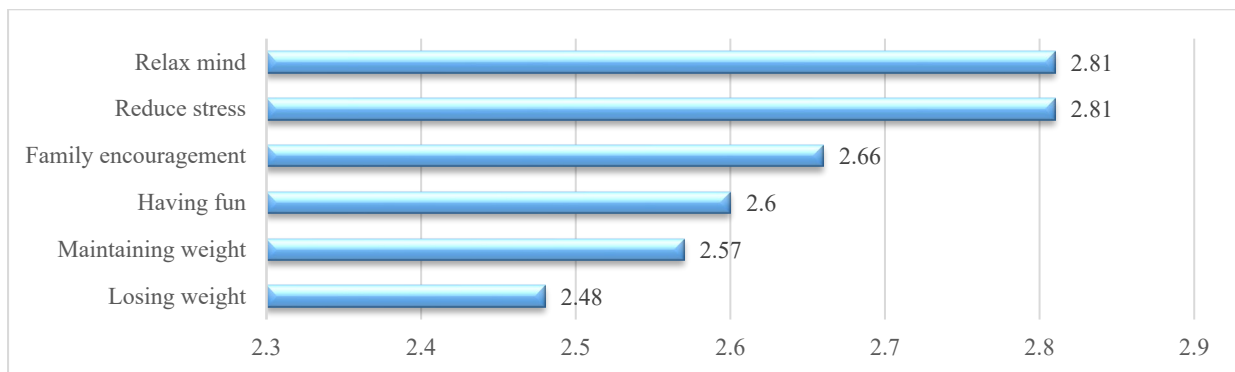
Motivation factors associated with physical activity

Table 3 displays the response to each variable related to motivation towards PA among adults in Kuantan.

Table 2: Motivation factors associated with physical activity of study respondents (n=217)

Variables	Frequency (N)	Percentage (%)	Mean (SD)
Losing weight			2.48 (0.908)
Strongly disagree	2	0.9	
Disagree	27	12.4	
Agree	82	37.8	
Fairly agree	77	35.5	
Strongly agree	29	13.4	
Maintaining weight			2.57 (0.965)
Strongly disagree	2	0.9	
Disagree	27	12.4	
Agree	74	34.1	
Fairly agree	73	33.6	
Strongly agree	41	18.9	
Having fun			2.60 (0.938)
Strongly disagree	4	1.8	
Disagree	17	7.8	
Agree	80	36.9	
Fairly agree	76	35	
Strongly agree	40	18.4	
Family encouragement			2.66 (0.997)
Strongly disagree	5	2.3	
Disagree	19	8.8	
Agree	70	32.3	
Fairly agree	74	34.1	
Strongly agree	49	22.6	
Reduce stress			2.81(1.026)
Strongly disagree	3	1.4	
Disagree	21	9.7	
Agree	57	26.3	
Fairly agree	69	31.8	
Strongly agree	67	30.9	
Relax mind			2.81(0.990)
Strongly disagree	3	1.4	
Disagree	18	8.3	
Agree	59	27.2	
Fairly agree	75	34.6	
Strongly agree	62	28.6	

Figure 1 depicts a summary of the mean scores for each variable. According to the data, the leading motivation factors for PA are "reduced stress" and "relaxed mind". "Losing weight" was perceived as the least motivating factor for PA among the respondents in the study.

Figure 1: Mean score for motivation factors towards physical activity among adults in Kuantan (N=217)

Hesitation factors associated with physical activity

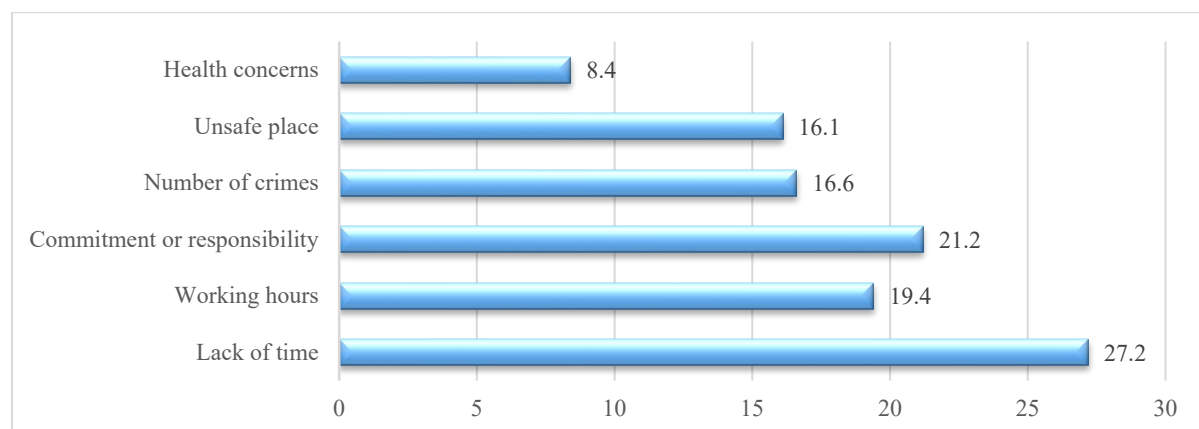
Table 4 describes the respondents' responses to perceived hesitation factors associated with PA.

Table 4: Hesitation factors associated with physical activity of study respondents (n=217)

Variables	Frequency (N)	Percentage (%)	Mean (SD)
Lack of time			2.67 (1.084)
Strongly disagree	5	2.3	
Disagree	29	13.4	
Agree	57	26.3	
Fairly agree	67	30.9	
Strongly agree	59	27.2	
Working hour			2.57 (1.030)
Strongly disagree	5	2.3	
Disagree	31	14.3	
Agree	59	27.2	
Fairly agree	80	36.9	
Strongly agree	42	19.4	
Number of crimes			2.47 (1.130)
Strongly disagree	24	11.1	
Disagree	33	15.2	
Agree	63	29	
Fairly agree	61	28.1	
Strongly agree	36	16.6	
Unsafe place			2.19 (1.236)
Strongly disagree	25	11.5	
Disagree	38	17.5	
Agree	59	27.2	
Fairly agree	60	27.6	
Strongly agree	35	16.1	
Health concern			2.39(1.092)
Strongly disagree	8	3.7	
Disagree	39	18.0	
Agree	71	32.7	
Fairly agree	59	27.2	
Strongly agree	40	18.4	

Figure 2 demonstrates the mean score for the perceived hesitation factors towards PA. For hesitation factors, the highest is lack of time, with a mean= 2.67, followed by working hours at 2.57, commitment at 2.47, health concerns at 2.39, number of crimes at 2.24 and unsafe places at 2.19.

Figure 2: Mean score for motivation factors towards physical activity among adults in Kuantan (N=217)



The association between motivation factors to physical activity and the sociodemographic background

The association between the sociodemographic background and the perceived factors that motivate PA is shown in **Table 5**. The results demonstrate a statistically significant association between "reduced stress" and race ($p=0.044$), employment status and "weight loss" ($p=0.025$). Then, the findings show a significant association between "having fun" and a "relax mind" ($p=0.002$ and 0.041 , respectively)., Lastly, there is also a significant association between education level and "family support" ($p=0.008$).

Table 5: Association between sociodemographic background with motivation factors associated with physical activity of study respondents (n=217)

Socio demographic	Motivation factors											
	Losing weight		Maintaining weight		Having fun		Family encouragement		Reduce stress		Relax mind	
	Mean (SD)	p-value	Mean (SD)	p-value	Mean (SD)	p-value	Mean (SD)	p-value	Mean (SD)	p-value	Mean (SD)	p-value
Gender		0.640		0.925		0.308		0.748		0.370		0.120
Male	2.53 (0.867)		2.60 (0.944)		2.53 (0.939)		2.66 (0.920)		2.64 (0.965)		2.69 (1.025)	
Female	2.48 (0.890)		2.58 (0.919)		2.66 (0.920)		2.69 (1.034)		2.73 (1.144)		2.90 (0.943)	
Age		0.122		0.462		0.002*		0.178		0.052		0.041*
15-31	2.54 (0.940)		2.53 (0.966)		2.74 (0.876)		2.74 (0.977)		2.89 (0.987)		2.89 (0.972)	
32-48	2.46 (0.781)		2.53 (0.966)		2.47 (1.020)		2.56(1.0350)		2.79 (1.101)		2.77 (0.964)	
49-64	2.10 (0.968)		2.35 (0.875)		2.00 (0.858)		2.35 (0.988)		2.30 (1.218)		2.30 (1.081)	
Marital status		0.503		0.375		0.795		0.571		0.402		0.733
Single	2.47 (0.961)		2.56 (1.026)		2.55 (0.921)		2.56 (1.008)		2.81 (1.009)		2.79 (0.958)	
Married	2.39 (0.794)		2.44 (0.856)		2.51 (0.947)		2.64 (0.973)		2.68 (1.045)		2.74 (1.023)	
Employment status		0.025		0.544		0.561		0.597		0.887		0.169
Fulltime	2.47 (0.889)		2.55 (0.966)		2.59 (0.916)		2.64 (1.014)		2.82 (1.019)		2.85 (0.957)	
Part-time	2.50 (1.007)		2.66 (0.966)		2.68 (1.042)		2.74 (0.921)		2.79 (0.921)		2.61 (1.128)	

*Significant value at 0.05

The association between hesitation factors to physical activity and the sociodemographic background

Table 6 shows the association between sociodemographic background and factors discouraging physical activity. The findings showed no conclusive relationship between PA hesitancy and sociodemographic background among the study respondents.

Table 6: Association between sociodemographic background with hesitation factors associated with physical activity of study respondents (n=217)

Socio demographic	Hesitation factors											
	Lack of time		Working hour		Commitment		Number of crimes		Unsafe place		Health concern	
	Mean (SD)	p-value	Mean (SD)	p-value	Mean (SD)	p-value	Mean (SD)	p-value	Mean (SD)	p-value	Mean (SD)	p-value
Gender		0.597		0.925		0.388		0.210		0.471		0.538
Male	2.63 (1.086)		2.58 (2.56)		2.52 (1.183)		2.16 (1.234)		2.17 (1.261)		2.47 (1.102)	
Female	2.71 (1.099)		2.56 (1.048)		2.39 (1.104)		2.37 (1.189)		2.30 (1.196)		2.39 (1.049)	
Age		0.152		0.723		0.381		0.170		0.127		0.242
15-31	2.78 (1.067)		2.61 (0.980)		2.44 (1.114)		2.23 (1.254)		2.18 (1.265)		2.31 (1.106)	
32-48	2.47 (1.104)		2.51 (1.167)		2.42 (1.209)		2.11 (1.175)		2.05 (1.216)		2.60 (1.083)	
49-64	2.50 (1.100)		2.45 (0.999)		2.80 (1.005)		2.70 (1.031)		2.70 (0.979)		2.30 (0.979)	
Marital status		0.435		0.483		0.354		0.845		0.891		0.743
Single	2.67 (1.136)		2.51 (1.009)		2.37 (1.165)		2.25 (1.208)		2.17 (1.234)		2.42 (1.069)	
Married	2.55 (1.005)		2.61 (1.066)		2.52 (1.114)		2.19 (1.195)		2.37 (1.055)		2.63 (1.425)	
Employment status		0.360		0.541		0.716		0.872		0.599		0.659
Fulltime	2.70 (1.079)		2.59 (1.048)		2.45 (1.118)		2.25 (1.221)		2.17 (1.249)		2.40 (1.052)	
Part-time	2.53 (1.109)		2.47 (0.951)		2.53 (1.202)		2.21 (1.234)		2.29 (1.183)		2.32 (1.276)	

DISCUSSION

The current study found that the prevalence of physical inactivity, based on the IPAQ-SF, among adults in Kuantan was 47%. The prevalence was higher than in similar studies conducted in the Malaysian setting (4,10). Other than that, in comparison to the national database, the prevalence of physical inactivity among Malaysian adults, in general, was 21.6% using the long version of IPAQ tools (11). In brief, this study suggests that adults in Kuantan are more sedentary as compared to adults in Malaysia.

According to this study, most adults (37.8 %) believe that losing weight for a more attractive appearance motivates them to engage in PA.

Furthermore, the majority of respondents (34.1 %) support the idea of maintaining weight as a motivator to continue being physically active. According to this study, most adults (37.8 %) believe that losing weight for a more attractive appearance motivates them to engage in PA. A similar study discovered that young adults who have internalized attractive ideals are motivated by PA to improve their appearance (12). Following that, most adults agree (32.3%) fairly agree (34.1%) that family encouragement motivates them to participate in PA. Morrissey et al., in their study, found that the presence of family and friend support resulted in higher participation of total moderate and vigorous-intensity types of PA (13). Most importantly, this study found that the top two motivators for most respondents to engage in PA were to

reduce stress and relax their minds. The findings support the claim that PA can improve mental health by lowering stress, anxiety, depression, and negative mood (14).

Aside from that, the findings of this study indicated that age was significantly associated with perceived fun as a motivation to engage in PA ($p=0.002$). According to the data, young to middle-aged adults in Kuantan may be encouraged to engage in PA to entertain themselves. Furthermore, compared to middle-aged to older adults, young adults perceived that relaxing their minds is a motivator to participate in PA ($p=0.002$). On the other hand, the present study discovered no significant association between sociodemographic background (gender, age, marital status, and employment status) and the hesitation factors toward PA among adults in Kuantan. Nonetheless, the analysis revealed that the majority of respondents perceived a lack of time as the significant factor for their hesitancy to engage with PA. Similarly, several findings also discovered that a lack of time is the most significant barrier to young adults' engagement with PA (15,16). In sum, this result recommends that motivation factors play a more important role than hesitation factors in ensuring individuals engage in PA. The "Global action plan on physical activity 2018–2030" aims to achieve more active people for a healthier world (17). Thus, local authorities may plan appropriate physical activities tailored to the preferences of the target group in order to increase the participation of young, middle-aged, and older adults.

CONCLUSION

In summary, this study finds that adults in Kuantan have a high prevalence of physical inactivity. While time constraints are seen as the main impediment to PA, stress reduction and mind relaxation are perceived as the main motivating factors. The promotion of PA should be prioritized in light of the problems facing adults' general wellbeing today. Additionally, the relevant authorities should make more efforts to incorporate PA into working environments. To generalize the findings to the entire Kuantan population, however, future studies with larger sample sizes and gender-specific questions are advised.

CONFLICT OF INTEREST

The author declares that there was no conflict of interest in this study.

ACKNOWLEDGEMENT

The authors would like to thank Dr Izatus Shima Taib for the permission to use an International Physical Activity Questionnaire (IPAQ) questionnaire and the community of Kuantan, Pahang, that participated in the study.

REFERENCES

1. World Health Organization. Physical activity [Internet]. 2020 [cited 2022 Apr 24]. Available from: <https://www.who.int/news-room/fact-sheets/detail/physical-activity>
2. Thivel D, Tremblay A, Genin PM, Panahi S, Rivière D, Duclos M. Physical Activity, Inactivity, and Sedentary Behaviors: Definitions and Implications in Occupational Health. Vol. 6, *Frontiers in Public Health*. Frontiers Media SA; 2018.
3. Thanamee S, Pinyopornpanish K, Wattanapisit A, Suerungruang S, Thaikla K, Jiraporncharoen W, et al. A population-based survey on physical inactivity and leisure time physical activity among adults in Chiang Mai, Thailand, 2014. *Archives of Public Health*. 2017 Oct 2;75(1).
4. Cheah YK, Poh BK. The Determinants of Participation in Physical Activity in Malaysia. *Osong Public Health Res Perspect*. 2014;5(1):20–7.
5. World Health Organization. Obesity and overweight [Internet]. 2021 [cited 2022 Apr 3]. Available from: <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>
6. Shahadan SZ, Daud A, Muhammad ML, Rasani AAM, Ibrahim M, Deraman S. Abdominal obesity and high-sensitivity C-reactive protein level among Malay obese adults in Kuantan, Malaysia. *International Medical Journal Malaysia*. 2018;17(1):79–86.

7. Almuzaini Y, Jradi H. Correlates and Levels of Physical Activity and Body Mass Index Among Saudi Men Working in Office-Based Jobs. *J Community Health*. 2019 Aug 15;44(4):815-21.
8. Werneck AO, Silva DR, Malta DC, Souza-Júnior PRB, Azevedo LO, Barros MBA, et al. Physical inactivity and elevated TV-viewing reported changes during the COVID-19 pandemic are associated with mental health: A survey with 43,995 Brazilian adults. *J Psychosom Res*. 2021 Jan 1;140.
9. Molanorouzi K, Khoo S, Morris T. Motives for adult participation in physical activity: Type of activity, age, and gender Health behavior, health promotion and society. *BMC Public Health*. 2015 Dec 12;15(1).
10. Leong Tan K. Factors influencing physical inactivity among adults in Negeri Sembilan, Peninsular Malaysia. *Med J Malaysia [Internet]*. 2019 [cited 2022 Aug 10];74(5):389-93. Available from: <http://e-mjm.org/2019/v74n5/physical-inactivity.pdf>
11. Institute for Public Health (IPH). National Health and Morbidity Survey (NHMS) 2019: Vol. I: NCDs – Non-Communicable Diseases: Risk Factors and other Health Problems. National Institutes of Health; 2020.
12. Vartanian LR, Wharton CM, Green EB. Appearance vs. health motives for exercise and for weight loss. *Psychol Sport Exerc*. 2012 May;13(3):251-6.
13. Morrissey JL, Janz KF, Letuchy EM, Francis SL, Levy SM. The effect of family and friend support on physical activity through adolescence: A longitudinal study. *International Journal of Behavioral Nutrition and Physical Activity*. 2015 Aug 20;12(1).
14. Frederick D, Sandhu G, Morse PJ, Swami V. Correlates of Appearance and Weight Satisfaction in a US National Sample: Personality, Attachment Style, Television Viewing, Self-Esteem, and Life Satisfaction. *Body Image [Internet]*. 2016;17:191-203. Available from: https://digitalcommons.chapman.edu/psychology_articles
15. Anjali, Sabharwal M. Perceived barriers of young adults for participation in physical activity. *Current Research in Nutrition and Food Science*. 2018 Aug 1;6(2):437-49.
16. Hussin NZMH@ M, Anuar A, Hassan NM, Maon SN. Perceived Barriers towards Physical Activity among Female University Students. *International Journal of Academic Research in Business and Social Sciences*. 2021 Apr 15;11(4).
17. World Health Organization. Global action plan on physical activity 2018–2030: more active people for a healthier world. Geneva; 2018.