

BEHAVIOUR AND THE PERCEPTION OF PHYSICAL ACTIVITY DURING THE PERIOD OF MOVEMENT CONTROL ORDER (MCO) IN MALAYSIA

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Abstract

To curb the spread of Covid-19, governments have introduced social distancing measures with varying degrees of enforcement, ranging from unenforced recommendations to quarantine. Physical activity is an important determinant of health, and it is likely affected by social distancing measures introduced to combat the pandemic. This study presents findings from an online survey examining behaviour and the perception of physical activity and exercise during the period of the movement control order (MCO) in Malaysia. A total of 307 respondents (male = 134, female = 173) participated in the survey, which comprised three sections with a total of 33 items. Results indicate that about 80% of the respondents engaged in physical activity and exercise during the MCO period, but male respondents reported a greater impact on their actual physical activity and exercise as compared to female respondents. This study reveals no significant correlation between gender and perception, but it does show a significant correlation between gender and behaviour ($p < 0.05$) in terms of physical activity and exercise during the MCO period. This study found that both genders have a positive understanding and awareness of the benefits of physical activity and exercise, which are crucial for physical and mental health during the pandemic.

Keywords: behaviour, gender, perception, physical activity

Introduction

The Covid-19 outbreak has become the world's leading health issue, with the World Health Organization (WHO) announcing it as a pandemic on 11 March 2020. Many countries have introduced movement control, often referred to as social isolation or quarantine. This is recommended by the WHO as a method for preventing the spread of the virus. In Malaysia, a movement control order (MCO) was introduced on 18 March 2020. During this period, most Malaysians have changed their daily routine, including their physical activity and exercise.

The physical activity comprises movement that involves the musculoskeletal system and expends energy, while exercise is a subcategory of physical activity that is more structured and aims to improve fitness (WHO, 2020). The benefits of being physically active have been well documented, including maintaining healthy body weight, reducing the risk of metabolic diseases, and improving musculoskeletal function (Ainsworth et al., 2020; Mauger et al., 2020). A recent Malaysian Health and Morbidity survey indicates that about 50.1% of Malaysian adults are overweight or obese (Institute for Public Health, 2019).

The ideal solution for combating obesity and being overweight is to increase physical activity and exercise, which have been found to improve immune functions and to have psychological benefits (Abreu et al., 2020). It should also be noted that obesity has been associated with the progression and severity of Covid-19 illness,

often leading to death (Cai et al., 2020; Sattar et al., 2020). Studies have shown that men usually have a greater tendency than women to participate in physical activity (Steptoe et al., 1997; Jurj et al., 2007; Baumen et al., 2009; Costello et al., 2011; Farias Ju´nior et al., 2014; Mao et al., 2020). This is in line with a recent report indicating that Malaysian men are more physically active than women (Institute for Public Health, 2019). Physical inactivity is recognised as the fourth risk factor of death (WHO, 2020), and the current Covid-19 pandemic has increased the probability of society becoming less physically active. Bortz (1984) stated that quarantine leads to physical inactivity, contributing to adverse mental and physical health changes. This study examined Malaysian adults’ physical activity during the MCO, and their perception of physical activity and any consequent behavioural changes.

Material and Methods

Respondents

A total of 307 respondents (male = 134, female = 173) from various backgrounds voluntarily participated in this survey.

Instrument and Procedure

This cross-sectional study was conducted via an online survey form from 27 April to 3 May 2020 (MCO Phase 4). The survey’s information and form were developed in two languages (Malay and English). There were 33 items in the survey form, including:

- i) Respondent’s profile – details of their gender, status, number of households, income and location.
- ii) Respondent’s behaviour in terms of physical activity and exercise – comprising 15 items, including frequency of physical activity and exercise, and a self-perceived difference in physical activity and exercise before and during the MCO.
- iii) Respondent’s perception of physical activity and exercise – comprising seven items, including their enjoyment of a physical activity, their thoughts about being physically active and how Covid-19 has impacted their physical activity.

Invitations to participate in this survey were sent via e-communication platforms and social media. Participants were linked to the survey’s platform and had access to the consent terms, explaining that the research was voluntary and that all information given by respondents would be confidential. The order in which questions appeared in the survey was always the same: (A) consent terms, (B) respondent’s profile and (C) physical activity and exercise.

Statistical Analysis

The descriptive data were presented in percentages. A chi-square test was used to determine the correlation between variables, with a level of significance set at $p < 0.05$.

Results

Demographics of respondents

Demographics of the 307 respondents are presented in Table 1. Approximately 69% of respondents are married, and about 70% of respondents have children aged 18 or under living in their household. Approximately 36% of the respondents have one to two children, and 29% have three to four children. Data also showed that 80% of the respondents have an income.

	Male n=134	Female n=173	Total n=307
Age			
13 - 17 years old	12	12	24
18- 34 years old	43	41	84

35 years old and above	79	120	199
Level of Education			
Post graduate	22	31	53
Graduate	80	117	197
Certificate	32	25	57
Marital Status			
Married	100	111	211
Single	34	62	96
Income			
No income	17	25	42
<1000 – 2000	4	10	14
2000 – 8000	73	91	164
8000 and above	40	47	87
Accommodation			
Urban	80	99	179
Rural	54	74	128

Table 1. Demographic of respondents by gender

Behaviour in terms of physical activity and exercise

In total, 81% of the respondents (n = 248) had engaged in physical activity or exercise for 30 minutes or more in the previous week. Of all the respondents, 42.3% exercise regularly (3 to 7 days), 38.8% exercise irregularly (1 to 2 days), and 18.9% do not exercise. Figure 1 indicates the extent of physical activity and exercise performed by respondents (by gender), with no significant differences found between gender and frequency of physical activity ($p > 0.05$). Female respondents reported higher physical activity and exercise during the MCO period compared with before the Covid-19 outbreak, and a significant correlation was found with gender ($p=0.002$). This survey covers various forms of physical activity and exercise, with the data indicating that home activity (in-house games, gardening etc.) is the most common, followed by exercise through online/app/TV/DVD, and then other recreational activities/sports. In addition, there was a significant correlation between gender and two forms of activities: home activity (in-house games, gardening etc.) ($p=0.001$) and exercise through online/app/TV/DVD ($p = 0.002$). Female respondents had a significantly higher tendency to perform these two forms of activities as compared to male respondents.

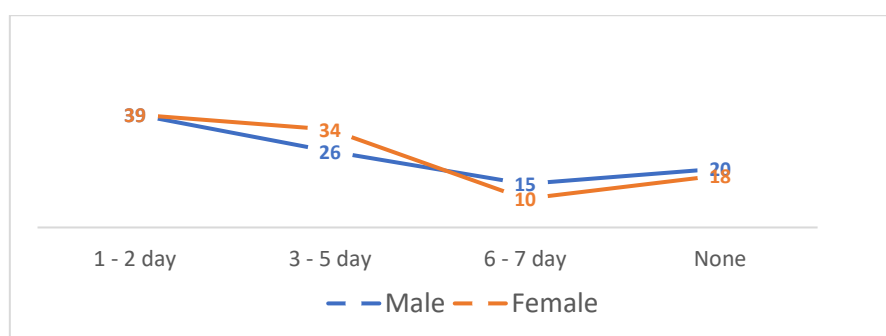


Figure 1. Percentage of physical activity and exercise frequency (number of days) by gender

This study also revealed respondent's behaviour in terms of physical activity and exercise, with approximately 53% of the respondents stating that they "can do", 48% stating that they "have more opportunity to do" and 53% stating that they "have more time to do" physical activity and exercise since the Covid-19 outbreak. There was a significant correlation between gender and two of these variables: "can do" ($p = 0.03$) and "have more opportunity to do" ($p = 0.03$). There was no significant correlation between gender and "have more time to

do” ($p > 0.01$) in this study. Approximately 40% of the respondents reported being unsure about “finding new ways” to be physically active during the MCO period, and there was a significant correlation with gender.

As outlined earlier, most respondents stated that they “have more time to do” physical activity and exercise, but male respondents stated that they were “not able to exercise as before the MCO” ($p = 0.02$) and the “MCO has impacted their exercise routine” ($p = 0.002$). This finding describes the male response to physical activity and exercise during the MCO period due to the Covid-19 outbreak. The survey also revealed each respondent’s condition and their readiness for physical activity and exercise. Results showed that 98% of the respondents were healthy and able to do all sort of activities, but only 75% were ready to do exercise on that day.

Perception of physical activity and exercise

Respondents’ perceptions of physical activity and exercise are described in Table 2. None of the variables has a significant correlation with gender. However, the percentages of agreement in the items “I found physical activity enjoyable”, “More frequent physical activity is important” and “I exercise to help manage my physical and mental health during the Covid-19 outbreak” were higher among female respondents.

Item		Percentage (%)	
		Male (n= 134)	Female (n=173)
I found physical activity enjoyable	Disagree	29.9	17.3
	Not sure	27.6	30.6
	Agree	42.5	52.0
More frequent physical activity is important	Disagree	6.0	1.7
	Not sure	19.4	19.7
	Agree	74.6	78.6
I exercise to help manage my physical & mental health during the Covid-19 outbreak	Disagree	11.2	5.8
	Not sure	28.4	27.2
	Agree	60.4	67.1
To what extend do you think it is more important to do physical activity during Covid-19 outbreak than compared to other times?	Important	70.9	74.6
	About the same	22.4	22.5
	Not important	3.7	0.6
	Don’t know	3.0	2.3
Has the Covid-19 outbreak changed your opinion/perception towards physical activity and exercise?	No	35.8	39.3
	Yes	53.0	54.3
	Don’t know	11.2	6.4

Table 2. Perception towards physical activity and exercise during the MCO period due to Covid-19 outbreak

Discussion

Several studies were conducted on gender differences in exercise participation, and males were frequently identified as exercising more than females (Steptoe et al., 1997; Jurj et al., 2007; Baumen et al., 2009; Costello et al., 2011; Farias Ju’nior et al., 2014; Mao et al., 2020). However, during movement controls initiated following the Covid-19 outbreak, a study in Italy discovered that physical activity dropped significantly for all

age groups, and especially among males (Maugeri et al., 2020). In contrast to this study, most respondents engaged in physical activity and exercise during movement controls, but there were slight differences in terms of behaviour between genders. In line with other studies, the Italian study also found that males were significantly impacted by movement controls (Maugeri et al., 2020). However, the findings of our study are similar to those of Mao et al. (2020), who revealed differences between genders in their forms of exercise, but no difference in the frequency of exercise (Mao et al., 2020). This study discovered that during the MCO period, females demonstrated more positive behaviour towards physical activity and exercise as compared to males. This may be related with other findings showing that a male's exercise determinant is "enjoyment" (Abreu et al., 2020) and could be due to an essential change in everyday schedules and habits (Maugeri et al., 2020).

The current study found that, in general, women enjoy doing physical activity and think that frequent physical activity is important. In addition, women also believe that exercise helps them to manage their physical and mental health during the Covid-19 pandemic as compared to men. This is also consistent with gender comparison studies showing that male exercisers are more likely to report that they exercise for social and competitive reasons (Craft et al., 2014). The previous study conducted in Malaysia has also shown that men tend to find "enjoyment" in competitive sports, attempting to master techniques, overcome challenges and gain strength (Molanorouz et al., 2015). Since sporting events have been cancelled and social distancing was introduced, men are likely less to continue engaging in physical activity during this pandemic period as compared to women. Studies have revealed that females tend to engage in exercise for appearance reasons, such as losing weight or maintaining weight loss (Molanorouz et al., 2015; Craft et al., 2014). Thus, even during the pandemic period, females have tended to continue their normal exercise routines as compared to men.

Current findings also revealed that most respondents were likely to engage in home activity (in-house games, gardening etc.) and exercise through online/app/TV/DVD. Females were found to be significantly more engaged in these forms of physical activity and exercise. In line with other studies, it was found that people use technological yet impersonalised applications (i.e., YouTube, Instagram and other mobile apps) to conduct their practices of physical activity during quarantine (Abreu et al., 2020). However, according to Bessa et al. (2013), technological applications can only serve the demands of a specific group of people. This may contribute to the findings of the current study whereby females have a significantly higher tendency to do exercise through online/app/TV/DVD as compared to men. In terms of technological applications only serving the demands of specific groups of people, the current findings may provide insights for formulating exercise tools using technological applications that meet the needs of various groups. However, the finding also show that people generally accept and adapt to the new norms and have started exercising using technological applications during the MCO period.

Gender roles showed to be one of the influential factors on physical activity participation in which culturally South Asian women more likely play the role of caregivers in the family, thus resulting in that they have less time to exercise (Mao et al., 2020; Caperchione et al., 2015). As for the current study, due to the MCO period, most respondents agreed that they have more time and opportunity to do physical activity. However, males were found to have difficulties in setting up new exercise regimes as compared to females. This finding could be due to females prefer to exercise in home-setting as compared to males who prefer to practice sports, outdoor and/or in public places like gym and fitness club (Maugeri et al., 2020). Also, the role of caregivers in the family could have changed during this period. Mao et al. (2020) recommended examining if the influential factors have changed over time. Other factors, such as social support (family, friends, and employers) and the application of technological devices also can be included in future studies.

This study has some limitations. First, respondents tended to live in urban areas. Thus, the findings may not be representative of the wider population. Second, the data was collected during the MCO Phase 4 (about two months of quarantine), which may provide different results compared to other phases or durations. Studies have shown that the duration of social isolation or quarantine can impact mental (Abreu et al., 2020; Hawryluck et al., 2004; Bai et al., 2004; Lee et al., 2005; Filgueiras and Stults-Kolehmainen, 2020) and physical health (Schwendinger & Pocecco, 2020). Third, the forms of physical activity were divided into four categories and depending on the respondent's own description of the form of physical activity. Future studies may include time, duration and intensity of the physical activity done to obtain a broad understanding of physical activity during the movement restriction period.

Conclusion

The results of our study show that, generally, the MCO period has encouraged physical activity and exercise among Malaysians. Although there was a slightly negative impact on men's behaviour, both genders have a positive understanding and awareness of the benefits of physical activity and exercise. Physical activity and exercise are important preventative strategies during the pandemic because they have a profoundly positive impact on physical and mental health. In addition, physical activity is found to improve the immune system, which is the best prevention method during a pandemic. This study gives health and fitness promoter a clear picture of gender differences in regular exercise participation and its related influential factors. Thus, this can help the establishment of gender-specific health and fitness promotion strategies.

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