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Motivation & Environmental Preferences of Park Goers in Physical Activity Engagement during COVID-19 Pandemic

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Abstract

The research aimed to investigate the motivation and environmental preferences of the park goers' engagement in physical activity during the current COVID-19 pandemic. Based on those aims, the study was conducted to identify demographic profiles, motivational factors and preferences among park-goers in Temerloh, Pahang, Malaysia. Results show that park goers in Pahang preferred performing their activities outdoors than indoors. Findings suggest that motivations and environmental preferences can induce different performance outcomes. It will help specialists to configure increased amounts of efforts and methods to achieve the best optimum health of the general public.

Keywords: Motivation; PALMS; Environmental Preferences; Physical Engagement

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1.0 Introduction

The world was in a state of emergency following the drastic growth spread of the SARS-CoV 2 (COVID-19) pandemic, a fast-spreading, high-risk respiratory disease that placed health risks on the masses. According to news sources, Malaysia recorded the first confirmed case of COVID-19 on February 4th 2020. This case instigated the Malaysian government to take several preventative measures, such as enacting a Movement Control Order (MCO) and issuing self-quarantine protocols to counter the growth of cases.

Over a year later, in 2021, the pandemic is still active in Malaysia, with the total number of cases had increased to this day. To this date, Malaysia has registered more than 2.3 million COVID-19 cases. However, the cases seem to be declining due to the aggressiveness of the Ministry of Health Malaysia in achieving the threshold of 80% of herd immunity (<https://www.bloomberg.com/news>). Before reaching this stage, Malaysia had undergone three stages of MCO with seven phases. Due to the rising cases, the authority had outlined and imposed strict regulations. These regulations affected all Malaysians in their daily lives from the decline of our economy due to the closure of business sectors to prevent them from performing their routine tasks, including engaging in physical activities (Khor et al., 2020).

The introduction of COVID-19 vaccines has helped in combating the virus spread, but society still has complications in adjusting to the current lifestyle of living in a pandemic environment. The immediate impact on our society during this pandemic COVID-19 era was more health-related cases, including obesity (TheSTAR, 2020). In fact, according to that article, Malaysia ranks the highest prevalence of obesity among adults in South-East Asia. The prevention of performing open or outdoor exercises also contributes to the risk. Some might be adapting themselves to more indoor and private workouts. Some might be participating in unsanctioned physical activities in public since

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performing outdoor physical activities is more attractive and beneficial. At the same time, some understanding locals took the challenge to adapt towards an indoor-physical activity engagement, a decrease in cases in certain areas that had allowed for outdoor recreational activities and exercise following the *Standard of Procedure (SOP)* listed by the Malaysian government.

2.0 Literature Review

2.1 Movement Control Order (MCO)

It is a preventative measure taken by the government of Malaysia to reduce the number of physical contact & COVID-19 cases (Khor et al., 2020). The MCO listed several guidelines for the public to advise individuals only to be outdoors if necessary, be wary of surroundings while being outdoors, practice a strong sense of hygiene, and avoid public gatherings and public areas are just some of the outlined rules addressed by the government.

Movement Control Order by Phase:

- a) Movement Control Order (MCO/ PKP): March 18th to May 3rd 2020.
- b) Conditional Movement Control Order (CMCO/ PKPB): May 4th to June 9th 2020.
- c) Recovery Movement Control Order (RMCO/ PKPP) June 10th 2020, to March 31st 2021.
- d) Movement Control Order (MOC, CMCO, RMCO, EMCO [Enhanced Movement Control Order], semi-EMCO by states: January 11th 2021 to May 31st 2021.
- e) Total Lockdown: June 1st 2021, to June 28th 2021.
- f) National Recovery Plan (NRP/ PPN): June 15th 2021 – Ongoing.

Due to the strict regulations (standard operating procedures) preventing widespread COVID-19 viruses, many sectors were closed, and the government's only essential services or sectors were allowed to continue their operations. These restrictions severely impacted our daily activities, including sports and recreation. All sports activities had to be stopped, especially during the lockdowns. To the sports enthusiasts, this was terrible news since they could not perform their routine exercises such as running, cycling, swimming and many more. Even though some restrictions were gradually uplifted, Malaysians still have to follow the SOP, especially in performing social or physical distancing during their activities.

Despite the strict regulations, many ignorant individuals still participate in sports even though they are at risk of catching the illness or being fined by the authority. What makes these sports goers very eager to continue exercising? Many Malaysian were saying that the continuous lockdown created unnecessary stress for them. Everybody was unable to express themselves due to a long period of staying or working from home. For example, all public universities in Malaysia were out of bounds to staff and students for quite some time and only allowed specific groups to be on campuses based on several criteria, such as students that do not have conducive environments for following the online and distance learning (ODL) and those who are performing their industrial attachments on campus (FSR Academic Circular, October 11th, 2021).

2.2 Motivation in Physical Engagement

Motivation is a crucial determinant of behaviour in sport. It is a complex construct. For example, athletes have diverse and dynamic motives for initiating, directing, sustaining, and terminating efforts. Athletes can be motivated by internal or external factors, which may vary by context and time (Sheehan, Herring & Campbell, 2018). Typical participants in sports also possess the same motivation as athletes. Intrinsic motivations may influence some, and extrinsic factors may affect some.

Intrinsic motivation is the most self-determined form of motivation and refers to doing an activity for the pleasure and satisfaction derived from participation (Seehan et al., 2018). Intrinsic motivation subscales include mastery and enjoyment (Molanoruzi, Khoo, & Morris, 2015; Chowdhury, 2012). Extrinsic motivation encompasses behaviours such as physical condition, psychological condition, and appearance. In addition, extrinsic motivation factors are the factors that are linked to a separable outcome and comprise four behavioural regulations (Seehan et al., 2018):

- a) integrated regulation is the most self-determined form of extrinsic motivation and includes behaviours that are congruent with an individual's self and value system (e.g., a basketball player who participates because sports involvement aligns with her values);
- b) identified regulation represents actions that are performed out of choice, though they are not attractive in and of themselves (e.g., a football player who does strength work because, even though he does not like it, he understands it contributes to his performance);
- c) introjected regulation exists when a person internalizes but does not endorse external forces (e.g., a gymnast who competes to avoid feeling guilty or ashamed);
- d) external regulation refers to behaviours that are regulated by external sources (e.g., swimmer who engages in training to get recognition from parents or coaches)

2.3 Quality of Physical Activity Engagement Interest Based on Environment

At the same time, some may emit positive mood states being surrounded by groups of people, and others can experience anxiety or a form of suffocation, which can be deemed negative mood states. The improvement of positive mood states was proven through exercise engagement, factoring in the aspect of the surrounding environment of the exercise conditioning had also been proven to show the influences of how it could further affect on in regards to individual perception and experience when in the environment. However, little information is known on how to exercise mood state perception is influenced by indoor and outdoor environments (Hooper, 2003).

Hooper (2003) also found that exercising outdoors yielded a better positive mood state when compared to exercising indoors. The participants were in a more significant positive mood state boost in their average heart rates before and after the physical activity engagement while outdoors. In a closing statement, engaging in physical activity is not enough to fully bring out the individual's potential. The surrounding environment plays a massive part in producing a positive mood state, thus allowing the individual to achieve that potential.

2.4 Why is lack of interest in physical activity worrying?

It started with the realization that there had been a lack of physical activity interest and involvement among European adults. However, society has been well informed that being physically active benefits the individual's overall health (Carraça et al., 2018). This statement was backed by a statistic produced by Eurobarometer in 2014 that highlights an estimation that 59% of European adults rare or do not participate in the exercise, sports or any form of recreational physical activity. The reason revealed was a lack of motivation or disinterest in being physically active for 20% through the same survey.

2.5 How did the pandemic affect physical activity engagement?

Studies have shown that the pandemic profoundly affects physical activity engagement in our society. The finding showed that physical activities during the pandemic were significantly lower than before (Maugeri et al., 2020; Woods et al., 2020). Banning physical activities among children during quarantine also poses significant issues, especially since the government recently started to provide vaccination. Dunton, Do & Wang (2020) observed the changes caused by the pandemic in children. Due to the closure of educational institutes nationwide, children no longer had access to school-based physical activities such as physical education, recess, and walking to/from school, which had limited their ability to engage insufficient physical activity levels to maintain health and prevent disease. Parents of older children ages 9–13 versus younger children ages 5–8 perceived more significant decreases in physical activity and more unusual sedentary behaviour from the pre- to early COVID 19. Children were more likely to perform physical activity at home, indoors or on neighbourhood streets during the early- vs pre-COVID-19 periods.

2.6 Physical Activity at Home during the pandemic

As the COVID-19 pandemic continues, some countries have been more badly affected than others, further declining the average health rate level due to restrictions preventing society from getting out and exercising outdoors. While most have adapted to a more sedentary lifestyle, others have learned to engage in-home physical activity. The in-home activity occurred in the two most affected cities in Saudi Arabia, where physical activity engagement became essential for health improvement. So far, to do recommendations, instructions, and consultations through all forms of media to help engage residents to become physically active (Barwais, 2020).

Studies found that participants had spent less time performing regular physical activities during the COVID-19 lockdown than before the lockdown period (Barwais, 2020; Greier et al., 2021).

A study by Barwais (2020) revealed that both genders of respondents had excellent physical activity engagement but differed in the factors influencing the engagement. For example, females are more physically active with family than males, while other items showed that males prefer to be physically active in groups compared to females. Both genders had also indicated a decline in inactiveness compared to the pre-lockdown period, especially among women (Nienhuis & Lesser, 2020).

Other findings indicated that all participants disregarding being physically active alone or in groups experienced a statistically significant decline during the COVID-19 lockdown, becoming insufficiently physically active when compared to before the lockdown; this also supported the hypothesis that social isolation during a lockdown may lead to reduced levels of physical activity caused by lack of space at home or lack of exercise equipment and poor mental & physical health.

2.7 Home physical activity participation

During the COVID-19 pandemic, sufficient physical activity has had a positive effect on physical and mental health, thus resulting in a significant decrease in the amount of time spent on physical activity levels during the COVID-19 lockdown than before the lockdown period indicating that society is insufficiently physically active (Barwais, 2020; Kass et al., 2021). Home physical activity is a term used for alternating physical activity or exercises while indoors at the home residence of individuals to maintain an optimum level of health.

3.0 Methodology

This research is diagnostic in nature and uses a case study method for fulfilling research objectives. This study aimed to examine the reasons for the park goers' physical activity engagement and environmental preferences in Temerloh during the COVID-19 pandemic and Movement Control Order (MCO) period. The respondents were purposely selected from Temerloh's Recreational Lake Park users who either performed or have experienced their physical or recreational activities at least once between April 1st 2021, and July 31st 2021. The park was purposely selected due to hosting many sports and recreational activities (Department of Statistics Malaysia, 2020). Among of sports events conducted in this park were *Hari Sukan Negara*, Le Tour De Langkawi (Temerloh to Kuala Lumpur) and domestic fishing competitions.

Four hundred and four (N=404) respondents participated in this study. The questionnaires that were used in the study were based on the combination of the work by Chowdhury (2012), titled "Examining Reasons for Participation in Sport and Exercise Using the Physical Activity and Leisure Motivation Scale (PALMS)" and the Environmental Perceptions Questionnaire (EPQ) by Hooper (2003). The PALMS items emphasized the reasoning behind physical activity engagement; meanwhile, EPQ investigated the environmental preference of individuals engaging in physical activity. All items were scaled on the 5-Likert scale ranging from 1 (very dissatisfied) to 5 (very satisfied).

The questionnaire was a bilingual instrument. In order to minimize discrepancies between the original instrument and the translated instrument, a back translation was conducted and verified by language experts.

Results of reliability analysis for the instrument were checked. The composite reliability and Cronbach's Alpha had values greater than 0.8, indicating that the measurement scale used in this study had high internal consistency (Chua, 2006; Henseler, Ringle & Sinkovics, 2009; Nunally & Benstein, 1994; Sekaran & Bougie, 2010).

Data analyses were performed on the data based on the purposes of the study. Descriptive analyses were performed to identify the demographic profiles of respondents. In contrast, inferential analyses were applied to investigate the association of motivations in physical activity engagement and environmental preferences to the park goers in Temerloh during the COVID-19 pandemic and Movement Control Order (MCO) period.

4.0 Results and Discussion

Profiles of Respondents

Table 4.1: Demographic profiles of Park Goers

Profiles	Items	Freq (N)	%	Profiles	Items	Freq (N)	%
Gender	Male	242	59.9	Marital Status	Single	199	53.1
	Female	162	40.1		Married	175	46.7
					Divorced	1	3
Age (Years)	Under 18	22	5.4	Employment Status	Employed	128	31.7
	18 – 24	237	58.7		Retired	11	2.7
	25 - 40	88	21.8		Student	178	44.1
	41 - 56	38	9.4		Part-time	19	4.7
	Above 57	19	4.7		Self-employed	24	5.9
					Unemployed	44	10.9
Ethnic	Malay	379	93.8				
	Chinese	10	2.5				
	Indian	10	2.5				
	Others	5	1.2				

Based on table 4.1, most park-goers were males (N=242, 59.9%) compared to females (40.11). Statistics of gender in Temerloh indicates that the town has almost equal numbers of gender (Poket Stats Negeri Pahang, 2020). The majority of Temerloh's park goers were Malays (93.8%), representing the major ethnic in the town with most of them in the active stage of life with the majority within the age of 18 to 40 years old (80.5%) with Malay ethnic was the dominant users at the park. In addition, most of the users were either student or still working, and only a few respondents were retired individuals or unemployed.

Descriptive statistics of Motivational Factors (PALMS) and the Environmental Preferences of Park-goers

Table 4.2: Means scores, SD, and Level of Importance of Motivational Factors and Environmental Preferences

PALMS Factors	No. of Items	Mean	Std Dev.	α	Rank
Psychological Condition		4.32	.73		
1. Because it helps me relax. (PsyC1)	4	4.36	.79	.86	2
2. To better cope with stress. (PsyC2)		4.32	.89		
3. To get away from pressures. (PsyC3)		4.32	.86		
4. Because it acts as a stress release. (PsyC4)		4.29	.92		
Physical Condition		4.64	.57		
5. Because it helps maintain a healthy body. (PhyC1)	5	4.72	.62	.92	1
6. Be physically fit. (PhyC2)		4.65	.67		
7. To maintain physical health. (PhyC3)		4.65	.67		
8. Because it keeps me healthy. (PhyC4)		4.65	.65		
9. To improve cardiovascular fitness. (PhyC5)		4.55	.69		
Enjoyment		4.26	.77		
10. Because it's interesting. (E1)	4	4.26	.91	.85	3
11. Because it makes me happy. (E2)		4.31	.85		
12. Because it's fun. (E3)		4.39	.86		
13. Because I enjoy exercising. (E4)		4.08	1.05		
Mastery		4.23	.76		
14. To get better at an activity. (M1)	3	4.29	.81	.85	5

15. To do my personal best. (M2)		4.26	.84		
16. To obtain new skills/ activities. (M3)		4.13	.95		
Appearance		4.25	.84		
17. To improve body shape. (Ap1)	4	4.33	.93	.91	4
18. To improve appearance. (Ap2)		4.21	.94		
19. To lose weight, look better. (Ap3)		4.24	.97		
20. To maintain a trim, toned body. (Ap4)		4.21	.98		
Environmental Preferences Factors	No. of Items	Mean	Std Dev.	α	Rank
Environmental Preferences	3	2.84	1.08	.67	
1. Environmental preference (surrounding)		2.46	1.46		2
2. Environmental preference (location)		2.30	1.47		3
3. Environmental preference (social)		3.76	1.23		1

Based on Table 4.2 above showed that the highest ranking of PALMS factors was Physical Condition (M=4.64, SD=.57) with the highest mean (M=4.72, SD=.62) for "because it helps maintain a healthy body". Psychological Condition (M=5.26, SD=1.15) was in the second rank of PALMS factors. The highest mean for the psychological condition was "because it helps me relax" (M=4.36, SD=.79). The third rank in the PALMS factor was enjoyment (M=4.26, SD=.77). The highest mean for enjoyment was "because it's fun" (M=4.39, SD=.86). The fourth rank PALMS factor was appearance (M=4.25, SD=.84) with "to improve body shape" was the highest mean (M=4.33, SD=.93). Lastly, mastery was the least important of all the PALMS factors (M=4.23, SD=.76), with "to get better at an activity" becoming the highest mean (M= 4.29, SD= .81).

The physical condition was the main issue among park-goers in Temerloh since they were in the active stage of life, with the majority within 18 to 40 years old (80.5%). In addition, the current trend of active lifestyles is more to be physically fit as promoted by government agencies such as agencies under the Ministry of Youth and Sports and the Ministry of Health (MoH). The celebration of Hari Sukan Negara (National Sports Day) on October 9th, 2021 and frequent MoH programs such as KOSPEN@Activ, Program InfoSihat, and information on healthy lifestyles thru the journal MyHealth for Life, many more health-related programs (<https://www.moh.gov.my/moh>).

Table 4.2 also showed that for the Environmental Preferences factors (M= 2.84, SD= 1.08), the highest rank item was "environmental preference (social)" with (M=3.76, SD= 1.23) followed by "environmental preference (surrounding)" and "environmental preference (location)" (M=2.46, SD=1.46 & M=2.30, SD=1.47) respectively.

A similar past study found how the environment surrounding could play a huge factor in developing motivation and performance factors. This statement was identified by Hooper (2003). It was concluded that "when individual perceived their exercise environment positively, they generally will have more positive mood states than when they perceive the environment less favourably". In addition, similar research was conducted to investigate this perception with a running activity as its consistent variable and different environmental preference settings as its manipulated variable by using an outdoor running track versus an indoor treadmill machine.

Association between Motivational Factors (PALMS) of park goers and their environmental preferences in physical activity engagement.

Table 4.3: Correlation distribution between PALMS factors of park-goers and their environmental preferences in physical activity engagement

PALMS Factors		Environmental Preference (Surrounding)	Environmental Preference (Location)	Environmental Preference (Social)	Environmental Preferences (Overall)
Psychological Condition	Spearman's rho	-.135**	-.151**	.098	.470**
	Sig. (2-tailed)	.007	.002	.050	.000
Enjoyment	Spearman's rho	-.145**	-.201**	-.015	.514**
	Sig. (2-tailed)	.004	.000	.757	.000
Mastery	Spearman's rho	-.034	-.059	.021	.431**
	Sig. (2-tailed)	.495	.233	.674	.000
Physical Condition	Spearman's rho	-.233**	-.220**	.065	.405**
	Sig. (2-tailed)	.000	.000	.189	.000
Appearance	Spearman's rho	-.038	-.107*	.109*	.414**
	Sig. (2-tailed)	.451	.031	.029	.000
Overall PALMS	Spearman's rho	-.107*	.106**	.065	.561**
	Sig. (2-tailed)	.031	.003	.191	.000

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Spearman's rho coefficient correlation was applied to determine the relationships or associations between the PALMS and Environmental Preference factors. The results revealed significant positive and strong associations between all those variables ($\sigma = .561$, $N = 404$, $p \leq .000$) (Dancy and Reidy, 2004). In addition, Enjoyment factor has the highest value of correlation towards the Environmental Preferences factors ($\sigma = .514$, $p \leq .000$) followed by Psychological Condition, Mastery, Appearance and Physical Condition ($\sigma = .470$, $p \leq .000$; $\sigma = .431$, $p \leq .000$; $\sigma = .414$, $p \leq .000$; $\sigma = .405$, $p \leq .000$) respectively. This finding indicated that the environment could be a huge factor in developing motivation and performance factors. It can be concluded that when individuals perceive their exercise environment positively, they generally will have more positive mood states than when they perceive the environment less favourably (Hooper, 2003).

Association between Motivational Factors (PALMS) and Preferences of Location of Physical Activity Engagement

Table 4.4: PALMS VS Indoor-Outdoor

PALMS Factors		Comfort in Outdoor	Comfort in Indoor
Psychological Condition	Spearman's rho	.482**	.264**
	Sig. (2-tailed)	.000	.002
Enjoyment	Spearman's rho	.542**	.255**
	Sig. (2-tailed)	.000	.000
Mastery	Spearman's rho	.416**	.258**
	Sig. (2-tailed)	.000	.000
Physical Condition	Spearman's rho	.463**	.168**
	Sig. (2-tailed)	.000	.000
Appearance	Spearman's rho	.332**	.318**
	Sig. (2-tailed)	.000	.000
Overall PALMS	Spearman's rho	.539**	.333**
	Sig. (2-tailed)	.000	.000

** . Correlation is significant at the 0.01 level (2-tailed).

Spearman's rho coefficient correlation was applied to determine the relationships or associations between the PALMS and Environmental Preference factors. The results revealed significant positive and strong associations between overall PALMS factors towards Outdoor Engagement ($\sigma = .539$, $N = 404$, $p \leq .000$) compared to significant positive and moderate associations Indoor Engagement $\sigma = .333$, $N = 404$, $p \leq .000$) (Dancy and Reidy, 2004). In addition, all of the PALMS factors showed significant and strong associations with every PALMS factor towards Outdoor Engagement, as shown in Table 4.4 above, compared to significant positive and either weak or moderate associations for Indoor Engagement. Enjoyment in outdoor engagement was the strongest association of all ($\sigma = .542$, $p \leq .000$). These findings indicated that the park goers preferred to be performing their activities outdoors than indoors since some of the control movement SOP had been uplifted in lesser case-area such as the town of Temerloh in Pahang. This situation existed since Malaysians were prevented from engaging in physical activity in open areas for fear of catching the illness through the virus carriers.

5.0 Conclusion

It is believed that the findings of this study will significantly contribute to the sports and health body of knowledge while providing awareness on levels of motivation that can induce different performance outcomes in physical activity engagement. This research could be used by sports and health professionals alike to improve and increase the number of efforts and methods to achieve the best optimum health for the general public. This investigation provides some interesting findings that further knowledge in understanding physical activity engagement, especially during this pandemic COVID-19, in terms of types of motivation that can be fully utilized to gain more engagement. Findings have indicated that park goers in Temerloh prefer outdoor activities more than indoor activities. The lengthy lockdown and quarantine forced them to perform their physical activities indoors may look less interesting and not attractive anymore. Other factors that might contribute to these conditions are the lack of up-to-date equipment and the ambience of indoor surroundings (Rozita et al., 2014). Area of physical activity engagements also may be one of the restrictions.

The findings of this study indicate that the service providers such as local authorities (park amenity department) should focus on providing more facilities and equipment to attract more users from various intentions, interests and motivations. All the motivational factors investigated in this study should be attended to carefully. Upgrading and maintenance should be suitable for the users since most are in the active stage of life. The physical condition of park amenities is among the frequently complained about areas, whereby users in many towns and cities voiced complaints and dissatisfaction. Park owners should take the opportunity from this pandemic Covid-19 to perform necessary activities to make their premises better to accommodate the needs of these health-affected users.

6.0 Recommendation for Future Research

Potential future research studies could point towards the comparison between the current situation and post-COVID-19. Furthermore, will there be a chance of an increased outcome once the world is again free of COVID-19? Engaging & practising daily physical activities have been proven for years to boost one's immunization system and are considered one of the best ways to naturally combat low-threatening viruses, which could cause a level of susceptibility to be infected with the COVID-19 infection (Silveira et al., 2020). Besides that, a similar type of research would have different outcomes, either higher or lower, if done at a denser population than in Temerloh, Pahang. Finally, due to the declining rate, would motivations & levels of interest in physical activity engagement also affect a change in general health, specifically the birth and death rates or even the population of adults with comorbidity issues?

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