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The Effect of Push and Pull Factors Towards Motives Participation in Physical Activities among Universities Students

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ABSTRACT

This study aims to identify the factor that influence push and pull factor motivation between motives in physical activities among university students. This study is a quantitative study using the questionnaire method involving 394 students of Universiti Putra Malaysia as respondents (L=156, P=238) conducted around Universiti Putra Malaysia, Serdang, Selangor. This study was conducted using a questionnaire as a research instrument using a Likert scale format. Research from descriptive study showed that entertainment (M=3.03, SD=.666), seeking relaxation (M=2.99, SP=.711), socialization (M=2.99, SD=.679) and prestige (M=3.02, SP =.701), marketing and promotion (M=3.05, SD=.790), education and familiarity (M=2.97, SD= .808), environment (M=3.02, SD=.815), accessibility (M= 2.99, SD= .822), fitness (M=3.6, SD=.628), fitness (M=3.6, SD=.628), social (M=2.96, SD=.613), interest/enjoyment (M=3.02, SD=.532), and appearance (M=2.98, SD=.588). Next is independent sample t test to test all the motives for physical activity by gender found that, there was no significant difference of motives in physical activity among male and female university students. To see the relationship between push and pull motivation factors between motives in physical activity, a correlation study found that there are negligible relationships between push and pull factor and motives in physical activity for all the five items. Hence, multiple regression was used to find out the factor that effected the push and pull factor between motives in physical activity which was prestige factor (sig-t (.001)) which significantly contributed at .05 at significance level. Therefore, the push and pull motivation factors also proved to have a relationship with motives in physical activities. Furthermore, the prestige factor has also contributed to motives in physical activity.

Keywords: Push and Pull Motivation Factor, Motives, Physical

INTRODUCTION

The push and pull model were the earliest and most popular explanation for why people migrate. E. G. Ravenstein, a German-English cartographer, first described the patterns of human migration in the 1880s. According to him, the push from the nation of origin and the pull from the new country were the factors that drove human migration. Push in the "push-pull model" refers to negative aspects of the origin place (or nation)(Minghuan, 2000; Pan, 2019; Yang & Lu, 2008). Pull refers to the positive social, economic, and environmental aspects of the new area or country. Given freedom of movement and the fact that the push and pull economic model holds true, individuals migrate because they believe that doing so would improve the quality of their lives (Haas, 2021).

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However, using the scale survey, the previous researcher (Dann, 1977) introduced "Push and Pull Motivation theory". Dann found that anomie, ego enhancements were motivational push factors identified in the early phase. It was later enriched with unstructured in-depth interviews by Crompton, he re-identified the motivating push factors in different dimensions consisting of escapism; self-discovery and evaluation; Relaxation; Prestigious; regression; Kinship and social interaction (Crompton, 1979). Motivating pull factors include novelty and education. Since then, many improvements had been made to the content of the factors over the years, which had had to be slightly refined and improved to suit the nature of the study (Jamaludin, 2018).

Motives and motivation were mutually supportive; a motive alone stimulates action, while motivation acts as the driving force behind that action. Merely possessing a motive and a rationale is insufficient; an individual must possess inner resilience and require motivation to effectively accomplish their goals. Likewise, there was no point in being motivated if someone had no motive or reason to act (Mitchell, 1982). Motivation also includes factors that provide guidance and continuity to actions aimed at achieving goals. Nevertheless, these motives are often not directly observable. Consequently, we frequently have to deduce the reasons behind individuals' actions by analysing their observable behaviours (Nevid, 2013).

As we know, physical activity was associated with psychological benefits in young people by improving control of anxiety and depressive symptoms (Kueh et al., 2019). Motivation was a crucial factor for physical activity because higher motivation leads to higher participation in physical activity (Antony & Azeem, 2021). According to Antony, motivation was a psychological quality that stimulates people to act, to be physically active, and to maintain a physically active behaviour (Antony & Azeem, 2021). In 2021 onwards, it was demonstrated that college students at public universities in Malaysia become physically inactive when engaging in exercise or playing sports, and motivation had been demonstrated to be an essential component in sustaining college students' physical activity(Anuar et al., 2021).

The push-pull model was originally developed to explain the factors influencing the movement of people or migration (Lee S., 1966) and then, it had become the most widely used tool by educational researchers to explain the motivations and choices of their international students. Although the basic push-pull model of international student selection was available as an explanatory mechanism, it had limitations (Li & Bray, 2007). Both push and pull factors were external forces that influence student behaviour and decisions, but individual student preferences and personal characteristics go largely unaccounted for (Rouse & Rouse, 2019). Individual students may respond differently to different push and pull factors. Hence, this was the first research using the push-pull motivation factors to find out the influences of the push-pull motivation factors on participation motives in physical activities among university students.

Based on previous studies, SDT theory as well as the theory of push-pull motivation can provide a theoretical framework to explain motivational factors, pull factors of motivation and push factors of motivation for the involvement of university students in physical activity. (Granero-Jiménez et al., 2022) Granero apply the SDT model to explore the association between physical activity, motivation, and psychological well-being in young adults. While Abdul Aziz had conducted research using push-pull motivational theory to identify the push and pull factors affecting students' enrolment in the TVET programme at community college and the findings shows that all push and pull factor significantly influence the student enrolment in TVET institutions (Abdul-Aziz et al., 2020). Based on past research, SDT theory were very useful to identify the factors that influence participation in physical activity and push-pull motivation model was originally developed to explain the factors influencing the movement of people or migration (Lee S., 1966) but it had since become the most commonly used tool by educational researchers to explain the motivations and decisions of international students (Lee S., 1966; Sembilan et al., 2020).

While previous studies had separately explored motivational factors using the Self-Determination Theory (SDT) and push-pull factors using the Push-Pull Motivation Theory, there was a research gap in combining these theories to comprehensively examine the determinants of college students' engagement in physical activity. By integrating SDT and Push-Pull Motivation Theory, this study aims to identify and analyse the various motivational factors and push-pull factors that impact college students' participation in physical activity. The findings will provide valuable insights into the complex interplay of intrinsic and extrinsic motivations, as well as the push and pull factors that influence college students' decision-making processes regarding physical activity. Ultimately, this research aims to contribute to the development of effective strategies and interventions to promote and sustain physical activity among college students in Malaysia, thereby improving their overall health and well-being. The purpose of the conceptual framework in this study shows the direction of the study which contains 2 independent variables (push and pull factor motivation) and one dependent variable which is the motives physical activity (refer to Figure 1)

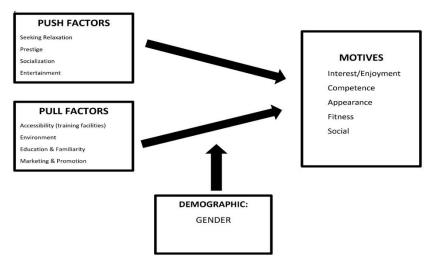


Figure 1: Conceptual Framework

METHODS

This was a cross-sectional study using a questionnaire as an instrument to see the contribution of the push-pull factors motivation to the motives of participation in physical activity among university students. Target population for this study is university students in Universiti Putra Malaysia (n=394) which aged between 18-40 years old. Approval from Ethical Committee for Research involving Human Subjects of University Putra Malaysia (JKEUPM-2023-265) was obtained to conduct the research. Two research instruments had been used to obtain information or data about the variables being studied. The two instruments were MPAM-r and push and pull motivation factors that adopt and adapt from past authors.

The data collected were analyzed using Statistical Package for the Social Science (SPSS) version 27. The researcher conducted descriptive data analysis, T-Test, correlation and regression analysis to identify the level of push and pull factor motivation participation and motives in physical activities among university students, to compare the differences of participation motives in physical activities among university students based on gender, to examine the relationship between push-pull factor motivation and participation motives in physical activities among university students, and identify the factors that influence push and pull factors between motives in physical activities among universities students.

RESULT AND DISCUSSION

Level of Push and Pull Factor Motivation Participation and Motives in Physical Activities among University Students

Based on table 1 it's clearly shown that the highest mean score for the push factors item was entertainment (M=3.03, SD = .666) indicating that mostly students choose entertainment as the factor that pushes them to do physical activity. Meanwhile, for seeking relaxation, the mean score was the same M=2.99 but they had different SD values SD=.711 and SD=.701 respectively. For socialization (M=3.02, SD = .679), shows that the second highest mean score indicates that the student chooses socialization as the factors that push them to be involved in physical activity. Overall, almost all the items in the push factors, participants choose as normal scores that relate to themselves.

TABLE 1

Push Factors Motivation Participation in Physical Activity

Item	Mean (M)	Std. Deviation
Seeking Relaxation	2.99	.711
Prestige	3.02	.701
Socialization	2.99	.679
Entertainment	3.03	.666

Based on table 2 it's clearly shown that the highest mean score for the pull factors item was marketing and promotion (M=3.05, SD = .790). For the least mean score was education and familiarity (M=2.97, SD= .808), environment (M=3.02, SD = .815), and accessibility (M=2.99, SD= .822) students choose as normal factors that relate to them. Overall, almost all the items in the pull factors, participants choose as normal scores that relate to themselves.

TABLE 2

Pull Factors Motivation Participation in Physical Activity

Item	Mean (M)	Std. Deviation
Accessibility	2.99	.822
Environment	3.02	.815
Education & Familiarity	2.97	.808
Marketing & Promotion	3.05	.790

Based on table 3 the fitness (M=3.6, SD = .628) had the highest mean score for the motives to do physical activity. The second highest mean score was competence (M=3.02, SD = .531). For the least mean score that was recorded was social (M=2.96, SD = .613). The mean score of motives for physical activity of others are, interest/enjoyment (M=3.02, SD = .532) and appearance (M=2.98, SD = .588). However, the overall mean score still in range of normal score that relate to motives for university students to do physical activity.

TABLE 3

Motives for Participating in Physical Activity

Item	Mean(M)	Std. Deviation
Interest/Enjoyment	3.01	.532
Competence	3.02	.531
Appearance	2.98	.588
Fitness	3.06	.628
Social	2.96	.613

Differences of Participation Motives in Physical Activities among University Students Based on Gender

As depicted from table 4, there was no significant difference in all the factors in motives to do physical activity between male students and female students.

TABLE 4

Motives for Physical Activity by Gender

Gender							
Motives Physical	Male		Fen	Female		Sig	
Activity	Mean	SD	Mean	SD		5	
Interest/Enjoyment	2.99	.538	3.03	.528	842	.400	
Competence	2.99	.530	3.04	.533	845	.399	
Appearance	2.97	.601	2.98	.580	162	.500	
Fitness	3.08	.639	3.05	.621	.575	.465	
Social	2.92	.576	2.99	.635	-1.19	.150	

Relationship between Push-Pull Factor Motivation and Participation Motives in Physical Activities among University Students

Table 5 shows the relationship between motives in physical activity and push factor items. The result of the correlation test showed that the results of the analysis found a very small significant relationship between motives in physical activity and push factor. The strongest relationship in this item was the relationship between social and prestige ($r=.141^{**}$, p=.005) with positive relationship.

TABLE 5 Relationship between Motives in Physical Activity and Push Factors

Motives in Physical Activity

		Interest/ Enjoyment	Competence	Appearance	Fitness	Social
Push Factors						
Seeking Relaxation	r	085	.041	051	.059	003
	Sig	.091	.417	.310	.245	.956
Prestige	r	.067	.024	.070	.050	.141**
	Sig	.183	.640	.164	.322	.005
Socialization	r	.002	.010	.030	.018	018
	Sig	.965	.837	.557	.718	.717
Entertainment	r	.020	006	019	045	.040
	Sig	.689	.912	.702	.373	.429

Table 6 show relationship between motives in physical activity item and pull factor item. The result of corelation test shown that the results of the analysis found a very small significant relationship between motives in physical activity and pull factor. The strongest relationship in this item was the relationship between competence and entertainment (r=.107, p=.0340) with positive relationship. Following the Guildford rule of Thumb, this conclude that there was positive and low relationship between competence and entertainment.

TABLE 6

Relationship between Motives in Physical Activity and Pull Factors

Motives in Physical Activity								
		Interest/ Enjoyment	Competence	Appearance	Fitness	Social		
Pull Factors								
Accessibility	r	057	.088	.005	017	.050		
	Sig	.257	.080	.922	.733	.323		
Environment	r	085	.041	040	.069	.019		
	Sig	.093	.412	.433	.175	.700		
Education &	r	026	.011	.042	032	042		
Familiarity	Sig	.600	.832	.400	.530	.402		
Marketing &	r	.050	.107	090	.014	010		
Promotion	Sig	.325	.034	.075	.777	.844		

Factors that Influence Push and Pull Factors between Motives in Physical Activities among Universities Students

Push factors were divided by 4 factors which were seeking relaxation, prestige, socialization, and entertainment. For students, prestige had the biggest influence which was 6.0%. While seeking relaxation had a percentage of 0.7%, entertainment had the percentage 0.5% and the factor with the least influence was the factor socialization whereas the value was 0.1%.

In conclusion, seeking relaxation (sig-t (.690)), socialization (sig-t (.948)) and entertainment (sig-t (.779)) did not contribute towards motives in physical activity. However, prestige factor (sig-t (.001)) actually significantly contributes towards motives in physical activity at .05 level significance.

TABLE 7 Factors Influence the Push Factor between Motives in Physical Activity among University Students

			ndardized ficients	Standardized Coefficients	t	Sig.
Model		В	Std. Error	Beta	-	6
1	(Constant)	2.867	.115		24.853	.000
	Seeking Relaxation	007	.018	020	399	.690
	Prestige	.060	.018	.164	3.262	.001
	Socialization	.001	.019	.003	.065	.948
	Entertainment	005	.019	014	281	.779

a. Dependent Variable: Motives in Physical Activity

Pull factors were divided by 4 factors which were accessibility, environment, education & familiarity, and marketing & promotion. For students, the accessibility factor had the biggest influence which was 1.0%. While the education & familiarity factor had a percentage of 0.8%, the marketing & promotion factor also had 0.8% and the factor with the least influence was the environment, whereas the value was 0.2%.

As conclusion, accessibility (sig-t(.530)), environment (sig-t(.894)) and education & familiarity (sig-t(.631)), and marketing & promotion factor (sig-t(.621)) actually not significantly contribute towards motives in physical activity at .05 level significance.

TABLE 8

Factors Influences the Pull Factor between Motives in Physical Activity among Universities Students

			Unstandardized Coefficients		t	Sig.
Model		В	Std. Error	Beta	-	
1	(Constant)	2.974	.098		30.225	.000
	Accessibility	.010	.016	.032	.629	.530
	Environment	.002	.016	.007	.133	.894
	Education & Familiarity	008	.016	024	480	.631
	Marketing & Promotion	.008	.016	.025	.495	.621

a. Dependent Variable: Motives in Physical Activity

DISCUSSION

Regarding push motivation factors, factors analysis identified five four push motivation factors (Seeking Relaxation, Prestige, Socialization and Entertainment). The results indicate that these push factors were contributed for participating in physical activities among students. For seeking relaxation, it can be said most students resulted normal as their push factor motivation. Among factors influencing students to participate in physical activity, seeking relaxation was the one of inner motivations, which were highly consistent with (Crompton, 1979; Mazzarol & Soutar, 2002)). Student might think that to reduce stress, to relax, to do nothing, and to refresh their body and mind just normal motivations that related to them when doing physical activity (Crompton, 1979; Goossens, 2000).

Push factors were including origin-related, intangible, and inherent cognitive elements. Therefore, pull factors were those that arise as an attractiveness of the results. With respect to pull motivations factors, factor analysis identified four pull motivation factors (Accessibility, Environment, Education & Familiarity and Marketing & Promotion). These findings illustrate that these pull factors were very important for students' participation in physical activity (Baloglu & Uysal, 1996).

Regarding the push motivation factors, the factors that identified were five factors (Interest/Enjoyment, Competence, Appearance, Fitness and Social). These findings were crucial to motives in physical activity

among university students. From the results of the study, it can be said that all students almost scored a mean score more or less than 3.00 which indicates that they were responding to normal motivation to do physical activity. So, qualitative research should be carried out in the future so that we can dig into an in-depth understanding of motives to do physical activity among university students.

It was clear that the motives of physical activities among male and female university students were the same and there was no difference. This may be caused by confounds and the month of the data collected was during fasting month, so that it could affect the motivations of the participant at the moment. However, through research from Valenzuela et al, they were support the outcome of research from Spain whereas, Nuviala had reported the result from MPAM-r, one with average fitness and appearance motives and next one with above-average enjoyment and social motives, an average competence motive for extrinsic motives (Nuviala et al., 2013; Valenzuela et al., 2021). From past research we can conclude that for significant value from nearest to P-value was social motives, followed by competence, interest/enjoyment, fitness, and appearance.

Even though almost all the variables push and pull factor motivations had negligible relationships toward motives in physical activity, it's still proven that the push and pull factor motivation had relationships with motives in physical activity among university students. So, to get a clearer understanding in relation to push and pull factor motivation with motives in physical activity, an experimental study should be conducted in future with the same variable.

Findings from multiple regression analysis between push factors and motives in physical activity show that prestige factors provide the biggest influences among push factors. Hence prestige factor significantly contributes towards motives in physical activity among university students. While other factors seeking relaxation, socialization, and entertainment actually did not contribute towards motives in physical activity It may be caused by the relationship between these variables was not significant on population levels (Tomasevic, 2018). Hence, seeking relaxation, socialization and entertainment does not contribute towards motives in physical activity students.

However, the findings from the multiple regression analysis between pull factor and motives in physical activity show that factors accessibility, environment, and education & familiarity, and marketing & promotion factor from pull factors do not significantly contribute towards motives in physical activity. It may be caused by the relationship between these variables was not significant on population levels (Tomasevic, 2018).

CONCLUSION

In order to find out the effect of push and pull factors towards motive participation in physical activities among university students, we need to know their intrinsic and extrinsic motivation as well as their push and pull motivation. Even though push and pull motivation factors are widely used to explain the factors migration, the push and pull motivation factors have also been proven to have a relationship with motives in physical activities. Furthermore, the prestige factor contributed to motives in physical activity.

The results may serve as a valuable platform for developing interventions that encourage university students to engage in regular physical activity. The findings recommended that educational institutions, administrators, and Kementerian Pengajian Tinggi implement a fresh perspective when dealing with university students by emphasizing fun physical activity programs, improving accessibility and facilities, and promoting the value of physical activity while taking gender into account. The goal of any intervention should be to increase the individual's motivation to include physical activity in their daily routine. Additionally, by assisting individuals with establishing better personal outcome expectations, it will encourage them to continue engaging in physical activity. Last but not least, improving social support was crucial for physical activity interventions. Cliques can create peer support groups to encourage one another to become physically active.

As this was the first study carried out, it was recommended that future studies conduct in-depth understanding research on the push and pull motivation between motives in physical activities. Future research may take into account using some tokens in addition to respondents as compensation for the limitations. Future research could also think about applying other push and pull factor analyses in order to learn additional new information.

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