

Unveiling Motivational Differences: Gender Influences on Physical Activity Engagement at UiTM Sarawak

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ABSTRACT

This study investigates the motivations behind adult participation in physical activity among male and female students at UiTM Sarawak. Employing the Physical Activity Leisure Motivation Scale-Malay (PALMS-M), the research explores both intrinsic and extrinsic motivational factors, including mastery, enjoyment, psychological condition, physical condition, appearance, others' expectations, affiliation, and competition/ego. A stratified sampling method was applied, yielding a total sample of 399 UiTM Sarawak students (n=399). The findings reveal a significant relationship between gender and factors such as mastery, enjoyment, psychological condition, physical condition, appearance, affiliation, and competition/ego, with the exception of others' expectations ($p < 0.05$). The results indicate that male students exhibit higher motivation for physical activity. It is recommended to foster a health-conscious campus environment that encourages students to lead active, balanced, and healthy lifestyles.

Keywords: Physical activity motivation, Gender differences, Exercise engagement, Student fitness behavior, UiTM Sarawak

INTRODUCTION

Engaging in physical activity is crucial for preventing various illnesses and maintaining overall health. Regular exercise strengthens bones and muscles, reduces the risk of diseases, helps maintain a healthy weight, enhances cognitive function, and facilitates daily tasks. According to Dale et al. (2019), physical activity among youth is associated with numerous positive outcomes, including a reduced risk of obesity and improvements in mental, physical, and academic well-being. However, several challenges or factors may discourage individuals from participating in physical activity. For example, contemporary issues such as the COVID-19 pandemic and air pollution pose significant health risks, emphasizing the need for a safe and clean environment to support physical exercise.

Gender differences in physical activity motivation have been well-documented, with males and females often exhibiting distinct driving factors behind their participation. Research by Molanorouzi et al. (2015) revealed that males are typically more motivated by mastery-oriented goals, focusing on personal achievement and excellence. Additionally, males tend to derive higher enjoyment from physical activity, which has been linked to engaging in challenging activities (Jiang et al., 2021). On the other hand, females are often motivated by factors related to appearance and psychological well-being, although males still report higher overall motivation in these areas (Fiedler et al., 2024; González et al., 2017). Such differences

in motivation are influenced by various societal and psychological factors, including the pressure for males to achieve physical fitness and the differing mental health benefits experienced by each gender (Quesada et al., 2017; Nogueira, 2021). Understanding these differences is crucial for developing effective strategies to promote physical activity across genders.

Uttar (2021) defines the term “motive” as that which propels an individual into action. Motives can be intrinsic forces or desires that inspire individuals to fulfil basic needs or achieve specific goals. These internal states influence and energize human behavior, providing a psychological basis for why individuals act in particular ways. Cherry (2023) further explains that a motive is a primary driving force behind an individual’s actions, desires, or behaviours, often shaped by needs, values, beliefs, or emotions.

Various motivational factors have been shown to influence the level of effort individuals exert during exercise and their intention to maintain regular physical activity. Additionally, males and females often have different motivations for engaging in physical activity. These motivations can range from a desire to maintain physical appearance and develop skills to staying healthy and achieving personal goals. Numerous studies have compared the motivations of males and females. For instance, a review by Jakobsen and Evjen (2018) found that men tend to score higher on extrinsic motivations for participating in sports, while women score higher on intrinsic motivations.

Regular exercise plays a key role in reducing the risks associated with obesity or being overweight. Obesity, characterized by an excessive accumulation of body fat, has serious implications for an individual’s health, behavior, social status, and physical and psychological well-being. Malaysian university students, in particular, face challenges related to high obesity rates. Malaysia is often cited as having one of the highest obesity rates in Asia. According to data from the World Health Organization (2019), Malaysia has the highest obesity prevalence among Asian countries, with 64% of men and 65% of women classified as obese or overweight (Kaur, 2019).

Previous studies have consistently highlighted the role of gender in shaping motivational factors for physical activity. Molanorouzi et al. (2015) found that mastery goals, which focus on personal excellence rather than external comparisons, are a significant motivator for males. This is supported by Zeigler-Hill and Shackelford (2019), who noted that males prioritize personal achievement in physical activities. In contrast, females often prioritize physical activity for health-related reasons, such as maintaining a healthy appearance or enhancing psychological well-being (Fiedler et al., 2024). Moreover, research has shown that males tend to enjoy physical activity more, particularly when it involves challenging tasks, as noted by Jiang et al. (2021). Despite this, González et al. (2017) found that physical activity offers psychological benefits for both genders, although males may derive more motivation from its physical and competitive aspects (Kueh et al., 2019). These gender-based differences highlight the need for tailored approaches to encourage participation in physical activities for both males and females.

METHOD AND MATERIALS

Research Design and Participants

This cross-sectional study was conducted among students at UiTM Sarawak from April to June 2024. Ethical approval for the study was obtained from the UiTM Research Ethics Committee. A total of 399 students participated in this research.

Survey Questionnaire

The survey questionnaire consisted of two sections: (Part A) demographic information and (Part B) the Physical Activity Leisure Motivation Scale-Malay (PALMS-M). The demographic section collected

information on participants' age, gender, ethnicity, level of education, course code, and athletic status. The second section utilized the PALMS-M, an adaptation of the Physical Activity Leisure Motivation Scale originally developed by Morris and Rogers in 2004. The PALMS-M consists of 40 items evenly distributed across eight components that assess the respondents' motivations for engaging in physical activity. The PALMS was initially translated into Malay using standard forward and backward translation techniques (Kueh, 2017). Responses were recorded on a 5-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree"), based on the distribution of PALMS items. The eight motivational factors were categorized as intrinsic motivation (mastery and enjoyment subscales) or extrinsic motivation (psychological condition, physical condition, appearance, others' expectations, affiliation, and competition/ego subscales). Specific items addressed mastery (items 5, 16, 19, 24, and 31), enjoyment (items 3, 13, 25, 34, and 37), psychological condition (items 2, 9, 14, 22, and 35), physical condition (items 10, 12, 15, 28, and 33), appearance (items 11, 23, 32, 36, and 40), others' expectations (items 1, 7, 18, 21, and 26), affiliation (items 4, 8, 20, 30, and 38), and competition/ego (items 6, 17, 27, 29, and 39). The internal consistency of the items was assessed using Cronbach's alpha, with values ranging from 0.78 to 0.82, indicating acceptable reliability (Molanorouzi et al., 2014).

Data Collection Procedures

The questionnaire was distributed to UiTM Sarawak students from April to June 2024 through stratified random sampling, ensuring that every student had an equal chance of being included in the sample. The survey was administered via Google Forms.

Data Analysis

Descriptive statistics, including means, standard deviations (SD), frequencies, and percentages, were used to summarize demographic data such as age, gender, ethnicity, level of education, course code, and athletic status. Inferential statistics were employed to test hypotheses, with an independent sample t-test used to compare gender differences (male and female) in adult participation in physical activity across various motivational factors (mastery, enjoyment, psychological condition, physical condition, appearance, others' expectations, affiliation, and competition/ego) among UiTM Sarawak students.

Statistical Analysis

All data analyses were conducted using the Statistical Package for Social Science (SPSS) version 27.0. For descriptive statistics, means and standard deviations were calculated for the eight motivational factors. For inferential statistics, an independent sample t-test was used to determine gender-based differences in motivations for physical activity among UiTM Sarawak students. Statistical significance was set at $p < 0.05$.

RESULTS

Completion rate

A total of 437 samples were initially collected for the study. However, due to errors in some of the data, the researcher excluded the compromised entries. Consequently, the final sample consisted of 399 participants ($n = 399$), including 116 male and 283 female students.

Participants

Table 1 presents the gender distribution of the participants. The majority of respondents were female, with 283 participants (70.9%), while male participants accounted for 116 (29.1%). Table 2 outlines the age distribution of the participants. The largest age group was 21 to 23 years old, comprising 282 participants

(70.7%), followed by the 18 to 20-year-old group with 81 participants (20.3%). The smallest age group, 24 to 26 years old, included 36 participants (9.0%). Table 3 details the participants' ethnicity, showing that 74 participants (18.5%) were Malay, 213 (53.4%) were Bumiputera Sarawak, 108 (27.1%) were Bumiputera Sabah, and the remaining 1.0% were from other ethnicities.

Table 4 displays the participants' educational levels. The majority held a bachelor's degree, with 300 participants (75.2%), followed by those with a diploma, numbering 97 (24.3%). A small minority (0.5%) reported having a different level of education. Table 5 indicates the distribution of participants by course. The Bachelor of Sports Science (Hons.) (SR243) program had the highest representation with 201 participants (50.4%), while other courses accounted for 158 participants (39.6%), and the Diploma in Sports Studies program had the lowest representation with 40 participants (10.0%). Finally, Table 6 illustrates the participants' athletic status, with 148 participants (37.1%) identifying as athletes and 251 participants (62.9%) identifying as non-athletes.

Table 1. Demographic data of participant's gender (n = 399)

Gender	n	(%)
Male	116	29.1
Female	283	70.9

Table 2. Demographic data of participant's age groups (n = 399)

Age	n	(%)
18 – 20 years old	81	20.3
21 – 23 years old	282	70.7
24 – 26 years old	36	9.0

Table 3. Demographic data of participant's ethnicity (n = 399)

Ethnicity	n	(%)
Malay	74	18.5
Bumiputera Sarawak	213	53.4
Bumiputera Sabah	108	27.1
Others	4	1.0

Table 4. Demographic data of participant's educational level (n = 399)

Educational Level	n	(%)
Diploma	97	24.3
Bachelor Degree	300	75.2
Others	2	0.5

Table 5. Demographic data of participant's course code (n = 399)

Course Code	n	%
SR113	40	10.0
SR243	201	50.4
Others	158	39.6

Table 6. Demographic data of participant’s athletic status (n = 399)

Athletic Status	n	(%)
Athlete	148	37.1
Non-athlete	251	62.9

Descriptive statistics

Table 7 presents the mean (M) and standard deviation (SD) for the Physical Activity Leisure Motivation Scale-Malay (PALMS-M) across various motivational factors. Among male participants, the highest mean was observed for physical condition, with a score of M = 22.93 (SD = 2.93). Female participants also showed the highest mean in physical condition, with a score of M = 21.41 (SD = 3.34). The second-highest factor was enjoyment, where males scored a mean of M = 22.33 (SD = 3.46), and females scored M = 20.26 (SD = 3.98). Mastery followed, with male participants having a mean score of M = 22.04 (SD = 3.47) and female participants scoring M = 19.92 (SD = 3.82).

Psychological condition ranked next, with males scoring a mean of M = 21.92 (SD = 3.42) and females M = 20.46 (SD = 3.65). Regarding appearance, males had a mean score of M = 21.46 (SD = 3.70), while females scored M = 19.17 (SD = 4.12). Affiliation showed a mean score of M = 20.06 (SD = 4.39) for males and M = 18.29 (SD = 3.99) for females. In the competition/ego category, males scored a mean of M = 17.99 (SD = 4.73) and females M = 15.03 (SD = 4.49). Finally, in the others’ expectations category, males had a mean score of M = 14.73 (SD = 4.14), while females scored M = 13.99 (SD = 3.81).

Table 7. Descriptive Statistics of Physical Activity Leisure Motivation Scale-Malay (PALMS-M)

Variables	Genders	M	SD
Mastery	Male	22.04	3.47
	Female	19.91	3.82
Enjoyment	Male	22.33	3.46
	Female	20.26	3.98
Psychological Condition	Male	21.92	3.42
	Female	20.46	3.65
Physical Condition	Male	22.93	2.93
	Female	21.41	3.34
Appearance	Male	21.46	3.70
	Female	19.17	4.12
Others’ Expectations	Male	14.73	4.14
	Female	13.99	3.81
Affiliation	Male	20.06	4.39
	Female	18.29	3.99
Competition/Ego	Male	17.99	4.73
	Female	15.03	4.49

Inferential Statistics

Table 8 presents the results of the comparison of motivational factors for adult participation in physical activity between genders among UiTM Sarawak students. An independent samples t-test was employed to

assess differences between male and female participants across various dimensions of physical activity motivation, including mastery, enjoyment, psychological condition, physical condition, appearance, others' expectations, affiliation, and competition/ego.

The t-test results indicated significant gender differences in seven of the eight subscales of physical activity motivation. Specifically, for the subscale "Others' Expectations," the p-value was 0.10, which exceeds the significance threshold of 0.05, leading to the retention of the null hypothesis. In contrast, the subscales of mastery, physical condition, psychological condition, affiliation, appearance, enjoyment, and competition/ego all yielded p-values less than 0.05, suggesting significant differences between genders in these areas.

Table 8. Results of the comparison of motivational factors for adult participation in physical activity between genders among UiTM Sarawak students.

Variables	Gender	n	M	SD	t	Sig. (2-tailed)
Mastery	Male	116	22.04	3.47	5.39	0.001
	Female	283	19.91	3.82		
Enjoyment	Male	116	22.33	3.46	5.18	0.001
	Female	283	20.26	3.98		
Psychological Condition	Male	116	21.92	3.42	3.81	0.001
	Female	283	20.46	3.65		
Physical Condition	Male	116	22.93	2.93	4.51	0.001
	Female	283	21.41	3.34		
Appearance	Male	116	21.46	3.70	5.43	0.001
	Female	283	19.17	4.12		
Others' Expectations	Male	116	14.73	4.14	1.66	0.10
	Female	283	13.99	3.81		
Affiliation	Male	116	20.06	4.39	3.75	0.001
	Female	283	18.29	3.99		
Competition/Ego	Male	116	17.99	4.73	5.76	0.001
	Female	283	15.03	4.49		

DISCUSSION

Differences Between Genders in Motivation for Mastery

The results reveal a significant gender difference in the motive of mastery for adult participation in physical activity among UiTM Sarawak students. Males exhibited a stronger drive towards achieving mastery compared to females, with mean scores of 22.04 (SD = 3.47) for males and 19.92 (SD = 3.82) for females, reflecting a significant difference of 5.39. Both genders displayed high motivation levels, but males scored notably higher. This finding aligns with Molanorouzi et al. (2015), who observed that mastery was a more prominent motivator for males. Mastery goals focus on achieving personal excellence without necessarily comparing one's performance to others, as noted by Zeigler-Hill and Shackelford (2019).

Differences Between Genders in Motivation for Enjoyment

Significant gender differences were also found in the enjoyment motive for physical activity. Males demonstrated a higher level of enjoyment compared to females, with mean scores of 22.33 (SD = 3.46) for

males and 20.26 ($SD = 3.98$) for females, resulting in a significant difference of 5.18. This observation is consistent with Jiang et al. (2021), who identified a strong positive correlation between male students' enjoyment and challenging physical activities. Conversely, women may engage in physical activity for reasons beyond mere enjoyment, such as maintaining a healthy and attractive appearance.

Differences Between Genders in Motivation for Psychological Condition

The study identified a significant gender difference in psychological condition motivation. Females displayed a lower motive for psychological condition compared to males, with mean scores of 20.46 ($SD = 3.65$) for females and 21.92 ($SD = 3.42$) for males, resulting in a significant difference of 3.81. Research by Nogueira (2021) indicates that male students generally report better mental health compared to their female counterparts, suggesting that exercise and physical activity contribute positively to psychological well-being (González et al., 2017).

Differences Between Genders in Motivation for Physical Condition

A significant gender difference was found in the physical condition motive for physical activity. Males were more motivated to maintain physical fitness, with mean scores of 22.93 ($SD = 2.93$) for males and 20.46 ($SD = 3.65$) for females, showing a significant difference of 4.51. This finding suggests that males may be more extrinsically motivated by physical appearance, possibly due to societal pressures to achieve a lean physique. Quesada et al. (2017) support this notion, indicating that young males are often driven more by appearance-related motives than by health or competence goals.

Differences Between Genders in Motivation for Appearance

The data reveal a significant gender difference in the appearance motive for physical activity. Males valued appearance more than females, with mean scores of 21.46 ($SD = 3.70$) for males and 19.17 ($SD = 4.12$) for females, resulting in a significant difference of 5.43. Research suggests that women may be more critical of their physical appearance, whereas males place a higher value on maintaining their attractiveness, particularly in social contexts (Fiedler et al., 2024).

Differences Between Genders in Motivation for Others' Expectations

The analysis found no significant difference in the motivation related to others' expectations between genders. Both males and females reported modest scores, with means of 14.73 ($SD = 4.14$) for males and 13.99 ($SD = 3.81$) for females. Previous studies (Lankveld et al., 2021; Zarei et al., 2016; Zach et al., 2013) have highlighted issues with the others' expectations subscale, noting that its items often do not align well with the intended motivational factors. For instance, some items initially related to others' expectations, such as managing a medical condition, were found to load more significantly on other components.

Differences Between Genders in Motivation for Affiliation

A significant difference was observed in the affiliation motive, with males showing a stronger drive for affiliation compared to females. Males had a mean score of 20.06 ($SD = 4.39$), while females had a mean score of 18.29 ($SD = 3.99$). This disparity may reflect greater male involvement in leadership roles and social interactions, as indicated by King, McInerney, and Watkins (2012), who found higher social affiliation scores among males.

Differences Between Genders in Motivation for Competition/Ego

Finally, a significant difference in the competition/ego motive was found between genders. Males scored higher with a mean of 17.99 ($SD = 4.73$), compared to females who scored a mean of 15.03 ($SD = 4.49$),

resulting in a significant difference of 5.76. This supports the notion that males are generally more competitive, valuing achievements in physical activities as a means of gaining social approval. Kueh et al. (2019) also found that competition and ego were stronger motivators for males, indicating that females are less driven by competitive aspects of physical activity.

CONCLUSION

To sum up, the investigation conducted among UiTM Sarawak students has revealed significant gender-based differences in the motivations for engaging in physical activity. The findings indicate that males generally exhibit stronger motivations across various factors, including mastery, enjoyment, psychological well-being, physical condition, appearance, affiliation, and competition/ego, compared to their female counterparts. This suggests that male students are more driven by these aspects when participating in physical activities.

The study highlights that males tend to place greater emphasis on achieving mastery, deriving enjoyment from the activity, enhancing both physical and psychological wellness, improving appearance, building social connections, and succeeding in competitive scenarios. Conversely, there were no statistically significant gender differences concerning the motivation related to others' expectations, indicating that both genders experience similar levels of influence from external pressures when deciding to engage in physical activities.

Overall, this study offers valuable insights into how gender differences in motivational factors affect participation in physical activities. These findings are essential for developing targeted interventions and programs aimed at addressing the distinct needs and motivations of both male and female students.

ETHICAL APPROVAL

Ethical approval for this study was obtained from the Ethics Committee of Universiti Teknologi MARA (UiTM).

CONFLICT OF INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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