

## **Motives for Male and Female University Students Engaging in Physical Exercise**

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### **Abstract**

This paper focuses on comparing the motives for male and female Mexican university students engaging in physical exercise. The sample consisted of 455 participants; 237 women and 218 men with a mean age of 20.07 years (SD = 2.04) and 21.50 years (SD = 2.38) respectively. The approach adopted for this research was quantitative with a survey like descriptive design. Results from the multivariate analysis of variance, followed up by univariate analysis of variance, show that men exhibit a better motivational profile to engage in physical exercise. The encountered differences among female and male university students with respect to their motives in performing physical exercise suggest that when designing any type of intervention with the goal of improving motivational profiles, it is necessary to consider the variable gender. Future research should replicate these results in larger samples.

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**Keywords:** Motivation, Gender, Physical activity, University students

### **Introduction**

Nowadays, young university students' entertainment activities are varying and are constantly changing with their lifestyle. More so, there are also options to engage in physical activities or sports that Chihuahua, Mexico, offers. Lifestyles refer to a set of behaviors related to exercise, physical activity, leisure time, and self care (Ríos, Torres & de la Torre, 2017). These

can have a positive impact on school adjustment by reducing the frequency of mental disorders and helping the student to function adequately. Lifestyles can be either healthy or harmful. However, Barragán et al. (2015) stated that recreation, sport and culture as part of a healthy lifestyle and an integral formation, will be beneficial to school adjustment in university students.

Given that the academic activities assigned to students frequently determine the performance of physical exercise, what happens with those students who do not routinely engage in physical activity or who never engage in physical activity? Does the physical activity sport institutions, who are in charge of providing the service in the city or within the university itself, provide additional services, advice, personalized attention, and institutional and academic support measures to help students achieve their goals, both academic and regarding physical activities and sports? Thus, this phenomenon has been found in other institutions around the country (Álvarez, Hernández & López, 2014).

Guirola, Torregrosa, Ramis and Jaenes (2018) analyzed the facilitators and barriers that influence the layout of the academic and sport aspects in high performance athletes. The authors found that facilitators and barriers might be sport related, psychological, psychosocial, academic, and financial. Facilitators are: intrinsic motivation, everyday pressure reduction, academic or sport scholarships, and social support groups. Barriers were identified as: long concentrations, overlap of training and class schedules, stress, fatigue, reduced leisure time, the distance between the educational institution and training facilities, and a lack of economic compensation for excelling in sports. The authors conclude that it is fundamental that the sport psychologist provides the athletes directly or indirectly (i.e., through the trainer) with knowledge of the social, health, financial benefits, their personal development, financial-laboral situation, and to anticipate retirement from sports. This is because they compatibilized the academic and sport careers. In addition, athletes should also be provided with basic time management skills and strategies to be self-sufficient in their dual careers.

For these reasons, it is important that the University should identify the motives that lead students to engage in physical activity; either practicing a sport as recreation or as physical activity in general. As mentioned in several studies, physical activity is fundamental and essential for the individual's formation and good health. It generates a decrease of risk factors for heart disease, blood pressure, cholesterol, and metabolic syndrome. In addition, physical activities improve muscle tone, maintain thought and learning abilities, and help to improve the quality of sleep. From an emotional aspect, it reduces the risk of depression and improves physical self-concept and self perception, among other benefits (García & Fonseca, 2012; Martínez & González, 2017; U.S. Department of Health and Human Services, 2018).

Motivation is considered as a perspective of freedom of choice of behaviors that direct and emphasize ideas that a person can think that will happen, and it is important because it determines what actually gets done (Fernández, Almagro & Sáenz-López, 2016). Motivation regulates affective, cognitive, and behavioral consequences and presents itself in two types: a) intrinsic motivation, doing something by oneself; and b) extrinsic motivation, doing something as a means to an end and not for one's own benefit (Del Pozo, 2018). Regarding motivation theories, there is the self-determination theory which is empirically derived from human motivation and personality in social contexts that differentiates motivation in terms of being autonomous and controlled. This is done based on experiments that examined the effect of extrinsic rewards on intrinsic motivation (Deci & Ryan, 2012).

According to the self-determination theory, extrinsic motivation includes integrated regulation motivation which explains how a person engages in physical activity on a daily basis as part of his or her lifestyle thereby maintaining a healthy and balanced diet. On this particular motivation, the person is aware of the benefits of a healthy lifestyle in its different facets, such as eating habits and health care. This is with physical activity being integrated into them (Belando, 2013). For this reason, a relationship has been established between motivation and physical activity such that motivation predicts persistence of the behavior of engaging in physical activity (Baena, Ruiz-Juan & Granero, 2015).

Research such as that conducted by Moreno, Gómez and Cervelló (2010) and by Yli-Piipari, Keng, Wang, Jaakkola and Liukkonen (2012) stated that people with a more self-determined motivation towards physical activity exhibit more vitality, positive affect, self-esteem, enjoyment, satisfaction, interest, mental concentration, effort, persistence, and adherence to practice, as well as less unadjusted consequences. Gökçe and Giyasettin (2013) analyzed the relationship between motivational environment provided in class and student attitudes towards physical exercise through a physical education program. The researchers observed that the task environment and the performance-centered environment both produced positive results reflected in higher cognitive and affective implications on students.

Consequently, students have the feeling that their three basic psychological needs have been satisfied by the influence of the closest social-educational environment (i.e., support towards engagement in physical activity), In addition, their intrinsic motivation was improved (Schneider & Kwan, 2013). Based on the self-determination theory, a series of instruments have been developed. Among them is the Behavioral Regulation in Exercise Questionnaire (BREQ-2). The instrument is used to measure behavioural regulation associated with intrinsic motivation and the 3 types of extrinsic regulation (i.e., external regulation, introjected and identified regulation)

taken from Mullan, Markland and Ingledew (1997). This was cited by Leal, Blanco, Benítez, Aguirre and Candia (2018) who conducted a Confirmatory Factor Analysis in order to validate the psychometric properties proposed by Moreno, Cervelló and Martínez (2007) of the Spanish Version of the BREQ-2 using a sample of Mexican university students who regularly engage in physical activity. Thus, the authors also measured the invariance of the factor structure for both men and women.

Having valid instruments facilitates the task of analyzing the motives male and female university students have to engage in physical exercise. With this information, the University can implement strategies to develop students' motivation, from a pedagogical perspective, by means of both class formation and sports facilities. Through this way, motivation can become a determining agent in the degree of university students' enrollment in current and future physical activity (Belando, 2013). In order to achieve this, the university professor should insist on the need to share epistemological conceptions in different terms on how to learn and how to teach, and also stimulate the student-professor interactions. Also, the professor should be strategic in the analysis of the students' role and his or her academic load as well as that of the lightness with which motives are managed. To achieve this, the professor will need to design a teacher's guide that is congruent with the emerging competencies (Escanero, 2019).

The goal of this study is to determine the differences and similarities in the motives that male and female Mexican university students have to engage in physical exercise. This can be achieved by taking into account its importance to explain the lack of both motivation and adherence to an active behavior.

## **Method**

### **Participants**

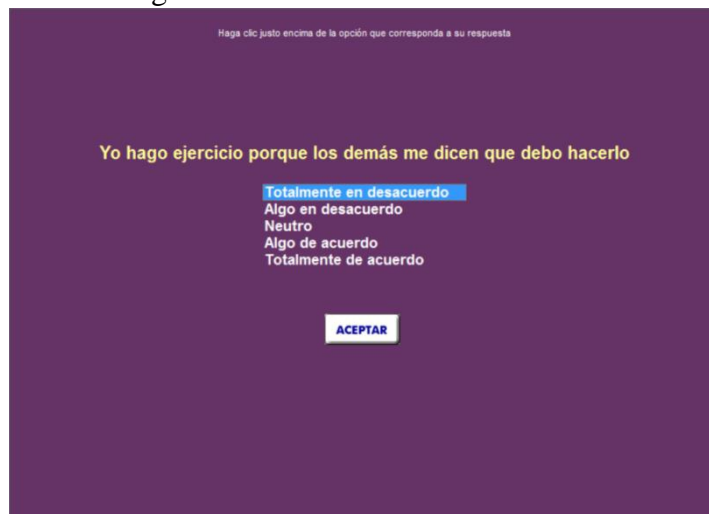
The sample consisted of 455 university students who regularly engage in physical activity. 237 women and 218 men were obtained through convenience sampling by trying to achieve representativity from the different undergraduate programs from the Faculty of Sciences of Physical Culture from the Autonomous University of Chihuahua. The age of the participants ranged from 18 to 27 years ( $M = 20.75 \pm 2.32$  years).

### **Instrument**

The Spanish version of the Behavioral Regulation in Exercise Questionnaire-2 (BREQ-2), validated to the Spanish context by Moreno et al. (2007), includes 18 items in which participants respond to on a 5-point likert-type scale which ranges from 0 (completely disagree) to 4 (completely agree) grouped into 5 factors: demotivation (4 items: e.g., "I don't find sense in

engaging in physical exercise), external regulation (4 items: e.g., “I engage in exercise to please other people”), introjected regulation (3 items: e.g., “I engage in exercise because I feel guilty when I don’t”), identified regulation (3 items: e.g., “I engage in exercise because I value the benefits of physical exercise”) and intrinsic regulation (4 items: e.g., “I engage in exercise because I believe that exercise is fun”). Furthermore, the study by Moreno et al. have internal consistency indices above .80.

For our study 2, adjustments to the version by Moreno et al. (2007) were made: (a) some of the terms used in the items of the original version were changed in order to employ a language that is more adequate to the Mexican culture; (b) the instrument was applied by means of a personal computer (Figure 1) allowing for the storage of the data with no prior coding, more precision, and avoiding errors.



**Figure 1.** Example of the item of the computer version of the BREQ-2.

## Design

Regarding the design of the study, a quantitative approach was used with a descriptive, cross-sectional survey-like design (Hernández, Fernández, & Baptista, 2014). The independent variable was gender and the dependent variables are the mean scores on the five factors of the BREQ-2.

## Procedure

Students from both undergraduate programs offered at the Faculty of Physical Culture Sciences (FCCF) at the Autonomous University of Chihuahua were invited to participate. All participants signed the corresponding informed consent form.

They completed the BREQ-2 questionnaire using a computer in a single 35-minute session conducted in the Faculty computer centers. The

instructions on how to respond could be found on the initial screen. The research team would thank the participant once they finished the test. After the instrument was completed, the results were compiled through the scale editor version 2.0 (Blanco et al., 2013).

### Data analysis

Descriptive analysis was used for the dependent variables. After ensuring that the data met the assumptions for parametric analysis, a multivariate analysis of variance was performed and followed up by the corresponding univariate analysis of variance in order to examine the differences between female and male university students with regards to their motives to engage in physical exercise. In addition, the size of the effect was estimated using eta squared ( $\eta^2$ ). All analysis were run using SPSS version 21.0 for Windows. The level of significance was set at  $p=.05$ .

### Results

Table 1 shows the values of the means and standard deviations of the scores on the 5 factors of the BREQ-2 questionnaire, as well as the results of the analysis of variance. The multivariate analysis of variance showed overall statistically significant differences by gender on the mean factor scores of the BREQ-2 questionnaire (Wilks'  $\lambda = .950$ ;  $p < .001$ ;  $\eta^2 = .050$ ). The univariate analysis of variance showed that men, in comparison to women, report higher motivation scores on the intrinsic regulation factor ( $F = 20.447$ ,  $p < .001$ ) and identified regulation ( $F = 7.179$ ,  $p < .01$ ) and lower scores on external regulation. No differences were encountered on introjected regulation and demotivation.

**Table 1.** Results from MANOVA and ANOVAs for the mean scores on the factors of the BREQ-2 questionnaire by gender.

	Women ( $n = 237$ )	Men ( $n = 218$ )	$F$	$P$	$\eta^2$
Intrinsic Regulation	3.24 (0.69)	3.53 (0.65)	20.447	<.001	.050
Identified Regulation	3.28 (0.72)	3.46 (0.69)	7.179	<.01	.016
Introjected Regulation	1.29 (1.04)	1.33 (1.09)	0.122	>.05	.0001
External Regulation	0.60 (0.78)	0.45 (0.64)	4.879	<.05	.011
Demotivation	.63 (0.62)	0.62 (0.64)	0.014	>.05	.0001

*Note.* The descriptive values are presented as mean (standard deviation).

## Conclusion

From the results of the analysis shown, the following conclusions can be drawn:

1. The results reveal that, in general, men compared to women show a more positive profile of motivation to engage in physical exercise. This is specifically on intrinsic and identified regulation.
2. The encountered differences between female and male university students with respect to their motives to practice physical exercise suggest that when designing any type of intervention to potentiate improvement on motivation, the variable gender should be considered. However, it is important to develop further research on the matter because the scope of the topic transcends beyond the present study.
3. The importance of increasing the amount of research on the matter in Mexico is underscored.

Lastly, at least two limitations are present in this study. First, all participants were students. As a result, generalizability of the results is limited. Enlarging the sample (to include teenagers, for example) is an area of opportunity for future research. The second limitation comes from the measurement instrument itself, which is based on self-report and thus may be biased due to social desirability.

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