

Does Physical Education Effects Students' Learning, Motivation and School Effectiveness in  
Secondary Schools in Mardan District?

Turkish Online Journal of Qualitative Inquiry (TOJQI)

Volume 12, Issue 10, December 2021: 6413-6427

## **Does Physical Education Effects Students' Learning, Motivation and School Effectiveness in Secondary Schools in Mardan District?**

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### **ABSTRACT**

This study aimed to investigate the effects of motivation and motivational environment on the study's outcome. Physical education has been given a high level of significance and utility. A total of 1000 students of SSC level (500 boys & 500 girls) were included in the study from the secondary school schools of Mardan District. The age range was between 14 and 18 with the median age of 16.51, in which for males the median age was noted as 16.37 and while for girls it was 16.25. The researchers utilized a questionnaire that consisted of the Importance of Physical Education (IPE) Scale, Sports Motivation Scale (SMS), Learning and Performance Orientations in Physical Education Classes Questionnaire (LAPOPECQ), and School Effectiveness Scale. To analyze the data, Multiple Regression was used with the help of SPSS-26. The findings of this study demonstrate the significance of intrinsic drive for both boys and girls as a motivator towards the study's outcome. Higher importance and utility are attributed to physical education, whereas a wider variety of factors impact physical education. Girls are more susceptible to this impact. It was suggested that sports and might give importance through physical education in these secondary schools for more excellent studies outcome.

## **Introduction**

There is evidence to suggest that students who have a positive attitude toward physical activities in Physical Education (P.E.) classes (Cardinal & Cardinal, 2001), or who indicate that they are more motivated and enjoy themselves more in these classes (Cox & Smith, 2008), are more likely to be physically active outside of the educational context. Students' healthy behaviour is promoted and acquired via physical education (Moreno & Llamas, 2007; Nuviala, Gómez-López, Pérez, & Nuviala, 2011) and physical education plays an essential part in this process. The current investigation is based on the accomplishment goal theory of Nicholls (1984) and the Self-determination theory of Deci and Ryan (1985), as studied by Granero-Gallegos et al. (2014). The accomplishment goal theory holds that in an atmosphere of achievement, such as physical education courses, students are driven by the prospect of achieving success (Thorburn and MacAllister, 2013). Success is also seen differently depending on the criteria used to determine success in a particular situation. Several variables, including personal characteristics (dispositional orientation) and social and environmental ones, influence this criterion (motivational climate) (e.g., Kavussanu, 2006). Keegan, Spray, Harwood & Lavalley (2011) have discussed the various social agents creating a motivational environment that determines the factors that determine success and failure. There are differences in this motivational environment based on the defined success criteria, whether it is task-oriented or ego-oriented, and how it is implemented (Granero-Gallegos et al., 2014). It is possible to create a task-related environment when the instructor promotes autonomy, self-direction, involvement, individual mastery of the task, problem-solving, and the opportunity to be rewarded for all students (Atencio, 2003). Instead, in an ego-involving environment, the instructor influences the class dynamics encourages interpersonal rivalry, conducts public evaluations, and often rewards more talented students (Bortoli, Bertollo, Di Fronso & Robazza, 2017). Those who perceive a task-oriented environment see physical exercise as a goal in and of itself, like challenging assignments, and are more likely to have a good time in the classroom (Papaioannou, Marsh & Theodorakis, 2004). On the other, when students view the course to gain social acceptance or prestige within the class group, the system is perceived as having little value (Granero-Gallegos et al., 2014). The physical education teacher is a critical component in establishing a classroom atmosphere that supports and encourages active practice both inside and outside of physical education courses (Pangrazi & Beighle, 2019).

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Furthermore, self-determination theory describes how people's motivation affects their actions (e.g., Adams, Little & Ryan, 2017; Ali et al., 2016). This idea is built on the concept of a continuum, with various degrees of self-determination being established. Student conduct may be intrinsically driven, extrinsically motivated, and with the degree of self-determination decreasing from the greatest to the lowest possible level. Intrinsic motivation occurs when students participate in class because they enjoy learning and experiencing the various practices, and it is the most self-determined form of stimulation (Baena-Extreme, Gómez-López, Granero-Gallegos, & del Mar Ortiz-Camacho, 2015). Intrinsic motivation occurs when students participate in class because they enjoy learning and experiencing the various practices.

On the other hand, extrinsic motivation is dependent on the degree of internalization that occurs. It can be derived from either internal or external sources (Hayamizu, 1997)—for example, practising because the student is aware of the health benefits of active practice, or because the student feels guilty, or even to follow educational rules to avoid possible punishment (Haerens, Aelterman, Vansteenkiste, Soenens & Van Petegem, 2015). A-motivation occurs when the student is not intrinsically or extrinsically motivated (Gopalan, Bakar, Zulkifli, Alwi & Mat, 2017). This happens when the student does not understand why they are required to attend physical education classes or does not recognize the value of these classes, thus viewing this course as a waste of time (Granero-Gallegos et al., 2014).

Witt and Kerssen-Griep (2011) have discovered that the motivation produced by the instructor was a significant influence on students' perceptions of the value and significance of physical education. Students who participated in more extracurricular physical activity rated physical education as highly relevant and utility in their lives.

The purpose of this article is to investigate the extent to which both theories can predict the significance of physical education on studies outcome of the students. The importance of this research is that students who place a high value on physical education are also more motivated and engage in more excellent physical exercise during their leisure time, which affect their studies outcome.

## **METHOD**

### **Population and Sample Size**

A total of one thousand secondary school students from the Mardan district took part in this research (500 boys, 500 girls). In this study, the participants' ages ranged from 14 to 18 years.

### **Instrument**

The Importance of Physical Education (IPE) exam (e.g., Moreno-Murcia, González-Cutre, & Chillón, 2009a, cited in Granero-Gallegos et al., 2014) consisted of three questions that assessed students' perceptions of the importance and utility of physical education. Students were required to respond on a scale of items with a variety of choices ranging from 1 (strongly disagree) to 5 (strongly agree). Based on the results of this research, the reliability was noted as .86 (male =.88; female =.90).

As studied by other researchers (e.g., Granero-Gallegos et al., 2014) in this study, the translated version of the original Learning and Performance Orientations in Physical Education Classes Questionnaire (LAPOPECQ) was used (Cervelló et al., 2002). It has two dimensions: Perception of the Motivational Environment, which includes 13 items, and Perception of the Motivational Climate, which consists of 14 items. Students were required to respond on a scale, ranged from 1 (strongly disagree) to 5 (strongly agree). The researchers (e.g., Granero-Gallegos et al., 2014) have discussed the internal reliability and validity of the factor structure. In the current research, the internal consistency of the subscale PME was noted as 0.88 (male =.94; female =.90), and for PMC, it was reported as 0.92 (male =.90; female =.91).

A translated version of the Sports Motivation Scale (SMS) (e.g., Pelletier, Tuson, Fortier, Vallerand, Briere, & Blais, 1995) was used to conduct this study, which was developed by Brière, Vallerand, Blais, and Pelletier (1995). It comprises 28 items containing the many kinds of motivation as defined by the theory of self-determination and other information (e.g., Granero-Gallegos et al., 2014; Rezvani, Khosravi, & Dong, 2017). The idea of self-determination explains the multidimensionality of motivation by distinguishing between motivation, extrinsic motivation (E.M.), and intrinsic motivation (I.M.). Motivation is defined as a desire to do something. In response to a set of questions, students were asked to rate their agreement or disagreement with each item on a scale ranging from 1 (strongly disagree) to 5 (strongly agree)

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(e.g., Granero-Gallegos et al., 2014). Based on the results of this research, the reliability for EM was noted as .81 (male = 0.86; female = 0.78) and for IM it was noted as 0.86 (male = .85; female = .93).

The tool with six dimensions and 23 items was used to assess students' perceptions about the school's effectiveness. The scale ranged between 0 = never to 6 = always (e.g., Ali, 2017). Based on the results of this research, the reliability was noted as .93 (male = .91; female = .89).

For this study, all the reliability values were noted as more significant than .70, confirming the tool's suitability (e.g., Ali, 2017; Ali et al., 2017; Ali et al., 2016).

### **Procedure**

The ethical consideration was taken into practice, such as keeping the responses confidential and taking permission for data collection from each school principal. Similarly, all the students were made aware of the study purposes, and no compulsion was created for students to fill the questionnaire. Again, the student was given a free atmosphere to respond.

### **Analysis**

A multiple regression analysis was used for the various dimensions of the IPE, LAPOPECQ, SMS and S.E. (School Effectiveness) to see if it predicted the relevance and usefulness of P.E. with boys and girls being treated differently. All computations were carried out using the SPSS v.26 software.

## **RESULTS**

A stepwise multiple regression analysis was conducted to determine whether or not the different subscales of the IPE, LAPOPECQ, SMS and S.E. accurately predict the significance and usefulness of physical education as viewed by high school students. To do this, the rating of the IPE was used as a variable criterion, and each of the dimensions of the LAPOPECQ, SMS, and S.E. was used as a predictor variable. The gender of the participants was utilized as a selection variable to compare predictions between boys and girls.

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Table 1

Variables	R Square	Adjusted R Square	Std. Error	Sig
IPE → LAPOPECQ	.870	.785	5.99	0.00

*Correlation between IPE and LAPOPECQ for girls (n=500)*

Note: [p is significant at 0.01]

The above table shows that there is a positive and significant effect of IPE on LAPOPECQ. Furthermore, 87 per cent variation in the LAPOPECQ is explained by the I.P.

Table 2

*Correlation between IPE and LAPOPECQ for Boys (n=500)*

Variables	R Square	Adjusted R Square	Std. Error	Sig
IPE → LAPOPECQ	.911	.856	6.32	0.00

Note: [p is significant at 0.01]

The analysis in the above table shows that there is a positive and significant effect of IPE on LAPOPECQ. Furthermore, 91 per cent variation in the LAPOPECQ is explained by the I.P. as perceived by the boys reading in the secondary schools of Mardan District.

Table 3

*Correlation between IPE and SMS for girls (n=500)*

Variables	R Square	Adjusted R Square	Std. Error	Sig
IPE → SMS	.760	.860	6.11	0.00

Note: [p is significant at 0.01]

The analysis in the above table shows that there is a positive and significant effect of IPE on SMS. Furthermore, 76 per cent variation in the SMS is explained by the I.P. as perceived by the girls.

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Table 4

*Correlation between IPE and SMS for Boys (n=500)*

Variables	R Square	Adjusted R Square	Std. Error	Sig
IPE → SMS	.789	.977	5.023	0.00

Note: [p is significant at 0.01]

The analysis in the above table shows that there is a positive and significant effect of IPE on SMS. Furthermore, 78 per cent variation in the SMS is explained by the I.P. as perceived by the boys reading in the secondary schools of Mardan District.

Table 5

*Correlation between IPE and S.E. for girls (n=500)*

Variables	R Square	Adjusted R Square	Std. Error	Sig
IPE → SE	.670	.660	6.09	0.00

Note: [p is significant at 0.01]

The analysis in the above table shows a positive and significant effect of IPE on S.E. Furthermore, 67 per cent variation in S.E. is explained by the IPE as perceived by the girls.

Table 6

*Correlation between IPE and S.E. for Boys (n=500)*

Variables	R Square	Adjusted R Square	Std. Error	Sig
IPE → SE	.778	.676	5.88	0.00

Note: [p is significant at 0.01]

The analysis in the above table shows that there is a positive and significant effect of IPE on S.E. Furthermore, 77 percent variation in the S.E. is explained by the IPE as perceived by the boys

reading in the secondary schools Mardan District.

Table 7

*The direct and indirect effect of IPE on LAPOPECQ, SMS and S.E. (n=1000)*

Model		$\beta$	S.E	Sig.
1.	IPE $\square$ LAPOPECQ (Individual direct Effect)	0.89	0.071	0.00
2.	IPE $\square$ SMS (Individual direct Effect)	0.78	0.810	0.00
3.	IPE $\square$ SE (Individual direct Effect)	0.80	0.623	0.00
4.	IPE $\times$ LAPOPECQ $\times$ SMS $\square$ SE (Total Indirect Effect)	0.341	0.656	0.722

Note: [p is significant at 0.01]

The above table shows that the direct effect models between IPE and LAPOPECQ, IPE SMS, IPE and S.E. were significant and positive. Still, as the LAPOPECQ and SMS were entered, the direct effect model became insignificant. This phenomenon show the physical education contributes to school effectiveness through sports motivation and learning and performance orientation.

### DISCUSSION

The purpose of this study was to investigate the prediction explained by physical education (P.E.) with the help of the "importance of physical education scale (IPE)" Sports Motivation Scale (SMS) and School Effectiveness Scale (S.E.) in secondary school students in District Mardan. As shown in Tables 1 and 2, the importance of physical education has a significant contribution in achieving Learning and Performance Orientations in Physical Education Classes both for boys and girls in secondary schools of the Mardan district. Jha and Bhattacharyya (2013) have studied learning orientation and performance orientation with relation to performance. The findings of this study were similar to the stated researchers. Furthermore, it was found that the "importance of physical education" has high significance for both the boys and girls in secondary schools in the Mardan district in explaining predictions in achieving learning and performance orientation in physical education.



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As shown in Tables 3 and 4, physical education has a more significant role in sports motivation, both for girls and boys. The findings were similar to other research studies (e.g., Baena-Extremera, Granero-Gallegos et al., 2014; Bracho-Amador; Pérez-Quero, 2012; Granero-Gallegos, Granero-Gallegos et al., 2012; Moreno et al., 2006), who argue that the more self-determined motivational profile corresponds to students who place a higher value on physical activity. Using a prediction model similar to the one used in the current research, several studies have found that self-determined motivation is associated with increased commitment and adherence to the practice of sport (e.g., Cervello, 2013; Duda & Ntoumanis, 2003; Koka & Hein, 2003; Moreno & Llamas, 2007; Moreno et al., 2007; Standage, Duda & Ntoumanis, 2003).

### Conclusion

In conclusion, the findings of this study demonstrate the importance of intrinsic motivation for both boys and girls as a predicting variable for greater significance and usefulness being ascribed to physical activity. In contrast, a more significant number of variables affect the perception of importance and use among girls. As a result, if we want to increase the level of interest in and participation in physical activity among females, we must also pay attention to factors in physical education that may increase the significance and usefulness assigned to this topic among girls. As a result, this research information will be helpful in the development of physical education programs that seek a better understanding of the motivation to be physically active (Coakley & White, 1992) because experiences in physical education lessons serve as mediators in the inclusion of physical activity as a healthy lifestyle habit (Moreno et al., 2006).

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