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**THE ROLE OF MOTRICITY IN THE DEVELOPMENT OF SELF-BODY RELATIONSHIP**

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***Abstract***

Psycho-physical development among young people is part of their multidimensional development specifically regarding self-body relationship which they need not only to adapt to daily school requirements but also to integrate themselves in society because both physical and intellectual health influence attention, increasing the ability to assimilate knowledge and self confidence. This study sought to verify the importance of the role of physical activities in developing the self-body relationship and identify the personal barriers that block the development of the self-body relationship. The sample group comprised 68 students (35 boys, 33 girls) aged between 19 and 27 years old studying Economic Sciences at the Petroleum-Gas University, Ploiesti, Romania. The research design employed a quantitative approach. The data collection method employed a questionnaire entitled “Multidimensional Aspects in the Self – Body Relation” (Janda, 2012, p. 67-76.). The aim of the research was to verify the importance and role of physical activities in the development of the multidimensional self-body relation. Physical activity was found to be very important and essential for multidimensional positive development of the self-body relation both physically and psychologically.

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**Keywords:** Self-body relationship, multidimensional development, psycho-social barriers, physical activity.



## 1. Introduction

“It appears that today no one can stand outside change or no one (can) oppose the phenomenon of change ...” (Albu, 2016, p.37), and this change starts with ourselves; the reason for which people are extremely stressed by their appearance or by the manner in which they are perceived by other people. In view of this, it is important to “... “shatter” all images which do not suit us, which deform, which distort our authentic way of being” (Albu, (2013, p. 57), as “Every individual is, in part, his own project and he creates himself“ (Maslow cited in Albu, 2017, p. 299). In the modern world, our physical appearance is the one that represents us first, followed by education, professional training, our social status, and so on. This is the reason why physical appearance which in this case refers to body proportions and harmony) is emphasized. This is especially so in the case of young people who desire to “express themselves, grow, manifest their freedom, and acquire their uniqueness.” (Albu, 2017, p. 23). Therefore, it is important to create a positive self image, because, as Moise (2014) states, in his work “Ego and Personality”, the ego reacts to and builds upon interactional dynamics revolving around the individual, others and the social environment. (Moise, 2014). Building the self-body relationship, based on “...a high level of physical training and is the base for the complex activity...” (Sabău, Niculescu, & Gevat, 2014, p. 499), is easily realised in the moment when the individual begins to prepare his sports equipment (he chooses the colour of the shirt at home, makes sure that the colour matches with his shorts), wears it, looks in the mirror, admires the image reflected by the mirror, is pleased, after which he goes to the gym, where he would expect to encounter in the glimpse of his colleagues, the same one he had when he saw his reflection in the mirror, the admiring response of people around him. This is the debut in building the self-body relationship, followed through as a completion by the need of involvement in Physical Education subjects, where answers to questions of self-body image can be obtained in the physical exercise itself. “When the answer is given from the outside, intelligence no longer has reason to develop, because intelligence only develops when it needs to find the answer by itself” (Osho, 2014, p. 169). This development can occur on the sports field, where students have the opportunity to demonstrate their intelligence, agility, elasticity, and skill, enabling the answer to be derived from the inside, in a single demonstrative “bouquet” that advocates the role of physical ability in the development of the self-body relationship. To this “bouquet” of body language, communication is added, by using the related words: catch!, pass!, throw! and so on. In essence, these words represent an impulse, that initially ensures the onset of communication, which later transforms communication into a habit, through repetition of physical activities, thus multiplying the chances of success of young people’s personal development and potential development as successful adults or, even, as future leaders, as heightened physical activity implies a positive attitude and leadership skills, especially when engaged in team sports. It can be extrapolated that a positive multidimensional self-body relationship can be a precursor to leadership.

## 2. Research Questions

- 2.1 Are physical education classes important in developing the multidimensional self-body relationship?
- 2.2 What are the personal barriers that block the development of multidimensional self-body relation?

### 3. Purpose of the Study

The purpose of this research was to verify the importance of the role of physical activities in developing the self-body relationship and identify the personal barriers that block the development of the self-body relationship.

### 4. Research Methods

Before starting to depict the research methods it is essential to mention from the outset that the current research is an exploratory study; a starting point for a more extensive research that will be conducted in future.

#### 4.1. Subjects

The group involved in this research comprised students aged between 19-27 years old who are studying Economic Sciences at the Petroleum-Gas University, Ploiesti, Romania. As active attendance of students in physical education classes was crucial for this research, the group of subjects was randomly selected from the researcher's classes. As the subjects are all attending the same University and studying Economic Sciences, it can be presumed that all of them have similar intellectual concerns, or theoretically, they have equal psychological and motric potential.

#### 4.2. Research Procedure

The stages of the research progress are detailed below:

STAGE I - Studying the reference literature, in order to acquire existing data on the proposed subject up to the initiation of this research;

STAGE II - Selection of 68 students (35 boys, 33 girls) as subjects for this research.

STAGE III – selection of an appropriate questionnaire entitled “Multidimensional Aspects in the Self-Body Relation” (Janda, 2012, p. 67-76). This questionnaire has been homologated and standardised and can be considered valid and reliable for use in this study.

STAGE IV - Implementing the questionnaire on the research group.

STAGE V - Gathering data. For this, the questionnaire was organised into four sections:

- Section I of the questionnaire evaluated the component *physical appearance* in items 5, 7, 13, 19, 25, 28\*, 31\* and the analysis is presented in Table 2;
- Section II of the questionnaire evaluated the component *physical shape* in items 16, 22\*, 34 and the analysis is presented in Table 3;
- Section III of the questionnaire evaluated the component *Subjective weight* in the items 36, 37 and the analysis is presented in Table 4;
- Section IV of the questionnaire evaluated the component *Satisfaction of Body Areas* in items 38, 39, 40, 41, 42, 43, 44, 45, 46 and the analysis is presented in Table 5.

STAGE VI – Recording the data, tabulating the data, analyzing and evaluating the results.

### 4.3. Research methods

In the research undertaken, "... both scientific and common knowledge were important ... because ... they advocate the continuity claim that science develops in the prolongation of common knowledge, distinguishing only by: the degree of precision, depth, coherence, consistency, efficiency" (Craciun, 2015, p. 13).

The investigation method involved the use of a questionnaire to gather data on the perceptions, reasons, skills, and habits of the sample. The questionnaire by Janda (2012), entitled "Multidimensional Aspects in the Relation between the Self and the Body" (Janda, 2012, p. 67-76), originally comprised 46 items. However, not all the items in the questionnaire were utilised as only certain items were relevant for the scope of this research. The rest of the items were utilised for another study. A number of open ended questions were given to identify what stimulates or blocks an individual in the development of a multidimensional self-body relationship. In order to be more relevant and as clear as possible the questionnaire was divided into four sections; each section having a number of questions with a direct reference to the component under study, and three questions to verify the sincerity of the answers mentioned by the subjects in the questionnaire (these are marked with a \* in the tables, namely questions number 22\*, 28\*, 31\*).

The questionnaire was then administered on the sample and a 100% response rate was obtained. Before the administration of the questionnaire, the students were informed their responses were confidential.

Subjects were asked to read the questionnaire first, and then write in the top-right of the questionnaire whether they had 100% presence at the Physical Education classes, or the number of classes they had participated in during a year. After that, they were asked to complete the questionnaire. The questionnaire used a Likert response scale ranging from 1 – *I Totally Disagree* to 5 – *I Totally Agree*.

The first step in verifying the sincerity of the subjects' responses was to reverse the scoring for items 22\*, 28\*, 31\*. These were practically "trick" questions, aimed to study the barriers that stimulate or block the respondents' sincerity, but also to verify the multidimensional aspects in the self-body relationship and also the role of physical activity in unlocking the emotional barriers and in developing the self-body relation. Only four components which were considered to be significant in the multidimensional aspect, with the purpose of evaluating the self-body relationship were utilised out of the 46 items and the six components from the questionnaire. The studied components were: Physical appearance - items 5, 7, 13, 19, 25, 28\*, 31\*; Physical shape - items 16, 22\*, 34; Subjective weight - items 36, 37; and the Satisfaction of body areas - items 38, 39, 40, 41, 42, 43, 44, 45, 46. The two omitted components were: orientation of physical aspect - 20, 21, 26 and the orientation of physical form - with items 3, 4, 6, 10, 11, 12, 17, 18, 23, 24, 29, 30, 35.

## 5. Findings

Since antiquity, from the ancient Greeks until today, the physical aspect has been an external label for mankind. In the modern world, the physical aspect is important both for women and men, representing us in the initial stages, after which other qualities follow. This is the reason why people nowadays consider making a "*harmonious self-body connection*" a goal through which to build a positive image, hence,

increasing their self-esteem, thus gaining self confidence which can be extrapolated to having leadership skills differentiating those who can lead and those who only follow orders.

The purpose of the research was to precisely verify this aspect, considered multidimensional in the self-body relationship. In order to achieve this, Janda's (2012) questionnaire entitled "Multidimensional Aspects in the Self -Body Relation" was used where "a series of statements referring to the manner in which, subjects involved in the research thought, felt, or behaved in certain situations.

As the subjects were analysed according to their presence in or absence from participating in the Physical Education classes, the first layering of the group arose from the centralization of the acquired data regarding the students' participation in the class. The university academic year is divided into 28 weeks (14 weeks for the first semester, 14 weeks for the second semester). Physical Education classes in the curriculum are one hour per week. The university module lasts for 100 minutes (90 minutes for the lesson + 10 minutes for a break). By joining two classes per week, students will have a 90-minute university class every two weeks. This means 7 classes in the first semester and 7 classes in the second semester with a total of 14 lessons per year. After recording the data from the questionnaire regarding the students' participation in class, several typologies of subjects were recorded (see Table 1)

In Table 1, the first layering of the research group can be observed as follows:

- Group I – students participating in all classes - 19 girls (57.58%) and 21 boys (60%);
- Group II – students participating in 6-8 lessons - 10 girls (30.30%) and 11 boys (31.42%);
- Group III – students with medical exempts (M.E.) or absent a number of times - 4 girls (12.12%) and 3 boys (8.58%).

**Table 01.** Typologies of students in the Physical Education classes - Girls (G.) and Boys (B.)

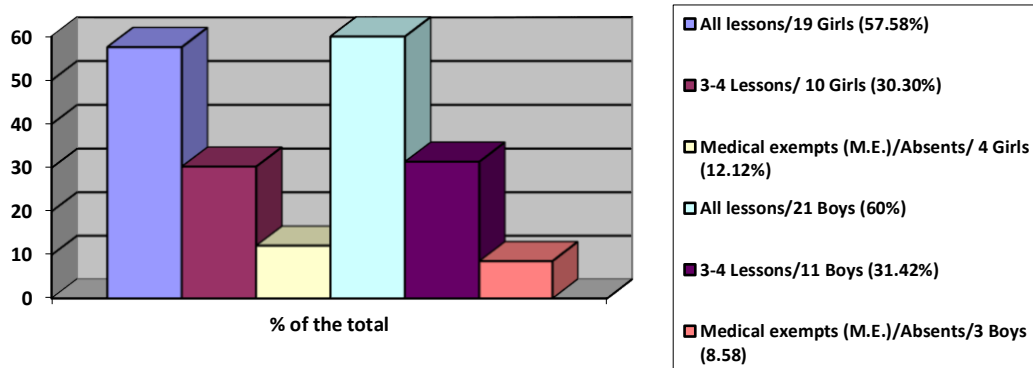
Answer	Present14 Classes/ year No. Students/ %	Present6-8 Classes/ year No. Students/ %	Medical Exempt (M.E.) or absent No. Students/ %	Total No. Students/ %
Total subjects: 68 students (35 boys; 33 girls)				
GIRLS - 33	19 G. -57.58%	10 G. - 30.30%	4 G. - 12.12%	33 Girls
BOYS - 35	21 B. - 60 %	11 B. - 31.42%	3 B. - 8.58%	35 Boys
Total- 68 STUDENTS	40 G.+B. =58.82%	21 G.+B. =30.88%	7 G.+B. =10.30%	68 students (G.+B.) 100 %

The manner in which the questionnaire was structured facilitated the study of the four components of the research.

The questionnaire was divided into four sections/components, with separate responses for girls and boys. The data was recorded in Tables 2, 3, 4, 5, and the role of physical activity based on the responses recorded in the relationship between the self and the body was analyzed.

As a result of the data obtained regarding the manner in which each individual was able to assess his/her physical appearance, physical form, subjective weight and perceived satisfaction for their own bodily areas, it was found that the studied group could be stratified further. The first layering is based on the participation in or absence from Physical Education classes, forming groups with different preoccupations for the Physical Education activity (interested in Physical Education, slightly disinterested

in physical exercise, having medical exemptions – as seen in the data recorded in the Tables 1, 2, 3, 4, 5 and Figure 01).



**Figure 01.** Indicators for the structure of students' typologies (1. Participating in all classes; 2. Partially attending; 3. Medical Exempts (M.S.), Girls (G.) and Boys (B.)

The second stratification of the studied group was obvious after the division of the questionnaire into the tables after the four sections, according to the four components analysed. The presentation of the analysis begins with Section I of the questionnaire which evaluated the perception of *Physical Appearance*. These items were calculated in percentage. As noted in Table 2, significant changes are noticeable. The group was structured into three typologies, similar to the typologies in Table 1 showing the attendance in Physical Education classes. Those who posted high scores of self-confidence are students who attend Physical Education classes (Table 2) and do not have emotional barriers such as fear-related barriers, barriers caused by individualistic attitudes, and barriers related to individual-group relationship. Their responses are substantiated through the two control items 28\* and 31\*. As mentioned above, the two items were reversed in scoring as compared to all the other items. The responses to these items confirmed the premise that active participation in the Physical Education class was the decisive/positive factor that affected the multidimensional perception of the self-body relationship. This was shown among 19 girls (57.57%) and 20 boys (57.15%), which was reflected in the number of students attending all the Physical Education classes. These students differentiated themselves on the basis of their responses regarding their attitude; showing a positive response to the evaluation of physical appearance and self-esteem as compared to the others (see Tables 1 and 2).

**Table 02.** Indicators for Evaluation of Physical Appearance; Girls (G.) and Boys (B.)

TOTAL NO. OF SUBJECT: 68 students (33 Girls -35 Boys)	EVALUATION SCALE - score									Total	
	1 point		2 points		3 points		4 points		5 points	%	
SECTION I-Observed Component	I totally disagree		I mostly disagree		Neutral		I mostly agree		I totally agree	Girls and Boys	
- Evaluation of physical	No. G. %	No. B. %	No. G. %	No. B. %	No. G. %	No. B. %	No. G. %	No. B. %	No. G. %	Nr. B. %	Nr. G/B %

<i>appearance;</i> -Items from the questionnaire											
5. My body is sexually appealing.			4	3	10	11	19*	21*			33/35
			12.12 %	8.58%	30.30 %	31.42 %	57.58 %	60 %			100 %
7. I like my physical aspect as it is.			4	3	10	11	17	20	2	1*	33/35
			12.22 %	8.58%	30.3%	31.42 %	51.51 %	57.14 %	6.07%	2.8%	100 %
13. Most people would think I look good.					14	14	*18	19	1	*2	33/35
					42.42 %	40%	54.5%	54.28 %	3.03%	5.72 %	100 %
19. I like how I look in a swimsuit.					14	14		21*	19*		33/35
					42.42 %	40 %		60 %	57.58 %		100 %
25. I like how my clothes fit me.			5	4	9	10	10*	21*	9		33/35
			15.16 %	11.42 %	27.27 %	28.57 %	30.30 %	60%	27.27 %		100 %
*28. I do not like my physical appearance.			18		10	31	5*	4*			33/35
			54.54 %		30.30 %	88.57 %	15.16 %	11.43 %			100 %
*31. I am not physically attractive	19	20*			14*	15					33/35
	57.57 %	57.15 %			42.43 %	42.85 %				100%	

Section II of the questionnaire evaluated the perception of *Physical Shape* with items 16, 22\* and 34 which are detailed in Table 3. It can be seen that both students with medical exemptions and absent students are neutral regarding their physical shape.

Through question 22\*, which is a control question, 23 boys (65.72%), and 19 girls (57.57%), perceived themselves as self confident and totally disagreed with the statement, “I am not good at sports and physical games.” Since the percentages and the number of students for this section is similar with that of Section I, a recheck of Table 1 was undertaken to confirm the findings. The percentages and numbers who responded to item 22 in Sections I and II are identical.

It thus can be concluded that the relationship between the positive role of physical activities and the development of the self-body relation is confirmed; helping at removing personal barriers, preventing communication blocking and issues that appear even when young people only attend part of the classes (see indicators in Table 3).

**Table 03.** Statistical indicators for Physical Shape – Girls (G.) and Boys (B.)

TOTAL NO. OF SUBJECTS: 68 students (33 Girls -35 Boys)	EVALUATION SCALE - score										Total %
	1 point		2 points		3 points		4 points		5 points		
<b>SECTION II:</b> - Observed component - evaluation of the physical shape; - Items from the questionnaire	I totally disagree		I mostly disagree		Neutral		I mostly agree		I totally agree		Girls and Boys
	Nr. F. %	Nr. B. %	Nr. F. %	Nr. B. %	Nr. F. %	Nr. B. %	Nr. F. %	Nr. B. %	Nr. F. %	Nr. B. %	
16. I easily learn physical skills.					15 *	12	18			23*	33/35
					45.45%	34.28%	54.55%			66,72%	100%
*22. I am not good at physical games and sport.		23*	19*		14	12					33/35
		65.72%	57.57%		42.43%	34.28%					100%
34. I have a very good coordination.			13*		4	14*	16	21			33/35
			39.39%		12.12%	40%	48.49%	60%			100%

Section III in the questionnaire evaluated the perception of *Subjective weight*; The questionnaire items and the responses for this section are detailed in Table 4. 3 boys (9.9% of total), 4 girls (2 of them think they are underweight-5.72% of total and the other 2 think they are overweight). In total, 7 students of the group are not confident with their appearance. It is surprising that these figures equal those found in table 1 at Medical Exempt (M.E.) or absent rubric, which confirms that the physical activity has an important role in the development of body-self relation. The medical exempt students and the absentees tend to have a negative opinion regarding their self-body relationship. In conclusion, the findings of this study have verified the positive effects of motricity in self-body relationship.

**Table 04.** Statistical indicators for Subjective Weight; Girls (G.) and Boys (B.)

TOTAL NO. OF SUBJECTS: 68 students (33 Girls -35 Boys)	EVALUATION SCALE – points value										Total %
	1 point		2 points		3 points		4 points		5 points		
<b>SECTION II:</b> - Observed component - subjective weight; - Items from the questionnaire	A lot underweight		Slightly underweight		Normal weight		Slightly overweight		A lot overweight		Girls and boys
	Nr. G. %	Nr. B. %	Nr. G. %	Nr. B. %	Nr. G. %	Nr. B. %	Nr. G. %	Nr. B. %	Nr. G. %	Nr. B. %	
36. I believe I am:			3	2	30*	31*		2			33/35
			9.09 %	5.71 %	90.91%	88.58 %		5.72%			100%
37. Looking at me, most people would think I am:			1*	1	32	*33		1			33/35
			3.03%	2.85%	96.97%	94.28%		2.87%			100%

Section IV of the questionnaire evaluated the perception of *Satisfaction of Body Areas*. The questionnaire items and the responses are detailed in Table 5. These responses demonstrate that girls, as expected, are less satisfied with their physical appearance in contrast to boys who have more confidence in their physical appearance, thus proving to be more satisfied with their body.



**Table 05.** Statistical indicators for Body Areas Satisfaction; - Girls (G.) and Boys (B.)

TOTAL SUBJECTS: 68 students (33 Girls-35 Boys)	EVALUATION SCALE – score										Total
	1 point		2 points		3 points		4 points		5 points		%
<b>SECTION IV:</b> - Observed component –Satisfaction of body areas ; - Items from the questionnaire	Very unsatisfied		Mostly unsatisfied		Neutral		Mostly satisfied		Very satisfied		Girls and Boys
	No. G. %	No. B. %	No. G. %	No. B. %	No. G. %	No. B. %	No. G. %	No. B. %	No. G. %	No. B. %	No. G/B %
38. Face (facial features, skin)				4	15*	11	8	20*	10		33/35
				11.43%	44.45%	31.43%	24.24%	57.14%	30.31%		100%
39. Hair (colour, density, texture)			16*			14	17	1		20*	33/35
			48.48%			40%	51.52%	2.85%		57.15%	100%
40. Lower part (bottom, hips, thighs, legs)			9	1	5	10	19	1*		23*	33/35
			27.27%	2.85%	15.16%	28.58%	57.57%	2.85%		63.72%	100%
41. Middle part (waist, abdomen)			17*	31*	14	4	2				33/35
			51.51%	88.57%	42.42%	11.43%	6.07%				100%
42. Upper part (chest or breasts, shoulders, arms)					8	7		2	25*	26*	33/35
					24.24%	20%		5.72%	75.76%	74.28%	100%
43. Muscle tone			11*	1	4	8	18	26*			33/35
			33.33%	2.86%	12.12%	22.85%	54.55%	74.28%			100%
44. Weight	1		10	6	20*	26*	2	3			33/35
	3.03%		30.31%	17.14%	60.60%	74.28%	6.06%	8.58%			100%
45. Height		7	12*	8	1		10	10	10	10	33/35
		20%	36.36%	22.86%	3.04%		30.30%	28.57%	30.30%	28.57%	100%
46. General appearance			4	5	10	5	19*	1		24*	33/35
			12.12%	14.28%	30.30%	14.28%	57.58%	2.86%		68.58%	100%

In addition to the items in the questionnaire, a few open ended questions were added in order to ascertain what stimulates or blocks an individual in the the development of a multidimensional self-body relationship. The responses to these open ended questions revealed the following barriers: fear, embarrassment, and the attitude of others. The manner in which these barriers affect the development of the self-body relation for our research group was analysed from the responses given. Based on these, we verified the importance and role of physical ability in the the development of a multidimensional self-body relationship for the research group.

The open ended questions ae presented as follows with the findings:

1. What is the reason for your medical exempt, if you have got one? A medical condition? Or is there another reason? 17 respondents; -14 girls, (42.43%) and 3 boys (8.58%), responded: fear, fear of ridicule which can lead to the conclusion that this a barrier caused by fear and the attitude of others caused by the dynamics of the individual-group relationship;
2. Are you absent from classes? 10 girls answered “Yes” – 30.30% as well as 11 boys – 31.42% (see Table 1).
3. How many classes do you attend in a school year? A total of 19 girls (57.58%) and 21 boys (60%) responded “*I have no unattended classes*”. However, 10 girls (30.30%), and 11 boys (31.42%), responded that they had not attended more than 3-4 classes per semester. This means even a limited number of physical activities can produce a visible positive change in the self-body perception;
4. Are you absent from Physical Education classes? If yes, what is the reason?  
“*Yes, I cannot accommodate with the group*” was the response given by 10 girls (30.30%) and 11 boys (31.42%). This response may be taken to signal a barrier caused by individualist attitudes;  
“*Yes, I cannot find myself in the group*” - This response signals a barrier in the individual-group relationship, and was posted by the same percentage of boys and girls as mentioned for the previous response.

The findings reveal that subjects who participated in all physical activities demonstrated through their answers, that physical activity plays an important role in the development of the self-body relationship. Hence, it is very clear that active (and even limited) participation in the Physical Education classes represents the positive factor that created the difference of opinion among groups in this study regarding the multidimensional perception of the relation between self-body. Furthermore, it can be assumed that this participation frees up negative feelings that slowly and surely deteriorate self-esteem. This answers the first research question related to the importance of physical education classes in developing the multidimensional self-body relationship.

As for the second research question the responses to the open ended questions revealed that fear, embarrassment and the attitude of others are the personal barriers that block the development of multidimensional self-body relation

## 6. Conclusion

The modern world and its needs trigger numerous emotional struggles which are mainly caused by concerns about our physical appearance. Such concerns can affect the normal psycho-physical development of individuals in terms of the multidimensional development of the self-body relationship.

It has been claimed that physical activity has an important role in developing the self-body relationship and in this study this has been established by the responses of those who actively participated in the Physical Education classes. Conversely, those who reported a lack of participation were seen to have a less developed self-body relationship.

The presence of Physical Education in the school curriculum as a compulsory subject is justified, as it can help mitigate psychological barriers to a multidimensional self-body relationship. Moreover, it increases the subjects' self confidence, being a decisive activity in the development of the multidimensional self-body relationship.

This study has established that individuals' full participation in the Physical Education classes had a decisive, positive role in self-body perceptions whereas some subjects' lack of participation in the Physical Education class was reflected in the negative self-body perceptions; thus, confirming the importance of physical education in the curriculum. Physical activity has an important role in the growth of self-body relationship through active attendance of students in physical education classes which can mitigate the emotional struggles that represents the definitive point which distinguishes a positive or negative multidimensional perception of the self and the body.

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