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MOTIVATION DIFFERENCES ON DOING SPORTS ACTIVELY AT THE DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS TEACHER IN ACCORDANCE WITH THEIR GRADE LEVELS

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Abstract:
The purpose of the present research is examining the differences between motivations of Physical Education and Sports (PES) Teaching Department students, who actively do sports in team sports and individual sports branches, in accordance with their grade levels. The participants of the present research are female (n=199) and male (n=344) the total of 543 athletes with age average of 21,25 ±2,66, who study at PES Teaching Departments of Ege and Uludag Universities and do different branches of sports. Sport Motivation Scale (SMS) developed by Pelletier et al. (1995) and adapted for Turkish athletes and tested for reliability and validity by Kazak (2004) was used to collect data. According to data collected from the participants, there are statistically significant differences between different grade levels in terms of "intrinsic motivation" ($p<.05$) and "intrinsic motivation to experience stimulation", which is a sub-dimension of intrinsic motivation ($p<.01$) values. Fourth grade students have the highest average of intrinsic motivation while second grade students have the lowest, and first grade students have the highest level of intrinsic motivation to experience stimulation, while second grade students have the lowest average. According to the data related to grade levels by gender, the variations among female students in terms of intrinsic motivation to experience stimulation aren't statistically significant, while the variations among male participants in terms of intrinsic motivation to experience stimulation and "amotivation" values are statistically significant ($p<.05$). Among the male participants, fourth grade students have the highest intrinsic motivation to experience stimulation average, while second graders have the lowest; and second grade students have the highest average for amotivation while the third graders have the lowest average for the related value. Data analyses were conducted on SPSS 17.0, and the variations in motivation by grade levels were tested with Mann-Whitney U and Kruskal Wallis tests.

Keywords: branch groups, intrinsic motivation, extrinsic motivation, amotivation

Abbreviations:
IM : Intrinsic Motivation
IM-KnAc: Intrinsic Motivation to Know and Accomplish
IM-Exp : Intrinsic Motivation to Experience Stimulation
EM : Extrinsic Motivation
EM-Id : Extrinsic Motivation into Identified Regulation
EM-Ext : Extrinsic Motivation into External Regulation
EM-In : Extrinsic Motivation into Introjected Regulation
AM : Amotivation

1. Introduction

Achievement in sports depends on finding talented athletes and their training for a long time in a quality training environment. Main elements of a quality training environment are; equipped facilities, training and competition programs organized in accordance with age and branch, scientific support provided for trainers and athletes and well-educated trainers with their knowledge and personality features. The definition of talented athlete includes not only branch specific genetic features but also dedication to branch and resistance to physical and psychological pressure of tough training, camps and repetitive competitions (Bompa, 2007). Accordingly, motivation is included in the main subjects of sports psychology field and has an important place in explaining the behaviours exhibited in sport environments.

Motivation to participate in sport has a complex structure and is mostly associated with different motivation types (Pelletier, Rocchi, Vallerand, Deci and Ryan, 2013). Understanding the type of motivation is very important in participation in sports and is of vital importance for the future of sports (Iso-Ahola and St. Clair, 2000). Therefore, systematic studying of the relationships between different motivation types (e. g. intrinsic or extrinsic motivation) and participation in sports is equally important.

Many studies in the field of sports have made use of self-determination theory (SDT) to understand participation in sports (Pelletier et al., 2013). SDT argues that individuals try to control their social environments in order to meet their three basic psychological needs; competence, relatedness and autonomy (Mallet, 2003). These three requirements fostering motivation are defined as follows; i) competence; the opportunity to express own competency or ability (e.g. physical or mental abilities), ii) relatedness; sense of belonging to a certain group or society, iii) autonomy; the ability to move or express oneself (Deci and Ryan, 1985; Grolnick vane Ryan 1989; Vallerand, Blais, Brière and Pelletier, 1989; Miserandino, 1996; Ryan and Deci, 2000). The interaction between these requirements and environment produces three different types of motivation; i) intrinsic motivation (IM); motivation to continue an activity just for pleasure of satisfaction, ii) extrinsic motivation (EM); conducting an activity with the control of external forces without one's own decisions, iii) amotivation (AM); lack of desire or motivation to conduct an activity due to the failure to relate behaviours and

activity (Deci and Ryan, 1985; Vallerand, Pelletier, Blais, Vallières, Senécal and Brière, 1992; Deci and Ryan 2000; Teo, Khoo, Wong, Wee, Lim, Rengasamy, 2015).

Intrinsic motivation is classified into three as; Intrinsic Motivation to Know (IM-Kn), Intrinsic Motivation to Accomplish (IM-Ac) and Intrinsic Motivation to Experience Stimulation (IM-Exp). IM-Kn includes such structures as to learn and understand. It is defined as "*undertaking an activity for the pleasure and satisfaction experiences while learning, studying or trying to understand something new*" (Vallerand et al., 1992). IM-Ac refers to the motivation to dominate, increasing competency and feeling authority. Accomplishment focused individuals interact with their environments to feel competence, mastery and satisfaction (Deci and Ryan, 1985). It is defined as "*undertaking an activity to reach the pleasure and satisfaction experienced when attempting to achieve or create something*". IM-Exp refers to the motivation to experience sensational stimulus when taking part in a certain activity (as bungee jumping or sky-diving). It is defined as "*the motivation to undertake an activity for the pleasure experienced when taking action or exhibiting any behaviour"* (Vallerand et al., 1992; Teo et al. 2015).

EM is classified into four as; Extrinsic Motivation into External Regulation (EM-Ext), Extrinsic Motivation into Identified Regulation (EM-Id), Extrinsic Motivation into Introjected Regulation (EM-In) and integration. Levels of these four different types of extrinsic motivation vary depending on the level of autonomy of where the individuals' behaviours are more assimilated and internalise, where they are more integrated. EM is more internalized from EM-Ext to integration (Vallerand et al., 1992; Ryan and Deci, 2000). EM-Ext is observed when individuals carry activities without their own will, and with external factors. In other words, it refers to conducting an activity even the individual doesn't want to but in accordance with the expectations of others in their environment. These individuals act to obtain the award or avoid punishment that follows the activity. EM-Id is observed when the individuals believe that the focus of the decision made the conduct activities is completely self-oriented, and they do these as a life style. Similarly, the internalisation that is based on the idea that the individual is the chosen one for the activity in the extent they value the related behaviour (Vallerand et al., 1992). EM-In is observed when the individuals internalise the external control sources of their own activities. In this case, even the individuals seem to have the control, they are not actually the source of conducting the activity. This is resulted by the external focused control mechanism coming from the past, since the individuals were made to adopt the idea of making decisions in accordance with the expectations from the environment (Vallerand et al., 1992). Deci and Ryan (1985) considered integration as one of the types of EM, yet the scale doesn't include any items assessing "integration" as one of the types of external motivation (Vallerand et al., 1992).

Finally, Deci and Ryan (1985) stated that amotivation should be taken into consideration as a third form of motivation, in addition of IM and EM, in order to fully understand human behaviours. Amotivation refers to lack of both internal and external motivations. Amotivated individuals may be unable to control their own behaviours, lack of the sense of responsibility for their own behaviours and have the feelings of incompetency, despair or being deceived (Vallerand et al., 1992). It can be compared

with the concept of "learned helplessness" (Abrahamson, Seligman and Teasdale, 1978). SDT argues that athletes who experience amotivation may lack of reasons to train and play and eventually quit sports (Teo et al. 2015).

It is believed that active athletes' receiving education in the field of physical education and sports affects their motivations related to their sportive lives. They take practical courses besides their heavy training programs, which increases their physical and mental stress levels. It is observed that active athletes start their education at the departments of physical education willingly. However, it is believed that the heavy training, competition and camp programs besides that practical courses they take in advanced grade levels may affect their motivation in sports negatively.

The purpose of the present research is examining the differences between motivations of Physical Education and Sports (PES) Teaching Department students, who actively do sports in team sports and individual sports branches, in accordance with their grade levels.

2. Method

The participants of the present research are female (n=199) and male (n=344) the total of 543 athletes with age average of 21,25 ±2,66, who study at PES Teaching Departments of Ege and Uludag Universities and do different branches of sports. Sport Motivation Scale (SMS) developed by Pelletier et al. (1995) and adapted for Turkish athletes and tested for reliability and validity by Kazak (2004) was used to collect data. SMS consists of 28 items and six sub-scales. Items 2, 4, 8, 12, 15, 20, 23 and 27 measure "Intrinsic Motivation to Know and Accomplish" levels, 1, 13, 18 and 25 measure IM-Exp levels, 6, 10, 16 and 22 measure EM-Ext levels, 7, 11, 17 and 24 measure EM-Id levels 9, 14, 21 and 26 measure EM-In levels, and 3, 5, 19 and 28 measure amotivation levels. Cronbanch alpha reliability coefficients for the scale range between .73 and .88 for intrinsic motivation sub-scales; .72 and .82 for extrinsic motivation sub-scales and is .70 for amotivation. Test-retest correlation coefficients for the scale range between .78 and .91 for intrinsic motivation sub-scales; .68 and .88 for extrinsic motivation sub-scales and is .52 for amotivation. Data analyses were conducted on SPSS 17.0, and the variations in motivation by grade levels were tested with Mann-Whitney U and Kruskal Wallis tests.

3. Findings

Table 1: Motivation levels of all participants by grade levels

Parameters		**Grade 1 n=161**	**Grade 2 n=105**	**Grade 3 n=157**	**Grade 4 n=120**	**General N=543**
Intrinsic Motivation (IM)	Ave.	5,52	5,13	5,40	5,51	5,41
	Sd	0,99	1,04	1,14	1,07	1,07
Intrinsic Motivation to Know and Accomplish (IM-KnAc)	Ave.	5,33	5,09	5,25	5,37	5,27
	Sd	1,07	1,06	1,27	1,18	1,16
Intrinsic Motivation to Experience Stimulation (IM-Exp.)	Sd	5,70	5,17	5,56	5,66	5,55
	Ave.	1,12	1,16	1,18	1,14	1,16
Extrinsic Motivation (EM)	Ave.	4,81	4,72	4,76	4,74	4,76

	Sd	0,98	1,06	1,05	0,99	1,01
Extrinsic Motivation into External Regulation (EM-Ext.)	Sd	4,34	4,49	4,12	4,18	4,27
	Ave.	1,24	1,17	1,30	1,17	1,23
Extrinsic Motivation into Identified Regulation (EM-Id)	Ave.	4,79	4,70	5,03	4,78	4,84
	Sd	1,25	1,27	1,21	1,23	1,24
Extrinsic Motivation into Introjected Regulation (EM-In)	Sd	5,30	4,97	5,12	5,27	5,18
	Ave.	1,14	1,27	1,25	1,23	1,22
Amotivation (AM)	Ave.	2,75	3,04	2,55	2,76	2,75
	Sd	1,35	1,44	1,23	1,35	1,34

Data related to participants' motivation levels by their grade levels are presented in Table 1.

Table 2: Variations in the motivation levels of all participants (n=543) by their grade levels

Motivation	Grade	n	Rank	SD	X^2	p
IM	Grade 1	161	276,42	3	8,782	,032*
	Grade 2	105	232,94			
	Grade 3	157	278,68			
	Grade 4	120	291,51			
IM-KnAc	Grade 1	161	270,43	3	5,051	,168
	Grade 2	105	244,75			
	Grade 3	157	277,79			
	Grade 4	120	290,38			
IM-Exp	Grade 1	161	289,49	3	15,188	,002**
	Grade 2	105	219,50			
	Grade 3	157	277,47			
	Grade 4	120	287,31			
EM	Grade 1	161	276,05	3	,221	,974
	Grade 2	105	267,38			
	Grade 3	157	272,54			
	Grade 4	120	269,91			
EM-Ext	Grade 1	161	277,33	3	4,657	,199
	Grade 2	105	296,69			
	Grade 3	157	256,84			
	Grade 4	120	263,08			
EM-Id	Grade 1	161	264,98	3	4,347	,148
	Grade 2	105	257,31			
	Grade 3	157	296,01			
	Grade 4	120	262,87			
EM-In	Grade 1	161	285,93	3	4,779	,189
	Grade 2	105	248,60			
	Grade 3	157	263,95			
	Grade 4	120	284,31			
AM	Grade 1	161	271,35	3	7,153	,067
	Grade 2	105	304,88			
	Grade 3	157	252,27			
	Grade 4	120	269,92			

*p<.05 **p<.01

The variations in motivation levels of all participants (n=543) by their grade levels are presented in Table2. According to data related to motivation levels of all participants in terms of their grade levels, there are statistically significant differences between different grade levels in terms of "intrinsic motivation-IM" ($p<.05$) and "intrinsic motivation to experience stimulation- IM-Exp", which is a sub-dimension of intrinsic motivation ($p<.01$) values. According to data related to rank values of IM, fourth grade students have the highest average of IM while second grade students have the lowest, and first grade students have the highest level of IM-Exp, while second grade students have the lowest average.

Table 3: Variations in the motivation levels of female participants (n=199) by their grade levels

Motivation	Grade	n	Rank	SD	X^2	p
IM	Grade 1	53	101,83	3	3,709	,295
	Grade 2	28	80,93			
	Grade 3	63	105,21			
	Grade 4	55	101,97			
IM-KnAc	Grade 1	53	100,48	3	1,721	,632
	Grade 2	28	87,36			
	Grade 3	63	104,26			
	Grade 4	55	101,09			
IM-Exp	Grade 1	53	107,25	3	7,690	,053
	Grade 2	28	72,48			
	Grade 3	63	104,02			
	Grade 4	55	102,43			
EM	Grade 1	53	101,30	3	,316	,957
	Grade 2	28	94,93			
	Grade 3	63	101,81			
	Grade 4	55	99,25			
EM-Ext	Grade 1	53	107,43	3	1,341	,719
	Grade 2	28	100,46			
	Grade 3	63	97,37			
	Grade 4	55	95,62			
EM-Id	Grade 1	53	95,70	3	1,922	,589
	Grade 2	28	94,86			
	Grade 3	63	108,21			
	Grade 4	55	97,36			
EM-In	Grade 1	53	102,46	3	1,720	,633
	Grade 2	28	89,73			
	Grade 3	63	97,30			
	Grade 4	55	105,95			
AM	Grade 1	53	97,75	3	2,795	,424
	Grade 2	28	112,45			
	Grade 3	63	103,61			
	Grade 4	55	91,70			

The differences between motivation levels in terms of grade levels among female participants are presented in Table 3. Accordingly, the variations among female

students in terms of intrinsic motivation to experience stimulation aren't statistically significant,

Table 4: Variations in the motivation levels of male participants (n=344) by their grade levels

Motivation	Grade	n	Rank	SD	X^2	p
IM	Grade 1	108	176,14	3	5,246	,155
	Grade 2	77	152,68			
	Grade 3	94	172,37			
	Grade 4	65	190,12			
IM-KnAc	Grade 1	108	171,84	3	3,136	,371
	Grade 2	77	159,80			
	Grade 3	94	172,00			
	Grade 4	65	189,36			
IM-Exp	Grade 1	108	182,88	3	8,749	,033*
	Grade 2	77	144,36			
	Grade 3	94	173,77			
	Grade 4	65	186,76			
EM	Grade 1	108	175,38	3	,144	,986
	Grade 2	77	172,21			
	Grade 3	94	170,86			
	Grade 4	65	170,81			
EM-Ext	Grade 1	108	171,12	3	4,794	,187
	Grade 2	77	192,79			
	Grade 3	94	160,14			
	Grade 4	65	168,64			
EM-Id	Grade 1	108	170,68	3	3,102	,376
	Grade 2	77	164,38			
	Grade 3	94	187,20			
	Grade 4	65	163,90			
EM-In	Grade 1	108	182,51	3	3,698	,296
	Grade 2	77	156,73			
	Grade 3	94	168,10			
	Grade 4	65	180,92			
AM	Grade 1	108	173,74	3	9,900	,019*
	Grade 2	77	193,59			
	Grade 3	94	147,69			
	Grade 4	65	181,35			

*p<.05

The differences between motivation levels in terms of grade levels among male participants are presented in Table 4. The variations among male participants in terms of intrinsic motivation to experience stimulation and "amotivation" values are statistically significant (p<.05). According to rank values of the male participants, fourth grade students have the highest intrinsic motivation to experience stimulation average, while second graders have the lowest; and second grade students have the highest average for amotivation while the third graders have the lowest average for the related value.

Table 5: Variations in the motivation levels of active team sport athletes (n=380) by their grade levels

Motivation	Grade	n	Rank	SD	X^2	p
IM	Grade 1	128	199,48	3	5,501	,139
	Grade 2	80	166,58			
	Grade 3	99	189,53			
	Grade 4	73	202,28			
IM-KnAc	Grade 1	128	195,89	3	2,752	,431
	Grade 2	80	174,89			
	Grade 3	99	187,85			
	Grade 4	73	201,75			
IM-Exp	Grade 1	128	205,81	3	11,865	,008**
	Grade 2	80	154,19			
	Grade 3	99	193,36			
	Grade 4	73	199,56			
EM	Grade 1	128	192,41	3	1,198	,753
	Grade 2	80	182,54			
	Grade 3	99	186,92			
	Grade 4	73	200,73			
EM-Ext	Grade 1	128	191,81	3	3,784	,286
	Grade 2	80	200,82			
	Grade 3	99	173,65			
	Grade 4	73	201,50			
EM-Id	Grade 1	128	184,34	3	2,417	,491
	Grade 2	80	181,91			
	Grade 3	99	203,99			
	Grade 4	73	192,42			
EM-In	Grade 1	128	202,45	3	6,010	,111
	Grade 2	80	167,33			
	Grade 3	99	185,73			
	Grade 4	73	201,42			
AM	Grade 1	128	182,16	3	10,559	,014*
	Grade 2	80	220,44			
	Grade 3	99	170,38			
	Grade 4	73	199,61			

*p<.05 **p<.01

Table 5 present the data related to the variations in motivation levels in team sports athletes by branch groups. The variations in IM-Exp values (p<.01) and amotivation values (p<.05) are statistically significant among team sports athletes. Rank averages presented in these tables show that first graders have the highest IM-Exp average values while second graders have the lowest; and second graders have the highest amotivation values while the third grades have the lowest.

Table 6: Variations in the motivation levels of active individual sport athletes (n=152) by their grade levels

Motivation	Grade	n	Rank	SD	X^2	p
IM	Grade 1	29	71,90	3	5,545	,088
	Grade 2	24	58,04			
	Grade 3	53	84,46			
	Grade 4	46	79,86			
IM-KnAc	Grade 1	29	69,60	3	5,217	,157
	Grade 2	24	62,04			
	Grade 3	53	84,45			
	Grade 4	46	79,23			
IM-Exp	Grade 1	29	77,84	3	5,789	,122
	Grade 2	24	57,08			
	Grade 3	53	82,02			
	Grade 4	46	79,42			
EM	Grade 1	29	81,78	3	3,302	,347
	Grade 2	24	77,42			
	Grade 3	53	81,52			
	Grade 4	46	66,91			
EM-Ext	Grade 1	29	81,88	3	7,010	,072
	Grade 2	24	89,94			
	Grade 3	53	78,94			
	Grade 4	46	63,28			
EM-Id	Grade 1	29	81,60	3	6,928	,074
	Grade 2	24	68,10			
	Grade 3	53	86,80			
	Grade 4	46	65,79			
EM-In	Grade 1	29	79,14	3	,172	,982
	Grade 2	24	74,85			
	Grade 3	53	75,46			
	Grade 4	46	76,89			
AM	Grade 1	29	84,57	3	2,203	,531
	Grade 2	24	80,85			
	Grade 3	53	75,62			
	Grade 4	46	70,15			

Table 6 present the data related to the variations in motivation levels in individual sports by branch groups. The variations in individual sports aren't statistically significant.

4. Discussion and Conclusion

In terms of their grade levels, all participants' IM (5,41±1,07) and EM (4,76±1,01) were found above average, IG being higher. On the other hand, their amotivation values (2,75±1,34) were below average. Additionally, fourth grade students have the highest rank average scores, while the second graders have the lowest in IM, which varied at a statistically significant level ($p<.05$). Amotivation scores of second graders were found

to be higher than other grade levels. This finding may have resulted from the heavy schedule of compulsory and elected courses in second grade curriculum. The findings of the present research are similar with the findings of the research conducted by Garcia-Mas, Palou, Gili, Ponseti, Borras, Vidal, Cruz, Torregrosa, Villamarin and Sousa (2010), who found that male footballers (n=456) of 15.6 age average had intrinsic motivation values of (5,32±.86), extrinsic motivation values of (4,66±.87) and amotivation values of (2,72±1,27).

According to the findings related to the variations in motivation by grade levels across genders, there aren't any statistically significant differences among female participants, while IM-Exp and amotivation values vary at a statistically significant level ($p<.05$) among male participants; and their rank values show that fourth graders have the highest IM-Exp average and second graders have the lowest; while second graders have the highest amotivation levels and the third grade students have the lowest amotivation average. This finding may be associated with the heavy course schedule of second graders. Bara, Andrade, Miranda, Núñez, Martín-Albó and Ribas (2011), who conducted a study with female (n=127) and male athletes (n=292) of age average 24,19±5,53, found that male athletes had higher IM-Exp and amotivation. On the other hand, Monazami, Hedayatikatooli, Neshati and Beiki (2012), who also conducted a study on female (n=62) and male (n=50) athletes, reported that female athletes had higher IM-Exp, while male athletes had higher amotivation levels.

Findings of the present research related to the variations in motivation levels in different grades by branch groups show that the variations in individual sports aren't statistically significant, while the variation in IM-Exp values ($p<.01$) is statistically significant among team sports athletes and according to the rank averages first graders have the highest IM-Exp average values, which shows that first graders enjoy participating in sportive activities more, as suggested by Pelletier et al. (1995) and Roberts at al. (1999) (Kazak, 2004). On the other hand, among team sports athletes, second graders have low IM-Exp and high (negative) amotivation levels at a statistically significant level ($p<.05$), which is an interesting finding.

Consequently, in accordance with the finding that second grade students' IM levels are lower, and their amotivation levels are higher than the other students, we can suggest that second grade curriculum of Physical Education and Sports Teaching Department requires revision.

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