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Gender Differences in Goal Orientation between High School Students in Physical Education Classes

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Abstract

Within kinesiology activities, concerning Nicholls's Achievement Goal Theory, we distinguish between "task" goal orientation/ involvement and "ego" goal orientation/ involvement, according to which students evaluated their own competence.

The main aim of this study was to determine if gender differences exist among high school students in task and ego orientation. The sample included 211 high school students, males and females, between 14 and 17 years of age (N=211, N_f=80, N_m=131). Individual differences in goal orientation of students have been assessed by the Task and Ego Orientation in Sport Questionnaire – TEOSQ (Duda et al., 1995, adapted for a Croatian population sample by Barić in 2001).

The basic descriptive indicators were calculated, and the t-test was applied to test gender differences in goal orientation. The results showed that there were gender differences in ego orientation. Although males were more ego-oriented than girls (t=-3.9; p=0.00), the results showed that both male and female students were dominantly task-oriented. In conclusion, high school students have a desirable goal orientation that directs them to learn new skills, to achieve personal development and to complete all the given tasks.

Key words: *adolescents; ego orientation; gender; motivation; task orientation.*

Introduction

Sixty minutes of physical activity a day have numerous positive effects on children and adolescents. Physical activity helps build muscle and skeletal system, improves muscle strength and endurance, reduces the incidence of risk factors associated with chronic

diseases, improves self-confidence and reduces stress and anxiety (USDHHS, 2008). Regardless of the fact that regular physical activity confers health benefits, the level of physical activity decreases significantly in adolescence (Dumith, Gigante, Domingues, & Kohl, 2011; Wickel, Eisenmann, & Welk, 2009). The conclusions based on research conducted in Croatia indicate that there is a very high proportion of insufficiently active children and adolescents (Jurakić & Heimer, 2012). The prevalence rates of insufficient physical activity among girls in the third year of high school amounted to 86.2%, while it amounted to 66.8% among male students (Jureša, 2010). According to the data of HBSC for 2009/2010, the prevalence of insufficient activity among 15-year-old girls was 92% and it amounted to 78% among their male counterparts (Currie, Zanotti, Morgan Currie, de Looze, Roberts, Samdal, Smith, & Barnekow, 2012).

The physical activity level (PAL) is very low among high school students, which was confirmed by the results of a study conducted by Petrić, Novak, Blažević, and Antala (2014) on a sample of Istrian high school students. The physical activity level amounted to 70% for female respondents and 63% for male respondents. Such results reveal that both groups of respondents were not sufficiently physically active. The overall physical activity level of students is reached through a number of different domains: physical activity at school, activity in their leisure time, physically active commute to school and physical activity related to housework (Howley, 2001). These assessments are based on intensity, duration and frequency of each domain (Montoya, Kemper, Saris, & Washburn, 1996).

Targeted actions aimed to increase physical activity within the school environment will also increase the overall level of health-oriented physical activity of high school students even when they are not at school (Aelterman, Vansteenkiste, Van Keer, Van den Berghe, De Meyer, & Haerens, 2012), and motivation of young people attending physical education classes is a major determinant of the level of their physical activity (Standage, Gillison, Ntoumanis, & Treasure, 2012). According to Nicholls's theory of goal orientation (Duda, Chi, Newton, Walling, & Catley, 1995), the definition of the meaning of motivated behaviour with regard to the goals set by a person is needed in order to understand motivation. Nicholls's theory of goal- orientation is associated with motivation for achievement and assumes two dominant objectives underlying the assessment of individual success (personal competence) in a situation of achievement. Thus, within kinesiology activities, we can distinguish between focus on the task and the development of skills ("task" goal orientation/involvement) and focus on the performance and result ("ego" goal orientation/involvement), according to which people judge their own competence. The two types of dispositional factors are normally considered to be orthogonal (Newton & Duda, 1999), and the predominance of a particular type of orientation among individuals varies depending on the sport context. Some recent research, however, emphasized interdependence of those concepts, i.e. their overlap (Harwood, 2002). A student who is predominantly task-oriented evaluates his/her success taking into account the self-reference criteria, and his/her success comes from the advancement in the development of skills as a result of effort (Barić, Cecić-

Erpić, & Babić, 2002). The person is focused on learning new skills, achieving personal goals, making progress and executing the given tasks. What the task-oriented student considers most important is the progress in the development of kinesiology skills which he/she evaluates solely in relation to his/her past achievements and experience. Participation in physical education classes is driven by intrinsic motivation patterns, the result of which is enjoyment, a greater sense of competence and greater persistence in kinesiology activities. In contrast, a student who is predominantly focused on performance and results assesses his/her personal achievement according to the normative criteria of evaluation. In this way, the formed goals encourage behaviour directed towards the attainment of conditions in which there is a possibility of social comparison. In this context, the student aims to be better in his/her performance than others. In addition, success is considered to be the result of superior ability, and such students believe that the effort they have to make in order to perform kinesiology activities and the level of ability are inversely proportional dimensions; that is, a major investment of effort is associated with a low level of skill and vice versa. The dominant motivational pattern is of the extrinsic type and the level of motivation depends on the result, awards and the like. It is important to point out that the types of behaviour are determined by certain target concepts. The students who are focused on the task express adaptive types of behaviour and they are willing to accept failure during performance. Those who are focused on results express maladaptive types of behaviour, hence they often choose either the tasks that are too easy or those that are too difficult to execute. In addition, such students are less diligent in performing the given tasks, and often give up their activities. The situational factors such as the physical education teacher, parents, peers, and sports heroes play an important role in determining the predominance of one type of goal orientation over another. It has been proved that students who are predominantly focused on the task have greater motivation in performing kinesiology activities, unlike the students who are predominantly focused on the result. Focusing on the result along with the dominance of orientation to the task can increase the sense of enjoyment in students performing kinesiology activities (Fox, Guadas, Biddle, Duda, & Armstrong, 1994). Furthermore, gender differences were found for the dimension of goal orientations focused on the result among male students (Bakirtzoglou, & Ioannou, 2011; Castillo, Balaguer, & Duda, 2002; Cetinić, 2004; Gano-Overway & Duda, 2001; Moreno Murcia, Cervelló Gimeno, & González-Cutre Coll, 2008). The results of this study could be of great importance to the introduction of emergency measures for the purpose of improving students' motivation for a more frequent implementation of physical activity in the school environment among the adolescent population in Croatia. A possible impact of increasing motivation in physical education classes can be reflected in an increase in their overall levels of physical activity, thus indirectly affecting a better health status of adolescents. The aim of this study was to determine the motivational patterns of high school students with respect to their goal orientation and examine if there are any differences between the groups of respondents, in this case the differences between male and female students of secondary school age,

given the level of goal orientation. Also, the aim was to determine whether those high school students exhibited gender differences in task-oriented activities and, also, in the activities that are focused on the result.

Methods

The random sample of respondents included a total of 211 high school students (80 female students and 131 male students) from two secondary schools on the island of Korčula (four-year programmes: grammar school, a computer technician for mechanical engineering and economist, and three-year vocational programmes: machinist, ship mechanic, electronic-mechanic and chef). The respondents were aged 14-17 (female students: M=15.55; SD=0.69; male students: M=15.86; SD=

0.74). The individual differences in the goal orientation variable of high school students were assessed by the questionnaire of target orientation - "Task and Ego Orientation in Sport Questionnaire - TEOSQ" (Duda et al., 1995, adapted by Barić, 2001). The questionnaire included two orthogonal dimensions: task orientation and result (ego) orientation, and comprised a total of 13 items, out of which six measured task orientation (e.g. "I feel most successful during a PE lesson when I learn a new skill by trying hard"). The remaining seven-item set focuses on the result orientation (e.g. "I feel most successful during a PE lesson when the others cannot do the tasks as well as I can"). While filling out the questionnaire, the participants responded to each item using a 5-point "agree-disagree" Likert type rating scale to indicate the extent to which they agree or disagree with each of the items on the scale (1=strongly disagree, 2=mostly disagree, 3=not sure, 4=mostly agree, 5=strongly agree).The survey was conducted anonymously and questionnaires were administered to all students at the same time, at the beginning of physical education lessons; the students participated in the study voluntarily and submitted a signed parental consent for their participation. The research was conducted in accordance with the 1964 Helsinki Declaration. One segment of statistical analysis was performed on gross results, while the other segment was conducted as follows: the gross results were condensed to target dimensions of the goal orientation on the basis of average values of the respective items. Subsequently, the obtained data were processed. Descriptive data for the items of the goal orientation dimension were calculated and the t-test was used to assess gender differences between the groups. The reliability of the dimension of goal orientation was tested by the Cronbach's alpha coefficient. Data processing was carried out by the STATISTICA (data analysis software system), version 7.1., and Stat Soft, Inc. (2005) program.

Results

As can be seen from Tables 1 and 2, both female and male students gave item 13 (E7) "I feel most successful during a PE lesson when I do my very best" the highest grade, while item 6 (E4) "I feel most successful during a PE lesson when others mess up, but I do not" the lowest average grade. This shows their homogeneity in the assessment

of these claims. Items 2 (T1), 5 (T2), 7 (T3), 8 (T4), 10 (T5) and 12 (T6), referring to task orientation, were highly rated by female high school students, with the average grade above 4. The following group of items obtained lower ratings by female students: 1 (E1), 3 (E2), 4 (E 3), 9 (E5) and 11 (E6).The mean scores were about 2.5 degrees on the Likert scale, and these items referred to the result/performance orientation.

Table 1

Descriptive data for the items of the goal orientation for female students (N_f=80)

I feel most successful during a PE lesson when…	N	M	Min	Max	SD	Skew	Kurt	Max D	K-S
1. (E1) I am the only one who can perform the task	80	2.61	1	5	1.37	0.35	-1.18	0.21	**p < .01**
2. (T1) I learn a new skill and it makes me want to practice more	80	4.24	2	5	0.75	-0.98	1.18	0.26	**p < .01**
3. (E2) I can do better than my friends	80	2.30	1	4	1.05	0.24	-1.12	0.20	**p < .01**
4. (E3) The others cannot do as well as I can	80	2.25	1	5	1.28	0.78	-0.50	0.24	**p < .01**
5. (T2) I learn something that is fun to do	80	4.24	2	5	0.93	-0.98	-0.08	0.31	**p < .01**
6. (E4) Others mess up but I do not	80	1.95	1	5	1.15	0.98	-0.13	0.28	**p < .01**
7. (T3) I learn a new skill by trying hard	80	4.21	1	5	0.91	-1.47	2.70	0.26	**p < .01**
8. (T4)) I work really hard	80	4.29	1	5	1.08	-1.71	2.44	0.33	**p < .01**
9. (E5) I score the most points/ goals/hits, etc.	80	2.91	1	5	1.31	0.06	-1.13	0.17	**p < .05**
10. (T5) Something I learn makes me want to practice more	80	4.53	1	5	0.73	-2.20	7.07	0.36	**p < .01**
11. (E6) I am the best	80	2.70	1	5	1.30	0,30	-0.99	0.19	**p < .01**
12. (T6) A skill I learn really feels right	80	4.34	2	5	0.81	-1.14	0.79	0.31	**p < .01**
13. (E7) I do my very best	80	4.54	1	5	0.84	-2.08	4.44	0.41	**p < .01**

Legend: E-ego goal orientation, T-task goal orientation, N – the number of participants, M-arithmetic mean, Min-minimum result, Max-maximum result, SD-standard deviation, Skew-skewness, Kurt-kurtosis, Max D-maximum distance, K-S- Kolmogorov-Smirnov Test, p-statistical significance, bold-significant aberration from a normal distribution

Similarly, male students (Table 2) gave the items 2 (T1), 5 (T2), 7 (T3), 8 (T4), 10 (T5) and 12 (T6), which were related to task orientation, the highest grade. Yet, the items related to ego orientation 1 (E1), 3 (E2), 4 (E3), 6 (E4), 9 (E5) and 11 (E6) were rated slightly higher by male students compared to their female counterparts. The minimum and maximum results of the values of the items, expressed by female respondents, encompassed the full range of response possibilities in 9 items (1-5), three items ranged from 2 to 5, and one item ranged between 1 and 4. Among male students, the range for ten items reached the maximum (1-5), and one item had a range of results from 2-5. On the whole, for most items the standard deviation

(SD) exceeded the value of one grade (larger than 1.00), which occurred mainly for items investigating ego orientation. Unlike female students, their male counterparts responded more consistently, particularly to issues relating to the focus on the task. These ratings show that both males and females are mainly oriented towards the task, which is particularly pronounced among female students. At the same time, male students were more focused on ego orientation/performance, which is probably due to their natural tendency to compete. The items of the questionnaire that are related to goal orientation statistically significantly deviated from a normal distribution of results regardless of the respondents' gender. However, those deviations were not big with respect to the size d coefficients, and it can be considered that they could not significantly affect the results. This is why parametric statistical procedures have been selected with proper justification to analyse the differences.

Table 2

Descriptive data for the items of the goal orientation for male students (N_m=131)

I feel most successful during PE lessons when…	N	M	Min	Max	SD	Skew	Kurt	Max D	K-S
1. (E1) I am the only one who can perform the task	131	3.14	1	5	1.32	-0.12	-1.06	0.15	**p < .01**
2. (T1) I learn a new skill and it makes me want to practice more	131	4.15	1	5	0.86	-1.17	1.4	0.27	**p < .01**
3. (E2) I can do better than my friends	131	3.37	1	5	1.11	-0.26	-0.64	0.19	**p < .01**
4. (E3) The others cannot do as well as I can	131	2.75	1	5	1.17	0.6	-0.69	0.18	**p < .01**
5. (T2) I learn something that is fun to do	131	4.13	2	5	0.88	-0.67	-0.46	0.25	**p < .01**
6. (E4) Others mess up but I do not	131	2.23	1	5	1.17	0.4	-0.49	0.20	**p < .01**
7. (T3) I learn a new skill by trying hard	131	4.12	1	5	0.98	-1.36	2.4	0.25	**p < .01**
8. (T4)) I work really hard	131	4.31	1	5	0.85	-1.24	1.4	0.30	**p < .01**
9. (E5) I score the most points/goals/hits, etc.	131	3.21	1	5	1.36	-0.19	-1.14	0.17	**p < .01**
10. (T5) Something I learn makes me want to practice more	131	4.12	1	5	0.91	-0.74	-0.09	0.26	**p < .01**
11. (E6) I am the best	131	3.18	1	5	1.49	-0.25	-1.33	0.18	**p < .01**
12. (T6) A skill I learn really feels right	131	4.04	1	5	0.93	-1.00	0.7	0.27	**p < .01**
13. (E7) I do my very best	131	4.43	1	5	0.89	-1.94	4.4	0.35	**p < .01**

Legend: E-ego goal orientation, T-task goal orientation, N-number of participants, M-arithmetic mean, Min-minimum result, Max- maximum result, SD-standard deviation, Skew-skewness, Kurt-kurtosis, Max D – maximum distance, K-S-Kolmogorov-Smirnov Test, p-statistical significance, bold-significant aberration from normal distribution

The subscales of the Task and Ego Orientation in Sport Questionnaire proved to be rather reliable for this sample (Table 3). The Cronbach's alpha coefficient was slightly higher for the task subscale. Male respondents yielded a Cronbach's alpha of 0.85 and females yielded a Cronbach's alpha of 0.82. Male respondents yielded a Cronbach's alpha of 0.73 for the ego subscale, and their female counterparts yielded a Cronbach's alpha of 0.77.

Table 3

The reliability of the subscales of the goal orientation (Cronbach's alpha N_m=131, N_f=80)

	TASK	EGO
female	0.85	0.73
male	0.82	0.77

Legend: TASK- task goal orientation, EGO- ego goal orientation

Table 4 shows the average grade of male respondents which amounted to 4.31 for items related to task-orientation dimension. Their female counterparts' average grade was 4.14. The range of results regarding the dimension of goal orientation was 3.17 for both female and male respondents. High scores on the goal orientation dimension show that there were not any gender differences: both female and male students were focused on their tasks/performance. Students are more motivated to work if they know what goals they are working towards. As for the item referring to the dimension of the focus on the result/performance, the female respondents' average score was 2.75, whereas their male counterparts' average score was 3.19. The range of results was 3.42 for female respondents, and it was 3.71 for their male counterparts. It may be noted that male students are more focused on the result/performance than female students, but their primary orientation is also task-oriented.

Table 4

Descriptive data for the subscales of goal orientation for female (N_f=80) and male students (N_m=131)

Gender	Subscale of goal orientation	AS	Min	Max	SD	Skew.	Kurt.	Max D	K-S
Female (N=80)	TASK	4.31	1.83	5.00	0.66	-1.32	2.05	0.15	p < .10
	EGO	2.75	1.29	4.71	0.74	0.1	-0.41	0.07	p > .20
Male (N=131)	TASK	4.14	1.83	5.00	0.65	-0.84	1.11	0.12	p < .10
	EGO	3.19	1.29	5.00	0.80	-0.03	-0.13	0.06	p > .20

Legend: EGO-ego goal orientation, TASK-task goal orientation, N-number of participants, M-arithmetic mean, Min-minimum result, Max-maximum result, SD-standard deviation, Skew-skewness, Kurt-kurtosis, Max D- maximum distance, K-S- Kolmogorov-Smirnov Test, p-statistical significance

The results of this study pointed to differences between male and female respondents regarding goal orientation (Table 5), with significance level p<0.5, which can be observed in 4 items related to the result-oriented dimension. Also, there were two items in which differences in the task-oriented dimension were observed.

Table 5

Gender differences regarding items of goal orientation obtained using the t-test (N_m=131, N_f=80)

	M_f	M_m	t-value	df	P	N_f	N_m	SD_f	SD_m	F-ratio	p
E1	**2.61**	**3.14**	**-2.8**	**209**	**0.01**	**80**	**131**	**1.37**	**1.32**	**1.08**	**0.70**
T1	4.24	4.15	0.8	209	0.43	80	131	0.75	0.86	1.31	0.19
E2	**2.30**	**3.37**	**-6.9**	**209**	**0.00**	**80**	**131**	**1.05**	**1.11**	**1.12**	**0.58**
E3	**2.25**	**2.75**	**-2.9**	**209**	**0.00**	**80**	**131**	**1.28**	**1.17**	**1.19**	**0.38**
T2	4.24	4.13	0.8	209	0.40	80	131	0.93	0.88	1.12	0.57
E4	1.95	2.23	-1.7	209	0.09	80	131	1.15	1.17	1.05	0.83
T3	4.21	4.12	0.7	209	0.50	80	131	0.91	0.98	1.15	0.49
T4	4.29	4.31	-0.1	209	0.89	80	131	1.08	0.85	1.62	0.01
E5	2.91	3.21	-1.5	209	0.12	80	131	1.31	1.36	1.07	0.76
T5	**4.53**	**4.12**	**3.4**	**209**	**0.00**	**80**	**131**	**0.73**	**0.91**	**1.57**	**0.03**
E6	**2.70**	**3.18**	**-2.4**	**209**	**0.02**	**80**	**131**	**1.30**	**1.49**	**1.33**	**0.17**
T6	**4.34**	**4.04**	**2.4**	**209**	**0.02**	**80**	**131**	**0.81**	**0.93**	**1.32**	**0.18**
E7	4.54	4.43	0.9	209	0.38	80	131	0.84	0.89	1.13	0.55

Legend: M_f-arithmetic mean of female students, M_m-arithmetic mean of male students, df-freedom degrees, P-statistical significance of t-test, N_f-number of female students, N_m-number of male students, SD_f-standard deviation of female students, SD_m-standard deviation of male students, p-statistical significance of F test, T-items that are task-oriented, E-items that are ego-oriented, bold-statistical significant difference concerning significance level of p<0.05

The results regarding the difference between male and female respondents in the dimension of goal orientation (Table 6), point to differences (significance level of p <0.1) in the result/performance dimension. Male students are more focused on the result (M_m =3.19) compared to their female counterparts (M_f = 2.75).

Table 6

Gender differences regarding the subscales of goal orientation obtained using t-test (N_m=131, N_f=80)

	M_f	M_m	t-value	df	P	N_f	N_m	SD_f	SD_m	F-ratio	P
TASK	4.31	4.14	1.7	209	0.08	80	131	0.66	0.65	1.03	0.87
EGO	**2.75**	**3.19**	**-3.9**	**209**	**0.00**	**80**	**131**	**0.74**	**0.80**	**1.17**	**0.45**

Legend: M_f-arithmetic mean of female students, M_m-arithmetic mean of male students, df-freedom degrees, P-statistical significance of t-test, N_f-number of female students, N_m-number of male students, SD_f-standard deviation of female students, SD_m-standard deviation of male students, p- statistical significance of F test, T-items that are task-oriented, E-items that are ego-oriented, bold- statistical significant difference concerning significance level of p<0.01

Discussion

Recently, kinesiologists, psychologists, parents, health professionals and the general public have been paying more attention to reasons why young people take part in physical activity or give up the involvement in all forms of kinesiology activities. Physical activity positively affects the psychological condition and physical fitness of the body. It improves coordination, velocity, flexibility, balance, and significantly affects the improvement of functional capacities (Petrović, 2012). Moreover, it can also improve physical, mental and emotional health (Li, Lu, & Wang, 2009). On the other

hand, the absence of the amount of physical activity recommended by the WHO (60 min/day of moderate- to high-intensity exercise) has a number of negative effects, such as emergence of numerous risk factors which can cause various diseases (Li, Lu, & Wang, 2009), or the incidence of overweight and obesity (Dinger, Brittain, & Hutchinson, 2014). The results of previous research have revealed that young people are not sufficiently physically active in order to experience the positive effects of physical activity (Lutz, Karoly, & Okun, 2008). Apart from earlier research findings, it has also been observed that the level of physical activity significantly decreases during adolescence (Wickel, Eisenmann, & Welk, 2009; Armstrong, Welsman, & Kirby, 2000), which poses a serious problem. Therefore, it is necessary to take goal-oriented actions in order to provide high school students with recommended levels of health-oriented physical activity. Since student motivation towards PE is considered to be one of the major determinants of total physical activity (Standage, Gillison, Ntoumanis, & Treasure, 2012), understanding the motivational patterns can help high school students willingly participate in kinesiology activities and lower the dropout rate of the adolescents from physical exercise. According to Nicholls's theory of goal orientation (Duda et al., 1995) and the results of previous research, personal goals affect the students' way of thinking during PE classes. Also, they have a great impact on his/her feelings and behaviour in the situation of achievement during PE classes. Depending on whether the set objectives have been fulfilled, the student will assess himself/herself as being successful or unsuccessful, and accordingly, will experience the feeling of competence, which affects the level of his/her self-confidence. From the results of the descriptive statistics of the Task and Ego Orientation in Sport Questionnaire – TEOSQ items, it can be concluded that both male and female students feel best when they do the best of their abilities while performing kinesiology activities. Besides, neither male nor female students are satisfied when other students make mistakes and do not want to build their success on other students' mistakes. Anderson and Dixon (2009) obtained similar results. Both male and female respondents who participated in their study reported that they were not happy when their fellow students made mistakes. Besides, learning new skills motivates them to persevere even further in exercising. The acquisition of new skills entertains them since they challenge their ability to apply the learned principles to new experiences. Also, while exercising, they invest a lot of effort in order to learn something new. Hence, one could state that male and female students enjoy doing their tasks, that they make efforts to accomplish them successfully, that is, do their best to enhance their performance. In addition to this, mastering new skills increases their motivation for learning new skills. Furthermore, their assessment of individual success, that is, personal competence in a situation of achievement is based on self-reference criterion, and success is the result of advancement in the development of the skill as a result of invested effort (Barić, Cecić-Erpič, & Babić, 2002). What motivates female students less is the fact that they are the only ones capable of performing a certain motor task, or that they perform it better than other

female students. Also, female students' motivation decreases when other students are not as successful as they are, or when other students' performance of some kinesiology activities is superior. This all suggests that female students considered comparison with other male and female students less important than their personal advancement. The target orientation set in this way is positive because it has been proved that an increase in competitive goal orientation could produce anxiety, a feeling of tension and pressure (Duda et al., 1995), and over a longer period it could lead to giving up these activities. In contrast, male students gave the items associated with comparison to other students and, also, those related to exhibiting superior motor activities higher scores since they considered them important for increasing student motivation while executing the given motor tasks during PE classes. What motivates the students, apart from making personal progress by enhancing their own skills and abilities, are both a superior performance and the winning score. Such target orientation of male students can be attributed to their natural inclinations towards competitiveness, which is enabled by kinesiology environment. Competitiveness generates excitement and a large number of students consider it stimulating. That is the reason why so many students enjoy doing kinesiology activities during their PE classes. Hence, competitiveness is believed to be an important motivational factor. Furthermore, the results of research conducted by Kondric, Sindik, Furjan-Mandić, and Schiefler (2013) suggest that males use the kinesiology environment to gain popularity among their peers, unlike females, who believe that kinesiology environment supports relaxation, which is in line with traditional male/female stereotypes and roles. Task and ego subscales of the Goal Orientation Questionnaire proved to be reliable for this sample. Cronbach's alpha coefficient for the task subscale is somewhat higher compared to that for the ego subscale. The obtained reliability coefficients are consistent with coefficients of reliability of subscales used in previous research. In the research carried out by Duda et al. (1995), who used a sample of male volleyball players, the Cronbach's alpha calculated for dimensions of TASK and EGO was 0.83 and 0.78, respectively. Furthermore, Newton and Duda (1999) obtained Cronbach's alpha for TASK and EGO of 0.86 and 0.81, respectively, on a sample of female volleyball players. Based on these results; we can conclude that TEOSQ questionnaire, which proceeded from the adaptation of the original questionnaire, worked well on a sample of Croatian high school students. Georgiadis, Biddle, and Auweele (2001) had been researching goal orientation on a sample of top cricket players. They recognized four profiles with regard to domination of one or the other dimension of the target orientation, the dominance of both dimensions or the absence of the dominant dimension. Profile 1 defines a person who is highly oriented towards the task and result, the one who has clearly identified the goals of achievement. Such a person is motivated to execute motor tasks by obtaining good results and by enjoying kinesiology activity. Social approval has a twofold significance: a demonstration of superior performance and achievement of personal progress due to the invested effort. Profile 2 determines a

person who has low orientation towards the task and towards the result. Individuals with this profile have the least desirable motives for achievement in pursuing kinesiology activities. They do not relate success either to task orientation or to result orientation. In addition, they rarely enjoy kinesiology activities and they are often bored. Besides, they express a full range of negative emotions, do not behave appropriately and have negative thoughts. Profile 3 defines a person who is predominantly focused on the result, and is less task-oriented. Individuals with this profile are directed towards demonstration of their abilities based on a better performance than others, and "to be competent means to be better than others". They believe that success is a result of superior abilities. Such athletes think that the effort that is invested in sports activity and the level of ability are inversely proportional dimensions; i.e., a major investment of effort is associated with low levels of skills and vice versa. The athletes with this profile believe that participation in kinesiology activities is a way of expressing their social status. Profile 4 defines a person who is predominantly directed towards the task and is less result-oriented, a person who believes that learning new skills is as important as mastering the already acquired ones. The evaluation of his/her own success is based on self-reference criteria. Success is a result of advancement in skills development due to hard work and effort, and the value of achievement and pride increases proportionally to the amount of the effort invested. Participation in kinesiology activities is driven by intrinsic motivational patterns, the result of which is enjoyment, a greater sense of competence and greater perseverance in executing motor tasks. According to this classification, and taking into account the results related to dimensions of the goal-orientation, it can be noted that female students were predominantly focused on the task, and less focused on the result (which matches personality traits described in personality Profile 4, Georgiadis et al., 2001). Male students, on the other hand, were predominantly focused both on the task and the result (which matches the traits described in Profile 1, Georgiadis et al., 2001). Also, they set their goals and achievements more strictly and were motivated by good results and enjoyment of kinesiology activity during PE classes. It can be concluded that both male and female students have desirable profiles of goal orientation in PE lessons. Similar results were obtained by Castillo et al. (2002), who conducted research on a sample of 967 Spanish adolescents aged 11-16, where the results of male students matched the personality traits described in Profile 1, while the results of female students matched the traits belonging to Profile 4. Gillet and Vallerand Pearl (2009) investigated the relationship between different motivational profiles and performance of motor tasks. They concluded that individuals with a less self-determined profile (those with moderate motivation or unmotivated individuals) showed a worse performance of motor tasks and obtained worse results compared to individuals with a more pronounced motivation. It could be concluded that, in this case, the male students who are highly oriented both towards the task and the result will achieve better results in motor performance, in comparison with female students.

As already mentioned in *Introduction*, it is important to note that personality traits described in Profiles 1 and 4 lead to desirable and positive behaviours of students, which can help the PE teachers accelerate student learning during PE lessons significantly. Gender differences obtained by the t-test for items of The Goal Orientation Questionnaire (Table 5) showed that male respondents exhibited a statistically significant difference regarding the items: "I am the only one who can do the play or skill"; "I can do better than my friend"; "The others cannot do as well as I can" and "When I am the best" compared to their female counterparts. Female respondents exhibited a statistically significant difference regarding the items "A skill I learn really feels right", as well as, "Something I learn makes me want to practice more" in comparison with their male counterparts. Among the above stated significant differences, male students gave the items related to result-oriented activities a higher average grade, whereas female students gave the items related to task-oriented activities a higher average grade. Gender differences obtained by the t-test for The Goal Orientation Questionnaire (Table 6) indicate that male students were more result/performance-oriented compared to their female counterparts. Both male and female students were predominantly focused on the task. However, gender differences regarding this dimension were not statistically significant. The lack of gender differences in goal orientation, with a greater result orientation of male respondents, was also found in the research carried out by Gill, Kelly, Martin, and Caruso (1991), and Marsh (1994). Regarding the goal orientation, both male and female students were predominantly focused on the task, which is a positive motivational pattern because it has been shown that people of such goal orientation avoid stressful situations and develop better coping mechanisms (Cumming & Hall, 2004; Kristiansen, Roberts, & Abrahamsen, 2007). In a survey conducted by Bakirtzoglo and Ioannou (2011) on a sample of 200 high school students aged 14-16, it was established that male students showed greater focus on the results than their female counterparts. Gender differences in favour of male gender on the dimension of goal orientation towards the result were also obtained by the research conducted by Belli (2015). In the research carried out by Moreno Murcia et al. (2008) on a sample of 413 young athletes aged 12-16 years, gender differences were found in both dimensions of goal orientation. Male respondents showed a greater focus on the result than females, whereas female respondents showed a greater focus on the task compared to their male counterparts. In Croatia, the research carried out by Cetinić and Vuk (2007) on a sample of 100 high school students did not show statistically significant differences on the dimensions of goal orientation. However, in the research carried out by Barić, Horga, and Cetinić (2004) on a sample of 323 athletes aged 13-17, the difference in gender was determined on the goal dimension focused on the result in favour of male basketball players, in comparison with female basketball players. Taking into account the results obtained in the present study and the results of previous findings, it can be concluded that there are gender differences in goal orientation and such differences can affect experience

of enjoyment during PE classes and encourage other forms of physical activity outside the school environment. However, if the students show undesirable motivational patterns, the PE teacher should apply procedures that would influence the change of such patterns. This was not the case in the present research, but there is room for this level of motivation to increase. Therefore, Mandigo and Holt (2002) designed a strategy called OPTIMAL to increase motivation among children. Teachers can use this framework to enhance children's intrinsic motivation, and the acronym OPTIMAL stands for: *O-opportunities for success; P-perceptions of choice; T-task mastery; I-inclusion teaching style; M- motivate through intrinsic elements; A-abilities awareness and L-like to do it.* If students possess the necessary competences, they will be motivated to execute the given motor tasks. Involvement of students in the teaching process by selecting methods of work and methodological organizational forms of work will enhance their motivation to pursue further learning. In this way, they will perform a range of tasks more effectively and efficiently. Directing students to acquire and improve their motor tasks and not only to achieve good results will still further enhance motivation in Physical Education classes. Furthermore, by taking an inclusive approach, a PE teacher needs to plan a number of different levels of performance of the same task, so that a student can choose the task that suits his/her abilities and go to the second level only when the first one has been adopted. Additionally, a teacher should abandon the system of punishment and rewards for students since it can be demotivating. He should rely on feedback to adjust the teaching style, thus increasing the intrinsic motivation of students. Of course, the teacher should take into account a variety of student characteristics when setting up motor tasks in order to avoid those tasks that are too demanding. Also, the teacher should survey students for their activity preferences to identify activities that appeal to a larger number of students.

Conclusion

The results of the present study point to gender differences in the result/performance orientation. Although male students are more result-oriented than female students ($t = -3.9$; $p = 0.00$), both genders are dominantly task-oriented. The fact that male students are more focused on the result than female students can be explained by higher normative criteria in the evaluation of success in performing kinesiology tasks and a more pronounced competitive spirit in males. The resulting motivational pattern (high orientation to the task and somewhat inferior orientation to the result) of male and female students is positive because it leads to adapted forms of behaviour in PE classes. In addition, it affects the persistence of male and female students in performing kinesiology activities. It also meets performance expectations and students' learning needs. It is concluded that this sample of high school students has a desirable goal orientation which encourages male and female students to learn new skills, execute tasks in PE classes, thus contributing to their personal progress. In addition, the practical value of this research on goal orientation of male and female students within

kinesiology context lies in the fact that it can contribute to the learning outcomes of the objectives set in global and operational curricula and syllabi of Physical Education.

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Spolne razlike u ciljnoj orijentaciji srednjoškolaca na satima Tjelesne i zdravstvene kulture

Sažetak

U okviru kineziološkim aktivnosti, a uzimajući u obzir Nichollsovu teoriju ciljne orijentacije, razlikujemo usmjerenost na zadatak odnosno razvoj vještine i usmjerenost na izvedbu odnosno rezultat, prema kojoj učenici prosuđuju vlastitu kompetentnost. Osnovni cilj i značaj rada bio je utvrditi postojanje spolnih razlika u usmjerenosti prema zadatku i prema rezultatu kod učenika srednjih škola. Uzorak ispitanika oblikovan je od ukupno 211 učenika i učenica u dobi od 14 do 17 godina (N=211, Nž=80, Nm=131). Individualne razlike u ciljnoj orijentaciji srednjoškolaca procijenjene su Upitnikom ciljne orijentacije u sportu-TEOSQ (Duda i sur., 1995, adaptirala za hrvatsku populaciju Barić, 2001). Izračunati su osnovni deskriptivni pokazatelji, a t-test je primijenjen za ispitivanje razlika u ciljnoj orijentaciji s obzirom na spol. Rezultati pokazuju da postoje spolne razlike u usmjerenosti na rezultat. Iako su učenici više usmjereni na rezultat od učenica (t=-3.9; p=0.00), rezultati ukazuju na to da su i učenici i učenice dominantno usmjereni na zadatak. Zaključuje se da srednjoškolci imaju poželjnu ciljnu orijentaciju koja učenike usmjerava prema učenju novih vještina, postizanju osobnog napretka, kao i izvršavanju postavljenih zadataka.

Ključne riječi: *adolescenti; motivacija; spol; usmjerenost na rezultat; usmjerenost na zadatak.*