GOAL ORIENTATION AND INTRINSIC MOTIVATION FOR PHYSICAL EDUCATION: DOES PERCEIVED COMPETENCE MATTER?

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Abstract:

The aim of the study was to examine the relationship between perceived competence, intrinsic motivation and goal orientation in children regularly attending physical education (PE) classes and to study the differences between boys and girls of different ages in this respect. The results obtained on the sample of 594 Croatian pupils showed positive correlation of perceived competence with goal orientation, enjoyment and interest in PE. In general, girls were more intrinsically motivated and task-oriented for PE than boys. Highly competent children, especially competent boys, enjoyed PE better, worked harder and were more task- and ego-oriented than less competent children. Girls who perceived themselves as less competent were in general less motivated for PE, and their motivation decreased with age. MANOVA indicated that children who felt more competent showed more interest, put more effort into PE classes and were more task-oriented; children's intrinsic motivation and goal orientation depended on age. The older pupils were more intrinsically motivated for PE and were both more task- and more ego-oriented than the younger ones. Interaction between age and perceived competence had a significant effect on the perception of interest and enjoyment in PE, along with the increase of PE contents complexity, the role of pupils' perceived competence increases. Perceived competence plays an important role in goal orientation and enjoyment in PE classes and should be emphasized within the educational system in order to promote healthy lifestyle habits.

Key words: *motivation, competence, task, ego, children, achievement, physical education*

Introduction

Increasing pupils' motivation for learning is one of the important goals of every educational process, including physical education (PE). Pupils' endeavors and their effort to engage in tasks with enthusiasm play a significant role in the successfulness of the educational process. Since motivation affects students' engagement and their behaviors (Chen, 2001), it has been studied as one of the key factors in influencing learning outcomes. Among many different theories that are employed to describe achievement behavior, social cognitive approach prevails in the current studies of motivation. The theory's main goal is to describe how thoughts, different cognitions and emotions govern the achievement behavior (Papaioannou & Goudas, 1999).

Bandura's Social Cognitive Theory assumes that human beings are self-organizing, proactive, self-reflecting, and self-regulating agents (Li & Lee, 2004). Person's functioning in every situation is a result of a dynamic interaction of personal, behavioral and environmental influences. The main concept of social cognitive theories is self-efficacy beliefs (McAuley, 1992) implying expectations and values that an individual attaches to different goals and achievement activities (Roberts, 1992; Treasure, 2001). Within this broad theoretical framework there are several theories that explain motivation in achievement contexts related to sport and exercise. Achievement Goal Theory (Nicholls, 1989; Roberts, 1992; 2001) and Cognitive Evaluation Theory (Deci & Ryan, 1985) explain motivational concepts used in this study.

Achievement Goal Theory

The Achievement Goal Theory framework (Nicholls, 1989) assumes that children's motivation to learn is presumably determined by their goal orientations and the perceived motivational cli-mates. This theory has been used to describe moti-vational concepts in competitive sports (e.g.

Duda, 1992, 1993, 2001; Roberts, 1992, 1993, 2001;) as well as in educational settings (e.g. Ames, 1992a, 1992b; Ames & Ames, 1989; Nicholls, 1989, 1992). The goal of action in achievement settings, such as physical education classes, is to demonstrate ability. The concept of ability is defined by two achievement goals: task or learning and ego or performance (Nicholls, 1998). These two goal perspectives, i.e. dispositional goal orientations, refer to the way an individual construes his/her level of competence and consequently defines success in specific settings. Motivation is a function of dispositional characteristics of an individual (i.e. pupil's goal orientation) and situational characte-ristics of an environment (i.e. influence of the teacher, schoolmates, parents) (Barić, 2004). An individual is comprehended as an intentional being who aims to be autonomous, to manifest his/her own competence through rational behaviour, and to make social relationships within the achievement setting.

Pupils' comprehension of success and failure depends on goals that have been set previously and that enable the assessment of competence (Duda, 1992). The explanation of motivation-related behavior refers to the inner need for decision-making, the need for independence and the need for establishing social relationships (Deci & Ryan, 1985). According to this theory, pupils model their motivational patterns based on the interpretation of their own behavior in the context of environmental and social factors. What kind of influence the interpretation will have on the motivational process depends on its objective characteristics and psychological effects that an activity in question has for an individual (Barić, 2004; Deci & Ryan, 1985; Duda, 1992). Results of numerous studies have shown (i.e. Duda, 1992, 2001; Duda, Chi, Newton, Walling, & Cately, 1995; Nicholls, 1989, 1992; Roberts, 1993) that dispositional (i.e. goal orientation) and situational (i.e. motivational climate) factors affect the development of individual's motivational structure.

Achievement Goal Theory presumes the occurrence of two dominant goals that influence individual's achievement, namely, success or a lack of success (Nicholls, 1989). These goal perspectives are task and ego orientations. As task and ego orientations are orthogonal factors, they represent two different and opposite approaches towards the subjective evaluation of individual's achievement (Roberts, 1993; Newton & Duda, 1995). Pupils with a task orientation use self-referenced criteria to evaluate their own competence, for mastery demonstration, to seek possibilities for improving their existing abilities and skills and to learn new ones. These students feel successful after high levels of effort and mastery of a task (Moreno-Murcia, Sicilia, Cervello, Huèscar, & Dimitru 2011). Task-oriented pupils prioritize development of the task, and they conceptualize progress exclusively through comparison with their own achievements and experiences (Biddle, Soos, & Chatzisarantis, 1999; Papaioannou & Goudas, 1999). Pupil's motivation for being active in educational process is influenced by his/her internal motives, growing sense of competence and enjoyment.

Pupils with ego orientation tend to achieve positive evaluation of their current abilities based on the social comparison and normative criteria (Papaioannou & Goudas, 1999). In this context, being successful means to be better than others (i.e. classmates). One's success is defined through one's superior capabilities and not through effort. In an ego-oriented setting extrinsic motivation prevails, while the level of motivation depends on the results, rewards and similar factors.

There has been extensive empiric evidence (e.g. Ames, 1992a, 1992b; Nicholls, 1989, 1992) that task orientation leads towards higher quality learning and persistence in the educational process. Task orientation, compared to ego orientation, is associated with more positive achievement behaviors and emotions in PE context (i.e. high effort, persistence and enjoyment and low levels of boredom) (e.g. Barkoukis, Ntoumanis, & Thøgersen-Ntoumani, 2010; Thomas & Barron, 2006).

Cognitive Evaluation Theory

According to Cognitive Evaluation Theory, intrinsic motivation is the "innate, natural propensity to engage in one's interests and exercise one's capacities through seeking and conquering optimal challenges" (Deci & Ryan, 1985, p. 43). Intrinsic motivation is considered to be an inherent tendency to seek out novelty and challenges, to extend and improve one's capacity, to explore and to learn (Ryan & Deci, 2000). This natural inclination towards assimilation, mastery, spontaneous interest and exploration is essential for cognitive and social development, and represents a principal source of enjoyment and vitality in life (Csikszentmihaly & Rathunde, 1993). Social and environmental factors may either facilitate or undermine intrinsic motivation; environment affects person's expression of inherent intrinsic motivation – it will flourish if the circumstances permit it (Ryan & Deci, 2000).

The effect of events that initiate or regulate behavior in motivation and motivationally relevant processes is not determined by the objective characteristics of the situation, but rather by its psychological meaning to an individual (Deci & Flaste, 1995; Deci & Ryan, 1985). Situational factors affect motivation through their impact on individual's perceptions of competence, autonomy and relatedness, which are considered the basic human psychological needs. An individual constructs his/her reality under the influence of these needs and the opportunities to fulfill them. The level of perceived competence,

the perceived locus of causality and the feeling of belongingness and connectedness with others, are descriptors of a person, not of environmental features. Depending on the relative salience of these aspects to the participant, a person will interpret an event as informational, controlling or motivating and will, or will not, engage himself/herself in it. These processes are influenced by the participant's previous experience, sensitivity and individual difference variables. Altogether, a person uses all environmental signs in a particular situation to shape internal construction of motivationally relevant inputs (Deci & Ryan, 1985). They represent incentives both for the engagement in an activity and for putting an effort into activity participation.

Both the theory and research emphasize the role of motivation and personal competence beliefs in determining the achievements and gendered patterns of achievement behaviors. Considering the influence of gender on motivation, there is empiric evidence both for gender differences and for gender similarities (Hyde & Durik, 2007). Gender can be considered as an individual difference variable as well as a stimulus variable (Deaux & Major, 1987). Considering gender in relation to competence and motivation actually means considering how an individual responds to others, to the feedback that he/she receives from the environment and how in turn all of the previously mentioned affects motivation and feelings of competence. Due to gender segregation in childhood and differentiation of activities, boys and girls have different success experiences that contribute to their motivation and build their sense of competence in a different way (Berk, 2010). Boys develop their sense of competence in active and competitive domains such as sport. Girls, on the other hand, practice communication and maintaining stable relationships as well as the building of their sense of competence in social relations. The development of competence beliefs is a process that is domain-specific. Competence beliefs are shaped through the socialization process where the influence of different agents of socialization (e.g. parents, siblings, school, coaches) has to be considered. Similar patterns of gender differences in motivational processes were also confirmed in several studies conducted in a PE setting (e.g. Ferer-Caja & Weiss, 2000, 2002). Cecić Erpič, Zabukovec, and Boben (2005) report significant gender differences in motivation. Adolescent boys express higher levels of external and internal motivation in comparison to their female peers. After studying the means of motivation, Černohorski (1998) found that girls were motivated for exercising by having fun and being productive, whereas boys highly evaluated prizes, competitiveness, popularity and actions.

Gender differences in motivation structure have also been identified. Weinberg and colleagues (2000) confirmed the domination of extrinsic motives for males and intrinsic motives for sport participation of females. Brustad (1996) showed gender differences in motives for physical activity participation in the American pupils aged 10 and 11 years. Boys accentuated attraction of physical exertion, liking of exercise and peer acceptance in physical activity, while girls found these motives to be less important. Also, girls perceived themselves as less competent for sport. Similar results were obtained in a study that was carried out in Slovenia. Adolescent girls had more negative attitudes towards competitive contents of PE than boys (Škof & Boben, 2005). Studying attitudes towards endurance activities in PE, Škof and associates (Škof, Cecić Erpič, Zabukovec, & Boben, 2002; Škof, Cecić Erpič, Boben, & Zabukovec, 2004) found several gender differences. In comparison to boys, adolescent girls considered endurance activities to be a more important contributor to health and well-being. At the same time, girls were significantly more discouraged by fatiguing activities in PE. Hein and Koka (2007) as well as Hagger, Biddle and Wang (2005) demonstrated that boys tended to be more interested in PE than girls. Boys, more frequently than girls, perceive their teacher as providing more positive feedback, they feel more competent and at the same time put more effort into PE classes participation than girls. It seems that girls do not perceive PE classes as the best environment for demonstrating competence. This is congruent with the previously mentioned developmental differences and can cause decrement of motivation. Several studies (i.e. Cecić Erpič, Boben, Škof, & Zabukovec, 2002; Prochaska, Sallis, Slymen, & McKenzie, 2003; Škof, et al., 2004) have shown that level of interest and enjoyment in PE significantly declines with age. Higher motivation for PE and a higher level of competence in older age is typical for pupils with sporting experience (Goudas, Dermitzaki, & Bagiatis, 2001). It seems that doing sport from childhood onwards can serve as a protective factor for maintaining motivation for sport and exercise at a higher level for a longer period of time.

Studying motivational structure and motivational processes is important for addressing physically active lifestyle among children and adolescents. Since physical education plays a significant role therein, classes have to be enjoyable and interesting in order to promote healthy lifestyle. The aim of the study was therefore to examine the relationship between perceived competence, enjoyment and interest for PE and goal orientation in Croatian children regularly attending physical education classes at school. The second aim was to study

the differences between boys and girls of different ages in this respect. Positive relationship between the level of perceived competence, enjoyment in PE, and task goal orientation was presumed. Also, significant differences in enjoyment and goal orientation level with regard to age, gender and level of competence were expected. More competent children were expected to enjoy PE classes better than children who felt less competent for these classes. This is expected to be especially true for younger children and for boys.

Methods

Participants

The sample consisted of 594 Croatian pupils of different schools that regularly attended PE classes. According to the curricula, two hours of PE per week are mandatory in Croatian primary and secondary schools. The sample was divided into two subsamples with regard to age (younger schoolchildren: 11-14 yrs, older schoolchildren: 15-18 yrs), gender and level of perceived competence (lower and higher competence) (see Table 1). The level of competence was determined according to the median value. The children whose mean value of self-perceived competence was lower than the median (*Me*=4.125) represented the lower competence group and the children whose evaluations of their competence were above the median represented the higher competence group.

Table 1. Overview of sample distribution (frequencies)

		Competence		
Gender	Age	lower	higher	total
Female	younger	127	62	189
	older	49	73	122
	total	176	135	311
Male	younger	85	59	144
	older	36	103	139
	total	121	162	283

Instruments and variables

Individual differences in goal orientations were assessed with the Croatian version of *Task and Ego in Sport Orientation Questionnaire* (CTEOSQ; Barić & Horga, 2007; Duda, et al., 1995). It consists of two orthogonal dimensions, represented by task and ego goal orientation. These dimensions showed adequate reliability and validity in the past research studies in sports contexts as well as in this study (Cronbach's alpha coefficient for the task subscale was .88, and for the ego subscale .86). Six items represented task orientation (i.e. 'I learn a new skill by trying hard') and seven items represented ego orientation (i.e. 'I can do better than my friends').

The level of participants' intrinsic motivation was measured by enjoyment and interest in PE classes subscale that is a part of the 16-item Croatian version of *Intrinsic Motivation Inventory* (IMI; McAuley, Duncan, & Tammen, 1989; Barić, Cecić Erpič, & Babić, 2002). According to McAuley et al. (1989) intrinsic motivation is considered as an additive function of three underlying dimensions which are positive indicators of intrinsic motivation: interest/enjoyment (I/E; i.e. 'I enjoyed this sport activity very much'), perceived competence, (PC; i.e. 'I think I am pretty good in this sport'), effort/importance and pressure/tension. The latter two dimensions were excluded for the purpose of this study. The former was excluded due to the different conceptualization of intrinsic motivation construct, according to which the amount of effort invested in an activity is a consequence, not an antecedent of intrinsic motivation (Markland & Hardy, 1997). The latter, i.e. pressure/tension dimension, was excluded as it is considered a negative indicator of intrinsic motivation. In this study the level of intrinsic motivation was estimated by interest/enjoyment subscale only, while a perceived competence was used as a classification variable. The internal consistency of the enjoyment/interest and perceived competence determined by Cronbach's alpha coefficients was as followed: I/E=.83 and PC=.74. It is a self-reported measure and the participants responded on a 5-point Likert type scale, ranging from strongly disagree (1) to strongly agree (5). The items' composite scores (mean values) represented the goal orientation and intrinsic motivation dimensions.

Data analysis

The data was processed with SPSS for Windows, version 11.0 and statistical significance was set at 5%. Descriptive statistics and correlation coefficients were computed. Three–way factorial multivariate analysis of variance [2(age) x 2(gender) x 2(competence) MANOVA] was performed to explore the differences in participants' intrinsic motivation and goal orientations.

Procedure

All the participants voluntarily took part in the study. Before the tests were administered by a psychologist, the teachers collected the written consents from the parents and school principals. The data were collected in a group setting prior to or after a PE class. Each child had a right to terminate participation in the study at any time. Anonymity and confidentiality of responses were guaranteed. The measurement took approximately 20 minutes on average.

Results

Descriptive statistics of all variables are presented in Tables 3 and 4. The results showed that perceived competence significantly correlated with task and ego goal orientation as well as with enjoyment/interest in PE, despite the fact that the values of correlation coefficients were not high (Table 2). When correlations were computed for boys and girls separately, the results showed a similar pattern. Perceived competence significantly correlated with task goal orientation and enjoyment. The significant correlation between perceived competence and ego goal orientation was obtained only for boys (Table 2).

The results showed that children's motivation for PE was moderately high. In general, children were more task- than ego-oriented. According to 2x2x2 MANOVA, there was a statistically significant difference in task, ego and interest/enjoyment level between girls and boys, younger and older children, and between children who differ in their perceptions of competence (Table 4). In comparison to their younger peers, older children enjoyed more in PE classes, and were more task- and ego-oriented (see Table 4). As for gender, the girls scored significantly higher on scale measuring task orientation. The children who perceived themselves as highly competent for PE enjoyed in PE classes significantly more and were more task-oriented than those who perceive themselves as less competent. As no significant interaction between gender, age and competence was obtained, the presented results can be considered as a general trend.

Table 2. Correlations between perceived competence, enjoyment and goal orientation

	Perceived competence		
	total	boys	girls
Interest/enjoyment	.67**	.66**	.67**
Task goal orientation	.45**	.40*	.52**
Ego goal orientation	.09*	.15*	.03

** p<.01; * p<.05

Table 3. Descriptive parameters (M, SD) of interest/enjoyment and goal orientation variables with regard to age, gender and perception of competence

Variable	*Age*		*Gender*		*Competence*	
	younger (n=333)	*older (n=261)*	*girls (n=311)*	*boys (n=283)*	*lower (n=297)*	*higher (n=297)*
Interest/enjoyment	3.60 .89	4.22 .71	4.02 .79	3.75 .92	3.42 .87	4.34 .58
Task g. orientation	3.41 .89	4.03 .78	3.73 .88	3.64 .96	3.35 .93	4.03 .78
Ego g. orientation	2.86 1.03	3.11 1.02	2.93 1.03	3.06 1.04	2.88 1.04	3.11 1.02

Table 4. Differences between subsamples (MANOVA)

Variables			Test of between subjects effects			
	M SD	M SD	F	df	p	partial ή²
	low competence	high competence				
Task	3.46 .05	4.01 .05	56.768	1	.000	.088
Enjoyment	3.54 .05	4.31 .04	148.431	1	.000	.202
	boys	girls				
Task	3.62 .05	3.84 .05	8.863	1	.003	.015
	younger	older				
Task	3.49 .05	3.97 .06	44.470	1	.000	.071
Ego	2.88 .06	3.13 .07	7.247	1	.007	.012
Enjoyment	3.74 .04	4.11 .05	33.635	1	.000	.054

Note. There was a statistically significant difference in task, ego and enjoyment between children who differ in competence [F(3,584)=53.030, p<.000, Wilk's λ=.786, partial ή²=.214], age [F (3,584)=20.392, p<.000, Wilk's λ=.905, partial ή²=.095], and gender [F(3,584)=7.513, p<.000, Wilk's λ=.963, partial ή²=.037].

Discussion and conclusions

The focus of this study was on assessing the relationships between goal orientations, intrinsic motivation and perceived competence within the context of regular PE classes. Analyses revealed that perceived competence correlated moderately positively with task and ego goal orientations, as well as with both intrinsic motivation indicators. The findings revealed that pupils who perceive themselves as more competent used more self-referenced criteria to evaluate their own competence; they strove to demonstrate mastery and to seek possibilities to improve their existing abilities, all of which characterize task goal orientations. The relations between perceived competence and task orientation were congruent with the findings of several other studies (e.g. Duda, et al., 1995; Newton & Duda, 1999), conducted in both the physical education and competitive sport settings. Contrary to our expectations, highly competent pupils tended to use social comparison and normative criteria as evaluation of their current abilities, which is more typical for ego goal orientations. The positive relation between the perceived competence and the ego goal orientation contradicted the findings of most of the mainstream studies (e.g. Duda, 1993; 1996; 2001; Duda, et al., 1995). The results of the present study were more congruent with those of Kim and Gill (1997) and Barić, et al. (2002), who showed a similar interdependence between the indices of intrinsic motivation and ego goal orientation. Both studies were conducted on the samples of young athletes in their competitive sport settings. Regardless of the setting, it can be presumed that pupils probably used multiple criteria for evaluating their goals and conception of their ability to achieve success in PE by relying on personal improvement and demonstration of superiority. Physical education class, as all contemporary educational contexts, is in some form a relatively competitive setting and therefore pupils may be oriented towards outperforming others (i.e. ego orientation) as well as towards performing at the highest level of their abilities (i.e. task orientation). The findings suggest that both attitudes may have a high motivational power.

The findings also revealed that perceived competence was positively correlated with intrinsic motivation indicator, i.e. interest/enjoyment. The children who perceived themselves as competent were more interested in PE contents and enjoyed exercising better than their peers who perceived themselves as less competent. These results confirm the premise of Cognitive Evaluation Theory (Deci & Ryan, 1985) in that, within the context of self-determination, perceived competence mediates intrinsic motivation (Carroll & Loumidis, 2001). The sense of being competent in an activity can in turn produce feelings of enjoyment and interest. Because enjoyment is vital for encouraging physical activity participation, these correlations highlight the importance of enhancing pupils' perceived competence in PE.

In general, the results of this study showed that pupils' motivation for PE was moderately high as were the scores on all scales measuring different motivational concepts. Children and adolescents were not highly motivated to strive for achievement in PE settings. Similar results were obtained in an extensive study of pedagogical and psychological aspects of PE that was conducted in Slovenia (Boben, Cecič Erpič, Škof, & Zabukovec, 2005). Cecić Erpič and colleagues (2002) studied the characteristics of pupils with lower motivation for PE. The results showed that pupils' motivation for learning and performing in PE classes can be satisfactorily predicted by attitudes towards PE, classroom climate during PE classes, and personality traits. Among personality traits of less motivated pupils higher nervousness and lower agreeableness were pronounced. They also perceived actual classroom climate as less oriented toward personal relationship between the teacher and pupils. On the other hand, highly motivated pupils had more positive attitudes towards PE, they perceived actual classroom climate as more satisfactory and would in future prefer a more competitive climate.

Several gender differences were identified in our study. First, the correlation analysis showed a significant relationship between perceived competence and interest/enjoyment in PE and task goal orientation. These correlations were significant for both the girls and boys, while the correlation with ego goal orientation was obtained only for boys. Second, according to the MANOVA results, three significant main effects were obtained. Boys and girls significantly differed in task orientations. Girls were more task-oriented than boys, while the level of all pupils' ego orientation was similar and moderate. The results were partially congruent with the findings of other studies which have generally shown that male pupils tend to be more ego-oriented than female pupils, while female pupils tend to be more task-oriented (e.g. Barić, et al., 2002; Deci & Ryan, 1985; Duda, 2001; Ntoumanis, 2002; Ntoumanis & Biddle, 1999).

The variable perception of competence is related differently to indicators of intrinsic motivation, namely, interest/enjoyment and task orientation. The children who perceived themselves as highly competent for PE were more interested in the contents of the classes, tended to enjoy PE more than their less competent peers. The pupils with a higher level of perceived competence were more task-oriented than those who perceive themselves as less competent for PE-related contents. Pupils' motivation for being active in the educational process is influenced by their internal motives,

growing sense of competence and enjoyment. The results therefore showed that personal competence beliefs played a significant role in motivation for PE.

The results of MANOVA also showed that age significantly affected pupils' interest/ enjoyment as well as both motivational orientations. The older pupils were more task- as well as ego-oriented than the younger ones. At the same time, the older pupils were more interested in PE and tended to enjoy the educational process more than their younger peers. These results are partly in line with the extensive empirical evidence about the significant age-related decrease in pupils' motivation to participate in PE (e.g. Cecić Erpič, et al., 2002; Digelidis & Papaioannou, 1999; Digelidis, Papaioannou, Laparidis, & Christodoulidis, 2003; Škof, et al., 2005). The results of an extensive longitudinal study carried out by Barkoukis and co-workers (2010) showed the trajectories of student achievement goals, perceptions of motivational climate and feelings of enjoyment and boredom during PE classes. The authors reported the decrease of adaptive and the increase in some maladaptive types of motivation. The findings showed that perceptions of task-involving motivational climate, task goal orientation, and enjoyment decreased linearly over time. Perceptions of ego-involving climate and boredom increased linearly during secondary school years. According to our results, along with the increase of PE contents complexity, the role of pupils' perceived competence increases. The pupils who were successful in more complex educational contents were more likely to enjoy PE and, along with that, to have more opportunities to develop the perception of higher competence. The results are in line with the previously set hypothesis as well as with the major empirical studies (Guay, Boggiano, & Vallerand, 2001; Elliot, et al., 2000).

To conclude, the results of the study showed that perceived competence plays an important role in the intrinsic motivation and goal orientations for PE. Focusing on the motivation in its broadest sense actually implies the emphasis of the unique position that PE has in the educational system in terms of promoting healthy lifestyles. The findings of the present study also have an applicative value since they imply the importance of internal motivation development. Overall, within the methodological restrictions of this research, related primarily to the sample selection of urban children, the motivational pattern could explain, to a certain extent, some differences in behaviour of Croatian boys and girls related to PE and exercise.

Specific aspects of teaching can be addressed in practice of PE in order to promote perceived competence through (a) promotion of a mastery motivation climate by setting differentiated tasks individually tailored that allow pupils to work at an appropriate level of challenge, and (b) positive feedback that is specific to pupils' task performances, which provides accurate information on their competence within a particular activity.

References

Ames, C. (1992a). Achievement goals, motivational climate, and motivational processes. In G.C. Roberts (Ed.), *Motivation in sport and exercise* (pp. 159-161). Champaign, IL: Human Kinetic.

Ames, C. (1992b). Achievement goals and classroom motivational climate. In J. Meece & D. Shunck (Eds.), *Students' perceptions in the classroom* (pp. 327-348). Hillsdale, NJ: Erlbaum.

Ames, C., & Ames, R. (1989). *Research in motivation in education*. San Diego: Academic Press.

Barić, R. (2004). *Klima v športu*. [Motivational climate in sport.]. (Unpublished masters thesis, University of Ljubljana, Slovenia).

Barić, R., Cecić Erpič, S., & Babić, V. (2002). Intrinsic motivation and goal orientation in track-and-field children. *Kinesiology*, *34*, 50-60.

Barić, R., & Horga, S. (2007). Psychometric properties of the Croatian version of Task and Ego Orientation in Sport Questionnaire (CTEOSQ). *Kinesiology*, *38*, 2, 135-142.

Barkoukis, V., Ntoumanis, N., & Thøgersen-Ntoumani, C. (2010). Developmental changes in achievement motivation and affect in physical education: Growth trajectories and demographic differences. *Psychology of Sport and Exercise*, *11*, 83-90.

Berk, L. (2010). *Development through the lifespan*. Boston: Allyn & Bacon.

Biddle, S.J.H., Soos, I., & Chatzisarantis, N.L. (1999). Predicting physical activity intentions using goal perspectives and self-determination theory approaches. *European Psychologist*, *4*, 83-89.

Boben, D., Cecić Erpič, S., Škof, B., & Zabukovec, V. (2005). Najpomembnejše ugotovitve in pogled naprej. [The most important findings and view ahead. In Slovenian.]. In B. Škof, V. Zabukovec, S. Cecić Erpič & D. Boben (Eds.), *Pedagoško-psihološki vidiki športne vzgoje*. [Pedagogical and psychological aspects of physical education.] (pp. 201-205). Ljubljana: Fakulteta za šport.

Brustad, R.J. (1996). Attraction to physical activity in urban schoolchildren: Parental socialization and gender influences. *Research Quarterly for Exercise and Sport*, *67*(3), 316-323.

Carroll, B., & Loumidis, J. (2001). Children's perceived competence and enjoyment in physical education and physical activity outside school. *European Physical Education Review*, *7*(1), 24-43.

Cecić Erpič, S., Boben, D., Škof, B., & Zabukovec, V. (2002). Differences in pupils' motivation for physical education classes. In D. Milanović & F. Prot (Eds.), *Proceedings of the 3rd International Scientific Conference on Kinesiology: New Perspectives* (pp. 141-144). Zagreb: Faculty of Kinesiology.

Cecić Erpič, S., Zabukovec, V., & Boben, D. (2005). Motivacija mladostnikov in učiteljev za športno vzgojo. [Motivation of the young and teachers for physical education. In Slovenian.]. In B. Škof, V. Zabukovec, S. Cecić Erpič & D. Boben (Eds.), *Pedagoško-psihološki vidiki športne vzgoje*. (pp. 101-135). Ljubljana: Fakulteta za šport.

Chen, A. (2001). A theoretical conceptualization for motivation research in physical education: An integrated perspective. *Quest*, *5*, 35-38.

Csikszentmihalyi, M., & Rathunde, K. (1993). The measurement of flow in everyday life: Toward a theory of emergent motivation. In J.E. Jacobs (Ed.), *Developmental perspectives on motivation* (pp. 57-97). Lincoln: University of Nebraska Press.

Černohorski, B. (1998). *Motivi in vrednote mladih športnikov.* [Motives and values of young athletes.]. (Unpublished doctoral thesis, University of Ljubljana, Slovenia).

Deaux, K., & Major, B. (1987). Putting gender into context: An interactive model of gender related behaviour. *Psychological Review*, *94*, 369-389.

Deci, E.L., & Flaste, R. (1995). *Why we do what we do*. New York: Penguin.

Deci, E.L., & Ryan, R.M. (1985). *Intrinsic motivation and self-determination in human behaviour.* New York: Plenum.

Digelidis, N., & Papaioannou, A. (1999). Age-group differences in intrinsic motivation, goal orientations and perceptions of athletic competence, physical appearance and motivational climate in Greek physical education. *Scandinavian Journal of Medicine and Science in Sport*, *9*, 375-380.

Digelidis, N., Papaioannou, A., Laparidis, K., & Christodoulidis, T. (2003). A one-year intervention in 7th grade physical education classes aiming to change motivational climate and attitudes towards exercise. *Psychology of Sport and Exercise*, *4*(3), 195-211.

Duda, J.L. (2001). Achievement goal research in sport: Pushing boundaries and clarifying some misunderstandings. In G.C. Roberts (Ed.), *Advances in motivation in sport and exercise* (pp. 129-183). Champaign, IL: Human Kinetics.

Duda, J.L. (1993). Goals: A social-cognitive approach to the study of achievement motivation. In R.N. Singer, M. Murphey & L.K. Tennant (Eds.), *Handbook of research in sport psychology* (pp. 421-435). New York: Macmillan.

Duda, J.L. (1996). Maximizing motivation in sport and physical education among children and adolescent: The case for greater task involvement. *Quest*, *48*, 290-302.

Duda, J.L. (1992). Motivation in sport settings: A goal perspective approach. In G.C. Roberts (Ed.), *Motivation in sport and exercise* (pp. 57-93). Champaign, IL: Human Kinetics.

Duda, J.L., Chi, L., Newton, M., Walling, M.D., & Cately, D. (1995). Task and ego orientation and intrinsic motivation in sport. *International Journal of Sport Psychology*, *26*, 40-63.

Elliot, A.J., Faller, J., McGregor, H.A., Campbell, W.K., Sedikides, C., & Harackiewicz, J.M. (2000). Competence valuation as a strategic intrinsic motivation process. *Personality and Social Psychology Bulletin*, *26*, 780-794.

Ferrer-Caja, E., & Weiss, M.R. (2000). Predictors of intrinsic motivation among adolescent students in physical education. *Research Quarterly for Exercise and Sport*, *71*, 267-279.

Ferrer-Caja, E., & Weiss, M.R. (2002). Cross-validation of a model of intrinsic motivation in physical education with students enrolled in elective courses. *Journal of Experimental Education*, *71*, 41-65.

Goudas, M., Dermitzaki, I., & Bagiatis, K. (2001). Motivation in physical education is correlated with participation in sport after school. *Psychological Reports*, *88*, 491-496.

Guay, F., Boggiano, A.K., & Vallerand, R.J. (2001). Autonomy support, motivation, and perceived competence: Conceptual and empirical linkages. *Personality and Social Psychology Bulletin*, *27*, 643-650.

Hagger, M.S., Biddle, S.J.H., & Wang, C.K.J. (2005). Physical self-perceptions in adolescence: Generalizability of a multidimensional, hierarchical model across gender and grade. *Educational and Psychological Measurement*, *65*, 297-322.

Hein, V., & Koka, A. (2007). Perceived feedback and motivation in physical education and physical activity. In M.S. Hagger & N.L.D. Chatzisarantis (Eds.), *Intrinsic motivation and self-determination in exercise and sport* (pp. 127-141). Champaign, IL: Human Kinetics.

Hyde, J.S., & Durik, A.M. (2007). Gender, competence, and motivation. In A.J. Elliot & C.S. Dweck (Eds.), *Handbook of competence motivation* (pp. 375-392). London: Guilford.

Kim, B.J., & Gill, D.L. (1997). A cross-cultural extension of goal perspective theory to Korean youth sport. *Journal of Sport and Exercise Psychology*, *19*, 142-155.

Li, W., & Lee, A. (2004). A review o conceptions of ability and related motivational constructs in achievement motivation. *Quest*, *56*, 439-461.

Markland, D. & Hardy, L. (1997). On the factorial and construct validity of the Intrinsic Motivation Inventory: Conceptual and operational concerns. *Research Quarterly for Exercise and Sport*, *68*, 20-32.

McAuley, E. (1992). Understanding exercise behaviour: A self-efficacy perspective. In G.C. Roberts (Ed.), *Motivation in sport and exercise* (pp. 107-129). Champaign, IL: Human Kinetics.

McAuley, E., Duncan, T., & Tammen, V.V. (1989). Psychometric properties of the Intrinsic Motivation Inventory in a competitive sport setting: A confirmatory factor analysis. *Research Quarterly for exercise and Sport*, 60(1), 48-58.

Moreno-Murcia, J.A., Sicilia, A., Cervelló E., Huéscar E., & Dumitru, D. (2011). The relationship between goal orientations, motivational climate and self-reported discipline in physical education. *Journal of Sports Science and Medicine*, *110*, 119–129.

Newton, M., & Duda, J.L. (1995). The relationship of goal orientations and expectations on multi-dimensional state anxiety. *Perceptual and Motor Skills*, *81*, 1107-1112.

Newton, M., & Duda, J.L. (1999). The interaction of motivational climate, dispositional goal orientations, and perceived ability in predicting indices of motivation. *International Journal of Sport Psychology*, *30*, 63-82.

Nicholls, J.G. (1989). *The competitive ethos and democratic education*. Cambridge, MA: Harvard University Press.

Nicholls, J.G. (1992). The general and the specific in the development and expression of achievement motivation. In G.C. Roberts (Ed.), *Motivation in sport and exercise* (pp. 31-57). Champaign, IL: Human Kinetics.

Nicholls, J.G. (1998). An alternative learning program: Effects on student motivation and self-esteem. *The Journal of Educational Research*, *91*, 272-278.

Ntoumanis, N. (2002). Motivational clusters in a sample of British physical education classes. *Psychology of Sport and Exercise*, *3*, 3, 177−194.

Ntoumanis, N., & Biddle, S.J.H. (1999). A review of motivational climate in physical activity. *Journal of Sports Science*, *17*, 643-665.

Papaioannou, A., & Goudas, M. (1999). Motivational climate in physical education. In Y.V. Auweele, F. Bakker, S.J.H. Biddle, M. Durand & R. Seiler (Eds.), *Psychology for physical educators* (pp. 51-68). Champaign, IL: Human Kinetics.

Prochaska, J.J., Sallis, J.F., Slymen, D.J., & McKenzie, T.L. (2003). A longitudinal study of children's enjoyment of physical education. *Pediatric Exercise Science*, *15*, 170-178.

Roberts, G.C. (1993). Motivation in sport: Understanding and enhancing the motivation and achievement of children. In R.N. Singer, M. Murphy & L.K. Tennant (Eds.), *Handbook of research in sport psychology* (pp. 517-586). New York: Macmillan.

Roberts, G.C. (1992). Motivation in sport and exercise: Conceptual constraints and convergence. In G.C. Roberts (Ed.), *Motivation in sport and exercise* (pp. 3-29). Champaign, IL: Human Kinetics.

Roberts, G.C. (2001). Understanding the dynamics of motivation in physical activity: The influence of achievement goals on motivational processes. In G.C. Roberts (Ed.), *Advances in motivation in sport and exercise* (pp. 1-51). Champaign, IL: Human Kinetics.

Ryan, R.M., & Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*, 68-78.

Škof, B., & Boben, D. (2005). Stališča mladostnikov in učiteljev do športnih aktivnosti in športne vzgoje. [Attitudes of the young and teachers towards sporting activities and physical education. In Slovenian.]. In B. Škof, V. Zabukovec, S. Cecić Erpič & D. Boben (Eds.), *Pedagoško-psihološki vidiki športne vzgoje* (pp. 49-99). Ljubljana: Fakulteta za šport.

Škof, B., Cecić Erpič, S., Boben, D., & Zabukovec, V. (2004). Differences in some psychological characteristics between pupils with positive and negative attitudes towards endurance activities in physical education. *Kinesiologica Slovenica*, *10*, 49-64.

Škof, B., Cecić Erpič, S., Zabukovec, V., & Boben, D. (2002). Pupils' attitudes toward endurance sports activities. In D. Milanović & F. Prot (Eds.), *Proceedings of the 3rd International Scientific Conference on Kinesiology: New Perspectives* (pp. 133-137). Zagreb: Faculty of Kinesiology.

Thomas, J.A., & Barron, K.E. (2006). A test of multiple achievement goal benefits in physical education activities. *Applied Journal of Sport Psychology*, *18*, 114-135.

Treasure, R. (2001). Enhancing youth peoples' motivation in youth sport: An achievement goal approach. In G.C. Roberts (Ed.), *Advances in motivation in sport and exercise* (pp. 79-101). Champaign, IL: Human Kinetics.

Weinberg, R., Tenenbaum, G., McKenzie, A., Jackson, S., Anshel, M., Grove, R., & Fogarty, G. (2000). Motivation for youth participation in sport and physical activity: Relationships to culture, self-reported activity levels, and gender. *International Journal of Sport Psychology*, *31*, 321-346.

CILJNA ORIJENTACIJA I INTRINZIČNA MOTIVACIJA ZA NASTAVU TZK: KOLIKO JE PERCIPIRANA KOMPETENTNOST VAŽNA?

Cilj rada bio je ispitati povezanost percipirane kompetentnosti, intrinzične motivacije i ciljne orijentacije kod djece koja pohađaju redovitu nastavu TZK, te provjeriti postoje li razlike između djevojčica i dječaka različite dobi u ovim varijablama. Rezultati dobiveni na uzorku 594 hrvatska osnovnoškolca pokazali su pozitivnu povezanost percipirane kompetentnosti sa ciljnom orijentacijom te uživanjem i interesom za nastavu TZK. Pokazalo se da su djevojčice više intrinzično motivirane te više razine orijentacije na učenje i usavršavanje vještina u sklopu TZK od dječaka. Visoko kompetentna djeca, osobito dječaci koji se osjećaju kompetetnima, značajno više uživaju u sadržajima nastave TZK, više se trude na satovima, te su više usmjereni na učenje i usavršavanje, a manje na ishod i rezultate od djece koja sebe smatraju manje sposobnom. Djevojčice koje se doživljavaju manje sposobnima općenito su i manje motivirane za nastavu TZK, a njihova motivacija opada s dobi. Rezultati MANOVA- e pokazali su da su kompetentnija djeca zainteresiranija za TZK, da se više trude na nastavi i da su više usmjerena na učenje i usavršavanje vještina, te da razina intrinzične motivacije ovisi o dobi. Stariji učenici više su intrinzično motivirani za TZK od mlađih, te je njihova ciljna orijentacija generalno viša. Interakcija između dobi i percipirane kompetentnosti značajno doprinosi doživljaju interesa i uživanja u nastavi TZK, s dobi i s porastom složenosti sadržaja TZK, percepcija kompetentnosti raste. Percipirana kompetentnost igra značajnu ulogu za razvoj i održavanje ciljne orijentacije i intrinzične motivacije na nastavi TZK što bi bilo važno naglasiti u okviru sustava i načina rada s djecom kako bi se dugoročno promovirale zdrave životne navike.

Ključne riječi: *motivacija, kompetentnost, zadatak, ego, djeca, postignuće, nastava TZK*

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