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Research article

THE EFFECTIVENESS OF HELLISON'S MODEL OF PERSONAL AND SOCIAL RESPONSIBILITY IN PHYSICAL EDUCATION TEACHING

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Svetlana Buišić[1], Višnja Đorđić[2]

[1]Faculty of Education, University of Novi Sad, Sombor, Serbia
[2]Faculty of Sport and Physical Education, University of Novi Sad, Novi Sad, Serbia

Abstract. *Increase in youth violence, discipline problems in schools, decrease of interest in physical activities and other negative trends, impose the need for reconceptualization of physical education. Among the promising models, one stands out. It is the Hellison's responsibility model or Teaching Personal and Social Responsibility model-TPSR Model, based on intrinsic motivation and encouraging the personal and social responsibility of students. The goal of the present study was to check the effectiveness of Hellison's model in a primary school physical education setting. The sample consisted of third grade elementary school students (N=100; 54 boys, 46 girls), appointed to the experimental and control group. The effects of the experimental (TPSR) and standard program of physical education on the responsibility of students, motivational orientations, self-evaluation, social support and motor learning were tested. The data were processed by methods of descriptive statistics, MANOVA analysis and the Mann-Whitney test ($p \leq .05$). After completing the experimental program, statistically significant differences were detected in all the dependent variables, consistently in favor of the experimental group. Hellison's model produced the largest effects in the domain of motor learning, responsibility and self-determined motivation among the students, which points to the validity of its implementation in regular physical education teaching.*

Key words: *physical education, discipline, responsibility, motivation.*

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Corresponding author: Svetlana Buišić
University of Novi Sad, Faculty of Education, Podgorička 4, 25101 Sombor, Serbia
Phone: +381 25 416461 • E-mail: svetlana.buisic@pef.uns.ac.rs

INTRODUCTION

In the context of an increase in social pathology among the youth (Csikszentmihalyi & McCormack, 1986), violence and indiscipline have become part of the day-to-day school life; the existing research shows that in Serbia almost one third of the teachers have problems maintaining discipline in class, while in some other countries the data is even more alarming (Gašić-Pavišić, 2005). Around 65% of the students in Serbia, according to their own estimate, were victims of peer violence, and in some schools the levels reach 80% (Popadić & Plut, 2007). At the same time, digital technologies have an ever increasing impact on the lives of children and youth; the frequency of use of digital devices increases with age, as does the exposure to digital violence (Popadić & Kuzmanović, 2016). A sedentary lifestyle, on the other hand, contributes to the increase of over-nutrition and obesity, both of which, already at the younger school age, affect 23% of the children (Đorđić et al., 2016). The level of physical activity decreases through childhood and adolescence (Đorđić & Matić, 2008), and the problem of inadequate motivation of students for active participation in physical education is ever more present. New challenges and expectations are being set before physical education, as a vital part of quality education, which imposes the need for its reconceptualization. The question is, if, and how, physical education can contribute to the personal and social development of children and youth in an increasingly complex social environment. Among the promising contemporary physical education models is Hellison's model of personal and social responsibility development or the TPSR model (Teaching Personal and Social Responsibility model; Hellison, 1985, 2003a, 2003b).

Hellison's model demands that PE teachers put the needs of children and youth first and focus, much more than before, on the personal and social development of students. This model was developed during the 1970's while working with high risk groups of young people, in the crime and violence infested urban city zones of Portland. In the context, and with the help, of physical activity, Hellison tried to help them understand and think through their own moral decisions, to contribute to the development of personally and socially responsible personalities, in spite of "experience of poverty, racism, and violence that my students brought to the gym" (Hellison, 2003b). Later the TPSR model found its application in physical education and education in general, sports, youth programs etc.

Hellison's model is based on intrinsic motivation, and focuses on self-regulation of students' behavior. The model of personal and social responsibility encourages students to implement positive social behavior through activities such as setting goals, contemplation and group discussion (Hellison, 2003a). The only reward that should encourage students to perform their tasks, is the satisfaction for active and cooperative participation in class activities, that stems from a child's inner desire to get along with others and accept responsibility for their own behavior. The model was developed in order to enable children to practice responsible behavior, primarily starting with behavior in physical education class, and later implement such behavior in a wider social context as well. The TPSR model contains five responsibility levels, with the goal to have students gradually improve, reaching ever higher levels of responsibility:

Level 0 - irresponsibility. A student at this level demonstrates various kinds of irresponsible behavior: talking in class when the teacher is speaking, disturbing other students, acting violently, giving punitive nicknames to classmates, throwing and breaking equipment etc.;

Level 1 - self-control/respect of others. The lowest level of responsibility. The student respects the rules of conduct, avoids conflicts and tries to resolve them peacefully, does not damage school property etc. The motivation is still pretty low, the student is active only under the supervision of the teacher;

Level 2 - effort/participation. The student shows effort in class, is more active, more persistent at given tasks, tries to progress, exercises under less supervision of the teacher, and cooperates with other students. There is a higher work motivation present.

Level 3 - self-regulation/self-responsibility. The student is noticeably more motivated, performs additional tasks although is not required to (picks up teaching equipment, attends extracurricular sport club, etc.) is independent, sets goals and performs the tasks given on his or her own. With the teacher's help he independently identifies personal needs and sets personal goals.

Level 4 - caring for/helping others. The student displays concern for other students and their feelings, eagerly accepts to train in pairs, helps the group in learning new lessons, helps and supports others, takes on leadership roles.

Level 5 - transfer outside of gym. The student displays responsible behavior even outside of gym, behaving responsibly at home, in the sports club, classroom etc.

The previous research showed that Hellison's model has a strong influence on increase of self-control, effort, teamwork and feeling of responsibility (Compagnone, 1995; Cutforth, 1997; Georgiadis, 1990; Lifka, 1990; Kahne et al., 2001; Kallusky, 2000; Wright, 2001). A smaller number of studies dealt with implementation of this model in physical education teaching (Cecchini, Montero, & Pena, 2003; Cecchini, Montero, Alonso, Izquierdo, & Contreras, 2007; Escarti, Gutierrez, Pascual, & Llopis, 2010; Escarti et al., 2012; Pascual et al., 2011; Walsh, 2012; Wright et al., 2010), while in Serbia, the TPSR model had not been implemented and analyzed until now. The aim of this study was to analyze the effectiveness of Hellison's model of personal and social responsibility in a primary school physical education setting, its influence on personal and social responsibility of the students, motivational orientations, self-evaluation of sports competences, social competence and behavior control, support by classmates, as well as adoption of motor skills.

METHODS

In a longitudinal quasi-experimental study, the test-pretest design with one control group was used. The experimental physical education program was based on planning and implementing specific teaching strategies focused on developing personal and social responsibility in accordance with the TPSR model. The field research was performed in a school setting, with the goal of evaluating the experimental program.

Participants

The sample has the characteristics of a convenience sample, since the two elementary schools that were selected have adequate conditions for physical education classes, and successful cooperation with the Faculty of Education in Sombor. In each of the selected schools, two classes of third graders were randomly selected to participate in the study. The final sample included 100 third grade students (54 boys, 46 girls), out of which 45 students comprised the experimental group, and 55 students comprised the control group.

The groups were homogenized in accordance to motor skills performance. The basic characteristics are shown in Table 1. Before data collection, written consent by the school principals and parents of the students were obtained.

Table 1 Basic characteristics of the sample (N = 100)

	Experimental group (n = 45)	Control group (n = 55)
Boys n (%)	22 (48.9)	32 (58.2)
Girls n (%)	23 (51.1)	23 (41.8)

Measures

For self-evaluation of personal and social responsibility, the Personal and Social Responsibility Questionnaire-PSQR (Li, Wright, Rukavina, & Pickering, 2008) was used. The motivational orientations of students in physical education classes were evaluated by the modified Self-Regulation Questionnaire (Ryan & Connell, 1989), that Goudas, Biddle, & Fox (1994) adapted to be used for measuring motivation of students in physical education classes. Using this questionnaire, the separate scores for amotivation, external behavior regulation, introjected regulation, identified regulation, and intrinsic motivation were obtained. Students' self-perceptions of competence in the domain of social acceptance, athletic competence, and behavioral conduct, were assessed by corresponding subscales of the Self-Perception Profile for Children-SPPC (Harter, 1985a), while self-perceived social support of classmates was measured by a corresponding subscale from the Social Support Scale for Children questionnaire (Harter, 1985b). In both questionnaires, a higher average score indicates higher competence. Acquisition of motor skills was evaluated based on specially constructed rubrics for basic gymnastics floor skills: scale, shoulder stand (candle) and roll forwards. The rubrics were in the form of a five-level Likert scale, where l is the lowest level of performance, and 5 the highest. Total motor skills score was the sum of scores for all three motor skills. An internal consistency check of the implemented scales, using Cronbach alpha coefficients, has proven the acceptable reliability of scales (alpha coefficients ranged from 0.60 to 0.80).

Experimental and standard physical education program

Students in the experimental and control group had a total of 24 physical education lessons each, during eight weeks. The classes lasted the standard 45 minutes, and the teaching units covered were in accordance with the yearly/monthly teaching plan.

The specificity of the experimental program, developed in accordance with the theoretical framework of the TPSR model, consisted in the implementation of specific teaching strategies focused towards the development of personal and social responsibility. Focus of the experimental program was on the first four levels of responsibility: self-control, effort, self-regulation, and helping. Within the duration of the program, the students were encouraged to gradually function on an increasingly higher level. Significant characteristics of the TPSR model, besides the experience of different levels, are also a possibility of choice, problem-solving and self-reflection as elements of all levels of responsibility (Hellison, 2003a). Every lesson in the experimental group was initiated with an introductory

discussion, in order to clearly set the expectations relating to the behavior of students in class, while in the closing section of the lesson, the students critically overviewed class activities through group discussion and self-reflection: what they liked, what the aim of the lesson was, how they functioned, as individuals and as a group, during the lesson, what should be improved, how to overcome a problem, etc.

All suitable teaching situations were used to remind the students of the responsibility levels and encourage them to adjust their behavior to the responsibility levels that are at that moment attainable for them (ex. "Can we all be at level 1 while putting training mats away?"; "Show me at what level you can behave during a game"; "Why did you push him?; Is this the behavior within the responsibility level we are trying to achieve today?"). Posters illustrating responsibility levels of the TPSR model were displayed in prominent positions in the gyms, which contributed to the fulfillment of theoretical requirements, to have TPSR teaching/learning permeate each lesson about 70% of the time.

The key TPSR strategies used in the experimental group were modelling responsible behavior, as well as clear goal setting referring to students' behavior in class. Irresponsible behavior was regulated with the strategy of progressive exclusion ("time-out bench"), with the students having the right to choose in all phases of the process. Effort (second responsibility level) was encouraged by individualization of teaching and redefining success. The students were offered tasks of different difficulty and complexity, so that they could choose the task, for example, rate and the number of repetitions; they could choose competition or activities where success was defined by individual advancement. Strategies of the third responsibility level (self-regulation) were directed towards the increasing independence of students and assuming responsibility for one's own activity in physical education class. Stations format enabled students to independently perform tasks provided for any given station, without direct supervision of the teacher or disturbing other students. To have the students reach the fourth responsibility level (helping), the teacher planned activities that put students in the position where they needed to cooperate among themselves, negotiate and/or help each other (pair work, work in small groups, cooperative activities). Bearing in mind that the TPSR model requires authentic implementation by program facilitators, because otherwise, the program evaluation is more likely to reflect poor implementation than program weaknesses (Hellison & Walsh, 2002), the experimental program in this research was performed by one of the authors.

For the control group, the standard physical education program was carried out. Students were neither specially encouraged to behave responsible, nor were special strategies for developing personal and social responsibility of students planned or implemented. The program was conducted by general teachers, without researcher intervention, and the whole-group activities were mostly used.

Data Analysis

Methods of descriptive statistics were used for the initial analysis, while the differences between groups were tested by a multivariate analysis of variance (MANOVA). Due to minor deviation of data distribution detected in several variables, besides the parametric statistics, the adequate non-parametric test was used simultaneously (the Mann-Whitney test). The standard level of significance was defined at $p \leq .05$.

RESULTS

Initial differences between the experimental and control group were tested by a multivariate analysis of variance (MANOVA) (Table 2). Results show that there were no statistically significant differences between these two groups in the observed multivariate domain (F = 1.334; P = .215). The results of series of univariate analyses of variance (ANOVA) confirm that there were no significant differences for individual variable levels either, which was confirmed by the Mann-Whitney test as well.

Table 2 Descriptive statistics and analysis of the significance of differences between the experimental and control group at the initial measurement

Variables	Group	*M*	*SD*	*f*	*p*	η^2	*MW*	p_{mw}
Personal Responsibility	E	4.81	0.73	2.28	.13	0.02	55.69	.10
	C	4.60	0.64				46.25	
Social Responsibility	E	4.88	0.69	1.03	.31	0.01	52.76	.48
	C	4.73	0.82				48.65	
Amotivation	E	1.46	0.54	2.59	.11	0.03	47.19	.28
	C	1.68	0.80				53.21	
External Regulation	E	2.37	0.84	0.49	.49	0.00	48.94	.63
	C	2.49	0.97				51.77	
Introjected Regulation	E	2.47	0.84	0.40	.53	0.00	48.68	.57
	C	2.58	0.88				51.99	
Identifiied Regulation	E	4.57	0.52	1.76	.19	0.02	55.63	.10
	C	4.43	0.52				46.30	
Intrinsic Motivation	E	4.55	0.51	2.36	.13	0.02	52.88	.44
	C	4.34	0.79				48.55	
Social Acceptance	E	2.89	0.53	1.70	.19	0.02	54.70	.19
	C	2.75	0.52				47.06	
Athletic Competence	E	2.59	0.57	0.54	.46	0.00	46.50	.21
	C	2.67	0.55				53.77	
Behavioral Conduct	E	2.93	0.65	0.44	.51	0.00	48.78	.59
	C	3.01	0.50				51.91	
Classmate Support	E	3.10	0.56	0.39	.53	0.00	52.98	.44
	C	3.03	0.59				48.47	
Motor skills	E	7.87	2.52	2.34	.13	0.02	46.49	.21
	C	8.62	2.38				53.78	
F = 1.334 P = .215 H^2 = 0.155								

Note: M – Mean; SD – Standard Deviation; *f* – Value of the f test; *p* – Significance of the f test; η^2 – Partial Eta Squared; MW – Mean range for the Mann-Whitney test; p_{mw} – Significance of the Mann-Whitney test; F – MANOVA F value; P – MANOVA significance level; H^2 – Total Eta squared values.

Bearing in mind that the experimental and control group did not differ significantly at the initial measurement, the effects of the experimental and control program were analyzed using MANOVA for the final measurement, i.e. after implementing the experimental program (Table 3). The results obtained show that the differences between the experimental and the control group in the studied variable system are statistically significant and high (F = 20.092; P = .000). The system of analyzed variables explains 73.5% of the difference between groups. At the univariate level, significant differences were detected in all of the

observed variables, except in the Identified Regulation, consistently in favor of the experimental group. The Mann-Whitney test additionally confirmed the existence of significant differences at the final measurement between the experimental and the control group in the analyzed variables.

Table 3 Descriptive statistics and analysis of the significance of differences between the experimental and control group at the final measurement

Variables	Group	*M*	*SD*	*f*	*p*	η^2	*MW*	p_{mw}
Personal Responsibility	E	5.60	0.56	69.58	**.00**	**0.41**	72.56	**.00**
	C	4.48	0.74				32.45	
Social Responsibility	E	5.48	0.57	72.65	**.00**	**0.43**	72.19	**.00**
	C	4.28	0.79				32.75	
Amotivation	E	1.05	0.17	29.13	**.00**	**0.23**	35.91	**.00**
	C	1.67	0.75				62.44	
External Regulation	E	1.38	0.57	39.81	**.00**	**0.29**	33.09	**.00**
	C	2.38	0.92				64.75	
Introjected Regulation	E	1.56	0.75	33.27	**.00**	**0.25**	34.69	**.00**
	C	2.57	0.96				63.44	
Identifiied Regulation	E	4.23	0.82	1.07	.30	0.01	46.78	.23
	C	4.40	0.82				53.55	
Intrinsic Motivation	E	4.90	0.21	44.76	**.00**	**0.31**	70.58	**.00**
	C	3.96	0.92				34.07	
Social Acceptance	E	3.14	0.58	9.57	**.00**	0.09	60.13	**.00**
	C	2.79	0.54				42.62	
Athletic Competence	E	2.99	0.58	6.59	**.01**	0.06	58.34	**.01**
	C	2.68	0.60				44.08	
Behavioral Conduct	E	3.30	0.56	12.00	**.00**	0.11	61.18	**.00**
	C	2.92	0.54				41.76	
Classmate Support	E	3.36	0.52	9.30	**.00**	0.09	60.30	**.00**
	C	3.00	0.63				42.48	
Motor skills	E	12.98	2.20	83.70	**.00**	**0.46**	72.49	**.00**
	C	8.80	2.33				32.51	
F = 20.092 P = **.000** H^2 = 0.735								

Note**:** M – Mean; SD – Standard Deviation; f – Value of the f test; p – Significance of the f test; η2 – Partial Eta Squared; MW – Mean range for Mann-Whitney test; p_{mw} – Significance of the Mann-Whitney test; F – MANOVA F value; P – MANOVA significance level; H2 – Total Eta squared values.

By analyzing partial eta squares as effect size measurements (Table 3), it can be concluded that the effects are strongest in the following variables: Motor Skills (46%), Social Responsibility (43%) and Personal Responsibility (41%), followed by Intrinsic Motivation (31%), External Regulation (29%), Introjected Regulation (25%) and Amotivation (23%). Moderate effects according to Cohen's criteria (Cohen, 1988) were found in the following variables: Behavioral Conduct (11%), Social Acceptance (9%), Classmate Support (9%), and Athletic Competence (9%).

DISCUSSION

The TPSR model has the potential to encourage the self-determined motivation, self-discipline and self-regulation of student behavior, as well as positive interpersonal relations (Hellison, 2003a). On a sample of third grade students, the effects of its implementation in a physical education setting were examined for the following: students' personal and social responsibility, motivational orientations, domain-specific self-perceptions (athletic competence, social acceptance, behavioral conduct), social support from classmates and mastering motor skills.

Testing significance of the differences between the experimental and the control group before intervention showed that the two groups did not differ significantly in the studied dependent variables. The students, generally, had very high self-evaluations of personal and social responsibility, while the dominant motivational orientations in physical education were identified regulation and intrinsic motivation. The least expressed was amotivation, followed by external and introjected regulation.

As for the competence self-perceptions, the participants obtained the highest scores on the behavioral conduct scale, followed by social acceptance and athletic competence. Although all scores were above 2.50 (a positive self-evaluation zone), the participants in our study had somewhat lower average scores in comparison to their peers from the USA (Harter, 1985a). The self-evaluation of athletic competence is important because individuals choose activities which they notice they are competent at, i.e. can be successful in, and avoid situations in which they lack confidence. A positive self-evaluation of athletic competence is connected with participation in physical activity, as well as with higher levels of physical activity (Weiss & Amorose, 2008). Concerning social support from classmates, the participants reported positive self-evaluations, in accordance with previous results obtained at similar samples (Harter, 1985b).

Concerning the level of acquisition of selected gymnastics floor skills, the mean results in both groups had below average scale value.

The analysis of the experimental program effects showed that the positive changes are most noticeable in the domain of motor skills acquisition, followed by personal and social responsibility and motivational orientations (except for the identified regulation), while the effects are weaker in terms of competence of self-perceptions and social support from classmates.

Personal and social responsibility

After the implementation of the experimental program, the students in the experimental group evaluated their own personal and social responsibility more positively, compared to the control group students. The students exposed to the experimental program reported that they put more effort into and are more willing to participate in class activities, wish to progress and are focused on reaching personal goals, which are personal responsibility traits. They also had higher self-evaluations of social responsibility, which includes self-control, respect for other students and teachers, kind treatment of others, encouraging other students and helping others. The method of stations used during most of the classes could have contributed a lot, because it allowed the students to have greater autonomy, encouraged cooperation, persistence, freedom of choice, while at the same time allowing the students to take responsibility for their own behavior and in that way practice responsible behavior through different roles.

Motivational orientations

The next important finding of our study refers to the positive changes in all motivational orientations in the experimental group. Hellison's model promotes the motivational climate of mastering the task and encourages student cooperation and persistence in task completion, while the more intrinsically motivated students enjoy performing tasks more, have higher participation in class activities and are more willing to exercise in leisure time (Hagger, Chatzisarantis, Culverhouse, & Biddle, 2003; Lonsdale, Sabiston, Raedeke, Ha, & Wum, 2009; Standage, Duda, & Ntoumanis, 2005). Although third grade students generally find physical education classes to be fun, like to learn various skills and enjoy attending physical education classes (Buišić, Cvejić, & Ćuruvija, 2016), the students exposed to the TPSR model scored significantly higher on an intrinsic motivation scale and significantly lower on amotivation, external and introjected regulation scales when compared to the control group of students. Intrinsic motivation represents the highest level of self-determination and autonomy of an individual; for the intrinsically motivated students, classes are primarily about pleasure, fun, challenge and enjoyment. Significantly lower external regulation scores show that after the experimental treatment, students in this group participated in physical education classes not so much for receiving rewards or avoiding punishment, as for their own pleasure. Besides, they had a significantly lower introjected regulation in physical education, which means that their participation was less driven by feelings of shame, guilt, or anxiety. Moreover, student from the TPSR group had significantly lower self-evaluations of amotivation. Controlling motivation (external and introjected regulation) and amotivation are linked to negative behavioral and emotional consequences, such as boredom during lessons, discontent, low effort, lack of intent to be active in free time etc. (Ntoumanis, 2001; Mouratidis, Vansteenkiste, Lens, & Sideridis, 2008; Standage et al., 2005). The positive changes in motivational orientations of the experimental group of students can be explained by contextual determinants, primarily the motivational climate in the class. Self-determined behavior of the students is encouraged by teachers that support student autonomy, i.e., adopt their perspective, respect their feelings, give them choice, encourage them to solve problems independently and participate in decision-making (Black & Deci, 2000).

Athletic competence, social acceptance, behavioral conduct and classmate support

At the final measurement, the experimental group showed significantly higher self-evaluation of sports and social competence, behavioral conduct, as well as support from classmates, when compared to the control group. Implementation of Hellison's model could have had a positive effect on the analyzed self-evaluation and social support aspects, enabling the students to be more successful in physical education classes (sports competence), developing their social skills and responsibility (social competence), emphasizing disciplined and responsible self-regulated behavior (behavior regulation). Bearing in mind that the roots of the self are found in a person's perceptions of acceptance and respect by significant others (Harter, 1985a), by encouraging positive relations between students (as well as between students and teachers) the TPSR model could have had an indirect influence on the students' increased feeling of acceptance and belonging, as well as on their more positive self-perceived social competence.

Motor skills

The very positive effects of the experimental program in the domain of motor skills acquisition represent a somewhat unexpected result, mostly since the TPSR model does not have motor skills acquisition in its focus. However, Hellison (2003a) points out that, although introducing this model makes a teacher's job more complicated in the beginning, the teaching gradually starts to get easier than was the case before introducing the TPSR. A possible explanation for the results obtained in the domain of motor skills acquisition is based on a complex relationship between contextual characteristics (the learning environment), basic psychological needs and the motivation of students. Namely, motor skills learning efficiency is dependent on the learner's characteristics, the task itself, as well as the environment in which the learning takes place (Haywood & Getchell, 2009; Newell, 1986). Since structural limitations of the students (age, health) and the task were common for both groups, the differences in motor skill learning efficiency should be sought in the functional limitations of the students (motivation, self-efficacy etc.) and the learning environment characteristics (teaching style, affective aspects of the learning environment, presentation of motor skills, etc.).

The TPSR model implemented in the experimental group contributed to better class discipline, higher self-determined student motivation, as well as more positive class atmosphere. In its essence, Hellison's model promotes a mastery-oriented motivational climate, encourages effort and student persistence in task completion, while more self-determined motivation is linked to class enjoyment, higher effort and more expressed intent to exercise in free time (Hagger et al., 2003; Lonsdale et al., 2009; Standage et al., 2005). Good discipline during physical education classes enable the teachers to conduct the lessons more efficiently, the students do not disturb, but rather help, each other, etc. Improved personal and social responsibility means that the students showed more effort while performing exercises and helped each other, which could have had a positive influence on motor skills acquisition. Individualization of teaching and more positive self-perceptions of sports competence are also linked to intrinsic motivation; individuals choose to do the activities they are successful in and competent at, and they are persistent. Differences in professional competences of teachers in the two programs could have had an influence on better motor skills learning in the experimental group. Still, bearing in mind the significance and size of the differences between the experimental and the control group related to motor skills acquisition, the conclusion arises that the TPSR model-based programs can, besides their primary goals, also have significant positive effects on motor skills learning.

While interpreting the study results, certain limitations, mostly related to characteristics of the sample and some of the instruments used (ex. validity of evaluation scales in young school-age children) must be considered. In the following studies, it would be useful to examine whether the following factors: age and sex of the students, class size, type of lesson, characteristics of teachers, and other factors, influence the TPSR model effects, and how powerful these influences are.

CONCLUSION

Physical education, as an important component of the educational curriculum and irreplaceable educational experience for the world's children and youth, is faced with new challenges and altered expectations by society. The ever more violent environment for

growing up in and school inefficiency in prevention and suppressing of indiscipline, impose the need to critically reevaluate the goals and priorities of physical education.

It can be concluded that significant and positive effects of Hellison's model in physical education setting documented in our study, justify its implementation in everyday physical education. Effort and progress, control of one's own behavior, mutual respect and independent goal setting, are emphasized as the criteria of the TPSR model success. The basic psychological needs of autonomy, competence and relatedness that are supported by the TPSR model can have a mediating influence on both the physical education teaching efficacy and the students' self-determined motivation.

A particularly valuable finding is that this model, besides the primary effects on development of students' personal and social responsibility, as well as self-determined motivation, can also contribute to motor skills learning efficiency, in spite of additional time needed for specific teaching strategies within the TPSR model. Since initial results are very promising, it can encourage practitioners (physical education teacher and coaches) to implement the model, or its part, in their everyday practice.

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EFEKTIVNOST HELISONOVOG MODELA LIČNE I DRUŠTVENE ODGOVORNOSTI U FIZIČKOM VASPITANJU

Porast nasilja medju omladinom, problemi sa disciplinom u školama, smanjeno interesovanje za fizičku aktivnost i ostali negativni trendovi nameću potrebu za rekonceptualizacijom nastave fizičkog vaspitanja. U mnoštvu obećavajućih modela jedan se naročito izdvaja. To je Helisonov model odgovornosti ili TPSR Model, baziran na unutrašnjoj motivaciji i ohrabrivanju lične i društvene odgovornosti kod učenika. Cilj ovog rada bio je da se proveri efikasnost Helisonovog modela odgovornosti u nastavi fizičkog vaspitanja kod dece mladjeg školskog uzrasta. Uzorak ispitanika je sačinjen od učenika trećih razreda osnovnih škola (N=100; 54 dečaka, 46 devojčica), podeljenih na eksperimentalnu i kontrolnu grupu. Testirana je efikasnost eksperimentalnog (TPSR) i standardnog programa nastave fizičkog vaspitanja na odgovornost učenika, njihovu motivaciju, samoevaluaciju, društvenu podršku i motoričko učenje. Izračunati su parametri deskriptivne statistike i primenjena je MANOVA analiza i Mann-Whitney test (p≤.05). Nakon završetka eksperimentalnog programa, utvrđene su statistički značane razlike u svim zavisnim varijablama, u korist eksperimentalne grupe. Najveći efekti Helisonovog modela odgovornosti su zabeleženi u domenu motoričkog učenja, odgovornosti i unutrašnjoj motivaciji među učenicima, što ukazuje na opravdanost implementacije ovog modela u nastavu fizičkog vaspitanja.

Ključne reči: *fizičko vaspitanje, disciplina, odgovornost, motivacija*.