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**ATTITUDES TO CONDITIONING
 ACTIVITIES IN PHYSICAL
 EDUCATION: A COMPARISON
 BETWEEN TEACHERS AND PUPILS**

**STALIŠČA DO VZDRŽLJIVOSTNIH
 AKTIVNOSTI V ŠPORTNI VZGOJI:
 PRIMERJAVA MED UČITELJI IN UČENCI**

Abstract

The purpose of the research was to ascertain physical education (PE) teachers' attitudes to conditioning activities and any differences in attitudes between teachers and pupils.

The questionnaires "Pupils' Attitudes to Conditioning Activities Questionnaire" and "Teachers' Attitudes to Conditioning Activities Questionnaire" (Boben, Cecić Erpič, Škof & Zabukovec, 2005) were used to measure the attitudes of 89 PE primary and high school teachers and 1,152 pupils aged from 12 to 18 years. PE teachers have a highly positive attitude to the conditioning contents of PE, while teachers with more pedagogical experience perceive the pupils' attitude to conditioning activities even more positively. ANOVA and MANOVA results showed that teachers perceive pupils' attitudes to conditioning activities more critically than the pupils themselves. The teachers' perception, however, does not differentiate between genders and age groups of young people. It can be concluded that the effectiveness of pedagogical work in PE classes would be improved by increasing teachers' sensitivity to perceptions of pupils' interests and needs.

Key words: attitudes, conditioning activities, physical education, teachers, pupils

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Izvleček

Namen študije je raziskati stališča učiteljev športne vzgoje do kondicijskih aktivnosti in ugotoviti ali obstajajo razlike v tovrstnih stališčih med učenci in učitelji. Za ugotavljanje stališč 89 osnovnošolskih in srednješolskih učiteljev športne vzgoje in 1152 učencev in dijakov, starih od 12 do 18 let, smo uporabili »Vprašalnik o stališčih učencev do kondicijskih aktivnosti« in »Vprašalnik o stališčih učiteljev športne vzgoje do kondicijskih aktivnosti« (Boben, Cecić Erpič, Škof & Zabukovec, 2005). Učitelji športne vzgoje imajo visoko pozitivna stališča do kondicijskih vsebin v okviru športne vzgoje, tisti z več pedagoškimi izkušnjami pa učenčeva stališča do kondicijskih aktivnosti zaznavajo še bolj pozitivno. Rezultati ANOVe in MANOVe so pokazali, da učitelji zaznavajo stališča učencev bolj kritično kot učenci sami. Spol in starost učencev ne vplivata na učiteljevo zaznavanje učenčevih stališč. Na podlagi rezultatov zaključujemo, da bi s povečanjem učiteljeve senzitivnosti zaznavanja stališč učencev lahko vplivali na povečanje učinkovitosti pedagoškega dela v okviru športne vzgoje.

Cljučne besede: stališča, kondicijske aktivnosti, športna vzgoja, učitelji, učenci

INTRODUCTION

Like in many European countries, one of the main aims of the Slovenian PE curriculum is to develop the physical fitness of young people as an element of a healthy lifestyle (Assche, Auweele, Metlushenko & Rzewnicki, 1999; Kovač & Novak, 1998a, 1998b). Due to their wide spectrum of positive biological, health, psychosocial and educational influences, outdoor aerobic sports activities and other conditioning activities (e.g., running, mountaineering, ski running, bicycling) have become some of the most important factors of human sports culture and thus comprise an important part of the physical education (PE) curriculum.

It seems that the PE curriculum in Slovenia is not very successful in influencing pupils' healthy lifestyles. Research results show a decrease in the aerobic and strength endurance capabilities of Slovenian pupils in the last three decades (Strel, Kovač, Jurak & Leskošek, 2003; Šturm & Strel, 2002). The average 600-metre running time of 13-year-old pupils in 1970 was 2:26.4, compared to 2:37.7 in 2002 – a decrease of 11.3 seconds or 7.7%. Similarly, results of the 'chins' hold-test, measuring the strength endurance of pupils in the 5th to 8th grades of primary school show a decrease of 17 seconds or 43% from 1970 to 2002. Similar trends in the fitness abilities of primary and high school pupils have also been reported elsewhere in Europe and the USA (e.g., Bunc, Jansa & Kluka, 1997; Kuntzleman & Reiff, 1992; Rychtecky, Naul & Neuhaus, 1996).

This decrease in the aerobic endurance of children and teenagers in Slovenia is perhaps a consequence of the decline in the amount of their physical activity (Strel, Kovač, Jurak & Leskošek, 2003) and is most likely also due to lower efficiency of programmes that seek to develop the fitness of children and teenagers. Even though conditioning activities are given a significant amount of time and importance in the Slovenian PE curriculum, it can be assumed from test results that conditioning activities are in fact not being carried out very efficiently. The main purpose of this study was therefore to find out possible reasons for the decline and the relationship with the PE teaching process.

Psychologists and sociologists have shown attitudes are an important predictor and generator of human behaviour (Ajzen, 1988; Biddle & Chatzisarantis, 1999). The theory of planned behaviour says that on the basis of self-motivation, which originates in one's beliefs and attitudes and under the influence of the social environment (expectations of the school leadership, parents) and one's own private standards, the human (i.e., teacher) has intentions which lead to action – i.e., they behave and act in a certain way (Ajzen, 1988; Biddle & Chatzisarantis, 1999). This means that the teacher may with their positive beliefs and attitudes to conditioning contents and health successfully transmit these values to pupils. Given that conditioning contents in PE programmes are not always optimally executed, it is possible to posit that this is a consequence of some PE teachers having a lower appreciation of these contents. It is also possible that pupils resist being physically active. At the same time, it can be assumed that when choosing contents and work modes teachers do not sufficiently consider young people's particular interests and developmental needs.

Teachers' beliefs, attitudes and values play an important part in accomplishing the specific aims of the PE curriculum (Hodges Kulinna & Silverman, 2000). The education process is always a result of pupils' and teachers' efforts and their co-operation. According to Grossman (1995), a teacher's effectiveness in the education process depends on their particular knowledge (i.e., occupational, pedagogical and curricular knowledge, knowledge about pupils and learn-

ing) along with their personal beliefs, attitudes, values, personal goals and motivations for teaching.

When teaching a PE teacher's value orientation also derives from their beliefs, attitudes and values. Value orientation is described through the teacher's priority areas in the pedagogical process (which targets in the curriculum they favour, how they choose the contents and methods etc.). The relative importance of an individual value orientation and the consequent efficiency in accomplishing the individual aims of PE also depends on the teacher's system of values (Ennis, 1994; Ennis & Zhu, 1991). Ennis (1994) observed that teachers plan and carry out their lessons according to their value orientation, whilst also believing that it is the best one in the given situation.

Researches (Banville, Desrosiers & Genet-Volet, 2002; Chen, Liu & Ennis, 1997) have shown that what PE teachers identify as value orientations change in different cultural environments. Further, the work environment also plays an important role in a teacher's value orientation. Hodges, Kulinna & Silverman (2000) found that PE teachers teaching younger age groups (up to 12 years old) see the development of agility and social development as imperative, whereas high school teachers favour activities to develop health and fitness. Similarly, compared with younger teachers more experienced teachers regard fitness activities and the development of a healthy lifestyle as being more important. It can therefore be concluded that a PE teacher's work accomplishments depend on the level of their positive attitudes, beliefs and values as regards the contents they implement in the educational process and, simultaneously, on their knowledge of and taking account of their pupils' attitudes and interests.

Conditioning activities are important elements of PE programmes but their purpose will only be realised if their performance is more effective. So to improve the efficiency of PE programmes in terms of their contents, we must also recognise the orientation of PE teachers' attitudes to these activities and their congruity with pupils' attitudes.

Therefore, the goals of the research project are to identify whether:

- a) there is a difference in attitudes to conditioning activities between teachers and pupils;
- b) there is a difference in attitudes to these contents between primary and high school PE teachers;
- c) there is a difference in attitudes to these contents between male and female PE teachers; and
- d) there is a difference in attitudes to both conditioning activities and the importance of education for a healthy lifestyle between novice and more experienced teachers.

Method

Participants

The sample of teachers in the study included 89 PE teachers. Forty teachers worked at primary schools, 43 teachers worked at high schools while 6 teachers did not list their type of school. Thirty-nine female and 47 male teachers participated, and three teachers did not specify their gender. The average age of the teachers included in the research was 39.5 year (SD = 8 years). Twenty-seven teachers had more than 10 years' work experience; 34 teachers had between 11

and 20 years; whereas 21 teachers had more than 21 years' work experience. The sample of pupils in the study consisted of 1,148 pupils. The sample included 595 pupils (299 boys and 296 girls – 5th and 7th grades) from 12 primary schools and 533 pupils (222 boys and 331 girls – 1st and 3rd grades) from 10 high schools. The average age in the 5th grade of primary school is 12 years and 14 years in the 7th grade; the average age in the 1st year of high school is 16 years and 18 years in the 3rd year.

Instruments

The two questionnaires *Pupils' Attitudes to Conditioning Activities Questionnaire* (PATCAQ) and *Teachers' Attitudes to Conditioning Activities Questionnaire* (TATCAQ) were completed by the pupils and teachers, respectively.

The *Teachers' Attitudes to Conditioning Activities Questionnaire* (TATCAQ; Boben et al., 2005; Škof, Cecić Erpič, Boben & Zabukovec, 2000) was used to measure teachers' attitudes to conditioning activities (e.g., endurance running, cycling, trekking, training for muscular strength and endurance) in the physical education process. The questionnaire includes 21 statements on a five-point Likert-type scale (with a score of 5 representing *strong agreement* and a score of 1 *strong disagreement*). The psychometric properties of this questionnaire have already been established (Škof et al., 2000). A validation study (Boben, Škof, Zabukovec, Cecić Erpič & Marcina, 2001) showed that the instrument has satisfactory internal consistency (shown as Cronbach alphas). Factor analysis led to the formation of three dimensions of attitudes:

- a) *Teacher's attitude to conditioning activities* (TACA; $\alpha = 0.78$). This consists of nine items which represent a teacher's attitude to fitness activities (e.g., *I like endurance running*). Individual statements include cognitive, connotative and emotional components of one's attitude.
- b) *Perception of a pupil's attitude to conditioning activities* (TPPA; $\alpha = 0.73$). The scale consists of seven items which show a teacher's perception of a pupil's attitude to conditioning activities in PE (e.g., *Pupils like physically demanding contents of PE*). Statements are mainly directed at the recognition of the pupils' emotional and actional responses to selected contents. The same statements were included in the PATCAQ questionnaire (emotionally-active dimension).
- c) *Importance of education for a healthy lifestyle* (IEHL; $\alpha = 0.61$). The scale consists of five items which describe a teacher's attitudes to the importance of education for a healthy lifestyle (e.g., *In PE pupils should acquire knowledge about the meaning of physical activities for their health*).

The *Pupils' Attitudes to Conditioning Activities Questionnaire* (ATCAQ; Boben et al., 2005; Škof et al., 2000) was used to assess the attitudes of primary and high school pupils to conditioning, namely physically demanding sports activities (e.g., endurance running, cycling, trekking, training for muscular strength and endurance), in the physical education process. The instrument was formed on the basis of a theoretical construct (Martens, 1975; Rot, 1983) that considers an attitude to be an individual phenomenon, comprehended as a multi-dimensional category that includes cognitive, emotional and action components. This questionnaire was specifically developed to assess attitudes to conditioning activities held by pupils aged 12 to 18 years. The validation study showed that the instrument has satisfactory psychometric properties (Cronbach alphas are cited in the parentheses) (Boben et al., 2001 (Škof et al., 2000,

2001). The questionnaire includes 19 items on a five-point Likert-type scale (with a score of 5 representing *strong agreement* and a score of 1 *strong disagreement*). The questionnaire has two dimensions:

- a) *The emotionally-active dimension* (EMO.B; $\alpha = 0.85$) includes 11 items which refer to the emotional relationship of young people with conditioning sports activities in the context of physical education (e.g., *I like the physically demanding contents of PE (e.g., strength exercising or endurance running)*). This dimension also includes statements reflecting the activity performed in various physical education contents. Seven items were the same as in the TATCAQ (TPPA dimension).
- b) *The cognitive dimension* (COG; $\alpha = 0.78$) includes seven items which represent beliefs about the positive effects of conditioning activities as well as young people's knowledge of physical education contents (e.g., *People stay healthy and feel well by exercising regularly*).

Procedure

Teachers, pupils and their parents were previously informed in writing about the purpose of the study and the questionnaire's general content. After the parents' written consent was obtained the primary and high school pupils were given the questionnaires to complete. The testing session took part in the classroom and was supervised by a psychologist. There was no time limit for completing the questionnaires. Participation in the study was voluntary and anonymous. Pupils completed the questionnaires in the classrooms. The inclusion of teachers in the research was also voluntary and anonymous.

Descriptive statistics for each individual attitude dimension were calculated for all teachers and then separately regarding gender, work environment (i.e., type of school – primary or high) and work experience (three groups: up to 10 years' work experience, from 10 to 20 years, more than 20 years' work experience). In order to allow a comparison of attitudes between teachers and pupils, relative values (M and SD) of individual dimensions were used. We divided the values of a dimension by the number of items which represent this dimension. Values for all dimensions range from 1 to 5. Frequency distributions of responses to each statement in the questionnaire for the teachers and pupils were also calculated.

To determine the influence of gender, work environment and work experience on expressed attitudes about the conditioning activities, a multi-variant analysis of variance (MANOVA) was used. The MANOVA was also used to determine the effect of interactions (gender, work environment and work experience) on the attitudes. To determine the impact of different genders, various work environments and differing work experience on an individual's attitude dimension, an analysis of variance (ANOVA) was used. A post-hoc test was used to examine any statistically significant differences between individual attitude dimensions for the different groups.

RESULTS

Analysis of teachers' attitudes to conditioning activities

The descriptive results and frequency distribution for each statement in the TATCAQ questionnaire demonstrate the very positive attitudes of teachers to the conditioning contents of PE (TACA: M = 39.20; SD = 3.8) out of a maximum 45 and 4.36, respectively, on a scale from 1 to

5 – average value regarding the number of included items). The majority (from 87% to 100%) of questioned teachers answered with a very positive answer (4 and 5) those statements which define the meaning of conditioning activities. They also live a healthy life as 92% of them have a settled life pattern allowing them to have time for regular sports-recreational activity. Most of them (90%) also include in their recreational programme aerobic and other physically demanding activities. Therefore, it was also logical to expect that they would identify the high level of importance of education for a healthy lifestyle (IEHL: $M = 23.91$; $SD = 1.48$ out of a maximum of 25 and 4.76, respectively, on a scale from 1 to 5).

Contrary to these highly positive teacher attitudes to conditioning contents and the importance of education for a healthy lifestyle, their perception of pupils' attitudes to these contents, especially the perception of the popularity of conditioning contents among pupils is much more negative (TPPA: $M = 22.82$; $SD = 4.1$ out of a maximum of 45 and 2.53, respectively, on a scale from 1 to 5). For example, 80% of the teachers claimed that their pupils do not like physically demanding activities.

The influence of gender, work environment and teachers' work experiences on their attitudes to education about a healthy lifestyle, conditioning activities and the importance of pupils' own attitudes to these activities are presented in Table 1. The MANOVA results show that the only differences in PE teachers' opinions on conditioning activities came from the differences in their work experience ($R = 2.18$, $p < 0.05$). The univariate follow-up analysis, however, showed that a different level of teachers' work experience only has a statistically significant ($F(2.84) = 2.85$, $p < 0.05$) effect on the TPPA. The attitudes of PE teachers to conditioning activities, their perception of their pupils' attitudes to these contents and their views of the importance of education to a healthy lifestyle did not differ significantly between genders or between primary and high school teachers.

Table 1: Descriptive statistics (M and SD) for each dimension of teachers' attitudes to conditioning activities separately for gender, work environment and work experience

	TACA		TPPA		IEHL	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
GENDER						
Male (n = 47)	40.09	4.19	23.23	4.78	23.67	1.88
Female (n = 39)	38.31	4.84	22.42	4.49	24.15	1.08
WORK ENVIRONMENT						
Primary school (n = 40)	38.88	4.30	23.00	4.74	24.01	1.78
High school (n = 43)	39.52	3.62	22.65	3.67	23.81	1.11
WORK EXPERIENCE						
Up to 10 years (n = 27)	38.77	3.73	23.10	4.10	23.94	1.28
10 – 20 years (n = 34)	40.08	4.02	22.65	5.26	23.40	1.91
20 + years (n = 21)	38.75	6.25	23.73	5.36	24.38	1.16

Legend: TACA = teacher's attitude; TPPA = teacher's perception of pupils' attitudes; IEHL = importance of education for a healthy lifestyle

The post-hoc tests suggested that teachers with 20 or more years of work experience rate their pupils' relationship to conditioning contents significantly more positively ($t_{2,53} = -2.583$; $p <$

0.05) than teachers with work experience of between 10 and 20 years. Statistically significant differences ($t_{2,46} = -2.214$; $p < 0.05$) can also be noted between teachers with 20+ years of work experience and those with less than 10 years. In the other two dimensions of attitude there were no significant differences among the teacher experience groups.

Pupils' attitudes to conditioning activities

The results assessed with PATCAQ point to large differences between the EMO.B and COG dimensions. Along with the very positive cognitive dimension of attitudes (COG: $M = 32.20$; $SD = 4.02$, on a 1 to 5 scale), the emotional component is neutral (EMO.B: $M = 31.27$; $SD = 2.84$, on a 1 to 5 scale). Both dimensions of attitudes to conditioning activities become more negative with age. The attitudes of young people to fitness activities also vary according to gender. Boys mainly manifest a higher emotional attitude dimension to endurance sports activities, whereas girls manifest a higher cognitive dimension (see Table 2).

Table 2: Descriptive statistics for separate groups of schoolchildren regarding gender and age – mean values (M) and standard deviation (SD)

	EMO.B		COG	
	M	SD	M	SD
Gender				
Boys (n = 521)	32.92 (2.99)	10.67 (0.97)	31.49 (3.94)	5.35 (0.67)
Girls (n = 627)	29.87 (2.71)	10.41 (0.95)	32.78 (4.10)	5.15 (0.64)
Age				
12–14 years (n = 595)	33.50 (3.04)	10.92 (0.99)	33.12 (4.14)	4.66 (0.58)
16–18 years (n = 533)	28.81 (2.62)	9.69 (0.88)	31.60 (3.95)	5.17 (0.65)

Legend:

COG = Cognitive dimension

EMO.B = Emotionally-active dimension

Relative values are stated in the parenthesis.

The MANOVA results show the statistical significance of Rao's R for gender and age, which means that the diversity in attitudes to conditioning activities derives from the age differences ($R = 39.44$, $p < 0.001$) and the gender of the subjects ($R = 11.12$, $p < 0.001$). Statistically significant differences between boys and girls were shown for both dimensions of attitudes (see Table 2). The positive value of the EMO.B dimension was significantly higher for boys [$F(1,1129) = 15.54$, $p < 0.001$], whereas the value of the COG dimension was significantly higher for girls [$F(1,1129) = 24.98$, $p < 0.001$]. Schoolchildren have different attitudes to the contents of conditioning activities in different age periods. The ANOVA results show significantly more positive attitudes of younger pupils in both emotional [$F(3,1129) = 22.47$, $p < 0.001$] and cognitive dimensions [$F(3,1129) = 5.66$, $p < 0.001$] when compared to their older peers.

Analysis of teacher-pupil differences in responses to individual statements about conditioning activities

The values of EMO.B and TPPA cannot be compared due to the different number of items in each dimension. A comparison can only be made for the relative values of both dimensions. In this case, we found that the mean value of EMO.B ($M = 2.84$; $SD = 0.96$) is significantly ($p < 0.001$) higher than the mean value of TPPA ($M = 2.53$; $SD = 0.97$). Significant differences between teachers' perceptions of pupils' attitudes to conditioning activities and the attitudes

of children to these contents of PE also reveal statistically significant differences between the mean values of teachers' and pupils' answers on seven similar items (see Table 3).

Table 3: Differences in responses to individual statements about pupils' attitudes to conditioning activities between teachers and pupils

Item	Teachers		Pupils		<i>t</i>	<i>P</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Pupils (I) like the contents of PE where they get tired.	2.47	1.07	3.18	1.01	15.243	0.000
Pupils (I) like physically demanding contents of PE.	2.67	0.97	3.04	1.05	11.721	0.000
Pupils (I) do not like conditioning activities because they require a lot of effort (R).	2.17	0.98	2.75	1.19	6.244	0.000
Pupils (I) like endurance running.	2.44	0.90	2.80	1.06	3.012	0.002
Pupils (I) get bored while running.	2.69	1.06	2.54	1.08	1.122	0.330
Endurance running competitions are too difficult for pupils (for me).	2.46	1.27	2.96	1.24	3.563	0.001
Pupils (I) like competing in endurance running.	2.42	0.93	2.55	0.01	-0.197	0.427

Note. R = inversion value

Teachers' perceptions of pupils' attitudes are significantly different from pupils' attitudes in all statements, apart from statements numbered 5 and 7. Further, teachers' perceptions of pupils' attitudes to conditioning, that is physically more demanding contents, are fairly different from the pupils' actual attitudes. Sixty-nine percent of teachers are convinced that pupils do not like physically demanding sports activities. Contrary to this, 49% of pupils agreed (score 4) or entirely agreed (score 5) with the statements: *'I like the contents of PE where I get tired'*. Only 17% of the teachers believed that pupils like outdoor running, whereas 39% of the pupils gave a positive answer to the same statement. Eighty percent of teachers and just 37% of pupils answered affirmatively in response to the statement *'Pupils do not like physically demanding contents of PE'*.

Descriptive results for the teachers

Analysing the answers to each statement also confirms the finding that among teachers of different genders and teachers who teach in primary and high schools there are no statistically significant differences. Only for statement 4 (*'Pupils like endurance running'*) were the male teachers' responses ($F = 2.097$; $p < 0.05$) typically higher than those of the female teachers.

Descriptive results for the pupils

On the contrary, the results according to the pupils' level and gender reveal significant differences. Primary school pupils (12 to 14 years) indicated a preference for more difficult physical education contents (items 2, 3, and 5) compared to high school pupils ($F_2 = 3.861$; $F_3 = 4.656$; $F_5 = 7.540$; $p < 0.000$). The younger ones also prefer ($F = 5.448$; $p < 0.000$) competing in these activities. Comparisons of male and female answers to selected questionnaire statements show that boys ($F_1 = 5.653$; $F_2 = 4.998$; $F_3 = 3.109$; $p < 0.000$) appreciate conditioning contents (items 1, 2, and 3) more than girls. For the girls, running competitions are the most unpopular because for them ($F_6 = 6.624$; $p_6 < 0.000$; $F_7 = 2.832$; $p_7 < 0.000$) they are more difficult than for the boys (items 6 and 7).

DISCUSSION

The most important findings are:

1. PE teachers' attitudes to conditioning activities and to education for a healthy lifestyle are highly positive.
2. PE teachers perceive pupils' attitudes to conditioning activities significantly more critically than the children themselves. Teachers also do not recognise differences in attitudes between different genders and age groups.
3. Teachers with more pedagogical experience perceive the attitude of pupils to conditioning activities more positively.

Teachers have a very positive attitude to conditioning activities and they value highly the importance of education for a healthy lifestyle. Similar conclusions about the importance of physical preparation and the need to develop a healthy lifestyle can also be seen in other studies (Bocket, 1994; Hodges Kulinna & Silverman, 2000).

The positive attitudes of teachers to examined contents suggest that the teachers are emotionally driven to succeed in their primary and most important role – helping with the socialisation of children and teenagers for the role of active participants in physical activities. Consequently, teachers whose beliefs and attitudes to physical conditioning and health are positive may be successfully transferring these values to their pupils.

Teachers perceive pupils' attitudes to physically demanding PE content as lower and are more critical of them than the pupils themselves. Many teachers are convinced that their pupils do not like physically demanding sports activities. Contrary to this, 49% of pupils agreed (score 4) or entirely agreed (score 5) with statements: *'I like PE contents where I get tired'*. Further, 69% of teachers and just 37% of pupils agreed with the statement *'Pupils do not like physically demanding contents of PE'*, which confirms the big differences between teachers and pupils. Differences in the identification of pupils' interests hardly contribute to the success of a PE teacher's pedagogical work, as the recognition, respect and consideration of interests, wishes and attitudes of pupils to individual contents of the programme are important foundations of the planning and execution of the PE process.

If pupils do not have a choice of different PE contents, it is possible that those who like physically demanding activities may be deprived of their favourite contents. This could negatively affect their otherwise highly positive attitude to PE. Pupils with positive attitudes to conditioning activities have a higher level of intrinsic motivation, they wish to have more difficult physical education lessons, they want to improve their sports results and confirm their own abilities. They are more persistent and work harder than pupils with negative attitudes to conditioning activities (Marcina, Škof, Ceci Erpič, Zabukovec & Boben, 2002). The attitudes of Slovenian adolescents to physically demanding activities are very ambivalent (Kukovič, 2001; Škof et al., 2001). The greater dispersion of attitudes indicates very different responses to these activities within groups of pupils of different ages and genders.

Unfortunately, the results demonstrate that teachers teaching different age groups and genders do not differentiate in their perceptions of pupils' attitudes to physically demanding activities. Among other things, this means that despite various needs and interests pupils of different age groups and genders may be subjected to the same demands, contents and pedagogical

approaches. This leads to the equal treatment of the unequal. Further research is needed to investigate if greater sensitivity on the part of the PE teacher in recognising pupils' opinions and interests, along with a modification of types of work and motivational procedures to meet the specific demands of the pupils of different ages and genders, might contribute to the better acceptance of conditioning activities and more efficient PE.

Studies of motivation in sport and physical education have shown that, in order to strengthen humanity in education and the development of human values in sport and education, the use of task orientation is very important (meaning that goals directed to contents and adapted to each individual are more important than normative goals) as well as the utilisation of internal motives for reaching goals (Deci & Ryan, 1991; Duda, Olson & Templin, 1991; Vallerand & Losier, 1994). Motivation derives from the fulfilment of basic psychological needs: being accepted, being recognised, having fun and freedom (Glasser, 1994). In different people various needs are manifested differently and their priority can also change over time. The "empty tanks" of one or more needs, especially in the long run, will lead to a decrease in pupils' motivation and a reluctance to accept a teacher.

Not all types of leadership work for all pupils in all situations. It often happens that the teacher views the pupils from their (subjective) aspect. They think that they know what a pupil needs and what is the most important for them (in the short and long term). In reality, with their actions they do not contribute to increasing a pupil's psychological capacities. In addition, due to the ever present teacher-pupil (class) interaction the teacher often forgets that each pupil has their own priority of needs and view of how to best fulfil these needs. Therefore, it is important that the teacher tries to establish the conditions to fulfil different needs in any given situation. Thus each pupil will be able to find something for themselves; something that works for one pupil is not necessarily beneficial to the other.

Compared to their younger colleagues, teachers with more than 20 years' work experience perceive pupils' attitudes to physically demanding activities more positively. The question is whether teachers with longer work experience develop a better classroom mood and produce satisfied pupils in PE, or do they just view them less critically? A teacher has many social roles (in relation to the pupils, headmaster, parents, environment etc.) which quite specifically define their socially expected actions. Frequently these actions are in contradiction with expectations and quite often the teacher experiences a so-called conflict of roles. This leads to them continuously compromising with pupils, school leadership, the incomplete school system etc. Conflicts of teachers' roles and continuous compromising are a cause of various neuroses which are manifested in atypical behaviour: inactivity or numbness, obsession with accuracy, demanding too much etc., or lead to the transformation from an idealist to an '*attuned virtuoso in practise*' (Cankar, 1994; Liebhart, 1970).

The socio-psychological theory of teaching emphasises the importance of the communication process which enables the transfer of knowledge and experience from the teacher to the pupils. The core of this process is an exchange of ideas, beliefs, attitudes etc. This dimension of a teacher's work is even more important in the PE subject. Cankar (1994) found that girls rank open communication as the highest virtue in a female PE teacher, whereas boys consider methods of class organisation and teaching as the most important criteria of a teacher's quality. In addition, Cankar (1985) found that 7th year primary school pupils value their teacher highly if they are included in the organisation and implementation of work and their interests are considered.

Liebhart's theory (1970) that practice makes the teacher and that experience develops leadership techniques and communication is being confirmed by the theory of the professional development of teachers. Berliner (1995) indicated five developmental stages of a teacher: complete novice; novice with some experience; competent teacher; proficient teacher; and expert teacher. A characteristic of an expert teacher (with 10 to 15 thousand hours of teaching) is intuitive work. They solve problems in their own way, very efficiently and with ease.

Conclusions

Based on the results of this study, it may be concluded that teachers highly value the importance of education for a healthy lifestyle. However, the difference seen in attitudes and their inability to recognise the individual needs of pupils of different ages and genders leads to the conclusion that the lower level of efficiency of PE programmes with conditioning activities is also a result of less efficient pedagogical approaches being used by PE teachers.

Greater sensitivity when recognising the opinions and interests of pupils, together with the adaptation of working methods and motivational procedures to the specific needs of each gender and age group, is needed in order to improve the efficiency of PE teachers' pedagogical approaches and bring about the more efficient delivery of programmes with endurance contents.

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