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Full Length Research Paper

The development of a student's behaviors' self-evaluation scale (SBSS) in multicultural physical education class settings

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The purpose of this study is to develop and validate the structural validity and reliability of a student's behaviors' self-evaluation scale (SBSS) in the physical education class. The SBSS was created in order to evaluate the effect of a physical education program in the context of the multicultural composition of the student population in the Greek elementary schools. First, the face validity of items was evaluated, second, the pool of the items selected was factor analyzed. Two hundred and thirty six (N = 236) students, aged 10 to 12 years old (M = 11, SD = 1.38) participated in this study. The participation consisted of 110 (46.6%) boys and 126 (53.4%) girls who attended the 5th and 6th grade of primary school. From the participants, 133 (56.4%) were Greeks and 103 (43.6%) were foreigners. Exploratory factor analysis yielded five factors (goals – acquaintances – reward – help – irresponsibility) accounting for 65.2% of the variance. The internal reliability index of the questionnaire was satisfactory. The scale developed in the present study can be a useful tool for the students' self–evaluation behavior in physical education classes with a multicultural student body. Although the results were encouraging, further research would be very helpful in order to improve the instrument.

Key words: Student's behavior, self-evaluation questionnaire, multicultural synthesis, physical education.

INTRODUCTION

During the recent years, Greece has been facing a new social reality. A growing current of emigration and repatriation has been noticed that is, reshaping the demographical structure of the country and consequently of the school as well. It has also dredged up important problems that had so far remained unnoticed, such as the lack of cooperation, xenophobia, racist behaviors and even violence (KEDA, 2001). According to Dragonas (2004), the most important effect of the increase of foreign students in the school environment was that it put under question the prevailing image of national homogeneity in the classroom. Also the dominant perception that focused on the national point of view; served as a corner stone for the curriculums was severely tested. As Greece is currently receiving a growing number of immigrants, it is being called to develop a social environment and consequently a school environment as well, that is capable of facing the "culturally different", the "other" and to develop in the best possible way the "cultural capital" of these new students, via interventions and approaches in the context of the educational process. Cordova and Love (1987) states that schools must create an environment where people of different ethnicities can live harmoniously and will be happy with the ethnic singularities that each "contributes" to the social group. Therefore the educational system must (a) produce students capable of re-adjusting to the ever-changing social demands, (b) promote the humanitarian values along with the development of cognitive skills, (c) insure a high level of cultural education for the students, d) promote mutual understanding and solidarity among them, emphasizing the importance of acknowledging their cultural and

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intellectual differences, (e) prepare the students for their role as active citizens in a global society (Greek Ministry of Education, 2008).

The educational needs of the current multicultural society were the starting point for the development and the implementation of an intercultural educational curriculum. Georgiogiannis (2007) defines intercultural as a process though which individuals, groups of individuals or nations of different cultures understand, acknowledge and experience the cultural difference, create the conditions for cooperation and adopt characteristics of these different civilizations. Govaris (2004) claims that intercultural education means adaptation for the foreign students and for the native ones, understanding of the others, but it also means to process jointly all the situations at school and to draw from these experiences and form suitable conclusions. Banks (1991) defines intercultural education as understanding the needs of each child and offer equal treatment to each child with sensitivity and efficiency during class hours. The intercultural education model, depending on its principles, cultivates in children the ability of critical thought, fulfilling all along the educational, social, cultural and political expectations of all ethnic groups (Georgiogiannis, 1997). Markou (1997) and Georgiogiannis (1995) described the intercultural model as "a dialectic relation, a process of recognition and cooperation between people of various ethnicities or nationalities". According to Georgiogiannis (2007), the principle of the intercultural education model must apply to all the subjects of the curriculum. These principles are: (a) awareness, (b) solidarity, (c) respect of the cultural "otherness" and (d) freedom from the nationalistic way of thought and the nationalistic stereo types and prejudices.

The models of the intercultural education can be applied in physical education courses, creating a learning environment that will support, respect and enhance "personal difference that will offer equal learning opportunities, and will develop the personal and social responsibility of all the students. As Derri (2007) states, "understanding and respect of personal differences and cooperation with everyone, as well as the display of responsible athletic and social behaviour, as a result of participating in sports activities, are currently some of the basic aims of the physical education courses". According to the developed programs of physical education in countries with suitable infrastructure, as North America (NASPE, 2004), the primary aim of the physical education course is the understanding and the acceptance of the differences by students. Chepyator – Thomson (1994) suggested that physical education due to its dynamic influence on social orientation can help to minimize ethnic discriminations and to promote intercultural understanding. It can promote the further evaluation and understanding of the particularities of different cultural groups and lead to the achievement of good interpersonal communication in and out of the school environment (Sparks, 1994).

Barrett (2005), Dyson (2001), Giebink and McKenzie (1985), Hellison (2001) and Siedentop et al. (2004), reports that responsibility, cooperation, fair play, active involvement, support of the piers and respect of the opponent or the classmate can be cultivated though targeted programmes. Klafki (1987) claims that, children have the ability to judge, to decide and act according to their own criteria and personal judgement. In the context of social learning and active participation of the student, alternative evaluation techniques have appeared, particularly during recent years, such as self-evaluation or mutual evaluation, evaluation based on the students' portfolio, systematic observation, sociometric techniques, teamwork etc.

Self-evaluation can be defined as the process in which the individual itself evaluates the results of its efforts. It aims at the improvement or the modification of these efforts, when necessary. According to Koliadis (2002), self-evaluation is an intervention technique in which the individual must modify his behaviour. Andreadakis and Xanthakou (2005) states that self-evaluation can be used as a pedagogical process for developing the students' responsibility and self-awareness. Matsagouras (1998, 2000) argues that social learning requires cooperative teaching and in this context, self-evaluation can contribute to the full, harmonious and balance development of the students. Dimitropoulos (2003) claims that this practice, when used in the Greek educational system, is less of testing character and more of a training and pedagogical character. According to researchers, the evaluation of the social behaviour of children differs depending on the experimental design, the program's goals and the research objectives (Martinek, 2000; Wright, 2001). Miller (1998) argues that in order to evaluate the students' social behaviour, we must first separate and record the different behaviours, such as responsibility, cooperation, acceptance of others, and then observe them for a specific period.

In their researches, Byrne (2002) Compagnone (1995) and Hellison and Georgiadis (1992) used catalogues, as they called them, which included behaviours for observation and self-evaluation. Also in recent research by Vidoni and Ward (2006), investigating the behaviour of students in the sixth grade of elementary school; regarding the principles of fair play, an observation sheet was used in order to record behaviours. In a research examining the issue of cross-cultural approach in physical education classroom, which included students of various nationalities and the role of the physical education course in the children's schooling, a questionnaire was developed "The Conceived National Identity in Physical Education" (Kouli and Papaioannou, 2006). Nikopoulou et al. (2006), carried out a research on the effects of an interventional physical education program,

based upon the Hellison model. They developed and used a scale that recorded the frequency of responsible and irresponsible behaviours. This student behavior rating scale was filled by students of various nationalities.

However, empirical research with student's behaviours' self-evaluation in physical education was limited. Furthermore, no psychometric instruments for measuring mainstream culture students' behaviors toward social and moral development were available for use in physical education settings. Therefore, the purpose of this study is to develop and validate the structural validity and reliability of a student's behaviours' self-evaluation scale (SBSS) during their participation in the physical education courses. More specifically, the Scale based on the principles of intercultural education was structured in order to evaluate the effects of a physical education program, with emphasis on the social and moral development in the context of the multicultural composition of the student's population in Greek elementary schools.

MATERIALS AND METHODS

Participants

Two hundred and thirty six students (N = 236), between the ages of 10 – 12, (M = 11, SD = 1, 38) participated in this study. The participants consisted of 110 (46, 6%) boys and 126 (53, 4%) girls who attended the 5th (102) and the 6th (134) grade of elementary school. From the participants, 133 (56, 4%) were Greeks and 103 (43, 6%) were foreigners. This population was chosen to keep the pilot study similar to the main study regarding participant's age and class.

Instrument

A two section scale was created so that the students themselves would evaluate their behavior in the context of the multicultural student population during a physical education school program. The first section of the survey included questions relative with the participants' demographic information, such as: age, gender, nationality etc. The second section included 18 items and contained 5 dimensions (goals, acquaintance, reward, help, and irresponsibility). The factor "goals" consisted of 4 items (for example, I set goals for the team's success), the factor "acquaintance" consisted of 3 items (for example, I like having friends and children from other countries), the factor "reward" consisted of 4 items (for example, I applaud those who play fair), the factor "help" consisted of 4 items (for example, I accept help from others when I cannot perform an exercise) and the factor "irresponsibility" consisted of 3 items (for example, I talk to others in an offensive manner about their origin). Participants rated their responses for each of these 18 items using a 5-point Likert-type scale. These five response categories were coded from 1 to 5 with 1 = never, 2 = rarely, 3 = sometimes, 4 = very often and 5 = always.

Procedure

The development and evaluation of student's behaviors' self-evaluation scale (SBSS) was carried out in 3 stages as thus described explicitly.

Stage 1 – The creation of SBSS

A scale was created so that the students themselves would evaluate their behavior during a physical education school program with emphasis on the social and moral development in the context of the students' multicultural synthesis.

After researching the relevant bibliography, a panel of experts was asked to evaluate and judge the content validity of the instrument. The groups of experts was made of three physical education teachers (holding PhDs in education), a professor of literature and two teachers (with educational experience from 10 to 24 years, M = 17.64). They created at least ten questions for each factor. To develop the items, authors and experts reviewed relevant studies based on several evaluation forms; for example, the Students behavior rating scale during the physical education class (SBRS) of Nikopoulou et al. (2006) and the students' self – evaluation test, regarding tolerance issues of UNESCO (Reardon, 1997). This resulted in a database containing more than 200 items. Then the groups of expert's individually reviewed the list of the items that emerged in order to narrow the size of this database. Identical or irrelevant items were excluded. Every time a set of changes was made, the questionnaire was reviewed again by the consultants, until the instrument was deemed adequate. This procedure resulted in 26 items, which were entered into the initial questionnaire. The reduction of the items was a desirable outcome, because the aim of this study is to develop a measure that is easy to use and amenable to multiple administrations.

Finally, when these questions were drafted, they were given to 8 students (4 boys and 4 girls) in order to help researchers eliminate unintended complexity and imprecision in wording. After few changes, mostly in the expression and formulation, the items were modified to meet the purpose of this study. The SBSS questionnaire contained two sections. The first section included questions pertinent to the participants' demographic information (age, gender, nationality, etc.), while, the second section included 26 items covering five (5) dimensions on students' self–evaluation behavior in multicultural synthesis physical education classes. Participants used a 5-point Likert response scale that ranged from 1 ''never'' to 5 ''always'' to indicate their level of agreement or disagreement with each of these items. The factor "acquaintance" consisted of 5 items (for example, I like having friends and children from other countries), the factor "irresponsibility" consisted of 6 items (for example, I insult my classmates without any particular reason), the factor "reward" consisted of 5 items (for example, I applaud the ones who follow the rules of fair play), the factor "help" consisted of 6 items (for example, I help others when they fail in an effort) and the last factor "goals" consisted of 4 items (for example, I insist on the success of team goals?).

Stage 2 – First pilot study

The purpose of the first pilot study was to investigate the validity and reliability of SBSS resulting from the aforementioned procedure and adjust uncertainties, which may arise in the implementation of the main study and may affect the research process. The construct validity was examined by exploratory factor analysis, whereas, the factors' internal consistency was presented with the Cronbach-alpha coefficient (Cronbach, 1951). Maximum likelihood approaches was used to identify (extract) the number of underling factors (dimensions). Factors were rotated using Oblique rotation procedure. The retention criterion of SBSS was to retain those first components with adjusted eigenvalues greater than one, also known as the Kaiser-Guttman criterion. Prior to the performance of the maximum likelihood factorial analysis, the suitability of data for each factor analysis was assessed. This involved inspecting the correlation matrix table for coefficients of 0.30 and above, and calculating the Barlett's test of sphericity and Kaiser-Meyer-Olkin

measure of sampling adequacy (KMO). The significance ($p < 0.05$) of the Barlett's test of sphericity and values above 0.60 for the KMO index were considered appropriate. Finally, the multicollinearity examination was based on the communalities exploration.

One hundred and twenty two students ($N = 122$), aged 10 to 12, ($M = 11$, $SD = 1$, 36) evaluated the SBSS questionnaire. The participants consisted of 55 (45, 1%) boys and 67 (54, 9%) girls who attended the 5th (52) and the 6th (70) grade of elementary school. From the participants 78 (63, 9%) were Greeks and 44 (36, 1%) were foreigners. This population was chosen to keep the pilot study similar to the main study regarding participant's age and class. The questionnaire was given to the students once. The questionnaires took approximately 30 min to complete. Students answered the questions on a Likert-type scale ranging from 1 "never" to 5 'always". For the benefit of the younger children, the researcher went through each question, giving explanation and/or clarification where necessary, while each child wrote down their answer. At the same time the researcher noted down the questions that caused difficulty to some of the students as regards their comprehension so that improvements would be made wherever it was considered necessary. Participants were assured of the anonymity and confidentiality of their responses, and were asked to be as objective and honest as possible with their answers. The questionnaires were all handed back to the researcher after being completed.

Stage 3 – Second pilot study

The purpose of the second pilot study was to investigate the validity and reliability of SBSS resulting from the 1st pilot research procedure. Two hundred and thirty six students ($N = 236$), aged 10 to 12, ($M = 11$, $SD = 1$, 38) revaluated the SBSS questionnaire. The participants consisted of 110 (46, 6%) boys and 126 (53, 4%) girls who attended the 5th (102) and the 6th (134) grade of elementary school. From the participants, 133 (56, 4%) were Greeks and 103 (43, 6%) were foreigners. This population was chosen to keep the pilot study similar to the main study regarding participant's age and class. The questionnaire was given to the students once. The questionnaires took approximately 30 min to complete. Students answered the questions on a Likert-type scale ranging from 1 "never" to 5 'always". Participants were assured of the anonymity and confidentiality of their responses, and were asked to be as objective and honest as possible with their answers. The questionnaires were all handed back to the researcher after being completed. As an index of internal consistency, Cronbach's alpha was calculated for each subscale.

RESULTS

1st pilot study

An initial maximum likelihood factorial analysis without rotation was conducted to determine the final number of factors. Analysis showed that five factors had eigenvalues greater than 1.0. Scree-plot was also supported for maintenance of five factors. Exploratory factor analysis was followed by varimax as well, as oblique rotation was employed to examine the underlying structure of the SBSS questionnaire. The two solutions provided similar results. However, inspection of the factor correlation matrix showed that its values ranged from 0.42 to 0.63. According to Tabachnick and Fidell (2001), factor correlation matrix values around 0.32 and above warrant oblique rotation. So, it was decided to present the results of the oblimin rotation. Exploratory factor analysis with oblimin rotation indicated that eight items from the initial scale had multiple or low loadings (< 0.30), thus, they were excluded from further analysis. The factor loadings are presented in Table 1.

Five factors explained 50.09% of the total variance (KMO = 0.66, Bartlett's test of sphericity = 1117.86, $p < 0.001$). The internal consistency cronbach's alpha coefficients were: 0.60 for the first factor ''reward'' (seven items), 0.52 for the second factor ''acquaintance'' (five items), 0.30 for the third factor ''irresponsibility'' (five items), 0.69 for the fourth factor ''goals'' (six items) and 0.63 for the fifth factor ''help'' (three items). Cronbach's alpha, mean and standard deviation are presented in Table 2. The results of the 1st pilot study revealed the necessity to revise the SBSS questionnaire. Therefore, items were added, deleted, or revised to enhance clarity of the items and the validity and reliability of the instrument. The following steps were made:

(a) From the factor "reward", questions 12, 13, 14 and 16 were revised so that they would become more understandable and question 15 (I congratulate my playmates for their effort regardless of the result) was deleted since it was loaded on a different factor. Question 12 (I reward the ones-Greeks or foreigners who succeed in an effort) was revised to the question "I instill courage to whoever finds difficulties in an effort". Instead of the question 14 (I congratulate the opponents after every game regardless of the result), the question "I congratulate opponent players regardless of the result of the game" and the question 16 (I applaud the ones who follow the rules of fair play), the question "I applaud the ones who play fair" was replaced.
(b) From the factor "acquaintance" questions 1, 4 remained and questions 3 (I am interested in games and activities from the countries of foreign classmates) and 5 (I enjoy participating in games and activities that I learn from foreign classmates) were deleted since they loaded in another factor. Also, question 2 (I learn new things when I play with foreign classmates) was revised to "I like playing games with children from other countries".
(c) In the factor "irresponsibility" it was decided to keep question 8 and to delete questions 9, 10 and 11. Question 6 (I address my classmates who come from another country in an offensive way about their origin) was revised to the question "I talk to others offensively about their origin" and question 7 (I cause embarrassment to other children by making negative comments about their body features) was revised to the question "I make negative comments about my classmate's appearance".
(d) In the factor "goals" it was decided to keep questions 24, 26 and to revise questions 23 and 25, even though the internal consistency and structural validity that the factor presented was quite good. Question 23 (I set goals for my improvement) was revised to "I set personal goals, so

Table 1. The rotated loading matrix from the factor analysis (1st pilot study).

S/N	Items	1	2	3	4	5	H^2
1	I like having friends children from other countries		0.817				0.739
2	I learn new things when I play with foreign classmates	0.613					0.558
3	I am interested in the games and activities of foreign classmates			-0.389			0.376
4	I avoid making friendships with children from other countries		0.625				0.523
5	I enjoy participating in games and activities that I learn from foreign classmates					-0.535	0.525
6	I address my classmates who come from another country in an offensive way about their origin			-0.700			0.574
7	I cause embarrassment to other children by making negative comments about their body features				0.395		0.451
8	I insult my classmates without any particular reason		-0.503				0.423
9	I am kind with my classmates			0.545			0.552
10	I annoy my classmates with gestures			-0.718			0.536
11	I distract my classmates attention with jokes and conversation		-0.530				0.341
12	I reward the ones (Greeks or foreigners) who succeed in an effort	0.685					0.586
13	I support whoever (Greek or foreign) fails in an effort	0.741					0.638
14	I congratulate the opponents after every game regardless of the result	0.485					0.321
15	I congratulate my playmates for their effort regardless of the result				0.525		0.424
16	I applaud the ones who follow the rules of fair play	0.612					0.487
17	I accept the help of others (Greeks and foreigners) when I do not manage to perform an exercise			0.517			0.330
18	I am careful for the safety of others when I exercise	0.584					0.599
19	I show to others, when asked, what they do wrong or right		0.529				0.582
20	I encourage the ones who hesitate to perform a new exercise	0.573					0.565
21	I ask help from others so as to improve myself in an exercise					0.496	0.451
22	I help others when they fail in an effort					0.509	0.291
23	I set goals for my improvement				0.603		0.535
24	I insist upon the success of my goal				0.711		0.533
25	I set goals for the success of my team				0.787		0.652
26	I insist on the success of team goals				0.609		0.643
	% of variance	12.49	11.07	10.31	9.64	7.43	
	Total variance						50.9
	Eigenvalue	3.24	2.88	2.68	2.51	1.93	
	H^2 = communalities						

Table 2. Internal consistency, means[1] and standard deviations for each factor (1st pilot study).

Factors	N	Cronbach a	Mean	S.D.
Reward	122	0.60	3.55	0.84
Acquaintance	122	0.52	4.11	0.73
Irresponsibility	122	0.30	2.16	0.74
Goals	122	0.69	4.37	0.61
Help	122	0.63	3.67	0.79

[1] Scale: 1 = never, 2 = rarely, 3 = sometimes, 4 = very often and 5 = always.

as to improve myself", while question 25 (I set goals for the success of my team) was revised to "I set goals for the team success".

(e) From the factor "help" questions 21, 22 were kept and questions 19, 20 were deleted since they were loaded in different factors, and questions 17and 18 were revised so that they would be more understandable. Question 17 (I accept the help of others -Greeks and foreigners when I do not manage to perform an exercise) was changed to "I accept help from others help when I cannot perform an exercise". Question 18 (I am careful for the safety of others when I exercise) was changed to "I pay attention to the safety of others when I do exercise". Questions after these corrections were given again to the panel of experts in order to revaluate the content validity of the instrument. After few changes, mostly in the expression and formulation, the items were modified to meet the purpose of the second pilot study.

2nd pilot study

An exploratory factor analysis of the 18-item scale was performed in order to investigate the underlying dimensions of the instrument, using the SPSS factor analysis program. Prior to the performance of an exploratory factor analysis, the suitability of data was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of 0.35 and above. The Kaiser-Meyer-Oklin values was 0.711, exceeding the recommended value of 0.6 and the Bartlett's test of sphericity equals 1810.553, reached statistical significance ($p < 0.001$), supporting the factorability of the correlation matrix (Tabachnick and Fidell, 2001).

Results indicate that our initial hypothesis of multidimensionality was correct. The principal components analysis revealed the presence of five components with eigenvalue exceeding 1. An inspection of the screen plot revealed a clear break after the five components. Based on screen plot and the eigenvalues, it was decided to retain five components for further investigation. To aid in the interpretation of these five components, oblique rotation was performed (Tabachnick and Fidell, 2001). The rotated solution, presented in Table 3 revealed the presence of simple structure, with five components showing a number of strong loadings, and all variables loading substantially on only one component. The five factors solution explained a total of 65.16% of the variance, with component 1 contributing 14.13%, component 2 contributing 14.03%, component 3 contributing 13.65%, component 4 contributing 11.76 % and component 5 contributing 11.59%. The interpretation of the five components is defined as follows:

1) Goals, (items: 15, 16 17, 18)
2) Acquaintance (items: 1, 2, 3)
3) Reward (items: 7, 8, 9, 10)
4) Help (items: 11, 12, 13, 14)
5) Irresponsibility (items: 4, 5, 6)

The internal consistency of cronbach's alpha coefficients were: 0.78 for the first factor ''goals'' (four items), 0.88 for the second factor ''acquaintance'' (three items), 0.76 for the third factor ''reward'' (four items), 0.71 for the fourth factor ''help'' (four items) and 0.73 for the fifth factor ''irresponsibility'' (three items). Cronbach's alpha, mean and standard deviation are presented in Table 4.

DISCUSSION

The initial purpose of this study was to develop and validate the structural validity and reliability of a student's behaviours' self-evaluation scale (SBSS) during their participation in the physical education courses. More specifically, the scale based on the principles of intercultural education was structured in order to evaluate the effects of a physical education program with emphasis on the social and moral development in the context of the multicultural composition of the student population in Greek elementary schools. According to Bagiatis (1997), such measurement tools are useful for the evaluation of the qualitative features that cannot be counted objectively. Initial drafting of questions for the instrument was created and the first pilot study followed. The results of the 1st pilot study revealed the necessity to revise the SBSS questionnaire, suggesting which items should be changed. Exploratory factor analysis with oblimin rotation indicates that eight items from the initial 26-items scale had multiple or low loadings, thus, they

Table 3. The rotated loading matrix from the factor analysis (2nd pilot study).

S/N	Items	1	2	3	4	5	H^2
1	I like having friends children from other countries		0.86				0.78
2	I like playing games with children from other countries		0.97				0.95
3	I avoid making friendships with children from other countries		0.86				0.75
4	I talk to others offensively about their origin					0.81	0.68
5	I make negative comments about my classmates' appearance					0.79	0.66
6	I insult my classmates without any particular reason					0.78	0.64
7	I congratulate those who make it in an effort			0.77			0.62
8	I instill courage to whoever finds difficulties in an effort			0.81			0.73
9	I congratulate opponent players regardless of the result of the game			0.69			0.63
10	I applaud the ones who play fair			0.61			0.53
11	I accept help from others when I cannot perform an exercise				0.77		0.67
12	I pay attention to the safety of others then I do exercise				0.57		0.45
13	I ask others for help so as to improve myself in an exercise				0.87		0.78
14	I help others when they fail in an effort				0.51		0.42
15	I set personal goals, so as to improve myself	0.82					0.68
16	I insist upon the success of my goal	0.76					0.6
17	I set goals for the team success	0.67					0.49
18	I insist on the success of team goals	0.8					0.67
	% of variance	14.1	14	13.7	11.8	11.6	
	Total variance						65.2
	Eigenvalue	2.54	2.53	2.46	2.12	2.09	

H^2 = Communalities.

Table 4. Internal consistency, means[1] and standard deviations for each factor (2nd pilot study).

Factors	N	Cronbach a	Mean	S.D.
Goals	236	.78	4.14	1.04
Acquaintance	236	.88	4.32	.74
Reward	236	.76	3.78	1.03
Help	236	.71	3.82	1.01
Irresponsibility	236	.73	1.49	.80

[1]Scale: 1 = never, 2 = rarely, 3 = sometimes, 4 = very often and 5 = always.

were excluded from further analysis. The internal consistency of cronbach's a coefficients were low in each factor. For the improvement of SBSS questionnaire, language ameliorations were done in some of the questions, some of them were revised in order to be more understandable, whereas the ones that loaded in another factor were deleted. Then, a second pilot study was followed to examine the underlying structure of the SBSS questionnaire. The factor-analytic results were encouraging; a five factor solution emerged (irresponsibility, goals, acquaintance, reward, help), containing 18 items. With regard to the reliability of the scale, examination of the cronbach's a coefficient showed that subscales of the SBSS presented satisfactory internal consistency. Results also supported the validity of the scores for this sample on the SBSS.

The existence and use of a scale about self-evaluation of behavior, will probably contribute to plan qualitative programs of physical education aiming to improve the students behavior. According to researchers, the evaluation of the children's' social behavior and the method of evaluation differs according to the experimental design, the goals of the program and the research objectives (Martinek, 2000; Wright, 2001). According to Miller (1998), prior to the evaluation of the students' social behavior, what initially has to be done was the division and recording of different behaviors, such as self-control, co-operation, and others and afterwards, their observation for a specific period. Hellison and Georgiadis (1992) supports that these lists of behaviors form a valid

method for evaluation and that according to the results of the research, the program's effectiveness is proved.

As multiculturalism becomes a more and more frequent phenomenon in the area of Greek education, the interest regarding the culturally different students who study in Greek schools is daily increasing. In Greece, several educational programs are carried out for students but also for educators, with the main aim of elevation, acceptance and co-existence in a multicultural society (Chatzicristos, 1990). The ongoing dialogue focuses beyond performances, to the socialization process of foreign students and the formation of co-operative and personal relations developing among the native and foreign students. The students might probably develop hostile relations with their classmates or show unwillingness to participate in activities or adopt stereo types and prejudices towards values and principles which are not familiar to them (Cummins, 1999). Children need physical education since they get spiritual and psychological benefits, mainly through the improvement of self-discipline, self-confidence, the empowerment of co-operation and the promotion of healthy life styles (Gauch et al., 2003).

However, since recent times, no research in the field of Greek education has studied the behavior of Greek and foreign students in elementary physical education, based on their views and to the way in which they perceive their inter-relations. The results of this research showed the perceptive ability of the scale about self-evaluation behavior of students in elementary education. SBSS is an instrument particularly useful in this kind of evaluation because the whole process of the evaluation was amenable to self-observation, self-reflection and self-report.

In conclusion, exploratory factor analysis revealed five meaningful factors. Although shortcomings in the psychometric properties of the SBSS did not emerge, the scale should be assessed further, combined with advanced statistical methods (confirmatory factor analysis), in order to ensure the validity of the questionnaire. There are several reasons why confirmatory analysis could not be applied. Initially, exploratory factor analysis was preferred at first when the questionnaire included items that had not been tested before (Hatzigeorgiadis and Biddle, 2000).

Additionally, since the questionnaire had not yet reached its final form, exploratory factor analysis would be helpful in order to identify problematic items, and therefore resulting in further item reduction. Absence of the examination of external validity is also a shortcoming of the instrument. Unfortunately, other instruments for the particular case do not exist, and comparisons between evaluations cannot be made. Finally, the SBSS, an instrument to evaluate professional development procedures, appears to be a promising research tool. In turn, knowledge about training evaluation procedures will be very useful for educational administrations and the improvement of future training procedures. In addition, after appropriate adjustments it could be used also in other professional development procedures with similar structure.

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