Scientific
Research
Publishing

Validity and Reliability of an Adaptation of Personal and Social Skills Scale for K-Students for Use in 2.691 Greek Elementary Students

Ntina Kourmousi[1]*, Georgios Markogiannakis[1], Ioannis Lazaridis[2], Konstantina Kolliopoulou[3], Kalliopi Papoutsaki[4], Kalliopi Kounenou[5], Chara Tzavara[6], Vasilios Koutras[1]

[1]Department of Early Childhood Education, University of Ioannina, Ioannina, Greece
[2]41th Prefecture of Primary Education of Attica, D Directorate of Athens' Primary Education, Athens, Greece
[3]43th Prefecture of Primary Education of Attica, D Directorate of Athens' Primary Education, Athens, Greece
[4]45th Prefecture of Primary Education of Attica, D Directorate of Athens' Primary Education, Athens, Greece
[5]Paedagogical Department, Higher School of Pedagogical and Technological Education, Athens, Greece
[6]Centre for Health Services Research, Department of Hygiene, Epidemiology and Medical Statistics, Medical School of National and Kapodistrian University of Athens, Athens, Greece
Email: *nkourmousi@sch.gr, gewmark@gmail.com, ilazaridis@sch.gr, konkolliopoulou@gmail.com, kpapouts@primedu.uoa.gr, kkounen@aspete.gr, htzavara@med.uoa.gr, vkoutras@cc.uoi.gr

Abstract

The Personal and Social Skills Scale for Preschool K-Students Aged 4 - 6 (Kourmousi & Koutras, in Kourmousi, 2012) is a measure comprising eight subscales, designed to measure kindergarten students' personal and social skills in the school environment. The presented study aimed to adapt it for use in elementary students—also adding two more dimensions, namely "Responsibility Taking" and "Use of Spoken and Written language"—and assess its reliability and validity in a sample of 2.691 first and second graders of Greek elementary schools. The adapted scale's construct validity was examined initially by an exploratory factor analysis (EFA). The adapted scale's correlation with the Behavioral Academic Self-Esteem (B.A.S.E.) scale and with demographic information was also investigated. Internal consistency reliability was satisfactory with Cronbach's alphas ranging from 0.82 to 0.92 for all subscales. EFA identified an 11 factor model. The extracted factors explained 70.9% of the total variance. All subscales were found to be significantly and positively correlated with each other. Correlations of self-esteem with all subscales were also significant with the highest ones found with Problem Solving, Concentration of Attention, Participation/Cooperation in class, Friendship skills and Use of Spoken and Written Language. In most questionnaire subscales lower scores were exhibited by boys, by younger students, by those who did not comprehend the spoken language well, by students who received special edu-

cation support (attended an integration class or received parallel support), by those re-attending the same grade, and by those whose mothers had lower educational level. In conclusion, the Personal and Social Skills Scale for Elementary Students Aged 7 - 9 (PSSS-E), namely the adaptation of the PSSS-K for use in older children, was found to have satisfactory psychometric properties. Therefore, it can be used to evaluate elementary students' personal and social skills.

Keywords

1. Introduction

Scientific studies and clinical applications regarding children's and adolescents' personal and social skills have become quite important since the 80s, mainly due to the increasing recognition of the significant role of social-emotional development in children's well-being; Since Daniel Goleman's first publication of his best-selling popular book titled "Emotional Intelligence" (1995), it has been acknowledged that emotional and social skills may be more important to our happiness and success in life, than IQ or intelligence (Merrell & Gimpel, 2014). Another important reason for the rising interest towards children's personal and social skills is that retrospective investigations have consistently shown strong relations between childhood social competence and social, academic and psychological functioning (Michelson et al., 2013).

1.1. The Concepts of Personal and Social Skills

In order to describe personal and social skills, terms such as "personal characteristics," "non-cognitive skills," "life skills", "socio-emotional skills" and even "21st century skills" have been used for a wide array of attributes like resilience and cooperation skills, which are considered valuable and necessary in many settings, including work and education (Lievens & Sackett, 2012). Inany case, in order to be able to examine the content and the definition of personal and social skills it should firstly be noted that the term *skill* indicates rather a set of learned and acquired behaviors than a personality trait (Michelson et al., 2013).

Regarding the concept of *personal skills*, in the work sector, they are considered as generic capabilities "which allow people to succeed in a wide range of tasks and jobs and include effective communication, negotiation skills, problem solving ability and ability to work in teams" (American Employment Department, 1991, in Harrison, 1996: p. 256). Botvin and Willis (1985) stress that the necessary ones in order to function effectively as adults should be developed during youth, and include effective and responsible decision making, techniques for coping with stress and anxiety, and basic principles of personal behavior

change and self-improvement. Griffin and his colleagues (2001), use the term personal competence skills, describing decision-making, self-control, and self-regulation skills. They also argue that although a great deal of research has shown the positive impact of social skills enhancement, fewer studies have focused on the potential protective role of personal skills such as cognitive and behavioral self-management strategies.

Regarding the definition of *social skills*, Merrell and Gimpel (2014) conclude that the concept is "among the most widely misunderstood and ill-defined of all psychological constructs" (p. 3), mostly due to the diversity of related traits, abilities, and behaviors, and to the complexity of the behavior-environment interaction necessary for their acquisition and performance. According to Michelson et al. (2013) social skills are generally regarded as a set of complex interpersonal behaviors. Gresham (1986) proposes a division of social skills' definitions in three general types: 1) *Peer acceptance* ones, which tend to rely on peer acceptance indices (e.g. sociometric techniques), 2) *Behavioral* ones which tend to explain social skills as situation-specific behaviors, and 3) *Social validity* ones which view social skills as predictors of important social outcomes, such as good social relations.

Merrell and Gimpel (2014) emphasize that the vast number of social skills' definitions apart from their differences also contain important similarities: "Social skills are learned, composed of specific behaviors, include initiations and responses, maximize social reinforcement, are interactive and situation-specific, and can be specified as targets for intervention" (p. 11). However, there is no valid and agreed-upon taxonomy for their classification. Merrell and Gimpel (2014) propose "the use of multivariate techniques, such as factor analysis, in order to derive empirically based clusters of highly intercorrelated behaviors" (p. 11) as a solution to this issue. According to their suggestion, these clusters should then be labeled by the researcher, based on the types of the specific behaviors included in the cluster, in order to identify the underlying behavioral dimension (Merrell & Gimpel, 2014). What should also be noted is, that even though quite a large number of dimensional approach studies has been conducted in order to classify problem behaviors, relatively few studies have used this kind of approach in order to classify children's or adolescents' social skills (Merrell, 1994).

Caldarella and Merrell (1997) identified the most common social skill dimensions, —on which Merrell and Gimpel (2014) prompt future researchers to consider focusing for assessment and intervention (p. 13)—occurring in one third or more of the studies they examined in their meta-analysis review:

1) Peer relations (social interaction, prosocial, interpersonal, peer preferred social behavior, empathy, social participation, sociability-leadership, peer reinforcement, general, peer sociability).

2) Self-management (self-control/social convention, social independence, social competence, social responsibility, rules, frustration tolerance).

3) Academic (school adjustment, respect for social rules at school, task orientation, academic responsibility, classroom compliance, good student).

4) Compliance (social cooperation, competence, cooperation compliance).

5) Assertion (assertive social skills, social initiation, social activator, gutsy).

However, when comparing the content of personal and social skills' categories as described in the literature, we cannot help but notice that skills such as self-control, frustration tolerance and assertiveness fall into both of them. This can explain the fact that sometimes personal skills are referred to as "social skills" and contrasted with "cognitive" and "intellectual" skills (Harrison, 1996). It is also worth mentioning that skills like stress and anxiety management, self-control and self-regulation, also constitute the content of another skills' group, defined as emotional skills (Denham, 2005; Humphrey et al., 2011). Moreover, skills such as decision-making, critical thinking, problem solving, self-direction and teamwork and collaboration are also characterized as "21st century skills" and included in the relative curricula (Kyllonen, 2012).

Extensive evidence, deriving from a wide range of studies on promotion, prevention, and treatment interventions has shown that youth can learn personal and social skills (Losel & Beelman 2003). However, research has also shown that new skills cannot be acquired immediately. As Durlak, Weissberg and Pachan (2010) state, "it takes time and effort to develop new behaviors and more complicated skills must be broken down into smaller steps and sequentially mastered. Therefore, a coordinated sequence of activities is required that links the learning steps and provides youth with opportunities to connect these steps. Usually, this occurs through lesson plans or program manuals, particularly if programs use or adapt established curricula" (p. 296).

1.2. Assessment of Personal and Social Skills

The accurate measurement of personal and social skills in children and young people has crucial implications for public health, as Denham and colleagues (2009) state, because of the associations with mental health, academic performance, and other key outcomes. Assessment is also an essential element of effective interventions in youth's personal and social skills enhancement. It includes careful identification, classification and selection.

Regarding the assessment of personal skills—defined as such—there has been limited research. Studies seem to focus on investigating one or more personal skills at a time rather than examining them in a group. For example Griffin and his colleagues (2001) investigated decision-making, self-reinforcement and self-regulation in high school students and Tesch, Braun & Crable (2008) investigated conceptual thinking, critical thinking, creative thinking, self-motivation, communication and listening abilities and ethics in adults. It is worth noting that no personal skills measure exists, named as such.

Conversely, regarding the assessment of social skills there have been considerable advances in research and practice, during the past 3 decades. After all,

screening and assessment play a crucial role in identifying effective interventions regarding social-behavioral problems in children and youth. Most researchers agree to six primary methods of collecting relevant information: behavioral observation, behavior rating scales, interviewing, self-report instruments, projective-expressive techniques, and sociometric techniques (Merrell, 2001). According to Merrell (2001) naturalistic behavioral observation [e.g. Peer Social Behavior Code (PSBC) in Walker and Severson's Systematic Screening for Behavior Disorders (SSBD), 1992] and behavior rating scales [e.g. the School Social Behavior Scales (SSBS) (Merrell, 1993), the Social Skills Rating System (SSRS) (Gresham & Elliot, 1990), and the Scales of Social Competence and School Adjustment (SSCSA) (Walker-McConnell, 1995)] are the two best choices for social skills assessment. Interviewing and sociometric techniques may constitute an important part of an assessment design but would be considered second choices, argues the same author, adding that projective-expressive techniques or objective, self-report instruments may help in further clarification of the results but should only be used in a complimentary manner (Merrell, 2001).

A number of key issues regarding the assessment of personal and social skills are suggested in the literature. In brief, these refer to 1) the distinction between capturing typical and maximal behavior, 2) the extent to which the measures provide information that is distinct or unique among existing constructs (e.g., personality), 3) the scope and specificity of measures (e.g., single, unidimensional vs. complex, multidimensional), and 4) the provider of the information (e.g., children, teacher, parent, peers) (Humphrey et al., 2011). General guidelines for evaluating such skills scales include user friendliness, clearly delineated norming procedure, detailed description, appropriateness and interpretation of scores, as well as validity and reliability (Demaray et al., 1995).

Concerning the use of such measures in Greek students or children and youth in general, there has only been one behavior rating scale investigating both personal and social skills, namely the Personal and Social Skills Scale for Preschool K-Students Aged 4 - 6 (Kourmousi et al., 2017; Kourmousi & Koutras, in Kourmousi, 2012).

No other scale has been used for the investigation of personal skills, while for the investigation of social skills there have only been used interviews (e.g. Kiriazis & Zaharias, 2015) and self-reports, such as the Greek version (Vassilopoulos et al., 2013) of the Children's Self-report Social Skills Scale (CS4) (Danielson & Phelps, 2003, in Mitropoulou, 2012 and Karabatsou, 2014), the Greek version (Goudas Magotsiou & Hatzigeorgiadis, 2009) of the Feelings Toward Group Work Questionnaire (Cantwell & Andrews, 2002, in Magotsiou, 2007 and in Filippou, 2013), and the Social Skills Rating System (Student Form–Elementary Grades) (Gresham & Elliott, 1990, in Statiri, 2015).

The Personal and Social Skills Scale for Preschool K-Students Aged 4 - 6 (Kourmousi et al., 2017; Kourmousi & Koutras, in Kourmousi, 2012) was created for the investigation of the effectiveness of a personal and social skills enhancement

K-program (Kourmousi et al., 2017: pp. 27-29). Its first part consists of items concerning demographics, while the second part consists of 77 items describing students' behaviors as exhibited in kindergarten settings and assessed by their teachers. Out of the 77 items 30 are adaptations from other skills' assessment scales for preschoolers (Kusché & Greenberg, 1994; Merrell 1994; Shure, 2005). The measure also uses the Coopersmith & Gilberts' Behavioral Academic Self-Esteem (B.A.S.E.) scale (1982), translated and adapted in Greek by Kakouros & Maniadaki (2002), in order to assess the self-esteem dimension.

The presented study aims to adapt the Personal and Social Skills Scale for Preschool K-Students Aged 4 - 6 (Kourmousi et al., 2017; Kourmousi & Koutras, in Kourmousi, 2012) for use in Greek elementary students aged 7 - 9 and examine its validity and reliability. Our main hypothesis is that the adaptation of the scale is a reliable and valid behavior rating measure for assessing Greek elementary students' personal and social skills. Additionally, we aim to investigate two more dimensions, namely Responsibility taking and Use of spoken and written language, by adding relevant subscales to the measure. Moreover, we aim to investigate possible correlations, hypothesizing that, factors like sex, age, need for special education assistance, same grade re-attendance, comprehension of the spoken language, and maternal education level, might affect students' personal and social skills.

2. Materials and Methods

2.1. Participants

The study took place in October 2013, in 6 educational prefectures in Attica region, in which Greece's capital—Athens—is located. These prefectures consist of urban, semi-urban, industrial and agricultural areas as well, thus representing all country's socioeconomic groups of inhabitants (Greek Statistical Authority, 2011). 126 elementary teachers participated in our study and completed a questionnaire for each of their students. Their 2.691 students formed our sample.

It should be noted that in the Greek educational system students who are diagnosed with learning difficulties or other problems (e.g. behavioral disorders), can attend an Integration Class besides their mainstream one, for up to twelve hours weekly. In such a class personal or group instruction is offered. Another option for the diagnosed children is the provision of Parallel Support, which is the official designation of the individual support offered to each child by a specially assigned teacher, within the mainstream class.

2.2. Measures

The study questionnaire consisted of:

1) Items concerning demographics, school features, family status and parents' educational level.

2) An adaptation of the Personal and Social Skills Scale for Preschool K-Students

Aged 4 - 6 (Kourmousi et al., 2017; Kourmousi & Koutras, in Kourmousi, 2012). The Personal and Social Skills Scale for Preschool K-Students Aged 4 - 6 (Kourmousi et al., 2017; Kourmousi & Koutras, in Kourmousi, 2012) consists of 77 items investigating students' behaviors as exhibited in the school environment and comprises8 subscales, namely Concentration of attention, Participation/cooperation in class, Emotions' identification and management, Verbal and physical aggressiveness control, Victimization Control, Empathy, Friendship skills, and Problem solving. All the subscales use a 7 point Likert type ranking, and are teacher-rated, with answers ranging from 1 = never or almost never, to 7 = always or almost always. Our version kept 75 out of the 77 items of the scale questions and adapted them in order to assess students' behaviors in elementary school settings.

3) Two more subscales assessing the dimensions of "Responsibility taking" and "Use of spoken and written language", including 5 and 15 items respectively, and rated in the same way.

4) Coopersmith & Gilberts' B.A.S.E. scale (1982), which includes 16 items and examines students' self-esteem as expressed by their behaviors in the school environment. The scale has been translated and adapted in Greek by Kakouros & Maniadaki (2002), and is also teacher-rated, by a 5 point Likert scale.

2.3. Data Collection

The anonymous questionnaires—one for each student—were administered to the 126teachers of our sample students, in October 2013. The teachers were instructed to complete them within 7 - 10 days.

2.4. Ethical Considerations

The study protocol was approved by the Greek Ministry of Education and permission was granted by the Greek Institute of Educational Policy (Ref. Φ15/806/174250/Γ1/18-11-2013). The license was granted on the condition of parents' consent on the completion of a questionnaire regarding their child, and therefore, participating teachers acquired a written consensus from each student's parents, prior to the completion of the corresponding questionnaire.

3. Statistical Methods-Data Analyses

Continuous variables are presented with mean and standard deviation (SD). Qualitative variables are presented with absolute and relative frequencies. Exploratory factor analysis (EFA) was carried out to evaluate construct validity, disclose underlying structures and reduce the number of variables of the study questionnaire. Principal component analysis (PCA) was chosen as extraction method using Varimax rotation. The cut-off point for factor loadings was 0.40 and for eigenvalues 1.00. The internal consistency of subscales was analyzed with Cronbach's α. Subscales with reliabilities equal to or greater than 0.70 were considered acceptable.

Construct validity was further investigated by computing the Pearson correlations coefficients among the subscales. Also, correlations with self-esteem scale were explored in terms of convergent validity. Correlation coefficients between 0.1 and 0.3 were considered low, between 0.31 and 0.5 moderate and those over 0.5 were considered high. The questionnaire subscales were compared according to sex, grade, special education support (attendance of an Integration Class or receiving Parallel Support), re-attendance of the same grade, comprehension of the spoken language, and mother's educational level, using Student's t-tests and the computation of effect sizes. Effect sizes of 0.2 - 0.5 are considered small, those between 0.51 - 0.81 are considered moderate, and those over 0.8 are considered large. It was hypothesized in terms of discriminant validity that worse outcomes would be found in boys, younger students, those who did not comprehend the spoken language well, students whose mothers had lower educational level, those in need of special education support, and those repeating the same class.

P values reported are two-tailed. Statistical significant level was set at 0.05 and analysis was conducted using SPSS 19.0 Statistical Software.

4. Results

Sample consisted of 2.691 students with 1.375 being boys and 1.316 being girls. 1.344 of the students were attending first grade and 1.347 were attending second grade. 3.9% of the sample attended an Integration Class of received Parallel Support—thus received special education support—and 1.9% re-attended the same grade. Sample characteristics are shown in Table 1.

An exploratory factor analysis with principal component method and with Varimax rotation was conducted on the sample. Using the latent root criterion of retaining factors with Eigenvalues greater than 1.0, an eleven-factor structure was identified, with the extracted factors explaining 70.9% of the total variance. In the final model all items were entered into the factor analysis. Factor loadings of the rotated solution are shown in Table 2, with all factor loadings being more than 0.40.

The final subscales were thus formed as follows:

1) Concentration of attention (5 items)

2) Participation/cooperation in class (11 items)

3) Emotions' identification and expression (4 items)

4) Emotions' management (8 items)

5) Verbal and physical aggressiveness control (17 items)

6) Victimization Control (8 items)

7) Empathy (6 items)

8) Friendship skills (9 items)

9) Problem solving (7 items)

10) Responsibility taking (5 items)

11) Use of spoken and written language (15 items)

Table 1. Sample characteristics.

	N (%)
Gender	
Boys	1375 (51.1)
Girls	1316 (48.9)
Nationality	
Greek	2319 (89.8)
Other	263 (10.2)
Grade	
First	1344 (49.9)
Second	1347(50.1)
Comprehension of Greek	
None to moderate	59 (21.2)
Very good	125 (45.0)
Excellent	94 (33.8)
Speaking Greek	
None to moderate	80 (28.8)
Very good	122 (43.9)
Excellent	76 (27.3)
Father's educational level	
Primary to middle school	236 (13.2)
High school	540 (30.3)
2-year college/University/Post-graduate studies	1008 (56.5)
Mother's educational level	
Primary to middle school	155 (8.6)
High school	520 (28.7)
2-year college/University/Post-graduate studies	1137 (62.7)
Parents living together	
No	267 (11.2)
Yes	2119 (88.8)
Number of siblings	
None	291 (12.6)
One	1217 (52.7)
Two or more	802 (34.7)
Attendance of all-day school schedule	
No	1842 (69.1)
Yes	823 (30.9)
Attendance of an Integration Class	
No	2562 (96.5)
Yes	93 (3.5)
Receiving Parallel Support	
No	2627 (99.2)
Yes	20 (0.8)
Re-attendance of the same grade	
No	2604 (98.1)
Yes	50 (1.9)
Number of students in class, mean (SD)	21.6 (3.3)

Table 2. Factor loadings as resulted from EFA.

	Ability to control Verbal and Physical Aggressiveness	Problem Solving	Concentration of Attention	Participation Cooperation in class	Empathy	Emotions' Management	Friendship skills	Ability to control Victimization	Emotions' Identification and Expression	Use of Spoken and Written Language	Responsibility Taking
A1			0.79								
A2			0.79								
A3			0.77								
A4			0.76								
A5			0.77								
B1				−0.46							
B2				0.47							
B3				0.46							
B4				0.53							
B5				0.40							
B6				0.62							
B7				0.50							
B8				0.52							
B9				0.53							
B10				0.45							
B11				−0.48							
C1									0.73		
C2									0.66		
C3									−0.62		
C4									0.75		
D1						−0.74					
D2						−0.73					
D3						−0.70					
D4						0.42					
D5						0.47					
D6						−0.60					
D7						−0.55					
D8						−0.56					
E1	−0.59										
E2	−0.83										
E3	−0.73										
E4	−0.69										
E5	−0.85										
E6	−0.69										
E7	−0.79										
E8	−0.81										

Continued

E9	−0.83					
E10	−0.65					
E11	−0.78					
E12	−0.80					
E13	−0.81					
E14	−0.77					
E15	0.45					
E16	0.47					
E17	−0.66					
F1					−0.63	
F2					−0.76	
F3					−0.76	
F4					−0.73	
F5					−0.72	
F6					−0.49	
F7					−0.68	
F8					−0.42	
G1			0.68			
G2			0.80			
G3			0.82			
G4			0.81			
G5			0.79			
G6			0.82			
H1				0.44		
H2				−0.76		
H3				−0.76		
H4				−0.51		
H5				0.75		
H6				0.70		
H7				0.57		
H8				0.42		
H9				0.51		
I1		0.52				
I2		0.57				
I3		0.55				
I4		0.60				
I5		0.58				
I6		0.60				
I7		0.40				
J1						0.48

Continued

J2	−0.43
J3	0.48
J4	−0.45
J5	0.45
K1	0.84
K2	0.85
K3	0.86
K4	−0.67
K5	0.80
K6	0.84
K7	0.84
K8	0.80
K9	0.79
K10	0.63
K11	0.85
K12	−0.56
K13	0.73
K14	−0.43
K15	0.78

Cronbach's alpha estimated along with the mean scale scores for the produced components are presented in Table 3.

Mean scores were divided by the number of items of each scale. Also, the items were reversed appropriately, so that greater scores indicated better performance. All the scales, exceeded the minimum reliability standard of 0.70. Cronbach's alphas ranged from 0.82 (Emotions' Identification and Expression) to 0.92 (Ability to control Verbal/Physical Aggressiveness, Concentration of Attention, and Participation/Cooperation in class).

Table 4 shows intercorrelations among the questionnaire subscales. All subscales were significantly and positively correlated with each other with correlations coefficients ranging from low to high.

The highest correlations were found between "Ability to control Verbal and Physical Aggressiveness" and "Emotions' Management", "Problem Solving" and "Use of Spoken and Written Language", "Ability to control Verbal and Physical Aggressiveness" and "Responsibility Taking", "Concentration of Attention" and "Participation/Cooperation in class" and "Responsibility Taking" and "Emotions' Management". Correlations of self-esteem with all subscales were significant and the highest were found with Problem Solving, Concentration of Attention, Participation/Cooperation in class, Friendship skills and Use of Spoken and Written Language.

Girls exhibited greater scores an all subscales as compared with boys (Table 5).

Table 3. Descriptive statistics and Cronbach's a for questionnaire dimensions.

	Minimum	Maximum	Mean	SD	Cronbach's a
Ability to control Verbal and Physical Aggressiveness	1.2	7.0	5.8	1.1	0.92
Problem Solving	1.0	7.0	4.8	1.2	0.87
Concentration of Attention	1.0	7.0	5.0	1.5	0.92
Participation/Cooperation in class	1.2	7.0	5.2	1.1	0.92
Empathy	1.0	7.0	5.1	1.1	0.91
Emotions' Management	1.0	7.0	4.8	1.2	0.91
Friendship skills	1.2	7.0	5.2	0.9	0.88
Ability to control Victimization	1.9	7.0	6.1	0.9	0.91
Emotions' Identification and Expression	1.0	7.0	4.4	1.1	0.82
Use of Spoken and Written Language	1.0	7.0	4.7	1.2	0.90
Responsibility Taking	1.2	7.0	4.9	1.1	0.85
Self esteem	1.3	5.0	3.6	0.6	0.89

Effect sizes of the differences were small with the exception of Ability to control Verbal and Physical Aggressiveness, and Concentration of Attention and Participation/Cooperation in class where medium effect sizes were found. Concerning differences between students of first and second grade (Table 5), lower scores were found in first grade ones, for Ability to control Verbal and Physical Aggressiveness, Emotions' Management, Ability to control Victimization, Use of Spoken and Written Language and Responsibility Taking, but with small effect sizes.

All questionnaire subscales were found to have lower scores in children that attended an Integration Class or received a Parallel Support, and in those that repeated the same grade (Table 6).

Concerning differences of special education needs, -namely attendance of an Integration Class or receiving Parallel Support-effect sizes were medium to high. Similarly, effect sizes of the differences between children that repeated the same grade and those that did not, were medium to high, with the exception of the effect size for Emotions' Management which was small.

Differences in questionnaire subscales according to comprehension of the spoken language (Greek) and mother's educational level are shown in Table 7.

All subscales provided greater scores for cases with Very good or Excellent comprehension of the Greek language and effect sizes were mostly medium. Also, lower scores on all subscales except for Ability to control Verbal and Physical Aggressiveness and Emotions' Management were found in children whose mothers had lower educational level, with effect sizes being low in most of the cases.

5. Discussion

The purpose of the presented study was to adapt the Personal and Social Skills Scale for Preschool K-Students Aged 4 - 6 (Kourmousi et al., 2017; Kourmousi &

Table 4. Intercorrelations among the questionnaire subscales and correlation with self-esteem scale.

	Problem Solving	Concentration of Attention	Participation Cooperation in class	Empathy	Emotions' Management	Friendship skills	Ability to control Victimization	Emotions' Identification	Use of Spoken and Written Language	Responsibility Taking	Self esteem
Ability to control Verbal and Physical Aggressiveness	0.24***	0.49***	0.66***	0.54***	0.73***	0.28***	0.61***	0.19***	0.24***	0.70***	0.38***
Problem Solving	1.00	0.68***	0.57***	0.48***	0.30***	0.59***	0.42***	0.50***	0.77***	0.46***	0.83***
Concentration of Attention		1.00	0.70***	0.50***	0.54***	0.42***	0.44***	0.28***	0.57***	0.54***	0.70***
Cooperation			1.00	0.62***	0.71***	0.45***	0.50***	0.27***	0.53***	0.68***	0.68***
Empathy				1.00	0.51***	0.59***	0.40***	0.50***	0.45***	0.66***	0.62***
Emotions' Management					1.00	0.30***	0.46***	0.25*	0.29***	0.68***	0.46***
Friendship skills						1.00	0.52***	0.52***	0.57***	0.43***	0.72***
Ability to control Victimization							1.00	0.24***	0.40***	0.50***	0.52***
Emotions' Identification								1.00	0.48***	0.27***	0.55***
Use of Spoken and Written Language									1.00	0.46***	0.75***
Responsibility Taking										1.00	0.55***

$*p < 0.05$; $**p < 0.01$; $***p < 0.001$.

Table 5. Sex and age differences for questionnaire subscales.

	Sex				Grade			
	Boys	Girls			First	Second		
	Mean (SD)	Mean (SD)	P	Effect size	Mean (SD)	Mean (SD)	P	Effect size
Ability to control Verbal and Physical Aggressiveness	5.5 (1.2)	6.1 (0.8)	<0.001	0.57	5.8 (1.1)	5.9 (1)	0.001	0.13
Problem Solving	4.7 (1.3)	4.9 (1.2)	<0.001	0.16	4.8 (1.2)	4.8 (1.2)	0.730	0.01
Concentration of Attention	4.7 (1.5)	5.3 (1.4)	<0.001	0.40	5.0 (1.5)	4.9 (1.5)	0.068	0.07
Participation/Cooperation in class	5.0 (1.1)	5.5 (1.0)	<0.001	0.53	5.2 (1.1)	5.2 (1.1)	0.598	0.02
Empathy	4.9 (1.1)	5.3 (1.1)	<0.001	0.43	5.1 (1.1)	5.1 (1.1)	0.857	0.01
Emotions' Management	4.5 (1.2)	5.1 (1.1)	<0.001	0.47	4.7 (1.2)	4.9 (1.2)	<0.001	0.18
Friendship skills	5.2 (0.9)	5.3 (0.9)	<0.001	0.15	5.2 (0.9)	5.2 (0.9)	0.358	0.04
Ability to control Victimization	6.0 (1.0)	6.3 (0.8)	<0.001	0.36	6.1 (0.9)	6.2 (0.9)	<0.001	0.16
Emotions' Identification and Expression	4.2 (1.1)	4.5 (1.1)	<0.001	0.28	4.4 (1.1)	4.3 (1.1)	0.597	0.02
Use of Spoken and Written Language	4.6 (1.2)	4.9 (1.2)	<0.001	0.20	4.7 (1.2)	4.8 (1.2)	0.002	0.12
Responsibility Taking	4.7 (1.1)	5.1 (1.1)	<0.001	0.39	4.8 (1.1)	4.9 (1.1)	<0.001	0.15

Table 6. Differences in questionnaire subscales according to attendance of an Integration class or having parallel support, and re-attendance of the same grade.

	The child attends an Integration Class or receives Parallel Support				The child repeats attendance of the same grade			
	No	Yes			No	Yes		
	Mean (SD)	Mean (SD)	P	Effect size	Mean (SD)	Mean (SD)	P	Effect size
Ability to control Verbal and Physical Aggressiveness	5.9 (1.0)	5.2 (1.5)	<0.001	0.60	5.8 (1.0)	5.3 (1.3)	0.001	0.48
Problem Solving	4.9 (1.2)	3.0 (1.2)	<0.001	1.58	4.8 (1.2)	3.4 (1.1)	<0.001	1.15
Concentration of Attention	5.1 (1.4)	3.1 (1.5)	<0.001	1.40	5.0 (1.5)	3.7 (1.6)	<0.001	0.89
Participation/Cooperation in class	5.3 (1.0)	4.1 (1.2)	<0.001	1.08	5.2 (1.1)	4.4 (1.2)	<0.001	0.75
Empathy	5.1 (1.1)	4.2 (1.3)	<0.001	0.81	5.1 (1.1)	4.5 (1.1)	<0.001	0.56
Emotions' Management	4.8 (1.2)	4.0 (1.4)	<0.001	0.64	4.8 (1.2)	4.4 (1.4)	0.013	0.35
Friendship skills	5.3 (0.9)	4.1 (1.0)	<0.001	1.33	5.3 (0.9)	4.4 (1.2)	<0.001	0.91
Ability to control Victimization	6.2 (0.9)	5.2 (1.3)	<0.001	1.07	6.1 (0.9)	5.5 (1.2)	<0.001	0.71
Emotions' Identification and Expression	4.4 (1.1)	3.6 (1.1)	<0.001	0.70	4.4 (1.1)	3.6 (1.0)	<0.001	0.68
Use of Spoken and Written Language	4.8 (1.1)	3.1 (1.1)	<0.001	1.54	4.8 (1.2)	3.3 (1.4)	<0.001	1.23
Responsibility Taking	4.9 (1.1)	4.0 (1.1)	<0.001	0.81	4.9 (1.1)	4.3 (1.1)	<0.001	0.51

Table 7. Differences in questionnaire subscales according to comprehension of Greek and mother's educational level.

	Comprehension of Greek				Mother's educational level			
	None to moderate	Very good/ Excellent			Primary to High school	2-year college/University/ Post-graduate studies		
	Mean (SD)	Mean (SD)	P	Effect size	Mean (SD)	Mean (SD)	P	Effect size
Ability to control Verbal and Physical Aggressiveness	5.5 (1.3)	5.9 (1.0)	0.008	0.39	5.8 (1.1)	5.9 (1.0)	0.069	0.09
Problem Solving	3.7 (1.1)	4.6 (1.1)	<0.001	0.74	4.6 (1.3)	5.1 (1.1)	<0.001	0.48
Concentration of Attention	4.3 (1.3)	5.0 (1.4)	<0.001	0.53	4.8 (1.5)	5.3 (1.4)	<0.001	0.30
Participation/Cooperation in class	4.7 (0.8)	5.3 (1.0)	<0.001	0.52	5.1 (1.1)	5.4 (1.0)	<0.001	0.23
Empathy	4.5 (1.0)	5.1 (1.1)	<0.001	0.53	5.1 (1.1)	5.2 (1.1)	0.021	0.11
Emotions' Management	4.7 (1.0)	5.0 (1.1)	0.108	0.24	4.7 (1.2)	4.8 (1.3)	0.384	0.04
Friendship skills	4.4 (0.8)	5.1 (0.9)	<0.001	0.72	5.1 (1.0)	5.4 (0.9)	<0.001	0.32
Ability to control Victimization	5.7 (1.0)	6.0 (1.0)	0.050	0.29	6.0 (1.0)	6.2 (0.8)	<0.001	0.24
Emotions' Identification and Expression	3.4 (1.0)	4.0 (1.1)	<0.001	0.55	4.3 (1.1)	4.6 (1.1)	<0.001	0.22
Use of Spoken and Written Language	2.8 (0.8)	4.2 (1.1)	<0.001	1.41	4.4 (1.2)	5.1 (1.1)	<0.001	0.56
Responsibility Taking	4.3 (1.0)	4.8 (1.1)	0.006	0.41	4.8 (1.1)	5.0 (1.1)	<0.001	0.21

Koutras, in Kourmousi, 2012) for use in elementary students aged 7 - 9, provide a new version by adding two more subscales, namely Responsibility taking and Use of spoken and written language, and examine its validity and reliability. The exploratory factor analysis identified an eleven-factor structure of the new measure, with the extracted factors explaining 70.9% of the total variance and with all factor loadings being more than 0.40. The exploratory factor analysis for the original version, the Personal and Social Skills Scale for Preschool K-Students Aged 4 - 6 (Kourmousi & Koutras, in Kourmousi, 2012) conducted by Kourmousi and her colleagues in 2017 had identified an eight-factor structure of the scale, apart from the self-esteem factor which was provided by the B.A.S.E. scale (Coopersmith & Gilberts, 1982). The difference in the number of factors in the new version occurs due to the addition of two new subscales, namely "Responsibility taking" and "Use of spoken and written language", and also due to the separation of the dimension of "Emotions' identification and management" to two dimensions, "Emotions' identification and expression" and "Emotions' management", respectively.

Cronbach's alpha for all the questionnaire subscales was acceptable and ranged from 0.82 to 0.92. All the questionnaire dimensions were significantly correlated not only with each other but also with the B.A.S.E (Coopersmith & Gilberts, 1982) scale as well, with the results remaining similar when correlations were examined separately in control and intervention group ($p < 0.05$). Inter-correlations with the B.A.S.E (Coopersmith & Gilberts, 1982) scale provided further construct validity evidence for the newly developed version. Similar results and correlations were found regarding the original version of the Personal and Social Skills Scale for Preschool K-Students Aged 4 - 6 (Kourmousi et al., 2017), confirming our findings.

Differences in questionnaire dimensions concerning the investigation of factors like sex, age, comprehension of the spoken language, re-attendance of the same grade, need for special education assistance, and maternal education level, were also found, further confirming the sensitivity of the new measure.

Regarding sex, boys scored lower on all the measure's subscales, confirming evidence which suggests that boys seem to have poorer self-control and self-regulation capabilities (Kourmousi, 2012; Schick & Cierpka, 2005; Perry et al., 2003; Brody & Hall, 2000) and more aggressive or inappropriate behaviors (Kourmousi, 2012; Else-Quest et al., 2006, Walker, 2005; Perry et al., 2003) compared to their female classmates.

First graders also scored lower than second graders. This finding implies that during their first school years, young children's personal and social skills do improve by age, probably due to maturation and to gained experiences, as other researchers have found (Eisenberg & Fabes, 1998; Halberstadt, Denham, & Dunsmore, 2001).

Lower scores were also detected in students who did not comprehend the spoken language well. This is a common finding in the relevant literature (Kourmousi, 2012; Cassidy et al., 2003, Espinosa, 2002; Saarni, 2001, Mundy &

Willoughby, 1998; Walker et al., 1994), which could imply that comprehension of things said by adults and by peers help children understand rules and norms, socialize, and develop their personal and social skills. It could also point to underlying cognitive difficulties.

Re-attendance of the same grade and need for special education assistance also predicted lower scoring in our study's scale. This can be explained by the findings of other studies (Reiter & Lapidot-Lefler, 2007; Jahoda, Pert, & Trower, 2006; Luckasson et al., 2002) which have shown that delay in aspects of cognitive development affects the socio-emotional development as well. As researchers state, populations with intellectual disabilities are deprived in social adjustment and social skills and competencies (Reiter & Lapidot-Lefler, 2007; Jahoda, Pert, & Trower, 2006; Luckasson et al., 2002).

Mothers' educational level also seemed to affect students' social and emotional children. Not to our surprise—since other researchers (Desforges & Abouchaar, 2003; Peisner-Feinberg et al., 2001) corroborate this finding—children whose mothers had a low educational level, exhibited lower levels of personal and social skills as well.

6. Limitations and Strengths

The main strength of the presented study is the large sample and its representativeness due to the representation of urban and rural and industrial areas. Furthermore, the percentage of the study participants' representation concerning sex and special education structures' attendance is identical with the one reported by the Greek Statistical Authority for students of the 2013-2014 academic year (Greek Statistical Authority, 2013). In addition, we were able to confirm the good fit of the adaptation of the Personal and Social Skills Scale for Preschool K-Students Aged 4 - 6 (Kourmousi et al., 2017; Kourmousi & Koutras, in Kourmousi, 2012) for use in Greek elementary students. However, limitations can also be identified in the presented study; given that the design of the study was cross-sectional, we were not able to examine the scale's sensitivity over time or its test-retest reliability.

7. Conclusion

The results of the presented study support our main hypothesis, namely that the adaptation of the Personal and Social Skills Scale for Preschool K-Students Aged 4 - 6 (Kourmousi et al., 2017; Kourmousi & Koutras, in Kourmousi, 2012) for use in Greek elementary students, thus the Personal and Social Skills Scale for Elementary Students Aged 7 - 9, is a reliable and valid self-report instrument for measuring Greek elementary students' personal and social skills; it can be applied to Greek students' populations since it has good construct validity and internal consistency for evaluating personal and social skills' levels, adding support for its easy utilization.

Our other hypotheses that factors such as sex, age, comprehension of the spoken

language, re-attendance of the same grade, need for special education assistance, and maternal education level would affect our sample students' personal and social skills were also supported by the study's findings. We hope, however, that additional personal and social skills related research will be conducted in the future in Greece, not only in 7 - 9 years old elementary students, but in all elementary and high school students as well.

Acknowledgements

Author Contributions

NK, GM and VK designed the study and adapted the questionnaire. GM created the two new subscales with the help of NK and VK. IL together with KK and KP conducted the study in the educational prefectures. CT conducted the statistical analyses. NK and KK drafted the manuscript and together with the other authors reviewed its final form.

Conflicts of Interest

The authors declare no conflict of interest.

References

Botvin, G. J., & Wills, T. A. (1985). Personal and Social Skills Training: Cognitive-Behavioral Approaches to Substance Abuse Prevention. *Prevention Research: Deterring Drug Abuse among Children and Adolescents, 63,* 8-49.

Brody, L. R., & Hall, J. A. (2000). Gender, Emotion, and Expression. In M. Lewis, & J. M. Haviland-Jones (Eds.), *Handbook of Emotions: Part IV: Social/Personality Issues* (2nd ed., pp. 325-414). New York, NY: Guilford Press.

Caldarella, P., & Merrell, K. W. (1997). Children and Adolescents: A Taxonomy of Positive Behaviors. *School Psychology Review, 26,* 264-278.

Cantwell, R. H., & Andrews, B. (2002). Cognitive and Psychological Factors Underlying Secondary School Students' Feelings towards Group Work. *Educational Psychology, 22,* 75-91. https://doi.org/10.1080/01443410120101260

Cassidy, K. W., Werner, R. S., Rourke, M., Zubernis, L. S., & Balaraman, G. (2003). The Relationship between Psychological Understanding and Positive Social Behaviors. *Social Development, 12,* 198-221. https://doi.org/10.1111/1467-9507.00229

Coopersmith, S., & Gilberts, R. (1982). *Behavioral Academic Self-Esteem: A Rating Scale.* Palo Alto, CA: Consulting Psychologists Press.

Demaray, M. K., Ruffalo, S. L., Carlson, J., Busse, B. T., Olson, A. E., McManus, S. M., & Leventhai, A. (1995). Social Skills Assessment: A Comparative Evaluation of Six Published Rating Scales. *School Psychology Review, 24,* 648-671.

Denham, S. A. (2005). *Assessing Social-Emotional Development in Children from a Longitudinal Perspective for the National Children's Study: Social-Emotional Compendium of Measures.* Fairfax, VA: George Mason University.

Denham, S. A., Wyatt, T. M., Bassett, H. H., Echeverria, D., & Knox, S. S. (2009). Assessing Social-Emotional Development in Children from a Longitudinal Perspective. *Journal of Epidemiology and Community Health, 63,* 37-52.
https://doi.org/10.1136/jech.2007.070797

Desforges, C., & Abouchaar, A. (2003). *The Impact of Parental Involvement, Parental Support and Family Education on Pupil Achievement and Adjustment: A Literature Review* (Vol. 433). Nottingham: DfES publications.

Durlak, J. A., Weissberg, R. P., & Pachan, M. (2010). A Meta-Analysis of After-School Programs That Seek to Promote Personal and Social Skills in Children and Adolescents. *American Journal of Community Psychology, 45,* 294-309.
https://doi.org/10.1007/s10464-010-9300-6

Eisenberg, N., & Fabes, R. A. (1998). Prosocial Development. In D. Kuhn, & R. S. Siegler (Eds.), *Handbook of Child Psychology* (pp. 701-778). New York, NY: John Wiley & Sons.

Else-Quest, N., Hyde, J. S., Goldsmith, H., & Van Hulle, C. (2006). Gender Differences in Temperament: A Meta-Analysis. *Psychological Bulletin, 132,* 33-72.
https://doi.org/10.1037/0033-2909.132.1.33

Espinosa, L. (2002). The Connections between Social-Emotional Development and Early Literacy. In The Kauffman Early Education Exchange (Eds.), *Set For Success: Building a Strong Foundation for School Readiness Based on the Social-Emotional Development of Young Children* (Vol. 1, pp. 30-45).

Filippou, K. (2013). *The Role of Camp Participation in the Development of Social Skills* (Master's Thesis). (In Greek)

Goleman, D. P. (1995). *Emotional Intelligence: Why It Can Matter More than IQ for Character, Health and Lifelong Achievement*. New York, NY: Bantam Books.

Goudas, M., Magotsiou, E., & Hatzigeorgiadis, A. (2009). Psychometric Properties of the Greek Version of the Feelings toward Group Work Questionnaire. *European Journal of Psychological Assessment, 25,* 204-210. https://doi.org/10.1027/1015-5759.25.3.204

Greek Statistical Authority (2011). *Economic Characteristics*. (In Greek)
https://www.statistics.gr/el/statistics/-/publication/SAM04/

Greek Statistical Authority (2013). *Primary Education Statistics*. (In Greek)
https://www.statistics.gr/el/statistics/-/publication/SED12/2013

Gresham, F. M. (1986). Conceptual and Definitional Issues in the Assessment of Children's Social Skills: Implications for Classifications and Training. *Journal of Clinical Child Psychology, 15,* 3-15. https://doi.org/10.1207/s15374424jccp1501_1

Gresham, F. M., & Elliott, S. N. (1990). *Social Skills Rating System: Manual*. American Guidance Service.

Griffin, K. W., Scheier, L. M., Botvin, G. J., & Diaz, T. (2001). Protective Role of Personal Competence Skills in Adolescent Substance Use: Psychological Well-Being as a Mediating Factor. *Psychology of Addictive Behaviors, 15,* 194.
https://doi.org/10.1037/0893-164X.15.3.194

Halberstadt, A. G., Denham, S., & Dunsmore, J. C. (2001). Affective Social Competence. *Social Development, 10,* 79-119. https://doi.org/10.1111/1467-9507.00150

Harrison, R. (1996). *Personal Skills and Transfer*. London: Routledge.

Humphrey, N., Kalambouka, A., Wigelsworth, M., Lendrum, A., Deighton, J., & Wolpert, M. (2011). Measures of Social and Emotional Skills for Children and Young People: A Systematic Review. *Educational and Psychological Measurement, 71,* 617-637.
https://doi.org/10.1177/0013164410382896

Jahoda, A., Pert, C., & Trower, P. (2006). Socioemotional Understanding and Frequent Aggression in People with Mild to Moderate Intellectual Disabilities: Recognition of Facial Affect and Role-Taking Abilities. *American Journal on Mental Retardation, 111,* 77-89. https://doi.org/10.1352/0895-8017(2006)111[77:SUAFAI]2.0.CO;2

Kakouros, E., & Maniadaki, K. (2002). Translation and Adaptation of the Behavioral Academic Self-Esteem Scale. In A. Stalikas, S. Triliva, & P. Roussi (Eds.), *Psychometric Tools in Greece* (pp. 279-280). Athens: EllinikaGrammata. (In Greek)

Karabatsou, E. (2014). *Efficacy of a Psychoeducational Group Program for the Development of Social Skills in Students of Elementary School* (Master's Thesis). Ioannina University. (In Greek)

Kiriazis, N., & Zaharias, P. (2015). Developing an Educational Digital Game for Learning Social Skills and Anti-Bullying Behaviors in Schools. In *Proceedings Pan Hellenic Conference Titled "Integration of ICT into the Educational Process"*. (In Greek)

Kourmousi, N. (2012). *Personal and Social Skills Training as a Part of Health Education in Kindergarten*. Doctoral Dissertation, University of Ioannina. (In Greek) https://www.didaktorika.gr/eadd/handle/10442/31671

Kourmousi, N., Salagianni, M., Merakou, K., Tzavara, C., & Koutras, V. (2017). Evaluation of the "Steps for Life" Personal and Social Skills Greek K-Curriculum. *Creative Education, 8,* 1912. https://doi.org/10.4236/ce.2017.812131

Kusché, C. A., & Greenberg, M. T. (1994). *The PATHS Curriculum*. Seattle, Washington DC: Development Research and Programs.

Kyllonen, P. C. (2012). Measurement of 21st Century Skills within the Common Core State Standards. In *Invitational Research Symposium on Technology Enhanced Assessments* (pp. 7-8).

Lievens, F., & Sackett, P. R. (2012). The Validity of Interpersonal Skills Assessment via Situational Judgment Tests for Predicting Academic Success and Job Performance. *Journal of Applied Psychology, 97,* 460. https://doi.org/10.1037/a0025741

Losel, F., & Beelman, A. (2003) Effects of Child Skills Training in Preventing Antisocial Behaviour: A Systematic Review of Randomized Evaluations. *ANNALS, American Academy of Political and Social Science, 587,* 84-110. https://doi.org/10.1177/0002716202250793

Luckasson, R., Borthwick-Duffy, S., Buntinx, W. H. E., Coulter, D. L., Craig, Ellis M., Reeve, A., Schalock, R. L., Snell, M. E., Spitalnik, D. M., Spreat, S., & Tasse, M. J. (2002). *Mental Retardation: Definition, Classification, and Systems of Supports* (10th ed.). Washington DC: American Association on Mental Retardation.

Magotsiou, E. (2007). *Creating, Implementing and Evaluating a Social Skills Program in the Physical Education Course*. Doctoral Dissertation, University of Thessalia. http://ir.lib.uth.gr/handle/11615/98

Merrell, K. W. (1993). Using Behavioral Rating Scales to Assess Social Skills and Antisocial Behavior in School Settings: Development of the School Social Behavior Scales. *School Psychology Review*.

Merrell, K. W. (1994). *Preschool and Kindergarten Behavior Scales*. Test Manual, Brandon: Clinical Psychology Publishing Company, Inc.

Merrell, K. W. (2001). Assessment of Children's Social Skills: Recent Developments, Best Practices, and New Directions. *Exceptionality, 9,* 3-18. https://doi.org/10.1080/09362835.2001.9666988

Merrell, K. W., & Gimpel, G. (2014). *Social Skills of Children and Adolescents: Conceptualization, Assessment, Treatment*. Psychology Press.

Michelson, L., Sugai, D. P., Wood, R. P., & Kazdin, A. E. (2013). *Social Skills Assessment and Training with Children: An Empirically Based Handbook*. Springer Science & Business Media.

Mitropoulou, A. (2012). *Implementation and Evaluation of a Psycho-Educational Program to Reduce Social Anxiety in Primary School Children by Enhancing Their Social Skills, with an Emphasis on Cognitive Reconstruction* (Master's Thesis). (In Greek)

Mundy, P., & Willoughby, J. (1998). Nonverbal Communication, Joint Attention and Early Social Emotional Development. In S. F. Warren, & J. Reichle (Series Eds.) and A. M. Wetherby, S. F. Warren, & J. Reichle (Eds.), *Transitions in Prelinguistic Communication* (pp. 111-134). Baltimore: Brooks.

Peisner-Feinberg, E., Burchinal, M., Clifford, R., Culkin, M., Howes, C., Kagan, S.L., & Yazejian, N. (2001). The Relation of Preschool Child-Care Quality to Children's Cognitive and Social Developmental Trajectories through Second Grade. *Child Development, 72,* 1534-1553. https://doi.org/10.1111/1467-8624.00364

Perry, C. L., Komro, K. A., Veblen-Mortenson, S., Bosma, L. M., Farbakhsh, K., Munson, K. A., Stigler, M. H., & Lytle, L. A. (2003). A Randomized Controlled Trial of the Middle and Junior High School DARE and DARE Plus Programs. *Archives of Pediatrics & Adolescent Medicine, 157,* 178-184. https://doi.org/10.1001/archpedi.157.2.178

Reiter, S., & Lapidot-Lefler, N. (2007). Bullying among Special Education Students with Intellectual Disabilities: Differences in Social Adjustment and Social Skills. *Intellectual and Developmental Disabilities, 45,* 174-181. https://doi.org/10.1352/1934-9556(2007)45[174:BASESW]2.0.CO;2

Saarni, C. (2001). Cognition, Context and Goals: Significant Components in Social-Emotional Effectiveness. *Social Development, 10,* 125-129. https://doi.org/10.1111/1467-9507.00152

Schick, A., & Cierpka, M. (2005). Faustlos: Evaluation of a Curriculum to Prevent Violence in Elementary Schools. *Applied and Preventive Psychology, 11,* 157-165. https://doi.org/10.1016/j.appsy.2005.05.001

Shure, M. B. (2005). *Drexel Early Childhood Behavior (DECB) Rating Scale*. Philadelphia, PA: Drexel University.

Tesch, D. B., Braun, G. F., & Crable, E. A. (2008). An Examination of Employers' Perceptions and Expectations of Is Entry-Level Personal and Interpersonal Skills. *Information Systems Education Journal, 6,* 1-16.

Vassilopoulos, S. P., Brouzos, A., Damer, D. E., Mellou, A., & Mitropoulou, A. (2013). A Psychoeducational School-Based Group Intervention for Socially Anxious Children. *The Journal for Specialists in Group Work, 38,* 307-329. https://doi.org/10.1080/01933922.2013.819953

Walker, D., Greenwood, C., Hart, B., & Carta, J. (1994). Prediction of School Outcomes Based on Language Production and Socioeconomic Factors. *Child Development, 65,* 606-621. https://doi.org/10.2307/1131404

Walker, H. M. (1995). *The Walker-McConnell Scale of Social Competence and School Adjustment: Elementary Version*. San Diego, CA: Singular Publishing Group.

Walker, H. M., & Severson, H. H. (1992). *Systematic Screening for Behavior Disorders (SSBD)*. Longmont, CO: Sopris West.

Walker, S. (2005). Gender Differences in the Relationship between Young Children's Peer-Related Social Competence and Individual Differences in Theory of Mind. *The Journal of Genetic Psychology, 166,* 297-312. https://doi.org/10.3200/GNTP.166.3.297-312

Appendix

Personal and Social Skills Scale for Elementary Students 7 - 9 (Markogiannakis G., Kourmousi N., Koutras V.)

Guidelines for teachers

The Personal and Social Skills Scale for Elementary Students Aged 7 - 9 is a teacher-rated scale designed to evaluate students' skills as expressed by their behaviors at school environment. You are asked to evaluate the student's performance regarding each of the following statements, using the 7-point Likert scale, in order to indicate the frequency with which the child expresses a behavior. How often does the student exhibit the following patterns of behavior? (1) never or almost never, 2) very rarely, 3) rarely, 4) sometimes, 5) often, 6) very often, 7) always or almost always)

1. Concentration of Attention

How often does the student

1) Work without interrupting his/her work unnecessarily
2) Work/Keep on working despite any distractions
3) Concentrate on the lesson and on the various activities
4) Persist in working on his/her assignments
5) Maintain attention for sufficient time (for about 30 minutes)

2. Participation/Cooperation in Class

How often does the student

1) Interrupt the discussion or the activities taking place when he/she wants something, without wondering whether it is appropriate or not
2) Interrupt politely
3) Actively participate in the classroom activities
4) Actively participate in the classroom discussions
5) Let his/her classmates speak
6) Listen carefully to others
7) Await his/her turn to speak
8) Accept assignments willingly and without complaining
9) Respect the rules which have been set
10) How often is the student good in cooperating with the other children
11) Distract/disturb the neighboring students

3. Emotions' Identification and Expression

How often does the student

1) Recognize and name his/her own feelings
2) Recognize and name other persons' feelings
3) Not express his/her feelings
4) Talk about his/her feelings

4. Emotions' Management

How often does the student
  1) Get excessively bothered when he/she loses
  2) Get easily bothered when he/she encounters difficulties during work
  3) Get easily upset by peers or adults, when checked for things he/she did.
  4) Find ways to calm himself/herself when he/she gets angry and upset
  5) Try to find ways to handle waiting
  6) Show obstinacy (stubbornness) and want his/her way
  7) Act impulsively
  8) Lose temper during disputes

5. Ability to Control Verbal and Physical Aggressiveness

How often does the student
  1) Grab other children's toys
  2) Threaten to harm a classmate in order to get what he/she wants
  3) Tell classmates that he/she will not play with them unless they do what he/she wants
  4) Not let a classmate be with him/her and his/her friends when angry with the child
  5) Verbally threaten that he/she will hurt other children
  6) Yell at others during a dispute
  7) Taunt/mock his/her classmates
  8) Scatter rumors and unsubstantiated accusations/speak badly of other children.
  9) Swear/call other children names
  10) Destroy things when upset
  11) Push the other children
  12) Kick or beat the others
  13) Cause pain to other children in some other way
  14) Choose to fight and collide
  15) Avoid conflicts by backing down
  16) Avoid conflicts by choosing to use ignoring as a strategy
  17) Choose to be involved in quarrels

6. Ability to Control Victimization

How often does the student
  1) Get taunted/mocked by other children
  2) Get threatened
  3) Get bullied
  4) Get pushed
  5) Get beaten or pain inflicted in other ways
  6) Get excluded by peers
  7) Have his/her stuff grabbed

8) How often is the student unable to stand up for himself/herself when attacked or bullied

7. Empathy

How often does the student

   1) Take into consideration the feelings and preferences of other children

   2) Show compassion for others

   3) Show interest in peers

   4) Help classmates

   5) How often is the student good at sharing his/her toys (or other stuff) with classmates

   6) Do nice things for other children

8. Friendship Skills

How often does the student

   1) How often is the student likable among peers

   2) Choose to play alone

   3) Watch the other children play but avoids to play with them

   4) Seem too timid and shy

   5) Enter groups of friends with ease

   6) Create new friendships

   7) Maintain friendships

   8) Behave politely to his/her friends

   9) Get invited at classmates' parties

9. Problem Solving

How often does the student

   1) Complete the assigned activities

   2) Overcome obstacles by himself/herself

   3) Try to solve a problem that arises, by himself/herself

   4) Find alternative solutions to problems

   5) Consider/explore consequences

   6) Suggest solutions to problems that arise in class

   7) When claiming something, he/she does it in a decisive manner

10. Responsibility Taking

How often does the student

   1) Easily recognize his/her own responsibility when engaged in a conflict

   2) Use expressions like: "it's his/her (the other child's) fault", "he/she (the other child) started it first", etc.

   3) Agree to the finding of a solution after a conflict

   4) Lie

   5) Choose to tell the truth even when the consequences are unpleasant

11. Use of Spoken and Written Language

How often does the student

  1) Express full oral speech in a correct way

  2) Use syntactically correct oral speech

  3) Useoral speech which is rich in expressive means

  4) Have difficulty in making others understand what he/she wants to say

  5) Use new words in his/her oral vocabulary

  6) Tell a short story about his/her experience with ease

  7) Reason/justify/ support a case, when using oral speech

  8) Write syntactically complete phrases

  9) Show cohesion in written speech

  10) Organize his/her writing in paragraphs

  11) Use rich vocabulary in his/her writing

  12) Repeat the same words in his/her writing

  13) Use sentences in a well-defined way (time, place, etc.) in his/her writing

  14) Get carried away off topic, in his/her writing

  15) Reason/justify/support a case in his/her writing

Note: Permission to use the Personal and Social Skills Scale for Elementary Students Aged 7 - 9 is granted by its authors (Markogiannakis G., Kourmousi N., Koutras V.) for educational purposes only, upon request.