



Article

# Dependence of Socio-Emotional Competence Expression on Gender and Grade for K5–K12 Students

Tomas Butvilas <sup>1</sup>, Remigijus Bubnys <sup>2</sup>,\* , Jordi Colomer <sup>3,4</sup> and Dolors Cañabate <sup>4,5</sup>

- Faculty of Human and Social Studies, Mykolas Romeris University, 08303 Vilnius, Lithuania; tbutvilas@mruni.eu
- <sup>2</sup> Institute of Education, Vilnius University Šiauliai Academy, 76352 Šiauliai, Lithuania
- <sup>3</sup> Department of Physics, University of Girona, 17003 Girona, Spain; jordi.colomer@udg.edu
- Institute of Sciences Education, University of Girona, 17003 Girona, Spain; dolors.canyabate@udg.edu
- <sup>5</sup> Department of Specific Didactics, University of Girona, 17004 Girona, Spain
- Correspondence: remigijus.bubnys@sa.vu.lt

Abstract: Socio-emotional education is referred to as the missing part that links academic knowledge to successes in school, family, community, workplace, and life. Socio-emotional education, in conjunction with academic instruction, aims to lay the groundwork for a sound moral education. This manuscript is aimed at proving that socio-emotional education may improve children's mental health. In total, 1322 students (of grades K5-K12) participated in this study back in October 2020. A statistically validated and partially modified questionnaire according to The Limbic Performance Indicators<sup>TM</sup> (Cronbach's alpha = 0.92, p < 0.000) was used to assess general education school students' social-emotional competencies. The study uses an abbreviated version of the questionnaire adapted by the Lithuanian Association of Social Emotional Education, which has been adapted with the consent of the selected age group. As a result, this study explores how to determine general education school students' knowledge and skills in socio-emotional education while also identifying the best pedagogical approaches to addressing socio-emotional education. According to research findings, students that participated in the study displayed more personal values, respect for others, internal balance, collaboration, emotional perception of others, or basic emotional needs. Personal values, respect for others, emotional perception of others, internal balance, support, and basic emotional needs were estimated to be greater in the target group of girls than in the target group of boys.

Keywords: socio-emotional competence; level of study; age; gender differences



Citation: Butvilas, T.; Bubnys, R.; Colomer, J.; Cañabate, D. Dependence of Socio-Emotional Competence Expression on Gender and Grade for K5–K12 Students. *Educ. Sci.* 2022, *12*, 341. https:// doi.org/10.3390/educsci12050341

Academic Editor: Colleen McLaughlin

Received: 2 March 2022 Accepted: 9 May 2022 Published: 12 May 2022

**Publisher's Note:** MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

# 1. Introduction

1.1. Socio-Emotional Competence and Its Role in the Development of Adolescence

A child's developmental stages bring recurring issues that must be addressed as they go through educational levels. Children in each of them must achieve specified goals, complete academic and competency obligations, and establish the foundation as long-term learners and more adaptable persons in the face of ongoing political, moral, and environmental issues. General education school students are socially embedded in perceiving and confronting freedom of expression, effective adaptation, and problem-solving issues of self-knowledge and personal identity. Recent research suggests that there are many psychological problems associated with children's mental health and emotions and misbehavior at this age [1–6]. These problems became apparent and intensified during the COVID19 pandemic. Restrictions on quarantine caused children many problems related to their social well-being and psychological health, and especially their emotional well-being and experiences worldwide [7–13]. In this context, the children's capacity to cope with current challenges is critical, as it will aid in avoiding major implications for the children's personality and development. General education school students with higher socio-emotional intelligence are much more effective and successful in dealing with the problems they face,

Educ, Sci. 2022, 12, 341 2 of 13

experiencing significantly fewer internal, external, and general emotional and behavioral difficulties [14–17]. Socio-emotional competence is one of the most central variables affecting a child's effective functioning; hence, it must be regularly analyzed and enhanced through the most effective educational approaches. Over the last two decades, the phenomenon of social-emotional competence instruction has received increasing attention both from the public and the scientific community. Sometimes better known as social and emotional intelligence, this phenomenon refers to how individuals act in social situations and deal with intrapersonal and interpersonal emotional development [18]. Researchers generally agree that healthy development of social-emotional competence at a young age establishes a good basis for academic achievement [19]. It is well recognized that social-emotional competence is critical for healthy life outcomes in early childhood and throughout the secondary grades [20]. There is strong research evidence that social and emotional development contributes to development across various domains: cognitive, physical, and communication [21,22]. Promoting such competencies can help a student become a competent and resilient individual capable of overcoming societal crises and hardships [23,24]. Therefore, the development of the social-emotional competence has historically been a central goal of school education.

There seems to be little common consensus about the operationalization of social-emotional competencies. The inconsistency in the definition is witnessed by the various terminologies used, such as 'social and emotional intelligence' [25], 'emotional literacy' [26], and 'social and emotional competence' [27]. However, in this paper, we decided to rely on the definition proposed by Denham [28]. According to the author, the social-emotional competence is defined as the development of a child's capacity to behave appropriately in social situations by regulating his/her own emotions. Describing this in other words, socio-emotional competence is important not only because it helps children to learn and shape their character but also because it helps individuals establish and maintain healthy and meaningful relations. Socio-emotional competence is the capacity to interact with others, monitor and control cognitive processes, and regulate one's emotions and behavior [29–32]. These skills are thought to allow children to modify and integrate behaviors, actions, and emotions to handle developmentally relevant social tasks [23]. Children that demonstrate mastery of these developmentally appropriate social tasks are generally considered socially and emotionally competent.

### 1.2. Improving Students' Social-Emotional Competences through Educational Activities in Schools

It is noticeable that there is still a lack of balance between subject knowledge and social-emotional education in schools, as the focus is on children's academic achievement, but it can also be seen that children's socio-emotional education is also gradually receiving more and more attention. According to Venslovaitė and Danylienė [33], educators face a difficult challenge—to successfully develop children's social and emotional competencies, but socio-emotional education is still a relatively new and poorly researched phenomenon. In recent years, more and more research [34–36] has examined the development of children's socio-emotional competencies. Authors emphasize the need for changing the curricula for the teaching and development of socio-emotional competencies [37,38]. It is assumed that the socio-emotional components will also have a positive impact on the teachers' work, during which they will develop skills related to socio-emotional competence, develop emotional literacy, promote behavioral self-regulation, and will produce positive outcomes related to socio-emotional competence development. Teachers are encouraged to use appropriate literacy in the promotion of students' socio-emotional competencies, develop effective educational approaches, and take action to encourage children to communicate appropriately.

It is argued that interventions that strengthen socio-emotional competencies and behavioral self-regulation in schools also promote students' social and emotional competencies. Developing emotional and behavioral difficulties strengthen socio-emotional competencies and improve academic achievement, thus contributing to successful school performance. The structure of socio-emotional competence development provides an opportunity for

Educ, Sci. 2022, 12, 341 3 of 13

teachers to link formal education to socio-emotional education, using resources already available in many schools.

## 1.3. The Role of Teachers in Developing Socio-Emotional Competencies

One of the most important functions of school educators is to ensure that children have self-confidence so that they can express and manage their emotions, apply problem-solving solutions, communicate with peers and be able to cope with challenges. Coggshall et al. [39] presented methods that are appropriate for teachers to successfully develop children's socio-emotional competencies:

- Building a personal relationship with the child.
- Continuous development and improvement of personal social–emotional competencies.
- Ensuring a safe and child-friendly learning environment.
- Continuously tracking the reaction of child behavior.

The development of a child's social and emotional competencies also depends on the environment: it is determined both by the family (parenting, interpersonal relationships, and emotional warmth) and the personality and competencies of the teacher working in the educational institution. Within socio-emotional education, children are directed to understand their emotions (through experience and feelings), understand the other person's emotional state (empathize and understand), and be able to manage those emotions: solve problems and conflicts, control and manage their behavior, and be able to cooperate [40]. According to Vaišvidiene and Gedviliene [40], it can be stated that educators most often use emotion recognition and artistic educational activities to express a child's socio-emotional competencies but rarely use specially designed programs. Educators understand the importance of developing emotional intelligence in early childhood, and this is most associated with positive social interactions, better educational outcomes, and cognitive development. On the other hand, Heo et al. [41] are of the opinion that teachers need to understand the importance of following an appropriate methodology for developing children's socio-emotional competencies. However, these researchers have shown that while many educators recognize the importance of a methodology for developing socioemotional competencies, they are reluctant to apply a methodology for developing socioemotional competencies when planning and conducting class lessons. It should be noted that teachers can successfully develop a child's social-emotional competencies based on a certain methodology. However, it should be emphasized that the child's socio-emotional competencies are not expected to be developed in a very short period-this, which requires a longer period and constant work in this area. Therefore, it is understandable that the pedagogue must also develop personal socio-emotional competencies, the development of which is nurtured throughout the pedagogue's career: starting with pedagogical studies as a theoretical preparation and ending with practical activities when the child's socioemotional competencies are developed [41].

Along with increasing attention to the social–emotional competence, researchers and practitioners have developed a range of measures suitable for assessing this phenomenon. In a review of existing measures of social–emotional competence in children and young people by Humphrey and colleagues [42], 12 measures with an established and sustained base in the academic literature were reviewed in depth in relation to their implementation characteristics and psychometric properties. The key issues raised by Humphrey et al.'s [42] review include the fact that the more well-established measures are only concerned with social skills, as opposed to emotional skills or both; most measures have been developed and standardized with American populations; and that only a very small number of measures have been used on a frequent basis.

#### 1.4. The Content of Socio-Emotional Competence and Assessment Measures

Discussing the ways of revealing the content of socio-emotional competence, Neale, Spencer-Arnell, and Wilson [43] proposed a measure called The Limbic Performance Indicators, which provides a strong framework for the assessment of both the social and

Educ. Sci. 2022, 12, 341 4 of 13

emotional dimensions. It is a cohesive and comprehensive scale that covers the most critical aspects of social-emotional competence as outlined in major theoretical models (e.g., [25]). The measure of The Limbic Performance Indicators [43] is based on the theory that social competence and emotional competence are two distinct constructs but strongly connected with overlapping developmental and behavioral processes. The scale is comprised of 17 dimensions: (1) an ability to meet basic emotional needs (such as need for the security, autonomy and control, privacy and reflection, etc.), (2) ability to live according to personal values, (3) self-esteem (ability to unconditionally accept and evaluate one's personality), (4) respect for others (ability to unconditionally accept and value the personalities of others), (5) emotional self-perception (ability to analyse and perceive one's feelings and emotions), (6) emotional perception of others (ability to analyse and perceive the feelings and emotions of others), (7) ability to manage stress, (8) positivity (ability to remain both optimistic and realistic), (9) balance (ability to allocate resources for the different areas of life), (10) ability to manage change, (11) authenticity (ability to remain yourself in different social situations), (12) active reflection (ability to learn from own experiences), (13) trust (ability to keep the trust in others), (14) ability to manage conflicts, (15) openness (ability to express one's thoughts and feelings in an open manner), (16) ability to collaborate with others, and (17) support (ability to provide others with help and support). This scale is designed to be sensitive to changes over time and intends to assist school practitioners and evaluators in assessing the level of social-emotional competence and subsequently identify those areas deemed in need of improvement.

Given the dearth of validated assessments of mental health functioning (i.e., social–emotional competence) in children, a large-scale validation of assessments is critical to the provision of effective care and timely intervention for this population. Investigating the internal structure of the scale may assist in accumulating relevant evidence to support its construct validity, ensuring the intended constructs are measured so that appropriate interventional decisions can be made. At the same time, the evidence can also contribute to the body of knowledge related to international social–emotional assessment practices for young people.

By considering all of this, the following problematic questions were identified in this research: (a) what are the socio-emotional competencies general education school students (grades K5–K12) best identify, and (b) what is the expression of socio-emotional skills for both genders and school grades? Therefore, the scope of the present study remains on the dependence of socio-emotional competence expression on gender and grade for K5–K12 students.

In the subsequent parts, researchers present the process of the research, as well as the results of statistical analysis. We conclude our study by discussing the findings obtained and proposing some recommendations for future studies.

#### 2. Materials and Methods

#### 2.1. The Context of the Research and Selection of Participants

Kaišiadorys district municipality, as well as the other municipalities of the country, seeks the highest socio-emotional competence level to be achieved among students in the schools as all the schools are obliged to have at least one or two preventive educational programs that would help students to develop and strengthen their socio-emotional competence. For this reason, the above-mentioned municipality, through *agreement No. TB-0024/2020*, is promoted to test and observe what socio-emotional competence is among children in schools and if those preventive educational programs are sufficient for children's development.

The type of study is quantitative comparative, applying the case analysis for maximum data collection. Non-probabilistic sampling was applied. In response to Kaišiadorys district municipal statistical data of children in grades 5–12 and the distribution of class composition in selected research cases in schools for the 2020–2021 school year, the main scope was 95% participation of all survey participants. In total, 1322 (784 girls and 538 boys) general education schools' students (of grades 5–12) participated in this study.

Educ, Sci. 2022, 12, 341 5 of 13

#### 2.2. Data Collection

After obtaining the consent of the parents/guardians/legal representatives of the students, acquainting the school community and the students themselves, and obtaining the permits of the school administration in selected cases, research on the social–emotional education of 5–12 grade individuals in seven formal general education institutions of Kaišiadorys district municipality was conducted back in November 2020–February 2021.

A statistically validated and partially modified questionnaire according to The Limbic Performance Indicators  $^{\text{TM}}$  (Cronbach's alpha = 0.92, p < 0.000) was used to assess the students' social–emotional competencies. The study uses an abbreviated version of the questionnaire adapted by the Lithuanian Association of Social Emotional Education, which has been adapted with the consent of the selected age group. The abbreviated research instrument consists of 17 dimensions that respond to the content of emotional intelligence, social and emotional competencies: (a) basic emotional needs; (b) personal values; (c) self-sufficiency; (d) respect for others; (e) emotional self-perception; (f) emotional perception of others; (g) stress management; (h) positivity; (j) balance sheet; (k) changes; (l) authenticity; (m) active reflection; (n) trust; (o) conflict management; (p) openness; (r) cooperation; and (s) support. Statements were presented within an interval scale-from complete agreement to complete disagreement within the chosen statement that children must evaluate when choosing the most appropriate answer, from "strongly agree" to "strongly disagree (Table 1). Empirical data were processed in the application program of mathematical statistics in social sciences MS SPSS 23.0.

**Table 1.** The Evaluation of Socio-emotional Competence Sub-groups (M).

Dimensions of Socio-emotional Competence and Evaluation of Each Group	(M Scores)	
1. Basic emotional needs	3.9	
2. Personal values	4	
3. Self-esteem	3.5	
4. Respect for others	4.2	
5. Emotional self-awareness	3.8	
6. Emotional perception of others	3.9	
7. Stress Management	3.1	
8. Positivity	3.4	
9. Balance	3.9	
10. Change	2.5	
11. Authenticity	3.2	
12. Active reflection	2.9	
13. Confidence	2.9	
14. Conflict Management	3.1	
15. Openness	2.6	
16. Cooperation	3.5	
17. Support	3.2	

The following methods were used for statistical data analysis:

- Cronbach's alpha coefficient—to assess the internal compatibility of the scale of socio-emotional competencies and its individual subscales. Further to this analysis, if the variable's internal consistency coefficient (Cronbach's alpha) is = 0.92, it is considered that the data are sufficiently well-matched and suitable for calculations. The internal compatibility of groups of variables, but not of one variable, is presented. For a single variable, internal consistency cannot be calculated because Cronbach's alpha is based on correlations between variables. Therefore, Cronbach's alpha was not calculated for subsamples consisting of one statement at a time.
- Kolmogorov–Smirnov and Shapiro–Wilk tests—to test the normality of the distributions of variables.
- Pearson correlation—to determine the correlations of variables.

Educ. Sci. 2022, 12, 341 6 of 13

 Multidimensional analysis of variance MANOVA—to determine the effect of two or more independent variables (social, demographic factors, and their individual categories) on the dependent variables (the general scale of socio-emotional competencies and its individual subscales).

• A graphical representation of the means of the subscales forming the scale of socioemotional competencies was also performed (Table 1). The significance level  $\alpha = 0.05$  was chosen for statistical analysis.

#### 2.3. Research Ethics

This study is based on the guidelines in the Code of Ethics [44], which respect and protect the rights of all research participants, as they were informed about the aims of the study and that all data gathered would be treated anonymously and confidentially. Children's legal representatives (parents, school administration) signed declarations of consent. Then, they were provided up 40 min to respond to the LPSI questionnaire. The questionnaire was submitted for quantitative analysis using SPSS 23.0, which included both the use of descriptive and inferential statistics. Participants were assured that their participation was voluntary and that all data gathered would be treated anonymously, as well as constructive feedback was also applied in this survey. The following ethical principles were complied with when conducting the research: (1) principle of respect for person's privacy, i.e., the research participant had the right to decide how much the researcher should or should not know about one and how much information to reveal. The surveyed student was provided an opportunity to not answer survey questions and terminate the conversation if feeling uncomfortable, (2) confidentiality and anonymity; the research participants were informed that information on the research participants and materials being dealt with are accessible to the researcher only. The information of the research participants was depersonalized and coded; (3) goodwill (the data of the interview analysis were used for the scientific research only); and (4) the principle of justice (the informants took part in the research voluntarily, approved by their consent form).

# 2.4. Calculation of Internal Validity of Social-Emotional Competence Scale

The Cronbach's alpha coefficient was found to be 0.92, p < 0.000, therefore greater than 0.7 when evaluating the overall consistency of the scale used [45]. Therefore, it can be stated that the applied group of 27 statements, from which the general scale of socio-emotional competencies is worth to be applied.

The data shows that the students in the survey were characterized by the expression of personal values, respect for others, balance, cooperation, emotional perception of others, and basic emotional needs (average M=4).

Thus, although there are subscales in the scale of socio-emotional competencies, the statements of which are poorly coordinated with each other, the overall assessment of the internal coherence of the scale is quite high. In addition, the Kolmogorov–Smirnov criterion  $p < \alpha$  and the Shapiro–Wilk criterion  $p < \alpha$  have shown that the distribution of the overall scale of socio-emotional competencies was statistically significantly different from normal (Table 2). Therefore, nonparametric tests will be applied; as for small sample sizes, normality tests have little power to reject the null hypothesis, and therefore, small samples most often pass normality tests.

**Table 2.** Results of the Kolmogorov–Smirnov and Shapiro–Wilk criteria for the variable Total scale.

General_Scale	Kolmogorov-Smirno Significance Cor		Snai		Shapiro-Wilk	
	Statistic	df	Sig.	Statistic	df	Sig.
	0.032	1322	0.003	0.997	1322	0.008

Educ. Sci. 2022, 12, 341 7 of 13

Also, the statistical analysis has shown that neither the absolute values of asymmetry nor the excess coefficients exceed one unit (Table 3).

			Statistic	Std. Error
General_Scale	Mean		94.2	0.3
	95% Confidence Interval for Mean	Lower Bound	93.5	
		Upper Bound	94.8	
	5% Trimmed Mean		94.2	
	Media	an	94.0	
	Variar	nce	147.2	
	Std. Dev	iation	12.1	
	Minim	um	35.0	
	Maximum		130.0	
	Range		95.0	
	Interquartile Range		17.0	
	Skewn	-	-0.07	0.1
	Kurto	sis	0.2	0.1

**Table 3.** Coefficients of excess and asymmetry for the variable General scale.

Thus, considering both the overall socio-emotional competence scale and the results of its individual subsets Kolmogorov–Smirnov and Shapiro–Wilk criteria, asymmetry, and excess coefficients, further calculations should be based on nonparametric tests (since the distributions of variables are slightly deviated from normal). However, after estimating the extremely large sample size (N = 1322) and the fact that parametric tests are more sensitive to differences between the measured variables (i.e., can detect them more efficiently), parametric tests were used in further calculations.

#### 3. Results

3.1. Evaluation of Socio-Emotional Competence Scale and Differences According to Students' Gender

Firstly, it was examined whether the dependent variables (i.e., the overall scale of socio-emotional competencies and all its subscales) were interrelated in both social and demographic groups and whether their interdependence was linear. The statistical analysis of the data revealed that the correlations of the dependent variables in the different groups of social and demographic variables are mainly of medium strength, negative and positive, which satisfies the statistical assumptions of the analysis of variance-MANOVA.

The interdependencies of the dependent variables in the groups are approximately linear, which indicates the dependency of the variables. The differences in the dependent variables (i.e., the overall scale of socio-emotional competencies and all the subscales that make it up) across gender groups (girls and boys) were examined. In this respect, the Wilks Lambda criterion was considered when assessing the multidimensional effect.

The data showed that the influence of gender on the dependent variables is statistically significant (Wilks Lambda is = 0.857 at p < 0.05). Boys and girls differ in this regard. The results of the ANOVA statistical analysis revealed that variables such as personal values, self-esteem, respect for others, emotional perception of others, stress management, positivity, balance, authenticity, active reflection, basic emotional needs, and support differed statistically significantly between the two gender groups (p < 0.05).

The calculation of the means of the dependent variables showed that the values of personal values, respect for others, emotional perception of others, balance, support, and basic emotional needs were higher in the group of girls. Meanwhile, scores on self-esteem, stress management, positivity, authenticity, and active reflection were higher in the group of boys.

Thus, to ensure access to a holistic personality and full implementation of the results of socio-emotional education, more attention should be paid to strengthening self-esteem,

Educ, Sci. 2022, 12, 341 8 of 13

stress management, positivity, authenticity, and active reflection skills in the girls' group, and for both girls and boys personal values, respect for others, emotional internalization of perception, balance, support and basic emotional needs, and the expression of these socio-emotional abilities in everyday situations. Statistical calculations were also used to examine how the dependent variables (i.e., the overall scale of socio-emotional competencies and all the subscales that make it up) differed in the different schools surveyed. The Wilks Lambda criterion was considered when assessing the multidimensional effect. The influence of school on the dependent variables was found to be statistically significant (Wilks Lambda = 0.837 at p < 0.05). The importance of school for each dependent variable is further examined below.

# 3.2. Evaluation of the Scales of the General Scale of Socio-Emotional Competencies in Terms of Different Grades

The analysis of the data also examined how the dependent variables (the overall scale of socio-emotional competencies and all the subscales that make it up) differed in different classes. The Wilks Lambda criterion was considered in assessing the multidimensional effect. The influence of the class on the dependent variables was found to be statistically significant (Wilks Lambda = 0.813 at p < 0.05). That means that groups in this regard differ as well and that the grade could be considered as an independent variable, affecting differences in socio-emotional competence. The results of ANOVA's statistical analysis showed that variables such as personal values, self-esteem, emotional perception of others, stress management, positivity, balance, authenticity, active reflection, openness, cooperation, support, and the overall scale of socio-emotional competencies differed statistically significantly across classes.

The means of the dependent variables show that personal values differed most between 9th- and 5th-grade students. Self-esteem differs the most between 11th and 5th-, 8th- and 5th-, and 12th- and 5th-grade students. Positivity differed most between 10th- and 5th-grade students. The balance was most different between 10th- and 5th, and 10th and 8th-grade students. Authenticity differed most between students in the 5th and 11th, 9th and 6th, 11th and 6th, 12th and 6th, 5th and 12th, and 5th and 9th grades. Collaboration is most different between 8th- and 5th-grade students.

From the point of view of different classes-personal values were especially strongly expressed among students of the 5th, 7th, and 12th grades. In other classes, falls and low scores were observed; self-esteem was highest in grade 5 and partly in grade 10. For other classes, this socio-emotional ability was particularly weak, such as in grades 8, 11, and 12; the emotional perception of others is most pronounced in grades 8 and 11, while in other grades, this ability did not garner particularly high scores; students in grades 5th, 8th, and 12th had the highest levels of stress management skills, while students in grade 11th had the most difficulty. Furthermore, the internal balance was also most prevalent among students in grades 5th, 8th, and 12th, with the lowest score in terms of this ability among students in grade 10. Active reflection was most common in grades 6th, 9th, and 12th, and the least in grade 11. Openness was most pronounced among 6th- and 8th-grade students, with this ability being extremely low in grade 7. Pupils in the 5th, 7th, 10th, and 12th grades were most likely to cooperate, and pupils in grade 8 are the least likely to cooperate. In terms of support, students in grades 10 and 12 stood out with the highest scores and those in grade 6 with the lowest.

Although students' assessments of the emotional perception of others, stress management, active reflection, openness, support, and the overall scale of socio-emotional competencies were found to be different in different classes, these differences between classes were not significant.

# 3.3. Evaluation of the Scales of the General Scale of Socio-Emotional Competencies in Terms of Different Grades

The Pearson's statistical correlation analysis (when the bond strength is considered significant from r = 0.60 to 1) between the individual scale steps of the overall scale revealed

Educ, Sci. 2022, 12, 341 9 of 13

some statistically significant correlations in some cases, indicating some dependence among the measured traits and allowing the formulation of assumptions about the determinants of socio-emotional skills:

- The main emotional needs and emotional self-perception were positively related and statistically significant (r = 0.71 when p < 0.05). It was then found that as the estimates of basic emotional needs of students increased, so did the estimates of emotional self-perception.
- Self-esteem and emotional self-perception were positively related, and statistically significant (r = 0.64 for p < 0.05). It was found that as students' self-esteem estimates increase, so do their emotional self-perception estimates.
- Emotional self-perception and cooperation were positively related, and statistically significant (r = 0.63 for p < 0.05). It was found that as students' assessments of emotional self-awareness increase, so do their assessments of cooperation.
- Confidence and conflict management were positively related, and statistically significant (r = 0.47 for p < 0.05). It was found that as confidence estimates increased, so did conflict management estimates.

#### 4. Discussion

Social—emotional abilities (so-called "emotional intelligence", "social intelligence") are the abilities to work together with others and learn productively, and they play the most important roles in the family, community, and workplace. Success not only in school but also in later life phases accompanies those students who: (a) realistically evaluate themselves and their possibilities (self-awareness); (b) properly manage their feelings and control their behavior (self-control); (c) accurately interpret the signs of the social environment (social awareness); (d) effectively resolve interpersonal conflicts (communication skills); and (e) make good decisions in the face of day-to-day difficulties (responsible decision making).

There is no doubt that social–emotional learning shapes character. Many years ago, the question of how social and emotional development affects learning was investigated. In 1995, the New York Times science reporter Daniel Goleman published the book *Emotional Intelligence: Why It Can Matter More Than IQ*, which launched the social–emotional movement [46,47]. The case he presented and validated with preliminary evidence was that: (a) character matters; (b) character can be taught; and (c) character improves academic, social, and professional achievement. Since then, all subsequent research has shown that social–emotional learning does, in fact, enhance children's academic success while preventing problems such as mental health disorders and violence. Social–emotional competencies empower children to grow self-aware and confident, manage difficult emotions and impulses, and embody empathy, which translates to not only improved behavior but also test scores.

Gender differences show that girls are characterized by a higher internalization of personal values, sensitivity, and respect for people other than boys. Higher ratings of other people's emotional and perceptual abilities indicate that girls are characterized by greater empathy in listening to and understanding other people's emotional experiences. Other research has linked girls' increased awareness of socio-emotional competencies to a greater level of emotional management, which is stated via the promotion of personal well-being and the building of peer relationships [21,22].

The results of the study, which provide conclusions about the peculiarities of children's social perception and empathy [29–32], also show that children with higher self-esteem are much more likely to notice other people's positive attitudes from their own point of view than children with lower self-esteem. Meanwhile, boys are characterized by higher self-esteem and a more positive outlook on life in general. They are satisfied with their appearance and usually think of themselves more positively than girls. The results are confirmed by other research by analyzing children's self-esteem [48–50], with boys having higher self-esteem than girls, although there are studies that do not agree with this postulate [51], which implies the need for further research to analyze possible causes and

Educ. Sci. 2022, 12, 341 10 of 13

inconsistencies in the results. Boys are more likely to accept positive information about themselves from others, and they are also more confident not only in the people closest to them but also in others than girls. It is an interesting fact that stress management skills, as one of the components of socio-emotional competence, are more common among boys than girls. Similar results have been reported by other researchers analyzing stress expression and management abilities in children's populations [52–54]. Children who feel safe, respect those around them, and spend a lot of time and attention on others, are much more likely to identify negative, stressful emotions and are more likely to say no and observe more positive perceptions of others. Differences also emerged according to the age of the students and the class in which they study.

In Lithuanian educational institutions, as in many other countries of the world, a great deal of attention is paid to strengthening cognitive abilities. The compulsory social and emotional education of students is increasingly being tackled in educational institutions. Socio-emotional competency also impacts learning outcomes [55,56], enabling possibilities to accomplish intended goals and objectives. Socio-emotional competence education is one of the most effective means of ensuring good mental health and preventing violence, and it is also the basis for developing positive not only academic but also social, emotional, healthy lifestyle, and citizenship results [57,58], especially in the period of the COVID19 pandemic, when children face rather socio-emotional problems [59,60].

The main limitations of this study are that the study was performed in only one of the regions of Lithuania. Therefore, the results can be summarized only for the population of this region. The research tool used, provided the number of constituent statements in specific dimensions, also does not allow for full disclosure of the phenomenon, so different research approaches and tools for a comprehensive assessment of socio-emotional competence should be combined in the future. From this perspective, it is appropriate to repeat the study covering different regions of the country, thus obtaining more representative results that reflect the situation of the children population in the whole country. It would also be possible to compare data.

Meanwhile, this present research revealed that some significant differences in social-emotional abilities and the strength of their expression in terms of the gender of the study participants could be detected, with girls more characterized by identification and application of personal values, respect for others, emotional perception of others, balance, support, and basic emotional needs, while boys were relying on the categories of more self-esteem, stress management, positivity, authenticity, and active reflection externalization at the behavioral level. Thus, to ensure access to a holistic personality and full implementation of the results of socio-emotional education, more attention should be paid to strengthening self-esteem, stress management, positivity, authenticity, and active reflection skills in the girls' group, and for both girls and boys, personal values, respect for others, emotional internalization of perception, balance, support and basic emotional needs and the expression of these socio-emotional abilities in everyday situations.

Furthermore, in the seven participating schools where critically low ratings of individual socio-emotional abilities were identified, it is critical to focus on their students' development and expression at the behavioral level, using separate specific educational programs to enhance cooperation, support for others, openness, coping with stress, active reflection, respect, or the emotional perception/empathy of others [61,62]. Each of these areas would be strategized using different educational approaches and associated competencies.

### 5. Conclusions

Children who participated in the study together had a greater expression of personal values, respect for others, internal balance, cooperation, emotional perception of others, or basic emotional needs. Estimates of personal values, respect for others, emotional perception of others, internal balance, support, and basic emotional needs were higher in the group of girls. Meanwhile, scores on self-esteem, stress management, positivity, authenticity, and active reflection were higher in the group of boys.

Educ. Sci. 2022, 12, 341 11 of 13

Students' assessments of the emotional perception of others, stress management, active reflection, openness, support, and the overall scale of socio-emotional competencies were found to be statistically significantly different in different grades.

The analysis of correlations revealed the following significant dependencies between the studied features of socio-emotional education skills: basic emotional needs and emotional self-perception—as the estimates of basic emotional needs of students increase, so do the estimates of emotional self-perception; self-esteem and emotional self-perception—as self-esteem estimates increase, so does the emotional self-perception estimates; emotional self-perception and cooperation—as children assessments of emotional self-perception increase, so do their assessments of cooperation.

**Author Contributions:** Conceptualization, T.B. and R.B.; methodology, T.B. and J.C.; software, T.B. and R.B.; validation, T.B., R.B. and J.C.; formal analysis, T.B., R.B., D.C. and J.C.; investigation, T.B. and R.B.; resources, T.B., R.B., D.C. and J.C.; data curation, T.B.; writing—original draft preparation, T.B., R.B., D.C. and J.C.; writing—review and editing, J.C. and R.B.; visualization, T.B. and D.C.; supervision, T.B., R.B., D.C. and J.C.; project administration, T.B.; funding acquisition, R.B. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

**Institutional Review Board Statement:** The study was conducted in accordance with the Declaration of Helsinki, and approved by the Institutional Review Board at Mykolas Romeris University, Ethic Committee for educational research (protocol code ESDI 2020-01-V254, approval date: 08-10-2020).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** Data supporting reported results can be found in the archive of Kaišiadorys district municipality. No hyper links to publicly are available.

**Acknowledgments:** Much appreciation to school team leaders with a special thanks to the administration of Kaišiadorys district municipality for allowing the access to the schools. Rather big appreciation goes to a doctoral student of Psychology—Modesta Morkevičiūtė (Vytautas Magnus University, Kaunas) for making a precise statistical analysis on the extracted data of this survey.

**Conflicts of Interest:** The authors declare no conflict of interest.

# References

- 1. Marsh, I.C.; Chan, S.W.Y.; MacBeth, A. Self-compassion and psychological distress in adolescents a meta-analysis. *Mindfulness* **2018**, *9*, 1011–1027. [CrossRef] [PubMed]
- 2. Rapee, R.M.; Oar, E.L.; Johnco, C.J.; Forbes, M.K.; Fardouly, J.; Magson, N.R.; Richardson, C.E. Adolescent development and risk for the onset of social-emotional disorders: A review and conceptual model. *Behav. Res. Ther.* **2019**, *123*, 103501. [CrossRef] [PubMed]
- 3. Marçal, K.E. Pathways to adolescent emotional and behavioral problems: An examination of maternal depression and harsh parenting. *Child Abus. Negl.* **2021**, *113*, 104917. [CrossRef] [PubMed]
- 4. Rajindrajith, S.; Ranathunga, N.; Jayawickrama, N.; van Dijk, M.; Benninga, M.A.; Devanarayana, N.M. Behavioral and emotional problems in adolescents with constipation and their association with quality of life. *PLoS ONE* **2020**, *15*, e0239092. [CrossRef] [PubMed]
- 5. Sahar, N.; Saman, M.; Sarwat, Y.; Zaman, K. Role of self-esteem and social support on emotional behavioral problems among adolescents. *Res. Sq.* **2021**, *1*, 1–16.
- 6. Sohrabzadeh, F.; Hakim, J.M. Relationship between emotional and social maturity problems in adolescents with depression and social anxiety disorder. *Sci. J. Nurs.* **2021**, *6*, 58–67.
- 7. Daniunaite, I.; Truskauskaite-Kuneviciene, I.; Thoresen, S.; Zelviene, P.; Kazlauskas, E. Adolescents amid the COVID-19 pandemic: A prospective study of psychological functioning. *Child Adolesc. Psychiatry Ment. Health* **2021**, *15*, 45. [CrossRef] [PubMed]
- 8. Adler, A.; Stančaitienė, G.; Grauslienė, I.; Nasvytienė, D.; Skabeikytė, G.; Barkauskienė, R. "Everything seems unreal": How adolescents cope with COVID-19 quarantine experience. *Psichologija* **2021**, *64*, 53–60. [CrossRef]
- 9. Repšytė, G.; Veitaitė, R.; Gasienė, J. COVID-19 pandemic effects on pediatric mental health. A literature review. *Med. Sci.* **2021**, 9, 199–210.
- 10. Zhou, S.J.; Zhang, L.G.; Wang, L.L.; Guo, Z.C.; Wang, J.Q.; Chen, J.C.; Liu, M.; Chen, X.; Chen, J.X. Prevalence, and socio-demographic correlates of psychological health problems in Chinese adolescents during the outbreak of COVID-19. *Eur. Child Adolesc. Psychiatry* 2020, 29, 749–758. [CrossRef]

Educ. Sci. 2022, 12, 341 12 of 13

11. Sieberer, R.; Kaman, A.; Erhart, M.; Devine, J.; Schlack, R.; Otto, C. Impact of the COVID-19 pandemic on quality of life and mental health in children and adolescents in Germany. *Eur. Child Adolesc. Psychiatry* **2020**, 25, 1–11.

- 12. Magson, N.R.; Freeman, J.Y.A.; Rapee, R.M.; Richardson, C.E.; Oar, E.L.; Fardouly, J. Risk and protective factors for prospective changes in adolescent mental health during the COVID-19 pandemic. *J. Youth Adolesc.* **2021**, *50*, 44–57. [CrossRef] [PubMed]
- 13. Okuyama, J.; Seto, S.; Fukuda, Y.; Funakoshi, S.; Amae, S.; Onobe, J.; Imamura, F. Mental health and physical activity among children and adolescents during the COVID-19 pandemic. *Tohoku J. Exp. Med.* **2021**, 253, 203–215. [CrossRef] [PubMed]
- 14. Saarni, C. Emotional competence: A developmental perspective. In *The Handbook of Emotional Intelligence: Theory, Development, Assessment, and Application at Home, School, and in the Workplace,* 1st ed.; Bar-On, R., Parker, J.D.A., Eds.; Jossey-Bass: San Francisco, CA, USA, 2000; pp. 68–91.
- 15. Domitrovich, C.E.; Durlak, J.A.; Staley, K.C.; Weissberg, R.P. Social-emotional competence: An essential factor for promoting positive adjustment and reducing risk in school children. *Child Dev.* **2017**, *88*, 408–416. [CrossRef] [PubMed]
- 16. Collie, R.J. The development of social and emotional competence at school: An integrated model. *Int. J. Behav. Dev.* **2020**, *44*, 76–87. [CrossRef]
- 17. Yu, L.; Zhou, X. Emotional competence as a mediator of the relationship between internet addiction and negative emotion in young adolescents in Hong Kong. *Appl. Res. Qual. Life* **2021**, *16*, 2419–2438. [CrossRef]
- 18. Brasseur, S.; Grégoire, J.; Bourdu, R.; Mikolajczak, M. The profile of emotional competence (PEC): Development and validation of a self-reported measure that fits dimensions of emotional competence theory. *PLoS ONE* **2013**, *8*, e62635. [CrossRef]
- 19. Rakap, S.; Balikci, S.; Kalkan, S.; Aydin, B. Preschool teachers' use of strategies to support social-emotional competence in young children. *Int. J. Early Child. Spec. Educ.* **2018**, *10*, 11–25. [CrossRef]
- 20. Blair, C.; McKinnon, R.D.; Daneri, M.P. Effect of the tools of the mind kindergarten program on children's social and emotional development. *Early Child. Res. Q.* **2018**, 43, 52–61. [CrossRef]
- 21. Cañabate, D.; Martínez, G.; Rodríguez, D.; Colomer, J. Analysing Emotions and Social Skills in Physical Education. *Sustainability* **2018**, *10*, 1585. [CrossRef]
- 22. Cañabate, D.; Santos, M.; Rodríguez, D.; Serra, T.; Colomer, J. Emotional Self-Regulation through Introjective Practices in Physical Education. *Educ. Sci.* **2020**, *10*, 208. [CrossRef]
- 23. Ahmed, I.; Hamzah, A.B.; Abdullah, M.N.L.Y.B. Effect of social and emotional learning approach on students' social-emotional competence. *Int. J. Instr.* **2020**, *13*, 663–676. [CrossRef]
- 24. Suratno, S.; Komaria, N.; Yushardi, Y.; Dafik, D.; Wicaksono, I. The effect of using synectics model on creative thinking and metacognition skills of junior high school students. *Int. J. Instr.* **2019**, *12*, 133–150. [CrossRef]
- 25. Salovey, P.; Mayer, J.D. Emotional intelligence. Imagin. Cogn. Personal. 1990, 9, 185–211. [CrossRef]
- 26. Park, J.; Haddon, A.; Goodman, H. The Emotional Literacy Handbook: Processes, Practices and Resources to Promote Emotional Literacy; David Fulton: London, UK, 2004.
- 27. Elias, M.J.; Zins, J.E.; Weissberg, R.P.; Frey, K.S.; Greenberg, M.T.; Haynes, N.M.; Kessler, R.; SchwabStone, M.E.; Shriver, T.P. *Promoting Social and Emotional Learning: Guidelines for Educators*; Association for Supervision and Curriculum Development: Alexandria, VA, USA, 1997.
- 28. Denham, S.A. Social-emotional competence as support for school readiness: What is it and how do we assess it? *Early Educ. Dev.* **2006**, *17*, 57–89. [CrossRef]
- 29. Garaigordobil, M.A. Comparative analysis of empathy in childhood and adolescence: Gender differences and associated socio-emotional variables. *Int. J. Psychol. Psychol. Ther.* **2009**, *9*, 217–235.
- 30. Tobari, M. The development of empathy in adolescence: A multidimensional view. Jpn. J. Dev. Psychol. 2003, 14, 136–148.
- 31. Mestre, M.V.; Samper, P.; Frías, M.D.; Tur, A.M. Are women more empathetic than men? A longitudinal study in adolescence. *Span. J. Psychol.* **2013**, *12*, 76–83. [CrossRef]
- 32. Van der Graaff, J.; Carlo, G.; Crocetti, E.; Koot, H.M.; Branje, S. Prosocial behavior in adolescence: Gender differences in development and links with empathy. *J. Youth Adolesc.* **2018**, *47*, 1086–1099. [CrossRef]
- 33. Venslovaitė, V.; Danylienė, L. Socialinis ir emocinis ugdymas: Mokytojo perspektyva. *Acta Paedagog. Vilnensia* **2018**, *40*, 111–126. [CrossRef]
- 34. Jones, S.M.; Barnes, S.P.; Bailey, R.; Doolittle, E.J. Promoting social and emotional competencies in elementary school. *Future Child*. **2017**, 27, 49–72. [CrossRef]
- 35. Rodríguez-Ledo, C.; Orejudo Hernández, S.; Celma Pastor, L.; Cardoso Moreno, M.J. Improving social-emotional competencies in the secondary education classroom through the SEA program. *Electron. J. Res. Educ. Psychol.* **2018**, *16*, 681–701. [CrossRef]
- 36. Magelinskaitė-Legkauskienė, Š.; Legkauskas, V.; Kepalaitė, A. Socialinės kompetencijos pradinėje mokykloje klausimyno kūrimas ir psichometrinių rodiklių analizė: Sąsajos su populiarumu klasėje, santykiais su mokytoja ir mokykliniu nerimastingumu. *Pedagogika* **2017**, 127, 32–47.
- 37. Daunic, A.; Corbett, N.; Smith, S.; Barnes, T.; Santiago-Poventud, L.; Chalfant, P.; Pitts, D.; Gleaton, J. Brief report: Integrating social-emotional learning with literacy instruction: An intervention for children at risk for emotional and behavioral disorders. *Behav. Disord.* **2013**, 39, 43–51. [CrossRef]
- 38. Saeki, E.; Watanabe, Y.; Kido, M. Developmental and gender trends in emotional literacy and interpersonal competence among Japanese children. *Int. J. Emot. Educ.* **2015**, *7*, 15–34.

Educ. Sci. 2022, 12, 341 13 of 13

39. Coggshall, J.G.; Osher, D.; Colombi, G. Enhancing educators' capacity to stop the school-to-prison pipeline. *Fam. Court. Rev.* **2013**, 51, 435–444. [CrossRef]

- 40. Vaišvidienė, L.; Gedvilienė, G. Pedagogų vaidmuo ugdant ikimokyklinio amžiaus vaikų emocinį intelektą. *Holistinis Mokym.* **2017**, *3*, 11–20. [CrossRef]
- 41. Heo, J.; Oh, J.; Subramanian, S.V.; Kim, Y.; Kawachi, I. Addictive internet use among Korean adolescents: A national survey. *PLoS ONE* **2014**, *9*, e87819. [CrossRef]
- 42. Humphrey, N.; Kalambouka, A.; Wigelsworth, M.; Lendrum, A.; Deighton, J.; Wolpert, M. Measures of social and emotional skills for children and young people: A systematic review. *Educ. Psychol. Meas.* **2011**, *71*, 617–637. [CrossRef]
- 43. Neale, S.; Spencer-Arnell, L.; Wilson, L. *Emotional Intelligence Coaching: Improving Performance for Leaders, Coaches and the Individual;* Kogan Page Limited: London, UK, 2009.
- 44. Ethical Principles of Psychologists and Code of Conduct. Available online: https://www.apa.org/ethics/code (accessed on 1 March 2022).
- 45. Taber, K.S. The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Res. Sci Educ* 2018, 48, 1273–1296. [CrossRef]
- 46. Goleman, D. Emotional Intelligence, 10th ed.; Bantam Books: New York, NY, USA, 2006.
- 47. Goleman, D. Emotional Intelligence: Why It Can Matter More Than IQ. 1995. Available online: https://www.academia.edu/3732 9006/Emotional\_Intelligence\_Why\_it\_Can\_Matter\_More\_Than\_IQ\_by\_Daniel\_Goleman (accessed on 19 September 2021).
- 48. Quatman, T.; Watson, C.M. Gender differences in adolescent self-esteem: An exploration of domains. *J. Genet. Psychol.* **2001**, 162, 93–117. [CrossRef] [PubMed]
- 49. Bachman, J.G.; O'Malley, P.M.; Freedman-Doan, P.; Trzesniewski, K.H.; Donnellan, M.B. Adolescent self-esteem: Differences by race/ethnicity, gender, and age. *Self Identity* **2011**, *10*, 445–473. [CrossRef] [PubMed]
- 50. Bang, H.; Won, D.; Park, S. School engagement, self-esteem, and depression of adolescents: The role of sport participation and volunteering activity and gender differences. *Child. Youth Serv. Rev.* **2020**, *113*, 105012. [CrossRef]
- 51. Mullis, R.L.; Chapman, P. Age, gender, and self-esteem differences in adolescent coping styles. *J. Soc. Psychol.* **2000**, *140*, 539–541. [CrossRef] [PubMed]
- 52. Hill, D.C.; Moss, R.H.; Sykes-Muskett, B.; Conner, M.; O'Connor, D.B. Stress and eating behaviors in children and adolescents: Systematic review and meta-analysis. *Appetite* **2018**, *123*, 14–22. [CrossRef]
- 53. Debnam, K.J.; Milam, A.J.; Mullen, M.M.; Lacey, K.; Bradshaw, C.P. The moderating role of spirituality in the association between stress and substance use among adolescents: Differences by gender. *J. Youth Adolesc.* **2018**, 47, 818–828. [CrossRef]
- 54. Cejudo, J.; Rodrigo-Ruiz, D.; López-Delgado, M.L.; Losada, L. Emotional intelligence and its relationship with levels of social anxiety and stress in adolescents. *Int. J. Environ. Res. Public Health* **2018**, *15*, 1073. [CrossRef]
- 55. Alzahrani, M.; Alharbi, M.; Alodwani, A. The effect of social-emotional competence on children academic achievement and behavioral development. *Int. Educ. Stud.* **2019**, *12*, 141–149. [CrossRef]
- 56. Denham, S.A. Emotional competence during childhood and adolescence. In *Handbook of Emotional Development*, 1st ed.; LoBue, V., Pérez-Edgar, K., Buss, K., Eds.; Springer: Cham, Switzerland, 2019.
- 57. Šukytė, D. Socialinis ir Emocinis Ugdymas; Baltic Printing House: Klaipėda, Lithuania, 2016.
- 58. De la Barrera, U.; Schoeps, K.; Gil-Gómez, J.-A.; Montoya-Castilla, I. Predicting Adolescent Adjustment and Well-Being: The Interplay between Socio-Emotional and Personal Factors. *Int. J. Environ. Res. Public Health* **2019**, *16*, 4650. [CrossRef]
- 59. Salmela-Aro, K.; Upadyaya, K.; Vinni-Laakso, J.; Hietajärvi, L. Adolescents' longitudinal school engagement and burnout before and during COVID-19: The role of socio-emotional skills. *J. Res. Adolesc.* **2021**, *31*, 796–807. [CrossRef]
- 60. Rogers, A.A.; Ha, T.; Ockey, S. Adolescents' perceived socio-emotional impact of COVID-19 and implications for mental health: Results from a U.S.-based mixed-methods study. *J. Adolesc. Health* **2021**, *68*, 43–52. [CrossRef] [PubMed]
- 61. Colomer, J.; Serra, L.; Cañabate, D.; Serra, T. Evaluating Knowledge and Assessment-Centered Reflective-Based Learning Approaches. *Sustainability* **2018**, *10*, 3122.
- 62. Bassachs, M.; Cañabate, D.; Serra, T.; Colomer, J. Interdisciplinary Cooperative Educational Approaches to Foster Knowledge and Competences for Sustainable Development. *Sustainability* **2020**, *12*, 8624. [CrossRef]