

Social emotional health, life satisfaction and school climate of junior school students in the context of Covid-19 pandemic crisis: Longitudinal research in Lithuania

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Abstract: Research on students' social-emotional health is important for quality learning and well-being at school, especially during the challenges of the Covid-19 pandemic times. Purpose: to investigate younger school-age students' social-emotional health, satisfaction with life, and perceived school climate in the Covid-19 pandemic crisis and the predominance of distance learning by longitudinal research strategy. Method: Social and Emotional Health Survey-Primary (SEHS-P; Furlong et al., 2013) and Multidimensional Students Life Satisfaction Scale (MSLSS; Huebner, 2001). The sample was 84 junior school-age students (10–12 years old) from Lithuanian schools. The results and conclusions: The first months of the Covid-19 pandemic crisis led to the deterioration of social-emotional health and satisfaction of younger school-age students. However, after 8 months of the Covid-19 pandemic crisis (re-test), some improvements in students' emotional health, satisfaction with life, and classroom microclimate were observed. No gender-based differences were identified among students. The results revealed positive and significant correlations between the younger school-age students' social-emotional health, satisfaction with life, and perceived school climate; the conducted regression analysis showed that family plays a significant role in junior school students' social-emotional health. The teachers' support for distance learning students could have improved their classroom microclimate and the knowledge of students' health status could have helped them to adapt to distance learning more effectively during the Covid-19 pandemic crisis.

Keywords: social-emotional health, satisfaction with life, school microclimate, younger school-age students, longitudinal research

Socialno-čustveno zdravje učencev, njihovo zadovoljstvo z življenjem in šolska klima v kontekstu pandemske krize COVID-19: vzdolžna študija v Litvi

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Povzetek: Raziskovanje socialno-čustvenega zdravja učencev je pomembna za kakovostno učenje in njihovo blagostanje v šoli, še posebno v času izzivov, ki jih prinaša pandemija COVID-19. Namen: raziskati socialno-čustveno zdravje mlajših učencev, njihovo zadovoljstvo z življenjem in zaznano šolsko klimo v času pandemske krize in prevladujočega učenja na daljavo z uporabo vzdolžnega pristopa. Metoda: Vprašalnik Socialnega in čustvenega zdravja – osnovna (Social and Emotional Health Survey-Primary; SEHS-P; Furlong idr., 2013) in Večdimenzionalna lestvica zadovoljstva z življenjem za učence (Multidimensional Students Life Satisfaction Scale; MSLSS; Huebner, 2001). Vzorec je obsegal 84 učencev Litvanskih osnovnih šol (starih med 10 in 12 let). Rezultati in sklepi: Prvi meseci pandemske krize so vodili k poslabšanju socialno-čustvenega zdravja in zadovoljstva učencev. Vendar pa je bilo po osmih mesecih (retest) moč opaziti nekaj izboljšanja v čustvenem zdravju, zadovoljstvu učencev z življenjem ter razredni mikroklimi. Med učenci ni bilo moč opaziti razlik po spolu. Rezultati so prav tako pokazali pozitivne in značilne povezanosti med socialno-čustvenim zdravjem učencev, njihovim zadovoljstvom z življenjem ter zaznano šolsko klimo; regresijske analize so pokazale, da ima družina pomembno vlogo pri oblikovanju socialno-čustvenega zdravja učencev. Podpora učiteljev pri učenju na daljavo je lahko izboljšala razredno mikroklimo, poznavanje zdravstvenega stanja učencev pa jim je lahko pomagalo pri prilagajanju učenja na daljavo, da je bilo to v času pandemske krize bolj učinkovito.

Ključne besede: socialno-čustveno zdravje, zadovoljstvo z življenjem, šolska mikroklima, učenci, vzdolžna študija

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In Lithuanian schools before the Covid-19 pandemic crisis growing rates of various dependencies and suicide, an increasing number of bullying incidences, and more instances of adolescent behavioral and emotional problems were observed. Lithuania ranks 33rd out of 38 developed countries in the field of overall well-being (UNICEF, 2020). Psycho-educational and preventive activities targeted at the emotional and social well-being of children have been given priority by educational psychologists in Lithuania (Barkauskienė & Zacharevičienė, 2019; Kalpokienė, 2005; Petrulytė & Guogienė, 2018; Valantinas, 2009; Žukauskienė, et al., 2011).

It should be noted that the emotional state and behaviour of a third of Lithuanian students worsened during the Covid-19 pandemic quarantine (Jusienė et al., 2021). Almost 32% of children aged 7 to 14 years old were considered as having an abnormal range of emotional and behavioral disorders at the end of the 2nd quarantine due to the COVID-19 pandemic in Lithuania (Jusienė et al., 2021). Also during the first quarantine (spring 2020), more than half (54%) of parents indicated that their child had behavioral or emotional difficulties, and in the second (in the fall of 2020) – 32 percent of parents (Kernagė et al., 2021). These scores were much higher compared with the children after the first quarantine. The authors emphasized that school closure and lockdown had an adverse psychological impact on youngsters, and suggest that it is urgent to develop effective screening and coping strategies for children. The increase in mental health problems in adolescents during the pandemic was confirmed by a series of other studies (Breidokienė et al., 2021; Daniūnaitė et al., 2021).

According to the authors, junior school students have become a particularly vulnerable group due to the introduction of quarantine, remote education has increased social isolation and unmet communication needs have emerged. The focus of this study is the social-emotional health of junior school students in the context of the Covid-19 pandemic. The child learns to express emotions through experience and communication with others. Children firstly get acquainted with feelings and aspects of social behavior in their families and slightly later the same children continue getting familiar with them in kindergarten and at school. In the beginning, junior school juniors learn feelings and prosocial behavior by observing adults (parents, class tutor, teacher) and making attempts to imitate them. The expression of a child's emotions and behavior are closely connected with his/her social-emotional health and well-being, which, in turn, are related to his/her positive engagement in relations within an educational institution. Therefore, it is particularly significant to analyze the mentioned aspects related to junior school students in the context of distance and mixed learning aiming at the improvement of junior students' psychological well-being and adaptation to transiting from primary school to a secondary one.

Positive psychology proposes a multiple-component view of mental health. The aim of the Social Emotional Health Model by Furlong is to identify key positive indicators for the prediction of mental health (Furlong et al., 2013, 2014). From the perspective of positive psychology, children's strong sides, which interact with each other, positively correlate

with positive development, life satisfaction, psychological well-being, self-belief and belief in others, and emotional competence (Furlong et al., 2014; Park et al., 2004 and others). The most relevant contexts where the strengths of school students manifest themselves include family, school, and friends. Life satisfaction and well-being of junior school students are expressed through optimism, gratitude, love, and hope in the aforesaid contexts (e.g., Peterson & Park, 2006; Peterson et al., 2005). The child's social and emotional health is perceived as a multidimensional dynamic construct embracing a combination of a person's psychological strengths, which, according to M. Furlong's model (Furlong et al., 2013), consists of 4 components: gratitude, optimism, persistence, zest, and their general index. Mentioned positive dimensions of junior school students' social-emotional health have to be discussed in the context of research on positive psychology. "Gratitude" refers to the person's being aware of and thankful for good things that happen (Park & Peterson, 2009). Gratitude is regarded as a response of thankfulness to any transactions that may occur within an individual or the environment surrounding him or her (Emmons, 2007) and it positively correlates with the provision of social support to others, the perception of this social support received, positive affect, social integration, life satisfaction and academic achievements (Bono & Froh, 2009; Froh et al., 2011). "Optimism" is seen as having a general expectation for good outcomes in future (Carver et al., 2010; Scheier & Carver, 1985). Optimism enhances self-confidence and perseverance in solving various problems and increases success in achieving desired goals. It relates to better physical health, recovery from illness and subjective well-being, and social engagement as well as positive, supportive relationships (Boman et al., 2009; Brissette et al., 2002; Carver et al., 2010; Srivastava et al., 2006). The research conducted in the educational context allows associating optimism with higher levels of academic interest, success, adjustment, and positive interpersonal relationships (Boman et al., 2009; Carver et al., 2010). "Zest" is perceived as a person's approaching life with excitement and energy (Park & Peterson, 2009). According to researchers, "zest" possesses a strong, consistent positive relationship with health, emotional well-being, autonomy, and positive interpersonal relationships and life satisfaction observed within all age groups (Park et al., 2004; Peterson et al., 2005). Weber and Ruch (2012) proved gratitude, zest, love of learning, perseverance and curiosity to be positively associated with school-related satisfaction. It is agreed that "persistence" is about the relation to expectation, motivation, effort, and self-regulation as well as with persistence deriving from being associated with or contributing to the effects of these constructs (Feather, 1962; Kuhl, 1996; Volet, 1997). Volet (1997) adapted prior notions of persistence to the educational setting and determined it as maintenance of learning intentions regardless of usual academic challenges. The results obtained by Volet (1997) suggest that persistence has a strong effect on performance, particularly when there is a perceived lack of competence and interest in the performed academic task. Furlong et al. (2013) state that the general index of social-emotional health is associated with feeling safe at school, whereas lower general index scores are connected with increased reports of becoming victims of bullying at

school. By APA research (Coalition for Psychology in Schools and Education, 2019), one of the most important principles for educators is social-emotional learning and the well-being of students.

In our opinion, the school students' social and emotional health is closely linked to the school microclimate and their satisfaction with life. In the research school, climate is referred to as school atmosphere or school environment. Prucha et al., (1998) argue that school climate is a socio-psychological variable, which expresses the quality of interpersonal relationships and social processes within a particular school as perceived, experienced, and evaluated by teaching staff, school learners, and other school personnel. According to Petlak (2006), in a narrow sense school, climate may be viewed as an organizational ideology representing school values and goals and climate, like mood, a mental state, a class climate or climate as a mediator between students and teachers. School climate is regarded as a relatively stable aspect of the internal school environment and individuals associated with the school – students, parents, and all school personnel contribute to its creation. The research on school climate in Slovakia revealed a highly positive evaluation of school climate among students (Gajdosova & Majercakova Albertova, 2019). The National School Climate Council (2007, as cited in Thapa et al., 2013) suggests defining school climate as based on patterns of people's experiences in connection to school life and reflecting norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures. The research conducted by Wang et al. (2018) with Chinese students in 3rd and 4th grades shows that a better school climate is connected both with less internalizing symptoms (negative mental health) and with more positive mental health. Satisfaction of life is determined as a global evaluation of a person's life given by the person himself or herself (Pavot et al., 1991) and numerous studies on life satisfaction of adults have been carried out (Diener, 1994; Veenhoven et al., 1993). The number of research studies on children's life satisfaction separating them from other aspects of psychological well-being has been growing. For example, life satisfaction reports have been separated from other constructs of well-being such as self-esteem (Huebner et al., 1999; Lucas et al., 1996; Terry & Huebner, 1995), depression (Lewinsohn et al., 1991) and others. The main domains of the Huebner model (2001) of the students' life satisfaction are a school, family, and friends in their lives.

A review of literature sources discloses that the research on well-being in school has mainly focused on adolescents from middle and high schools with considerably less attention to the younger age groups in elementary school (Proctor et al. 2009). The good overall adjustment of students is based on academic results but to the detriment of the promotion of social-emotional competencies (Nunes El Achkar et al., 2019). The study results revealed that hope and positive emotions make up an important factor in life satisfaction among elementary school students (Telef, 2020). The level of life satisfaction perceived during childhood is an excellent indicator of healthy and psychological development. However, the results indicate no gender differences in terms of life satisfaction during childhood. Levels of satisfaction with life are significantly higher in childhood than in pre-adolescence

and adolescence. The present results highlight the importance of psychological/affective care in the pre-adolescent age (Aymerich et al., 2021).

Generalizing it can be stated that although social-emotional health, life satisfaction, and school climate have been investigated, there is a lack of studies on junior school students' social-emotional health, life satisfaction, and school climate relationship as well as on factors that predict social-emotional health.

The research goal

To investigate social and emotional health of junior school students during the Covid-19 pandemic crisis and distance education.

The objectives of research

1. To evaluate school students' social-emotional health in the whole sample and to compare it between the groups of boys and girls.
2. To compare school students' social-emotional health, life satisfaction, perceived school microclimate and academic achievements in the period before and during the Covid-19 pandemic crisis by applying the strategy of longitudinal research (test and re-test).
3. To identify relationships between school students' social-emotional health with life satisfaction and school microclimate perceived by school students and factors predicting school students' social-emotional health by applying regression analysis.

Method

Participants

The test and re-test were conducted with the same research participants in February of 2020 and it was repeated in September–October of the same year (re-test). It should be noted that strict quarantine was introduced in Lithuania from March 7 to June 16 (1st wave) and since 7 November up to now the conditions of quarantine have not been so strict.

The participants from two Lithuanian schools (Švenčionėliai Progymnasium and Adutiškis Basic School) took part in the research. The students are from 4th and 5th graders of elementary school (10 – 12 years old). The whole sample included 84 junior school students: 48 boys (57.1%) and 36 girls (42.9%). The participants are from 4th and 5th graders of elementary school (10 – 12 years old).

The study was conducted in accordance with the rules of professional ethics of the psychologist: the survey was agreed with the school administration and the class leaders of the students; a consent form was prepared for the parents of the children, in which the parents would sign if they agreed that their child would take part in the interview. School psychologists conducted a survey of students. Questionnaires were distributed by paper, participation was confidential, and the names of the children were encoded. The main selection criterion for children in the study was primary education.

Statistical processing of research data

The collected data were processed using Microsoft Excel 2003, SPSS (17 for Windows).

Since the data of participants are not normally distributed, the Wilcoxon criterion was applied for comparison of mean values of participants' social-emotional health (SEHS-P) and scales according to gender as well as for comparison of mean values of life satisfaction before and after the crisis. In the statistical analysis by gender, the Mann-Whitney U criterion was used to compare the means. Correlation analysis was performed using Spearman's rho criterion.

Instruments and procedure

Social Emotional Health Survey – Primary (SEHS-P; Furlong et al., 2013). The questionnaire was translated by A. Petrulytė and J. Bagdonavičiūtė.

The SEHS-E (Furlong et al., 2013) is a 20-item self-report measure of social emotional health for primary school students. The general index of social emotional health (SEHS-Primary) is measured considering 16 items, with 4 items each assessing gratitude, optimism, zest and persistence (4 sub-scales). The general index of SEHS-P is understood as a general vitality, activity and engagement.

An example item for "gratitude" in the questionnaire is "I am lucky to go to my school". One of the items for "optimism" is "I expect good things to happen at my school". An example item for "zest" is "I get excited when I learn something new at school". An example item for "persistence" is "I keep working until I get my schoolwork right". There is an additional pro-social behavior sub-scale and one of the statements there is "I follow the classroom rules". The four response options are "almost never", "sometimes", "often" or "very often" (Furlong et al., 2013).

The reliability of scales in the SEHS-P questionnaire was conducted testing data collected in the pre-pandemic period (Table 1). The internal consistency of questionnaire is appropriate and all the Cronbach alpha coefficients range from .703 to .879.

The Multidimensional Students Life Satisfaction Scale (MSLSS; Huebner, 2001) expressed an increased interest in promoting positive psychological well-being in children and adolescents (Compas, 1993; Sarason, 1997). The MSLSS was designed to introduce important, specific domains – school, family and friends in their lives as well as to get access to their general overall life satisfaction. 40-item MSLSS can be administered to individual children as well as ones in groups. With younger children (grades 3–5), it is recommended for the researcher to read the directions aloud to school students and to encourage them to ask questions if necessary.

The four response options are assigned points as follows: never (1), sometimes (2), often (3), and almost always (4). Negatively-keyed items get reverse score, i.e., almost always = 1, and so on. Thus, higher scores reveal higher levels of life satisfaction throughout the scale.

Normative data obtained to date are available for elementary (grades 3–5; Huebner, 1994).

Table 1

Reliability of SEHS-P scales

SEHS-Primary subscales	Cronbach α
Gratitude	.878
Optimism	.836
Zest	.703
Persistence	.834
Pro-social behaviour	.851
General SEHS-P index	.879

Internal consistency (α) coefficients (Greenspoon & Saklofske, 1997; Huebner, 1994; Huebner et al., 1999) all range from .70s to .90s and are appropriate for research purposes. Permission to use the MSLSS is in the public domain and researchers are allowed to use it without it.

In our study the Cronbach α coefficients range from .70 to .85 and are appropriate for analysis.

Georgi School Climate Survey (GSCS) was used to evaluate school climate perceived by school students (La Salle & Meyers, 2014).

At present, the questionnaire is being standardised in several countries all over the world including Lithuania. Preliminary results for the USA, Italy, Jamaica, Latvia, Lithuania and Slovak Republic were presented at an International School Psychology Association conference in Tokyo, Japan in July 2018. The full version of questionnaire provides questions for all participants of educational process at school – school students, their parents and teachers. The questionnaire was used in the group of junior school students in the present research. The questionnaire form consists of 11 questions and the total summative indicator is calculated according to them.

School students' academic achievements were calculated according to three levels in the following way: higher 9–10; basic 6–8; satisfactory 4–6. The same evaluation system was chosen for 4th and 5th grades (transition from the 4th grade in the primary school to the 5th form in the secondary school).

The reliability of GSCS was checked by assessing internal consistence (Cronbach's α) – all coefficients ranged from .67 to .79.

Results

The normality of distribution of junior school students' SEHS-P scales was tested. The Kolmogorov – Smirnov test was used to carry out the normality test of distributions of sub-scales of school students' social emotional health. The variables are not distributed according to normal distribution, i.e., all $p < .05$: gratitude ($p < .001$), optimism ($p < .001$), zest ($p = .004$), persistence ($p = .004$) and general index ($p = .007$) (Table 2). Therefore, non-parameter criteria were used for further statistical analysis.

The results of longitudinal research on junior school students' social emotional health (SEHS-P) will be presented further. It should be noted that according to the author of SEHS-Primary questionnaire (Furlong, 2015), general index has four levels (Furlong et al., 2014): low ≤ 37 , low average 38–47, high average 48–56 and high ≥ 57 .

The school students' data according to the distribution of SEHS-P values considering the levels of norms received during the presented research is presented in Fig 2. It should be noted that although the values of separate sub-scales of school students' SEHS-P increased and some of them went down, comparison of general index in the pre-pandemic period and during the Covid-19 pandemic did not reveal any differences.

Distribution of girls and boys in the pre-pandemic period and during the Covid-19 pandemic crisis according to the results of the research is as follows: in February 2020 12.6% of primary school students were assigned to "low and low average level", which showed their higher vulnerability and necessity to receive more attention. The biggest number of participants fell within "high and high average level" (87.4%), which disclosed rather high resistance (Figure 1).

In the period of September – October 2020, 32.2% of school students were attributed to "low and low average level". The results of 67.8% of fifth formers comply with the high and high average level.

Comparing the data on school students' SEHS-P by gender, slight differences are observed: 6.3% of boys fall under the "low level", whereas no girls (0%) are assigned to this level. The percentage of boys complying with the "low average level" equals 6.3% and the percentage of girls in this level amounts to 8.3%, which makes a slight difference only. "High average level" includes slightly more boys (43.5%) than girls (41.6%). The "high" level also shows minor changes in terms of participants' gender: boys – 43.9% and girls – 50.1%. More considerable changes in social emotional health between boys and girls were identified according to the low level but no essential differences were found according to the data (Table 3, Figure 2).

Analysing the school students' SEHS-P according to their gender, it can be stated that there are no boys and girls assigned to the "low level". The "low average level" applies to 25.1% of boys and 16.6% of girls. The "high average level" includes slightly more girls (33.3%) than boys (25.2%). A minor difference was found comparing the data in the "high level" in terms of gender: 49.7% of boys and 50.1% of girls. The most significant differences are observed between the boys and girls that fall within the low average and high average level of social emotional health.

Table 2
Testing the normality of distribution of school students' SEHS-P scales (Kolmogorov-Smirnov)

SEHS-P subscales	Prior to the pandemic (n = 84)		During the pandemic (n = 84)	
	Statistic	p	Statistic	p
Gratitude	2.41	.000	2.38	.000
Optimism	2.24	.000	2.04	.000
Zest	1.27	.080	1.98	.001
Persistence	1.56	.016	1.82	.003
Pro-social behaviour	1.51	.021	2.71	.000
General SEHS-P index	1.78	.003	1.57	.014

After the comparison of indicators of boys' and girls' social emotional health before the Covid-19 pandemic, no statistically significant differences were observed according to sub-scales of SEHS-P and only the distribution of pro-social behaviour of girls had higher values compared to that of boys ($p = .001$).

Comparison of values of junior school students' social emotional health sub-scales according to gender during the Covid-19 pandemic crisis (Table 4, Figure 3) revealed no statistically significant differences between the boys and the girls according to SEHS-P sub-scales. However, a tendency of slightly higher mean ranks was revealed.

Our previously conducted research included comparison of data on school students' SEHS-P before the Covid-19 pandemic crisis and during the first months of crisis and it disclosed deterioration in social emotional health (Petruelytė & Guogienė, 2020).

Comparing ranks of positive and negative values and their sums in Table 5 (ranges of differences in values are analyzed: re-test – test), we can see that the variable of school students' gratitude tends to obtain lower values (compared to the pre-crisis period), $p = .01$. The sum of negative ranks is equal to 1506, whereas that of positive ones is 705. Compared to the pre-pandemic period, the values in the following two sub-scales went up in the period of crisis: Zest (the sum of negative ranks is 589.5, the sum of positive ranks is equal to 1825.5, $p < .01$) and Pro-social behavior (the sum of negative ranks equals 703.5, the sum of positive ranks is 1507.5, $p = .01$). Thus, after 8 months of the Covid-19 pandemic crisis school students' social-emotional health improved in two aspects (Zest and Pro-social behavior) and a minor decrease was identified in one (Gratitude). However, the general index of SEHS-P did not undergo any changes.

Further, the results according to school students' Life satisfaction in the pre-crisis period (February 2020) and during the pandemic crisis (September – October 2020) (Table 6).

Analyzing distributions (differences of negative and positive ranks of retest-test) of sub-scales of Life satisfaction from Table 7, it can be seen that the distributions of Friends, Schools, Living environment, and General index acquire lower values during the pandemic period compared to the pre-pandemic one (both mean values of negative ranks and

Figure 1
Distribution of general index of junior school students' SEHS-P according to the norm levels in February 2020 and September– October 2020 (percentage)

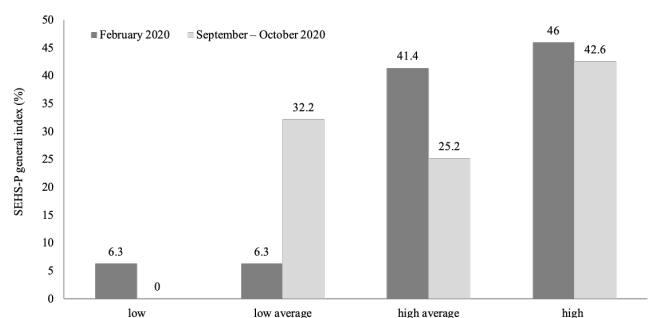


Table 3

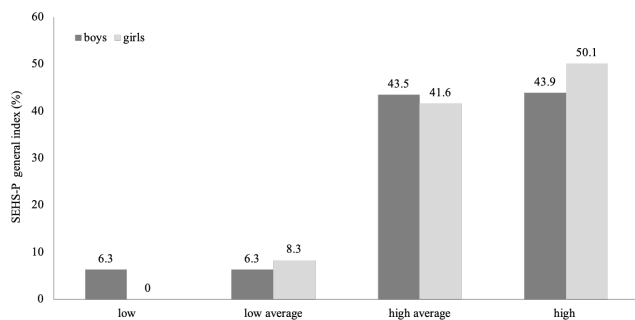
Comparison of school students' social emotional health according to gender (before the Covid-19 pandemic crisis)

SEHS-P subscales	M_{rank} boys ($n = 48$)	M_{rank} girls ($n = 36$)	U	Z	p
Gratitude	38.75	47.50	684.0	-1.75	0.080
Optimism	42.69	42.25	855.0	-0.08	0.933
Zest	41.56	43.75	819.0	-0.41	0.680
Persistence	42.59	42.38	859.5	-0.04	0.967
Pro-social beh.	34.81	52.75	495.0	-3.39	0.001
General SEHS-P index	41.29	44.13	805.5	-0.53	0.596

Note. When $p < .05$, the difference is statistically significant.

Figure 2

Distribution of general index of SEHS-P of younger school-aged boys and girls according to the norm levels before the Covid-19 pandemic (February 2020) (percentage)



their sums are lower than those of positive ranks). The sum of negative ranks in the sub-scale of Friends is 2400, whereas that of positive ones is equal only to 603 ($p < .01$); the sum of negative ranks in the sub-scale of School – 2478 and the sum of positive ranks in the same sub-scale is 843, in the sub-scale of the Living environment– 3036 and 285 respectively, General index – 2817 and 609. Thus, life satisfaction slightly deteriorated in three sub-scales, whereas in two sub-scales statistically significant differences were not identified.

The correlation analysis of the general index of junior school students' social-emotional health (SEHS- P) with the sub-scales of life satisfaction (in the pre-pandemic period) revealed positive correlations of medium strength ($p < .01$) and they all are statistically significant with exception of pro-social behavior scale (Table 7).

During the research conducted on school students in the pre-pandemic period numerous positive relationships were recorded between SEHS-P and Life satisfaction sub-scales: the scale Friends links to gratitude ($r = .30, p = .01$), optimism ($r = .23, p = .05$) and zest ($r = .23, p = .05$) of SEHS-P; the scale Self correlates with gratitude ($r = .50, p = .01$), optimism ($r = .39, p = .01$), zest ($r = .47, p = .01$), persistence ($r = .32, p = .01$) and general index ($r = .52, p = .01$) of SEHS-P; the scale School relates to gratitude ($r = .48, p = .01$), optimism ($r = .44, p = .01$), zest ($r = .61, p = .01$), persistence ($r = .51, p = .01$) and general index ($r = .64, p = .01$) of SEHS-P; the scale Family is linked to gratitude ($r = .50, p = .01$), optimism

Table 4

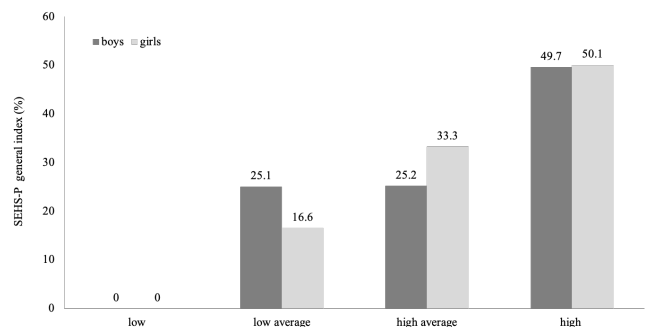
Comparison of school students' social emotional health according to gender (during the Covid-19 pandemic crisis)

SEHS-P subscales	M_{rank} boys ($n = 48$)	M_{rank} girls ($n = 36$)	U	Z	p
Gratitude	38.30	41.14	688.5	-0.58	.563
Optimism	37.20	42.64	639.0	-1.08	.280
Zest	39.10	40.05	724.5	-0.19	.851
Persistence	39.90	38.95	724.5	-0.19	.852
Pro-social beh.	36.70	43.32	616.5	-1.39	.165
General SEHS-P index	40.00	38.82	720.0	-0.23	.819

Note. When $p < .05$, the difference is statistically significant.

Figure 3

Distribution of general index of SEHS-P of younger school-aged boys and girls according to the norms during the Covid-19 pandemic (September-October 2020) (percentage)



($r = .39, p = .01$), zest ($r = .49, p = .01$), persistence ($r = .34, p = .01$) and general index ($r = .48, p = .01$); the scale Living environment correlates with gratitude ($r = .33, p = .01$), zest ($r = .44, p = .01$) and general index ($r = .27, p = .05$) of SEHS-P. Thus, a big number and highly significant positive correlations between school students' social emotional health and sub-scales of life satisfaction were identified.

We have calculated correlations of sub-scales of junior school students' social emotional health with microclimate perceived by school students (Table 8).

The school climate perceived by school students in the pre-pandemic period is positively and significantly related to all the sub-scales of social emotional health (Table 9), such as Gratitude ($r = .55, p < .01$), Optimism ($r = .55, p < .01$), Enthusiasm ($r = .63, p < .01$), Persistence ($r = .33, p < .01$), Pro-social behaviour ($r = .26, p < .05$) and General index of SEHS- P ($r = .61, p < .01$).

The comparison of school students' academic achievements and perceived school climate before the Covid-19 pandemic crisis (February 2020) and during the pandemic crisis (September – October 2020, re-test) was carried out. The differences in ranges were calculated according to the Wilcoxon criterion (Table 9).

No statistically significant differences were identified between the school microclimate perceived by school students in the period before the Covid-19 pandemic crisis and during the crisis period ($p > .05$). Thus, microclimate did not

Table 5

Comparison of school students' social emotional health (February 2020 and during the crisis from September to October 2020)

SEHS-P subscales differences (retest – test)	Negative ranks		Positive ranks		Z	p
	Mean rank	Sum of ranks	Mean rank	Sum of ranks		
Gratitude	35.86	1506.00	29.38	705.0	-2.574	.010
Optimism	33.50	1206.00	30.00	810.0	-1.368	.171
Zest	21.83	589.50	43.46	1825.5	-3.731	.000
Persistence	33.36	1101.00	39.15	1527.0	-1.201	.230
Pro-social behaviour	33.50	703.50	33.50	1507.5	-2.582	.010
General SEHS-P index	39.73	1549.50	39.27	1531.5	-.045	.964

Note. When $p < .05$, the difference is statistically significant.

Table 6

Comparison of school students' life satisfaction in February 2020 and September–October 2020

Scales of life satisfaction (retest – test)	Negative rank		Positive rank		Z	p
	Mean rank	Sum of ranks	Mean rank	Sum of ranks		
Friends	42.11	2400.00	30.15	603.00	-4.565	.000
Self	53.38	1921.50	31.10	1399.50	-1.231	.218
School	48.59	2478.00	28.10	843.00	-3.852	.000
Family	40.06	961.50	24.13	868.50	-0.343	.732
Living environment	44.00	3036.00	23.75	285.00	-6.479	.000
General index of life satisfaction	44.71	2817.00	33.45	609.00	-4.877	.000

Note. When $p < .05$, the difference is statistically significant

deteriorate after 8 months. On the opposite, it even improved slightly but the difference is statistically insignificant (Table 9).

Comparing academic achievements in the pre-pandemic period (February 2020) with the one during the Covid-19 pandemic crisis (re-retest, September-October 2020), a slight growth of academic achievements during the pandemic was observed (the sum of positive ranks was higher than that of negative ranks, $p < .001$).

The regression analysis was carried out to distinguish factors that predict social emotional health. It can be stated that in the pre-crisis period the indicators of life satisfaction predict school students' social emotional health in a reliable way. The variables of sub-scales *Self*, *Family*, *School* and *Living environment* predicted 65 % ($R^2 = .65$) of variables' distribution. The data of ANOVA criterion ($p < .01$) is homoscedastic, all *VIFs* are under 4 ($VIF < 4$) and the problem of multicollinearity was not revealed.

The following regression equation is received:

$$\text{Soc. Emotional health} = -26.02 + .794*\text{Self} + 1.35*\text{Family} + .41*\text{Living environment} + .38*\text{School}$$

After a comparison of standardized Beta coefficients, it can be stated that the variable of Family has the biggest influence (standardized Beta coefficient is .56, other standardized coefficients are lower). Thus, Family is the most important factor in social-emotional health. In our opinion, the role of family and parents plays a significant role in junior school students' learning and it tends to increase during the distance and mixed education introduced because of the Covid-19 pandemic.

Discussion and conclusion

This study investigated students' social emotional health, life satisfaction and perceived school climate within the sample of Lithuanian primary school students (4th and 5th graders; 10–12 years old).

The first task of the study was – to evaluate school students' social-emotional health and to compare it between the groups of boys and girls. Before interpreting our research results it should be noted that fourth graders learned in a usual way before the Covid-19 pandemic – they directly communicated with teachers and their peers and knew that there was always a person at school, who could help them at the right time. One important result of this study (before the Covid-19 pandemic) was that there are no gender differences in the general index of SEHS-P. This aligns with the study of Furlong et al. (2013) on the development of the SEHS-E, where all the sub-scales showed full factor invariance across genders.

Another task of the study was – to identify the relationships between school students' social-emotional health with life satisfaction and school microclimate perceived by school students and factors predicting school students' social-emotional health.

The obtained data according to the students' SEHS-P scales partly complies with the results of other research, e.g., gratitude was found to be in a strong relationship with other positive psychological constructs; school engagement, well-being in youth, persistence had a strong relationship with pro-social behavior (Bono & Froh, 2009; Froh et al., 2011; Peterson & Park, 2006; Wilkins et al., 2015).

Table 7
Correlations of school students' social emotional health (SEHS-P) and life satisfaction (February 2020)

Scales	Gratitude	Optimism	Zest	Persistence	Pro-social behaviour	General SEHS-P index
Friends	.301**	.232*	.228*	.069	.364**	.203
Self	.498**	.390**	.469**	.323**	.430**	.519**
School	.480**	.440**	.607**	.507**	.573**	.638**
Family	.499**	.388**	.487**	.344**	.387**	.475**
Living environment	.333**	.193	.440**	.100	.317**	.272*
General index of life satisfaction	.563**	.431**	.590**	.389**	.586**	.575**

* $p < .05$, ** $p < .01$.

Table 8
Correlation of school students' social emotional health with perceived school climate (before the Covid-19 pandemic crisis)

Scales	Gratitude	Optimism	Zest	Persistence	Pro-social behaviour	General SEHS-P index
Perceived school climate	.553**	.550**	.628**	.332**	.263*	.610**

* $p < .05$, ** $p < .01$.

Table 9
The differences in school students' academic achievements and perceived school climate (February 2020 and during the crisis September-October 2020) (differences in ranks according to the Wilcoxon criterion)

Indicators	Negative rank		Positive rank		Z	p
	Mean rank	Sum of ranks	Mean rank	Sum of ranks		
Academic achievements	18.50	55.50	18.50	610.50	-5.000	.000
School climate	31.54	1230.00	47.46	1851.00	-1.552	.121

Having calculated correlations of school students' social-emotional health (SEHS-P), life satisfaction, and perceived microclimate in the pre-pandemic period (February 2020), positive moderately strong, and strong significant correlations were identified. The regression analysis also disclosed that in the period before the Covid-19 pandemic the following indicators of life satisfaction predicted school students' social-emotional health in a reliable way: Self, Family, School, and Living environment (65%). The conducted correlation and regression analysis allow seeing SEHS-P as an appropriate research instrument for evaluating junior school students' social and emotional health and observing its dynamics.

However, no other research studies on correlations between junior school students' social-emotional health, life satisfaction, and perceived microclimate during the Covid-19 pandemic have been found. In the future, it would be meaningful to carry out a factor analysis of the investigated variables of school students as well as a qualitative analysis of the learning experience during the d-19 pandemic. We also think that ability to get access to the strengths of social-emotional health may it in more effective practice in predicting students' adaptation within different social contexts.

The results of school students' perceived microclimate, academic achievement and social-emotional health, and life satisfaction comply with the results of other researchers. For example, academic results could be detrimental to the promotion of social-emotional emotional competencies (Nunes El Achkar et al., 2019), positive emotions make up an

important factor for life satisfaction (Telef, 2020), and school climate is evaluated highly positively by students (Gajdosova & Majercakova Albertova, 2019).

Yet another most interesting goal of the study was - to compare school students' social-emotional health, life satisfaction, perceived school microclimate, and academic achievements in the period before and during the Covid-19 pandemic crisis.

After the Covid-19 pandemic crisis started (February-March 2020), school students' social-emotional health and safety slightly went down, which is in line with the results obtained during the research conducted by Petruitytė and Guogienė (2020) and other national research (Nuotolinis vaikų ugdymas pandemijos dėl Covid-19 metu: grėsmės bei galimybės ekosisteminiu požiūriu [Distance Education of Children During the COVID-19 Pandemic: Threats and Opportunities from an Ecosystem Perspective], 2020). However, following the data of our longitudinal research (re-test) conducted approximately 8 months after the Covid-19 pandemic crisis started, under quarantine conditions of distance/mixed learning in September-October 2020 and when the respondents-school students entered the fifth grade with the subject system, a certain improvement in school students' social-emotional health was identified. Compared to the beginning of the Covid-19 pandemic, school students are satisfied that their appropriate behavior is noticed by teachers, and the latter provide feedback. The students started liking school. Generalizing, it can be stated that in the fifth

grade better academic achievements and not deteriorated microclimate perceived by school students, i.e., interpersonal relations with teachers, a greater consensus with others, safer being at school, were observed during distance/mixed learning compared to the beginning of Covid-19 pandemic crisis. It can be concluded that the attitude of fifth graders to learning and school microclimate changed for the better and their social-emotional health and well-being partially improved.

Research limitations and guidelines for further research

Future research could include a larger and more representative sample of Lithuanian primary school students. Monitoring dynamics of 4th and 5th graders' social emotional health, microclimate and academic achievements should be continued. Observation of school microclimate perceived by school students in comparison with teachers' and parents' evaluation should be also conducted.

School psychologists will be able to apply the questionnaire version adapted for Lithuania in monitoring primary school students' social and emotional health. Identifying difficulties and risks of 4th and 5th graders could contribute to their faster adaptation in the period of transition from the 4th grade in primary school to the 5th grade in secondary school.

Following the obtained research results the following questions are raised: why did academic achievements of school students slightly improved during the distance/mixed learning, perceived microclimate did not deteriorate and social-emotional health slightly improved? What strategies and methods would be better applied to improve the social-emotional health of students and other participants in the educational process? It should also be noted that to strengthen the social and emotional health of students, it is also important to take care of the social and emotional health of their teachers. According to the authors, teachers with better social-emotional health and resilience can take good care of their students' social-emotional health.

References

- Aymerich, M., Cladellas, R., Castelló, A., Casas, F., & Cunill, M. (2021). The evolution of life satisfaction throughout childhood and adolescence: Differences in young people's evaluations according to age and gender. *Child Indicators Research*, 14(6), 2347–2369.
- Barkauskienė, R., & Zacharevičienė, A. (2019). Darbas su vaikais, turinčiais elgesio ir emocinių sunkumų bei sutrikimų [Working with children suffering from behavioural and emotional difficulties and disorders]. Nacionalinė Švietimo Agentūra. <https://sctelsiai.lt/ppt/darbassuvaikais.pdf>
- Breidokienė, R., Jusienė, R., Urbonas, V., Praninskienė, R., & Girdzijauskienė, S. (2021). Sedentary behavior among 6–14-year-old children during the COVID-19 lockdown and its relation to physical and mental health. *Healthcare*, 9, Article 756.
- Boman, P., Furlong, M. J., Shochet, I., Lillies, E., & Jones, C. (2009). Optimism and the school context. In M. J. Furlong, R. Gilman, & S. Huebner (Eds.), *Handbook of positive psychology in schools* (pp. 51–64). Routledge.
- Bono, G., & Froh, J. (2009). Gratitude in school: Benefit to students and schools. In M. Furlong, R. Gilman, & S. Huebner (Eds.), *Handbook of positive psychology in schools* (pp. 77–88). Routledge.
- Brissette, I., Scheier, M. F., & Carver, C. S. (2002). The role of optimism in social network development, coping, and psychological adjustment during a life transition. *Journal of Personality and Social Psychology*, 82, 102–111.
- Carver, S. C., Scheier, M. F., & Segerstrom, S. C. (2010). Optimism. *Clinical Psychology Review*, 30, 879–889.
- Coalition for Psychology in Schools and Education. (2019, December). *Report on the Teacher Needs Survey 2019*. American Psychological Association, Center for Psychology in Schools and Education.
- Compas, B. (1993). Promoting positive mental health in adolescence. In S. G. Millstein, A. C. Peterson, & E. O. Nightingale (Eds.), *Promoting the health of adolescents* (pp. 159–179). Oxford University Press.
- Daniunaite, I., Truskauskaite-Kuneviciene, I., Thoresen, S., Zelviene, P., & Kauzlauskas, E. (2021). Adolescents amid the COVID-19 pandemic: A prospective study of psychological functioning. *Child and Adolescents Psychiatry and Mental Health*, 15, Article 45.
- Diener, E. (1994). Assessing subjective well-being: Progress and opportunities. *Social Indicators Research*, 31(2), 103–157.
- Emmons, R. A. (2007). *Thanks! How the new science of gratitude can make you happier*. Houghton Mifflin.
- Feather, N. T. (1962). The study of persistence. *Psychological Bulletin*, 59, 94–115.
- Froh, J. J., Fan, J., Emmons, R. A., Bono, G., Huebner, E. S., & Watkins, P. (2011). Measuring gratitude in youth: Assessing the psychometric properties of adult gratitude scales in children and adolescents. *Psychological Assessment*, 23, 311–324.
- Furlong, M. J., You, S., Renshaw, T. L., O'Malley, M. D., & Rebelez, J. (2013). Preliminary development of the Positive Experiences at School Scale for elementary school students. *Child Indicators Research*, 6, 753–775.
- Furlong, M. J., You, S., Renshaw, T., Smith, D. C., & O'Malley, M. D. (2014). Preliminary development and validation of the Social Emotional Health Survey for secondary school students. *Social Indicators Research*, 117, 1011–1032.
- Gajdosova, E., & Majercakova Albertova, S. (2019) Validation of International School Climate Surveys in Slovakia. *American Journal of Applied Psychology*, 8(1), 14–18.
- Greenspoon, P. J., & Saklofske, D. H. (1997). Validity and reliability of the Multidimensional Students' Life Satisfaction Scale with Canadian children. *Journal of Psychoeducational Assessment*, 15(2), 138–155.
- Huebner, E. S. (1994). Preliminary development and validation of a Multidimensional Life Satisfaction Scale for children. *Psychological Assessment*, 6(2), 149–158.
- Huebner, E. S. (2001). *Manual for the Multidimensional Students' Life Satisfaction Scale*. University of South Carolina, Department of Psychology.

- Huebner, E. S., Gilman, R., & Laughlin, J. E. (1999). A multimethod investigation of the multidimensionality of children's well-being reports: Discriminant validity of life satisfaction and self-esteem. *Social Indicators Research, 46*(1), 1–22.
- Jusienė, R., Baukienė, E., & Breidokienė, R. (2021). Risk of behavioural and emotional disorders in Lithuanian school aged children as assessed with SDQ during the second lockdown due to COVID-19. *Psichologija, 64*, 77–85.
- Jusienė, R., Būdienė, V., Gintilienė, G., Girdzijauskienė, S., Stonkuvienė, I., Žekaitė, J., Adomaitytė Subačienė, I., Baukienė, E., Breidokienė, R., Buzaitytė-Kašalynienė, K., Dragūnevičius, K., Grabauskaitė, V., Praninskienė, R., Schoroškienė, V., Speičytė-Ruschhoff, E., & Urbonas, V. (2021). *Nuotolinis vaikų ugdymas pandemijos dėl Covid-19 metu: grėsmės bei galimybės ekosisteminio požiūriu* [Distance Education of Children During the COVID-19 Pandemic: Threats and Opportunities from an Ecosystem Perspective]. Vilniaus universiteto leidykla.
- Kalpokienė, V. (2005). Paauglių raida ir psichikos sutrikimai Ego psichologijos požiūriu [An attitude of ego psychology towards development and mental disorders of adolescents]. *Psichologija, 31*, 75–85.
- Kernagė, A., Marcikonytė, R., Juzonienė, J., Eljašovienė, M., & Maslauskienė, V. (2021). *COVID-19 pasekmių psichikos sveikatai mažinimas: Vertinimo ataskaita* [COVID-19 reducing mental health implications: Assessment report]. <https://www.valstybeskontrolė.lt/LT/Product/Download/4105>
- Kuhl, J. (1996). Who controls whom when “I control myself”? *Psychological Inquiry, 7*(1), 61–68.
- La Salle, T. P., & Meyers, J. P. (2014). *The Georgia Elementary School Climate Survey*. Georgia Department of Education.
- Lewinsohn, P., Redner, J., & Seeley, J. (1991). The relationship between life satisfaction and psychosocial variables: New perspectives. In F. Strack, M. Argyle, & N. Schwartz (Eds.), *Subjective well-being* (pp. 141–169). Plenum Press.
- Lucas, R. E., Diener, E., & Suh, E. (1996). Discriminant validity of well-being measures. *Journal of Personality and Social Psychology, 71*(3), 616–628.
- Nunes El Achkar, A. M., Romera Leme, A. B., Benevides Soares, A., & Mattar Yunes, M. A. (2019). Life satisfaction and academic performance of elementary school students. *Psico-USF, 24*(2), 323–335.
- Park, N., & Peterson, C. (2009). Strengths of character in schools. In R. Gilman, E. S. Huebner, & M. J. Furlong (Eds.), *Handbook of positive psychology in schools* (pp. 65–76). Routledge.
- Park, N., Peterson, C., & Seligman, M. E. P. (2004). Strengths of character and well-being. *Journal of Social and Clinical Psychology, 23*(5), 603–619.
- Pavot, W. G., Diener, E., Colvin, C. R., & Sandvik, E. (1991). Further validation of the Satisfaction with Life Scale: Evidence for the cross-method convergence of well-being measures. *Journal of Personality Assessment, 57*(1), 149–161.
- Peterson, C., & Park, N. (2006). Character strengths in organizations. *Journal of Organizational Behavior, 27*, 1149–1154.
- Peterson, C., Park, N., & Seligman, M. E. (2005). Orientations to happiness and life satisfaction: The full life versus the empty life. *Journal of Happiness Studies, 6*(1), 25–41.
- Petlák, E. (2006). *Klima škola a klima triedy* [School and classroom climate]. Iris.
- Petrulytė, A., & Guogienė, V. (2018). Adolescents' social emotional health and empathy in a Lithuanian sample. *International Journal of Psychology: Biopsychosocial Approach, 22*, 69–93.
- Petrulytė, A., & Guogienė, V. (2020). Social emotional health of younger school-age students in the context of (non) crisis. In E. Gajdošová, M. Madro, & M. Valihorová (Eds.), *Duševné zdravie v školách v kontexte kríz a krízovej intervencie: zborník príspevkov z online medzinárodnej vedeckej konferencie* [Psychological health in schools in the context of crisis and crisis intervention: Proceedings of the online conference] (pp. 9–22). IPV Inštitút priemyselnej výchovy.
- Proctor, C. L., Linley, P. A., & Maltby, J. (2009). Youth life satisfaction: A review of the literature. *Journal of Happiness Studies, 10*(5), 583–630.
- Prucha, J., Walterová, J., & Mareš, J. (1998). *Pedagogický slovník* [Pedagogical dictionary]. Portál.
- Sarason, S. D. (1997). Forward. In R. Weissberg, T. P. Gullotta, R. L. Hampton, B. A. Ryan, & G. R. Adams (Eds.), *Enhancing children's wellness: Vol. 8*. (pp. ix–xi).
- Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology, 4*, 219–247.
- Srivastava, S., McGonigal, K. M., Richards, J. M., Butler, E. A., & Gross, J. J. (2006). Optimism in close relationships: How seeing things in a positive light makes them so. *Journal of Personality and Social Psychology, 91*, 143–153.
- Telef, B. B. (2020). Hope and life satisfaction in elementary school students: Mediation role of affective experiences. *Journal of Positive School Psychology, 4*(2), 176–186.
- Terry, T., & Huebner, E. S. (1995). The relationship between self-concept and life satisfaction in children. *Social Indicators Research, 35*(1), 39–52.
- Thapa, A., Cohen, J., Guffey, S., & Higgins-D'Alessandro, A. (2013). A review of School Climate Research. *Review of Educational Research, 83*(3), 357–385.
- UNICEF (2020). *Annual report 2020*. Office of research - Innocenti.
- Valantinas, A. (2009). Socialinis emocinis ugdymas. Kas tai? Kuo gali mums padėti? [Social emotional education: What is it? How can it help us?]. *Švietimo problemos analizė, 10*(38). <https://www.nsa.smm.lt/wp-content/uploads/2020/07/Socialinis-emocinis-ugdymas.-Kas-tai-Kuo-gali-mums-padeti-2009-gruodis.pdf>
- Veenhoven, R., Ehrhardt, J., Ho, M. S. D., & de Vries, A. (1993). *Happiness in nations: Subjective appreciation of life in 56 nations 1946–1992*. Erasmus University Rotterdam.

- Volet, S. F. (1997). Cognitive and affective variables in academic learning: The significance of direction and effort in students' goals. *Learning and Instruction*, 7, 235–254.
- Wang, C., La Salle, T., Wu, C., Do, K. A., & Sullivan, K. E. (2018). School climate and parental involvement buffer the risk of peer victimization on suicidal thoughts and behaviors among Asian American middle school students. *Asian American Journal of Psychology*, 9(4), 296–307.
- Weber, M., & Ruch, W. (2012). The role of a good character in 12-year-old school students: Do character strengths matter in the classroom? *Child Indicators Research*, 5, 317–334.
- Wilkins, B., Boman, P., & Mergler, A. (2015). Positive psychological strengths and school engagement in primary school students. *Cogent Education*, 2(1), Article 1095680.
- Žukauskienė, R., Malinauskienė, O., & Erentaitė, R. (2011). Tėvų auklėjimo stiliaus ir emocinio intelekto sąsajos su vyresniųjų paauglių saviveiksmingumu bei saviverte pagal lytį [Effects of parenting styles and emotional intelligence on self-efficacy and self-esteem in late adolescence: Gender differences]. *Psichologija*, 44, 22–41.