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KOOLIELUS TEKKIVATE EMOTSIOONIDE TUGEVUS JA VALENTS

STRENGTH AND VALENCE OF SCHOOL EMOTIONS

Master's thesis

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Lühikokkuvõte

Käesoleva uuringu eesmärgiks on uurida, kuidas õpilased hindavad oma emotsioone erinevates kontekstides; hinnata nende tunnete valentsi (negatiivsust või positiivsust) ja nende tugevust. Samuti uuriti õpilaste soo, vanuse erinevused ja erinevused õpetajate ja õpilaste arvamuste vahel õpilaste emotsioonide kohta. Selles uuringus osales valimis 107 õpilast (66 naist ja 41 meest, keskmine vanus $14,94 \pm 2,0$ aastat) ning 44 õpetajat (34 naist ja 10 meest, keskmine vanus $45,16 \pm 12,18$ aastat) erinevatest Ida-Virumaa koolidest. Hinnangud saadi kahe erineva küsimustikku abil, üks õpilastele ja teine õpetajatele. Tulemused näitavad, et üldiselt tüdrukute hinnangud on valentsilt ekstreemsemad ja tugevamad kui poistel. Noorematel on tunded äärmuslikumad ja tugevama intensiivsusega. Õpetajate hinnangud langevad väga hästi kokku õpilaste hinnangutega valentsi suuna osas, selle erinevusega, et õpetajad ülehindavad emotsioonide intensiivsust ja valentsi suurust. Tulemused näitasid samuti, et õpetajad ei hinda adekvaatselt õpilaste meeleolu halvenemist pärast koolipäeva. Töö kinnitab vajadust kasutada lisaks enesehinnangutele ka teiste antud hinnanguid.

Abstract

The aim of this study is to investigate how students estimate their emotions in different contexts, to assess these emotions` valence (negativity or positivity) and their strength. Also were studied students sex, age differences and differences in teachers` and students` opinion about students` emotions. In this study participated 107 students (66 women and 41 men with mean age 14.94 ± 2.0 years) and 44 teachers (34 women and 10 men with mean age 45.16 ± 12.18 years) from different schools of Ida-Viru Country. Estimates were gotten by two different questionnaires, the one for students and the second for teachers. Results show that in common girls` estimations are more extreme and stronger than boys give. Younger teenagers` emotions are more drastic and with the stronger intensity. Teachers value the students` emotions very well in the valence direction with the exception that they overestimate the emotions` intensity and the value of the valence. The results showed also, that teachers also do not estimate adequately the worsening of students` mood after the school day. The work confirms the need to use in addition to self-esteem also the other estimations.

Introduction

The goal of this thesis is to study emotions of the students in different school and life contexts, their valence and strength. Since the school age is a turbulent period I am also interested in age differences in emotional expression to understand in what direction emotional life is developing. Because boys and girls are different it is also relevant to register possible sex differences in experiencing and expression of emotions. It is also possible that young people have not mastered yet in the way how they analyse and report their emotional life. For this reason we need to use, in addition to students' self-reports, also the teachers' assessment of students' emotions. It is expected that there are some differences in students' and teachers' assessments of the emotions in the same context.

There are several relatively well-established regularities showed in Laidra et al. (2006) work that subjective evaluations of the students' personality by the pupils do not match with the evaluations of students' emotions by teachers. Some interesting researches are linked with gender differences in emotions (Izard, 1991, Else-Quest et al., 2012).

The problem is important, because it provides additional information about emotions that students have during the learning process and about students' reactions to a variety of school events. The problem is topical and has an operational advantage, because almost everyone goes through the learning stages of their life and participates in various school emotional situations. According with Izard (2002) work, conception of emotion is inherently adoptive and motivational and emotions play an important role in children's socioemotional competence, in the emergence of behaviour problems and in psychopathology.

The opinions of different groups of people (students and teachers) about students' emotions in different situations and about the strength of these emotions are very interesting. Stereotypes play an important role in people's life, namely, they are often a basis of people's actions and the behaviour.

Some conceptual problems

According to one of the most influential theories emotions are expected to arise from our evaluations (appraisals) of events that cause specific reactions in different people (Scherer, Shorr, & Johnstone, 2001). Emotion is not just appraisal but a complex multifaceted experience including several components: subjective feelings (feeling good or bad), physiological arousal (sweating, increase in heart rate etc.), expressive behaviours (laughing, facial expressions etc.), and action tendencies (aggression, avoidance etc.). According with Russell work (2003) core affect is that neurophysiological state consciously accessible as the simplest raw feelings evident in moods and emotions. It is similar to what is called an affect,

a mood, and what is commonly called a feeling. It is a single integral of two dimensions. The horizontal dimension, pleasure– displeasure, ranges from one extreme (e.g., agony) through a neutral point (adaptation level) to its opposite extreme (e.g., ecstasy). The vertical dimension, arousal, ranges from sleep, then drowsiness, through various stages of alertness to frenetic excitement. The feeling is one's sense of mobilization and energy (Russell, 2003).

Beside in the broad sense of appraisal emotions are also used in a more narrow sense as a short-term experience, the distinct human reaction to a particular situation. An emotional response to an external stimulus in its form and the content is determined not by the own stimulus, but by assessment of its significance for the individual, or by factors of internal directionality. So openness and closeness of the relationships within which the conflicts occur moderate patterns of such adolescents` conflicts and emotions (Jensen - Campbell, Graziano, 2000). Social nature of emotions and feelings can be explained with this, that they are "socially" conditioned, and inextricably linked to cognitive function, and as all intellectual processes are accompanied by certain emotional and sensory reactions, that are purely subjective. The social function of human emotions is the subject of Niedenthal and Brauer work (2012). As a holistic mental process, emotions and feelings are the indivisible unity that is having the outward expression in the form of physiological reactions and the internal, as subjective experiences.

Sex differences in emotions

There are many stereotypes in the area of the sex differences. So women are expected, that they generally react more likely with sadness to the events with negative emotionality and more often cry and describe their personal events with the sadness. The men are expected to respond to events with negative emotionality more with calmness and they tend to describe negative personal events calmly (Hess et al, 2000). The cultural and sex differences exist in some degree due to the cultural differences in the socialization of the fear. American boy, who shows the fear, rather than a girl, cause the disapproval of others. As in the case with other basic emotions, the society regulates (or seeks to regulate) the emotion of the fear, causing in the individual some other emotion (Izard, 1991).

Gender differences exist in anxiety, disordered eating, suicidality, depression, academic achievement, temperament and self-esteem. Women have long been stereotyped as generally more emotional than men. Women are stereotyped as experiencing more distress, fear, sadness, shyness, happiness, love, and sympathy than men. Men are stereotyped as experiencing more anger than women. It is believed that women experience more embarrassment, shame, and guilt, but men experience more pride. Results of Else-Quest et al.

(2012) study showed that guilt and shame displayed small gender differences and women experience more guilt and shame. Pride and embarrassment showed gender similarities. Gender differences in domains such as the body, sex, and food tended to be larger than differences in SCE (the self-conscious emotions) of other domains. These results demonstrate that some stereotypes about women's greater emotionality are enough inaccurate (Else-Quest et al., 2012). A plausible explanation of origins of gender differences in SCE experience may be that men and women differ in some small way as young children and that these small gender differences are amplified by gender stereotyping and gender role socialization. Brody's theory of gender differences in emotion maintains that early gender differences in child temperament elicit different socialization patterns of girls and boys, which magnify in turn preexisting gender differences in trait emotion. But much of Brody's theory involves rather the expression of emotion, than the experience. For example, girls are encouraged to express fully their emotions (with the exceptions of pride and anger), and pride—which demonstrates higher status or power—is encouraged in the male child, who is encouraged to keep his emotions in control and be assertive (Else-Quest et al., 2012). Also it was found that women compared with men have fewer bonds between the desire for success and real achievements but not always. According to High-land, Curtis and Mason, sex differences in the fear of the success are found in cases where women in their behaviour are guided by the motive of avoiding "unfeminine" in terms of the prevailing cultural attitudes and behaviours (Izard, 1991).

Some studies have examined sex differences in the relationship school class context, school problems and psychological distress. Data a total of 6,379 pupils were obtained from the Young-HUNT3 study and analyzed in Dalen (2014) study. The results were that the amount of variation in psychological distress attributable to school class context was higher among girls (4.5 %) compared to boys (1.0 %). Individual school problems were associated for both genders with psychological distress, but the effects were greater for girls. One of this study results is that researchers should account for possible gender differences when examining the association between classroom environment and psychological distress (Dalen, 2014).

Environment and parents influence on emotions

Some studies related to school children emotion shows that parents' reports of their children's emotion regulation predicted behaviour problems that were reported by teachers. Children's own reports of their emotional bonds with parents were less predictive of behaviour problems and emotion regulation (Kim, Page, 2013). Also other work revealed that

emotion regulation and the expression were indeed associated with children's reported school adjustment, with the strongest associations with children's emotion dysregulation and their negative emotion expression. Many of these associations were different for girls and boys (Herndon, 2013). At the same time the role of teacher training initiatives aimed at improving emotional, behavioural and social outcomes of primary school aged children through improved classroom management is limited. Study result shows that only few teacher training initiatives have showed desired significant effects (Whear, et al., 2013).

A new study linked with parents' negative relations impact on adolescents with major depressive disorder (Sheeber, et al., 2012). The study related to the relations between perceived emotional support from peers and parents, self-concept and social functioning of school-aged children globally revealed that a positive self-concept, if combined with high emotional support from peers or from parents, is related to a better social functioning both as in terms of peer acceptance so in prosocial behaviours (Inguglia, Inguglia, Coco, 2013).

Age-related and intellectual differences in emotions

Raccanello and others have investigated students' representation of achievement emotions in context-specific situations in terms of settings and as a function of grade level. Results have revealed higher intensity of positive emotions for younger students, and for older students the opposite pattern (Raccanello, Brondino, Bernardi, 2013). In according to socioemotional selectivity theory when time in people life is perceived as open-ended, knowledge-related social goals are prioritized. In contrast when time is perceived as limited, emotional goals assume primacy. So younger and older people have different social goals related to their age (Carstensen, Isaacowitz, Charles, 1999).

The ability to perceive emotions is very important for interpersonal communication, because it allows to understand better the signals that sent by other people and to adjust own emotions during interaction. The recent study revealed the tendency, where for children with mild intellectual disability it is more difficult to perceive the emotions of fear, anger, sadness and happiness from the depicted social situations, compared to the same age children of the regular development. Such children experienced difficulties in the perceiving an emotion from a situation are related both as their interpretation of the situation and so the ability to perceive the emotion (Ališauskaitė, Butkienė, 2013). In the other study were investigated the children with emotional and behavioral difficulties (EBD) and the children also with developmental disorders. There was effect for sex, where females presented higher levels of negative emotional intensity (e.g., anger, aggression, frustration) comparing with males. Also

was revealed that the EBD-only group experienced greater negative peer interactions than the EBD with developmental disorder group (Lynn, Carroll, Houghton, Cobham, 2013).

Impact of life-events on emotions

In Costello work the authors examined exposure to potentially traumatic events in childhood, adolescence, and the average exposure of vulnerability. Analyses were based on data for the first four years wave of a longitudinal study of the population of young people in Western North Carolina. In this population, a quarter of the sample participants experienced at least one of the large magnitude events in their lives. The most frequently reported events of high magnitude were: the death of a loved one (parent, caretaker, brother or best friend), being witness of traumatic events, experiencing of traumatic events, and exposing sexual abuse. More than one in four children reported about having one or more small- magnitude events during the three months preceding the interview. The events that occurred most frequently, were: moving to another place of residence, transfer to another school, the break with boy or girl and significant deteriorating of family financial condition or in living standards. Girls also reported more likely than boys about allocation from parents or breakup of the best friends or boyfriend (Costello, et al., 2002).

Other study was also devoted to students, school life and emotions. In Evsikova (2008) work were defined the important experiences for students in life school, their content and causes. In common, it included basic subjects of family and school relationships (parents, teachers, etc.), the basic phenomena of school life (good and bad appraisal, tests, etc.), events of family life (birthday), positive and negative feelings, various states, and so on. Thus established concepts were divided into nine major thematic groups, conventionally named as "spheres of relations". There were such spheres as "family" (mom , family, dad, my birthday, sister, brother), "school" (my school, a good score, bad appraisal, teacher, test, classmates, study, books), "positive experiences" (joy , kindness, holiday, candy), "negative feelings" (fear , resentment , guilt), "my mood states"(sleep, rest , fatigue, illness), "game" (game, favourite toy), "friends (friends), "future time" (perspective), "I myself " (I myself) (Евсикова, 2008).

Researches related on school children's emotions and stereotypes are quite a few. There are available differences in younger and older school children emotion. There is little information available about teachers` opinion related to students` emotions. Investigations show that there are sex differences in school children` emotion and emotion stereotypes. Some investigations` results demonstrate that some stereotypes about women`s greater emotionality are enough inaccurate.

Goals on this study

Hypothesis: the subjective evaluation of the students ' emotions by the pupils do not match with the evaluation of students' emotions in the same context by the teachers. Girls are generally more emotional than men, especially in negative events. Younger students have higher intensity of positive emotions.

The purpose of this work is to study the emotions of the students, their negativity, positivity and strength, in different school and contexts, to study the teachers` assessment of students' emotions and to test whether there is a difference in students' and teachers' assessments of the emotions in the same context. Also it is planned to investigate age-related and sex differences.

Methods

Participants

The study was carried out on the basis of Ida-Viru County schools. The sample of 107 students (66 women and 41 men) and 44 teachers (34 women and 10 men with the mean age $M = 45.16 \pm 12.18$ years) was used. Pupils study in grades of school from 4 to 12 with mean ($M = 8.67 \pm 2.04$). The students were between 9 and 10 years of age with the mean age $M = 14.94 \pm 2.0$ years. Participants were reached through personal contacts of the author (acquaintances, friends, colleagues and their acquaintances etc.)

Measures

Estimations of emotions were gotten by questionnaires. Questionnaires for students and teachers are shown in Appendices 1 and 2. To prepare the events list for the assessment a list of important events and a rating scale, that was worked out by Holms and Rahe (1967), a list of traumatic events in childhood (Costello, et al., 2002) and students' emotional and personal development differences (Evsikova, 2008) were used. Extremely traumatic events, such as parents death, sexual violence, disaster were not used in questionnaires, because feeling in these situation are clear and extremely negative and to avoid negative feelings during the time of questionnaires filling. The events were divided on the sections: home, school, friends, personal. The study aim was to find out, what kind of feelings pupil experience in a variety of typical situations that he/her encounters in school life. The first questionnaire was offered to pupil to estimate his/her feelings in a typical situation, or to imagine what kind of feelings he/she would experience if he/she had never encountered such a situation before.

According to theory of core affect (Russell, 2003) participants estimated separately valence (from strongly positive to strongly negative) of emotions elicited by a typical life or school event and also a strength of these emotions irrespective of their valence. To assess feelings was offered a visual analog scale, which is the horizontal line, divided into 10 sectors (from -5 to +5 points). The valence was indicated characterized by verbal (negative or positive) and stylized with sad face or smiling face icon. Additionally was offered an analog scale for the assessment of feeling strength (FS) (from 0 to 5). It was offered to the pupil to mark the point on the scale (cross), that best fits his/her feeling assessment.

The “mood ” and “feelings“ scales principles, which were used in students' emotions and states express assessment of the Laskova (2010) work, were used to prepare a visual analog scale. Different students will experience a variety of emotions during life events. Typically at the same time several emotions are experienced at once, they are often ambivalent, for example, joy and sadness, anger and shame, anger and anguish, pity and disgust and so on. There is the data about the presence of sadness and happiness simultaneously in feelings in the Kööts, Realo, Allik, (2012) work. The contents of the event are also often ambivalent. Each person feels and reacts usually in the situation with a complex of various emotions. Because of this it was decided to assess students' feelings as the total emotional condition that occurs as a result of the event. The valence of feelings in this case or “bad/good mood” is equal to the complex of emotions, which is negative/positive in total. If feelings are more negative/positive then “mood” is worse/better (-1 to -5/ +1 to +5). The intensity of the complex of emotions (feelings strength) is also reflected. The negative or positive feelings here, however, are not a moral assessment of positivity or negativity rating.

The same questionnaire was asked to respond by teachers. Teachers were asked to assess the feelings of the students in a typical situation, or to imagine what kind of feelings they would have if they had never encountered such a situation before, or teacher has not dealt with this situation before. Some questions relate to teacher own mood.

Results were statistically analyzed with the IBM SPSS 22 program.

Results

Students` ratings

Majority of students who participated in this study believe that their mood dropped after the school day. Sixty three (59%) from 107 students reported that their mood has declined by the end of the school day. About 22 % or 24 students had higher, than average worsening of mood, that agrees with data of Laskova (2010). An excitement before school

experience 74 of 107 students (69%). Above average level of excitement to the school have 29 students (27 %). Students estimated their usual mood with Mean (*SD*) = 2,83 (1,75), their usual mood after school with Mean (*SD*) = 1,70 (2,50) and the magnitude of their excitement before leaving the house for school with Mean (*SD*) = 1,19(1,20). At the same time, only 10 from 44 or 23 % teachers believe that children mood worsens after school. Their own mood worsening after school was demonstrated by 13 teachers out of 44 (30%).

Table 1 demonstrates students' ratings on 36 items describing different life and school events. Items were ranked according to their valence from the most positive to the most negative. The item evoking the most positive emotions was "Getting as a gift the long-desired thing" and the item which elicited the most negative reaction was "Serious illness of a loved one." Differences between boys and girls were small. Only significant difference ($d = -.533$) was on the most positively evaluated item where girls were more happy than boys of getting the long-desired thing.

According to the core affect concept at the heart of emotion, mood, and any other emotionally charged event are states experienced as simply feeling good or bad, energized or enervated (Russell, 2003). Figure 1 show the core affects representation of these 36 life and school events. A general rule seems to be that extreme emotions, either positive or negative, are accompanied by the increase of their intensity. In other words, extremely positive and extremely negative events are also perceived as the most intensive.

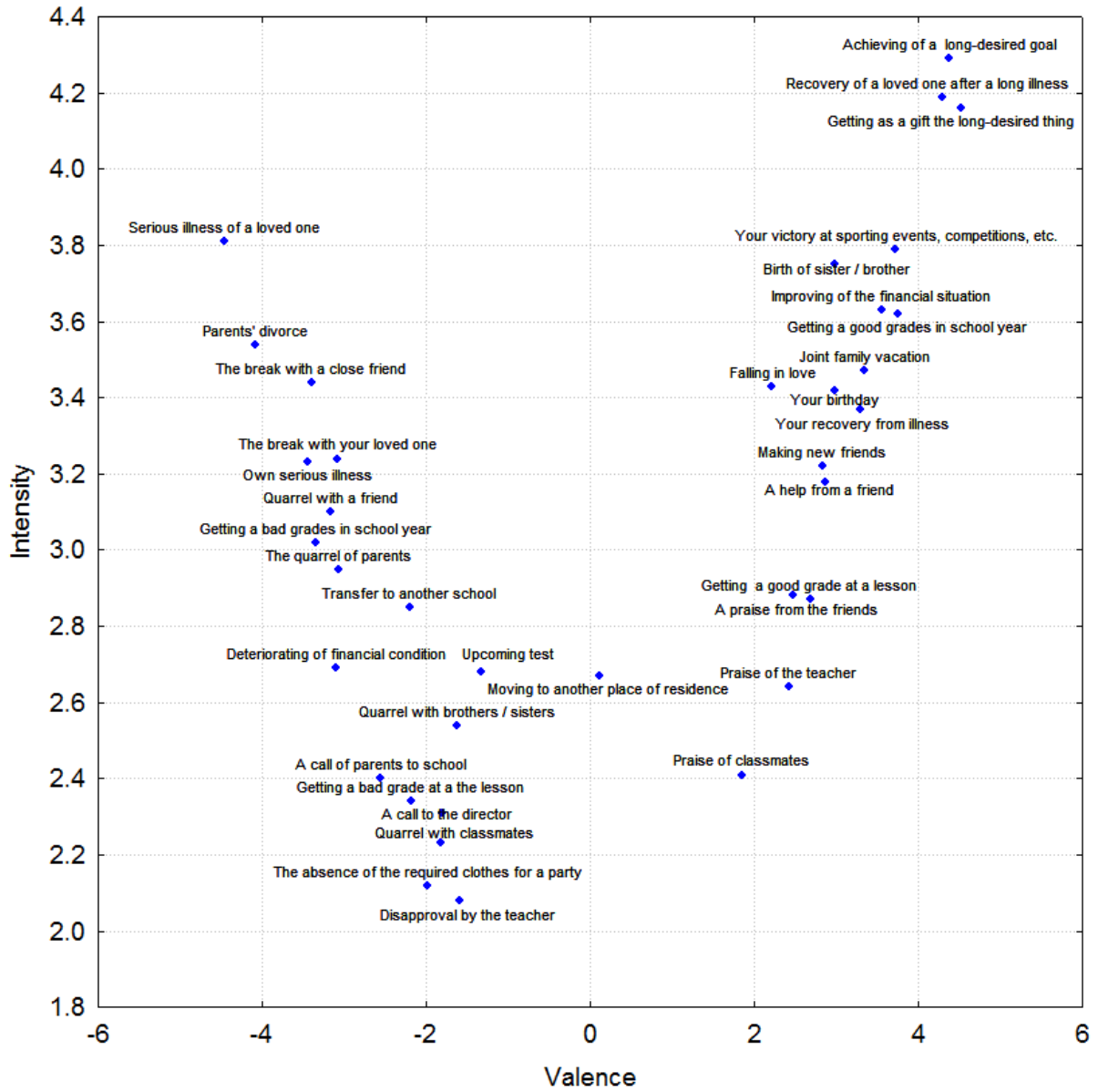


Figure 1. Core affect representation of 36 life and school events for student ratings

Table 1. *Students' mean ratings of valence and intensity of 36 situations and life events.*

Item	Valence				Intensity			
	Total	Boys	Girls	Cohen's d	Total	Boys	Girls	Cohen's d
Getting as a gift the long-desired thing	4.52	4.22(1.21)	4.71(0.63)	-0.533*	4.16	4.07(1.03)	4.21(0.92)	-0.144
Achieving of a long-desired goal	4.38	4.17(0.97)	4.52(1.08)	-0.341	4.29	4.20(1.08)	4.35(1.09)	-0.138
Recovery of a loved one after a long illness	4.30	4.17(1.18)	4.38(1.00)	-0.193	4.19	3.98(1.13)	4.32(1.13)	-0.301
Getting a good grades in school year	3.76	3.37(1.74)	4.00(1.50)	-0.389	3.62	3.34(1.64)	3.79(1.35)	-0.301
Your victory at sporting events, competitions, etc.	3.73	3.42(2.00)	3.92(1.63)	-0.275	3.79	3.54(1.66)	3.96(1.16)	-0.298
Improving of the financial situation	3.55	3.44(1.27)	3.62(1.42)	-0.134	3.63	3.66(1.24)	3.61(1.35)	0.039
Joint family vacation	3.35	3.02(1.98)	3.55(1.75)	-0.284	3.47	3.00(1.41)	3.76(1.18)	-0.587
Your recovery from illness	3.30	2.95(1.84)	3.52(1.73)	-0.319	3.37	3.07(1.40)	3.56(1.45)	-0.344
Birth of sister / brother	2.99	2.49(2.67)	3.30(2.40)	-0.320	3.75	3.44(1.36)	3.94(1.19)	-0.392
Your birthday	2.99	3.00(2.07)	2.99(2.00)	0.005	3.42	3.39(1.64)	3.44(1.37)	-0.033
A help from a friend	2.87	3.15(1.46)	2.70(1.81)	0.275	3.18	3.07(1.49)	3.24(1.25)	-0.124
Making new friends	2.83	2.56(1.83)	3.00(1.71)	-0.249	3.22	2.95(1.52)	3.38(1.16)	-0.321
Getting a good grade at a lesson	2.68	2.44(2.03)	2.83(1.64)	-0.213	2.87	2.76(1.39)	2.94(1.29)	-0.134
A praise from the friends	2.47	2.56(1.78)	2.41(1.53)	0.091	2.88	2.81(1.65)	2.92(1.28)	-0.075
Praise of the teacher	2.42	2.02(2.26)	2.67(1.62)	-0.335	2.64	2.78(1.64)	2.55(1.35)	0.154
Falling in love	2.22	2.22(2.68)	2.21(2.84)	0.004	3.43	3.15(1.61)	3.61(1.50)	-0.296
Praise of classmates	1.85	1.83(1.99)	1.86(1.63)	-0.017	2.41	2.32(1.47)	2.47(1.37)	-0.106
Moving to another place of residence	0.11	-0.15(2.56)	0.27(2.63)	-0.162	2.67	2.34(1.26)	2.88(1.46)	-0.397
Upcoming test	-1.33	-0.66(2.29)	-1.74(2.01)	0.502	2.68	2.29(1.62)	2.92(1.44)	-0.412
Disapproval by the teacher	-1.59	-1.42(1.75)	-1.70(1.68)	0.163	2.08	2.05(1.48)	2.09(1.39)	-0.028
Quarrel with brothers / sisters	-1.62	-1.59(2.01)	-1.64(2.36)	0.023	2.54	2.56(1.52)	2.53(1.44)	0.020
A call to the director	-1.80	-0.90(2.90)	-2.36(2.26)	0.566	2.31	1.93(1.49)	2.55(1.60)	-0.401
Quarrel with classmates	-1.82	-2.17(1.92)	-1.61(1.99)	-0.286	2.23	2.39(1.51)	2.14(1.32)	0.177
The absence of the required clothes for a party	-1.98	-1.54(2.05)	-2.26(1.84)	0.370	2.12	1.90(1.73)	2.26(1.45)	-0.226

Students` emotions in school life

Getting a bad grade at a the lesson	-2.18	-2.02(1.93)	-2.27(1.91)	0.13	2.34	2.20(1.54)	2.42(1.38)	-0.151
Transfer to another school	-2.20	-2.34(1.91)	-2.11(2.29)	-0.11	2.85	2.39(1.50)	3.14(1.48)	-0.503
A call of parents to school	-2.55	-2.37(2.24)	-2.67(2.11)	0.138	2.40	2.39(1.72)	2.41(1.56)	-0.012
The quarrel of parents	-3.06	-2.88(1.89)	-3.17(1.88)	0.154	2.95	2.83(1.41)	3.03(1.40)	-0.142
The break with your loved one	-3.08	-3.02(2.09)	-3.12(2.00)	0.049	3.24	3.20(1.58)	3.27(1.64)	-0.043
Deteriorating of financial condition	-3.09	-3.10(1.70)	-3.09(2.06)	-0.005	2.69	2.73(1.18)	2.67(1.35)	0.047
Quarrel with a friend	-3.16	-3.10(1.26)	-3.20(1.67)	0.068	3.10	3.05(1.34)	3.14(1.38)	-0.066
Getting a bad grades in school year	-3.34	-3.42(1.55)	-3.29(2.25)	-0.068	3.02	2.76(1.53)	3.18(1.59)	-0.269
The break with a close friend	-3.40	-3.02(2.09)	-3.64(1.96)	0.306	3.44	3.44(1.38)	3.44(1.63)	0.000
Own serious illness	-3.45	-3.29(1.63)	-3.55(1.91)	0.147	3.23	3.02(1.49)	3.36(1.32)	-0.242
Parents' divorce	-4.08	-4.27(1.16)	-3.97(1.53)	-0.223	3.54	3.54(1.66)	3.55(1.73)	-0.006
Serious illness of a loved one	-4.46	-4.24(0.94)	-4.59(1.15)	0.335	3.81	3.76(1.24)	3.85(1.52)	-0.065

Note: * = significant at the level $p < 0.05$; Cohen`s d = the standardized mean difference between boys and girls.

Sex differences

As it is shown in the last column of Table 1 most of the Cohen's d-values are negative (30 out of 36). This means that girls have stronger feelings, both positive and negative, than boys. In general, the evaluation of the emotional content of different life and school events was extremely similar among boys and girls. If to compute correlation between 36 mean values of valence rating by boys and girls then the Pearson correlation is very close to one: $r(34) = .99, p < .0001$. In other words, there are only negligible differences between boys and girls what concern their perception of emotional content.

Although girls estimate their usual mood (2,94(1,65)) as more positive than the boys 2,66(1,91), the boys estimate their usual mood after school (2,00(2,19)) as more positive than the girls (1,52(2,67)). It can be if, for example, the girls cumulate more negative emotions during their school day. The magnitude of students excitement before leaving the house for school is more for girls' results (1,30(1,28)), than for boys' (1,00(1,05)). Independent Samples Test showed that Levene's Sig is less than 0.05 in only 7 cases and the only one case is statistically significant: Getting as a gift the long-desired thing, valence (for boys $M(SD)=4,22(1,21)$, for girls $M(SD)=4,71(0,63)$, $F=11,63, p=0,02$).

Age differences

To investigate are there any age-related differences available in the estimations of emotions, students' data were divided in 3 groups of teenagers: the first group – ages from 13 to 15 (54 students, 50,5 % of the total), the second group- ages from 16 to 18 (41 students, 38,3 % of the total), the third group - the others (12 students, 11,2 %). In the first group were 20 boys and 34 girls, and in the second group were 17 boys and 24 girls. It was compared results of the first and the second groups.

As trend younger teenagers' emotions are more positive in case of positive polarity or more negative in case of negative polarity or stronger in most of cases (49 from 72). Older teenagers' emotions are more positive or more negative or stronger than younger's ones in 13 cases of 72. Younger teenagers' and older teenagers' emotions are almost equal in 9 cases of 72 and in one cases „Moving to another place of residence” we have opposite polarity emotions (Figure 4). These results are in accordance with opinion that younger teenagers are more emotional than older ones. These results show that younger teenagers have both more positive and more negative polarity emotions.

Younger teenagers' positive polarity of emotion more than older in 17 cases vs. older teenagers' positive polarity never more than younger have. Also younger estimate more positive their usual mood (2,98(1,64)) and their usual mood after school (2,15(2,24)). Older

teenagers` usual mood (2,41(1,87)) lower and usual mood after school is much lower (0,88(2,76)) than younger teenagers`. Olders estimate the magnitude of their excitement before leaving the house for school as higher (1,29(1,35)), than youngsters`(1,17(1,09)).

Younger teenagers` negative polarity of emotion more than olders`one in 16 cases vs. older teenagers` negative polarity more in 2 case. It means that younger teenagers also more often have more negative emotions in their life. Because of more negative emotions younger teenagers may have more depression episodes in their life, that often have not been taken in account. For older teenagers more important role begins to play relations with loved one and close friend.

The only 7 cases are statistically significant. So younger teenagers statistically significantly have more positive emotions in cases of Joint family vocations valence, ($F=6,15, p=0,003$); Recovery of a loved one after a long illness, valence, ($F=4,57, p=0,010$); Your birthday, valence, ($F=10,85, p=0,000$); Getting a good grades in school year valence, ($F=19,60, p=0,002$) and Your victory at sporting events, competitions, etc. ., valence, ($F=6,75, p=0,021$). Also younger have statistically significantly more intensity of emotions in case of Getting a good grades in school year, intensity ($F=6,09, p=0,033$) and the older teenagers have more intensity in case The break with your loved one, intensity ($F=6,39, p=0,048$) (Figure 2). Mostly differences between younger teenagers` and older ones` results should be considered as trend for younger teenagers to have more positive and more negative emotions and with more strength.

Age differences are shown in Figure 2 where items were ranked according to their Cohen d value. Positive value means that younger students evaluated this event more positive than older ones. Conversely, negative d values indicate that older students looked at these events more positively than younger students. Younger students were much happier than older students about their birthday and improvement in financial situation. With age older student become more indifferent about calls of parent to school or to director and also towards transfer from one school to another.

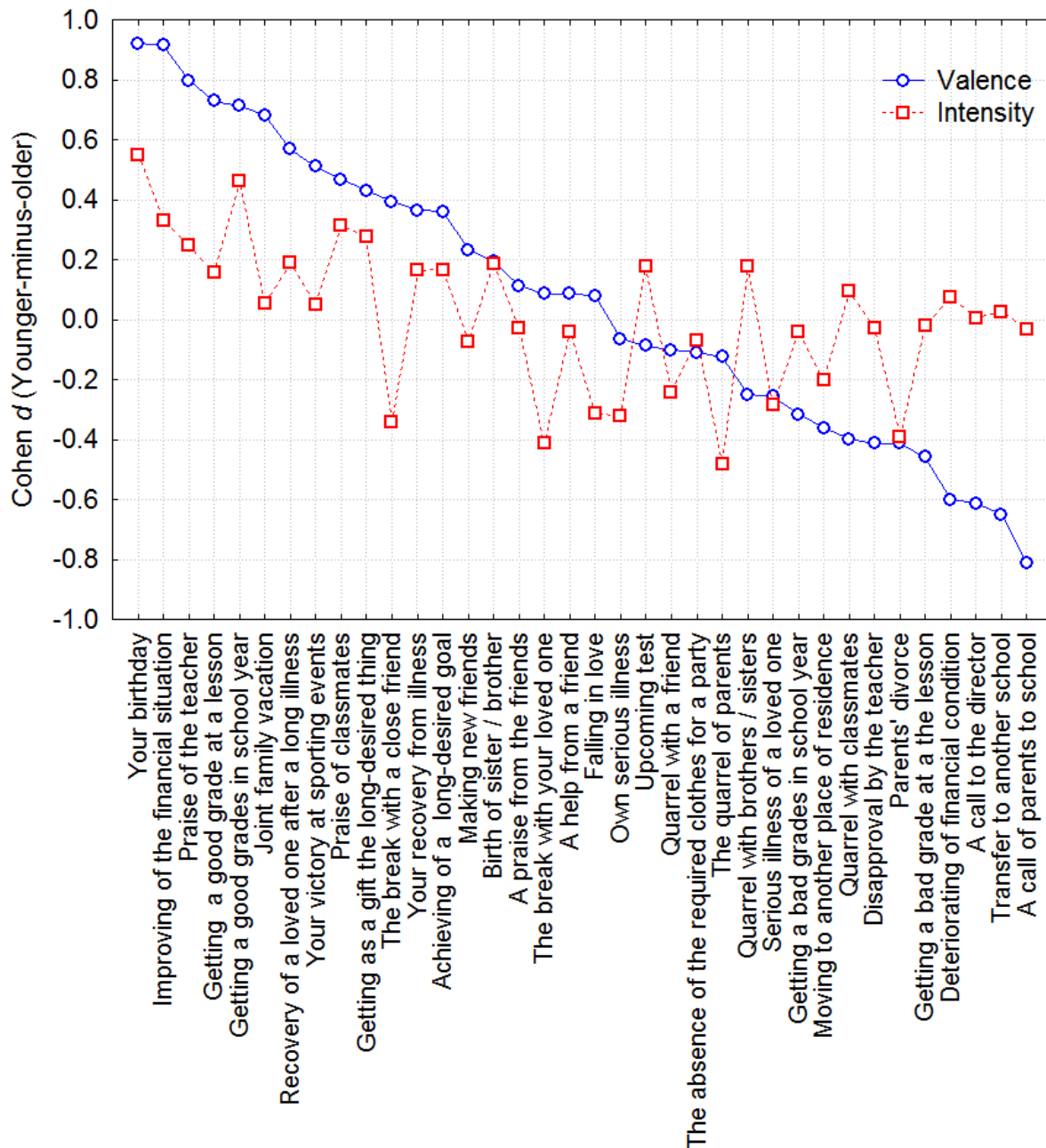
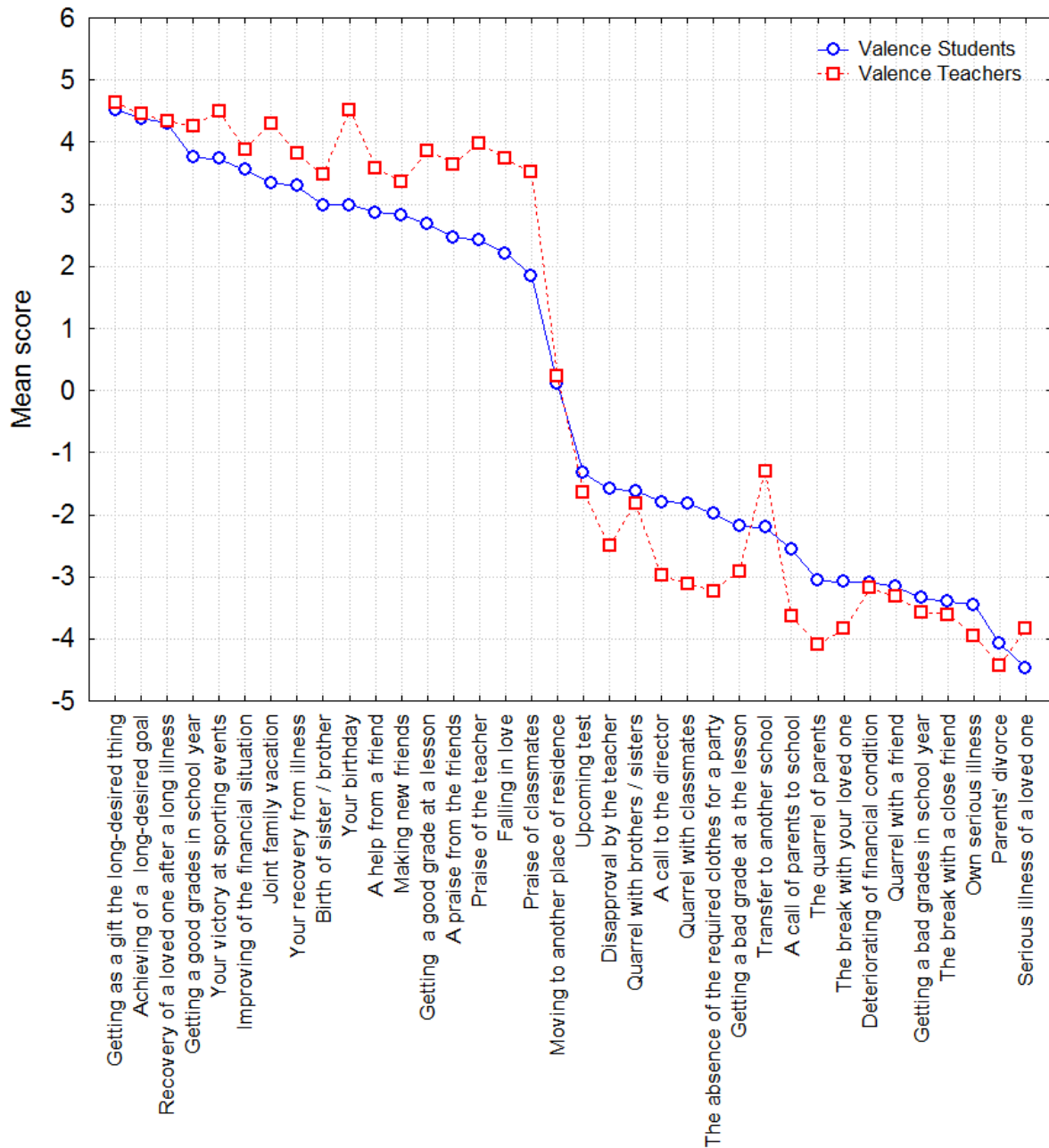


Figure 2. Standardized mean difference in valence and intensity of emotions between younger and older students.

Teachers` versus students` ratings

Next I compared students` and teachers` ratings of the same life and school situations. Across all 36 situations ratings of valence were highly correlated: $r(34) = .98, p < .001$. Figure 3 shows valence of students` and teachers` ratings rank ordered according to students` ratings. Thus, there was a very strong agreement between students and teachers how they perceived positive and negative aspects of situations for students. Although the shape of these two profiles was very similar, the teachers perceived the positive situation for students more

positive and negative situation more negative compared with students own. One of a few exceptions is transfer to another school which teachers perceive less negative than students estimate (Figure 3A).



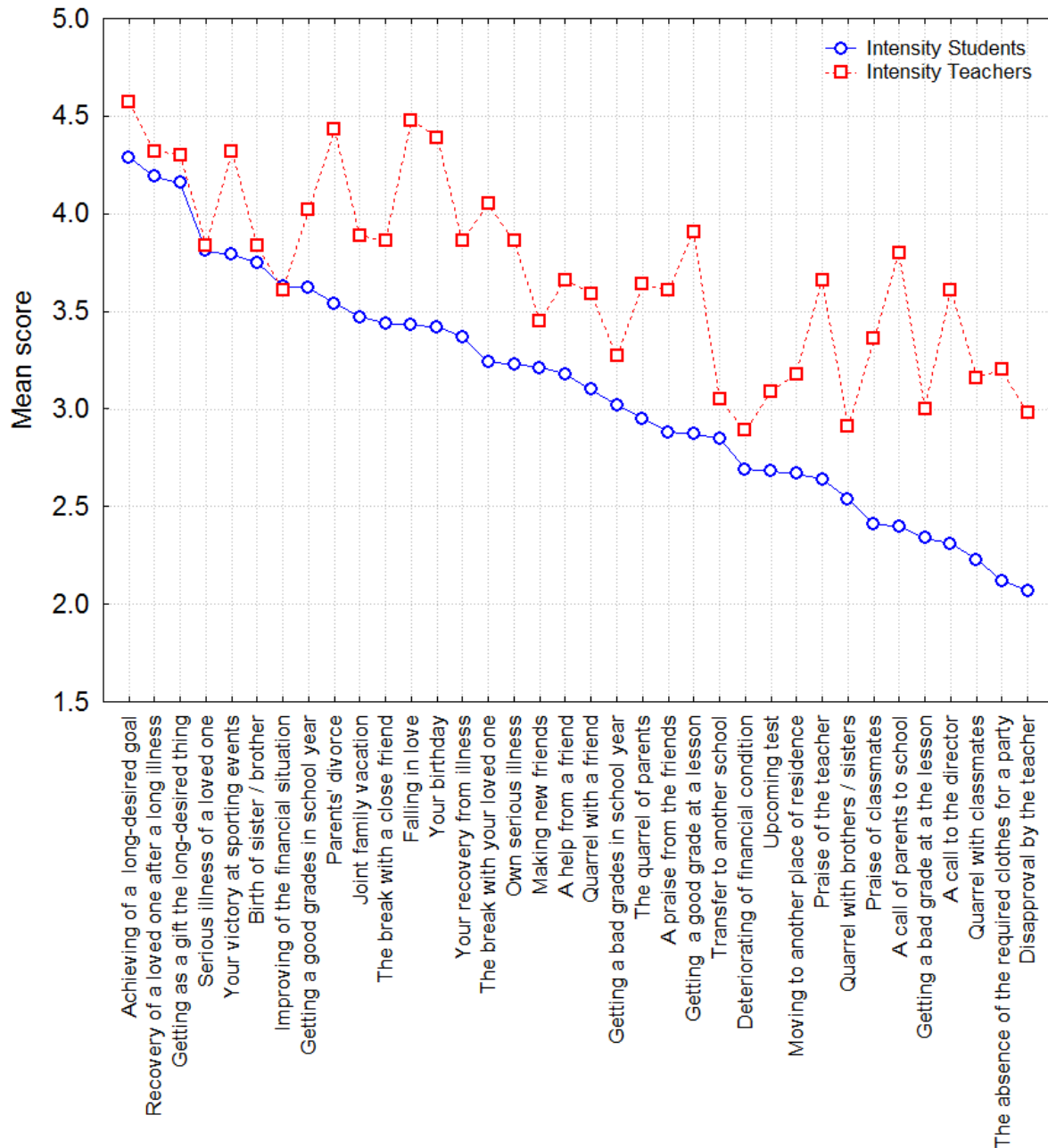


Figure 3. Students` versus teachers` ratings of life and school situations. A – Valence; B – Intensity

Although there was a strong agreement in the perception of emotional intensity (Figure 3B) these two profiles were less similar to each other: $r(34) = .78, p < .001$. In general, teachers exaggerated emotion they believe that situations elicit in students. In other words, the intensity of students` emotion is hugely overestimated by teachers. For example,

teachers believe that calling parent to school is a strong generator of emotions but in reality students stay or they believe that they stay cool.

Teachers estimate the teachers` own mood and students estimate the students` mood differently. The students estimate more positively own usual mood 2,83(1,75) than the teachers their own (2,71(1,8)); but worse own usual mood after school (1,70(2,50)) than teacher do (2,61(2,17)). The magnitude of own excitement before leaving the house for school is more for teachers themselves (2,00(1,30)) than for students (1,19(1,20)).

The estimations of the students mood by the teachers have larger means than by students in all 3 cases: in estimation students` usual mood teachers` estimation is 3,05(1,29) but students` is 2,83(1,75); in estimation students` usual mood after school teachers` estimation is statistically significantly more 3,20(1,65) than students` (1,70(2,50), $F=12.13$, $p=0,000$), in estimation of magnitude of the students` excitement before leaving the house for school teachers` estimation is 2,41(1,13), but students` is only 1,19(1,20).

Comparing 35 cases with the statistically significant means in valence (17) and intensity (18) showed that 18 from 35 of such cases are related to home, others 17 are related to school life. It shows that teachers overestimated or incorrectly estimate the emotions that are related as to the school so to home events. So teacher estimate statistically significantly (*Sig. of Levene's Test* <0.05 , $p<0.05^*$, $p<0.01^{**}$, $p<0.001^{***}$) more positive than students the students` emotions in cases: Joint family vacation^{***}, Your birthday^{***}, Praise of the teacher^{***}, Praise of classmates^{***}, Getting a good grade at a lesson^{***}, Getting a good grades in school year^{*}, Making new friends^{*}, Falling in love^{***}, A help from a friend^{**}, A praise from the friends^{***}, Your victory at sporting events, competitions, etc.^{***}. Teachers estimate more negative than students their emotions in cases: The quarrel of parents^{***}, Serious illness of a loved one^{*}, Quarrel with classmates^{***}, Getting a bad grade at a the lesson^{**}, A call to the director^{**} and A call of parents to school^{**}. Also teachers estimate intensity of emotions of students more than students themselves in cases: Parents' divorce^{***}, Joint family vacation^{*}, Moving to another place of residence^{*}, Your birthday^{***}, Praise of the teacher^{***}, Praise of classmates^{***}, Getting a good grade at a lesson^{***}, Getting a bad grade at a the lesson^{**}, Getting a good grades in school year^{*}, A call to the director^{***}, A call of parents to school^{***}, The absence of the required clothes for a party^{***}, The break with your loved one^{**}, Falling in love^{***}, A help from a friend^{*}, A praise from the friends^{**}, Own serious illness^{**}, Your victory at sporting events, competitions, etc^{**}.

Sex of teachers had only a small effect on ratings. None of male and female teachers' mean rating differences was statistically significant. Thus, it is possible to conclude male and female teachers perceive their students' emotional life very similarly.

Discussion and Conclusions

The study results confirm hypothesis in part that the subjective evaluation of the students' emotions by the pupils do not match exactly with the evaluation of students' emotions in the same context by the teachers. Teachers value their students' emotions very well in valence direction with the exception that they overestimate their intensity and values of valences. Also study results confirm hypothesis in part that girls are generally more emotional than men, but as in negative events so in positive events. The study data confirm hypothesis in part that younger students have higher intensity of positive emotions, but they have higher intensity of negative emotions too. The students are more emotional in ages 13-15 years than in ages 16-18 years.

The results of this study contain five principal points of interest:

(1) The concept of core emotions (Russell, 2003) was very useful allowing to estimate two relatively independent aspects of emotions, their valence (positivity or negativity) and their intensity. In the result it was possible to place emotional content of different life and school events on a semantic plane with two underlying dimensions of pleasure-displeasure and activation-deactivation. These events were described by a common language applicable to emotions, mood, or any other emotionally charged event that can be experienced as simply feeling good or bad, energized or enervated.

(2) The list of 36 life and school events was well chosen because they cover almost the whole semantic space from very good to very bad and from extremely intense emotion to almost complete absence of affective reactions. In particular, there was a strong agreement that getting a long-desired gift, achieving a long-awaited goal, recovery of a loved one after a long illness, and getting good grades in the end of the school-year are the happiest events one can imagine. At the same time, the break with a close friend, serious illness of oneself or a loved one, and parents' divorce are the worst things that could happen with evoking very strong negative emotions (see Figure 1). It may come as a surprise that that disapproval of teachers and praise from classmates are believed to evoke very little emotions without almost any positive or negative valence.

(3) It was surprising that boys and girls evaluated emotional content of various events almost identically. Since the correlation between the boys' and girls' mean ratings was practically one there was practically no room for sex differences. Nevertheless, these

extremely small and from practical point of view negligible differences showed that girls had a tendency to feel emotions more intensely.

(4) The age of participants was an important factor which affected emotional content of situations. Younger children had more extreme bad or good feelings than older children. Their feelings were also more intense than affects expressed by older age groups. These results appear to be in accordance with Raccanello and co-authors who reported higher intensity of positive emotions for younger students, and for older students the opposite pattern (Raccanello, Brondino, Bernardi, 2013). In accordance with the socioemotional selectivity theory (Carstensen, Isaacowitz, Charles, 1999) for younger teenagers when time in people life is perceived as open-ended, knowledge-related social goals are prioritized and school grades evoke more polarized and intense emotions. To the contrast, older participants concentrate more on the self-centred life goals. Figure 2 demonstrates that younger children care more than older ones about getting good grades, joint family vacation, and receiving praise from teachers. Unlike younger children older ones seem to be less worried about getting bad grades or calling parents to school but have more intensive emotions in case the break with loved one.

(5) Perhaps the most important, from both theoretical and practical viewpoint, was a question how well teachers know their students' emotional reactions. Many studies have witnessed that there may be disagreement between how students perceive their own personality traits and these traits are perceived from the vantage point of teachers (cf. Laidra et al., 2006). Against expectations this study demonstrated almost perfect agreement between direction of valence students' and teachers' ratings of the emotional content of various situations. But here are statistically significant differences in estimations of intensity emotions and the degree of the positivity and the negativity. However, it is important to emphasize that neither students nor teachers estimated emotional reactions of a particular individual. They estimated some kind of hypothetical social norms (affective reactions in general) rather than differential traits by which one individual diverges from all others. Teachers systematically overestimated the intensity of children's emotional life. They also think that students experience more extreme positive and negative emotions than students are ready to admit about their affective reactions. In other words, children appear to be emotionally more reserved than it is typically thought by adults. The results showed also, that teachers also do not estimate adequately the worsening of students' mood after school day. Many things can happen with children from the morning until the afternoon, however, at this time, mainly is dealing with school problems, or interact with other schoolmates and teachers

in school. Teachers, however, do not appreciate by my opinion, a great burden for the children, both physical and psychological at the school adequately.

Possible causes of an incorrect assessment by teachers of students' mood after school can be that students leave school immediately after school and teachers do not see their general emotional condition; a lack of attention of teachers to the pupils` emotional state in relation to teachers` own fatigue; the stereotypical view, that students as young people, are full of an energy, strength and positivity. The differences in the estimates of emotions and behaviour problems in parents, teachers and students were marked and discussed in the recent study of emotion regulation (Kim, Page, 2013). Also in the case of large differences in the opinion of teachers and students that can be in results of stereotypes of the teachers or lack of objective assessment of the situation due to students age characteristics and features of the development. If the estimates are obtained by averaging the assessment of teacher and student it can get a more objective picture of the emotional state of the student.

Limitations of this study

This study is entirely based on subjective reports. The part of children in the part of questions described how they could feel in a typical situation, not how they felt in a real situation what actually happened not in a very distant past. Another group of participants—teachers—estimated hypothetical emotional reactions not a specific student who attend their classes but an imaginary collective person. Consequently there is no information how accurately teachers can predict emotional reactions of specific students whom they know from their classes. The limitation of this study is a small sample of teacher. Also the content of the sample as of teachers so of students has more percent of the women. To clarify the data of the study it is necessary to do the study with bigger samples.

Since the study was based on questionnaire reports there is no possibility to draw any conclusion how, for example, in the real life social environment or parents influenced emotional life of each student. Although it is expected that quarrels and divorce of parents could in principle influence child's emotional life one needs to restrain from any causal conclusions until objective information about life events is collected. The lack of objective information about life and school events is the main limitation of this study. Nevertheless, the used methods allowed reconstructing a semantic space in which emotions and mood evoked by various situations and life events are experienced. It was gratifying to learn that students share this semantic space of their affective life with their teachers who appear to understand how they feel.

References

- Ališauskaitė, I., Butkienė, D. (2013), Emotion Perception From Situation: Comparing The Abilities Of Children With Intellectual Disability And Children With Regular Development. *Special Education*, Issue 2, 37-46
- Carstensen, LL, Isaacowitz, DM, Charles, ST. (1999). Taking time seriously - A theory of socioemotional selectivity. *American Psychologist*. Vol 54, 3, p 165-181, DOI: 10.1037//0003-066X.54.3.165
- Else-Quest, N. M., Higgins, A., Allison, C., Morton, L. C. (2012). Gender differences in self-conscious emotional experience: A meta-analysis. *Psychological Bulletin* , Vol. 138, No. 5, 947–981
- Евсикова, Н. И. (2008). Некоторые особенности эмоционально-личностного развития младших школьников, обучающихся в различных педагогических системах. *Вестник Московского университета, Серия 14, Психология № 4*, стр. 20-37
- Dalen, J. (2014). Gender differences in the relationship between school problems, school class context and psychological distress: results from the Young-HUNT 3 study. *Social Psychiatry & Psychiatric Epidemiology*, Vol. 49 Issue 2, 183-191
- Inguglia, C., Ingoglia, S., Coco, A. (2013). The Relation between Emotional Support, Self-Concept, and Social Functioning among School-Aged Children. *Bollettino di Psicologia Applicata*, Issue 267, 3-15
- Izard C., E., (1991). *The Psychology of Emotions*. New York: Springer.
- Izard C., E. (2002). Translating emotion theory and research into preventive interventions. *Psychological Bulletin*, Vol. 128, 5, 796-824, DOI: 10.1037//0033-2909.128.5.796
- Herndon, KJ; Bailey, CS; Shewark, EA; Denham, SA; Bassett, HH. (2013). Preschoolers' Emotion Expression and Regulation: Relations with School Adjustment. *Journal Of Genetic Psychology*; nov 1; 174; 6; 642-663
- Hess, U. et al., (2000). Emotional expressivity in men and women: Stereotypes and self-perceptions, *Cognition and Emotion*. Volume 14, 5, 2000, 609-642

- Holmes, T.H., Rahe, R. H. (1967). The Social Readjustment Rating Scale. *Journal of Psychosomatic Research*, Vol. 11, 213-218
- Jensen-Campbell, L. A., Graziano, W. G. (2000). Beyond the School Yard: Relationships as Moderators of Daily Interpersonal Conflict. *Pers Soc Psychol Bull*, <http://psp.sagepub.com/content/26/8/923>
- Kim, H.; Page, T. (2013). Emotional Bonds with Parents, Emotion Regulation, and School-Related Behavior Problems Among Elementary School Truants. *Journal of Child & Family Studies.*, Vol. 22 Issue 6, 869-878
- Laidra, K., Allik, J., Harro, M., Merenäkk, L., & Harro, J. (2006). Agreement among adolescents, parents and teachers on adolescent personality. *Assessment*, 13, 187-196
- Ласкова, И.В. (2010). Экспресс-оценка эмоций и состояний, обусловленных образовательным процессом у учеников средней школы. / Лазаренко, В.А., Калущкий П.В. Материалы Третьей международной дистанционной научной конференции «Инновации в медицине»/, КГМУ, Центр. - Чернозем. науч. центр РАМН, Общерос. общест. организация «Рос. союз молодых ученых, Курск, 235 стр., стр. 116-117
- Lynn, S., Carroll, A., Houghton, S., Cobham, V. (2013). Peer relations and emotion regulation of children with emotional and behavioural difficulties with and without a developmental disorder. *Emotional & Behavioural Difficulties*. Vol. 18, Issue 3, 297-309
- Niedenthal, P. M., Brauer, M. (2012). Social Functionality of Human Emotion. *Annual Review of Psychology*, Vol. 63, 259-285
- Raccanello, D.; Brondino, M.; Bernardi, B. (2013). Achievement emotions in elementary, middle, and high school: How do students feel about specific contexts in terms of settings and subject-domains? *Scandinavian Journal of Psychology*. Vol. 54 Issue 6, p 477- 484
- Scherer, K. R., & Shorr, A., & Johnstone, T. (Ed.). (2001). *Appraisal processes in emotion: theory, methods, research*. Canary, NC: Oxford University Press

Sheeber, L., Kuppens, P., Shortt, J. W., Katz, L.F., Davis, B., Allen, N.B. (2012). Brief Report. Depression is associated with the escalation of adolescents' dysphoric behavior during interactions with parents. *Emotion*, Vol. 12, 5, 913–918

Whear, R.; Thompson-Coon, J.; Boddy, K.; Ford, T.; Racey, D.; Stein, K. (2013). The effect of teacher-led interventions on social and emotional behaviour in primary school children: a systematic review. *British Educational Research Journal*, Vol. 39 Issue 2, 383-420.

Appendices

1. A questionnaire for students.

STUDENTS STUDY OF EMOTIONS

This questionnaire is part of a study of public opinion. The aim of this study is to determine which emotions students are experiencing in typical situations in school life and the subjective assessment of their strength. Your answers are confidential and anonymous. Your participation in this study is voluntary, so you can stop filling out the questionnaire at any time. Information on each participant will not be available to other participants and do not become the subject of public discussion.

We want to know what kind of feelings you experience in a variety of typical situations that you encounter in school life. Your task - to estimate your feelings in a typical situation, or to imagine what kind of feelings you would experience if you had never encountered such a situation before.

You are offered a visual analog scale, which are the horizontal lines, divided into 10 sectors (from -5 to +5 points). The negative/positive value of the index is characterized by verbal (negative or positive) and stylized with sad face or smiling face icon. Additionally notes feeling strength (from 0 to 5). Mark the point on the scale (please cross) that best fits your feeling assessment.

Example:

Estimate feelings, which the following situation cause in you (or would cause)

- a. How positive (cause a good mood) or negative (cause a bad mood) are these feelings
- b. How strong are these feelings (0- absent, 5- very strong)

For example, if you believe that your feelings in the situation, then new fashionable clothing is bought for you are very positive (+5), but are not very strong (2), put a cross in this place:

New fashionable clothing is bought for you	<div style="text-align: center;"> <p>-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5</p> <p>☹ Negative X Positive ☺</p> <p style="margin-left: 40px;">0 1 2 3 4 5</p> <p>Feeling strength X </p> </div>
--	--

1 part

Estimate your usual mood	<div style="text-align: center;"> <p>0 1 2 3 4 5 6 7 8 9 10</p> <p>☹ Very bad Very good ☺</p> </div>
Estimate your usual mood after school	<div style="text-align: center;"> <p>0 1 2 3 4 5 6 7 8 9 10</p> <p>☹ Very bad Very good ☺</p> </div>

Estimate the magnitude of your excitement before leaving the house for school	0 1 2 3 4 5 6 7 8 9 10 ☺ Very slight Very severe ☹
---	---

2 part

Estimate feelings, which the following situation cause in you (or would cause)

- a. How positive (cause a good mood) or negative (cause a bad mood) are these feelings
- b. How strong are these feelings (0- absent, 5- very strong)

2.1.	
Getting as a gift the long-desired thing	-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 ☹ Negative Positive ☺ 0 1 2 3 4 5 Feeling strength
Parents' divorce	-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 ☹ Negative Positive ☺ 0 1 2 3 4 5 Feeling strength
Birth of sister / brother	-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 ☹ Negative Positive ☺ 0 1 2 3 4 5 Feeling strength
The quarrel of parents	-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 ☹ Negative Positive ☺ 0 1 2 3 4 5 Feeling strength
Joint family vacation	-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 ☹ Negative Positive ☺ 0 1 2 3 4 5 Feeling strength
Quarrel with brothers / sisters	-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 ☹ Negative Positive ☺ 0 1 2 3 4 5 Feeling strength
Recovery of a loved one after a long illness	-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 ☹ Negative Positive ☺ 0 1 2 3 4 5 Feeling strength
Serious illness of a loved one	-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 ☹ Negative Positive ☺ 0 1 2 3 4 5 Feeling strength
Improving of the financial situation	-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 ☹ Negative Positive ☺ 0 1 2 3 4 5 Feeling strength

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STRENGHT AND VALENCE OF SCHOOL EMOTIONS

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