Perceived Parental Rearing Practices, Supportive School Environment, and Self-Reported Emotional and Behavioral Problems among Lithuanian Secondary School Students

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Abstract

Previous research rarely addressed parental rearing practices, perceived safety at school, teachers' support and school climate in the same study. Most often those two contexts-home environment and school context-are analyzed separately. Several authors have advocated the need for incorporating those two contexts in the study of emotional and behavioral problems (Suldo et al., 2012). Thus, the main purpose of the study was to investigate the relationship between the perceived parental practices (parents' reactions to adolescents' behavior, i.e., guilt induction and emotional warmth) and supportive school environment (school attachment, school climate, perceived teacher support, and feelings of safety at school) with adolescents' emotional and behavioral problems. The data used is from an ongoing longitudinal Positive Youth Development study (POSIDEV) that examines the mechanisms and processes through which young people develop their competences. The sample comprised 2625 Lithuanian students (1146 boys and 1479 girls, age 14-20 (M = 16.69; SD = 1.17)) from the ninth, tenth, eleventh and twelfth grades of 8 upper secondary schools. The results showed that parents' emotional warmth was negatively, and psychological control was positively related to students' depressive symptoms and delinquent behavior. Furthermore, perceived teacher support, feelings of safety at school were negatively associated with adolescents' depressive symptoms and delinquent behavior, when students' perceptions of negative school climate were positively associated with adolescents' depressive symptoms and delinquent behavior. After entering school context variables in the regression, demographic characteristics and mother's guilt induction practice remained significant, but mother's emotional warmth was no longer significant. This suggests the possibility that school context acts as a mediator between emotional warmth by mother and delinquent behavior. This finding has important practical implications in terms of shedding some insight on how multiple systems might be interlinked in influencing wellbeing in adolescents and confirms the importance of intervening at the double platform of both the family and the school system.

Keywords: guilt induction, emotional warmth, school attachment, school climate, perceived teacher support, feelings of safety at school, adolescence, emotional and behavioral problems

1. Introduction

Parenting practice is described as behavioral, goal-oriented actions of parents, when parenting style is typically conceptualized as a general emotional climate within the home (Fletcher, Elder, & Mekos, 2000). Previous research suggests that perceived parental practices positively or negatively affects adolescents' well-being. The direct effect of parental bonding on well-being during adolescence has been studied extensively. During the course of the past 40 years, many studies have been conducted to explore parental involvement and its effect on adolescents' psychological well-being. The importance of the family's role has been recognized for its influence over adolescents' psychosocial adaptation and in avoiding deviant and risky behavior. Various studies recognize that satisfactory relations with parents (and peers) are connected to a more positive outcome in this stage of development (Doyle & Markiewicz, 2005). High-quality parent–child relationships predict lower levels of adolescent depression and delinquent behaviors and also protect against antisocial behaviors for children in families experiencing marital conflict or disruption (Conger, Conger, & Scaramella, 1997). Parental support and the quality of parent-child relationships predicts school adjustment, reduced levels of depression, psychological disorders, externalizing behaviors, and behavior problems among youth (McLoyd, 1990; Dubois, Eitel, & Felner,

1994). Doyle and Markiewicz (2005) noted that parenting does affect adolescents' ability to adjust, with parental warmth being an aspect of the authoritative parenting style.

Numerous studies confirm that low quality of parenting is the strongest risk factor contributing to child's outcomes. For example, Collins et al. (2000) states that the expression of heritable traits depends, often strongly, on experience, including specific parental behaviors, as well as predispositions and age-related factors in the child. In Dmitrieva et al. (2004) study poorer quality of parent-adolescent relationships was found to influence levels of adolescent depressed mood. However, McKee et al. (2008) examined a positive parenting behavior (warmth) and failed to find evidence for a hypothesized negative relationship between this parenting behavior and child internalizing problems.

Psychological control refers to parenting behaviors that attempt to control youths by taking advantage of their emotional and psychological needs. It includes attempting to control youths by making them feel guilty or ashamed, also known as guilt induction (Kakihara et al., 2010). It also includes behaviors that communicate a withdrawal or threat of withdrawal of parental love, including rejection and coldness (Kakihara et al., 2010). Psychological control intrudes into the emotional and psychological development of the child, such as thinking processes, emotions, self-expression and attachment to parents (Barber, 1996, p. 3296). It is manifested primarily through covert strategies, such as guilt induction, invalidating feelings, or creating an environment in which acceptance is contingent on the child's behavior (Silk et al., 2003, p. 115).

Literature suggests that parental guilt induction is associated with internalizing problems in children (Donatelli et al., 2007). Specifically Rakow et al. (2009) findings indicate that higher levels of parental guilt induction were related to higher levels of child internalizing problems when considered in the context of more traditionally assessed parenting variables. Donatelli et al. (2007) found that adolescents' depressive symptoms were more severe when incidents were unresolved and involved maternal emotions and less severe when incidents were specific. That it is unresolved, undirected, and unalleviated guilt feelings that hold the greatest potential for destructiveness (Donatelli et al., 2007). However, studies that address the role of guilt induction to later outcomes are not numerous and most of them are exploring links between parental guilt induction and child internalizing problems in samples of depressed mothers (e.g., Donatelli et al., 2007; Rakow et al., 2009; McKee et al., 2008). In a non-clinical sample (Taylor et al., 2011), for mother's psychological control, results were consistent with past research suggesting that parent's use of control tactics including guilt or anxiety induction or love withdrawal are linked to poorer functioning in adolescents. Authors conclude that parent's use of psychological control may be linked to poorer adjustment including anxiety/withdrawal and conduct problems, because the control tactics involved suggest the rejection and disregard of adolescent's views and preferences (Taylor et al., 2011). Rogers at al. (2003) findings indicate that fathers' psychological control predicts higher adolescent-reported internalizing problems both for boys and for girls only when mothers also are perceived as high as fathers in psychological control. Similarly, but only among girls, fathers' psychological control predicts higher externalizing problems only when mothers also are perceived as high in psychological control. Barber (1996) conclude that in both cross-sectional and longitudinal analyses, psychological control, particularly as perceived by preadolescents and adolescents, is consistently predictive of youth internalized problems (depression) and, in some cases, externalized problems (delinquency).

Like the family, schools are important developmental contexts for adolescents, influencing their academic and socio-emotional development. In the literature review Eccles and Roeser (2003) conclude that considerable strides have been made in the past decade in recognizing the centrality of the cultural context of schooling to adolescent development. Supportive school environment may be considered to have a significant effect on student's health outcomes. The quality of teacher-student relationships and students' feelings of classroom belonging are related to students' social-emotional well-being in school (Roeser at al., 2000). Positive attitudes and feelings toward school are beneficial for student well-being and learning (Wei & Chen, 2010). Moody and Bearman (1998) described school attachment as the degree to which students feel socially and emotionally close to others at school, how much they enjoyed being at school and attending classes, and feel like a part, or member, of the school. Goodenow (1993, p. 80) defined school attachment as "the extent to which students feel personally accepted, respected, included, and supported by others in the school social environment". Despite the some differences in definitions, each of them emphasize that attachment to school has a very strong emotional aspect. Feelings of emotional connectedness, support, and inclusion in the school environment are often referred to as school attachment or school bonding (Jimerson et al., 2003). In this particular study the attachment to school is operationalized by emotions or feelings toward school as to the whole institution but not to separate school community members.

Studies that address the role of school attachment to later outcomes have found that attachment to school contribute to lower delinquency and aggression as well as higher motivation for achievement (Eccles, 2007; Simons-Morton et al., 1999), better academic performance, and higher self-esteem (Maddox & Prinz, 2003; Catalano et al., 2004). Suldo et al. (2012) study explored the relationship between school climate perceptions and self-reported mental health among 415 high school students. Regression analysis indicated that students' perceptions of six dimensions of school climate (sharing of resources, order and discipline, parent involvement, school building appearance, student interpersonal relations, and student-teacher relations) accounted for a total of 15-22 % of the variance of the indicators of mental health (e.g., internalizing and externalizing problems). Across indicators, school climate was more highly associated with girl's mental health.

Risk factors for school-based fear of crime include both individual and contextual risk factors such as the school and the community (see Swartz, et al., 2011 for a review; Bowen & Bowen, 1999). The school context may foster fear of crime by suggesting an increase in the risk potential for victimization (Schreck & Miller, 2003). Perumean-Chaney and Sutton study (2013) found that students who were male, White, had higher GPAs, and reported feeling safe in their neighborhood were more likely to report feeling safety school, while those who experienced prior victimizations, had larger class sizes, and who attended schools that had disorder problems were more likely to report not feeling safe at school (Perumean-Chaney & Sutton, 2013). Certain individual factors, such as age and gender may also contribute to a heightened sense of fear. Students who are unable to protect themselves may perceive themselves to be at a higher risk for victimization due to their vulnerability, for example, females and younger students Some studies revealed that older students perceive themselves as being safer than younger students perceive themselves (Bowen & Bowen, 1999; Vargas, Hendrich, & Meyers, 2009). However, other studies observe the opposite pattern (Griffin & Cook, 1995). These inconsistencies might be due to differences in the age range and location of the study samples. Thus, a study with school-age children found no gender differences in perceptions of school safety (Hess & Graff, 1999). However, studies of older students have found that adolescent boys were more likely to report being victimized physically (Sheley, 1995) and that they perceived more danger from fights at school (Bowen & Bowen, 1999; Vargas, Hendrich, & Meyers, 2009) than girls perceived.

Perceptions of school safety may be considered to have a significant effect on student's emotional and behavioral problems. When students have fears about personal safety at school or on the way to and from school, they may miss days of school. Perpetrators and victims of school violence are more likely to experience health problems, social and emotional difficulties, and/or poorer academic performance. Additionally, fear at school can contribute to an unhealthy school climate, and can lead to negative student behaviors (Child Trends, 2011).

In summary, in previous studies, links between perceived parental rearing practices, school attachment and perceived safety at school were related to self-reported emotional and behavioral problems. However, previous research rarely addressed parental rearing practices, perceived safety at school, teachers' support and school attachment in the same study. Most often those two contexts-home environment and school context-are analyzed separately. It is currently unknown if parental rearing practices or school climate are more tied to adolescent's problems, such as symptoms of internalizing and externalizing disorders. Thus, the main purpose of the study was to investigate the relationship among the perceived parental practices (parents' reactions to adolescents' behavior, i.e., guilt induction and emotional warmth) and school environment factors (school attachment, school climate, perceived teacher support, and feelings of safety at school) with adolescents' emotional and behavioral problems (depression symptoms and delinquency).

Study Hypotheses

Theoretically, parental rearing practices and school environment variables may contribute to emotional and behavioral problems, either serve as protective factors. Thus, we focused on the previous literature to derive the following hypotheses.

We hypothesized the following:

1) Child reported parental guilt induction would be significantly positively associated with child emotional and behavioral problems, when emotional warmth received from mother and father will be associated negatively.

2) Supportive school environment (school attachment, school climate, perceived teacher support, and feelings of safety at school) will be negatively associated with child emotional and behavioral problems, when negative school climate will be associated positively with child emotional and behavioral problems.

2. Method

2.1 Participant Characteristics

The data used is from an ongoing longitudinal Positive Youth Development study (POSIDEV) that examines the mechanisms and processes through which young people develop their competences. The sample comprised 2625 Lithuanian students (1146 boys and 1479 girls, age 14-20 (M = 16.69; SD = 1.17)) from the ninth, tenth, eleventh and twelfth grades of 8 upper secondary schools. Families that reside in the neighborhoods' in which these schools are located have a broad range of income levels and are relatively homogeneous in terms of their ethnic and cultural backgrounds. However, the ethnic and cultural diversity of this region is somewhat lesser than that in some other urban areas in the country. The majority of participants were Lithuanian nationality (97.8%), but the sample also included Russians (0.8%) and other nationalities (0.4%), while 0.9% of the participants did not indicate their nationality.

2.2 Sampling & Procedures

Student participants were drawn from 8 high schools in one of the administrative regions of Lithuania. Each school was visited before the assessment took place in order to inform school administration and prospective participants about the date and time of the assessment. During the introductory meeting, adolescents were informed that participation is voluntary and confidential. Parents were informed about the study by letter. Parental permission was obligatory for all children who expressed willingness to take part in the study. Parents were asked to contact the school or investigators if they did not want their children to participate. From all approached participants and their parents, only 0.84 % of the parents did not provide consent. Questionnaires were administered by the researchers and several trained research assistants at the schools, after obtaining the consent of school authorities and parents. Questionnaires were completed in class during regular school hours. The two parts of the questionnaire were administered in two classroom sessions and each part took from 35 to 45 minutes to complete. Teachers were not present in the classroom. Students who were absent on the day of the data collection were contacted next week by research assistants. Youth were not paid for participation, but all students and their parents who completed the questionnaires were eligible for drawings provided by the project.

2.3 Measures

Dependent variables

Depressive symptoms were measured with *The Center for Epidemiological Studies Depression Scale for Children (CES-DC) (*Weissman, Orvaschel, & Padian, 1980; Faulstich, Carey, Ruggiero, et al., 1986)*. In this scale, individuals are asked about the frequency of depressive symptoms (e.g., "I was bothered by things that don't usually bother me.") on a 4-point scale (1=never; 4=very often). The average scores were calculated so that higher values indicated more symptoms of depression. Internal consistency for the scale was .86.

Delinquency was measured with the adopted for Lithuanian youth *Delinquency scale* (Magnusson, Dunér, & Zetterblom, 1975; updated in Kerr & Stattin, 2003). This scale consists of 10 questions about whether students had engaged in various delinquent behaviors during the past year (e.g., items like "Have you taken part in a street fight during the last year?"). The response scale was a 5-point scale ranging from never (1) to more than 10 times (5). Internal consistency for this measure was .75.

Independent variables

Students' perceptions of parental rearing practices were measured using two scales: (1) *Guilt induction* (e.g., parental coldness-rejection) *scale* (Kakihara, et al., 2010). This scale consists of 4 items for each parent. Youths were asked in a common stem: "How does your mother (father) react if you do something he (she) really does not like?" They then responded to the following items: "He (she) doesn't talk to you until after a long while", "He (she) is silent and cold toward you", "Makes you feel guilty for a long time" and "He (she) avoids you" using a 3-point format (1 = never; 3 = most often). Internal consistency for this measure was .70 for father and for mother. (2) *Parental emotional warmth scale* (adopted from van Zalk & Kerr, 2011). Youths were asked how warm they perceived their parents to be toward them (6 items, separately for father and for mother like "Praises you for no special reason") using a 3-point scale. Internal consistencies for these measures for fathers' and mothers' ratings were .82 and .66, respectively.

The school environment measures were collected using the Social and Health Assessment (SAHA) questionnaire (Ruchkin, Schwab-Stone, & Vermeiren, 2004) which included four scales: (1) *Attachment to school scale* (5 items, like "Most mornings I look forward to going to school", "I like school", "When I'm in school, I would rather be someplace else" (R)). Internal consistency for this measure was .78; (2) *Negative School Climate scale* (7 items, like "Students spend a lot of class time just talking to each other", "Teachers spend a lot of time in class

trying to get students to behave", "Students criticize or joke about the teachers a lot"). Internal consistency for this measure was .79. (3) *Feelings of Safety at School scale* (7 items, like "I feel safe on the school bus or while walking to school", "I feel safe in the restrooms or changing rooms at my school", "Recent events in the news make me worried about safety in school"). Internal consistency for this measure was .83, and (4) *Perceived Teacher Support scale* (8 items, like "Teachers are patient when students have trouble learning", "I like most of my teachers this year", "My teachers show concern when I am absent from school"). Internal consistency for this measure was .66. Items were rated using a 4 point scale ranging from 1 (definitely not true) to 4 (definitely true).

3. Results

Mean scores and standard deviations for scales assessing emotional and behavioral problems, parenting practices, and school environment measures are given in Table 1. According to analyses of differences in mean scores, using the independent Student's t-test (Table 1) girls scored higher on depressive symptoms, emotional warmth received from mother and father, attachment to school, feelings of safety at school and more teacher support than did boys, when boys scored higher on disruptive behavior and guilt induction by mother and father than girls did. Analysis of the mean differences revealed also that there was no difference in negative school climate scores between girls and boys.

Table 1. Means, standard deviations, t and p-values from analyses of differences in mean scores for parenting practices, school environment measures and emotional and behavioral problems between boys (n = 1146) and girls (n = 1479)

Variables	Total sample		Boys		Girls		t	p-value
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
Age	16.69	1.17	16.67	1.16	16.71	1.18	-.734	.463
Depression symptoms	2.22	.45	2.13	.12	2.29	.12	-8.864	.000
Delinquent behavior	1.83	.56	2.01	.61	1.70	.47	14.307	.000
Emotional warmth (M)	2.09	.39	2.03	.37	2.15	.39	-7.648	.000
Emotional warmth (F)	1.96	.48	1.91	.45	1.99	.50	-4.076	.000
Guilt induction (M)	1.48	.45	1.50	.45	1.47	.45	1.985	.047
Guilt induction (F)	1.44	.44	1.48	.45	1.41	.44	3.483	.001
Attachment to school	2.44	.60	2.34	.61	2.52	.58	-7.632	.000
Negative school climate	2.63	.47	2.63	.49	2.63	.46	.150	.881
Feelings of safety at school	2.97	.48	2.94	.53	2.99	.43	-2.618	.009
Teachers support	2.72	.39	2.66	.39	2.76	.38	-6.873	.000

Note: *M: Mother, F: Father*

Table 2 shows correlations among the perceived parental practices (guilt induction and emotional warmth) and school environment factors (school attachment, negative school climate, perceived teacher support, and feelings of safety at school) and adolescents' emotional and behavioral problems (depression and delinquency).

Correlation analyses of variables involved in this research revealed that student's depressive symptoms and delinquent behavior were related with parenting practices and school environment measures. Parents' (mother's and father's separately) emotional warmth was negatively, and guilt induction by mother and father were positively related to students' depressive symptoms and delinquent behavior. The results show that when emotional warmth by mother and father decreases, and guilt induction by mother and father increases, depressive symptoms increase, or otherwise, when emotional warmth by mother and father decreases, and guilt induction by mother and father increases, the students' depressive symptoms increase. The same was observed for students' delinquent behavior. Furthermore, students' perceptions of attachment to school, perceived teacher support, feelings of safety at school were negatively associated with adolescents' depressive symptoms and delinquent behavior, when negative school climate was positively associated with adolescents' depressive symptoms and

delinquent behavior. Thus the results show that when attachment to school, perceived teacher support, and feelings of safety at school decrease and negative school climate increase, depressive symptoms tend to increase, or otherwise, when attachment to school, perceived teacher support, and feelings of safety at school decrease and negative school climate increase, then depressive symptoms increase. The same was observed for students' delinquent behavior.

Table 2. Correlation matrix for the study variables

Variables	1	2	3	4	5	6	7	8	9
1.Depression symptoms	.00								
2.Delinquent behavior	.08***	.00							
3.Emotional warmth (M)	-.19***	-.19***	.00						
4.Emotional warmth (F)	-.16***	-.14***	.85***	.00					
5.Guilt induction (M)	.25***	.17***	-.23***	-.15***	.00				
6.Guilt induction (F)	.24***	.14***	-.25**	-.27**	.51***	.00			
7.Attachment to school	.-10***	-.21***	.29***	.13***	-.09***	-.06**	.00		
8.Negative school climate	.13***	.19***	-.08***	-.06**	.09***	.10***	-.27***	.00	
9. Feelings of safety at school	-.20***	-.06**	.09***	.05*	-.14***	-.12***	.23***	-.10**	.00
10.Teachers support	-.13***	-.18***	.22***	.15***	-.12***	-.10***	.39***	-.24***	.37***

* $p < .05$; ** $p < .01$; *** $p < .001$; *M – Mother, F- Father*

Finally, two separate hierarchical multiple regressions were conducted to predict emotional and behavioral problems taking depression symptoms and delinquent behavior measures as dependent variables, and parenting practices and school environment measures as independent variables (see Table 3).

In the first block, gender and age were entered to control for the effects of demographic characteristics. After the variables in Block 1 have been entered, the overall model explains 8.7 per cent of the variance. After Block 2 (emotional warmth by mother, emotional warmth by father, guilt induction bay mother, and guilt induction by father) have been included, the model as a whole explains 12.7 per cent of the variance. Thus, parental practices explain an additional 4 per cent of the variance in delinquent behavior, even when the effects of gender and age are statistically controlled for. This is a statistically significant contribution. The ANOVA results indicate that the model as a whole (which includes two blocks of variables) is significant (F (6, 2182) = 52.959, p<0.001).

After Block 3 (Attachment to school, negative school climate, feelings of safety at school, and teachers support) has been also included, the model as a whole explains 18.2 per cent of the variance. Thus school environment explains an additional 5.5 per cent of the variance in delinquent behavior, even when the effects of gender and age, and parental practices are statistically controlled for. This is a statistically significant contribution. The ANOVA results indicate that the model as a whole (which includes three blocks of variables) is significant (F (10, 2139) = 47.490, p<0.001). When evaluating each of the independent variables, it can be observed that almost all variables contribute to the equation. In order of importance they are: gender (beta = -.241), negative

school climate (beta =.152), age (beta =.134), guilt induction by mother (beta =.115), attachment to school (beta = -.115), teachers' support (beta = -.079), and feelings of safety at school (beta = .056). Neither emotional warmth by mother and by father, nor guilt induction by father made a unique contribution.

Table 3. Behavioral and emotional problems (depression and delinquency) predicted by adolescents' age and gender, school attachment, negative school climate, perceived teacher support, and feelings of safety at school, and parents' guilt induction and emotional warmth

Variables		Delinquent behavior	Depressive symptoms
		β	β
Age		.095***	.029
Gender		-.280***	.169***
	R	**.295**	**.172**
	R²	**.087**	**.029**
Age		.094***	.023
Gender		-.262***	.221***
Emotional warmth (M)		-.119**	-.184***
Emotional warmth (F)		.004	.040
Guilt induction (M)		.111***	.150***
Guilt induction (F)		.028	.134***
	R	**.357**	**.371**
	R²	**.127**	**.137**
Age		.134***	.052**
Gender		-.241***	.233***
Emotional warmth (M)		-.033	-.141***
Emotional warmth (F)		-.038	.019
Guilt induction (M)		.115***	.132***
Guilt induction (F)		.017	.115***
Attachment to school		-.115***	-.033
Negative school climate		.152***	.081***
Feelings of safety at school		.056**	-.151***
Teachers support		-.079***	-.019
	R	**.426**	**.419**
	R²	**.182**	**.175**

p < .05; ** p < .01; *** p < .001

Similar results were found for depression symptoms. In the first block, gender and age were entered to control for the effects of demographic characteristics. After the variables in Block 1 have been entered, the overall model explains 2.9 per cent of the variance. After Block 2 (emotional warmth by mother, emotional warmth by father, guilt induction by mother, and guilt induction by father) have been included, the model as a whole explains 13.7 per cent of the variance. Thus parental practices explain an additional 10.8 per cent of the variance in depressive symptoms, even when the effects of gender and age are statistically controlled for. This is a statistically significant contribution. The ANOVA results indicate that the model as a whole (which includes two blocks of variables) is significant (F (6, 2203) = 58.481, p<0.001). After Block 3 (Attachment to school, negative school climate, feelings of safety at school, and teachers support) has been included, the model as a whole explains 17.5 per cent of the variance. Thus school environment explain an additional 3.8 per cent of the variance in depressive symptoms, even when the effects of gender and age, and parental practices are statistically

controlled for. This is also a statistically significant contribution. The ANOVA results indicate that the model as a whole (which includes three blocks of variables) is significant (F (10, 2160) = 45.870, p<0.001). When evaluating each of the independent variables, it can be observed that almost all variables contribute to the equation. In order of importance they are: gender (beta = .233), feelings of safety at school (beta = -.151), emotional warmth by mother (beta = -.141), guilt induction by mother (beta = .132), guilt induction by father (beta = .115), negative school climate (beta = .081), and age (beta = .052). Neither emotional warmth by father, nor attachment to school nor teachers support made a unique contribution.

4. Discussion

This study examined the association of parental rearing practices (e.g., emotional warmth and guilt induction), also as school environment measures attachment to school, negative school climate, feelings of safety at school, and teachers support) with child depressive symptoms and delinquent behavior. Specifically, it was hypothesized that child reported parental guilt induction would be significantly positively associated with child emotional and behavioral problems, when emotional warmth received from mother and father will be associated negatively. Furthermore, it was hypothesized that supportive school environment will be negatively associated with child emotional and behavioral problems, when negative school climate will be associated positively with child emotional and behavioral problems.

Correlational analysis was used to evaluate relationships between study variables. Further relationships between study variables were explored by HMR in order to evaluate how they were related when controlling for one another. As expected, HMR analysis predicting delinquent behavior revealed that both family context and school context predicted delinquent behavior. The addition of the family context variables in to regression showed that mother's, but not father's emotion warmth and guilt induction were associated with delinquent behavior. After entering school context variables in the regression, demographic characteristics and mother's guilt induction practice remained significant, but mother's emotional warmth was no longer significant. This suggests the possibility that school context acts as a mediator between emotional warmth by mother and delinquent behavior. Note also that the contribution of all school context variables were significant, indicating that each of them accounted for unique proportion of the delinquent behavior variance. This supports expectation that more "communal school" environments, characterized by a supportive and collaborative school climate, have been shown to be associated with a decreased risk of youth engaging in delinquency (Payne, 2008). Our findings suggest that child's emotional and behavioral problems may be influenced by both family and school contexts.

The patterns of significance of analyzed family and school context factors were different in the regression model predicting depression symptoms. Girls reported more depression symptoms than boys. More guilt induction from both parents and less emotional warmth from mother was associated with more depressive symptoms. After entering school context variables the effects of the mentioned family context variables were reduced, but remained significant. Thus, perceived negative school climate and feelings of safety at school may explain to some extent the associations between depressive symptoms and parents' raring practices. The bivariate relationships between four domains of school environment (e.g., attachment to school, negative school climate, feelings of safety at school and teachers support), are consistent with findings from other studies that indicated inverse relationships of supportive school environment factors (Kasen et al., 1990; Resnick et al., 1997; LaRusso et al., 2008) and emotional warmth by parents (Operario et al., 2006) with adolescents' emotional and behavioral problems.

Several authors have advocated the need for incorporating those two contexts (parental rearing practices and school environment) in the study of emotional and behavioral problems (Suldo et al., 2012). The bivariate relationships between three domains of school environment (e.g., negative school climate, feelings of safety at school and teachers support), are consistent with findings from other studies that indicated inverse relationships of supportive school environment factors (Kasen, Johnson, & Cohen, 1990; Resnick et al., 1997; LaRusso et al., 2008) and emotional warmth by parents (Operario, Tschann, Flores, & Bridges, 2006) with adolescent emotional and behavioral problems. Overall, school context perceptions and parental rearing practices account for approximately 12%-15% of the variability of emotional problems and for approximately 6 % -12 % of the variability of behavioral problems, what is in line with findings of other researchers (Kuperminc, Leadbeater, & Blatt, 2001; Loukas & Robinson, 2004).

Overall, this study confirms findings of other studies that parents' emotional warmth is negatively, and psychological control is positively related to adolescents' depressive symptoms and delinquent behavior. Furthermore, perceived teacher support, feelings of safety at school are negatively associated with adolescents' depression symptoms and delinquent behavior, when adolescents' perceptions of negative school climate are

positively associated with adolescents' depression symptoms and delinquent behavior. In our study, perceived negative school climate and feeling of safety at school explain to some extent the associations between depression symptoms and parents' raring practices. This suggests the possibility that school context acts as a mediator between emotional warmth by mother and delinquent behavior. This finding has important practical implications in terms of shedding some insight on how multiple systems might be interlinked in influencing wellbeing in adolescents and confirms the importance of intervening at the double platform of both the family and the school system

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