

Early Detection of Internalizing Problems in Preschool Children According to their Teachers

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Abstract

The purpose of this research, which was carried out for the first time in Greece, is to focus on the early detection of preschool children's *internalizing problems*, according to their teachers' perceptions. The participants, 77 preschool teachers of 77 half-day and all-day preschool classes from the thirteen regions of Greece, completed: (a) the "Caregiver-Teacher Report Form (C-TRF) for ages 1½-5" of Achenbach (Achenbach & Rescorla, 2009) and (b) the "Demographic Questionnaire" (Doni, 2015), considering 1.234 mixed gender (617 boys and 617 girls) children 4-6 years of age. According to the results, preschool teachers detected *internalizing problems* in 10.4 % of the children, of whom 6.9% was included in the clinical range, while 3.5% was included in the borderline range. The highest rate, 10.9 % of the children, was included in either clinical or borderline range for *withdrawal syndrome*. Boys had higher rates of *internalizing problems* than girls. Moreover in all-day preschools, preschool teachers detected more cases of children with *emotional reactivity*. These findings could be useful in future studies specialized on children's social and emotional functioning, in a future revision of universities curricula associated with early childhood education, as well as in preschool teachers' training programs, by including modules related to the accurate and early detection and treatment of *internalizing problems* experienced by preschoolers.

Keywords: preschool teachers' perceptions, early detection, preschool students' internalizing problems, C-TRF of Achenbach.

1. Introduction

The Greek population has experienced socioeconomic changes with a clear psychological impact, mainly since 2010, when the global financial crisis affected many countries of Europe, including Greece (Giotsa & Mitrogiorgou, in press). Children are a vulnerable population group and, according to Anagnostopoulos and Soumaki (2012), the psychological effect of crisis is obvious, not only by the child psychiatric services' data, but also by children's behavior within their environment (family, school, social life). Specifically, Anagnostopoulos and Soumaki (2012, 2013) argue that there are increased percentages of psycho-social problems in childhood (rise by 40%).

Preschool age, is considered as the best time for an early detection of *internalizing problems* as well as the right period for an early intervention, in order to deal with them (Achenbach & Rescorla, 2009; Cole et al., 2008; McCabe & Altamura, 2011). In Greece, that schooling begins at the age of four and the time spent in a preschool has increased (all-day preschool), the school context has become an important setting where these types of difficulties can be detected. In addition, the importance of evaluation in preschool age is enhanced by the increased rates of *internalizing problems* in children (Briggs et al., 2013; Knitzer & Perry, 2009). Finally, longitudinal research confirms that *internalizing problems* in preschoolers are stable and continuous during childhood (Achenbach et al., 1987; Fuchs et al., 2013; Keenan et al., 1998) and adolescence (Bosquet & Egeland, 2006; Strickl et al., 2011) for about 23% to 61% of the children.

1.1 *Internalizing problems*

In Caregiver-Teacher Report Form (C-TRF) for ages 1½ -5 (Achenbach & Rescorla, 2009), the main data collection tool in our research, the term *internalizing problems* refers to problems of a child's inner world (Achenbach & Rescorla, 2000). *Internalizing problems* include syndromes such as *emotional reactivity*, *depression/anxiety*, *somatic complaints and withdrawal* (Achenbach & Edelbrock, 1984). According to Manolitsis and Tafa (2005), there are no age differences in the incidence of *internalizing problems* in preschoolers. However, research results show that it is more likely for girls to exhibit these problems (Beidel et al., 2000; Beyer et al., 2012; Kazdin, 1995; Manolitsis & Tafa, 2005; Morgan et al., 2008; Ollendick & King, 1991). The type of school (all-day or half-day preschool) is also a factor linked to *internalizing problems* exhibited by preschool students, since extended school time may be stressful and exhausting (Emery et al., 1998; Mashburn & Henry, 2004). Finally, Pianta et al. (2005) argue that positive emotional interactions can be more easily developed in preschool classes with a small number of students.

1.2 *Emotional reactivity*

Emotional reactivity refers to the tendency of people to experience frequent and intense emotional stimuli (Karrass et al., 2006; Rothbart & Derryberry, 1981), which help them achieve their objectives and adapt to different environments (Campos et al., 2004). According to Achenbach, *emotional reactivity* is an *internalizing problem* which can be tested by using detection tools constructed by him and his associates (Achenbach, 1991; Achenbach et al., 2003; Achenbach & Rescorla, 2009).

1.3 *Depression/anxiety*

Depression, as a separate syndrome is a psychiatric mood disorder characterized by excessive sadness and loss of interest in activities normally pleasant for the person (Liu et al., 2011). *Anxiety* can be described as a “state of worry without apparent cause” (Johnson & Melamed, 1979). Anxiety disorders are the most common type of psychiatric disorders in children (Costello & Angold, 1995), with separation anxiety disorder and selective mutism disorder appearing only in children (American Psychiatric Association, 1994). In the ICD-10 (International Statistical Classification of Diseases-10th revision) of the World Health Organization (World Health Organization, 2010) depression and anxiety are mentioned together, as a single syndrome, called mixed *anxiety/depressive disorder*. This study is based on the categorization developed by Achenbach, where depressive and anxiety disorders are not examined separately, but as a single syndrome with the name “*Depression/anxiety*”, classified as an *internalizing problem* (Achenbach, 1991; Achenbach et al., 2003; Achenbach & Rescorla, 2009).

1.4 Somatic complaints

Somatic complaints are defined as somatic symptoms that occur without any specific organic cause (Brown, 2007; Steinhausen, 2006). Domenech-Llaberia et al. (2004) found that, during early childhood, the *somatic complaints* most frequently mentioned are stomachaches (in 38.8%), tiredness (in 20.4%), headache (in 16.7%) and pain at the lower limbs (in 16.6%). According to several researchers, preschool children develop *somatic complaints*, with an increasing frequency later in life (Bass & Murphy, 1995; Domenech-Llaberia et al., 2004; Rask et al., 2009; Zuckerman et al., 1987).

1.5 Withdrawal

The term (*social*) *withdrawal* is used to describe the situation in which a child exhibits a systematic tendency to avoid peers and be isolated (Rubin & Coplan, 2004). This behavior may occur even if the peers are not strangers, but some familiar people (Hart et al., 2000; Rubin et al., 2002). Children with *withdrawal* behavior speak much less, when interacting with others, than children who do not exhibit such behavior (Schneider, 1999). Moreover, they have deficits in social competence and in cooperation skills (Bohlin et al., 2005).

1.6 Preschool teachers' perception of internalizing problems

In general, preschool teachers often state that the *internalizing problems* of their students are too demanding and difficult to deal with (Nutbrown & Clough, 2004). According to Poulou (2013b), teachers' perceptions of *internalizing problems* exhibited by their students, as well as the interpretations of the things that cause them, (temperament, family, school or wider social environment) will determine to a significant extent, the way a preschool teacher confronts them. In particular, Liljequist and Renk (2007) argue that, for preschool teachers, the causes differ depending on the type of the problem. Lovejoy (1996) states that teachers tend to attribute the development of *internalizing problems* to internal and more stable reasons, related to child's temperament and not to the different environments in which a child acts (family, school, peers, neighborhood).

1.7 Early detection

The stability of *internalizing problems* and their continuity over time are two factors that make early detection in preschool very important (Feeney-Kettler et al., 2010). Different researchers (Costello et al., 2003; Mesman et al., 2001; Richman et al., 1982) argue that the children who had developed *internalizing problems* in preschool age, continued to exhibit these problems later in their life.

1.8 Main research purpose and specific objectives

The main purpose of our research is to focus on the early detection of preschool children's internalizing problems, according to their teachers' perceptions. Specific objectives of our research were to investigate the factors influencing the detection of internalizing problems by preschool teachers. These factors are related to: (a) the specific characteristics of their students (gender, age); and (b) the characteristics of the school unit (type of school, number of children in the classroom).

1.9 Research hypotheses

Hypothesis 1. The classification of students to normal, borderline and clinical range, for the separate syndromes (*emotional reactivity, depression/anxiety, somatic complaints and withdrawal*) and *internalizing problems* depends on the gender.

Hypothesis 2. The classification of students to normal, borderline and clinical range, for the separate syndromes (*emotional reactivity, depression/anxiety, somatic complaints and withdrawal*) and *internalizing problems*, depends on their age (4-5, 5-6 years old).

Hypothesis 3. The classification of students to normal, borderline and clinical range, for the separate syndromes (*emotional reactivity, depression/anxiety, somatic complaints and withdrawal*) and *internalizing problems*, depends on the type of school (half-day, all-day).

Hypothesis 4. The classification of students to normal, borderline and clinical range, for the separate syndromes (*emotional reactivity, depression/anxiety, somatic complaints and withdrawal*) and *internalizing problems*, depends on the total number of children in the classroom.

2. Methodology

2.1 Sample and design

The sampling method selected for the particular sample was random sampling in groups or “blocks” (cluster sampling) (Paraskevopoulos, 1993; Tomaras, 2005). This method was considered appropriate because it is used when the role of geography is important (Tomaras, 2005). In this study, the geographical coverage included all the thirteenth regions of Greece. The population consisted of all the children aged 4-6 years¹, who attended preschool during the academic year 2011- 2012 in every public preschool of Greece (Hellenic Statistical Authority, 2012). On a first level we selected all the thirteen (13) geographical regions of Greece and, on a second level, we randomly selected seventy seven (77) half-day and all-day preschool classes from all the regions. Preschool teachers, after they had been informed for the purpose of the research, completed: (a) C-TRF (Achenbach & Rescorla, 2009) for every child in their class, and (b) a “Demographic Questionnaire” (Doni, 2015). These questionnaires were completed after class. After they had completed the questionnaires, they sent them back via post (pre-paid envelope). The data collection took place during the academic year 2011-2012.

2.2 Participants

The participants, 77 preschool teachers of 77 half-day and all-day preschool classes (Table 1), from the thirteen regions of Greece, completed questionnaires considering 1.234 mixed gender (617 boys and 617 girls) toddlers and preschoolers 4-6 years of age (M=5,65, sd=0,64) (Table 2).

2.3 Instrumentation

(A) “Caregiver-Teacher Report Form (C-TRF) for ages 1½ -5”, based on the Achenbach System of Empirically Based Assessment (ASEBA) (Achenbach & Rescorla, 2009). At the

¹ Collecting data from children aged 5-6 years is allowed, because the age deviation from the norms of FAN-B is not significant (Achenbach & Rescorla, 2009, <https://bib.aseba.org>). Moreover, no child in the sample was older than 6 years of age.

beginning, C-TRF has demographic questions followed by 97 closed-ended questions which reflect the opinions of educators (preschool teachers, childminders or people who take care of children of this age) about internalizing and externalizing problems. Finally, it includes three open-ended questions which are not scored. C-TRF enables a quality assessment of children, classifying boys separately from girls, through cutpoints, to those who belong to the normal range and those who belong to the clinical range. Between normal and clinical ranges, there is one called borderline range. The borderline range indicates that the rating of the child, to one or more syndrome scales, is high enough to create concern about providing the child with professional help, however, it does not deviate as much as a score that is in the clinical range (Achenbach & Rescorla, 2009, pp. 89-112). C-TRF has been “weighed and translated into more than 60 different languages” (Achenbach & Rescorla, 2009: 13), while its scientific documentation has been recorded, until now, in more than 8610 scientific articles (ASEBA, <https://bib.aseba.org>, 2014). C-TRF’s scales are harmonized with the diagnostic categories of DSM-IV (Achenbach & Rescorla, 2009). For the present study we used the Greek version of C-TRF which was adjusted, validated and weighted in Greek by Ioannis Tsaousis in 2003 (Achenbach & Rescorla, 2009). Filling in this form does not require any special training, since the instructions are clear and helpful, so that teachers can perform the assessment quickly and easily.

(B) The “Demographic questionnaire” (Doni, 2015). This questionnaire was designed by the researcher, for the purposes of the present research. It is not commercially available and consists of 11 closed-ended and open-ended questions that refer to demographic data of preschool teachers, as well as information on the type of school (half-day, all-day) and the number of students in the classroom.

2.4 Method of statistical analysis

The classification of children in the clinical, borderline normal range for *emotional reactivity*, *depression/anxiety*, *somatic complaints* and *internalizing problems* or syndromes group was correlated with the categorical variables which were recorded using the Pearson Chi Square criterion and in cases where the conditions were not met, the Fisher’s Exact test. For the correlation with continuous sample measurements, we carried out the necessary normality tests with QQ plots and the Shapiro Wilk criterion. We used one-way Analysis of Variance (ANOVA) or the Kruskal Wallis criterion and then multiple comparisons with the Bonferroni or Dunnett’s criterion respectively, depending on the fulfillment of conditions. Results were analyzed with the use of multinomial logistic regression models (Garson & Anderson, 1982). In these models, the different syndromes and the *internalizing problems* were defined as dependent variables, by classifying children into normal, borderline and clinical range. The particular characteristics of the children [gender, age (4-5 and 5-6 years old)], the type of school (half-day, all-day) and the number of students in the classroom were defined as independent variables.

3. Results

As shown in Table 3, the overall rate of *internalizing problems*, exhibited by the students of our sample, was 10.4%, 3.5% of whom was included in the borderline range and 6.9% in the clinical range. As regards the separate syndromes, according to our results, 8.1% of the students experienced *emotional reactivity*, 6.9% of whom was included in the borderline range and 1.2% in the clinical range. 3.9% experienced *anxiety/depression*, 2.8% of whom was included in the borderline range and 1.1% in the clinical range. 7.7% of the students exhibited *somatic complaints*, 4.9% of whom was included in the borderline range and 2.8% in the clinical range and 10.9% experienced *withdrawal*, 8.1% of whom was included in the borderline range and 2.8% in

the clinical range. Table 4 summarizes the means and ranges of the sample's scores of *emotional reactivity*, *depression/anxiety*, *somatic complaints* and *withdrawal*.

Statistically significant differences (Table 5) were observed in the distribution of normal, borderline and clinical cases, for *internalizing problems* in relation to: (a) the total number of children in the classroom, $\chi^2=19.08$, $p = ,000$ and (b) the children's gender, $\chi^2 = 6.9$, $p = ,032$.

Statistically significant differences were found in the distribution of normal, borderline and clinical cases for:

Emotional reactivity (Table 6) in relation to: (a) the total number of children in the classroom, $\chi^2 = 16.43$, $p = ,000$ and (b) the type of school, $\chi^2 = 6.16$, $p = ,046$.

Anxiety/depression (Table 7) in relation to the total number of children in the classroom, $\chi^2 = 6.23$, $p = ,044$.

Somatic complaints (Table 8) in relation to: (a) the total number of children in the classroom, $\chi^2 = 27.15$, $p = ,000$ and (b) the children's gender, $\chi^2 = 48.90$, $p = ,000$.

Withdrawal (Table 9) in relation to: (a) the total number of children in the classroom, $\chi^2 = 26.22$, $p = ,000$ and (b) the children's gender, $\chi^2 = 6$, $p = ,049$.

4. Discussion

The main purpose of this research is to focus on the early detection of preschool children's *internalizing problems*, according to their teachers' perceptions. As seen from the results, 94.6% of the children in our sample is included in the normal range. These findings agree with the research findings of Berkhout, Dolk and Goorhuis-Brouwer (as reported by Berkhout et al., 2012) and Berkhout et al. (2012), in which more than 90% of the children in their sample (98 and 96% respectively), was included in the normal range. These variations occur, probably, due to the much smaller sample size in these foreign studies, which consisted of 228 preschool children, while ours consists of 1,234 children 4-6 years old ($M=5.65$, $SD=0.64$).

The prevalence of *internalizing problems*, in the children of our sample is 10.4%, of which 6.9% is included in the clinical range, while 3.5% is included in the borderline range. Our research findings are consistent with Harden et al. (2000), who confirmed that 6.5% of the children in their sample has *internalizing problems* in the clinical range. The data analysis, especially for each syndrome separately, shows that in most syndromes the clinical range rates are between 1.1 and 2.8%, while borderline range rates are between 2.8 and 8.1%. However, *withdrawal* receives the highest rate, since 10.9% of the children in our sample, exhibits this syndrome. 2.8% of these children is included in the clinical range and 8.1% in the borderline range. In Kontopoulou's (2003) research, which explored the views of preschool teachers in relation to major behavioral problems associated with the adjustment of the child at school, *withdrawal* received the highest rates (56%).

Anxiety/depression received the lowest rate (3.9%) according to our results, 1.1% of these children is included in the clinical range and 2.8% in the borderline range. The findings of this study are consistent with the findings of many (non-clinical) surveys, in which the rate of major depressive disorders does not exceed 2,0% in preschoolers (Egger & Angold, 2006; Kashani et al., 1997; Liu et al., 2011; Morgan et al., 2014). The low rate of *anxiety/depression* is, probably, due to the fact that, *internalizing problems* are often ignored in school contexts, because children do not easily express them to their teachers (Rescorla et al., 2007). Moreover, the symptoms of depression in preschoolers usually go unnoticed because children "cannot verbally express unpleasant emotions" (Poulou 2013a: 148).

4.1 *The effect of gender*

There are statistically significant differences between gender in some syndromes and groups of syndromes (*somatic complaints, withdrawal and internalizing problems*), while in other syndromes these differences are not statistically significant (*anxiety/depression and emotional reactivity*). Our research findings are consistent with the research of Berkhout et al. (2012) and Furniss et al. (2006), where boys also exhibit higher rates of *internalizing problems*. However, in most surveys, boys exhibit lower rates of *internalizing problems* (Beidel et al., 2000; Beyer et al., 2012; Kazdin, 1995; Manolitsis & Tafa, 2005; Morgan et al., 2008; Ollendick & King, 1991). The different rates between the two genders (as they appear in the different studies), in the incidence of *internalizing problems*, occur, according to Renk (2008), due to the different standpoint of each informant.

Winer and Philips (2012) report that a lot of research in elementary students confirms the existence of bias in teachers' evaluation of the behavior and performance in boys and girls. For example, girls' reading and math skills are often overestimated compared to boys'. Moreover, girls usually receive less criticism and establish, less often, confrontational relationships with the teacher of the same sex.

4.2 *The effect of children's age*

According to our research results, four hundred and thirty seven (437) out of the one thousand two hundred and thirty four children (1.234) (35.4%) are 4-5 years old, and seven hundred ninety seven (797) (64.6%) are 5-6 years old. From the correlation analysis between the children's age and the onset of the syndromes, the *internalizing problems* and the total problems, it does not occur any statistically significant difference. According to Poulou (2013b), research on age differences in child behavior during preschool years, is quite limited and the picture is rather obscure. The results of this research, however, are consistent with the research findings of Manolitsis and Tafa (2005), who did not observe any differences in the incidence of *internalizing problems* between 4-5 year olds and 5-6 years olds.

4.3 *The type of school (half-day/all-day)*

Particularly for *emotional reactivity*, 1.8% of the children who attended all-day preschool, was included in the clinical range, 9.7% was included in the borderline range and 88.5% in the normal range. 0.9% of the children who attended half-day preschool was included in the clinical range, 5.6% in the borderline and 93.5% in the normal range, respectively. It seems that extended school time, has a clearly negative (inclusion in the clinical range), or somewhat negative impact (inclusion in the borderline range) on the social and emotional functioning of the children in our sample. These findings are confirmed by other studies, according to which, the extended school time in preschool actually exhausts children (Emery et al., 1998), who consequently argue with their teachers and exhibit more *internalizing problems*, due to stress and frustration caused by the extended time spent at school (Mashburn & Henry, 2004).

4.4 *The total number of children in the classroom*

In classes with larger numbers of students there are more cases of children among the normal range either than the borderline or clinical range for all 4 syndromes and *internalizing problems*. Seeking for a possible interpretation of these findings, we would argue that classes with larger numbers of children seem to create dynamics that are likely to result in either: (a) the

limited incidence of *internalizing problems* in children, or (b) the increased difficulty for teachers to detect any issues. Given that *internalizing problems* in preschool children are mainly associated with dysfunctional relationships (Henricsson & Rydell, 2006), the infrequent incidence of such problems in crowded classrooms could possibly be due to the existence of positive interactions among students.

5. Conclusion

Through this study, there has been an effort, for the first time in Greece, to explore, on a national level, whether preschool students exhibit *internalizing problems* which can be detected by their preschool teachers. The findings show that boys exhibit higher rates of *internalizing problems* than girls. Moreover, the prevalence of *emotional reactivity* seems to be higher in preschoolers who attended all-day preschool. Finally, *internalizing problems* are less frequent in classes with larger numbers of students. These results could be used as a reference point and as a point of comparison in future, more specialized studies on the social and emotional functioning of preschool children. Moreover, they could be useful in a future revision of the Greek analytical curriculum for preschool education, which should aim at the social and emotional development of children among other targets.

6. Limitations – Suggestions for future research

While considering methodological implications of the current study, the sampling design and in turn overgeneralization of the findings should be taken into account. The detection of *internalizing problems* in preschool children, with the use of psychometric tools by their teachers, carries a large degree of subjectivity, an element which exists almost as a “principle” in several studies which explore the perceptions of preschool teachers on this issue (Kleftaras & Didaskalou, 2006; Liljequist & Renk, 2007; Poulou, 2013b; Poulou & Norwich, 2000). In a future research, information for a child may be collected, from parents and other important key persons (e.g. a grandmother or a grandfather), independently or in combination with C-TRF, using a valid and reliable psychometric tool the “Child Behavior Checklist for ages 1½ -5” (CBCL) of Achenbach, which has been also standardized for Greek populations (Achenbach & Rescorla, 2009; Rescorla, 2009). Moreover, in a different research caregivers could be included in the sample, in order to avoid the overestimation of parental reports (Carter et al., 2004). Future research could also examine the effect of specific variables-factors related to the family, on the incidence of *internalizing problems* in preschool children, as for example, parents’ occupation, family income, family size, parents’ age, child’s place of residence and type of family (nuclear, extended, single parent, binuclear). Other factors such as the emotional climate of the family, parental psychopathology and rearing practices (parenting) are worth exploring. It would be also interesting if researchers examined the effect of variables related to the psychological state of preschool teachers (stress, depression, job burnout), on the way they detect *internalizing problems* exhibited by their students. Furthermore, the influence of factors associated with neighborhood and community, on the incidence of *internalizing problems* in children, is rather interesting for future research.

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Tables

Table 1. Type of school

		Number of schools	Percentage %	Number of students	Percentage %
Type of school	All-day classes	52	67.5	843	68.2
	Half-day classes	25	32.5	390	31.8
	Total	77	100	1234	100

Table 2. Gender and age distribution of students

		Number of students	Percentage %
Gender	Boys	617	50.0
	Girls	617	50.0
Total		1234	100
Age	4-5 years	437	35.6
	5-6 years	797	64.4
Total		1234	100

Table 3. Rates of the separate syndromes and internalizing problems for the normal, borderline and clinical range

		Number of students	Percentage %
Emotional reactivity	Normal	1,134	91.9
	Borderline	85	6.9
	Clinical	15	1.2
Anxiety/depression	Normal	1,186	96.1
	Borderline	35	2.8
	Clinical	13	1.1
Somatic complaints	Normal	1,139	92.3
	Borderline	61	4.9
	Clinical	34	2.8
Withdrawal	Normal	1,099	89.1
	Borderline	100	8.1
	Clinical	35	2.8
Internalizing problems	Normal	1,106	89.6
	Borderline	43	3.5
	Clinical	85	6.9
		1,168	94.6

Table 4. Means and ranges of the sample's scores of emotional reactivity, depression/anxiety, somatic complaints and withdrawal

	Mean	Range			Possible Range according to Achenbach		
		Normal	Borderline	Clinical	Normal	Borderline	Clinical
Emotional reactivity	1.15	0-4	5-7	8-12	0-4	5-7	8-14
Depression/anxiety	1.72	0-6	7-9	10-16	0-6	7-9	10-16
Somatic complaints	0.44	0-1	2-4	5-9	0-1	2-4	5-14
Withdrawal	1.73	0-5	6-11	12-20	0-5	6-11	12-20
Internalizing problems	3.97	0-12	13-15	16-44	0-12	13-15	16-45

Table 5. Statistical correlations of internalizing problems

Effect	-2 Log (Likelihood of Reduced Model)	Likelihood Ratio Tests		
		Chi-square	Df	Sig.
Intercept	573.572 ^a	.000	0	.
Children's gender	580.473	6.901	2	.032*
Children's age	575.237	1.666	2	.435
Type of school	576.195	2.623	2	.269
Total number of children in classroom	592.654	19.083	2	.000*

Nagelkerke's Pseudo R Square for the model: 0.115

Table 6. Statistical correlations of emotional reactivity

Effect	-2Log (Likelihood of Reduced Model)	Likelihood Ratio Tests		
		Chi-square	Df	Sig.
Intercept	450.761 ^a	.000	0	.
Children's gender	454.474	3.713	2	.156
Children's age	453.360	2.600	2	.273
Type of school	456.919	6.159	2	.046*
Total number of children in classroom	467.193	16.432	2	.000*

Nagelkerke's Pseudo R Square for the model: 0.151

Table 7. Statistical correlations of anxiety/depression

Effect	-2Log (Likelihood of Reduced Model)	Likelihood Ratio Tests		
		Chi-square	Df	Sig.
Intercept	267.257 ^a	.000	0	.
Children's gender	267.336	.079	2	.961
Children's age	267.336	.079	2	.961
Type of school	268.814	1.556	2	.459
Total number of children in classroom	273.492	6.234	2	.044*

Nagelkerke's Pseudo R Square for the model: 0.104

Table 8. Statistical correlations of somatic complaints

Effect	-2Log (Likelihood of Reduced Model)	Likelihood Ratio Tests		
		Chi-square	Df	Sig.
Intercept	419.988 ^a	.000	0	.
Children's gender	468.892	48.904	2	.000*
Children's age	420.257	.269	2	.874
Type of school	423.627	3.638	2	.162
Total number of children in classroom	447.144	27.155	2	.000*

Nagelkerke's Pseudo R Square for the model: 0.264

Table 9. Statistical correlations of withdrawal

Effect	-2Log (Likelihood of Reduced Model)	Likelihood Ratio Tests		
		Chi-square	Df	Sig.
Intercept	568.932 ^a	.000	0	.
Children's gender	574.928	5.996	2	.049*
Children's age	570.222	1.290	2	.525
Type of school	570.664	1.732	2	.421
Total number of children in classroom	595.153	26.221	2	.000*

Nagelkerke's Pseudo R Square for the model: 0.102

