Article

Sociodemographic Characteristics, Behavioral Problems, Parental Concerns and Children's Strengths Reported by Parents[1]

Deisy Ribas Emerich[2]
*Faculdades Metropolitanas Unidas,
São Paulo-SP, Brazil*

Luiz Renato Rodrigues Carreiro
*Universidade Presbiteriana Mackenzie,
São Paulo-SP, Brazil*

Ana Maria Justo
*Universidade Federal do Espírito
Santo, Vitoria-ES, Brazil*

Paula Guedes
*Universidade Presbiteriana Mackenzie,
São Paulo-SP, Brazil*

Maria Cristina Triguero Veloz Teixeira
*Universidade Presbiteriana Mackenzie,
São Paulo-SP, Brazil*

Abstract: Parental report is essential to understand adaptive difficulties in childhood. The aim of the study was to identify concerns of parents and qualities of children reported by parents, as well as the association of these variables with sociodemographic factors and child behavior problems. Parents of 353 schoolchildren from three public schools and one private school took part in the study. Assessment of behavior problems and parental reports about concerns and children's strengths were obtained from the Child Behavior Checklist - CBCL. We submitted parents' answers to the open-ended questions in the CBCL to a lexical analysis with the IRAMUTEQ software. Results concerning 'strengths' were related to affective and social interaction, while 'concerns' were related to academic performance and prevention of behavior problems. We concluded that parent concerns are targets of preventive interventions in childhood, while child strengths reported by parents are skills that need to be developed, as they help in adaptive functioning.

Keywords: children, parents, child behavior checklist, behavior disorders

Características Sociodemográficas, Problemas Comportamentais, Preocupações e Qualidades das Crianças relatadas por Pais

Resumo: O relato de pais é essencial na compreensão de dificuldades adaptativas na infância. O objetivo do estudo foi identificar preocupações dos pais e qualidades dos filhos, relatadas pelos pais, bem como a associação dessas variáveis com fatores sociodemográficos e problemas de comportamento das crianças. Participaram 353 pais de alunos de três escolas públicas e uma escola privada. A avaliação de problemas de comportamento dos filhos e o relato dos pais sobre preocupações e qualidades foram obtidos com o Inventário de Comportamentos para Crianças e Adolescentes - CBCL. As respostas às questões abertas do CBCL foram submetidas à análise lexical no *software* IRAMUTEQ. Resultados sobre qualidades da criança foram relacionados à interação afetiva e social. As preocupações foram relacionadas a desempenho acadêmico e prevenção de problemas de comportamento. Concluímos que as preocupações relatadas são indicativas de alvos para intervenções preventivas e as qualidades, se desenvolvidas, poderão auxiliar no funcionamento adaptativo.

Palavras-chave: crianças, pais, lista de verificação comportamental para crianças, distúrbios do comportamento

Características Sociodemográficas, Problemas Conductuales, Preocupaciones y Cualidades de Niños Relatadas por Padres

Resumen: El relato de padres es esencial para la comprensión de dificultades adaptativas de niños. Los objetivos de este estudio fueron identificar preocupaciones y cualidades relatadas por padres y verificar sus asociaciones con factores sociodemográficos y problemas de conducta. Fueron participantes 353 padres de alumnos de cuatro escuelas públicas y una privada. La evaluación de problemas de comportamiento de los hijos y el relato de los padres sobre preocupaciones y cualidades fueron obtenidos con la Lista de Comportamientos para Niños y Adolescentes (CBCL). Conducimos un análisis lexical de las respuestas a las preguntas abiertas de la CBCL mediante el software IRAMUTEQ. Los resultados sobre las cualidades del niño fueron relacionados con la interacción afectiva y social. Las preocupaciones estuvieron relacionadas al desempeño académico y la prevención de problemas de comportamiento. Concluimos que las preocupaciones de los padres indican metas para intervenciones preventivas en la infancia, mientras que las cualidades, si desarrolladas, podrán auxiliar el funcionamento adaptativo.

Palabras-clave: niños, padres, lista de verificacion del comportamiento infantil, transtornos de la conducta

Verbal report is a usual strategy to assess behavior problems (De Rose, 1997). When the target is children's behavior, parental verbal report is a first step in identifying problems and adequate repertoires. Besides that, the formulation of functional behavior hypotheses requires other methodological procedures, such as direct observation and

Available in www.scielo.br/paideia

functional analysis (Bolsoni-Silva & Loureiro, 2011; Leme, Bolsoni-Silva, & Carrara, 2009).

The classification of behavioral topographies used by Achenbach and Edelbrock (1978) is widely accepted by behavioral analysts. They have classified two categories of behavior problems: externalizing and internalizing (Achenbach & Edelbrock, 1978). Externalizing problems are behaviors that affect the environment, such as impulsivity, nervousness, aggressiveness, impatience/restlessness, destructiveness, disobedience, teasing behavior and fights (Achenbach & Edelbrock, 1978; Bolsoni-Silva & A. Del Prette, 2003). On the other hand, internalizing problems do not affect other people directly. Examples of this type of complaint are withdrawal, depression, anxiety, irritability, sadness, somatic complaints related to emotional functioning, shyness, excessive preoccupation, insecurity and fears (Achenbach & Edelbrock, 1978; Bolsoni-Silva & A. Del Prette, 2003; Hourigan, Southam-Gerow, & Quinoy, 2015).

Behavioral assessment inventories are an important methodological resource to check behavioral topographies of children and adolescents through parental report. The Child Behavior Checklist for Ages 6-18 (CBCL / 6-18) (Achenbach & Rescorla, 2001) allows this type of verbal report through questions about parental concerns and descriptions of children's positive aspects. These questions allow the assessment of possible behavior problems (which can be inferred from the reported concerns) and appropriate behavior (which can be inferred from the report of positive aspects of the child).

Parents' perception about behavior problems of their children can influence their proneness to search for specialized support (Johnson & C. Wang, 2008). For instance, parents might search for a mental health service when their child's socio-emotional adaptation or social interaction is impaired or when they feel overloaded by their parenting role (Matijasevich et al., 2014; Wichstrøm, Belsky, Jozefiak, Sourander, & Berg-Nielsen, 2014). One of the major factors that influence parental concerns about their children is the occurrence of externalizing behavior problems that affect the child's behavior adjustment (Nunes, Faraco, Vieira, & Rubin, 2013).

However, it is also important to assess the influence of the degree of family support, socioeconomic status, educational level of parents, as well as parental perception about children behavior problems (Gomide, 2009). Sociodemographic factors, characteristics of the familiy, mental health of parents and academic performance have been studied to verify possible associations between these variables and behavior problems and social competences of children and adolecents (D'Abreu & Marturano, 2010; Ferriolli, Marturano, & Puntel, 2007; F.R. Souza & Mosmann, 2014). D'Abreu and Marturano (2010) have made a bibliographic survey on five databases of prospective and longitudinal studies that focused on the association of externalizing behavior problems and poor academic performance in elementary school (period of 1990-2006). The analysis revealed that the co-ocurrence of poor academic performance and externalizing problems suggests the interference of adverse familiar con-

ditons and low socioeconomic level. Likewise, Lins, Alvarenga, Paixão, Almeida, and Costa (2012) have published a literature review of Brazilian studies focused on externalizing problems and aggressiveness and their relation with adaptive difficulties and childhood suffering. The analysis showed that the main factors related to externalizing problems/aggressiveness were linked to parental educational practices and gender of the child.

Ferriolli et al. (2007) assessed indicators of the family context associated with mental health problems in schoolchildren. This was a cross-sectional study, involving 100 children (age range 6 to 12 years) and their family members. The following variables were assessed: socioeconimoc level, adverse events, maternal stress, maternal depression, organization and structure of the family environment. Maternal stress appeared associated to general mental health problems in children and as a risk factor to anxiety/depression symptoms. F.R. Souza and Mosmann (2014) explored relations between sociodemographic variables and behavior problems in childhood. Thus, they characterized demographic factors of mothers and teachers of children and adolescents sent to psychotherapy. The main results about mothers indicated that older mothers assessed their children with lower scores in breaking rules behavior when compared to younger mothers. As for the factor income, there was no statistically significant difference in the perception of emotional and behavior problems.

There are different strategies to assess children's behavior problems and most of them are based on parent and teacher reports (Cianchetti et al., 2013; Lagattuta, Sayfan, & Bamford, 2012; Liu, Cheng, & Leung, 2011). Verbal parent-report questionnaires and surveys are essential to identify children's global emotional and behavior difficulties (American Psychiatric Association, 2014; Cianchetti et al., 2013; Rocha et al., 2013). There are important tools that describe difficulties and concerns about children and adolescents using standardized questions, such as the Strengths and Difficulties Questionnaire (Goodman, 2001). However, few standardized assessment tools include open-ended questions to identify strengths and concerns about the assessed child or adolescent. The Child Behavior Checklist for Ages 6-18 (CBCL/6-18), developed by Achenbach and Rescorla (2001), is a standardized instrument that contains qualitative questions about positive aspects (strengths) and concerns related to the child/adolescent. In this regard, this instrument allows mental health professionals to assess parental concern and children's strengths, as well as data about behavior problems from multiple-choice items.

The use of open-ended questions to obtain parental reports of concerns and strengths related to children can be a strategy to detect several behavior problems that are common in childhood (Biel et al., 2015), such as socialization problems, low self-esteem, academic difficulties and other externalizing and internalizing behavior problems (W.W. Chen & Wong, 2014; Okano, Loureiro, Linhares, & Marturano, 2004). Requiring parents to describe their concerns and children's strengths can direct their attention to observe the children/adolescents and their environment more care-

fully (Hoberman et al., 2013; Rescorla et al., 2012).

Verbal reports of concerns and children's strengths may help to identify important information about children's behavioral patterns, such as observable behaviors (aggressiveness) and covert behaviors (feelings). Thus, the objectives of this study were to identify concerns of parents and qualities of children reported by parents, as well as the association of these variables with sociodemographic factors and child behavior problems.

Method

Participants

The sample comprised 353 parents of schoolchildren (6-11 years old; from 1st to 5th grade) from three public and one private school in Barueri (State of São Paulo) and São Paulo, using non-probabilistic sampling selected by convenience. For both types of schools, informants were biological mothers or fathers (approximately 95%) who spent at least six hours a day with the child (Table 1).

Table 1

Socio-Demographic Characteristics of the Sample

Variables	*n*	*%*	*M (SD)*
Children	—	—	—
Age	—	—	8.35 (1.35)
Gender	—	—	—
Male	170	48.15	—
Female	183	51.85	—
Parents	—	—	—
Age	—	—	37.39 (7.38)
Gender	—	—	—
Male	52	14.75	—
Female	301	85.25	—
Relation to child	—	—	—
Biological mother or father	337	95.50	—
Adoptive mother or father	5	1.40	—
Other	11	3.10	—
Education	—	—	—
Elementary school incomplete	13	3.70	—
Elementary school complete or middle school incomplete	22	6.20	—
Middle school complete or high school incomplete	33	9.40	—
High school complete or University degree incomplete	162	45.90	—
University educational level	123	34.80	—
ABEP Socio-economic status	—	—	—
Class A	72	20.40	—
Class B	168	47.60	—
Class C	105	29.70	—
Class D	8	2.30	—
Class E	—	—	—

Note. N = 353. ABEP= Association of Research Companies for Economic Classification of Families (Associação Brasileira de Empresas de Pesquisa, 2010).

Instruments

The *Child Behavior Checklist for Ages 6-18 (CBCL/ 6-18)* (Achenbach & Rescorla, 2001) was used to assess emotional and behavioral difficulties in children and adolescents based on the report of parents, referred to as "informants" here. CBCL is composed of multiple-choice items that assess competences (Social, Activities, and School Performance scales) as well as behavior and emotional problems. It also contains two open-ended questions: (1) What concerns you most about your child? (which assesses the main concerns), (2) Please describe the best things about your child (which assesses the children's strengths). Eight empirically based syndromes scales (Anxious/ Depressed, Withdrawn/ Depressed, Somatic

Complaints, Social Problems, Thought Problems, Attention Problems, Rule-Breaking Behavior, and Aggressive Behavior) and three broadband scales (Internalizing, Externalizing and Total Problems) are obtained from 118 behavior and emotional problem multiple-choice items. All scales allow a classification through standardized scores as normal, borderline and clinical range, compared by gender and age through Assessment Data Manager 7.1 (Achenbach & Rescorla, 2001). For syndrome and broadband scales, T scores below 65 represent normal range, between 65 and 69 represent borderline range and over 70 represent clinical range. CBCL is available in Portuguese (Bordin et al., 2013) and has empirical evidences for Brazilian schoolchildren (Rocha et al., 2013).

The ABEP questionnaire was used to assess sociodemographic data. This survey was developed by the Brazilian Association of Research Companies for Economic Classification of Families (Associação Brasileira de Empresas de Pesquisa [ABEP], 2010).

Procedure

Data collection. The researchers responsible for data collection presented this study during a previously scheduled meeting at the school and invited parents to take part. After acceptance, parents read and signed the informed consent term and then received the instruments (CBCL and ABEP questionnaire) to be completed individually. Data collection took place in groups composed of 30 parents, led by at least three trained researchers who were responsible for reading the instrument's instructions to the group.

Data analysis. Answers to open-ended questions about concerns and strengths reported by parents were subject to lexical analysis. This analysis was developed through IRA-MUTEQ – R Interface for Multidimensional Analysis of Texts and Questionnaires (Camargo & Justo, 2013). It involved the transcription of answers to CBCL open-ended questions and the creation of two text files ("strengths" and "concerns"). The answers of all 353 participants were analyzed by IRAMUTEQ in combination with: a) sociodemographic characteristics – child's age, gender and education level, type of school (public or private), informant's age, gender, educational level and his/her relation to child; b) socioeconomic status; c) CBCL broadband scales of behavior problems (internalizing, externalizing, and total), classified as normal or clinical. Following Achenbach and Rescorla's (2001) recommendation, the borderline classification was added to the clinical range.

IRAMUTEQ software performs classical lexical analysis. The program identifies and formats text units, transforming Initial Context Units (ICU) into Elementary Context Units (ECU, which in this study are described as typical text of the class). It identifies the number of words, average frequency and number of hapax (words spoken once); searches vocabulary and reduces the words based on their roots

(lemmatization); creates a dictionary of reduced forms; and identifies active and supplementary forms (Camargo & Justo, 2013). The software also calculates the frequency of words and treats parents' answers through a method of Descending Hierarchic Classification (DHC). Using a χ2 (chi-square) test of association, DHC provided, for each class, sets of words from the corpus (parents' answers to open-ended questions about concerns and strengths of their children) and characterization variables (sociodemographic characteristics and behavior problems) with significant statistical association with the class. The adopted statistical significance level was 95% ($p \leq .05$) when χ2 values were higher than 3.84, according to the preset value (2) in conditions of one degree of freedom (Dancey & Reidy, 2007; Lahlou, 2012). Only the results of dendrograms from IRAMUTEQ that reached statistical significance are presented.

Ethical Considerations

The project had the approval of the Ethics Committee for Research involving Human Beings of Universidade Presbiteriana Mackenzie (Process CEP/UPM 1374/08/2011 and CAAE 0069.0.272.000-11). After data collection, all parents were invited to a psycho-educational workshop about parental strategies for managing child behavior problems.
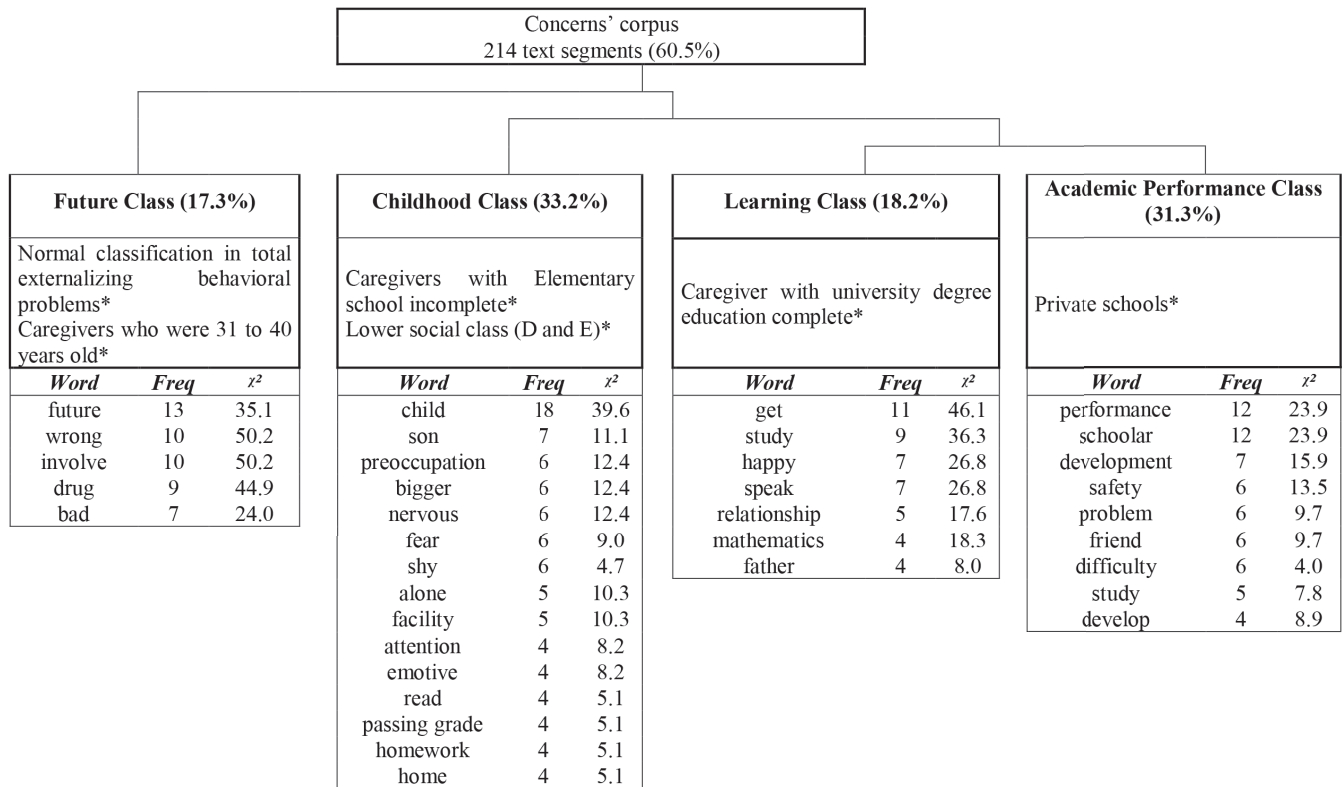
Results

Table 2 shows a descriptive analysis for CBCL multiple-choice question scores for CBCL broadband scales of behavior problems (internalizing, externalizing and total). There is a greater proportion of internalizing than externalizing problems in the clinical range.

Table 2

Percentage Distribution of Scores on Normal and Borderline/Clinical Ranges for CBCL/6-18

CBCL Scales	Normal Range		Clinical Range	
	n	*%*	*n*	*%*
Internalizing Problems	231	65.45	122	34.55
Externalizing Problems	299	84.70	54	15.30
Total Problems	268	75.95	85	24.05

The corpus of concerns was submitted to DHC. Out of 353 parental verbal reports about concerns, IRAMUTEQ used 60% of them for the analysis. This means that such reports were heterogenous. Textual analysis subdivided the corpus into four classes: Future, Childhood, Learning, and Academic Performance. Figure 1 shows the dendogram of the DHC with the lexical content for each class, followed by its frequency in the class, chi-square (χ2,) and significance levels.

Concerns' corpus
214 text segments (60.5%)

Future Class (17.3%)		
Normal classification in total externalizing behavioral problems* Caregivers who were 31 to 40 years old*		
Word	*Freq*	*χ²*
future	13	35.1
wrong	10	50.2
involve	10	50.2
drug	9	44.9
bad	7	24.0

Childhood Class (33.2%)		
Caregivers with Elementary school incomplete* Lower social class (D and E)*		
Word	*Freq*	*χ²*
child	18	39.6
son	7	11.1
preoccupation	6	12.4
bigger	6	12.4
nervous	6	12.4
fear	6	9.0
shy	6	4.7
alone	5	10.3
facility	5	10.3
attention	4	8.2
emotive	4	8.2
read	4	5.1
passing grade	4	5.1
homework	4	5.1
home	4	5.1

Learning Class (18.2%)		
Caregiver with university degree education complete*		
Word	*Freq*	*χ²*
get	11	46.1
study	9	36.3
happy	7	26.8
speak	7	26.8
relationship	5	17.6
mathematics	4	18.3
father	4	8.0

Academic Performance Class (31.3%)		
Private schools*		
Word	*Freq*	*χ²*
performance	12	23.9
schoolar	12	23.9
development	7	15.9
safety	6	13.5
problem	6	9.7
friend	6	9.7
difficulty	6	4.0
study	5	7.8
develop	4	8.9

*Variables Associated With the Class With Statistical Significance ($p \leq 0.05$)

Figure 1. Hierarchical Cluster Dendrogram of Children's Concerns Reported by Parents to CBCL Open-Ended Question.

The 'Future' class had less text segments (17.3%) and was significantly associated with the normal range in the total behavior problems scale and externalizing behavior problems scale. It was also significantly associated with parental age ranging from 31 to 40 years old. Answers involved mainly concerns about the child's future and the possibility that they do something wrong/illegal, such as drug abuse, as can be seen in the following examples: "Get involved with bad things, bad companies and drugs"; "Get involved with drugs".

The 'Childhood' class (33.2%) was significantly associated with parents' incomplete elementary education and lower social class (D). Concerns reported in this class are more related to the present than in the previous class. Parents report varying concerns and describe childhood as a period that requires specific care. For instance: "He is very anxious, a little nervous and impatient"; "I am afraid of diseases that my child may die, someone may steal or harass her, if I lose my daughter I lose everything". Characteristics such as nervousness, shyness and sensitivity demonstrate psychological traits that elicit parents' concern. Elements such as reading and doing homework demonstrate parents concerns with the child's education.

The 'Learning' class had 18.2% of the text segments.

It showed a statistically significant association with parents' complete higher education. Most answers emphasize learning as a major concern. For instance: "I wish he becomes a righteous human being who is able to assimilate his studies in the best way and is happy"; "She needs help to learn; I can see she makes a big effort, but she even comes to tears when she cannot think properly […]".

The 'academic performance' class, with 31.3% of the text segments, was typical for participants from private schools. It is also focused on education, but in a more objective way. Academic performance is the main concern of this class of answers: "Study hard to have a good academic performance"; "I wish she learns school lessons for her life and comes to like studying".

The Strengths' corpus was submitted to DHC. Out of all 353 parental verbal reports about the strengths, IRAMUTEQ used 82% for the analysis. Thus, 82% of the reports were included in the textual analysis, which subdivided the corpus into four classes: Learning, Social Competences, Affection and Intelligence, and Love and Companionship. Figure 2 shows the dendrogram of the DHC with the lexical content for each class, followed by its frequency in the class, chi-square (χ2) and significance levels.
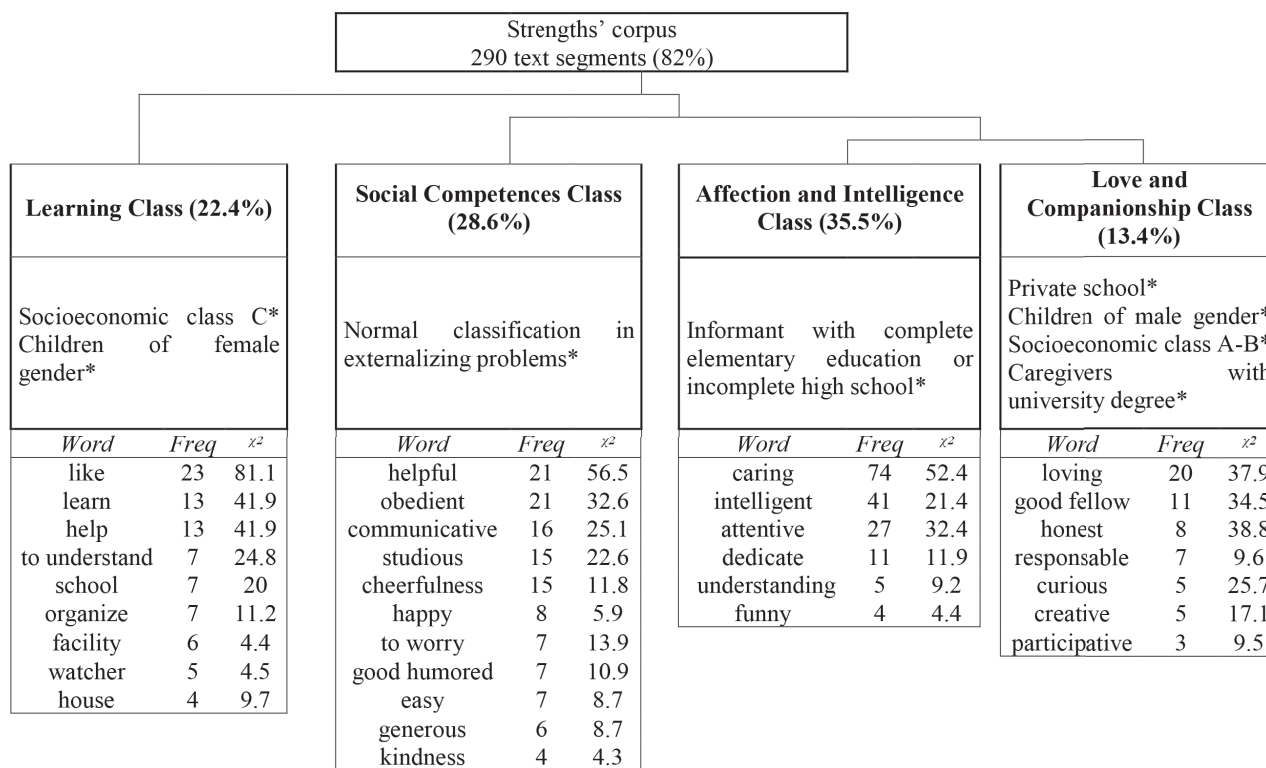
Figure 2. Hierarchical Cluster Dendrogram of Children's Strenghs Reported by Parents to CBCL Open-Ended Question.

The 'Learning' class represented 22.4% of the corpus and was significantly associated with the variables: socioeconomic class C and children of female gender. This content presents elements directly related to children's strengths concerning the learning process. Some examples of typical quotes from this class are: "Caring, learns easily, sweet and attentive"; "Responsible for his homework, interacts easily with other children"; "Disciplined, orderly, organized, studious, affective with parents, willing to help at home and likes talking to people of all ages".

The 'Social Competences' class contained 28.6% of the analyzed text segments and was significantly associated with the normal range in externalizing problems. For example: "[The child is] obedient, helpful, likes to be with us all the time"; "Happy, good-humored, makes friends easily and is caring". Other significant elements of this class are related to characteristics that can facilitate social interactions, such as: good mood, communicativeness, studiousness, cheerfulness, happiness, being concerned about other people, easy-going, generous and caring.

The 'Affection and Intelligence' class represented 35.5% of the text segments and was significantly associated with informant's educational level (elementary school complete or middle school incomplete). The content of the text segments indicates informants' valuation of affective aspects expressed by children, allied to intelligence and dedication. For example: "Very intelligent, loving, caring, makes friends easily"; "Caring, sweet, very intelligent, studious, talkative, relaxed outside the school, sociable, friendly and good-natured".

The 'Love and Companionship' class contained less text segments (13.4%) and was significantly associated with private school, male children, socioeconomic class A-B and parents with university degree education. For example: "Loving, caring, solidary, brave, sociable, curious, intelligent, creative, good-humored, and sincere"; "Is a good fellow, always shares everything with his sister, makes friends easily, very happy and caring".

Discussion

The results from the lexical analysis of text segments of "Concerns" present contents related to the school routine (mainly in classes 'Learning' and 'Academic Performance'), behavior repertoires of socialization or emotional difficulties (mainly in 'Childhood' class) and expectations on possible inadequate behavior repertoires in adolescence and adulthood (mainly in 'Future' class). Concerns about these difficulties are important in the family routine. Children with academic difficulties usually develop other behavior problems, low self-esteem and socialization problems (W.W. Chen & Wong, 2014; Okano et al., 2004).

Concerns related to socialization and emotional difficulties accounted for the largest portion of text segments.

Words indicate excessive or lacking emotional and behavioral repertoires (nervous, fearful, shy, alone). Text segments reveal concerns about internalizing behavior problems compatible with previous studies (Hourigan et al., 2015). Reports indicate concerns related to the possibility that the child will get involved in drug abuse and develop antisocial behavior patterns. This type of difficulty is usually the outcome of mental health problems in adolescence when externalizing problems are not identified and treated properly during childhood (Patterson, Reid, & Dishion, 2002).

Externalizing behavior problems, such as aggressive behaviors, have great impact on the environment (Achenbach & Edelbrock, 1978), and children with externalizing difficulties tend to show lower levels of social competences (X. Chen, Huang, Chang, L. Wang, & Li, 2010). Parents of children who scored normal in the externalizing behavior problem scale presented more words that were grouped in the 'Social competences' class of the strengths' corpus (Figure 2). According to the words from the 'Social Competences' class, children's strengths that were reported by parents are examples of the pro-social behavior repertoire and social skills that are necessary for a proper educational and socio-familiar adaptation.

Vocabularies and the text segments about children's strengths reinforce the hypothesis that parents seem to consider that adequate academic performance and better social skills repertoire are linked to a better social and educational adaptation and lower rates of behavior problems. In this respect, they are consistent with empirical evidence (Pizato, Marturano, & Fontaine, 2014). This parental perception converges with a previous study that demonstrated a functional relationship between promotion of social skills and improvement in academic performance (Molina & Z.A.P. Del Prette, 2006). Promotion of school conditions for socio-emotional development can be an important strategy to overcome learning difficulties maintain an appropriate school performance, and reduce emotional and behavior problems (Molina & Z.A.P. Del Prette, 2006; Cia, Pamplin, & Z.A.P. Del Prette, 2006).

The 'Childhood' class (Figure 1) grouped some vocabularies related to concerns that configure complaints of internalizing behavior problems and parental concern about homework and child's education. Evidence from previous studies indicates that internalizing behavior problems are associated with deficits in social abilities, self-concept indicators and poor academic performance (Z.A.P. Del Prette & A. Del Prette, 2005; Miles & Stipek, 2006). In accordance with previous studies, parents in the present study recognized the importance of good academic performance as a positive indicator of adaptive functioning in childhood (Cia & Barham, 2009). Text segments of the strengths' corpus contain reports about pro-social behaviors, such as being caring, attentive, understanding, fun, good friend, responsible, collaborative, obedient, communicative, among others. The development of this repertoire minimizes or prevents the development of behavior problems in school-aged children (Leme, Z.A.P. Del Prette, Koller, & A. Del Prette, 2016). They help children to properly manage demands from interpersonal relations, allowing the development of social and academic skills, and

facilitate academic adjustment, which enables the child to develop important abilities, such as making and keeping friends, sharing and playing (Bolsoni-Silva, Mariano, Loureiro, & Bonaccorsi, 2013; Melo, Pereira, & Silvério, 2014).

Words and text segments from the strengths' corpus present repertoire important for the development of school-aged children: adequate behavior profile and good academic performance ('Learning' class of Figure 2). According to descriptive variables in this study, informants from lower social classes with female children perceived these strengths more frequently. Previous studies have shown that, according to different types of informants, girls have more social skills, positive behavior and education skills than boys, at least in kindergarden and in the early years of elementary school (Abdi, 2010; Bandeira, Rocha, T.M.P. Souza, Z.A.P. Del Prette & A. Del Prette, 2006; Grimm, Steele, Mashburno, Burchinal, & Pianta, 2010).

Core results of this study indicate that the main concerns reported by parents were related to behavior problems in adolescence, drug use, presence of internalizing difficulties (fears, shyness and nervousness), learning disabilities and school performance. These concerns indicate possible areas of clinical management for preventive interventions. Concerns regarding learning difficulties were mainly perceived by parents with university education. However, parents with incomplete elementary education and social class D reported emotional difficulties (internalizing behavior problems). The classes on the concerns showed no statistically significant associations with children's behavior problems. The software did not reveal any statistically significant association between the presence of these problems in clinical range and concerns regarding children.

To the best of our knowledge, this is the first study that uses a statistical method to analyse reports obtained with CBCL/6-18' open-ended questions. The data presented reveals that is feasible to use open-ended questions as indicators of strengths and concerns that parents recognize in their children. This information associated to parental reports about specific behavior patterns (multiple-choice items) can provide a broader assessment of children's mental health. Additionally, mapping strengths perceived by parents can be useful to identify adequate behaviors that can improve the effectiveness of psychological interventions. Moreover, we identified that socio-demographic characteristics were related to specific types of concerns reported by parents, but children's behavior problems (externalizing and internalizing problems) were not. Despite the fact that there was no information about parental mental health problems and that the sample came from one single Brazilian state, this study is a starting point for further research on prevention or intervention in the area of childhood or adolescent mental health, using qualitative data obtained from open-ended questions as an assessment tool. It is strongly recommended that further studies overcome the aforementioned limitations to broaden the understanding about parental report to open-ended questions assessing their children's mental health.

References

Abdi, B. (2010). Gender differences in social skills, problem behaviours and academic competence of Iranian kindergarten children based on their parent and teacher ratings. *Procedia - Social and Behavioral Sciences, 5*, 1175-1179. doi:10.1016/j.sbspro.2010.07.256

Achenbach, T. M., & Edelbrock, C. S. (1978). The classification of child psychopathology: A review and analysis of empirical efforts. *Psychological Bulletin, 85*(6), 1275-1301. doi:10.1037/0033-2909.85.6.1275

Achenbach, T. M., & Rescorla, L. A. (2001). *Manual for the ASEBA School-Age Forms & Profiles.* Burlington, VT: University of Vermont/Research Center for Children, Youth & Families.

American Psychiatric Association. (2014). *Manual diagnóstico e estatístico de transtornos mentais: DSM 5 [Diagnostic and Statistical Manual of Mental Disorders: DSM 5]* (M. I. C. Nascimento, Trad., 5a ed.). Porto Alegre, RS: Artmed.

Associação Brasileira de Empresas de Pesquisa. (2010). *Critério de Classificação Econômica Brasil [Brazilian Criteria of Economic Classification]*. São Paulo, SP: ABEP. Recuperado de http://www.abep.org/criterio-brasil

Bandeira, M., Rocha, S. S., Souza, T. M. P., Del Prette, Z. A. P., & Del Prette, A. (2006). Comportamentos problemáticos em estudantes do ensino fundamental: Características da ocorrência e relação com habilidades sociais e dificuldades de aprendizagem [Behavior problems in elementary school children and their relation to social skills and academic performance]. *Estudos de Psicologia (Natal), 11*(2), 199-208. doi:10.1590/S1413-294X2006000200009

Biel, M. G., Kahn, N. F., Srivastava, A., Mete, M., Banh, M. K.,Wissow, L. S., & Anthony, B. J. (2015). Parent reports of mental health concerns and functional impairment on routine screening with the strengths and difficulties questionnaire. *Academic Pediatrics, 15*(4), 412-420. doi:10.1016/j.acap.2015.01.007

Bolsoni-Silva, A. T., & Del Prette, A. (2003). Problemas de comportamento: Um panorama da área [Behavior problem: a panorama of the area]. *Revista Brasileira de Terapia Comportamental e Cognitiva, 5*(2), 91-103. Retrieved from http://pepsic.bvsalud.org/pdf/rbtcc/v5n2/v5n2a02.pdf

Bolsoni-Silva, A. T., & Loureiro, S. R. (2011). Práticas educativas parentais e repertório comportamental infantil: Comparando crianças diferenciadas pelo comportamento [Parenting practices and child behavioral repertoire: comparing children differentiated by behavior]. *Paidéia (Ribeirão Preto), 21*(48), 61-71. doi:10.1590/S0103-863X2011000100008

Bolsoni-Silva, A. T., Mariano, M. L., Loureiro, S. R., & Bonaccorsi, C. (2013). Contexto escolar: Práticas educativas do professor, comportamento e habilidades sociais infantis [Teacher´s educational practices and child behavior:

the influence of multiple variables]. *Psicologia Escolar e Educacional, 17*(2), 259-269. doi:10.1590/S1413-85572013000200008

Bordin, I. A., Rocha, M. M., Paula, C. S., Teixeira, M. C. T. V., Achenbach, T. M., Rescorla, L. A., & Silvares, E. F. M. (2013). Child Behavior Checklist (CBCL), Youth Self-Report (YSR) and Teacher's Report Form (TRF): An overview of the development of the original and Brazilian versions. *Cadernos de Saúde Pública, 29*(1), 13-28. doi:10.1590/S0102-311X2013000500004

Camargo, B. V., & Justo, A. M. (2013). IRAMUTEQ: Um sotfware gratuito para análise de dados textuais [IRAMUTEQ: A free software for analysis of textual data]. *Temas em Psicologia, 21*(2), 513-518. doi:10.9788/TP2013.2-16

Chen, X., Huang, X., Chang, L., Wang, L., & Li, D. (2010). Aggression, social competence, and academic achievement in Chinese children: A 5-year longitudinal study. *Development and Psychopathology, 22*(3), 583-592. doi:10.1017/S0954579410000295

Chen, W. W., & Wong, Y. L. (2014). What my parents make me believe in learning: The role of filial piety in Hong Kong students' motivation and academic achievement. *International Journal of Psychology, 49*(4), 249-256. doi:10.1002/ijop.12014

Cia, F., & Barham, E. J. (2009). O envolvimento paterno e o desenvolvimento social de crianças iniciando as atividades escolares [Father involvement and the social development of children in the school-entry transition stage]. *Psicologia em Estudo, 14*(1), 67-74. doi:10.1590/S1413-73722009000100009

Cia, F., Pamplin, R. C. O., & Del Prette, Z. A. P. (2006). Comunicação e participação pais-filhos: Correlação com habilidades sociais e problemas de comportamento dos filhos [Communication and parent-children participation: a correlation with social skills and behavior problems of the children]. *Paidéia (Ribeirão Preto), 16*(35), 395-406. doi:10.1590/S0103-863X2006000300010

Cianchetti, C., Pittau, A., Carta, V., Campus, G., Littarru, R., Ledda, M. G., … Fancello, G. S. (2013). Child and adolescent behavior inventory (CABI): A new instrument for epidemiological studies and pre-clinical evaluation. *Clinical Practice & Epidemiology in Mental Health, 9*, 51-61. doi:10.2174/1745017901309010051

D'Abreu, L. C. F., & Marturano, E. M. (2010). Associação entre comportamentos externalizantes e baixo desempenho escolar: Uma revisão de estudos prospectivos e longitudinais [Association between externalizing behavior and underachievement: a review of prospective and longitudinal studies]. *Estudos de Psicologia (Natal), 15*(1), 43-51. doi:10.1590/S1413-294X2010000100006

Dancey, C. P., & Reidy, J. (2007). *Estatística sem matemática para psicologia: Usando SPSS para Windows [Statistics without maths for psychology: Using SPSS for Windows]* (L. Viali, Trad., 3a ed.). Porto Alegre, RS: Artmed.

Del Prette, Z. A. P., & Del Prette, A. (2005). *A psicologia das habilidades sociais na infância: Teoria e prática [Psychology of children social skills: Theory and practice]*. Petrópolis, RJ: Vozes.

De Rose, J. C. (1997). O relato verbal segundo a perspectiva da análise do comportamento: Contribuições conceituais e experimentais [Verbal report according to behavior analysis: conceptual and experimental contribution]. In R. A. Banaco (Org.), *Sobre comportamento e cognição: Vol. 1. Aspectos éticos, metodológicos e de formação em análise do comportamento e terapia cognitivista* (pp. 148-163). São Paulo, SP: Arbytes.

Ferriolli, S. H. T., Marturano, E. M., & Puntel, L. P. (2007). Contexto familiar e problemas de saúde mental infantil no Programa Saúde da Família [Family context and child mental health problems in the Family Health Program]. *Revista de Saúde Pública, 41*(2), 251-259. doi:10.1590/S0034-89102006005000017

Gomide, P. I. C. (2009). A influência da profissão no estilo parental materno percebido pelos filhos [The influence of profession on maternal parenting styles according to children's perception]. *Estudos de Psicologia. (Campinas), 26*(1), 25-34. doi:10.1590/S0103-166X2009000100003

Goodman, R. (2001). Psychometric properties of the strengths and difficulties questionnaire. *Journal of the American Academy of Child & Adolescent Psychiatry, 40*(11), 1337-1345. doi:10.1097/00004583-200111000-00015

Grimm, K. J., Steele, J. S., Mashburn, A. J., Burchinal, M., & Pianta, R. C. (2010). Early behavioral associations of achievement trajectories. *Developmental Psychology, 46*(5), 976-983. doi:10.1037/a0018878

Hoberman, A., Shaikh, N., Bhatnagar, S., Haralam, M. A., Kearney, D. H., Colborn, D. K., … Chesney, R. W. (2013). Factors that influence parental decisions to participate in clinical research: Consenters vs nonconsenters. *JAMA Pediatrics, 167*(6), 561-566. doi:10.1001/jamapediatrics.2013.1050

Hourigan, S. E., Southam-Gerow, M. A., & Quinoy, A. M. (2015). Emotional and behavior problems in an urban pediatric primary care setting. *Child Psychiatry & Human Development, 46*(2), 289-299. doi:10.1007/s10578-014-0469-z

Johnson, S. B., & Wang, C. (2008). Why do adolescents say they are less healthy than their parents think they are? The importance of mental health varies by social class in a nationally representative sample. *Pediatrics, 121*(2), 307-313. doi:10.1542/peds.2007-0881

Lagattuta, K. H., Sayfan, L., & Bamford, C. (2012). Do you know how I feel? Parents underestimate worry and overestimate optimism compared to child self-report. *Journal of Experimental Child Psychology, 113*(2), 211-232. doi:10.1016/j.jecp.2012.04.001

Lahlou, S. (2012). Text mining methods: An answer to Chartier and Meunier. *Papers on Social Representations, 20*(2), 38.1-38.7. Retrieved from http://www.psych.lse.ac.uk/psr/PSR2011/20_39.pdf

Leme, V. B. R., Bolsoni-Silva, A. T., & Carrara, K. (2009). Uma análise comportamentalista de relatos verbais e práticas educativas parentais: Alcance e limites [A behavioral analysis of verbal reports and parental educative practices: scope and limits]. *Paidéia (Ribeirão Preto), 19*(43), 239-247. doi:10.1590/S0103-863X2009000200012

Leme, V. B. R., Del Prette, Z. A. P., Koller, S. H., & Del Prette, A. (2016). Habilidades sociais e o modelo bioecológico do desenvolvimento humano: Análise e perspectivas [Social skills and bioecological model of human development: Analyze and perspectives]. *Psicologia & Sociedade, 28*(1), 181-193. doi:10.1590/1807-03102015aop001

Lins, T., Alvarenga, P., Paixão, C., Almeida, E., & Costa, H. (2012). Problemas externalizantes e agressividade infantil: Uma revisão de estudos brasileiros [Externalizing problems and child aggressiveness: a review of Brazilian studies]. *Arquivos Brasileiros de Psicologia, 64*(3), 59-75. Retrieved from http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1809-52672012000300005&lng=pt&tlng=pt

Liu, J., Cheng, H., & Leung, P. W. (2011). The application of the preschool Child Behavior Checklist and the parent-teacher report form to Mainland Chinese children: Syndrome structure, gender differences, country effects, and inter-informant agreement. *Journal of Abnormal Child Psychology, 39*(2), 251-264. doi:10.1007/s10802-010-9452-8

Matijasevich, A., Murray, E., Stein, A., Anselmi, L., Menezes, A. M., Santos, I. S., … Victora, C. G. (2014). Increase in child behavior problems among urban Brazilian 4-year olds: 1993 and 2004 Pelotas birth cohorts. *Journal of Child Psychology and Psychiatry, 55*(10), 1125-1134. doi:10.1111/jcpp.12236

Melo, M., Pereira, M. G., & Silvério, J. (2014). Impacto de um programa de competências em alunos do 2º ciclo de escolaridade [Impact of a skill development intervention in 5th and 6th grade students]. *Psicologia Escolar e Educacional, 18*(1), 113-123. doi:10.1590/S1413-85572014000100012

Miles, S. B., & Stipek, D. (2006). Contemporaneous and longitudinal associations between social behavior and literacy achievement in a sample of low-income elementary school children. *Child Development, 77*(1), 103-117. doi:10.1111/j.1467-8624.2006.00859.x

Molina, R. C. M., & Del Prette, Z. A. P. (2006). Funcionalidade da relação entre habilidades sociais e dificuldades de aprendizagem [Functionality of relations between social skills and learning disabilities]. *Psico-USF, 11*(1), 53-63. doi:10.1590/S1413-82712006000100007

Nunes, S. A. N., Faraco, A. M. X., Vieira, M. L., & Rubin, K. H. (2013). Externalizing and internalizing problems: Contributions of attachment and parental practices. *Psicologia: Reflexão e Crítica, 26*(3), 617-625. doi:10.1590/S0102-79722013000300022

Okano, C. B., Loureiro, S. R., Linhares, M. B. M., & Marturano, E. M. (2004). Crianças com dificuldades escolares atendidas em programa de suporte psicopedagógico na escola: Avaliação do autoconceito [Children with learning difficulties attending a psychopedagogic school program: Evaluation of self-concept]. *Psicologia: Reflexão e Crítica, 17*(1), 121-128. doi:10.1590/S0102-79722004000100015

Patterson, G. R., Reid, J. B., & Dishion, T. J. (2002). *Antisocial boys: Comportamento anti-social* (A. C. Lima & G. V. M. Rocha, Trads.). Santo André, SP: Esetec.

Pizato, E. C. G., Marturano, E. M., & Fontaine, A. M. G. V. (2014). Trajetórias de habilidades sociais e problemas de comportamento no ensino fundamental: Influência da educação infantil [Trajectories of social skills and behavior problems in primary school: influence of early childhood education]. *Psicologia: Reflexão e Crítica, 27*(1), 189-197. doi:10.1590/S0102-79722014000100021

Rescorla, L., Ivanova, M. Y., Achenbach, T. M., Begovac, I., Chahed, M., Drugli, M. B., … Zhang, E. Y. (2012). International epidemiology of child and adolescent psychopathology: Integration and applications of dimensional findings from 44 societies. *Journal of the American Academy of Child & Adolescent Psychiatry, 51*(12), 1273-1283.e8. doi:10.1016/j.jaac.2012.09.012

Rocha, M. M., Rescorla, L. A., Emerich, D. R., Silvares, E. F., Borsa, J. C., Araújo, L. G., ... Assis, S. G. (2013). Behavioural/emotional problems in Brazilian children: Findings from parents' reports on the child behavior checklist. *Epidemiology and Psychiatric Sciences, 22*(4), 329-338. doi:10.1017/S2045796012000637

Souza, F. R., & Mosmann, C. P. (2014). Crianças e adolescentes encaminhados para psicoterapia pela escola: Características e percepções de mães e professores sobre os problemas emocionais e de comportamento [Children and adolescents sent to psychotherapy by their school: perceptions of parents and teachers]. *Revista Brasileira de Psicoterapia, 16*(3), 16-29. Retrieved from http://rbp.celg.org.br/detalhe_artigo.asp?id=158

Wichstrøm, L., Belsky, J., Jozefiak, T., Sourander, A., & Berg-Nielsen, T. S. (2014). Predicting service use for mental health problems among young children. *Pediatrics, 133*(6), 1054-1060. doi:10.1542/peds.2013-3184

Deisy Ribas Emerich is a Professor of the Faculdades Metropolitanas Unidas (Laureate International Universities).

Luiz Renato Rodrigues Carreiro is a Professor of the Program in Developmental Disorders of the Centre for Health and Biological Sciences at the Universidade Presbiteriana Mackenzie.

Ana Maria Justo is a Professor of the Department of Social and Development Psychology at the Universidade Federal do Espírito Santo.

Paula Guedes is a psychology student of the Centre for Health and Biological Sciences at the Universidade Presbiteriana Mackenzie.

Maria Cristina Triguero Veloz Teixeira Carreiro is a Professor of the Program in Developmental Disorders of the Centre for Health and Biological Sciences at the Universidade Presbiteriana Mackenzie.