

Parental beliefs and child-rearing attitudes and mental health problems among schoolchildren

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Keywords

Mental health, statistics & numerical data. Child rearing. Child abuse. Health knowledge, attitudes & practice. Child psychiatry. Cross-sectional studies. Risk factors. Logistic models. Prevalence.

Abstract

Objective

To verify the prevalence and identify the risk factors related to mental health problems among schoolchildren and its possible association with the beliefs and educational attitudes of parents/caretakers.

Methods

Cross-sectional study with a stratified probabilistic sample (n=454) of first to third-graders from public and private schools in Southeastern Brazil. Standardized instruments were administered to parents/caretakers by trained interviewers, including screening questionnaires for mental health problems among children and parents/caretakers; a questionnaire on beliefs and attitudes; and a questionnaire for socio-economic status. Chi-square tests and logistic regression models were used for statistical analysis.

Results

We found 35.2% prevalence of clinical/borderline cases among students. Parents/caretakers that believed in corporal punishment as a child-rearing method used physical aggression towards their children more frequently (64.8%). Logistic regression models showed that the act of hitting the child with a belt was associated to conduct problems and to overall mental health problems among schoolchildren in the presence of other risk factors: child gender (male), parents/caretakers with mental health problems, and adverse socio-economic conditions.

Conclusions

The high prevalence of mental health problems among schoolchildren and its association with child-rearing methods and mental health problems among parents/caretakers indicate the need for psycho-educational interventions aimed to reduce physical abuse and mental health problems in childhood.

INTRODUCTION

Records of family violence go back to Antiquity. In 1985, mummies were found aged between 2,000 and 3,000 years showing a much greater number of fractures among women and children than among men, which is suggestive of violence in times of peace.¹⁹ In New York City, in 1871, the neighbors of a

maltreated child reported the occurrence to the Society for the Protection of Animals, for the lack of an appropriate institution. Some time later, a society for the prevention of cruelty to children was created. Only in 1961 did child abuse receive greater attention from healthcare professionals and from general society, with the description of the 'battered-child syndrome' by Kempe et al.¹³ In Brazil, the seriousness of maltreat-

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ment during childhood was recognized in the late 1980's, when the notification of cases was made mandatory by the Federal Constitution, and Tutelary Councils were created in order to protect the rights of children and adolescents.¹

Corporal punishment is a common educational method throughout the world, and has serious repercussions on child mental health.^{10,14,18} In Brazil, the great majority of studies of violence against children and adolescents are based on clinical samples, with subjects seen in specialized services. In these studies, it becomes clear that physical aggression is the most common type of abuse, affecting children of both genders and all ages, the mother and/or father being the most frequent aggressors.⁵ A recent population-based study* carried out in a low-income neighborhood in the municipality of Embu, Southeastern Brazil, showed a high prevalence (10.1%) of severe physical aggression towards children under age 18 years in the domestic environment; parents were also considered as the potential aggressors. According to the World Health Organization,¹⁴ further research is needed in order to increase existent knowledge on the occurrence of child and adolescent abuse in all world regions, as well as on the causes and consequences of such abuse in each specific region.

Children of all age groups and socio-economic conditions can be victims of physical, psychological, or sexual abuse perpetrated by biological, surrogate, and adoptive parents, as well as by other family members. Since the patterns that determine the behavior of parents and caretakers vary according to cultural factors, what characterizes maltreatment in a given population may be considered acceptable in others.¹⁴ In Jamaica, the belief in corporal punishment as a means of education is as ingrained as it is legitimate, and its use is not limited to parents, but is also observed in schools as a pedagogical tool.¹⁸ Whereas certain populational groups tend to administer corporal punishment to their children, others seldom resort to such child-rearing methods. Among the *Xingu* indigenous population of South America, for instance, spanking children is considered to be a cowardly act.¹⁷

Several factors can render the child more vulnerable to physical aggression within the family environment, including individual (gender, age), family-related (mental health problems, history of corporal punishment in childhood, marital violence), and socio-cultural (poverty and unequal income distribution, cultural norms

and values, social support) factors.¹⁴ Maltreatment may lead to both short and long-term negative consequences to the child, including impact on general health (fractures, lacerations, cerebral lesions) and mental health problems (anxiety, depression, social isolation, suicide, substance abuse, conduct problems, delinquency).^{12,14,15} Other consequences of physical violence against children include delays in cognitive development, intellectual deficit, and school failure, in addition to violence and criminality in adolescence and adulthood.^{14,15}

The present study is aimed at investigating the prevalence of mental health problems among first to third-graders; to verify whether the educational beliefs of parents and caretakers are associated with such problems in these children; and to identify risk factors for such problems among schoolchildren.

METHODS

A cross-sectional study was carried out in Taubaté, Southeastern Brazil, distant 134 km from state capital Sao Paulo. With a population of 244,000 inhabitants, Taubaté is known as the university city of the Paraíba Valley, and is an important industrial and agricultural center.

The present study was based on part of the database of a survey** that evaluated a probabilistic sample of 1,251 students enrolled in the eight grades of elementary education in the city of Taubaté. The sample was stratified according to type of school and geographical area, including students of private schools (all urban) and public schools (both urban and rural). Participation in the study was conditional on obtaining written free informed consent from parents or caretakers. The rate of non-responders was 18% in private schools, 17% in rural public schools, and 16% in urban public schools.⁶

The sample investigated in the present study (n=454) comprised children aged 7-11 years, of both genders and all social classes, enrolled in the first three grades of elementary school. Such a scope was aimed at collecting information useful for the development of early intervention programs in schools in the field of mental health.

Fieldwork was conducted between August 2000 and August 2001. During individual interviews, trained interviewers administered standardized instruments to parents and caretakers at the schools or, ex-

*Bordin IAS, Paula CS, Duarte CS, Fernandes M. Saúde mental e violência doméstica. [Congress abstract] Resumo em Anais do XIX Congresso Brasileiro de Psiquiatria, Recife: 2001. p. 299.

**Fleitlich-Bilyk BW. The prevalence of psychiatric problems in 7-14-year olds in the southeast of Brazil [thesis]. London: Department of Child and Adolescent Psychiatry, Institute of Psychiatry, King's College. London University; 2002.

ceptionally, at the parent/caretaker's home or workplace or at the study headquarters.

A questionnaire was developed to investigate the beliefs of parents/caretakers regarding corporal punishment and child-rearing attitudes (talking to the child, time-out punishment, yelling/scolding, slapping, and hitting with a belt). An open question was included as an attempt to identify other educational attitudes mentioned spontaneously by responders.

The Strengths and Difficulties Questionnaire (SDQ)¹¹ is a brief questionnaire used for screening mental health problems in children aged four to 16 years, and shows adequate psychometric properties. Its 25 items are distributed across five scales: anxiety and/or depression, conduct problems, hyperactivity/inattention, peer relationship problems, and prosocial behavior, the sum of the four first scales representing the total difficulties. Cutoff points determine three categories (clinical, borderline, and normal) for each of the scales. In the present study, the validated Brazilian version of SDQ* was administered to parents/caretakers.

The Self-Report Questionnaire (SRQ-20) is a screening instrument comprising 20 items, designed to identify mental health problems among adults in the community, the validity and reliability previously established in Brazil.¹⁶ Parents/caretakers with a total score above seven were considered positive to SRQ-20.

The *Questionário de Classificação Econômica Familiar* (Family Economic Classification Questionnaire) was developed by the Associação Brasileira de Empresas de Pesquisa (Brazilian Association of Research Companies - ABEP) for the determination of economic classes according to family purchase power.** Five classes were established according to the total score obtained: A (25-34), B (17-24), C (11-16), D (6-10), and E (0-5).

Outcomes of interest were the presence of four types of mental health problems in the children (anxiety/depression, conduct problems, hyperactivity/inattention, peer relationship problems), as well as the total score for difficulties. Clinical and borderline cases according to the SQD scales were considered positive for mental health problems. Risk factors investigated included: child gender (male, female); family socio-economic status (classes A-B-C, D-E); parents'/caretakers' beliefs regarding corporal punishment

(spanking is educational, children do not need to be spanked); educational attitudes (hitting with a belt, slapping, general score for corporal punishment including other physical aggressions reported spontaneously by responders); and parents/caretakers with mental health problems (yes, no).

Statistical analysis was carried out using SPSS software (1998 version) and involved simple frequency tables, cross-tables with Chi-square tests, and logistic regression models. Backward stepwise method was employed to reduce initial models and identify the best associative models (final models) for the study outcomes of interest. Variables included in the initial models showed no colinearity. We tested all possible interactions for each initial model, and only statistically significant interactions ($p=0.05$) were kept in the final model.

The present study was approved by the Research Ethics Committee of the Universidade Federal de São Paulo (Project no. 0259/04); by the Medical Ethics Committee of the Hospital das Clínicas of the Faculdade de Medicina of Universidade de São Paulo (n° 277/99); and by the London Institute of Psychiatry (n° 058/99).

RESULTS

Of the 454 children studied, 216 (47.6%) were girls and 238 (52.4%) were boys. Age ranged from seven to 11 years (median =8 years). The majority of students were aged seven (36.8%), eight (33.3%), or nine (23.6%) years and few were aged 10 (5.3%) or 11 (1.1%) years. Regarding the type of school, 72.5% of the children studied in urban public schools (municipal or state), 20.0% studied in private schools (all urban), and only 7.5% studied in rural schools (all public). Each of the first three elementary school grades contributed with similar proportions of students to the sample (30.0%, 34.8%, and 35.2%, respectively). As to socio-economic status, the greatest share of students came from classes C (32.6%) and D (35.5%), while only 7.0% came from class A, 19.2% from class B, and a small share from class E (5.1%).

The great majority of responders (91.7%) were biological mothers (81.3%) or fathers (10.4%). Among the caretakers, there was a predominance of women (89.2%) and of the 20-49 years age group (89.6%). Mental health problems were identified in 28.4% of responders (Table 1) and were more frequent among women than men (30.4% vs 12.2%; $p=0.008$) and

*Fleittich-Bilyk BW. The prevalence of psychiatric problems in 7-14-year olds in the southeast of Brazil [thesis]. London: Department of Child and Adolescent Psychiatry, Institute of Psychiatry, King's College, London University; 2002.

**Associação Brasileira de Empresas de Pesquisa (ABEP). Critério de classificação econômica Brasil [on-line]; 2003. Available from: http://www.abep.org/codigosguias/ABEP_CCEB.pdf [2005 Sep 3]

Table 1 - Characteristics of responders (parents/caretakers). (N=454)

Characteristics of responders	N (%)
Identification	
Responders (parents/caretakers)	
Biological mother	369 (81.3)
Adoptive mother or tutor	3 (0.7)
Biological father	47 (10.4)
Stepfather	1 (0.2)
Grandmother	18 (4.0)
Grandfather	1 (0.2)
Sister	8 (1.8)
Aunt	7 (1.5)
Socio-demographic characteristics	
Gender	
Male	49 (10.8)
Female	405 (89.2)
Age (years)	
15-19	9 (2.0)
20-29	101 (22.2)
30-39	214 (47.1)
40-49	93 (20.3)
50-59	22 (4.8)
60-69	8 (1.1)
70-80	3 (0.7)
Missing	4 (0.9)
Mental health problems*	
Problems	
Present (total score >7)	129 (28.4)
Absent	325 (71.6)

*According to the Self-Report Questionnaire (SRQ-20)

among responders from classes D and E than from classes A, B, and C (46.2% vs 16.3%; $p < 0.001$).

Among parents/caretakers, 11.9% regarded corporal punishment as educational and 43.3% reported having administered such punishment to their children, slapping (36.1%) being more common than hitting with a belt (8.8%). Other forms of corporal punishment were reported spontaneously, especially hitting with a slipper or stick. Educational attitudes not based on physical aggression included talking to the child, time-out punishment, yelling/scolding, and other spontaneously mentioned attitudes, such as

speaking firmly and reprimanding (3.5%), stern looks with angry facial expressions (0.3%), and verbal confrontation (0.4%) (Table 2).

Parents/caretakers who believed that corporal punishment is educational were more likely to use physical aggression with their children than those who did not have this belief (64.8% vs 42.5%; $p = 0.002$; OR=2.5; 95% CI: 1.4-4.5). In comparison with those who did not, parents/caretakers who hit their children with a belt also more frequently slapped (60.0% vs 33.8%; $p = 0.001$) and undervalued their children, being unable to recognize qualities or capabilities in them (15.0% vs 6.3%; $p = 0.04$). Parents/caretakers with mental health problems slapped their children more frequently than those without such problems (47.3% vs 31.7%; $p = 0.002$; OR=1.9; 95% CI: 1.3-2.9).

Regarding the mental health of the schoolchildren, 35.2% were considered positive for overall mental health problems, reaching clinical (22.7%) or borderline (12.5%) levels in the SDQ total difficulties scale. Symptoms of anxiety/depression were the most frequent (47.8%), followed by conduct problems (32.6%), hyperactivity/inattention (31.1%), and peer relationship problems (25.8%) (Table 3).

The presence of overall mental health problems was associated with child gender (male), child-rearing attitude of hitting with a belt, mental health problems in parents/caretakers, and adverse socio-economic conditions (social classes D and E). These four factors reached statistical significance ($p = 0.05$) in univariate analysis (Table 4).

Concerning risk factors for the four specific types

Table 2 - Beliefs and attitudes of parents/caretakers regarding child-rearing methods. (N=454)

Child-rearing beliefs and attitudes	N (%)
Beliefs regarding physical punishment	
Believe that spanking is educational	54 (11.9)
Believe that children do not need to be spanked	367 (80.8)
Do not agree with any of the alternatives above	31 (6.8)
Could not answer	2 (0.4)
Attitudes	
Corporal punishment	
Reported corporal punishment	198 (43.6)
Did not report corporal punishment	256 (56.4)
Type of corporal punishment reported	
Slapping*	164 (36.1)
Hitting with a belt*	40 (8.8)
Hitting with a slipper**	19 (4.2)
Hitting with a stick**	11 (2.4)
Pulling ear**	2 (0.4)
Pulling hair**	1 (0.2)
Slapping on the face**	1 (0.2)
Other educational attitudes	
Talking to the child*	311 (68.5)
Time-out punishment*	240 (52.9)
Yelling/scolding*	239 (52.6)
Speaking firmly and reprimanding**	16 (3.5)

*Included in the questionnaire

**Reported spontaneously

of mental health problems among the schoolchildren, we found greater prevalence of hyperactivity among boys than girls (37.0% vs 24.5%; $p=0.004$). Children from classes D-E showed more conduct problems (38.6% vs 28.5%; $p=0.025$) and emotional problems (symptoms of anxiety and depression) (53.8% vs 43.7%; $p=0.034$) than children from classes A-B-C. In addition, children hit by their parents/caretakers with a belt showed greater hyperactivity (45.0% vs 29.7%; $p=0.046$) and conduct problems (50.0% vs 30.9%; $p=0.014$) than those who did not suffer this type of punishment. Slapping was not associated with any type of problem among schoolchildren.

Finally, children whose parents/caretakers had mental health problems showed greater prevalence of conduct problems (45.0% vs 27.7%; $p<0.001$), emotional problems (66.7% vs 40.3%; $p<0.001$) and peer relationship problems (34.1% vs 22.5%; $p=0.01$). Parents'/caretakers' belief that spanking is educational was not associated with mental health problems in schoolchildren; however, this analysis was hindered by the high rate of non-responders (7.2% of responders failed to answer this question objectively).

The following risk factors were included in multivariate analysis: child gender, hitting with a belt, mental health problems in parents/caretakers, and social class. Since the last two factors showed a linear relationship, they could not be included in the same model. Therefore, two models – A (with factors 1, 2, and 3) and B (factors 1, 2, and 4) – were elaborated for each of the five outcomes of interest.

Table 5 summarizes the results of logistic regression analysis, showing that hitting with a belt was associated with conduct problems and overall mental health problems (total difficulties) in these schoolchildren, even in the presence of the remaining risk factors. Child gender (male) was an independent risk

Table 3 - Mental health problems in the sample of schoolchildren, according to the Strengths and Difficulties Questionnaire. (N=454)

Mental health problems	N (%)
Anxiety and/or depression	
Clinical	152 (33.5)
Borderline	65 (14.3)
Normal	237 (52.2)
Conduct problems	
Clinical	107 (23.6)
Borderline	41 (9.0)
Normal	306 (67.4)
Hyperactivity/inattention	
Clinical	98 (21.6)
Borderline	43 (9.5)
Normal	313 (68.9)
Peer relationship problems	
Clinical	76 (16.8)
Borderline	41 (9.0)
Normal	337 (74.2)
Total difficulties	
Clinical	103 (22.7)
Borderline	57 (12.5)
Normal	294 (64.8)

factor for hyperactivity/inattention, peer relationship problems, and overall mental health problems. Parents/caretakers with mental health problems was an independent risk factor for all outcomes of interest, with the exception of hyperactivity/inattention. Coming from classes D and E was an independent risk factor for conduct problems, anxiety/depression, and overall mental health problems.

There was an interaction between social class and child gender. In families from social classes D-E, symptoms of anxiety/depression were more frequent among girls than boys (63.1% vs 46.0%; $p=0.02$; OR=2.0; 95% CI: 1.1-3.6); however, rates for girls and boys from classes A-B-C were similar (40.9% and 46.4%, respectively) (model 2B). In families from classes A-B-C, peer relationship problems were more frequent among boys than girls (31.9% vs 20.5%; $p=0.03$; OR=1.8; 95% CI: 1.1-3.2); boys and girls from classes D-E did not differ in this aspect (21.0% and 29.8%, respectively) (model 4B).

Table 4 - Risk factors for various mental health problems among schoolchildren according to odds ratios and 95% confidence intervals. (N=454)

Risk factors	Conduct problems		Anxiety/depression		Hyperactivity/inattention		Peer relationship problems		Total difficulties	
	N (%)	OR (95% CI)	N (%)	OR (95% CI)	N (%)	OR (95%CI)	N (%)	OR (95% CI)	N (%)	OR (95% CI)
Child gender										
Male	82 (34.5)	NS	110 (46.2)	NS	88 (37.0)	1.8**	65 (27.3)	NS	97 (40.8)	1.7**
Female	66 (30.6)		107 (49.5)		53 (24.5)		(1.2-2.7)	52 (24.1)	63 (29.2)	(1.1-2.5)
Hitting with belt										
Yes	20 (50.0)	2.2*	24 (60.0)	NS	18 (45.0)	1.9*	7 (17.5)	NS	22 (55.0)	2.4**
No	128 (30.9)	(1.2-4.3)	193 (46.6)		123 (29.7)		(1.003-3.7)	110 (26.6)	138 (33.3)	(1.3-4.7)
Parents/caretakers with mental health problems										
Yes	58 (45.0)	2.1***	86 (66.7)	3.0***	43 (33.3)	NS	44 (34.1)	1.8**	62 (48.1)	2.1***
No	90 (27.7)	(1.4-3.3)	131 (40.3)	(1.9-4.5)	98 (30.2)		73 (22.5)	(1.1-2.8)	98 (30.2)	(1.4-3.3)
Social class										
D-E	71 (38.6)	1.6*	99 (53.8)	1.5*	59 (32.1)	NS	46 (25.0)	NS	83 (30.7)	1.6*
A-B-C	77 (28.5)	(1.1-2.3)	118 (43.7)	(1.03-2.2)	82 (30.4)		71 (26.3)		77 (41.8)	(1.1-2.4)

* $p<0,05$; ** $p<0,01$; *** $p<0,001$
NS: Non significant variable ($p>0.05$)

Table 5 - Final logistic regression models^a showing odds ratios and 95% confidence intervals for risk factors for various mental health problems among schoolchildren. (N=454)

Risk factors	Conducts problems		Anxiety/depression		Hyperactivity/inattention		Peer relationship problems		Total difficulties	
	Models 1A and 1B	Models 2A and 2B	Models 2A and 2B	Models 2A and 2B	Models 3A e 3B	Models 3A e 3B	Models 4A and 4B	Models 4A and 4B	Models 5A and 5B	Models 5A and 5B
(1) Child gender										
EX	EX	EX	NS	1,8**(1,2-2,7)	1,8**(1,2-2,7)	EX	1,8*(1,1-3,2)	1,1*(1,1-2,5)	1,6*(1,1-2,4)	
(2) Hitting with a belt										
2,1*(1,1-4,1)	2,1*(1,1-4,2)	EX	EX	EX	EX	EX	EX	2,2*(1,1-4,3)	2,2*(1,2-4,3)	
(3) Parents with mental problems										
2,1**(1,4-3,2)	---	3,0***(1,9-4,5)	---	EX	---	1,8*(1,1-2,8)	---	2,1***(1,4-3,3)	---	
(4) Social class										
---	1,5*(1,03-2,3)	---	2,5**(1,4-4,3)	---	EX	---	NS	---	1,6*(1,1-2,3)	
Interaction (1) * (4)										
---	---	---	0,4*(0,2-0,9)	---	---	---	0,3*(0,1-0,8)	---	---	

^aDue to the colinearity between mental problems in parents/caretakers and social class, models A (including factors 1, 2, and 3) and B (including factors 1, 2, and 4) were elaborated for each of the five outcomes of interest

*p≤0,05; **p≤0,01; ***p≤0,001

EX: Non-significant variable (p>0.05) excluded from the final model

NS: Non-significant variable (p>0.05) kept in the final model

(1) Male vs female; (2) yes vs no; (3) yes (SRQ >7) vs no (SRQ 0-7); (4) classes D-E vs classes A-B-C

DISCUSSION

The greatest limitation of the present study was the narrowness of the definition of corporal punishment of children in the household. We did not employ broader-ranging questionnaires for the identification of types of child-rearing attitudes employed by parents/caretakers. However, this is the first population-based study in Brazil to evaluate the beliefs and attitudes of parents/caretakers as potential risk factors for mental health problems in childhood. Since the aims of the present study were secondary to those of the major research project,⁸ it was not possible to include a large number of items in the questionnaire, which would lengthen the interview, rendering the study unfeasible. Furthermore, as in all cross-sectional studies, the associations found do not necessarily represent causal relationships between risk factors and the outcome of interest. This is due to the impossibility of determining sequence in time among the variables measured. In addition, there was no bias in the sample, since the age and grade of the schoolchildren were not analyzed as risk factors.

Prevalence rates found were similar to those obtained using the Child Behavior Checklist (CBCL) screening instrument in a subsample of a population-based study⁸ (n=215; 7-11 years) conducted in a low-income neighborhood in the municipality of Embu, Southeastern Brazil: 36.7% prevalence including clinical (19.5%) and borderline cases (17.2%).

Higher rates were found in a subsample of patients from a public pediatric clinic in the city of São Paulo (n=195; 7-11 years), using the SDQ questionnaire: 56.9% prevalence including clinical (45.1%) and borderline cases (11.8%).⁸ Even higher rates were obtained using the CBCL in a subsample of children and adolescents (n=38; 7-11 years) referred to a child psychiatry intake service in Rio de Janeiro, also in Southeastern Brazil: 92.1% prevalence including clinical (84.2%) and borderline cases (7.9%).⁸

Our results regarding child-rearing attitudes slapping or hitting with a belt were compatible with the data from a survey⁸ conducted in Latin-American countries. This survey registered similar rates of slapping administered by mothers and fathers in Rio de Janeiro (11.9% and 33.8%, respectively) and of hitting children with a hard object by mothers and fathers in Salvador, Northeastern Brazil (7.9% and 11.8%, respectively).

Parents/caretakers who hit their children with a belt were also likely to undervalue their children, and not to recognize positive aspects or capabilities in them. This finding is in agreement with the literature, indicating that parents who resort frequently to corporal punishment are those who do not have good emotional relationship with their children, and who do not often hug their children or play with them.¹⁴

Parents/caretakers who believed that spanking is

^aFleitch-Bilyk BW. The prevalence of psychiatric problems in 7-14-year olds in the southeast of Brazil [thesis]. Londres: Department of Child and Adolescent Psychiatry, Institute of Psychiatry, King's College, London University; 2002.

^bBordin IAS, Paula CS, Nascimento R, Abreu SR, Duarte CS. Estudo brasileiro de violência doméstica contra a criança e o adolescente (BrazSAFE) [Final scientific report presented to the Fundação de Amparo à Pesquisa do Estado de São Paulo (Fapesp) - Process nº 00/14555-4]. São Paulo: Fapesp; 2004.

^cRibeiro EL. Problemas de saúde mental da criança em idade escolar: oportunidades e possibilidades de abordagem na atenção básica [doctoral thesis]. São Paulo: Faculdade de Saúde Pública da Universidade de São Paulo; 2003.

^dBrasil HHA. Desenvolvimento da versão brasileira da K-SADS-PL (Schedule for Affective Problems and Schizophrenia for School Aged Children Present and Lifetime Version) e estudo de suas propriedades psicométricas [doctoral thesis]. São Paulo: Universidade Federal de São Paulo. Escola Paulista de Medicina; 2003.

educational were more likely to physically assault their children than those who thought otherwise. One must keep in mind that families are immersed in a specific social and cultural environment. In this environment, beliefs regarding corporal punishment as an adequate child-rearing method are often shared. Such a belief is probably linked to the lack of knowledge or value attributed to other educational methods, including affection, recognition and reward.¹⁹

A frequent criticism to research on corporal punishment in childhood refers to the low specificity of definitions, which do not discriminate between forms of physical aggression with and without risk of significant corporal lesions. This lack of specificity impedes an evaluation of the consequences of slapping, a widespread attitude among parents from many different cultural backgrounds. In the present study, slapping was not associated with any type of mental health problems among children. However, when parents/caretakers hit their children with a belt, there was an increase in the risk for conduct problems and overall child mental health problems, even in the presence of other risk factors. In fact, data from an epidemiological study of childhood mental disorders (Epidemiology of Child and Adolescent Mental Problems Study⁷ - MECA) showed that, in a probabilistic sample of children and youths from the general population of New York (United States) and Puerto Rico (n=665, 9-17 years), physical abuse was associated with conduct problems, major depression episodes, and anxiety disorders. An association between physical abuse and conduct disorders was also found among adolescents in a case-control study¹² conducted in Long Island, New York State (n=198; 12-18 years). Logistic regression analyses, employed in both studies, showed that physical abuse was associated with conduct problems regardless of the presence of other risk factors such as gender, age, physical health problems, sexual abuse, family history of psychiatric disorders, and family income. Recently, a comprehensive systematic review of the literature¹⁰ showed that corporal punishment, used by parents as an educational method, is associated with mental health problems, not only during childhood and adolescence (antisocial behavior, depression), but also in adult life (aggressive and criminal acts, antisocial behavior, alcoholism, depression).

In addition to severe corporal punishment (hitting with a belt), other factors, such as parents/caretakers with mental health problems, were also associated with mental health problems in schoolchildren. Our data confirm the findings of Costello et al,⁴ who found that, in addition to severe corporal punishment, family history of mental disorders was associated with psychiatric disorders in a population-based sample of children

and adolescents aged 9-17 years living in rural areas of the United States. Mental health problems among parents/caretakers were also associated with conduct problems, anxiety/depression, peer relationship problems, and overall mental health problems in schoolchildren. Studies carried out in different continents showed that parents more likely to physically abuse their children were those with low self-esteem, poor impulse control, antisocial behavior, or mental health problems. Such parental characteristics have a negative effect on the capacity to care for children and are associated with inability to handle stressful situations and lesser access to social support systems.¹⁴

Male gender was an independent risk factor for hyperactivity/inattention, peer relationship problems, and overall mental health problems. According to the World Health Organization,¹⁴ boys are at greater risk of suffering severe physical punishment than girls in various countries. A possible explanation for this is that boys are often more agitated and aggressive than girls, so that parents more frequently react with rigorous disciplinary methods. In the studied sample, although boys showed greater hyperactivity than girls, both genders showed equal prevalence of being hit with a belt. Parental child-rearing attitudes may vary with child gender because of the values attributed to boys and girls in different societies. Therefore, more attention should be given to such values in future studies.

Coming from social classes D and E was also an independent risk factor for conduct problems, anxiety/depression, and overall mental health problems. Indeed, studies carried out in a number of countries provide evidence of a strong association between poverty and childhood maltreatment. Surveys show that chronic poverty affects children through its impact on parental behavior and due to the lack of resources available to the community.¹⁴ Poverty is related to a range of stress-generating situations, such as unemployment, severe marital discord, mental health problems in parents, and use of inadequate educational methods, which put child and adolescent mental health at risk.⁹ The lack of social and economic resources generates tension within the family, and the child is ultimately regarded as a burden and a source of problems for parents.¹⁹ Under such circumstances, children are more prone to suffer physical aggression in the household.

The way in which the experience of corporal punishment affects the mental health of a child depends on child developmental level, severity and frequency of physical aggression, and access to mental health services that provide care to victims of family violence. Chronic physical abuse often results in more

severe psychopathological presentations,² while the child's ability to recover depends on human protection systems operating in the child's favor.³ Social networks and well-organized and cohesive communities are protective factors for children victimized by violence, even when parental educational level is low and socio-economic conditions adverse.¹⁴

Regarding risk factors for anxiety/depression and peer relationship problems, the present study found an interaction between social class and child gender. However, caution is needed when interpreting this finding; the level of significance $p \leq 0.05$ does not exclude the possibility of this finding being a spuri-

ous one, since multiple statistical tests were performed in the search for significant interactions.

In conclusion, the high prevalence of mental health problems among schoolchildren and their association with severe corporal punishment and mental health problems among parents/caretakers indicate the need for psycho-educational interventions aimed to reduce physical abuse and mental health problems in childhood. We also recommend the administration of screening instruments to the parents/caretakers of children subjected to physical violence in the household, aiming at the early treatment of mental health problems in childhood.

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