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Factors associated with severe physical violence against children and adolescents with mental disorders

Fatores associados à violência física grave contra crianças e adolescentes com transtornos mentais

Factores asociados a la violencia física grave contra niños y adolescentes con trastornos mentales

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ABSTRACT

Objective: to analyze factors associated with the occurrence of severe physical violence in children and adolescents with mental disorders. **Method**: cross-sectional study with 274 patients attending a psychosocial care unit in Nova Iguaçu between October and December 2016. In addition to sociodemographic and clinical data on caregivers and children, family violence was measured by the "Parent-Child Conflict Tactics Scales". **Results**: The time spent in the health unit combined with the week's schedule of care by the caregiver resulted in high chances of serious physical abuse (OR 5.0; p-value 0.002). On the other hand, participation in cash transfer programs (OR 0.5, p-value 0.015) was found to protect children and adolescents from violence. **Conclusion**: sociodemographic and clinical characteristics seem to be related to the occurrence of physical abuse. To prevent such episodes, it seems essential to include families in daily mental care, mainly because caregivers are overloaded.
Descriptors: Child; Adolescent; Mental Disorders; Violence.

RESUMO

Objetivo: analisar os fatores associados à ocorrência de violência física grave em crianças e adolescentes com transtornos mentais. **Método**: estudo transversal com 274 pacientes atendidos em uma unidade de atenção psicossocial de Nova Iguaçu, entre outubro e dezembro de 2016. Além de dados sociodemográficos e clínicos dos cuidadores e crianças, a violência familiar foi apreendida pelo "Parent-Child Conflict Tactics Scales". **Resultados**: o tempo de atendimento na unidade de saúde combinada com a jornada semanal de cuidado pelo cuidador resultaram em altas chances de ocorrência de violência física grave (OR 5,0; p-valor 0,002). Por outro lado, a participação em programas de transferência de renda (OR 0,5; p-valor 0,015) demonstrou proteção das crianças e adolescentes às violências. **Conclusão**: as características sociodemográficas e clínicas parecem estar relacionadas à ocorrência de maus-tratos físicos. Para prevenir episódios, principalmente devido à sobrecarga dos cuidadores, parece imprescindível que as famílias sejam inseridas no cotidiano do cuidado mental.
Descritores: Criança; Adolescente; Transtornos Mentais; Violência.

RESUMEN

Objetivo: analizar los factores asociados a la ocurrencia de violencia física grave en niños y adolescentes con trastornos mentales. **Método**: estudio transversal junto a 274 pacientes atendidos en una unidad de atención psicosocial en Nova Iguaçu, entre octubre y diciembre de 2016. Además de los datos sociodemográficos y clínicos sobre los cuidadores y los niños, la violencia familiar fue medida por las "Parent-Child Conflict Tactics Scales". **Resultados**: El tiempo de permanencia en la unidad de salud combinado con la jornada semanal de cuidado por parte del cuidador resultaron en altas probabilidades de violencia física grave (OR 5,0; p-valor 0,002). Por otro lado, la participación en programas de transferencia de ingresos (OR 0,5; p-valor 0,015) demostró protección de los niños y adolescentes contra la violencia. **Conclusión**: las características sociodemográficas y clínicas parecen estar relacionadas con la ocurrencia de maltratos físicos. Para prevenir episodios, principalmente derivados de la sobrecarga de los cuidadores, parece ser fundamental que se incluyan las familias en el cotidiano de cuidado mental.
Descriptores: Niño; Adolescente; Trastornos Mentales; Violencia.

INTRODUCTION

The interest in studies on adverse experiences in childhood and adolescence has grown in Brazil and in the entire world, including an important production on child abuse, since its acceptance is influenced by social habits, values, beliefs and judgments[1-5]. Although its classification is broad and sometimes divergent, the notions proposed by the World Report on Violence and Health[6] to define abuse and violence have been adopted in most national and international research studies. Based on this classification, violence is understood as intentional use of power or physical force with potential damage or harm for the victim. Additionally, severe types of violence are those with a potential to cause direct harms and, in general, they imply power strategies involving melee weapons or firearms[7,8].

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Contrary to what is expected for the home environment, many authors have shown that it is precisely in this space that violence is perpetrated and somehow concealed, mainly when considering the difficulty encountered by the public sectors to address such situations in private environments[9]. A number of studies carried out in Brazil point to a quite variable magnitude of violence against children and adolescents, which apparently worsens when they are affected by chronic conditions, such as mental disorders[10-12]. It is believed that children with severe mental disorders have limitations that demand intense and special care, requiring changes in the family dynamics and, consequently, increasing the chances of physical violence.

Some aspects should be highlighted because, although there are many legal movements and health initiatives to limit violence in the home environment, a significant part of children is educated from abusive experiences. Education based on physical punishment is still part of the everyday life of many Brazilian families[13,14]. Despite all the substantial changes in the political and social context, the traditional view of gender roles, which centers the responsibility of caring for children and adolescents almost exclusively on women, still remains in force and is perhaps a possible cause of maternal burden[15].

In this sense, believing that unveiling the main characteristics associated with violence can assist in the development of public policies and more comprehensive care strategies for this population subgroup, this article aims at analyzing the factors associated with the occurrence of severe physical violence in children and adolescents with mental disorders.

METHOD

This is a cross-sectional study anchored in the project entitled "Family Violence in Children and Adolescents with Mental Disorders: Reflections from Mental Health and Primary Care", carried out with a group of parents and caregivers of patients treated at a psychosocial care unit in Nova Iguaçu (Rio de Janeiro) from October to December 2016.

The study population consisted in guardians of children and adolescents aged up to 18 years old living in Nova Iguaçu (RJ) and treated in the unit in the last 12 months. Considering the complexity of confirming or suspecting the diagnosis of severe mental disorder in childhood, the patients who attended only the first appointment were excluded, as well as those who did not have a therapeutic plan that indicated monitoring in the health service. Of the 340 children and adolescents enrolled in the unit, 38 were excluded due to the aforementioned criteria. There was 9.3% (n=28) of refusals by the parents and guardians of the eligible patients; thus, the final sample consisted of 274 participants.

The data were collected by means of a structured questionnaire with aspects of the disease and of the care for children and adolescents with mental disorders, divided into three modules. The first module consisted in sociodemographic variables of the parents and caregivers, as well as of the children and adolescents. The parents' demographic variables (age, race/skin color, schooling, marital status and participation in income transfer programs) were measured by items from the National Household Sample Survey (Pesquisa Nacional por Amostra de Domicílios, PNAD)[16].

The socioeconomic variables were evaluated using the "Critérios Brasil"[17] instrument, considering goods and services contracted by the family, the structure of the house and the schooling level of the head of the family to classify the individuals into the following economic strata: A (mean family income: R$ 20,888.00); B1 (mean family income: R$ 9,254.00); B2 (mean family income: R$ 4,852.00); C1 (mean family income: R$ 2,705.00); C2 (mean family income: R$ 1,625.00); D-E (mean family income: R$ 768.00). Data from strata "B1" and "B2" were aggregated to form a single stratum named "B". The same technique was applied in strata "C1" and "C2". The second part consisted of questions about the children's and adolescents' age and skin color/race.

The second module included the children's and adolescents' clinical and health care data and consisted of the following variables: relationship of the main caregiver (collected in the item: Who is the person who spends the most time taking care of the child/adolescent?); Time devoted to care (in years) since diagnosis; Weekly hours devoted to care (time in hours); and Monitoring time in the psychosocial care unit.

The final module collected information on serious physical violence perpetrated by family members/caregivers against children or adolescents, measured using the “Conflict Tactics Scales - Parent-Child” (CTSPC), validated and cross-culturally adapted for its use in Brazil[18]. Based on the Theory of Conflicts between parents and children, the CTSPC scale has 22 items that measure non-violent discipline, psychological aggression, physical violence and severe physical

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violence18. This paper analyzed severe physical violence as its dependent variable, considering as positive violence those cases in which at least one of the scale's items was positive.

Statistical processing was performed using the Stata SE 15 software[19], initially with univariate analyses to recognize data distribution and describe the sample profile. Bivariate analyses were performed, with calculation of the Odds Ratios (OR) and the respective 95% Confidence Intervals (95% CI), applying the Chi-square test. The variables with p-values of up to 0.20 were included in the initial model of the multiple analysis.

Logistic regression analysis with the manual stepwise backward technique was performed to detect the factors associated with the outcome and control the confounding factors, individually removing the non-significant covariates until attaining a final model (all the variables with p-value<0.05). All the interactions between the independent variables and the outcomes were tested.

The research was conducted in accordance with the ethical precepts involving human beings, in consonance with the international and Brazilian legislation, and was approved by the Research Ethics Committee (Approval No. 1,789,738). All the research participants signed the Free and Informed Consent Form. Anonymity, confidentiality and reduction of potential harms were ensured throughout the data collection process, conducting the interviews in a private environment and monitoring the families at the moments subsequent to data collection.

RESULTS

The mean age of the study participants was 38.4 years old (SD 8.9), with 83.5% aged over 30 years old. The primary caregivers were women (86.1%), black- and brown-skinned (73.3%), with more than 8 years of study (57.8%), with a partner (52.0%), with occupations linked to house chores or unemployed (57.1%), and belonging to economic classes C (46.7%) and D/E (43.1%). They received some type of financial assistance from the State in the form of income transfer programs (69.3%). The mother was identified as the main caregiver in 77.1% of the cases, had occupations related to house chores or were unemployed (65.6%). In relation to the time devoted to care, 55.3% of the participants had a Weekly Care Workload of more than 40 hours, from over 10 years (48.7%).

In relation to the sociodemographic characteristics of the children and adolescents assisted, it was observed that 54.8% were aged between 12 and 18 years old; with a mean of 11.2 years old (SD 3.7). They were predominantly male (63.9%) and black- and brown-skinned (63.5%). On average, the children and adolescents were diagnosed 6.1 years earlier (SD 4.3); 74.6% when aged under 10 years old; and they had 1.5 years (SD 1.87) of monitoring time in the health unit (study setting).

Table 1 shows the results of the bivariate analysis between severe physical violence against children and adolescents according to the covariates referring to the characteristics of the caregivers and of the children and adolescents.

Statistically significant relationships were observed with age group, gender, enrollment in income transfer programs, time devoted to care and weekly care workload by the caregiver. In relation to the children's and adolescents' characteristics, severe physical violence had a statistically significant relationship with age group and with time since diagnosis.

Table 2 presents the results of the multiple logistic regression analysis for severe physical violence.

It is worth noting that governmental financial support (adjusted OR = 0.5; p-value = 0.026) showed a protective association against severe physical abuse. On the other hand, age from 31 to 40 years old, caregiver's gender, time devoted to care in the service, Weekly Care Workload and time since diagnosis exerted effects on the occurrence of severe physical violence.

Table 3 presents the results of the logistic regression analyses to test the interactions between the independent variables and the outcome.

Although all the variables included in the model have been tested, interaction was only observed between time devoted to care and Weekly Care Workload.

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TABLE 1: Association between severe physical violence and the characteristics of the caregivers and of the children and adolescents with mental disorders. Nova Iguaçu, Rio de Janeiro, Brazil, 2016.

Variables	Unadjusted OR (95% CI)	p-value
Related to the caregivers		
Age group		
18-30 years old	1	
31-40 years old	2.5 (1.2 - 5.2)	**0.012**
41-50 years old	1.7 (0.7 - 4.1)	0.196
Over 50 years old	1.6 (0.6 - 4.1)	0.332
Gender		
Female	1	-
Male	3.3 (3.6 - 6.8)	**0.001**
Race/Skin color		
White	1	
Black/Brown	0.7 (0.4 - 1.3)	0.271
Asian/Indigenous	1.6 (0.5 - 4.8)	0.378
Schooling		
Up to 8 years	1	
More than 8 years	0.9 (0.6 - 1.5)	0.813
Marital status		
With a partner	1	
Without a partner	0.9 (0.6 - 1.5)	0.699
Occupation		
Others	1	
House chores/Unemployed	1.2 (0.7 - 1.9)	0.474
Economic class		
A/B	1	
C	1.4 (0.6 - 3.2)	0.405
D/E	0.7 (0.3 - 1.7)	0.475
Income transfer program		
No	1	
Yes	0.5 (0.3 - 0.9)	**0.015**
Main caregiver: the mother		
No	1	
Yes	0.8 (0.4 - 1.3)	0.344
Time devoted to care in the service		
Up to 10 years	1	
More than 10 years	2.5 (1.5 - 4.0)	**<0.001**
Weekly care workload (over 40h)		
No	1	
Yes	1.6 (1.1 - 2.6)	**0.048**
Related to the children and adolescents		
Age group		
12-18 years old	1	
Up to 11 years old	0.6 (0.4 - 1.0)	**0.034**
Gender		
Female	1	
Male	0.9 (0.6 - 1.5)	0.871
Race/Skin color		
White	1	
Black/Brown	1.1 (0.6 - 2.0)	0.624
Asian/Indigenous	1.7 (0.7 - 4.1)	0.231
Time since diagnosis		
Up to 4 years	1	
5-9 years	1.7 (0.9 - 2.9)	0.082
10+ years	1.6 (0.9 - 2.9)	0.124

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Table 2: Adjusted Odds Ratio (final model) between the independent variables and severe physical violence. Nova Iguaçu, Rio de Janeiro, Brazil, 2016.

Variables	Adjusted OR (95% CI)	p-value
Caregiver's age		
18-30 years old	1	-
31-40 years old	2.4 (1.0 - 5.5)	**0.039**
31-50 years old	1.2 (0.4 - 3.3)	0.704
Over 50 years old	0.9 (0.3 - 2.7)	0.814
Caregiver's gender		
Female	1	
Male	5.7 (2.2 - 14.6)	**<0.001**
Income transfer program		
No	1	
Yes	0.5 (0.3 - 0.9)	**0.026**
Time devoted to care (in years)		
Up to 10 years	1	-
More than 10 years	2.9 (1.2 - 7.2)	**0.018**
Weekly care workload (over 40h)		
No	1	
Yes	1.5 (1.1 - 2.3)	**0.047**
Time since diagnosis		
Up to 4 years	1	-
5-9 years	2.1 (1.1 - 4.0)	**0.024**
10+ years	1.3 (0.6 - 2.8)	0.454

TABLE 3: Logistic regression analysis to test the interaction for severe physical violence against children and adolescents based on time devoted to care (> 10 years) and on weekly care workload (> 40 hours). Nova Iguaçu, Rio de Janeiro, Brazil, 2016.

Variables	Adjusted OR (95% CI)	p-value
Time devoted to care ≤ 10 years and Weekly Care Workload ≤ 40 hours	1	-
Time devoted to care ≤ 10 years and Weekly Care Workload > 40 hours	1.5 (0.7 - 3.4)	0.297
Time devoted to care > 10 years and Weekly Care Workload ≤ 40 hours	2.4 (0.8 - 6.6)	0.096
Time devoted to care > 10 years and Weekly Care Workload > 40 hours	5.0 (1.8 - 13.9)	**0.002**

Notes: OR adjusted by the following variables: caregiver's age and gender, enrollment in income transfer programs, time devoted to care (in years), weekly care workload and time since diagnosis.

DISCUSSION

The main results point to the importance of supporting caregivers of children and adolescents with severe mental disorders, especially when considering that these cases represent chronic conditions with a high potential for dependence. The classic Illinois cohort of 101,189 Medicaid enrollees, born between 1990 and 1996, indicated that chronic conditions, especially mental disorders, tend to double the risk (RR: 2.0; 95% CI: 1.7 / 2.4) of physical violence[20]. Other studies also reinforce the effects of the families' burden as possible elements in the causality of violence[21,22], especially due to the potential effects of illness on the family dynamics.

These results are consistent with those of this study, which revealed greater chances of severe physical violence associated with long periods of time (in years) and weekly care workloads exceeding 40 hours. That is, it was identified that the longer the care time devoted to children and adolescents, the greater the chances of severe physical violence, showing the daily stressors related to time devoted to care as a proxy for the caregiver's burden.

It is not a novel fact that chronic conditions produce changes in family life, requiring adjustments in the organization of daily life to meet the needs of the person cared for[23]. Imbalance and deterioration of the family dynamics are common events and are closely associated with the occurrence of conflicts due to the high load of demands[24]. The stress associated with adaptive events can cause distress in the caregiver, increasing the chances of conflicts and, as a consequence, of violence to the person being cared for10, especially in the absence of dynamics that produce the necessary family support[25,26].

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Children with mental disorders are at a high risk of physical violence from an early age, increasing the chances of serious consequences on physical and emotional development throughout life, as abuse tends to be repeated over time[20], producing marks that are difficult to measure. It is important to remember that physical punishment is still at the heart of education and of resolution of conflicts involving parents and children, aspects that can favor the occurrence of violence due to the caregivers's burden and to lack of family support[27].

The mothers are usually the main perpetrators of violence and physical punishment against their children[28], in part because of the social norms created to guide what is expected from men and women in conducting early childhood and family education. Despite the many advances in the public policies to reduce inequalities between men and women, the traditional notion of gender can also help to understand the women's role as caregivers and their responsibility in managing and caring for the home and the children. As seen in this study, women, essentially those of working age, are the main caregivers to abdicate formal work to care for children and adolescents, imposing physical and emotional burden and increasing the chances of violence and negative results against children[29-31].

However, this research contributes a new way of looking at this phenomenon, since the male caregiver was pointed out as the main responsible for the events of severe physical violence (5.7 times the chances in relation to women). Giffin[32] had already reflected that the home environment idealized as protective and fraternal has also been the main place for male abuse against women, children and older adults, as well as the privileged place for its systematic concealment. In addition, it is important to problematize that most of the research studies on physical abuse against children have been carried out with the general population, not focusing on the group of children in chronic situations. Another point is the involvement of adolescents in this research, which, by itself, differentiates the population base from most of the surveys carried out.

Contrary to the factors associated with the occurrence of violence, an important protective effect for physical violence against children and adolescents in families that were enrolled in governmental income transfer programs was observed, reducing occurrence of the event by 50%. The two main programs are Bolsa Família and the Continuous Cash Benefits (Benefícios de Prestação Continuada, BPC) and are respectively directed to poor or extremely poor families, older adults and people with disabilities[33]. Considering the magnitude of the Bolsa Família Program, some studies have been carried out pointing to the beneficial effects of income transfer on eating habits[34], treatment of infectious diseases[35] and access to the health services[36].

Although some authors have already associated income transfer programs with the reduction in the number of homicides and hospitalizations due to violence[37], this is one of the few studies that show a protective influence for violence against children and adolescents with mental disorders. This reduction can be explained by the control of the health and education sectors, as it is a mandatory condition for the continued receipt of the benefits[33]. In addition to that, it is possible that the income transfer programs are producing financial emancipation for the families whose lives are directly devoted to caring for children and adolescents with severe mental disorders, thus becoming an explanatory hypothesis that deserves further clarifications in future research studies.

Although this study greatly contributes to the scrutiny of the factors associated with severe physical violence in a group of children and adolescents with severe mental disorders, its results must be interpreted in the light of its limitations. The first refers to the study scope, which was limited to the analysis of a single health unit. Although this health unit is a reference for all the children and adolescents with severe mental disorders in the municipality, it is important to consider that the Primary Care network also serves children and adolescents in psychological distress, a scenario not covered in this study. Thus, the milder cases of mental disorders were not recruited, generating a selection bias that may have increased the association measures herein found.

Another aspect was the way to measure continuous numerical variables by means of categorical measures, which did not allow observing more detailed nuances of the effect of time on the outcome, a gap that deserves to be addressed in future analyses. For this, it becomes important to reflect on the ways of measuring these events, as this study found predominance of 10 years in time devoted to care and of 40 hours in the weekly care workload. It becomes necessary and urgent to reflect on new ways to assess these events.

CONCLUSION

Severe physical violence is prevalent among children and adolescents, especially due to the culture of abuse that structures conflict resolution relationships in many societies. Children and adolescents with chronic conditions, mainly mental disorders, present greater incidence of violence when compared to other groups. This article presents an analysis of the factors associated with the occurrence of severe physical violence against children and adolescents with mental

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disorders, a scenario that is still little explored in the academic literature. It identifies that time devoted to care and weekly care workload are the factors most associated with these events, raising the hypothesis that the caregiver's burden is an important event in the phenomenon of violence against children and adolescents. In addition, caregiver's age, gender and time since diagnosis are also factors to be considered in the production chain of violence against this population group, aspects that can be identified by health professionals.

Thus, it seems important that the mental health team develop a set of attitudes for the early detection of risks to children and adolescents. Integration of family members and caregivers in the joint development of therapeutic plans can improve the health teams' approach, serving as a protective factor against new episodes of violence and expanded care.

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