



Contents lists available at [ScienceDirect](#)

Child Abuse & Neglect



Research article

The association of intrafamilial violence against children with symptoms of atopic and non-atopic asthma: A cross-sectional study in Salvador, Brazil[☆]

Camila Barreto Bonfim^{a,*}, Darci Neves dos Santos^a, Maurício Lima Barreto^a

^a Institute of Collective Health, Federal University of Bahia, Salvador, Brazil

ARTICLE INFO

Article history:

Received 9 February 2015
Received in revised form 17 May 2015
Accepted 27 May 2015
Available online xxx

Keywords:

Intrafamilial violence
Asthma
Atopy
Psychosocial factors

ABSTRACT

This study aims to describe the types of intrafamilial violence perpetrated against children according to living conditions, family factors, and child characteristics, and to identify the association between types of intrafamilial violence and asthma symptoms in atopic and non-atopic children. A cross-sectional study was carried out with 1,370 caregivers as part of the Social Changes, Asthma and Allergy in Latin America (SCAALA) study, conducted in 2006 in Brazil. The study population was selected by random sampling. The main outcome measures were atopic and non-atopic asthma. We investigate the association between intrafamilial violence and asthma symptoms in atopic and non-atopic children. A backward multivariate logistic polytomous regression was performed to verify the main association. Nonviolent discipline (NVD) and maltreatment nonviolent discipline (MNVD) were positively associated with non-atopic asthma symptoms (NVD: odds ratio (OR) = 1.95/95% confidence interval (CI) = 1.17–3.25; MNVD: OR = 1.95/95% CI = 1.19–3.20). However, for the most severe intrafamilial violence, this association was not found after control of potential confounders. This study demonstrates the effect of types of intrafamilial violence on non-atopic asthma. Intrafamilial violence against children represents one more component in the determination of non-atopic asthma in Latin America.

© 2015 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Introduction

Asthma is a chronic disease and its prevalence is increasing in Latin America (Anandan, Nurmatov, Van Schayck, & Sheikh, 2010). This is a multifactorial condition with a heterogenic profile that presents at least two phenotypes: atopic and non-atopic. Atopic asthma is more common in developed countries and it is associated with allergic inflammation related to intestinal infections, crowding, and older siblings at home (Cooper, Rodrigues, Cruz, & Barreto, 2008). Non-atopic asthma is more common in developing countries and it is associated with poverty, indoor and outdoor pollution, diet, and stress (Cooper et al., 2008; Cooper, Rodrigues, & Barreto, 2012). The increase in non-atopic asthma in Latin America needs to be understood and seems to be associated with a Western lifestyle and urbanization (Barreto et al., 2006; Cassol et al., 2005; Cooper et al., 2008), including psychosocial and environmental risk factors (Maia, Marcopito, Amaral, Tavares, & Santos, 2004;

[☆] *Funding:* The study was funded by Wellcome Trust, UK, HCPC Latin American Centres of Excellence Programme (ref. 072405/Z/03/Z). The funders had no role in study design, data collection and analysis, the decision to publish, or the preparation of the manuscript.

* Corresponding author at: Basilio da Gama Street, University campus of Canela, Canela, Salvador, Bahia 40110-040, Brazil.

<http://dx.doi.org/10.1016/j.chiabu.2015.05.021>

0145-2134/© 2015 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Please cite this article in press as: Bonfim, C. B., et al. The association of intrafamilial violence against children with symptoms of atopic and non-atopic asthma: A cross-sectional study in Salvador, Brazil. *Child Abuse & Neglect* (2015), <http://dx.doi.org/10.1016/j.chiabu.2015.05.021>

Strina, Barreto, Cooper, & Rodrigues, 2014), since genetic factors alone cannot explain the observed increase over such a short duration (Boechat, Rios, Sant'anna, & França, 2005; Cassol et al., 2005). Intrafamilial violence against children might be one of these stressors associated with asthma and the severity of this condition (Wright, 2011; Wright & Steinbach, 2001). Despite few studies about asthma phenotypes (Strina et al., 2014), there is evidence that stress is a risk factor for the non-atopic phenotype and intrafamilial violence might be one of them. Furthermore, some studies have suggested that dysfunctional family interaction, especially early parental interaction, might influence the course of asthma (Gustafsson, Kjellman, & Bjorksten, 2002). Intrafamilial violence may play a role in asthma development as a stress factor through inflammatory effects produced by an increase in cortisol (Wright, 2011). Moreover, serious damage to the cell structure can be caused by the action of neutrophilic airway inflammation that may dramatically increase the reaction to stress (Wright, 2005).

An association between intrafamilial violence against children and asthma has been found mainly in populations exposed to dysfunctional family relationships, regardless of socioeconomic status. Data from North American cross-sectional studies have shown a 1.48 times greater risk of asthma developing in schoolchildren (Graham-Bermann & Seng, 2005) and a 1.73 times greater risk in very young children (Berz et al., 2007). A cross-sectional study of 2,771 Swedish schoolchildren aged 4–9 years reported that the risk of asthma was 3.9 times greater among those who suffered from intrafamilial violence (Jernbro, Svensson, Tindberg, & Janson, 2012). A recent wide-ranging study with 95,677 American children found a significant association of intrafamilial adverse childhood experiences (ACE) exposures and the odds of reporting asthma. As numbers of ACE events increase, we can observe a rise in the odds of reporting asthma. There was a 2.42 times increase in the odds ratio when children were exposed to at least five ACE (Wing, Gjelsvik, Nocera, & McQuaid, 2015).

Intrafamilial violence is also related to asthma in adolescents. Health status in general and the risk of developing asthma in particular are more likely to be affected in adolescents subjected to corporal punishment (Lau, Liu, Cheung, Yu, & Wong, 1999; Turyk et al., 2008). A longitudinal retrospective study employing secondary data for 6,282 subjects aged 12–18 years with low socioeconomic status found a 1.73 times greater risk of asthma when the children suffered an episode of family violence during childhood (Lanier, Jonson-Reid, Stahlschmidt, Drake, & Constantino, 2010).

Evidence about association between intrafamilial violence and asthma in the Latin American context has been demonstrated in only one study. A total of 40 Mexican children with bronchial asthma who were exposed to family violence within a more disorganized environment had a greater number of episodes of asthma throughout the year (Bolaños-Rodriguez, Loredó-Abdalá, Trejo-Hernández, & Huerta-López, 2010). In Brazil, although intrafamilial violence has also been suggested as a trigger factor for health problems in children and adolescents (Reichenheim, Hasselman, & Moraes, 1999), unfortunately, there has been no investigation into its influence on asthma symptoms.

In spite of the advances highlighted in international studies, there are few observational studies to evaluate the association between intrafamilial violence and asthma in Latin America. Furthermore, the relationship between non-atopic asthma and intrafamilial violence against children in the Brazilian context has not been addressed, despite being a common phenomenon (Cooper et al., 2012; Rates, Melo, Mascarenhas, & Malta, 2015; Reichenheim et al., 1999).

In order to extend the biomedical model of asthma, to understand the relationship between asthma phenotypes and intrafamilial violence, and considering the relevance of this subject and a lack of study in Latin American context, this study was carried out. This research aims to describe the types of intrafamilial violence perpetrated against children according to living conditions, family factors, and child characteristics, as well as to estimate the association between intrafamilial violence and asthma symptoms in atopic and non-atopic children.

Methods

Study Design, Population, and Setting

This is a cross-sectional study carried out as part of the Social Changes, Asthma and Allergy in Latin America (SCAALA) program, conducted in 2006 in the city of Salvador, Bahia, Brazil. SCAALA is a program of research activities conducted in Brazil and Ecuador. In Brazil, the main objective of this study was to investigate the association between the prevalence of asthma and other allergic disorders and their potential risk factors, such as exposure to infections in childhood, and environmental, nutritional, immunological, and psychosocial factors (Barreto et al., 2006).

The study population was selected by random sampling and was recruited from 24 micro-regions located in different sewage system basins within Salvador. Out of 1,445 caregivers who answered the questions for asthma symptoms, 1,370 answered the intrafamilial violence questionnaire. The non-response rate was 5.19%, without differential bias.

Instruments

Asthma and risk factors were measured using the International Study of Asthma and Allergies in Childhood, largely based on ISAAC Phase II, adapted and standardized for the Brazilian population (Table 1) (Camelo-Nunes, 2002).

Blood samples were used to measure specific IgE levels and were analyzed by radioimmunoassay (RAST) using the enzyme-linked immunosorbent assay (ELISA) technique with commercially available kits (Indoor Biotechnologies, Charlottesville, VA, EUA).

Intrafamilial violence against children was measured using the Conflict Tactics Scales: Parent–Child (CTSPC) (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998), which was validated for a Brazilian population (Reichenheim & Moraes, 2003).

Download English Version:

<https://daneshyari.com/en/article/6832546>

Download Persian Version:

<https://daneshyari.com/article/6832546>

[Daneshyari.com](https://daneshyari.com)