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## Short Communication

# Greater income inequality is associated with higher rates of intimate partner violence in Latin America

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## ABSTRACT

**Objective:** The aim of the study was to examine the association between income inequality and experiences of past-year intimate partner violence.

**Study design:** Multiple country population-based surveys.

**Methods:** We examined associations between experiences of past year physical or sexual violence perpetrated by an intimate partner and income inequality using correlation tests. Income inequality was measured using both the Gini coefficient and ratios between the incomes of the richest 10% and the poorest 10%; data on gross domestic product (GDP) per capita were also retrieved. All income data were sourced from Human Development Reports closest to the year each violence survey was administered.

**Results:** A positive association between income inequality and intimate partner violence was statistically significant using either the 10:10 ratio of income inequality ( $r = 0.78$ ,  $P = 0.003$ ) or the Gini coefficient ( $r = 0.69$ ,  $P = 0.011$ ). Including GDP per capita as a covariate slightly strengthened these associations ( $r = 0.79$ ,  $P = 0.004$  and  $r = 0.73$ ,  $P = 0.011$ , respectively).

**Conclusions:** To our knowledge, this is the first quantitative study of societal income inequality and intimate partner violence. Despite the small sample of countries, there is a significant association between higher inequality and higher levels of violence.

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## Introduction

The association between income inequality and violence is longstanding and robust—higher rates of homicides and violent crime have been associated with income inequality across the world.<sup>1</sup> Income inequality is also linked to mass

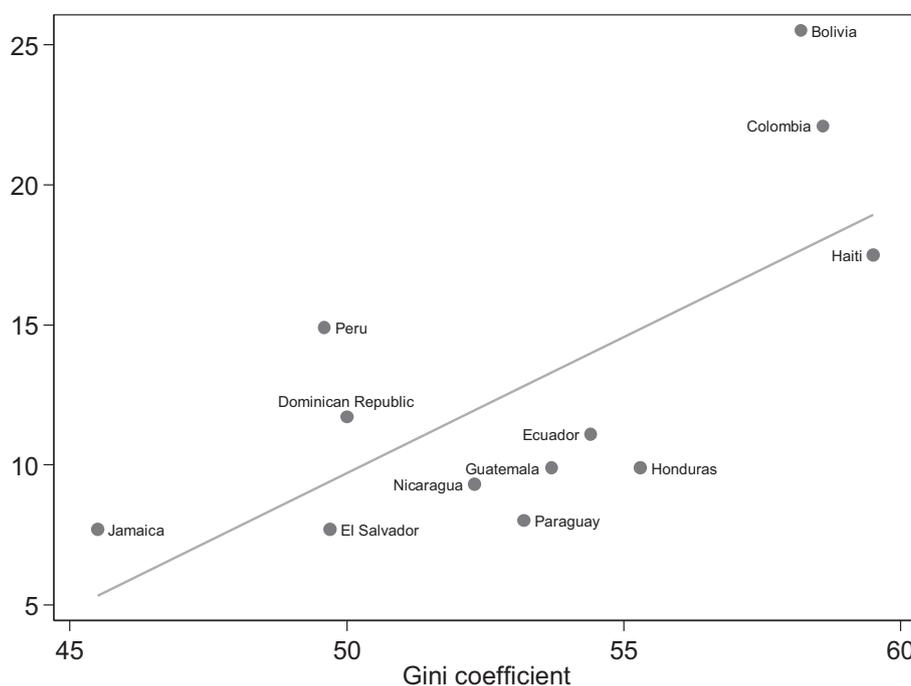
shootings within the United States, juvenile homicides, bullying in schools and child maltreatment.<sup>2</sup> As women's status is also significantly lower in more unequal societies<sup>3</sup> and women with relatively fewer economic resources are at higher risk of intimate partner violence,<sup>4</sup> it is reasonable to hypothesise that intimate partner violence may also be linked

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**Fig. 1 – Women report more intimate partner violence in the past year in more unequal Latin American countries.**

to income inequality. However, comparable prevalence data are less readily available. The World Health Organisation conducted standardised population-based household surveys, where women aged 15–49 years who had ever had a male partner were asked in private about their experiences of physical and sexual violence and emotionally abusive acts; prevalence rates were estimated for 10 countries but from widely different regional, cultural and economic contexts.<sup>5</sup> Similarly, the European Agency for Fundamental Rights conducted a survey on violence against women across 28 European Union member states, but sample sizes were too small to reliably compare rates of intimate partner violence between countries.<sup>6</sup>

### Latin American data

We studied the association between income inequality and intimate partner violence for countries represented in the Pan American Health Organisation's comparative analysis of violence against women in Latin America and the Caribbean.<sup>7</sup> The data were from Demographic and Health Surveys and Reproductive Health Surveys. These surveys are used to generate population-based national data on various reproductive health issues and began to include brief modules on intimate partner violence in the 1990s. Women in the surveys were asked in private about their experiences by interviewers who had received specialised training in domestic violence. Standardised indicators were constructed from surveys conducted between 2003 and 2009, and the details of these indicators are discussed in full elsewhere.<sup>7</sup> For this analysis, experiencing any physical or sexual violence in the past year was used as the indicator of intimate partner violence.

National estimates of income inequality closest to the year each survey was administered were sought from Human Development Reports.<sup>8</sup> Income inequality was measured using both the Gini coefficient and the ratios between the incomes of the richest 10% and the poorest 10%, and data on GDP per capita were also retrieved. Cross-sectional associations between income inequality and intimate partner violence were assessed with correlation tests in Stata.

### The association between intimate partner violence and income inequality

The past year prevalence of intimate partner violence was high, ranging from 7.7% of women in Jamaica and El Salvador to 53.3% in Bolivia.<sup>7</sup> A positive association between income inequality and intimate partner violence was statistically significant using either the 10:10 ratio of income inequality ( $r = 0.78$ ,  $P = 0.003$ ) or the Gini coefficient ( $r = 0.69$ ,  $P = 0.011$ ). Including GDP per capita as a covariate slightly strengthened these associations ( $r = 0.79$ ,  $P = 0.004$  and  $r = 0.73$ ,  $P = 0.011$ , respectively) (Fig. 1). GDP per capita was not significantly associated with intimate partner violence after accounting for income inequality.

### Conclusions

To our knowledge, this is the first quantitative study of societal income inequality and intimate partner violence. Despite the small sample of countries, there is a significant association between higher inequality and higher levels of violence. This association may not hold elsewhere; survey data indicate high rates of reported intimate partner violence among

European countries exhibiting low income inequality,<sup>9</sup> although the data underpinning this conclusion have been questioned.<sup>6</sup> As accurate, comparable data become available for other regions it will be possible to extend our understanding of this phenomenon; however, this preliminary cross-sectional ecological study fits with what is known about the impact of inequality on other aspects of violence on women's status and on social relations, such as levels of trust, solidarity and chronic stress.<sup>3</sup> The World Health Organisation considers violence against women an urgent public health priority<sup>5</sup>; understanding the wider social determinants of intimate partner violence will be essential in creating policy interventions to prevent this violation of human rights and enabling gender equality.

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### Author statements

#### Ethical approval

Ethical approval was not required for this study as it uses publicly available data.

#### Funding

The authors declare no further funding.

#### Competing interests

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those of the NHS, the NIHR or the Department of Health and Social Care. The authors declare no further competing interests.

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