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Introduction

It is widely recognized that intimate partner violence against women (IPVAW) affects all societies. In Latin America and the Caribbean (LAC), there is growing concern about violence against women and this has led to legislative efforts in several countries (Economic Commission for Latin America, ECLAC, 2014). A study of 12 LAC countries—based on data for the 2000s—by Bott, Guedes, Goodwin, and Mendoza (2012) indicates that, in most cases, between a quarter and a half of women reported that they had suffered intimate partner violence at least once. However, analyses in LAC are relatively scarce, partly because information is lacking or too heterogeneous. In this article, we aim to contribute to the empirical knowledge about IPVAW in LAC through the study of attitudes.

The understanding and analysis of attitudes and the factors behind them are quite important because the link between IPVAW and tolerance is very close. There is empirical evidence that IPVAW is more frequent among individuals who justify or approve of these kinds of acts (Markowitz, 2001; Orpinas, 1999). Besides, there is evidence that tolerance decreases the likelihood of victims or witnesses reporting IPVAW and even inhibits potential helpers from intervening (Frye, 2007; Gracia & Herrero, 2006a; Pease & Flood, 2008; West & Wandrei, 2002).

In this article, we analyze the factors that explain attitudes toward IPVAW at individual and country level. The empirical literature focuses mainly on factors at the individual level. There are far fewer studies of macro variables. Most of these rely on descriptive analysis and exploratory hypothesis (Nayak, Byrne, Martin, & Abraham, 2003; Rani & Bonu, 2009; Rani, Bonu, & Diop-Sidibe, 2004) and only in rare cases do they deal with methods that attempt to assess the effect of macro variables (BowvariT93ni, Bonu, & Diop-Sidibe

The rest of this article is organized as follows. First, we review the literature about theoretical issues and international evidence that guide our empirical analysis, and then we present our data and methods. The estimations and results are given in "Results" section and we draw our conclusions in "Discussion" section.

Conceptual Framework and Empirical Foundations

Individual Characteristics

Socio-demographics variables. An important group of individual characteristics are socio-demographic variables. Studies for different countries find common patterns including the fact that the likelihood of tolerating IPVAW is greater among rural and young people than among urban and old populations (Lawoko, 2008; Rani & Bonu, 2009; Rani et al., 2004). The evidence about the age effect is surprising because we might expect young people to be less tolerant than old people, which would reflect the changes in women's status over time in most of the world. Some authors advance different arguments that support this result, but there is no single explanation (Flood & Pease, 2009). For example, it has been argued that there has been a generational change of attitudes toward condemning IPVAW, but this change would be offset by parallel changes over time in other attitudes, feelings, and perceptions, such as empathy or moral awareness.

The literature also shows that there is a gender difference but its sign varies between countries. In most African studies, tolerance of wife-beating is higher among women than men (Rani et al., 2004; Speizer Ilene, 2010; Uthman et al., 2009) whereas the opposite holds in the United States, Europe, and most Asian countries (Flood & Pease, 2009; Markowitz, 2001; Nayak et al., 2003; Rani & Bonu, 2009).

In our empirical analysis, we introduce three explanatory variables, namely, gender, age, and living in rural areas.

Environment. Most of the evidence shows that socioeconomic disadvantage and low education increase the likelihood of IPVAW tolerance (Rani & Bonu, 2009; Rani et al., 2004; Uthman et al., 2009). Boyle et al. (2009) argue that part of the education effect comes from beliefs and self-image. High levels of education are associated with more liberal norms and more support for women's rights, so more education leads to lower acceptance of violence. Besides, low education is related to low levels of women's empowerment in the home.

Exposure to the mass media is another possible explanatory factor. There is a strand in the literature that finds that media content (news, soap operas, violence, etc.) affects a wide range of attitudes and behaviors. A priori, the sign of this is ambiguous. The content of mass media may challenge stereotypes by disseminating attitudes and behaviors that condemn domestic violence. For example, Jensen and Oster (2009) find that the introduction of cable TV in India decreased support for wife-beating, which they maintain was due to exposure to other cultural influences. In addition, the mass media may affect attitudes when it is used by the government and other organizations when they implement campaigns against violence. However, these positive effects are

risk of IPVAW. However, many researchers argue that religiosity increases tolerance toward IPVAW by supporting and transmitting rigid gender roles. Seguino (2011) finds that individuals who are intensely religious are more likely to support gender inequitable attitudes regardless of what their particular faith is. A more direct channel of influence is when religious institutions reject divorce, and consequently, their spiritual counselors will advise abused women to remain in their marriage, which lends support to tolerant attitudes. But in a variety of faiths and particularly in the form of Christianity, the teaching includes compassion and love for human beings, which may lead to the rejection of domestic violence. Thus, on the theoretical level, the effect of religion is ambiguous. In fact, in a review of the literature, Flood and Pease (2009) state that the empirical findings about the relation between support of domestic violence and religiosity are not conclusive, although there is some evidence that tolerance of IPVAW increases when religious beliefs are more fundamentalist.

Heise (1998) proposes a model—an ecological model—whereby domestic violence is seen as the result of the interaction of factors operating at different levels: individual, family, community, and society. This notion supports the idea that variables at country-level may explain differences between countries. However, the few empirical studies on country-level effect do not give a robust set of variables to be tested. Therefore, we explore the empirical literature that focuses on the community level to obtain insights to help us select appropriate explanatory variables that take account of the heterogeneity across the LAC countries.

Among all the possible factors that affect IPVAW at community level, the one cited most often is socioeconomic situation, measured by poverty, unemployment, the incidence of a high-educated population, and other variables (Beyer, Wallis, & Hamberger, 2013). However, the few empirical studies that have assessed these variables at country level through quantitative empirical strategies do not find a significant effect (Gracia & Herrero, 2006b; Uthman et al., 2009). At any rate, we study the effect of poverty as we consider it an important socioeconomic indicator of a country. We expect to find that poverty affects IPVAW and attitudes through several mechanisms. When poverty is high, the chances of mobility and improvement are limited, jobs opportunities are scarce, and, in general, the range of options (choice of school, entertainment, access to services, etc.) is restricted. All these factors may increase feelings of frustration and make domestic violence more likely even among non-poor population sectors. Besides, poverty is associated with low education, which has its own effect. Indeed, if the population is better-educated—particularly women—this encourages the creation of networks and public programs that help and protect victims and contributes to shaping attitudes of rejection toward domestic violence.

Many authors consider that the predominant culture in the society is central to the acceptance of wife-mistreatment, particularly the existence of rigid gender roles based on male dominance (Heise, 1998; Nayak et al., 2003; Rani et al., 2004). We attempt to capture this dimension through the fertility rate. We expect that high fertility levels are related to a high proportion of women with home-centered preferences. Furthermore, high fertility may be associated with low levels of women's empowerment at home. Low empowerment may reduce women's ability to control their fertility outcome because they lack control over sexual decision making and contraceptive use (Pallitto & O'Campo, 2005). Branisa, Klasen, and Ziegler (2013) find that women having low decision-making power in the household increases fertility, which supports using the fertility rate as a proxy for the prevailing gender roles in a country.

As culture is transmitted from generation to generation, it is crucial to have an understanding of the factors and processes that modify values and beliefs. We have already mentioned that beliefs about male superiority at individual level are key to explaining the acceptance of gender-based violence. Individuals would face a conflict between their inherited culture and reality when they are exposed to more egalitarian outcomes in areas such as authority structures, economic participation, and financial contribution. Therefore, outcomes that provide evidence of equal gender performance (in political action, business, the labor market, the arts, etc.) would increase the rejection of IPVAW, and there is some empirical support for this effect (Gracia & Herrero, 2006b; Rani et al., 2004b). In our empirical work, we consider gender inequality outcomes as factors that would explain differences between countries.

Access to Internet may also work as a channel that exposes people to diverse cultural views, debates, and ways of life that may challenge the cultural attitudes and behaviors they have inherited. When a high proportion of the population is exposed to values and beliefs that condemn domestic violence, this produces a spillover effect that would increase rejection of IPVAW in the country. However, Internet could also produce and reinforce tolerant attitudes. Two examples show the possible opposite effects. On one hand, the international campaigns against death by stoning would make people think about women's status in general and particularly their mistreatment. On the other hand, Internet facilitates pornography and violent games, and many empirical studies have found that these foster gender-stereotyped and violence-supportive attitudes (Flood & Pease, 2009). Thus, the expected effect of Internet coverage in a country is ambiguous.

We would also expect that institutions oriented to narrowing gender gaps and promoting gender equity will affect attitudes toward IPVAW (although previous social movements and cultural changes would have fostered the development of institutions favorable to gender equality). An outstanding equalizing event is the granting of equal electoral rights. The more that women have the right to vote, the more they can promote their interests and well-being, which includes pressing for policies that punish violence against women. Empirical studies support the hypothesis that women's

voting rights influence gender equality, although long-term improvements require long-term participation in the political process (Beer, 2009; Cooray, 2012).

Finally, attitudes toward IPVAW also depend on the levels of conflict in a society like criminal activities, political crises, war, and so on. If people get used to high levels of violence outside the boundaries of the home, tolerance to other types of violence increases (Noe & Rieckmann, 2013). Moreover, tolerance increases because conflict would tend to make domestic violence more likely.

Data and Method

Data

Our study uses data at the individual and country levels. The variables at the individual level are from the AmericasBarometer survey carried out by the LAPOP in 2012. This survey uses the same questionnaire for all countries; it is based on a national probability design and is implemented in many countries in the Americas. There are 23 countries in our sample (see Table 1).

The respondents are voting-age adults who are asked about attitudes and perceptions in face-to-face interviews conducted in their own language. The survey also reports demographic and socio-economic variables. The number of cases varies between countries but LAPOP provides the

First, there is the difficulty of interpersonal comparability. In the education literature, a test question has a differential item functioning (DIF) if the probability of a correct answer between equally able persons is different. DIF has been reinterpreted as referring to the different ways people understand the same question, and some strategies to alleviate this problem have been proposed (King, Murray, Salomon, & Tandon, 2004). In our dependent variable, there are two possible misunderstandings: "unfaithful" and "hitting his wife." The first one does not bother us: we are not very concerned about how people define the bounds between marital fidelity and infidelity, but rather the extent to which the subjective idea of "unfaithful" triggers tolerance of violence. But the second one may be important: we are aware that the levels of violence that the word "hitting" brings to mind may differ

comprises 23 indicators that reflect three aspects of the absence of violence or fear of violence: ongoing domestic or international conflict, the society's safety and security, and militarization. A lower score on the GPI means a safer and more secure (more peaceful) country. There is no information about the GPI of Belize.

Method

Our data consist of observations of individuals and are nested in countries. Empirical studies of attitudes toward IPVAW that used these types of data applied multilevel modeling (Boyle et al., 2009; Gracia & Herrero, 2006b; Uthman et al., 2009). Following this strategy, we define a random-intercept model by

$$y_{ic} = \beta_0 + \beta_1 X_{ic} + \beta_2 Z_c + \varepsilon_{ic} + u_c, \quad (1)$$

where y_{ic} is the attitude of the individual i in country c that depends on characteristics at individual level X_{ic} and at country level Z_c, ε_{ic} is an unobserved individual effect, and u_c is an unobserved country effect (country-specific random intercept). The model assumes that the unobserved effects are normally distributed and are not correlated with X_{ic} and Z_c. As the y_{ic} is a binary response, the model may be written as

$$\text{logit}\ \Pr\left(y_{ic} = 1 / X_{ic}, Z_c, u_c\right) = \beta_0 + \beta_1 X_{ic} + \beta_2 Z_c + u_c, \quad (2)$$

where $u_c \sim N(0, \quad)$. We tried to estimate this model, but we had convergence and instability problems. Particularly, the estimation of β_2 was heavily dependent of the estimation method option. Our interpretation is that the instability is caused by the low number of countries. The optimal sample size at second level is discussed in the literature by several authors (Bryan & Jenkins, 2013; Hox, van de Schoot, & Matthijsse, 2012; Stegmueller, 2013). Bryan and Jenkins (2013) suggest that the estimation of Equation 2 using databases similar to ours gives an accurate estimation of the parameters at individual level, but the estimated parameters at country level are not reliable.

Thus, we restricted the multilevel estimation to a random-intercept model in which the random country effects are not modeled:

$$\text{logit}\ \Pr\left(y_{ic} = 1 / X_{ic}, \varepsilon_{ic}\right) = \beta_0 + \beta_1 X_{ic} + \varepsilon_c, \quad (3)$$

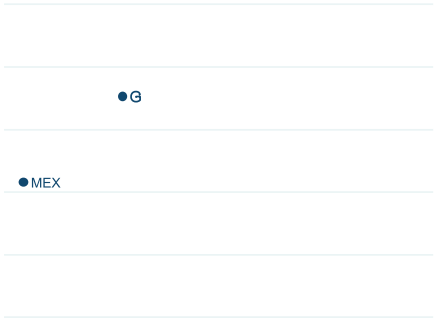
where ε_c is a country-specific random intercept where $\varepsilon_c \sim N(0, \quad)$. The estimation enables us to calculate the variance partition coefficient (VPC). This indicator gives the proportion of the residual variability in the propensity to justify IPVAW unexplained by the individual-level covariates, that is explained by between-country variations. We calculated the VPC for the null model (without the vector of X covariates) and for Model 3. For the estimation, we used the formula VPC $= \rho / (\rho + (\pi^2 / 3))$ as explained in Snijders and Bosker (1999).

To model the country effects,coun4 Tw T* [([ic BMC 0 g /GS)

approval is .06 points lower for women than for men. Populations in rural areas and small towns are more likely to support IPVAW. However, the size of the difference is rather low: the marginal effect is 0.017. In turn, age is not related to approval of IPVAW.

As regards environment influence, we find that support for IPVAW decreases with education and the frequency of accessing the news mass media, and increases with deprivation. A comparison of two extreme examples illustrates the magnitude of the effect of environment. The probability of approval for a non-deprived person with 16 years of education who pays daily attention to the news is 0.35 (other vari-

country; the results are given in column 2, and in column 3, we include GPI as a covariate. The differences between the coefficients in columns 1 and 2 are negligible, which indicates the results are not sensitive to the exclusion of Belize. Note that when we include GPI, the constant is not significantly different from 0, which suggests that the covariates are enough to explain the differences between countries. Finally, as there is no information about GGG for Haiti, we re-estimated the basic model without this country but including Belize. The results are shown in column 4. Two global results merit some comment. First, we cannot reject the hypothesis that the constant is null. Therefore, the variables in the basic model would explain the differences between all the countries except Haiti. Second, the results are sensitive to the inclusion of Haiti, at least for some covariates, as it emerges from the comparison of columns 2 and 4. In column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estimates given in Table 3 indicate a negative and significant effect in all models. The magnitude of the effect is around –0.01 in all cases, with a negligible decline when we introduce GPI and GGG as covariates.

Conflict and other types of violence are positively related to approval of IPVAW. Indeed, Figure 2c indicates a positive relation between GPI and ζ_1. The same conclusion arises from the estimated coefficient reported in column 3 of Table 3: higher levels of GPI mean higher levels of approval of IPVAW.

The importance of the year that women's suffrage was enacted is not robust. As shown in Figure 2d, the bivariate relation is weak. The estimates of Equation 5 indicate that the effect of the variable is positive in the basic model and remains so when Belize is dropped. Based on the marginal

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