

Attitudes Toward Intimate Partner Violence Against Women in Latin America and the Caribbean

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Abstract

We analyze individual and country factors that explain attitudes toward intimate partner violence against women (IPVAW) in Latin America and the Caribbean. Most patterns at individual level are similar to the international ones: for example, approval of IPVAW is higher among women and people in rural areas or in disadvantaged socio-economic situations. The most novel contribution of our work is the study of the variables at country level: approval of IPVAW increases with poverty, fertility rate, and equal gender outcomes. It decreases with Internet access and, less robustly, with the time elapsed since the enactment of women's suffrage.

Keywords

violence, attitudes, Latin America, gender

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 (Boyle, Georgiades, Cullen, & Racine, 2009; Gracia & Herrero, 2006b; Uthman, Moradi, & Lawoko, 2009).

We have data about attitudes at individual level for 23 LAC countries provided by the AmericasBarometer by the Latin American Public Opinion Project (LAPOP) collected in 2012. As the questionnaire is the same in all the countries, we have the advantage of having homogeneous data. The variable of analysis is attitudes to wife-beating when she has been unfaithful. International evidence shows that infidelity is one of the main triggers of IPVAW, and it is one of the most frequently cited examples of behavior that is considered the victim's fault and justifies an aggressive reaction (Vandello & Cohen, 2008; Waltermaurer, 2012). We analyze approval of IPVAW at individual level using a logit model. We use this estimation to calculate the predicted approval at country level, and use it as a dependent variable to estimate the effect of macro variables.

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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 IPVAV 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 IPVAV, 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 IPVAV 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 mediated by various factors. Content that reflects gender and family relations that support stereotypes of women’s submission and men’s dominance, and content that shows violence as a way of solving conflicts, feed cultural norms that support domestic violence. In the case of news, if IPVAV is not considered important in a society, there will be no demand for this type of information and the topic will rarely be an issue. In addition, journalists’ attitudes are also important. In short, we would expect that exposure to the mass media will increase condemnation of IPVAV when its contents undermine inherited cultural norms that tolerate or approve of it.

In our empirical study, we reflect the environment through three variables: years of schooling, socioeconomic deprivation, and exposure to the news media.

Culture. Another important explanation of the differences between individuals’ attitudes toward IPVAV is based on cultural aspects understood as values and beliefs transmitted from generation to generation. One strand in the literature emphasizes that attitudes toward IPVAV belong to a coherent set of values and beliefs. Gender role stereotypes are the most frequently cited examples of this, and empirical studies confirm that they are correlated with tolerance of wife-beating (Flood & Pease, 2009; Vandello & Cohen, 2008). The main idea that gives support to men’s violence is that they have a dominant role in the home in a context in which ideal male behavior is associated with aggressiveness, power, and strength. This makes it seem that men have the right to enforce their authority through physical violence. This stereotype is usually accompanied by the idea that the woman’s role is mainly related to motherhood. Hakim (2003) says that this ideal refers to women with home-centered preferences, that is to say, women for whom “family life and children are their main priorities throughout life,” or even that having children is a precondition for living a meaningful life. The interaction of men’s and women’s stereotypes is reflected in the decision-making process in the home, and the evidence indicates that households in which men have the “final say” are associated with a higher risk of IPVAV (Flake & Forste, 2006). These roles in the home are accompanied by similar attitudes to gender roles in society: male superiority is simply assumed and women tend to be excluded from decision-making positions in the public sphere and in business. Where such stereotypes prevail, women who deviate from their traditional roles may suffer IPVAV, and this will be seen as justified punishment.

Another important cultural aspect is religion and its institutions. In a review of the literature, Mahoney, Abadi, and Pargament (2015) state that religious attendance lowers the

risk of IPVAV. However, many researchers argue that religiosity increases tolerance toward IPVAV 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 IPVAV 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 of 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 IPVAV 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 IPVAV 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 IPVAV, 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 IPVAV 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 IPVAV (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

Table 1. Countries and Number of Cases in the Sample and in the Study.

Country name	Country abbreviation	Number of cases in the sample	Dropped cases ^a	Number of cases in the study
Argentina	ARG	1,512	197	1,315
Belize	BLZ	1,512	132	1,380
Bolivia	BOL	3,029	390	2,639
Brazil	BRA	1,500	143	1,357
Chile	CHL	1,571	234	1,337
Colombia	COL	1,512	212	1,300
Costa Rica	CRI	1,498	171	1,327
Dominican Republic	DOM	1,512	78	1,434
Ecuador	ECU	1,500	222	1,278
El Salvador	SLV	1,497	184	1,313
Guatemala	GTM	1,509	213	1,296
Guyana	GUY	1,529	161	1,368
Haiti	HTI	1,836	386	1,450
Honduras	HND	1,728	284	1,444
Jamaica	JAM	1,500	335	1,165
Mexico	MEX	1,560	170	1,390
Nicaragua	NIC	1,686	59	1,627
Panama	PAN	1,620	183	1,437
Paraguay	PRY	1,510	144	1,366
Peru	PER	1,500	190	1,310
Trinidad & Tobago	TTO	1,506	219	1,287
Uruguay	URY	1,512	336	1,176
Venezuela	VEN	1,500	298	1,202
Total		37,139	4,941	32,198

Source. The Americas Barometer by the Latin American Public Opinion Project (LAPOP; 2012, www.LapopSurveys.org).

^aCases that were dropped because of missing values for the dependent and/or explanatory variables.

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

Finally, attitudes toward IPVAV 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 stratification variable and a weighting factor so the results are comparable across countries regardless of population size. In Table 1, we report the number of cases in the survey and the number used in our study (after dropping cases that lack data for the dependent and/or explanatory variables). For the empirical work, we recalculated the weights to work with equal country weights.

Our variable of interest was built from the following question: *Suppose that a man hits his wife because she has been unfaithful with another man. Would you approve of the man hitting his wife, or would you not approve but understand, or would you neither approve or understand?* To generate the dependent variable for the empirical analysis, we grouped the two first options under the value 1 and we assigned 0 when the individual responded that he would not approve or understand. Note that we use a strong criterion according to which just understanding why a man would hit his partner is interpreted as endorsement of IPVAV. Thus, henceforth, we analyze the variable as a dichotomous opinion of the approval or disapproval of violence.

Two potential problems with using opinion surveys to gauge attitudes deserve some comments. However, we do not adopt any strategy to address these issues.

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 re-interpreted 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 between individuals and so may condition the response.

The other potential problem is that persons might feel inhibited or embarrassed to say what they think. Particularly as regards justifying IPVAV, inhibition may increase as the moral condemnation of violence in the society raises. If this behavior prevails, the differences in attitudes between countries will overestimate the true differences.

Explanatory variables at the individual level. We used 10 explanatory variables at the individual level; these were also built from information reported in the LAPOP database. We controlled for three socio-demographic characteristics: gender (1 for females and 0 for males), geographic residence (1 for people residing in small towns and rural areas and 0 otherwise, which covers people living in the nation’s capital/metropolitan area, or large and medium cities), and age (years). The classification “rural area” or “small town” varies between countries.

Socio-economic situation was captured by two variables: years of schooling and a deprivation index. The deprivation index was built on the basis of possession of the following assets: television, refrigerator, landline/residential telephone, cellular telephone, vehicle/car, washing machine, microwave oven, indoor plumbing, indoor bathroom, computer, and Internet. For details of the index methodology, see Borooah (2002).

We included an indicator of exposure to news media measured through the answer to the following question: *About how often do you pay attention to the news, whether on TV, the radio, newspapers, or the Internet?* The pre-coded answers (and thus the variable range) are (1) *daily*, (2) *a few times a week*, (3) *a few times a month*, (4) *rarely*, and (5) *never*.

Because acceptance or tolerance of IPVAV is part of a wider set of values and beliefs, we included four indicators of cultural aspects as independent variables.

First, there is an indicator of religiosity that reflects the intensity of the individual’s exposure to religion institutions. This was constructed from the following question: *How often do you attend religious services?* The variable takes value 1

when the individual reported to attend at least once a month and 0 otherwise.

Second, attitudes about gender roles and stereotypes were captured through the respondent’s opinion about the following statement: *Some say that in general, men are better political leaders than women.* The variable ranges from 1 (*strongly disagree*) to 4 (*strongly agree*).

Finally, we used two questions that reflect the extent to which the person prefers to avoid the authorities when facing conflict or a violent situation. One measures support for vigilantism: *Of people taking the law into their own hands when the government does not punish criminals. How much do you approve or disapprove?* The answer (and the variable) ranges from 1 (*strongly disapprove*) to 10 (*strongly approve*). The other question might be interpreted as the attitude toward self-defense gun use: *If you could, would you have your own firearm for protection?* The variable takes value 1 when the answer was *yes* and 0 when the answer was *no*.

In the estimation, all explanatory variables were centered at the grand-mean of the pool of countries.

Explanatory variables at country level. We used different sources to acquire information about the macro factors for all the countries and to ensure that the data were built with the same methodology. We used six variables, but two of them were not available for all the countries.

As a proxy of the socio-economic situation of the country, we used the poverty headcount ratio at US\$1.25 a day (PPP) provided by ECLAC (2015a) for 2011 (information for 2012 was not available for all the countries).

Cultural characteristics and the factors that make people confront other views are captured by fertility, the Global Gender Gap (GGG), Internet coverage, and the year that women’s suffrage became law.

The fertility indicator is the average fertility rate (the number of children per woman) in 2005-2010 and is provided by ECLAC (2015b).

GGG is a composite measure of outputs that reflect gender equality. Its value for each country in the world and its methodology are available in Hausman, Tyson, and Zahidi (2012). It includes gender-based gaps in economic participation and opportunities, educational attainment, and political empowerment. The index ranges from 0 (*inequality*) to 1 (*full equality*). We use GGG estimation for 2012; there is no information for Haiti.

Internet coverage was measured by the percentage of persons with access to the World Wide Web: information provided by the World Bank (2015) for 2012.

The dates when women’s suffrage was enacted in the various countries were obtained from national legislations records. In all cases, date of suffrage means the first year that all women had the right to vote in presidential elections.

Finally, the extent of other types of violence was captured by the Global Peace Index (GPI) for 2012, produced by the Institute for Economics and Peace (2012). The GPI

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 IPVAV 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

$$y_{ic} = \beta_0 + \beta_1' \mathbf{X}_{ic} + \beta_2' Z_c + \varepsilon_{ic} + u_c, \quad (1)$$

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

$$\text{logit}\{Pr(y_{ic} = 1 / \mathbf{X}_{ic}, Z_c, u_c)\} = \beta_0 + \beta_1' \mathbf{X}_{ic} + \beta_2' Z_c + u_c, \quad (2)$$

where $u_c \sim N(0, \emptyset)$. 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:

$$\text{logit}\{Pr(y_{ic} = 1 / \mathbf{X}_{ic}, \varepsilon_{ic})\} = \beta_0 + \beta_1' \mathbf{X}_{ic} + \varepsilon_c, \quad (3)$$

where ε_c is a country-specific random intercept where $\varepsilon_c \sim N(0, \emptyset)$. 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 IPVAV 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 \mathbf{X} covariates) and for Model 3. For the estimation, we used the formula $VPC = \hat{\sigma} / (\hat{\sigma} + (\pi^2 / 3))$ as explained in Snijders and Bosker (1999).

To model the country effects, we turned to a two-step strategy, which has been widely used in economics. In the first step, we estimated a logit model with fixed-country effects: Model 3 is transformed using a variable a_c whose aim is to capture both observed and unobserved country characteristics ($a_c = \beta_2' Z_c + u_c$):

$$\text{logit}\{Pr(y_{ic} = 1 / \mathbf{X}_{ic}, a_c)\} = \beta_0 + \beta_1' \mathbf{X}_{ic} + a_c. \quad (4)$$

To estimate a_c , we fitted Model 4 using binary country-variables as covariates. We did not include a constant, and the variables of vector \mathbf{X} were centered at their grand-mean. The second step consists of an ordinary least squares (OLS) estimation in which the dependent variable is the estimated \hat{a}_c :

$$\hat{a}_c = \alpha + \beta_2' Z_c + u_c. \quad (5)$$

To estimate the standard deviation, we follow the strategy of bootstraps technique presented in Cameron and Trivedi (2009). In any case, because of the weakness stemming from the small number of countries, we combined the analysis of the estimation of Model 5 with the analysis of the bivariate relation between each covariate and the estimated country-fixed effect \hat{a}_c .

Results

Estimation at Individual Level

The results of the multi-level model estimation—Equation 3—and the logit model estimation—Equation 5—are given in Table 2. As shown in column 1, first, we considered a null model, that is to say, an unconditional model that predicts the individual-level intercept of approval of IPVAV as a random effect of the country level (without any other covariates). We found that 12.1% of the variability in attitudes unexplained by the individual-level covariates is explained by unobserved between-country characteristics. When we consider the full model shown in column 2, the between-country explained that variability declines to 9.2%. Therefore, part of the differences between countries depends on a population composition effect.

In column 3, we show the estimates obtained with the logit model. We do not find differences between the estimated parameters and the results obtained with the multi-level model. In column 4, we report the average marginal effect based on the estimation of the logit model.

The results show that women are less likely to approve of IPVAV than men. As shown in column 4, the probability of

Table 2. Estimated Coefficients, Marginal Effects, and Standard Errors (in Parenthesis).

Variables	Random-intercept models		Logit model	
	(1) Null model	(2) Full model	(3) Coefficients	(4) Marginal effects ^a
Female		-0.305*** (0.0304)	-0.305*** (0.0254)	-0.064*** (0.005)
Rural areas		0.082 (0.0550)	0.0812* (0.0426)	0.017* (0.009)
Age		-3.83E-05 (0.0012)	2.70E-05 (0.000875)	0.000 (0.000)
Years of schooling		-0.013*** (0.0040)	-0.013*** (0.00397)	-0.003*** (0.001)
Deprivation index		0.570*** (0.0978)	0.564*** (0.0824)	0.119*** (0.017)
Media consumption		0.035 (0.0282)	0.0342** (0.0154)	0.007** (0.003)
Religiosity		0.146** (0.0589)	0.143*** (0.0321)	0.030*** (0.007)
Gender political roles		0.265*** (0.0293)	0.265*** (0.0169)	0.056*** (0.004)
Vigilantism		0.043*** (0.0092)	0.0425*** (0.00501)	0.009*** (0.001)
Self-defense gun use		0.311*** (0.0496)	0.311*** (0.0296)	0.065*** (0.006)
Constant	-0.413*** (0.144)	-0.426*** (0.1236)		
Countries			YES	YES
Observations		31,818	31,818	31,818
Variance country level	0.451 (0.1067)	0.333 (0.0793)		
VPC	0.121	0.092		

Note. Variables centered at the mean of the pool. VPC = variance partition coefficient. ^aAverage marginal effects. For dummy variables, it is the discrete change from 0 to 1.

p* < .1. *p* < .05. ****p* < .01.

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

As regards environment influence, we find that support for IPVAV 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 variables at their centered value), while for a person who is fully deprived, has only 5 years of schooling, and never pays attention to the news, the probability is 0.53.

The coefficients and marginal effects of the four variables that capture values and beliefs are positive. The probability of approval for a religious person is 0.419. If this individual also strongly supports the idea that men are better political leaders than women, the probability increases to 0.530. When we also consider full support for vigilantism, it rises to 0.590, and finally, if we add being in favor of self-defense gun use, it reaches 0.630. On the other extreme, when religiosity takes the value 0, the probability is 0.389, and it declines to 0.279 when we add rejection of unequal political gender roles, vigilantism, and gun use for self-defense.

Finally, the logit estimation of column 3 of Table 2 includes country dummy variables that are used to estimate Equation 5 but are not reported. The estimated coefficients (fixed-country effects) range from -1.45 to 0.70. We use this information to calculate the predicted probability that an

average person (that is with individual characteristics equal to the mean of the pool) approves of hitting unfaithful wives ($\hat{P}_c = 1 / (1 + e^{-\hat{a}_c})$ where \hat{a}_c is the estimated coefficient of country *c*). In Figure 1, we show the predicted probabilities with their confidence interval at 95%. We also show the percentage of approval by country.

In Figure 1, the countries are ordered by predicted approval from the highest to the lowest. The vertical differences between the reported and predicted approval are related to population composition. At a glance, we may see these differences, but most of them are not significant at 95%, and when they are (as in the case of Guyana, Belize, and Dominican Republic), the gap size is negligible.

Estimation at Country Level

To analyze the relation between support for IPVAV and macro factors, we combined the study of two strategies: the estimation of Equation 5 and the bivariate relation between each macro variable and the estimated country fixed-effect \hat{a}_c . The results of the estimation of Equation 5 are given in Table 3. The bivariate relations are shown in six graphs in Figure 2; in each graph, we see a scatter diagram and the prediction of \hat{a}_c based on a simple regression for \hat{a}_c on the macro variable.

Let us first take an overall view of Table 3. In column 1, we report a basic estimation in which we use the covariates for which information is available for all countries, namely, poverty rate, Internet access, year that women’s suffrage became law, and fertility rate. To analyze GPI, we had to drop Belize, so we re-ran the basic estimation without this

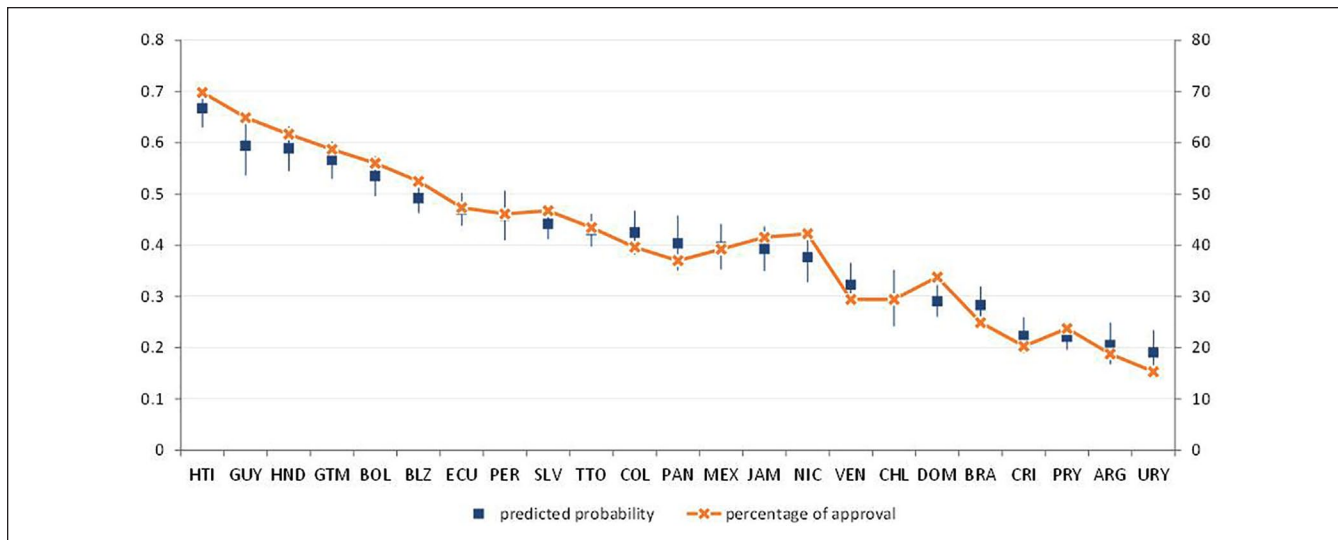


Figure 1. Percentage of approval of IPVAW, predicted probability, and confidence interval at 95% by country.
Note. IPVAW = intimate partner violence against women.

Table 3. OLS Estimates and Bootstrap Standard Errors (in Parenthesis).

Variables	(1) All countries	(2) Without BLZ	(3) Without BLZ	(4) Without HTI	(5) Without HTI
Poverty rate	0.0160*** (0.0017)	0.0159*** (0.0016)	0.0157*** (0.0016)	0.0455*** (0.0054)	0.0466*** (0.0054)
Internet access	-0.0101*** (0.0014)	-0.00985*** (0.0014)	-0.00639*** (0.0014)	-0.00882*** (0.0014)	-0.00842*** (0.0015)
Women's suffrage	0.00354** (0.0016)	0.00289* (0.0017)	-0.00157 (0.0017)	0.00117 (0.0016)	0.00152 (0.0016)
Fertility rate	0.248*** (0.0376)	0.256*** (0.0386)	0.247*** (0.0385)	0.134*** (0.0422)	0.146*** (0.0422)
GPI			0.733*** (0.0602)		
GGG					0.921** (0.4315)
Constant	-7.715** (3.0002)	-6.479** (3.2234)	0.602 (3.3021)	-2.982 (3.1417)	-4.339 (3.2528)
Observations	23	22	22	22	22
R ²	.515	.506	.585	.438	.440

Note. OLS = ordinary least squares; BLZ = Belize; HTI = Haiti; GPI = Global Peace Index; GGG = Global Gender Gap.
* $p < .1$. ** $p < .05$. *** $p < .01$.

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 5, we report the estimates when GGG is included as a covariate. The constant is still not significantly different from 0.

We turn now to the analysis of the macro variable parameters. Poverty has a positive and significant effect in the five estimations. However, the magnitude of the effect is sensitive to the inclusion of Haiti: It increases from 0.016 when this country is included (columns 1 to 3) to 0.046 when it is dropped (columns 4 and 5). This result is due to the markedly high level of poverty of Haiti which suggests that Haiti acts as an outlier that reduces the effect of poverty. The same conclusion arises from the analysis of the bivariate relation. In Figure 2a, we see that when all countries are included, the prediction of \hat{a}_c for each level of poverty—represented by the solid line—appears to be led by Haiti. When Haiti is removed, the positive relationship remains, as shown by the dashed line, but the estimated slope slightly increases (from 0.03 to 0.08) and so does the adjusted R^2 (from 0.33 to 0.36).

Internet coverage and the country effect \hat{a}_c are plotted in Figure 2b. The pattern of dots and the simple regression describe a negative relation between the variables. The

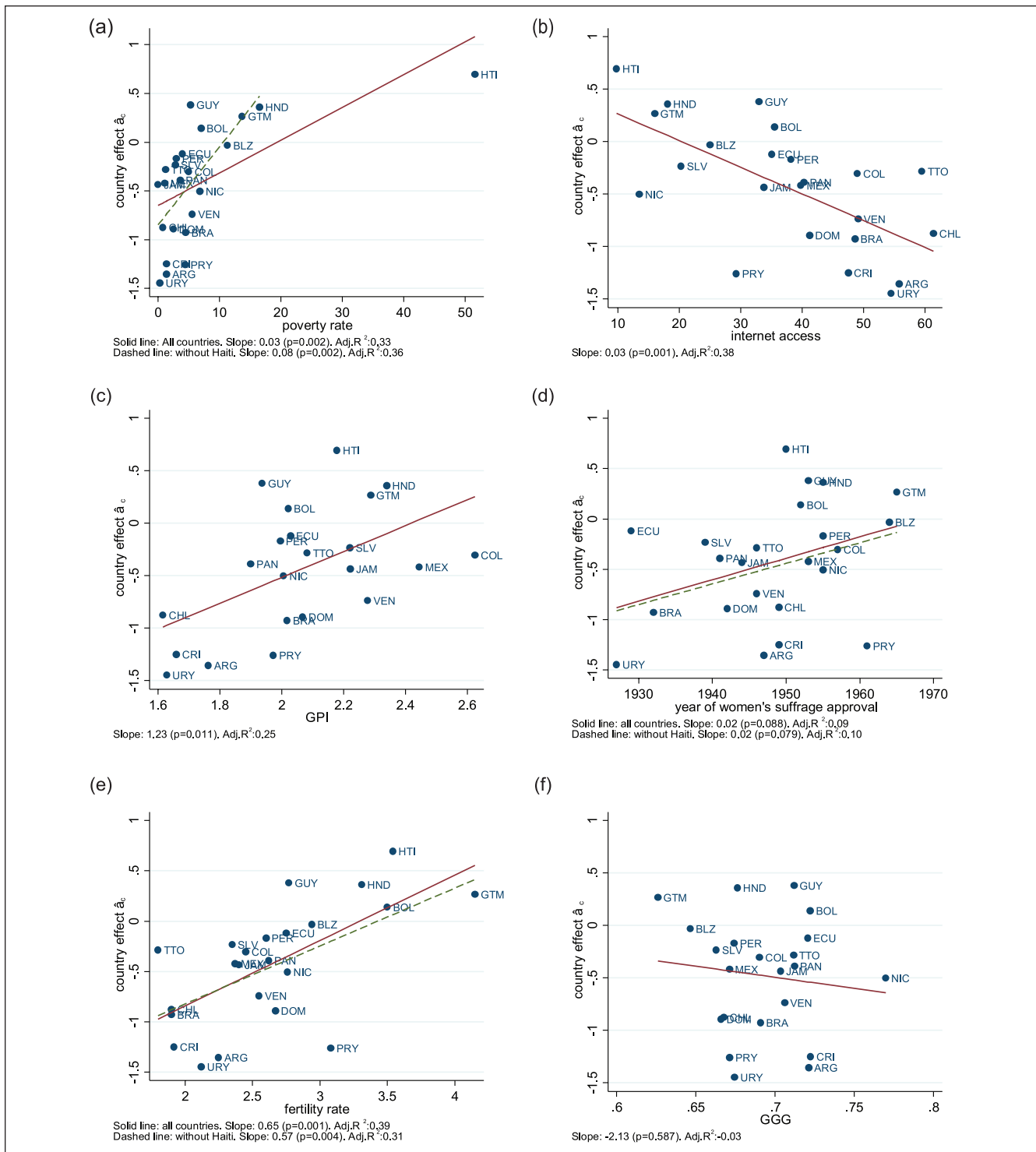


Figure 2. Fixed country effect \hat{a}_c and macro variables.

^aPoverty rate.

^bInternet access.

^cGlobal Peace Index.

^dYears of women's suffrage approval.

^eFertility rate.

^fGlobal Gender Gap.

Note. The straight line is the prediction for \hat{a}_c from a linear regression of \hat{a}_c on the country characteristic.

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 IPVAV. Indeed, Figure 2c indicates a positive relation between GPI and \hat{a}_c . 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 IPVAV.

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 effect of 0.0035, its accumulation over time may be considerable (a decrease of 7 percentage points of approval after 20 years). However, in the estimations reported in columns 3 to 5 of Table 3, the parameter loses statistical significance.

Fertility rate has a significant positive effect whose magnitude is sensitive to the inclusion of Haiti. Indeed, the removal of Haiti—whose fertility rate is high—makes the estimated coefficient decrease from 0.25 to 0.13. There is also a slight decline in the simple regression given in Figure 2e.

Finally, the dots in Figure 2f do not suggest any pattern between GGG and \hat{a}_c , and the estimation of a simple regression model indicates no correlation. The results obtained with the estimation of Equation 5 are unexpected: They suggest that GGG is positively related to approval of IPVAV.

Discussion

Violence is an important issue in LAC. Among the types of violence, concern about IPVAV has been increasing, and in the last decade, governments and social networks have been leading a fight against it. In this article, we analyze the individual and country characteristics believed to be related to attitudes toward IPVAV in LAC, and we make various contributions to the literature. First, this is the first study that undertakes a global analysis of LAC that assesses the effect of individual and country data derived using the same methodology in all countries. Second, we contribute to a sparse literature that deals with methods that attempt to assess the effect of macro variables. Finally, we analyze the relation between country variables and attitudes, and introduce characteristics that were not taken into account in previous empirical research. For this analysis, we have data from common sources that use the same methodology for collection and to construct variables.

We analyze attitudes toward IPVAV using a variable that reflects the approval of the man hitting his wife when she has been unfaithful with another man. We are aware that IPVAV concerns not only physical violence but also psychological, verbal, and spiritual violence, including coercive control (DeKeseredy, Dragiewicz, & Schwartz, 2017; Larsen, 2016).

The individual variables that affect attitudes are aggregated in three blocks of factors: demography, environment, and culture. Most of our results are similar to international patterns.

As regards the demographics of violence, we find that women and people in urban areas are less prone to support IPVAV. Unlike the international findings, we find that age is not related to support for IPVAV. As several authors point out, the expected result is that the young have lower levels of tolerance because of the intergenerational change in attitudes toward women's roles in society and the family. However, empirical studies do not support this idea: the sign of age is the opposite of what was expected. The explanations put forward in the literature for this result are plausible but not conclusive. In general terms, the reasons hinge on factors that make the intergenerational change effect invisible. The fact that age is not significant in LAC may indicate that this intergenerational change is strong enough to offset other factors.

We reflect the environment through three variables: deprivation, education, and exposure to news media. The effects of deprivation and education are similar to those reported in the international literature. Paying attention to the news is positively related to less approval for IPVAV. There may be no casual effect: People who are more likely to reject IPVAV may pay more attention to the news because they are more concerned with social problems. But it is also true that we may expect exposure to the mass media to have a genuine impact on attitudes. In principle, the sign of the effect is unknown because it depends on the contents of the news and perspectives of the journalists. In LAC, our findings suggest that the press disseminates condemnation of IPVAV. This may be the result of government efforts to banish violence against women. In several LAC countries, governments have used the mass media to carry out campaigns designed to change sexist cultural attitudes, cultivating a culture without violence and informing the public about offenders being punished by the law.

Finally, we use four variables to represent the cultural characteristics of individuals. Individuals who support male superiority in the political sphere are more likely to justify IPVAV. This finding is not surprising if we consider that the assumption that women are inferior in the public sphere goes hand in hand with the stereotyped view that a woman's role is to be a wife and mother. In this context, infidelity is a deviation from what would be considered proper female behavior. We also study the effect of religiosity. Our results suggest that in LAC, religiosity is positively correlated with justifying IPVAV. Beyond the argument that religions may support gender inequitable behaviors and would ultimately justify IPVAV, it is possible that our result is led by the fact that we are studying support for hitting women when they are unfaithful, and in Christianity, a woman's infidelity is an offense against the family. Finally, we find that support for vigilantism and self-defense gun use is positively correlated with the justification of IPVAV. It could be argued that the

three variables reflect a propensity to individual violence. In particular, people who support vigilantism are signaling themselves as ready to exercise physical violence to solve their problems. Our interpretation is that they would also be more likely to use violence when faced with a conflict within the family. Moreover, the three variables may reflect adherence to a conservative view of gender roles whereby masculinity is associated with aggressiveness, power, and strength.

One of the most novel aspects of our study is that it involves assessing the effect of country characteristics. One of the factors we consider is the country's socio-economic performance. In poor countries, options for improvement are limited so we can expect high levels of frustration, which makes domestic violence more likely. Indeed, we find that approval of IPVAV is positively related to poverty.

We also find that the level of conflict in the country is positively related to approval of IPVAV. This is an expected result because high levels of violence outside the household promote permissive attitudes toward the use of violence.

Finally, we also study the effect of culture. Beyond the positive relation between fertility and poverty, we take the number of children per woman as a proxy for the prevailing culture in terms of male dominance. As expected, we find that the higher the fertility rate, the higher the approval of IPVAV. We assess the effect of three factors that potentially affect the intergenerational transmission of culture. We argue that the effect of Internet access is ambiguous. Our empirical work shows that approval of IPVAV decreases with Internet access, which suggests that in the LAC countries, Internet is a channel that promotes values and beliefs that condemn domestic violence. Another factor we examine is the time elapsed since the enactment of women's suffrage, and we expect that improved gender equality would decrease approval of IPVAV. We find this outcome in some estimations, but the result is not robust. Furthermore, the results indicate that the narrower the gender gaps, the greater the approval of IPVAV. We do not have a definitive explanation for these intriguing results. Note that the expected negative relation between gender gap and approval of IPVAV depends on the fact that exposure to more egalitarian outcomes leads to the acceptance of changes in traditional gender roles. But possibly, this does not hold in stages when gender gaps are high and their reduction begins. In these stages, the first signals of gender equity could have the opposite effect and exacerbate violent attitudes.

Conclusion

In this article, we analyze the individual and country characteristics believed to be related to attitudes toward IPVAV in LAC.

The individual variables that affect attitudes are aggregated in three blocks of factors: demography, environment, and culture. Most of our results are similar to international

patterns. Particularly, we find that women and people in urban areas are less prone to support IPVAV.

We reflect environment through three variables: deprivation, education, and exposure to news media. Support for IPVAV decreases with education and increases with deprivation. Paying attention to the news is positively related to less approval for IPVAV.

We use four variables to represent cultural characteristics of individuals. Individuals who support male superiority in the political sphere are more likely to justify IPVAV; religiosity is positively correlated with justifying IPVAV and support for vigilantism and self-defense gun use is positively correlated with the justification of IPVAV.

One of the most novel aspects of our study is that it involves assessing the effect of country characteristics. One of the factors we consider is the country's socio-economic performance. We find that approval of IPVAV is positively related to poverty, the level of conflict in the country, and the fertility rate but negatively related to Internet access. Another factor we examine is the time elapsed since the enactment of women's suffrage, but the result is not robust.

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