

RESEARCH ARTICLE

Effect of education on the risk of gender-based violence in the Philippines

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ABSTRACT

Background: Gender-based violence originates when societal gender-based expectations and the reality are not consistent. One such example is: there has been a recent rise in women's education in the Philippines, yet the prevalence of traditional female role expectations in the context of the heavily Catholic Filipino society remains unchanged.

Objectives: In this paper, the relationship between women's education and their risk of gender-based violence (GBV) is examined and compared with the relationship between the education of their partners and the women's risk of experiencing GBV.

Methodology: Our sample included women living in the Philippines surveyed by the Demographic Health Survey in 2017. We used multivariate logistic regression on the respondents' and the partner's education level, with respondent's risk of experiencing GBV.

Results: We found that there was a slight but statistically significant decreased risk of GBV experience with increased years of education of both the female respondents and their male partners. For all female respondents, there was a 3.7% decrease in the risk of GBV per additional year of their own education. For those with partners, there was a 2.3% decrease in the risk of GBV per additional year of their partner's education.

Conclusion: We found that the education of male partners is as much of a factor as the women's own education in her likelihood of experiencing violence. From this, we established that partner selection based on their education levels may act as a protective factor for an individual's likelihood of experiencing GBV. Policy initiatives should address increasing male awareness of safe behavior and violence against women, especially while traditional gender roles are still predominant in the Filipino society.

Keywords: gender-based violence, violence against women, education, partner selection, Philippines, women's safety, survey data

Introduction

In today's world, an average of one out of three women experience physical and/or sexual abuse in their lifetime and approximately half of women who were intentionally killed were killed by a family member or an intimate partner [1,2]. While there is growing research on the various sociodemographic factors contributing to this phenomenon, there is increasing attention on how education may act as a protective factor to gender-based violence (GBV) around the world.

The Central Asia Institute posits that "Education is the Best Weapon Against Violence," reflecting the evidence that shows individuals with less education experience more violence, for example someone with a high school degree has a higher chance of experiencing violence than someone with a college degree [4]. In the United States, the Department of Justice have previously reported that women with lower levels of education were overrepresented in records of intimate partner homicide victims [3]. Despite evidence like these, women in traditional family structures are often met with repercussions when they seek more than basic education and face cultural clashes with conservative, genderist social norms that require women to be responsible for the house and children. Those living in developing countries are especially more likely to face difficulties in obtaining education due to lack of resources and traditional



gender roles. Obtaining higher levels of education is known to reduce women's exposure to GBV in a wide range of settings [5]. A study in Peru found that a 1990s compulsory schooling reform reduced women's exposure to intimate partner violence (IPV). Specifically, they found a reduction of 2-4% risk of experiencing GBV for each additional year of schooling for females [6]. Education levels of women's partners may also shape risk. A descriptive study in India found that females from neighborhoods with middle and low male literacy level had more risk (8% and 12%, respectively) compared to females from neighborhoods with high male literacy levels [7]. These and other previously published literature point to a higher likelihood for women with less education to experience violence in the female population, such as those limited to primary-secondary education compared to those with post-secondary education [8].

The theory of status inconsistency has been researched since the early 20th century. When it first emerged in the field of sociology, the theory was largely attributed and tested on males and their tendency to resort to violence when their status was inconsistent with their learned skills and/or expectations, such as having the ability to provide for their family or having a high-income job after completing higher education [9]. At the inception of this theory, female 'status' was not considered as relevant due to their tendency to stay home and belong solely to the family. There was no expectation for females to strive for higher status, even for those with higher than average education. Starting in the late 20th century to the current 21st century, several sociologists and psychologists pointed to status inconsistency theory to explain intimate partner violence and gender-based violence towards females. This theory applies acutely to females in the modern era as female status increasingly becomes more equitable in terms of education and work. The 'status inconsistency' for now includes the recent trend of females with higher education and work skills, while traditional gender roles still prevail in households. This notion closely relates to that of power relations between men women in attempting to keeping genders accountable to their expected roles [10].

Goode's seminal paper in 1971 about family power relations discussed the direct correlation of a family member's decision-making power to the perceived value of the resources that the member brings to the family unit [11]. Hornung *et al.* further strengthened the literature surrounding GBV by conducting a study that showed status inconsistency between romantic partners is associated with increased risk of abusive behavior [12]. Shockingly, this study

specifically found that women with a higher professional status than their partner were most vulnerable to lifethreatening forms of violence, and men with higher education but lower-status jobs were more likely to perpetuate violence on their partner. Yick's interpretation on intimate partner violence among Chinese American families highlighted the family unit as a 'power system' where every member employs various degrees of force [13]. She hypothesized that violence may be a byproduct of the societal expectation within a traditional, heterosexual dyad, and the realities that fall short of these expectations. The basis of patriarchal theory states that men's dominance must be complemented by the women's subordinance. Women with more social capital, such as education and professional status, can threaten men's dominance and trigger violent behavior. A comparison of five theories to explain violence against women found status inconsistency to be the most suitable explanatory theory for gender-based violence as a multi-dimensional encapsulation of both sexism and patriarchal power relations theory [14].

Before the 1987 constitution, there was no specific law that protected women against GBV in the Philippines, and women were considered as assets of male family members, most often to a father or a husband. The 1987 Constitution effectively placed women as equal entities to men for the first time in the Filipino society. Since 1995, more attention has been centered on human rights, including those of women. Six new legislations have since been put in place to protect women against harassment, trafficking and rape, including the most recent: Republic Act (RA) No. 9262 or the "Anti-Violence Against Women and Their Children Act of 2004" [15]. RA-9262 made any type of violence against women and children as a public crime and made any violence within intimate and family relationships punishable [16]. However, national surveys still show a high prevalence of GBV experienced by women. A recent publication using the 2013 Demographic and Health Survey explore Filipino women's help-seeking behavior after they have experienced violence, and found this behavior to be low [17].

There has not yet been a study where a large sample of women and their education level has been compared to that of their partners', regardless of their marital status. Most studies investigating interpersonal violence only takes account of married partners which overlooks many other potential abusive cases. Also, the most relevant study to the current topic was done more than a decade ago, and this topic continues to be understudied. This study aims to: 1) assess the relationship between educational attainment of respondents and risk of GBV and 2) for partnered respondents, between



the education level of their male partners and their risk of experiencing GBV in the Philippines using the most recent country-wide data from the Philippines 2017 Demographic and Health Survey.

Methodology

Data Source

We used publicly available Women's Safety Module data, which is part of the 2017 Demographic and Health Survey (DHS) from the United States Agency for International Development (USAID). These surveys are conducted about every five years. They are nationally-representative surveys that allow monitoring and evaluation of population health indicators and are conducted globally by USAID. DHS surveys typically take about 18-20 months to complete in a single country and consist of a large sample size (>10,000 households). Training and Fieldwork for recruitment and survey dissemination are conducted by data collectors consisting of mostly female interviewers, field editors and team leaders. Data processing is done by the Philippines Statistics Authority for the Philippines government and USAID.

The Women's Safety Module from the Philippines' 2017 National DHS asked a wide range of questions including but limited to: respondent's demographic data, knowledge of reproductive health, history of childbirth, prenatal care and experience of GBV [18]. The data was accessed at no cost via the DHS Program website after registering with the author's institutional affiliation with Boston University [19]. The 2017 Philippines DHS Individual Recode dataset was downloaded and used for this study's analyses.

Study population and sample

The 2017 DHS Women's Safety Module is a two-stage stratified random sample and is designed to be representative of married and unmarried adult female population of ages 15 to 49. Only one female per household was selected to take the survey. When there was more than one eligible woman in the household, one female was randomly selected to complete the survey. Individuals who did not have access to a secure, private location in their household was not selected for the survey.

Key measures

Our primary outcome was "ever experienced GBV", ascertained through questions 1203-1224, which asks

respondents about their experience of abuse in their lifetime. There were three different major types of violence collected by the module — excessive control, emotional abuse, and physical abuse. Physical abuse includes rape and any other sexual abuse or battery. The different types of violence are reported separately in our descriptive statistics but are not reflected in the regression model. For the purposes of our regression model, the responses were dichotomized to 'ever experienced GBV' and 'never experienced GBV', according to the female respondents' lifetime experience on experiencing any type of violence because of their gender. The primary exposures were the total number of years of the respondent's education and their partner's education, respectively.

Covariates for the logistic regression model were selected based on the existing literature's common sociodemographic factors related to gender-based violence. We conducted a test of significance for each variable selected with the binary GBV variable (ever vs never) and included the significant factors into the logistic model. For the first analysis which measures the correlation between the likelihood of experiencing GBV and educational attainment of all eligible women, covariates included: respondent's age, partner's years of education, partner's age, urbanicity and religion. For the second analysis which measures the correlation between the likelihood of experiencing GBV of partnered women and educational attainment of their partners, covariates included: respondent's age, respondent's years of education, partner's age, urbanicity and religion.

Study design

This study utilizes observational, cross-sectional data from the 2017 Philippines DHS survey. For the purposes of our analysis, we redefined some variables in the dataset. Firstly, we combined the various violence-related categories. In the Women's Safety Survey, these variables for different types of violence were separate: control (d102), emotional abuse (d104), mild physical abuse (d106), severe physical abuse (d107), different types of sexual abuse (d106, d124, d125), and miscellaneous types of domestic violence (d111). These variables were grouped together to represent individuals who ever experienced GBV, making GBV a dichotomous variable. Secondly, we created separate dummy variables for self-reported years of education of the female respondents (d133) and their male partners (d715). Due to the existence of some outliers that were most likely errors and missing variables coded as '999' in the numeric field, the sample was limited to those with less than 20 years of education. Finally, another dummy variable was created



for those that were 'partnered.' Staying consistent with the context of the Women's Safety Module, the term 'partnered' means the female respondent self-identified as having a husband or a male partner who she resides with, including fiancés and boyfriends.

The first analysis with "all women" relates the female respondents' level of education with their likelihood of experiencing GBV and is unrelated to the male partners. This is meant to be a comparison point for the second analysis, which is a sub-analysis exclusive to those with partners and relates the level of education of male partners with the female respondents' likelihood of experiencing GBV.

Data processing and analysis

For descriptive statistics, we obtained summaries for the respondent's age, marital status, employment status, number of living children, categorical education level, urbanicity, religion, and type of GBV experienced. We also obtained the partner's age, employment status and categorial education level, which are shown in Table 2. We measured the significance of the difference between the two GBV groups (ever experienced vs never experienced) with t-tests for continuous variables and Pearson's chi-squared tests for categorical variables for each of the descriptive variables, including those of the partners. Potential confounders were removed from the regression model.

For each of the two aforementioned logistic analyses, we performed a multivariate logistic regression to draw a relationship on the respondents' education level, partner's education level, and the risk of GBV. Our population parameter of interest was the estimated risk of experiencing GBV among Filipina women who were selected to answer the Women's Safety Module in 2017 in relation to their own education or the education of their partners. The alpha level of significance was 0.05.

Observations from partnered women without complete partner data was excluded from the second analysis. There was a negligible number of outliers for years of education for respondents and partners which were deemed as erroneous data points and were excluded from analysis (>20 years of education). There were no missing data in baseline respondent data. All analysis was conducted using STATA/SE 16.1.

Results

A total of 25,074 female respondents were selected to take the Women's Safety Module in 2017 (Table 1). Of these

women, 17,967 provided enough demographic data available to be included in the analysis for the 'all women' group (Table 1). Of these women, 12,499 provided enough partner information to be included in the sub-analysis for 'partnered women' (Table 2).

As shown in Table 1, 28.8% had ever experienced any GBV among all eligible women (n=17,967). Women who never experienced GBV were more likely to be employed (47.4% vs 38.8%) and less likely to be married (47.3% vs 62.3%). Women who experienced GBV was likely to be slightly older (33.6 vs 30.1 years old) and have more children (2.7 vs 1.7 living children). Majority of respondents were of the Catholic faith (72.5%). Women who experienced GBV were slightly more likely to be Catholic (74.1% vs 71.8%).

Approximately 70% of all eligible women (n=12,499) reported having a partner and provided valid information on their partners (Table 2). Women who experienced GBV tended to have partners of similar age with lower level of education (23.4% vs 30.6%). The average age of men who were partners of the selected respondents of the Women's Safety Module was approximately 37 years old, 6 years older than the average age of the female respondents. Among partnered respondents, their partners were drastically more likely to work than the respondents, with just under 50% of all female respondents currently working compared to over 94% of their male counterparts who have worked in the past week. For all female respondents regardless of their partnerships (n=17,967), there was a 6% decreased risk (Unadjusted OR=0.94) of GBV with each year increase of their own educational attainment (95% CI: 0.93, 0.95; p<0.001).

The odds ratio results shown in Table 3 show that partner's education years are slightly but significantly associated with the likelihood of the female respondents experiencing GBV. Adjusted OR controls for the partner's age, as well as the respondent's age, years of education, religion and urbanicity. For partnered women (n=12,499), there was a crude 3.7% (OR=0.964; 95% CI= 0.955, 0.973; p<0.001) and adjusted 2.3% decrease (OR=0.977; 95% CI=0.965, 0.989; p<0.001) in the risk of GBV with each year increase of their partner's education attainment.

Discussion

Significance of findings

Our findings suggest that partner's education may be as significantly associated as the female's education to the



Table 1. Demographic summary of all survey respondents for the 2017 Women's Safety Module

	All selected participants (N=17,967)	Never experienced GBV (N=12,794)	Ever experienced GBV (N=5,173)	P-Value (a=0.05)
	Mean (SD) or n(%)	Mean (SD) or n(%)	Mean (SD) or n(%)	
Age	31.08 (9.69)	30.08 (9.98)	33.57 (8.44)	<0.01
Marital Status				<0.01
Married Living with partner Divorced / Separated Widowed Never in union	9,273 (51.61) 3,247 (18.07) 490 (2.72) 205 (1.14) 4,753 (26.45)	6,051 (47.30) 1,814 (14.18) 162 (1.26) 132 (1.05) 4,633 (36.21)	3,222 (62.28) 1,433 (27.70) 328 (6.34) 71 (1.37) 119 (2.30)	
Employment				<0.01
Not working Currently working Paused/ On leave	8,075 (44.94) 8,272 (46.04) 1,621 (9.02)	6,069 (47.44) 5,686 (44.44) 115 (0.90)	2,006 (38.78) 2,585 (49.97) 582 (11.25)	
Number of living children	1.97 (1.78)	1.68 (1.76)	2.67 (1.65)	<0.01
Education level				<0.01
Less than Grade 6 Grades 7-12 Post-secondary 4- year College+	3,234 (18.00) 8,739 (48.64) 746 (4.15) 5,249 (29.21)	2,064 (16.13) 6,120 (47.8 3) 506 (3.95) 4,104 (32.08)	1,169 (22.60) 2,619 (50.63) 240 (4.64) 1,145 (22.13)	
Urbanicity				<0.01
Urban Rural	6,231 (34.68) 11,736 (65.32)	4,565 (35.68) 8,229 (64.32)	1,666 (32.21) 3,507 (67.79)	
Religion				<0.01
Catholic Protestant Islam Other	13,024 (72.49) 1,714 (9.54) 1,576 (8.77) 1653 (9.20)	9,189 (71.82) 1,229 (9.61) 1,241 (9.70) 1135 (8.87)	3,835 (74.13) 485 (9.38) 335 (6.48) 518 (10.01)	
GBV type*				
Control			2,315 (44.75)	
Emotional			2,903 (57.44)	
Physical**			1,991 (38.49)	

prevalence of GBV. Our findings of incremental decreased risk of females experiencing GBV for each additional year of education for females and, for those with partners, additional year of education for their male partners, are consistent with the evidence found in prior literature from India and Peru [6,7]. This phenomenon is especially telling since high levels of GBV still persist for females after Philippines passed several crucial education laws from 2011 to 2013, which made primary and secondary education attainment compulsory, thus more equitable, between males and females, and since violence against women became punishable by law in 2004

[15,20]. The demographic data in Tables 1 and 2 also show that the education levels of females and their partners are similar. While their education levels were comparable, it is notable that the partner's employment levels are sharply higher, with less than half of the females actively employed while over 90% of their counterparts were employed. This may further reflect the state of 'inconsistency' in the male-female dynamic in Filipino culture. Women are becoming as educated as men, while still upholding the expected traditional gender roles within a male-female partnership, such as being dependent on their male counterparts for income and other essential needs.



Table 2. Demographic summary of the respondents' partners

	Partners of women who never experienced GBV (N=7,855)	Partners of women who experienced GBV (N=4,644)	P-Value (a=0.05)
	Mean (SD) or n(%)	Mean (SD) or n(%)	
Age	37.67 (9.19)	36.98 (9.20)	<0.01
Employment			<0.01
Did not work in the past 1 year Worked in the past 1 year Worked in past 1 week	233 (2.97) 231 (2.94) 7,391 (94.09)	95 (2.05) 177 (3.81) 4,372 (94.04)	
Number of living children	1.97 (1.78)	1.68 (1.76)	<0.01
Education level of partners			<0.01
No education Primary Secondary Higher	155 (1.97) 2,140 (27.74) 3,160 (40.22) 2,400 (30.55)	73 (1.57) 1,465 (31.55) 2,020 (43.50) 1,086 (23.39)	

Table 3. Logistic regression of partner's education on risk of experiencing GBV for respondents (Bold = outcomes of interest)

Females with Partners with Education data (N=12,499)						
	Odds ratio	95% CI	p-value (a=0.5)			
Crude	0.964	(0.955, 0.973)	<0.001			
Adjusted*	0.977	(0.965, 0.989)	<0.001			

^{*}adjusted for respondent age, respondent years of education, partner's age, respondent's urbanicity, respondent's religion

This persistent inconsistency may be part of the reason for the persistent high rate of GBV experienced by women in the Philippines despite the comparable levels of educational attainment between both genders.

The phenomenon presented in our results, where we see women are getting the same, if not higher, level of education than their male partners in the recent years, but the risk of GBV is as prevalent as it has been for decades may be explained by several relevant theoretical explanations. Yick relates GBV in traditional Asian societies to the inconsistent expectation of responsibilities of females and their tangible lack of decision-making power compared to their male counterpart [13]. Decision making power is contingent on the resources that a member brings to the family. In the case of an individual who is consistently expected to lack financial and moral autonomy yet expected to hold up a family structure is vulnerable to status inconsistency. This makes the family unit more susceptible to violence, often instigated from the member expected to provide material goods, to the individual with the most status inconsistency. The wife or the female

member in the case of a traditional Filipino household is a prime example of the status inconsistent member. More broadly speaking, females are more likely to experience status inconsistency in a society with such traditional expectations. While the Filipino society is moving towards higher education for women, the heavily Catholic traditions of family still has a stronghold on the societal gender expectations of females as a subjugate of male counterparts in society and family and whose primary purpose is to maintain the household.

Policy implications

Since the enactment of the 2004 Law, RA-9262, 89 States in the Philippines have developed state-specific legislation on protecting women against violence or harassment (not all are comprehensive to both). The results of the current study shows GBV against women is ever-present even 15 years after enactment of RA-9262. To contribute to potential explanations for this persistent disparity, our results demonstrate that the education levels of male partners are almost as impactful as the women's level of education.



Guanzon's legal report in the Philippines Law Journal in 2008 draws twelve different difficulties in enforcing RA-9262, including but not limited to: gender bias in court, costs of litigation, unethical legal practices and corruption within the legal system [15]. Other laws put in place in the 21st century to protect women's welfare include the 2009 RA-9710, or "the Magna Carta of Women". This was Philippine's action in committing to the international Convention on the Elimination of All Forms of Discrimination Against Women, or CEDAW, and broadly incriminates any form of discrimination based on gender. RA-10361 is the Domestic Workers' Act passed in 2012, which protects the rights of domestic workers against abuse, mandates decent working conditions in the home and bans child labor/ trafficking for domestic labor. These regulations, albeit progressive and beneficial for women, do not address the systemic inconsistency between increased education and for females and the stagnant state of household values [21].

Our findings suggest that policy efforts aiming to educate all Filipino citizens to mitigate prevalence and risk of GBV is not yet complete. Philippines may need to perform a critical evaluation of its legal system and the enforcement of RA-9262 to ensure that its purpose is achieved. Inserting additional supplements to the existing policy, such as financial assistance for the women who seek to take legal action against their perpetrators and protection against retaliation, may enhance the policy's protective effect. Filipino policy for mitigating and preventing GBV may benefit from bolstering education in the Philippines for both male and female sexes, specifically targeting those likely to drop out of basic or secondary education prematurely.

Limitations

There were several limitations in this study. Control for income between females and their male partners was not possible due to the absence of separate income data on the respondent's partner. Many of the demographic factors reported for respondents were not reported for their partners, so covariates leaned heavily for respondent data and less so on the partner. We do not know if the relationship is causal or if GBV led females to drop out of school earlier in life. We also cannot discern if other factors such as poverty led to low educational attainment and higher exposure to GBV. The partnered sample excludes women who were exposed to GBV but were not currently in a partnership. Finally, partners' educational attainment and the female respondents' own educational attainment are likely related.

Conclusion

We were successful in testing our hypothesis that the level of education of male partners of Filipino women is as strongly correlated as the women's own level of education against the women's likelihood of experiencing violence. To further validate these findings, additional investigation is needed to explore other factors contributing to the association of lower educated partners with women who are more likely to experience GBV, such as childhood experiences, wealth index and family structures, which are not collected for the female's partners through the Women's Safety Module. Causal relationships not established with our descriptive study may be established once additional preand post-partnership data points are gathered on the male partners and matched with the female respondents.

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