Women's Autonomy and Intimate Partner Violence in Ghana

CONTEXT: Previous studies have established women's autonomy as an important determinant of several demographic outcomes in Sub-Saharan Africa, yet very few have considered intimate partner violence as one of these outcomes.

METHODS: Data collected in 2017 from 2,289 women residing in 40 communities in Ghana were used to examine associations between three types of autonomy—economic decision making, family planning decision making and sexual autonomy—and women's experiences with physical, sexual, emotional and economic violence. Multilevel logistic regression was used to identify associations.

RESULTS: All three types of autonomy were associated with having experienced intimate partner violence, although in different ways, at the individual level or community level. At the individual level, after adjustment for theoretically relevant variables, family planning decision-making autonomy was negatively associated with all four types of violence (odds ratios, 0.7–0.8), while economic decision-making autonomy was positively associated with emotional and economic violence (1.2 for each). At the community level, living in a community where women had higher levels of sexual autonomy was associated with reduced odds of having experienced physical and economic violence (0.5 and 0.4, respectively).

CONCLUSIONS: The findings underscore the relevance of women's empowerment programs as potential mechanisms for reducing intimate partner violence in Ghana. They also point to the need to move beyond individual-level interventions and consider community-level programs that empower women to be autonomous. International Perspectives on Sexual and Reproductive Health, 2018, 44(2):51–61, https://doi.org/10.1363/44e6118

Evidence suggests that intimate partner violence is common among Ghanaian women; one-third of women of reproductive age report having experienced physical violence and one-fifth report having experienced sexual violence. ¹⁻³ This is troubling, given that studies show intimate partner violence has deleterious short-term and long-term effects on women's lives. ⁴⁻⁷ For instance, women who experience intimate partner violence are more likely to report physical or mental health problems than those who do not experience such violence. ⁵⁻⁷ There are sexual health implications as well—for instance, victimized women are less likely than others to use contraceptives; they are also more likely to have mistimed and unwanted pregnancies and to have HIV or other STIs. ⁸⁻¹¹

Some studies suggest that at the macro level, intimate partner violence—if not reduced or completely eliminated—could hinder or erode gains made toward gender equity and equality, especially in developing countries in which the structures of patriarchy are entrenched. 12,13 In other words, intimate partner violence might prevent women from expressing themselves in ways that enhance their social and economic well-being, jeopardizing their ability to contribute meaningfully to their family and to their community and society more generally. This leads some to propose that reducing intimate partner violence might empower women (and vice versa).8

Studies have confirmed the role of women's autonomy in increasing contraceptive use, determining fertility outcomes, and improving maternal, infant and child health in Sub-Saharan Africa. 14-16 However, autonomy's relationship to intimate partner violence is not so clear. First, the existing literature is largely limited to studies from South Asia, where the sociocultural norms of autonomy and violence differ from those in other parts of the developing world. To date, few studies have examined the autonomyintimate partner violence relationship in Sub-Saharan African countries, including Ghana. Second, those few studies have focused on individual autonomy and rarely explored autonomy at the community level, which is arguably an important proxy for gender equality. Third, findings on the links between autonomy and intimate partner violence risk have been inconclusive. For instance, while some studies have concluded that women's autonomy is associated with lower risk of experiencing intimate partner violence, 8,17 others have found that greater autonomy is associated with increased likelihood of experiencing such violence.8,17-19 In other settings, researchers have found no association between women's autonomy and intimate partner violence.20

To contribute to the debate and to fill some important research gaps, this article explores the relationship between

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each of three types of women's autonomy—economic decision making, family planning decision making and sexual autonomy—at the individual level and four dimensions of intimate partner violence—physical, sexual, emotional and economic violence—using data collected from women in Ghana. It also examines the associations between community-level autonomy and Ghanaian women's risk of experiencing intimate partner violence.

Conceptual and Empirical Considerations

Women's autonomy has long been a major theme in sociology and demography. Some conceptualize a woman's autonomy in a general way, as the ability to obtain information and use it in her decisions about her private life, her partners and her immediate environment. ^{21,22} Others use the concept to refer more specifically to a woman's ability to access and exert control over economic, material and social resources alone or in collaboration with her husband. ^{5,23–25} In any case, the central themes are control and the ability to make independent decisions.

Past studies have often used the terms women's status, women's empowerment and women's autonomy interchangeably. ²⁵⁻²⁷ Although related to status, autonomy refers to the power and agency a woman wields in the household rather than to her position or prestige in a social setting. ²⁸ It is important to remember that women with high social status may not necessarily be autonomous within their households, and that autonomous women may not necessarily enjoy higher social status in their communities than women who are not autonomous. Both autonomy and status may be important indicators of women's empowerment, but empowerment is difficult to measure and can easily change over time. ^{25,29}

Several dimensions of autonomy have been identified. For instance, Khan³⁰ points to two types of autonomyeconomic decision making and family planning decision making. Economic decision making refers to women's ability to select and purchase goods for the household and to decide how money is spent. Family planning decision making refers to a woman's ability to make decisions about her sexual and reproductive health, including those associated with contraceptive use and childbearing.³¹ Making such distinctions in autonomy is relevant for analytic purposes, especially when the determinants of these types of autonomy differ and may affect specific demographic outcomes of interest differently. These distinctions also raise important questions about the measurement of women's autonomy within and across contexts. Because single-item measures of autonomy have low validity and reliability,23 some authors argue for the use of multiple measures, an approach adopted in the current study.

As noted above, previous research has examined the associations between women's autonomy and a range of demographic outcomes in Sub-Saharan Africa, but relatively few have considered the relationship between autonomy and women's experiences of intimate partner violence or have used community-level measures of

women's autonomy. In one of the few extant studies on the topic, a preliminary analysis of women's autonomy in three Sub-Saharan African countries32 found that autonomy was positively associated with having experienced physical, emotional and sexual violence. In another case, using employment as a measure of women's status and empowerment, Paul¹⁸ found that employed women were more likely than unemployed women to experience intimate partner violence. Similarly, Sparks and Valencia¹⁹ used Demographic and Health Survey data from Latin America and the Caribbean and found that women with household purchasing autonomy faced higher risks of intimate partner violence than women without such autonomy. In contrast, in some South Asian settings, such as Bangladesh and India, women's autonomy was associated with reduced odds of experiencing physical or sexual violence.33,34

As the mixed findings indicate, the relationship between women's autonomy and intimate partner violence is complex. While autonomy affects intimate partner violence, some evidence suggests that the reverse is also true—intimate partner violence affects autonomy. Women who have experienced intimate partner violence may lack the autonomy to make decisions related to their socioeconomic and sexual well-being. For instance, Pearson et al.³⁵ used data from Bangladesh to demonstrate that women with a history of intimate partner violence faced more constraints to reproductive autonomy than women without such a history. Eswaran and Mahotra³⁶ found that men in South Asia used domestic violence to undermine their wives' autonomy in allocating household resources.

The importance of women's autonomy to intimate partner violence is highly specific to cultural and community contexts.³⁷ But research examining the relationship between women's autonomy and such violence rarely considers community-level variables. Using community social norms as a proxy for gender empowerment, Linos et al.³⁸ found that communities that justified wife beating in Nigeria (an indicator of low gender empowerment) were more likely than those that did not to report intimate partner violence. These findings have encouraged researchers and policymakers to ensure that programs addressing intimate partner violence also work to change gender norms and inequalities at the community level.

Ghanaian Women's Autonomy

Like most countries in the world, Ghana is signatory to various international conventions and declarations that promote gender equality in all facets of life. Some traditional laws and—most importantly—the Ghanaian Constitution, condemn or prohibit gender discrimination.³⁹ These commitments notwithstanding, Ghana lags behind other civilized societies in ensuring women's empowerment and equality. Cultural norms discriminate against women; as a result, they are denied economic opportunities, which entrenches high levels of poverty among this demographic group. More generally, the patriarchal nature of Ghanaian

society and the limited socioeconomic opportunities in the country render women powerless, excluding them from participating in major decisions related to their households, communities and the society at large, 40 or from making decisions about their own sexual reproductive health and rights. Sossou³⁹ has noted, for instance, that Ghanaian women are subordinate to men and are unable to exercise their sexual and reproductive rights; they cannot talk about sex or negotiate safer sex with their partners.

In recent years, however, Ghana has made progress in bridging the gender gap. Much remains to be done, but sociocultural norms regarding female education and employment are gradually changing; the proportion of girls enrolled in secondary and tertiary education is increasing, as has female employment in both the formal and informal sectors of the economy.⁴¹ There is some political will to improve the lives of women and to address gender-related issues, which has resulted in the establishment of the Ministry of Gender, Children and Social Protection, and the launching of several initiatives to monitor women's progress in decision making at the household level.⁴²

These structural changes and other efforts to improve the circumstances of Ghanaian women may be paying off, as surveys show increased autonomy among women. Data from the 2008 Demographic and Health Survey indicate that a substantial proportion of Ghanaian women could tell their husbands to use condoms or even refuse to have sexual intercourse,⁴³ and that many participate in or make household economic decisions.⁴⁴ Ghanaian women's autonomy has been linked to their maternal and reproductive health outcomes,⁶ but its relationship to their experiences of intimate partner violence has not been explored.

METHODS

Sample Selection

This analysis used nationally representative data collected between May and August 2017 from 2,289 ever-married Ghanaian women aged 18-65. The data were collected in face-to-face interviews as part of a larger study that used mixed methods to explore the domestic violence experiences of women in Ghana; respondents were asked about their knowledge of domestic violence, and social and gender norms related to violence, as well as their own experiences of domestic violence, their help-seeking behaviors and their household autonomy. Respondents were selected using a multistage sampling procedure: First, using the Ghana Statistical Service's Gazetteer, two districts were randomly selected from each of the country's 10 administrative regions, for a total of 20 districts. Next, systematic random sampling was used to choose two communities from each selected district. The resulting 40 communities were stratified by whether they were rural or urban, to ensure adequate and fair representation of each. Respondents were then interviewed from randomly selected households in the sampled communities.

Data Collection and Protocol

Research assistants were trained to adhere strictly to the World Health Organization's recommendations for conducting domestic violence research, including that only one woman per selected household should be interviewed. In addition, given the sensitive nature of the topic and to minimize psychological, emotional and social risks, research assistants were trained to pay attention to and to respond to respondents' emotional needs.

Each research assistant was assigned to two communities in a district. All research assistants had prior data collection experience and were fluent in the languages of the regions to which they were assigned, which helped to establish rapport with respondents and expedited data collection. The survey questionnaires were pretested with about 5% of the sample and were modified on the basis of the pretest results. Participants provided written informed consent and completed the interview at a time and location of their choosing. Pseudonyms were used to ensure anonymity.

Measures

- Intimate partner violence. Four different dimensions of respondents' domestic violence experiences were employed as outcomes: physical violence, sexual violence, emotional violence and economic violence. Each was measured using a summative index derived from three to eight questions that loaded on the same construct in a principal components analysis (see Table 1 for the operationalization of these variables). All four variables were dichotomous and indicated whether respondents had experienced that form of intimate partner violence.
- Other individual-level characteristics. The remaining individual-level measures were the autonomy and background characteristic variables. The autonomy variables measured the three types of autonomy (economic decision making in the household, family planning decision making and sexual autonomy) and were each created from several multidimensional items (see Table 1 for information on the operationalization of these latent variables). Once again, principal component analysis was used to ensure that the items used to measure these variables loaded on the same dimensions. The variables were coded such that higher or positive values on the scale meant greater autonomy, while lower or negative values indicated lower autonomy.

Background characteristics measured respondents' socioeconomic characteristics (education, income, employment status), their demographic characteristics (ethnicity, religion, age, residence) and whether they and their partners had ever used alcohol. The analyses adjusted for these variables because their relationship with intimate partner violence have been demonstrated in previous studies.

• Community-level autonomy. To determine whether levels of intimate partner violence differed across communities and whether such differences explained variances in intimate partner violence, individual women's responses to survey

Variable	Description and operationalization
INTIMATE PARTNER VIOLENCE	
Physical violence	A summative index derived from five questions asking women if their (last) husband or partner had ever pushed or shook them, or threw something at them; slapped them; twisted their arm or pulled their hair; punched them with their fists; or kicked, dragged or beaten them. Respondents were classified as having experienced physical violence if they answered yes to at least one of the questions; otherwise, they were classified as not having experienced physical violence.
Sexual violence	A summative index derived from three questions asking women if their (last) husband or partner had ever physically forced them to have sex with him even when they did not want to, forced them to perform sexual acts they did not want to or made them perform inappropriate sexual acts that made them feel uncomfortable. Respondents were classified as having experienced sexual violence if they answered yes to at least one of the questions; otherwise, they were classified as not having experienced sexual violence
Emotional violence	A summative index derived from three questions asking women if their (last) husband or partner had ever said or did anything to humiliate them in front of others, threatened to harm them or someone close to them, or insulted or made them feel bad about themselves. Respondents were classified as having experienced emotional violence if they answered yes to at least one of the questions; otherwise, they were classified as not having experienced emotional violence.
Economic violence	A summative index derived from eight questions asking women if their (last) husband or partner had ever refused to give them enough housekeeping money even though he had enough money to spend on other things, taken cash or withdrawn money from their bank account or other savings without permission, controlled their belongings or their spending decisions, destroyed or damaged property they had material interest in, prohibited them from working or forced them to quit working, forced them to work against their will, prevented them from having a paid job, or refused to give or denied them food or other basic needs. Respondents were classified as having experienced economic violence if they answered yes to at least one of the questions; otherwise, they were classified as not having experienced economic violence.
INDIVIDUAL-LEVEL AUTONOMY	
Economic decision making	A weighted summative index derived from women's responses to four questions: Who usually decides how the money you earn will be used? Who usually decides how your husband's/partner's earnings will be used? Who usually makes decisions about health care for you? Who usually makes decisions about major household purchases? Responses were coded as follows: mainly you=4; you and your husband/partner jointly=3; mainly your husband/partner=2; someone else=1. The Anderson-Rubin factor scores were extracted and used as a scalar variable. Factor loadings for this scale ranged between 0.6 and 0.9; Cronbach's alpha was 0.8.
Family planning decision making	A weighted summative index derived from women's responses to three questions: Who usually makes decisions about how many children to have? Who usually makes decisions about when to have sexual intercourse? Who usually decides whether or not to use contraceptives/ condoms? Responses were code as they were for economic decision making. The Anderson-Rubin factor scores were extracted and used a scalar variable. Factor loadings for this scale ranged between 0.6 and 0.9; Cronbach's alpha was 0.8.
Sexual autonomy	A weighted summative index derived from 11 questions asking if, as a married woman, she can refuse to have sex with her husband/partner if she doesn't want sex; he is drunk; she is sick; he mistreats her; she is menstruating; he does not want to use a condom/contraceptive; she finds out that he has other girlfriends/partners; he refuses to give her housekeeping money; he humiliates her; he refuses to pay the children's school fees; or he has an STI, such as HIV. All variables were coded yes=1 and no=0. The Anderson-Rubin factor scores were extracted and used as a scalar variable. Factor loadings for this scale ranged between 0.7 and 0.9; Cronbach's alpha was 0.9.
COMMUNITY-LEVEL AUTONOMY	Make a second about a second in this ideal and a second accordance to the second accordance to t
Sexual autonomy Economic decision making	Value represents the mean individual sexual autonomy score for women residing in the community. Value represents the mean individual economic decision-making score for women residing in the community.
Family planning decision making	Values represents the mean family planning decision-making score for women residing in the community.

items on autonomy were aggregated to create community-level data. This method of generating community-level data, although imperfect, is commonly used in the domestic violence literature.⁸⁻¹⁰ The three community-level autonomy variables represented the aggregated median scores for economic decision-making autonomy, family decision-making autonomy and sexual autonomy for women in the community. Higher or positive scores on these scales meant that communities were more empowered and endorsed women's autonomy, while lower or negative values implied less empowerment and a lack of women's autonomy at the community level. Thus, in this study, community autonomy

was conceptualized to mean communities in which women make independent decisions on household expenses, sexuality and family planning. The literature suggests that women in highly autonomous or empowered communities would have lower odds of experiencing intimate partner violence than women in communities with low levels of female autonomy.

Analyses

Because the main outcome variables (concerning intimate partner violence) were dichotomous, analyses employed binary logit models. These models used a multilevel framework, because the structure of the data was complex and hierarchical (respondents were nested in districts and communities), and such clustered data structures may violate the assumption of independence underlying standard regression techniques, potentially resulting in biased standard errors and misleading statistical inferences. By estimating the significance and magnitude of clustering, multilevel modeling could deal with this bias. The second reason for using this technique was that it allowed variance to be partitioned at the individual and community levels, in keeping with the study goal of assessing the associations between community-level autonomy and intimate partner violence among Ghanaian women. Unfortunately, district-level variables could not be modeled because of the limited sample for districts. Results are reported as odds ratios.

A set of secondary analyses examined predictors of the different types of autonomy—specifically, the relationship between intimate partner violence and women's autonomy. Therefore, the secondary analyses used autonomy as an outcome; because the measures of autonomy were continuous, linear regression techniques that account for clustering were used. Regression coefficients are reported for all three autonomy outcomes.

Ethical approval for the study was obtained from the Interdisciplinary Committee on Ethics and Human Research, Memorial University, and the Ethics Committee for the Humanities at the Institute of Statistical, Social and Economic Research, University of Ghana.

RESULTS

On average, the respondents were about 38 years old; the majority had less than a university education (88%—Table 2), were employed (71%) and were Christian (72%). Their average monthly income was 226 Ghana cedis (about US\$55). Women had experienced all four types of intimate partner violence: physical (40%), sexual (35%), emotional (58%) and economic (52%). Means scores were positive for all three individual-level measures of autonomy, but negative for two of the community-level autonomy measures—economic decision making and family planning decision making.

Bivariate analyses revealed some associations between intimate partner violence and measures of autonomy at the individual and community levels (Table 3). At the individual level, sexual autonomy was not associated with intimate partner violence; however, family planning decision-making autonomy was negatively associated with all four types of intimate partner violence (odds ratios, 0.6–0.8). Women with greater economic decision-making autonomy were more likely than those with less autonomy to have experienced emotional or economic intimate partner violence (1.2 for each).* At the community level, sexual autonomy was negatively associated with intimate partner

TABLE 2. Selected characteristics of women aged 18-65 participating in a study on intimate partner violence, Ghana, 2017 Variable % or median/ mean (N=2,289) **BACKGROUND CHARACTERISTICS** Mean age of respondent (yrs.) 37.9 Education 20.6 Primary 19.2 Junior high school 25.7 Senior high school 15.0 Vocational/technical school 7.8 11.7 ≥university **Employed** 29.4 Yes 70.6 Religion 72.4 Christian **Traditionalist** 2.8 Muslim 18.6 None 3.2 Other 3.0 Mean personal monthly income (in Ghana cedis) 225.6 **Ethnicity** Akan 39.1 Ga Adangbe 11.1 19.6 Fwe Northern tribes 18.8 Other 11.3 Residence 48.3 Rural Urban 51.7 Respondent ever used alcohol 90.6 Yes 9.4 Partner ever used alcohol 83.1 16.9 INTIMATE PARTNER VIOLENCE **Physical violence** 60.2 39.8 Sexual violence 65.4 Yes 34.6 **Emotional violence** 41 9 58.1 **Economic violence** 47.9 52.1 INDIVIDUAL-LEVEL AUTONOMY+ Sexual (range, -1.93 to 1.16) 0.27 Economic decision making (range, -4.35 to 1.90) 0.02 Family planning decision making (range, -3.15 to 2.81) 0.02 COMMUNITY-LEVEL AUTONOMY† 0.08 Sexual (range, -1.58 to 0.98)

†Scores are medians. *Notes*: Unless otherwise noted, figures are percentages. Percentages may not total 100.0 because of rounding.

Family planning decision making (range, -1.11 to 1.10) -0.07

-0.03

Economic decision making (range, -1.06 to 0.91)

^{*}In Tables 3 and 4, the odds ratios associated with the individual- and community-level autonomy variables represent the change in the odds of intimate partner violence associated with a one-point change in the normalized autonomy score.

TABLE 3. Odds ratios (and robust standard errors) from bivariate analyses assessing associations between selected individual- and community-level variables and intimate partner violence among Ghanaian women

Variable Type of intimate partner violence				
	Physical	Sexual	Emotional	Economic
INDIVIDUAL-LEVEL AUTONOMY				
Sexual	0.63 (0.17)	0.95 (0.10)	1.11 (0.09)	0.95 (0.09)
Economic decision making	1.01 (0.08)	1.06 (0.11)	1.23 (0.08)**	1.21 (0.08)**
Family planning decision	0.75 (0.07)**	0.57 (0.11)**	0.67 (0.07)**	0.77 (0.06)**
making				
COMMUNITY-LEVEL AUTONOMY	,			
Sexual	0.50 (0.35)**	0.97 (0.45)	0.86 (0.21)	0.48 (0.31)*
Economic decision making	0.95 (0.38)	1.09 (0.39)	0.72 (0.48)	0.70 (0.41)
Family planning decision	0.65 (0.46)	0.46 (0.62)	0.56 (0.56)	1.14 (0.56)
making	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,	(,	(1111)
BACKGROUND CHARACTERISTIC	S			
Age of respondent	1.01 (0.00)**	0.99 (0.00)**	1.00 (0.00)	1.01 (0.00)*
Education				
None (ref)	1.00	1.00	1.00	1.00
Primary	0.93 (0.22)	0.84 (0.19)	0.85 (0.17)	0.82 (0.16)
Junior high school	0.84 (0.16)	1.04 (0.18)	0.66 (0.16)**	0.62 (0.16)**
Senior high school	0.59 (0.17)**	1.02 (0.18)	0.66 (0.18)*	0.42 (0.18)**
Vocational/technical	0.56 (0.25)*	1.24 (0.26)	0.56 (0.21)**	0.55 (0.21)**
≥university	0.30 (0.25)**	0.69 (0.25)	0.50 (0.19)**	0.30 (0.20)**
	0.000 (0.000)	(0.20)		
Employed				
No (ref)	1.00	1.00	1.00	1.00
Yes	0.94 (0.12)	0.74 (0.12)**	1.09 (0.12)	0.88 (0.12)
Religion				
Christian (ref)	1.00	1.00	1.00	1.00
Traditionalist	1.56 (0.55)	0.51 (1.16)	1.06 (0.62)	1.41 (0.39)
Muslim	1.14 (0.22)	0.72 (0.21)	1.02 (0.21)	1.08 (0.19)
None	0.88 (0.25)	0.58 (0.70)	0.93 (0.24)	1.33 (0.22)
Other	1.46 (0.28)	1.09 (0.22)	1.56 (0.21)	0.79 (0.32)
Personal monthly income	1.00 (0.00)	1.01 (0.00)	1.01 (0.00)	1.00 (0.00)
Ethnicity				
Akan (ref)	1.00	1.00	1.00	1.00
Ga Adangbe	1.12 (0.16)	2.38 (0.25)**	1.84 (0.22)**	2.23 (0.19)**
Ewe	0.96 (0.31)	0.61 (0.46)	0.71 (0.40)	1.39 (0.230)
Northern tribes	1.44 (0.28)	0.79 (0.23)	0.83 (0.18)	1.67 (0.26)*
Other	1.59 (0.31)	0.89 (0.28)	0.92 (0.22)	1.44 (0.27)
Residence				
Rural (ref)	1.00	1.00	1.00	1.00
Urban	0.64 (0.26)	1.25 (0.47)	0.59 (0.41)	0.79 (0.29)
Respondent ever used alcohol				
No (ref)	1.00	1.00	1.00	1.00
Yes	2.69 (0.17)**	3.41 (0.20)**	3.44 (0.21)**	3.46 (0.23)**
Partner ever used alcohol				
No (ref)	1.00	1.00	1.00	1.00
Yes	1.95 (0.21)**	1.89 (0.17)**	2.16 (0.23)**	2.21 (0.19)**
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^{*}p<.05. **p<.01. Note: ref=reference category.

violence: Women in communities with higher levels of sexual autonomy had reduced odds of having experienced physical or economic violence (0.5 for each).

Some control variables were associated with intimate partner violence. For instance, compared with those with no education, women with at least a senior high school education were less likely to have experienced physical, emotional or economic violence (odds ratios, 0.3–0.7), while those with at least a junior high education were less likely to have experienced emotional or economic violence (0.6–0.7). Employed women were less likely

than the unemployed to have experienced sexual violence (0.7). In addition, women's and partners' alcohol use were positively associated with all four types of intimate partner violence (1.9-3.5).

Multivariate analyses of the associations between individual- and community-level autonomy and intimate partner violence revealed results similar to those found at the bivariate level, with marginal changes in the odds ratios (Table 4). The estimates for the variance components and intraclass correlations suggest the existence of significant heterogeneity at the community level.

The final analysis uses autonomy as the outcome and treats intimate partner violence as a predictor variable (Table 5). Compared with those with no experiences of physical or economic violence, women with such experiences had lower or negative scores on the measure of sexual autonomy (coefficients, –0.19 and –0.14, respectively). Notably, those with experiences of sexual violence had lower scores on the family planning decision-making index (–0.40) than did women without such experiences, while those with experiences of emotional violence had elevated or positive scores on the economic decision-making index (0.14).

Women with a university education had higher or positive scores on both family planning decision-making autonomy and sexual autonomy (coefficients, 0.26 and 0.32, respectively). A different pattern emerged in economic decision-making autonomy, for which employment status was a significant determinant (0.23).

DISCUSSION

Intimate partner violence is a pervasive social problem that cuts across religious, ethnic and socioeconomic groups in Sub-Saharan Africa. Several variables account for the high prevalence of intimate partner violence in Ghana, but the problem is rooted in traditional gender-based power inequalities. In Ghana, these inequalities mostly derive from the many decades of socioeconomic advantages—including patriarchal and cultural privileges—that men have had. It has been argued that it is possible to reduce intimate partner violence by removing power imbalances in intimate relationships. There are many ways of correcting power imbalances, but improving women's autonomy in the household seems a promising target for empowerment programs seeking to address intimate partner violence in Sub-Saharan Africa.

This study looked at three types of autonomy—sexual autonomy, economic decision making and family planning decision making—and the findings suggest that many Ghanaian women have some degree of autonomy in each dimension. This result is consistent with those of several other studies that have examined women's autonomy using Demographic and Health Surveys in Ghana. 40,44 For instance, Fuseini and Kalule-Sabiti concluded that a high proportion of Ghanaian women were autonomous, in that they could participate in economic decisions or make independent ones, could make decisions about their own

health care, had freedom of movement and could decide the number of children they wanted.

The current findings also demonstrate that being autonomous is associated with reduced odds of having experienced intimate partner violence, but this relationship is confined to a specific type of autonomy-family planning decision making. The right to make independent and autonomous decisions on fertility and sexuality is inalienable, and is fundamental to women's freedom, privacy and security.46 Yet, in the majority of Sub-Saharan African countries, these rights are curtailed by cultural norms that disempower women and endorse patriarchal privileges. In Ghana, a husband's approval is an important determinant of women's decision to use effective contraceptives, and men have strong influence on desired and actual fertility in their relationships. 47,48 These norms are so entrenched that shifting away from them requires women to be highly empowered and have a high status in the household. It is not surprising that the models indicated that highly educated women tend to have greater family planning decision-making autonomy than the less educated. This finding provides qualified support for the view that interventions to increase women's empowerment are crucial to reducing intimate partner violence in Sub-Saharan Africa.

While family planning decision-making autonomy was negatively associated with all four types of intimate partner violence examined in this study, economic decision-making autonomy was associated with increased odds of experiencing both economic and emotional violence. Furthermore, the models demonstrated that employed Ghanaian women wield higher levels of household economic decisionmaking autonomy than unemployed women, suggesting that employment improves women's economic decisionmaking autonomy in the household. The finding that this type of autonomy is associated with elevated risk of some types of intimate partner violence runs contrary to theoretical expectations that autonomy is protective. However, some studies suggest that employed women (who have higher economic decision-making autonomy) are vulnerable to intimate partner violence simply because their status as employed women challenges traditionally prescribed gender roles of men as primary providers for the household. $^{18,49,50}\,$

Although not the primary focus of the study, whether intimate partner violence influences autonomy was also examined, given the bidirectional relationship between these two variables. Generally, the findings suggest that women who have experienced physical, sexual and economic intimate partner violence have lower levels of either sexual autonomy or family planning decision-making autonomy. Studies show that intimate partner violence can reduce the confidence of women, prevent them from expressing themselves in ways that enhance their self-dignity, stifle their creativity and reduce their ability to contribute to their households and communities.⁵¹ The findings in the current study suggest that strategies aimed at reducing the prevalence of intimate partner violence could help to improve women's autonomy in

TABLE 4. Odds ratios (and robust standard errors) from multivariate logistic regression analyses assessing associations between selected individual- and community-level variables and intimate partner violence among Ghanaian women

Description	Variable -	Type of intimate partner violence			
1,02 (0,07) 0,98 (0,41) 1,15 (0,09) 1,03 (0,09) 1,02 (0,07) 1,13 (0,42) 1,24 (0,07)** 1,22 (0,07) 1,000 1,00 (0,88 (0,07)** 1,22 (0,07)* 1,24 (0,07)** 1,22 (0,07)* 1,24 (0,07)** 1,22 (0,07)* 1,000 (0,88 (0,07)** 1,22 (0,07)* 1,000 (0,88 (0,07)** 1,008 (0,08)* 1,008 (0,07)** 1,008 (0,08)* 1,008 (0,07)** 1,008 (0,08)* 1,008 (0,07)** 1,008 (0,07)** 1,008 (0,07)** 1,008 (0,07)** 1,008 (0,07)** 1,008 (0,07)** 1,009 (0,09) 1,0		Physical	Sexual	Emotional	Economic
1,02 (0,07) 0,98 (0,41) 1,15 (0,09) 1,03 (0,09) 1,02 (0,07) 1,13 (0,42) 1,24 (0,07)** 1,22 (0,07) 1,000 1,00 (0,88 (0,07)** 1,22 (0,07)* 1,24 (0,07)** 1,22 (0,07)* 1,24 (0,07)** 1,22 (0,07)* 1,000 (0,88 (0,07)** 1,22 (0,07)* 1,000 (0,88 (0,07)** 1,008 (0,08)* 1,008 (0,07)** 1,008 (0,08)* 1,008 (0,07)** 1,008 (0,08)* 1,008 (0,07)** 1,008 (0,07)** 1,008 (0,07)** 1,008 (0,07)** 1,008 (0,07)** 1,008 (0,07)** 1,009 (0,09) 1,0	NDIVIDUAL-LEVEL AUTONOMY				
1.02 (0.07)		1.02 (0.07)	0.98 (0.41)	1.15 (0.09)	1.03 (0.09)
Community Comm		, ,			
COMMUNITY-LEVEL AUTONOMY Sexual 0.47 (0.37)** 0.79 (0.41) 0.58 (0.44) 0.44 (0.32) Economic decision making 1.09 (0.36) 1.11 (0.42) 0.65 (0.48) 0.77 (0.38) 0.87 (0.39) 0.84 (0.73) 0.96 (0.59) 1.55 (0.52) 1.55					
COMMUNITY-LEVEL AUTONOMY Sexual 0.47 (0.37)** 0.79 (0.41) 0.58 (0.44) 0.44 (0.32) Economic decision making 1.09 (0.36) 1.11 (0.42) 0.65 (0.48) 0.77 (0.38) Family planning decision 0.87 (0.39) 0.84 (0.73) 0.96 (0.59) 1.55 (0.52) 1.55 (0.81 (0.05)**	0.84 (0.10)**	0.68 (0.07)**	0.81 (0.08)^
Care	making				
Caronic decision making	COMMUNITY-LEVEL AUTONOMY				
Caronic decision making	Sexual	0.47 (0.37)**	0.79 (0.41)	0.58 (0.44)	0.44 (0.32)*
Sample S	Fronomic decision making	. ,	, ,		
BACKGROUND CHARACTERISTICS Age of respondent 1.01 (0.00)		, ,	, ,		
Seducation 1.01 (0.00) 0.98 (0.01)** 0.99 (0.01) 1.01 (0.01)	making	0.67 (0.59)	0.64 (0.73)	0.90 (0.59)	1.55 (0.52)
Seducation 1.01 (0.00) 0.98 (0.01)** 0.99 (0.01) 1.01 (0.01)	PACKCOOLIND CHADACTEDISTICS				
Education None (ref)		1.01 (0.00)	0.08 (0.01)**	0.99 (0.01)	1 01 (0 01)
None (ref) Primary Oss (0.13) O.72 (0.20) O.82 (0.22) O.93 (0.28) Unior high school O.90 (0.15) O.87 (0.21) O.58 (0.20)** O.67 (0.16)** O.81 (0.23) O.58 (0.18)** O.47 (0.21) O.58 (0.28)* O.59 (0.16)** O.81 (0.23) O.58 (0.18)** O.47 (0.21) O.58 (0.20)** O.59 (0.16)** O.81 (0.23) O.58 (0.18)** O.47 (0.23) O.58 (0.18)** O.47 (0.23) O.58 (0.18)** O.47 (0.23) O.58 (0.18)** O.49 (0.20)** O.55 (0.31)* O.38 (0.27)** O.38 (0.27)** O.30 (0.27) Employed No (ref) O.94 (0.11) O.64 (0.15)** O.97 (0.15) O.85 (0.14) Engligion Christian (ref) O.94 (0.11) O.94 (0.11) O.95 (0.18) O.92 (0.18) O.92 (0.18) O.92 (0.18) O.92 (0.18) O.92 (0.18) O.94 (0.11) O.93 (0.19) O.94 (0.10) O.93 (0.19) O.95 (0.19) O.96 (0.35) O.80 (0.28) O.81 (0.34) O.92 (0.27) O.94 (0.35) O.95 (0.35) O.96 (0.35) O.97 (0.31) Ethnicity Akan (ref) O.90 (0.35) O.90 (0.35) O.90 (0.24) O.91 (0.29) O.62 (0.34) O.72 (0.27) O.97 (0.27) O.97 (0.27) O.99 (0.29) O.	age of respondent	1.01 (0.00)	0.90 (0.01)	0.55 (0.01)	1.01 (0.01)
Primary 0.98 (0.13) 0.72 (0.20) 0.82 (0.22) 0.93 (0.28) Unior high school 0.90 (0.15) 0.87 (0.21) 0.58 (0.20)** 0.67 (0.21) Vocational/technical 0.63 (0.22)* 1.13 (0.29) 0.49 (0.20)** 0.61 (0.28) Vocational/technical 0.63 (0.22)** 0.55 (0.31)** 0.38 (0.27)** 0.32 (0.27)** Vocational/technical 0.63 (0.22)** 0.55 (0.31)** 0.38 (0.27)** 0.32 (0.27)** Vocational/technical 0.63 (0.22)** 0.55 (0.31)** 0.38 (0.27)** 0.32 (0.27)** Vocational/technical 0.63 (0.22)** 0.55 (0.31)** 0.38 (0.27)** 0.32 (0.27)** Vocational/technical 0.63 (0.22)** 0.55 (0.31)** 0.38 (0.27)** 0.32 (0.27)** Vocational/technical 0.63 (0.22)** 0.55 (0.31)** 0.38 (0.27)** 0.32 (0.27)** Vocational/technical 0.63 (0.22)** 0.55 (0.31)** 0.38 (0.27)** 0.32 (0.27)** Vocational/technical 0.63 (0.22)** 0.38 (0.27)** 0.32 (0.27)** Vocational/technical 0.63 (0.22)** 0.38 (0.27)** 0.32 (0.27)** Vocational/technical 0.63 (0.24)** 0.97 (0.15)** 0.85 (0.14)** Vocational/technical 0.63 (0.24)** 0.97 (0.15)** 0.97 (0.35)** Vocational/technical 0.63 (0.24)** 0.97 (0.27)** 1.11 (0.20)** 0.93 (0.19)** Vocational/technical 0.63 (0.24)** 0.92 (0.25)** 1.88 (0.28)** 0.93 (0.28)** 0.93 (0.24)** Vocational/technical 0.63 (0.24)** 0.93 (0.24)** 0.93 (0.24)** Vocational/technical 0.63 (0.24)** 0.93 (0.25)** 0.80 (0.28)** 0.37 (0.24)** Vocational/technical 0.63 (0.24)** 0.93 (0.25)** 0.80 (0.28)** 0.37 (0.24)** Vocational/technical 0.63 (0.24)** 0.93 (0.25)** 0.80 (0.28)** 0.32 (0.25)** Vocational/technical 0.63 (0.24)** 0.93 (0.25)** 0.80 (0.28)** 0.23 (0.25)** Vocational/technical 0.63 (0.24)** 0.93 (0.25)** 0.80 (0.28)** 0.23 (0.25)** Vocational/technical 0.63 (0.24)** 0.93 (0.25)** 0.80 (0.28)** 0.23 (0.25)** Vocational/technical 0.63 (0.24)** 0.93 (0.25)** 0.80 (0.28	Education	1.00	1.00	1.00	1.00
Junior high school 0.90 (0.15) 0.87 (0.21) 0.58 (0.20)** 0.67 (0.21) 0.67 (0.21) 0.67 (0.16)** 0.81 (0.23) 0.58 (0.18)** 0.47 (0.23) 0.63 (0.22)* 0.63 (0.22)* 0.49 (0.20)** 0.61 (0.28) 0.20 (0.27)** 0.35 (0.20)** 0.35 (0.20)** 0.35 (0.31)* 0.38 (0.27)** 0.32 (0.27)** 0.35 (0.20)** 0.55 (0.31)* 0.38 (0.27)** 0.32 (0.27)** 0.38 (0.27)** 0.32 (0.27)** 0.38 (0.27)** 0.32 (0.27)** 0.38 (0.27)** 0.32 (0.27)** 0.38 (0.27)** 0.32 (0.27)** 0.38 (0.27)** 0.32 (0.27)** 0.38 (0.27)** 0.32 (0.27)** 0.38 (0.27)** 0.32 (0.27)** 0.38 (0.27)** 0.38 (0.27)** 0.38 (0.27)** 0.38 (0.27)** 0.38 (0.27)** 0.38 (0.27)** 0.38 (0.27)** 0.38 (0.27)** 0.97 (0.15) 0.85 (0.14)** 0.94 (0.11) 0.64 (0.15)** 0.97 (0.15) 0.85 (0.14)** 0.94 (0.11) 0.64 (0.15)** 0.97 (0.15) 0.85 (0.14)** 0.94 (0.11) 0.64 (0.15)** 0.97 (0.15) 0.85 (0.14)** 0.96 (0.35) 0.96 (0.35) 0.96 (0.35) 0.96 (0.35) 0.96 (0.35) 0.96 (0.35) 0.96 (0.35) 0.96 (0.35) 0.96 (0.35) 0.96 (0.35) 0.96 (0.35) 0.96 (0.35) 0.96 (0.35) 0.96 (0.35) 0.96 (0.35) 0.96 (0.36) 0.96 (0.35) 0.96					
Senior high school	Primary	0.98 (0.13)	0.72 (0.20)	0.82 (0.22)	0.93 (0.28)
Senior high school	Junior high school	0.90 (0.15)	0.87 (0.21)	0.58 (0.20)**	0.67 (0.21)
Vocational/technical 0.63 (0.22)* 1.13 (0.29) 0.49 (0.20)** 0.61 (0.28) ≥university 0.35 (0.20)** 0.55 (0.31)* 0.38 (0.27)** 0.32 (0.27)* Employed No (ref) 1.00 1.00 1.00 1.00 1.00 Christian (ref) 1.00 1.00 1.00 1.00 1.00 Traditionalist 1.25 (0.46) 0.63 (0.84) 0.92 (0.52) 0.96 (0.35) Wuslim 0.92 (0.18) 0.72 (0.27) 1.11 (0.20) 0.93 (0.19) None 0.76 (0.28) 0.63 (0.59) 0.78 (0.27) 1.03 (0.26) Other 1.42 (0.30) 1.22 (0.32) 1.48 (0.23) 0.81 (0.34) Personal monthly income 1.01 (0.00) 1.01 (0.00) 1.01 (0.00) Ethnicity Alkan (ref) 1.00 1.00 1.00 1.00 1.00 0.84 (0.28) Ewe 0.96 (0.19) 0.69 (0.35) 0.80 (0.28) 1.37 (0.24) Northern tribes 1.27 (0.24) 0.844 (0.30) 0.90 (0.24) 1.68 (0.25) Other 1.24 (0.28) 0.91 (0.29) 0.62 (0.34) 1.17 (0.31) Residence Rural (ref) 1.00 1.00 1.00 1.00 1.00 Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 No (ref) 1.00 1.00 1.00 1.00 No (ref) 1.00 1.00 1.00 1.00 1.00 Partner ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 No (ref) 1.00 1.00 1.00 1.00 1.00 1.00 1.00 No (ref) 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	3				
Employed No (ref) 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	5	, ,	, ,		
Employed No (ref)					
No (ref) 1.00 1.00 1.00 1.00 1.00 Religion Christian (ref) 1.00 1.00 1.00 1.00 Traditionalist 1.25 (0.46) 0.63 (0.84) 0.92 (0.52) 0.96 (0.35) Muslim 0.92 (0.18) 0.72 (0.27) 1.11 (0.20) 0.93 (0.19) None 0.76 (0.28) 0.63 (0.59) 0.78 (0.27) 1.03 (0.26) Other 1.42 (0.30) 1.22 (0.32) 1.48 (0.23) 0.81 (0.34) Personal monthly income 1.01 (0.00) 1.01 (0.00) ** 1.01 (0.00) Ethnicity Akan (ref) 1.00 1.00 1.00 1.00 1.00 Sa Adangbe 1.04 (0.23) 2.29 (0.25)** 1.88 (0.28)* 2.39 (0.20)* Northern tribes 1.27 (0.24) 0.844 (0.30) 0.90 (0.24) 1.68 (0.25)* Other 1.24 (0.28) 0.91 (0.29) 0.62 (0.34) 1.17 (0.31) Residence Rural (ref) 1.00 1.00 1.00 1.00 1.00 Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Partner ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Respondent ever used alcohol	≥university	0.35 (0.20)**	0.55 (0.31)*	0.38 (0.27)**	0.32 (0.27)*
Religion Christian (ref) 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Employed				
Religion Christian (ref) 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.01 1.02 0.96 (0.35) Nuslim 0.92 (0.18) 0.76 (0.28) 0.63 (0.59) 0.78 (0.27) 1.03 (0.26) Other 1.42 (0.30) 1.22 (0.32) 1.48 (0.23) 0.81 (0.34) Personal monthly income 1.01 (0.00) 1.01 (0.00) 1.01 (0.00) 1.01 (0.00)** 1.01 (0.00) 1.01 (0.00) 1.01 (0.00) 1.01 (0.00) 1.00 1.0	No (ref)	1.00	1.00	1.00	1.00
Religion Christian (ref) 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.01 1.02 0.96 (0.35) Nuslim 0.92 (0.18) 0.76 (0.28) 0.63 (0.59) 0.78 (0.27) 1.03 (0.26) Other 1.42 (0.30) 1.22 (0.32) 1.48 (0.23) 0.81 (0.34) Personal monthly income 1.01 (0.00) 1.01 (0.00) 1.01 (0.00) 1.01 (0.00)** 1.01 (0.00) 1.01 (0.00) 1.01 (0.00) 1.01 (0.00) 1.00 1.0	• •				
1.00	1.03	0.54 (0.11)	0.0+(0.13)	0.57 (0.15)	0.03 (0.14)
Traditionalist 1.25 (0.46)	Religion				
Muslim 0,92 (0.18) 0.72 (0.27) 1.11 (0.20) 0.93 (0.19) None 0,76 (0.28) 0.63 (0.59) 0.78 (0.27) 1.03 (0.26) Other 1,42 (0.30) 1.22 (0.32) 1.48 (0.23) 0.81 (0.34) Personal monthly income 1.01 (0.00) 1.01 (0.00) 1.01 (0.00)** 1.01 (0.00) Ethnicity Akan (ref) 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	, ,				1.00
None 0.76 (0.28) 0.63 (0.59) 0.78 (0.27) 1.03 (0.26) Other 1.42 (0.30) 1.22 (0.32) 1.48 (0.23) 0.81 (0.34) O.81 (0	Traditionalist	1.25 (0.46)	0.63 (0.84)	0.92 (0.52)	0.96 (0.35)
None 0.76 (0.28) 0.63 (0.59) 0.78 (0.27) 1.03 (0.26) Other 1.42 (0.30) 1.22 (0.32) 1.48 (0.23) 0.81 (0.34) O.81 (0	Muslim	0.92 (0.18)	0.72 (0.27)	1.11 (0.20)	0.93 (0.19)
Other 1.42 (0.30) 1.22 (0.32) 1.48 (0.23) 0.81 (0.34) Personal monthly income 1.01 (0.00) 1.01 (0.00) 1.01 (0.00)** 1.01 (0.00)** Ethnicity Akan (ref) 1.00 1.00 1.00 1.00 Ga Adangbe 1.04 (0.23) 2.29 (0.25)*** 1.88 (0.28)** 2.39 (0.20)** Ewe 0.96 (0.19) 0.69 (0.35) 0.80 (0.28) 1.37 (0.24) Northern tribes 1.27 (0.24) 0.844 (0.30) 0.90 (0.24) 1.68 (0.25)* Other 1.24 (0.28) 0.91 (0.29) 0.62 (0.34) 1.17 (0.31) Residence Rural (ref) 1.00 1.00 1.00 1.00 Urban 0.29 (0.34) 1.50 (0.52) 0.72 (0.41) 0.97 (0.37) Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 Yes 1.94 (0.14)*** 2.61 (0.25)*** 2.50 (0.23)*** 2.53 (0.25)* Partner ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.47 (0.20)* 1.39 (0.15)* <t< td=""><td></td><td></td><td></td><td></td><td></td></t<>					
Personal monthly income 1.01 (0.00) 1.01 (0.00) 1.01 (0.00)** 1.01 (0.00) Ethnicity Akan (ref) 1.00 1.00 1.00 1.00 1.00 Ga Adangbe 1.04 (0.23) 2.29 (0.25)** 1.88 (0.28)* 2.39 (0.20)* Ewe 0.96 (0.19) 0.69 (0.35) 0.80 (0.28) 1.37 (0.24) Northern tribes 1.27 (0.24) 0.844 (0.30) 0.90 (0.24) 1.68 (0.25)* Other 1.24 (0.28) 0.91 (0.29) 0.62 (0.34) 1.17 (0.31) Residence Rural (ref) 1.00 1.00 1.00 1.00 Urban 0.29 (0.34) 1.50 (0.52) 0.72 (0.41) 0.97 (0.37) Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 Yes 1.94 (0.14)** 2.61 (0.25)** 2.50 (0.23)** 2.53 (0.25)* Partner ever used alcohol No (ref) 1.00 1.00 1.00 1.00 Yes 1.47 (0.20)* 1.39 (0.15)* 1.71 (0.25)* 1.63 (0.19)* Variance components (random intercept) 1.02** 2.64** 1.76** 1.29**					
Ethnicity Akan (ref)	Other	1.42 (0.30)	1.22 (0.32)	1.48 (0.23)	0.81 (0.34)
Akan (ref) 1.00 1.00 1.00 1.00 1.00 2.39 (0.26)** Ga Adangbe 1.04 (0.23) 2.29 (0.25)** 1.88 (0.28)* 2.39 (0.20)* Eve 0.96 (0.19) 0.69 (0.35) 0.80 (0.28) 1.37 (0.24) Northern tribes 1.27 (0.24) 0.844 (0.30) 0.90 (0.24) 1.68 (0.25)* Other 1.24 (0.28) 0.91 (0.29) 0.62 (0.34) 1.17 (0.31) Residence Rural (ref) 1.00 1.00 1.00 1.00 1.00 Urban 0.29 (0.34) 1.50 (0.52) 0.72 (0.41) 0.97 (0.37) Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Yes 1.94 (0.14)** 2.61 (0.25)** 2.50 (0.23)** 2.53 (0.25)* Partner ever used alcohol No (ref) 1.00 1.00 1.00 1.00 Yes 1.47 (0.20)* 1.39 (0.15)* 1.71 (0.25)* 1.63 (0.19)* Variance components (random intercept) 1.02** 2.64** 1.76** 1.29**	Personal monthly income	1.01 (0.00)	1.01 (0.00)	1.01 (0.00)**	1.01 (0.00)
Ga Adangbe 1.04 (0.23) 2.29 (0.25)** 1.88 (0.28)* 2.39 (0.20)* Ewe 0.96 (0.19) 0.69 (0.35) 0.80 (0.28) 1.37 (0.24) Northern tribes 1.27 (0.24) 0.844 (0.30) 0.90 (0.24) 1.68 (0.25)* Other 1.24 (0.28) 0.91 (0.29) 0.62 (0.34) 1.17 (0.31) Residence Rural (ref) 1.00 1.00 1.00 1.00 Orban 0.29 (0.34) 1.50 (0.52) 0.72 (0.41) 0.97 (0.37) Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Yes 1.94 (0.14)** 2.61 (0.25)** 2.50 (0.23)** 2.53 (0.25)* Partner ever used alcohol No (ref) 1.00 1.00 1.00 1.00 Yes 1.47 (0.20)* 1.39 (0.15)* 1.71 (0.25)* 1.63 (0.19)* Variance components (random intercept) 1.02** 2.64** 1.76** 1.29**	Ethnicity				
Ewe 0.96 (0.19) 0.69 (0.35) 0.80 (0.28) 1.37 (0.24) Northern tribes 1.27 (0.24) 0.844 (0.30) 0.90 (0.24) 1.68 (0.25)* Other 1.24 (0.28) 0.91 (0.29) 0.62 (0.34) 1.17 (0.31) Residence Rural (ref) 1.00 1.00 1.00 1.00 1.00 Urban 0.29 (0.34) 1.50 (0.52) 0.72 (0.41) 0.97 (0.37) Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Yes 1.94 (0.14)** 2.61 (0.25)** 2.50 (0.23)** 2.53 (0.25)* Partner ever used alcohol No (ref) 1.00 1.00 1.00 1.00 Yes 1.47 (0.20)* 1.39 (0.15)* 1.71 (0.25)* 1.63 (0.19)* Variance components (random intercept) 1.02** 2.64** 1.76** 1.29**	Akan (ref)	1.00	1.00	1.00	1.00
Ewe 0.96 (0.19) 0.69 (0.35) 0.80 (0.28) 1.37 (0.24) Northern tribes 1.27 (0.24) 0.844 (0.30) 0.90 (0.24) 1.68 (0.25)* Other 1.24 (0.28) 0.91 (0.29) 0.62 (0.34) 1.17 (0.31) Residence Rural (ref) 1.00 1.00 1.00 1.00 1.00 Urban 0.29 (0.34) 1.50 (0.52) 0.72 (0.41) 0.97 (0.37) Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Yes 1.94 (0.14)** 2.61 (0.25)** 2.50 (0.23)** 2.53 (0.25)* Partner ever used alcohol No (ref) 1.00 1.00 1.00 1.00 Yes 1.47 (0.20)* 1.39 (0.15)* 1.71 (0.25)* 1.63 (0.19)* Variance components (random intercept) 1.02** 2.64** 1.76** 1.29**	Ga Adangbe	1.04 (0.23)	2.29 (0.25)**	1.88 (0.28)*	2.39 (0.20)*
Northern tribes 1.27 (0.24) 0.844 (0.30) 0.90 (0.24) 1.68 (0.25) Other 1.24 (0.28) 0.91 (0.29) 0.62 (0.34) 1.17 (0.31) Residence Rural (ref) 1.00 1.00 1.00 1.00 0.97 (0.37) Respondent ever used alcohol No (ref) 1.00 1.00 1.00 1.00 0.97 (0.37) Partner ever used alcohol No (ref) 1.00 1.00 1.00 1.00 2.53 (0.25) Partner ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Yes 1.94 (0.14)** 2.61 (0.25)** 2.50 (0.23)** 2.53 (0.25) Partner ever used alcohol No (ref) 1.00 1.00 1.00 1.00 1.00 Yes 1.47 (0.20)* 1.39 (0.15)* 1.71 (0.25)* 1.63 (0.19) Variance components (random intercept) 1.02** 2.64** 1.76** 1.29**	3				
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	res	1.47 (0.20)*	1.39 (0.15)*	1.71 (0.25)*	1.63 (0.19)*
ntraclass correlations 22.7 44.5 24.0 20.2	/ariance components (random intercept)	1.02**	2.64**	1.76**	1.29**

^{*}p<.05. **p<.01. *Note*: ref=reference category

the household. By the same token, interventions aimed at improving women's autonomy could help reduce intimate partner violence.

Community-Level Autonomy

Not many studies have explored relationships between community-level autonomy and intimate partner violence in Sub-Saharan Africa. Even fewer have established

TABLE 5. Coefficients (and robust standard errors) from multivariate linear regression models assessing associations of intimate partner violence and other individual-level characteristics with selected types of autonomy among Ghanaian women

Variable	Type of autonomy					
	Economic decision making	Family planning decision making	Sexual			
Physical violence						
No	0.00	0.00	0.00			
Yes	-0.05 (0.08)	-0.01 (0.06)	-0.19 (0.10)*			
Sexual violence						
No	0.00	0.00	0.00			
Yes	0.09 (0.08)	-0.40 (0.07)**	-0.03 (0.10)			
Emotional violence						
No	0.00	0.00	0.00			
Yes	0.14 (0.07)*	-0.12 (0.07)	0.16 (0.10)			
Economic violence						
No	0.00	0.00	0.00			
Yes	0.10 (0.01)	0.04 (0.05)	-0.14 (0.07)*			
Age of respondent	0.01 (0.00)*	0.00 (0.00)	0.00 (0.00)			
nge of respondent	0.01 (0.00)	0.00 (0.00)	0.00 (0.00)			
Education	0.00	0.00	0.00			
None	0.00	0.00	0.00			
Primary	0.05 (0.08)	-0.01 (0.07)	0.16 (0.07)*			
Junior high school	0.20 (0.09)*	-0.01 (0.07)	0.27 (0.08)**			
Senior high school	0.02 (0.10)	0.16 (0.08)	0.26 (0.08)**			
Vocational/technical	0.06 (0.10)	0.21 (0.08)*	0.24 (0.10)*			
≥university	0.19 (0.13)	0.26 (0.08)**	0.32 (0.10)**			
Employed						
No	0.00	0.00	0.00			
Yes	0.23 (0.06)**	0.02 (0.07)	0.08 (0.09)			
Religion						
Christian	0.00	0.00	0.00			
Traditionalist	0.17 (0.18)	0.38 (0.16)*	0.10 (0.15)			
Muslim	-0.24 (0.09)**	-0.03 (0.10)	-0.56 (0.19)**			
None						
	0.24 (0.13)	-0.07 (0.26)	-0.28 (0.18)			
Other	-0.25 (0.13)	-0.12 (0.14)	0.30 (0.20)			
Personal monthly income	0.01 (0.10)	0.00 (0.10)	0.00 (0.10)			
Ethnicity						
Akan	0.00	0.00	0.00			
Ga Adangbe	-0.52 (0.24)*	-0.22 (0.11)*	0.51 (0.13)**			
Ewe	-0.10 (0.15)	0.39 (0.17)*	0.43 (0.12)**			
Northern tribes	-0.14 (0.15)	-0.24 (0.12)*	0.16 (0.21)			
Other	-0.14 (0.13) -0.17 (0.13)	-0.24 (0.12) -0.08 (0.16)	-0.05 (0.19)			
Residence						
Kesidence Rural	0.00	0.00	0.00			
Urban	-0.03 (0.14)	0.06 (0.13)	0.02 (0.16)			
Respondent ever used alcohol						
No	0.00	0.00	0.00			
Yes	0.12 (0.11)	-0.21 (0.12)	-0.06 (0.11)			
Partner ever used alcohol						
No	0.00	0.00	0.00			
Yes	-0.27 (0.10)**	0.16 (0.11)	0.09 (0.09)			

both theoretical and empirical bases for the inclusion of community-level predictors and interventions in explaining and addressing intimate partner violence. For instance, in their analysis of intimate partner violence, Meija et al.³⁷ emphasized the need to change gender norms at both individual and community levels. Using data from Nigeria, Linos et al.³⁸ justified the inclusion of broader social and contextual factors as important determinants of intimate partner violence. In this study, associations between

community-level autonomy and intimate partner violence were explored. The findings demonstrate that women in communities where women have high levels of sexual autonomy are less likely than those in low-autonomy communities to have experienced physical and economic violence. These findings back up the many researchers who argue for the need to go beyond individual-level interventions to create programs that address the contextual-structural variables associated with intimate partner violence.

Limitations

This study is limited in several ways. First, the data are cross-sectional; therefore, causal connections cannot be made between women's autonomy and intimate partner violence. As a result, the relationships between variables should be viewed as associations. The endogenous relationship between autonomy and intimate partner violence suggests that longitudinal data with the proper time sequencing would be useful to examine this relationship. Second, and as is the case with most quantitative surveys, there is the potential for social desirability bias, especially on sensitive topics like domestic violence. This may affect responses to some sensitive questions and could lead to underreporting. The use of aggregated data for multilevel analysis may be a potential source of bias, but this technique is considered methodologically prudent in the absence of real community-level data.

CONCLUSIONS

These limitations notwithstanding, this study provides the first documented evidence of the links between women's autonomy and intimate partner violence in Ghana, and is one of few such studies in Sub-Saharan Africa. The findings have implications for both researchers and policymakers.

First, the findings acknowledge the complex and nuanced relationship between autonomy and intimate partner violence, and suggest mixed methods are required to unpack these relationships. Studies examining the links between autonomy and intimate partner violence, including the current one, have relied mostly on quantitative data. Although important, such studies rarely provide context on women's lived experiences of the intersections of autonomy, status and intimate partner violence. Future researchers should use in-depth qualitative interviews to document these important experiences and contexts, and should consider using longitudinal data given the bidirectional relationship between women's autonomy and intimate partner violence.

This study's findings have important policy implications. They highlight the need for strategies and empowerment programs that enhance Ghanaian women's access to and control of resources and power within the household. While the value of economic empowerment programs—including microfinance and cash transfer programs—cannot be underestimated, social empowerment programs, especially those that improve women's self-efficacy and their decision-making power,

are equally valuable. Finally, while empowering women to be autonomous is important, we also need to find ways to empower communities to help women control and make independent decisions in their household.

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RESUMEN

Contexto: Estudios previos han establecido que la autonomía de las mujeres es un determinante de importancia para varios resultados demográficos en África subsahariana; sin embargo, muy pocos estudios han considerado la violencia de pareja íntima como uno de esos resultados.

Métodos: Se utilizaron datos recolectados en 2017 de 2,289 mujeres que residían en 40 comunidades en Ghana para examinar las asociaciones entre tres tipos de autonomía—toma de decisiones económicas, toma de decisiones sobre planificación familiar y autonomía sexual—y las experiencias de las mujeres en cuanto a violencia física, sexual, emocional y económica. Para identificar las asociaciones se usó regresión logística multinivel.

Resultados: Los tres tipos de autonomía se asociaron con el hecho de haber experimentado violencia de pareja íntima, aunque de diferentes formas, a nivel individual o a nivel comunitario. A nivel individual, después de ajustar por variables teóricamente relevantes, la autonomía en la toma de decisiones sobre planificación familiar se asoció negativamente con los cuatro tipos de violencia (razón de probabilidades, 0.7–0.8), mientras que la autonomía en la toma de decisiones económicas se asoció positivamente con la violencia emocional y económica (1.2 cada una). A nivel comunitario, vivir en una comunidad en donde las mujeres tenían niveles más altos de autonomía sexual se asoció con menores probabilidades de haber experimentado violencia física y económica (0.5 y 0.4, respectivamente).

Conclusións: Los hallazgos subrayan la relevancia de programas de empoderamiento de las mujeres como mecanismos potenciales para reducir la violencia de pareja íntima en Ghana. También señalan la necesidad de ir más allá de las intervenciones a nivel individual y considerar programas a nivel comunitario que empoderen a las mujeres para que sean autónomas.

RÉSUMÉ

Contexte: Différentes études ont établi l'autonomie des femmes comme un déterminant important de plusieurs résultats démographiques en Afrique subsaharienne, mais très peu ont considéré la violence aux mains d'un partenaire intime parmi ces résultats.

Méthodes: Les données collectées en 2017 auprès de 2 289 femmes résidentes de 40 communautés ghanéennes ont servi à examiner les associations entre trois types d'autonomie—décision économique, décision en matière de planification familiale et autonomie sexuelle—et l'expérience féminine de la violence physique, sexuelle, psychologique et économique. Les associations ont été identifiées par régression logistique multiniveaux.

Résultats: Les types d'autonomie considérés sont tous trois associés à l'expérience de la violence aux mains d'un partenaire intime, mais de différentes manières, au niveau individuel ou de la communauté. Au niveau individuel, après correction des variables théoriquement pertinentes, l'autonomie de décision en matière de planification familiale s'est avérée associée négativement aux quatre types de violence (RC, 0, 7–0,8), tandis que

celle sur le plan économique l'était positivement à la violence psychologique et économique (1,2 pour chacune). Au niveau communautaire, la vie dans une communauté où les femmes présentaient de plus hauts niveaux d'autonomie sexuelle était associée à une moindre probabilité d'avoir subi des violences physiques et économiques (0,5 et 0,4, respectivement).

Conclusions: Les observations soulignent la pertinence des programmes d'autonomisation des femmes en tant que mécanismes potentiels de réduction de la violence aux mains d'un partenaire intime au Ghana. Elles indiquent aussi le besoin d'envisager, au-delà des interventions de niveau individuel,

les programmes de niveau communautaire aptes à favoriser l'autonomie des femmes.

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