



International Journal of Behavioral and Social Analytics

Volume I, Issue 3, August 2026

eISSN: 3116-4358

<https://journal.ijhba.com/index.php/ijbesa>

<https://slsipress.com>

Gendered Norms of Violence: Female Education, Economic Empowerment, and Women's Acceptance of Wife Beating Across Countries

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Abstract

The persistence of social norms that legitimize intimate partner violence represents an important behavioral dimension of gender inequality. This study examined the relationships of female education, women's employment structure, and gender parity in labor-force participation with women's acceptance of wife beating across countries. Using World Development Indicators data from 1999 to 2023, the analysis focused on the percentage of women aged 15–49 who considered wife beating justified for at least one of five specified reasons. Female lower-secondary completion, female wage and salaried employment, and the female-to-male labor-force participation ratio served as the principal explanatory variables. The dataset contained 190 country-survey observations from 72 countries. A latest-observation cross-sectional model included 64 countries, while fixed-effects analysis used 149 observations from 47 countries with repeated survey waves. Cross-sectional results indicated that higher female educational completion and greater wage and salaried employment were associated with lower acceptance of wife beating, whereas labor-force participation parity was not significant. After adjustment for national development, urbanization, fertility, and survey year, female wage and salaried employment remained significant. However, country fixed-effects models showed that changes in education and economic participation did not significantly explain within-country changes in violence-accepting attitudes. The findings indicate that economic participation should not automatically be equated with normative empowerment and that structural advancement and transformation of gendered violence norms constitute related but distinct social processes.

Keywords: *gender norms; intimate partner violence; women's empowerment; female education; wage employment; social attitudes*

1. Introduction

Intimate partner violence is sustained not only through acts of physical aggression but also through social norms that determine whether such behavior is regarded as unacceptable, excusable, or legitimate. Attitudes that justify violence within intimate relationships therefore represent an important behavioral manifestation of gender inequality. Particularly significant are situations in which women themselves accept the use of physical violence by husbands under specified circumstances, as such attitudes may reflect the internalization of gendered expectations regarding marital authority, obedience, and acceptable behavior.

The World Development Indicators measure women's acceptance of wife beating through the percentage of women aged 15–49 who believe that a husband may be justified in beating his wife for at least one of five reasons: arguing with him, refusing sexual relations, burning food, going out without informing him, or neglecting the children (World Bank, 2026). These circumstances reflect more than individual attitudes toward violence. They capture broader social expectations concerning women's behavior within marriage, household responsibilities, sexuality, mobility, and male authority. Acceptance of wife beating may therefore be understood as an indicator of the extent to which coercive gender relations remain socially legitimized.

Cross-national evidence indicates substantial variation in the acceptance of intimate partner violence. Research across low- and middle-income countries has shown that attitudes toward wife beating differ considerably according to socioeconomic conditions, education, residence, and broader national characteristics (Sardinha & Nájera Catalán, 2018; Tran et al., 2016). Such variation suggests that violence-supporting gender norms are influenced by both individual circumstances and the wider structural and normative environments in which individuals are situated.

Female education is frequently regarded as one mechanism through which restrictive gender norms may weaken. Educational attainment may increase awareness of rights, expose women to alternative social arrangements, expand opportunities for participation outside the household, and strengthen personal agency. Evidence from multiple countries has consequently associated lower levels of education with greater acceptance of wife beating (Paintsil et al., 2023). Nevertheless, education may operate within social environments in which patriarchal norms remain highly persistent. Recent evidence indicates that community-level norms can constrain the extent to which educational attainment translates into rejection of intimate partner violence (Patwary & Esha, 2025). Education may therefore provide enabling resources without necessarily producing immediate normative transformation.

Economic participation presents a similarly complex relationship. Women's employment is commonly interpreted as an indicator of empowerment because participation in economic activity may increase access to income, bargaining resources, social networks, and independence. However, employment itself does not necessarily indicate economic autonomy. Women may participate in unpaid family work, informal occupations, subsistence agriculture, precarious employment, or other forms of economic activity that provide limited security or bargaining power. Consequently, the extent of women's participation in the labor force may not adequately capture the quality of their economic position.

This distinction is particularly relevant when comparing women's labor-force participation with wage and salaried employment. A higher female-to-male labor-force participation ratio indicates greater parity in economic activity, but it does not establish that women possess secure employment, independent income, occupational protections, or enhanced household decision-making authority. In contrast, wage and salaried employment may more closely approximate integration into formal labor-market arrangements and may therefore serve as a different structural indicator of women's economic position. The distinction does not imply that wage employment directly measures autonomy, but it permits a more differentiated assessment of whether the structure of women's employment is associated with attitudes toward gender-based violence.

A further analytical issue concerns the difference between cross-national association and within-country change. Countries characterized by higher educational attainment, greater formal employment, urbanization, or economic development may exhibit lower acceptance of wife beating because these characteristics coexist with broader institutional, cultural, legal, and normative conditions. Cross-sectional relationships therefore cannot establish that changes in education or employment themselves produce changes in social attitudes. Examining repeated observations within countries provides a more demanding test of whether structural improvements correspond with changes in violence-legitimizing norms over time.

This distinction is particularly important for behavioral and social analytics. Macro-level indicators may identify the characteristics of societies in which violence-supporting attitudes are less prevalent, while longitudinal analysis may reveal whether changes in those indicators correspond with normative transformation. Separating these two questions reduces the risk of interpreting cross-country differences as evidence of causal social change.

Objectives of the Study

This study aimed to examine the relationships among female education, women's economic position, gender parity in labor-force participation, and women's acceptance of wife beating across countries using World Development Indicators data.

1. determine whether higher female lower-secondary completion is associated with lower acceptance of wife beating;
2. examine whether a greater proportion of women in wage and salaried employment is associated with lower acceptance of wife beating;
3. determine whether greater female-to-male parity in labor-force participation is associated with lower acceptance of wife beating;
4. assess whether these relationships persist after accounting for national income, urbanization, fertility, and survey timing;
5. determine whether changes in female education and economic participation correspond with changes in wife-beating acceptance within countries over time; and
6. examine whether the relationships of female education and economic empowerment with wife-beating acceptance are consistent across the five specific circumstances under which wife beating may be considered justified.

2. Review of Related Literature

2.1 Social and Gender Norms Underlying the Acceptance of Wife Beating

Acceptance of wife beating reflects more than approval of an isolated act of physical aggression. It represents a normative judgment concerning whether husbands are entitled to use violence to regulate wives' behavior within marriage. The commonly used five-scenario measure—arguing with the husband, neglecting children, going out without

informing him, refusing sexual relations, and burning food—therefore captures expectations surrounding obedience, caregiving, mobility, sexuality, and household authority. When women themselves endorse violence under these circumstances, such attitudes may indicate the internalization of social norms that legitimate unequal gender relations.

Cross-national studies demonstrate substantial differences in the prevalence of these attitudes. Tran et al. (2016), analyzing women and men across 39 low- and middle-income countries, found exceptionally wide variation in the proportion considering wife beating justified. Acceptance was generally higher among respondents experiencing socioeconomic disadvantage, limited education, and rural residence. Similarly, Sardinha and Nájera Catalán (2018), using data from 49 low- and middle-income countries, identified pronounced regional and national differences and found that broader political, social, and economic conditions were associated with societal acceptance of domestic violence.

The persistence of these attitudes also reflects the interaction between individual beliefs and the surrounding normative environment. Rani et al. (2004) found that acceptance of wife beating remained widespread across several Sub-Saharan African countries and interpreted such attitudes in relation to socially prescribed gender roles. More recent evidence likewise demonstrates that women's attitudes cannot be separated easily from household and community structures. Paintsil et al. (2023) found considerable variation in wife-beating acceptance across 30 Sub-Saharan African countries, with education, household characteristics, gender roles, media exposure, and socioeconomic position all contributing to differences in attitudes. These findings support an ecological interpretation in which violence-supporting beliefs are produced through the interaction of individual resources, household power arrangements, and wider social norms. Comparable behavioral evidence from Filipino late adolescents indicates that peer influence is related to personal-social functioning, illustrating how social conformity pressures can shape behavior within interpersonal contexts (Balut et al., 2026). Related ecological work among university students has likewise modeled outcomes as jointly embedded in individual, interpersonal, and systemic domains, with gender differences emerging across psychological responses (Malabanan, 2026).

2.2 Female Education and Rejection of Violence-Supporting Gender Norms

Education is among the most consistently identified correlates of women's rejection of intimate partner violence. Formal schooling can expose women to information, alternative gender arrangements, rights-based perspectives, social networks, and economic opportunities that may challenge traditional expectations concerning marital obedience and male authority. At the aggregate level, Sardinha and Nájera Catalán (2018) found that higher national female literacy was associated with lower societal acceptance of domestic violence. Similar patterns have been documented at the individual level across multiple national settings.

Paintsil et al. (2023) reported particularly substantial educational differences across 30 Sub-Saharan African countries. Women without formal education were considerably more likely to accept wife beating than women with higher education. Earlier evidence from Rani et al. (2004) similarly identified educational attainment as one of the strongest and most consistent negative correlates of wife-beating acceptance. Tran et al. (2016) also found that limited formal education characterized groups with greater acceptance of intimate partner violence across the countries they examined.

However, the relationship should not be interpreted as evidence that schooling automatically transforms gender norms. Patwary and Esha (2025), using recent Bangladesh Demographic and Health Survey data, found that women living in communities where intimate partner violence was widely justified were substantially more likely to justify such violence themselves. Importantly, once community norms were considered, differences between some educational groups became considerably weaker. Their findings suggest that the normative environment can constrain the extent to which individual educational attainment translates into rejection of violence.

Education may therefore be understood as an enabling structural resource rather than a sufficient condition for normative transformation. Educational expansion can strengthen women's capabilities and exposure to alternative social expectations, but the behavioral effects of those resources remain conditioned by community beliefs, household relationships, and institutional environments. Evidence from adjacent knowledge-behavior domains likewise cautions against assuming that greater awareness automatically produces uniform behavioral change: monetary-policy awareness predicted saving and investment but not spending among Filipino students (Espelita et al., 2025). Similarly, community health research found only weak associations between awareness and preventive practice, while attitudes were much more strongly related to practice (Temporada et al., 2025).

2.3 Women's Employment and Economic Empowerment

Economic participation is frequently treated as another pathway toward women's empowerment. Employment may provide income, greater interaction outside the household, stronger bargaining resources, increased mobility, and reduced economic dependence. From this perspective, employment should potentially strengthen women's capacity to reject

coercive gender relations. The empirical literature, however, shows that the association between employment and gender-based violence is considerably more complicated.

Earlier cross-national research already questioned the assumption that participation in work necessarily produces egalitarian attitudes. Rani et al. (2004) found that working women in several countries were no less likely—and in some settings were more likely—to justify wife beating than nonworking women. Such results indicate that employment status alone may be an inadequate indicator of empowerment. Work undertaken because of household poverty, agricultural necessity, unpaid family responsibilities, or precarious informal employment may provide little independent income or decision-making authority.

Research examining women's employment and actual exposure to intimate partner violence reinforces this ambiguity. Bourey et al. (2023), using Demographic and Health Survey data from 20 low- and middle-income settings, found that women's employment was positively associated with past-year intimate partner violence at individual and community levels. Their findings demonstrate that employment operates within household and community environments and cannot be treated as an inherently protective condition. Economic activity that challenges established gender roles may produce different consequences depending on household wealth, prevailing norms, and the distribution of authority.

At the same time, economic empowerment interventions can produce beneficial outcomes when they provide more substantive resources. Eggers del Campo and Steinert (2022), in a systematic review and meta-analysis of randomized controlled trials, found that women's economic empowerment interventions were associated overall with reductions in emotional, sexual, and physical intimate partner violence. However, some interventions also produced increased controlling behavior or conflict over financial resources. The authors found tentative evidence that programs combining economic empowerment with gender-sensitization components may generate stronger protective effects.

These findings support a multidimensional interpretation of empowerment. Employment may provide an opportunity for greater independence, but whether it becomes meaningful empowerment depends partly on income security, control over resources, household decision-making, occupational conditions, and the normative environment in which women's employment occurs. Using WDI-based indicators in the Philippine context, Menez and Atento (2026) similarly operationalized women's empowerment as a multidimensional construct encompassing economic participation, employment quality, autonomy-related constraints, and institutional inclusion, reinforcing the need to distinguish participation from substantive empowerment.

2.4 Labor-Force Participation Versus Meaningful Economic Empowerment

The distinction between labor-force participation and substantive empowerment is especially important for cross-national analysis. Labor-force participation measures whether women are economically active, but it does not indicate the quality of their employment or the extent to which their economic activity increases autonomy. Women engaged in subsistence agriculture, unpaid family work, informal vending, precarious service work, or other forms of vulnerable employment may be classified as participating in the labor force while continuing to experience economic dependence and limited household bargaining power.

Evidence concerning women's decision-making reinforces this distinction. Seidu et al. (2022), examining women in Mali, found that participation in household decision-making was associated with women's justification of wife beating, indicating that empowerment involves dimensions of agency that cannot be reduced to employment status. Similarly, Bourey et al. (2023) demonstrated that the relationship between women's employment and intimate partner violence depends upon structural conditions surrounding employment rather than employment alone.

Broader research on gender disparities also shows that improvements in conventional development indicators do not necessarily translate directly into changes in gender norms. Bussolo et al. (2024), examining long-term patterns in South Asia, found that educational progress coexisted with persistent disparities in female labor-force participation, agency, intimate partner violence, and gender attitudes. Their analysis emphasized the continuing constraining role of social norms even among women who were educated, urban, or economically advantaged.

This distinction provides a rationale for separating women's overall economic participation from the structure of women's employment. Wage and salaried work does not itself constitute a complete measure of empowerment, but it may more closely reflect regularized economic relationships, income-generating employment, and integration into formal labor institutions than labor-force participation alone. The relevant behavioral question is therefore not simply whether women work, but whether the nature and institutional context of that work provide resources that can be converted into greater autonomy and rejection of coercive gender relations.

Economic empowerment should consequently be treated as multidimensional. The literature suggests that labor participation, employment status, earnings, control over resources, decision-making, and social acceptance of women's economic roles capture related but distinct processes. Treating any single measure as synonymous with empowerment

risks obscuring the mechanisms through which women's economic position may influence gender attitudes. In another Philippine behavioral domain, investment participation differed by sex and income, while attitudes and socioeconomic capacity jointly predicted investment decisions, illustrating how participation may depend on both structural resources and evaluative orientations (Lantin-Magana et al., 2026). Cross-country WDI evidence from four ASEAN economies also shows that employment expansion and macroeconomic strength do not uniformly translate into equitable social outcomes, underscoring the limits of treating aggregate participation indicators as sufficient proxies for substantive welfare or empowerment (Quinto & Atento, 2025).

2.5 Social and Normative Change Across Countries and Over Time

Cross-sectional differences in gender attitudes do not necessarily reveal how those attitudes change. Countries with higher educational attainment, stronger economic institutions, greater urbanization, or higher female employment may also differ in legal systems, media environments, civil society participation, family structures, political institutions, and longstanding cultural norms. Consequently, characteristics associated with low wife-beating acceptance across countries may not necessarily explain declining acceptance within the same country over time. Methodologically, WDI-based mixed-effects analysis of ASEAN business entry has likewise identified substantial persistent between-country heterogeneity, demonstrating how national context can account for a meaningful share of cross-country variation beyond measured structural predictors (Atento, 2026).

Longitudinal and repeated-survey evidence demonstrates that attitudes can change substantially, although trajectories vary. Oyediran (2016), analyzing Nigerian Demographic and Health Surveys from 2003, 2008, and 2013, documented a marked decline in women's acceptance of wife beating. Education, residence, wealth, autonomy, religion, ethnicity, and media exposure were associated with attitudes, but normative change occurred within a broader social transformation rather than through a single identifiable mechanism.

Raza and Pals (2025) similarly found that attitudes toward wife beating in Pakistan varied over time and were associated with education, employment, wealth, decision-making arrangements, region, and survey context. Their findings illustrate that normative trajectories can be complex and may not follow a uniform modernization pathway.

More extensive global evidence now points to a broad secular movement away from violence-supporting attitudes. Bergenfeld et al. (2025), drawing on population-based surveys covering 83 countries between 1999 and 2022, found substantial declines in acceptance of intimate partner violence among both women and men, although the magnitude of change differed considerably between countries. The authors consequently cautioned against interpreting pooled global trends without attention to national and subnational trajectories.

Vartanova et al. (2026) reached a similar conclusion using Demographic and Health Survey data extending from 1999 to 2024. Acceptance of intimate partner violence declined in the large majority of countries examined. Improvements in human development were associated with faster declines in acceptance, but the study could not establish that development itself caused normative change. Their results also indicated that broader human development showed somewhat stronger relationships with declining acceptance than gender-specific development measures.

Together, these studies suggest that gender norms can undergo substantial historical change, but identifying the structural mechanisms responsible for such change remains difficult. This makes it analytically important to distinguish characteristics associated with differences between countries from variables that actually track change within countries.

2.6 Synthesis and Research Gaps

The reviewed literature establishes several relatively consistent patterns. Acceptance of wife beating varies markedly across societies and is influenced by individual resources, household arrangements, socioeconomic position, and community-level gender norms (Paintsil et al., 2023; Sardinha & Nájera Catalán, 2018; Tran et al., 2016). Education is generally associated with lower acceptance, although the strength of this relationship depends partly on the surrounding normative environment (Patwary & Esha, 2025). Economic empowerment is more difficult to characterize because labor-force participation and employment do not automatically confer autonomy, while decision-making power, employment quality, and control over economic resources appear to represent distinct dimensions of empowerment (Bourey et al., 2023; Eggers del Campo & Steinert, 2022; Seidu et al., 2022).

A further gap concerns the analytical separation of cross-national differences from within-country change. Existing studies predominantly examine individual-level or country-level associations using cross-sectional survey data, while emerging longitudinal evidence demonstrates widespread declines in violence-accepting attitudes without identifying a single structural mechanism responsible for this transformation (Bergenfeld et al., 2025; Vartanova et al., 2026). Consequently, it remains unclear whether countries with higher female education and stronger economic positions exhibit lower wife-beating acceptance because these characteristics themselves drive normative change or because they coexist with broader institutional and cultural conditions.

The present study addresses this gap by distinguishing female educational completion, wage and salaried employment, and female-to-male labor-force participation and by evaluating both between-country associations and within-country changes. This approach permits a more precise assessment of whether structural indicators of women's advancement correspond with the transformation of violence-legitimizing gender norms. Adjacent behavioral research further suggests that internalized value orientations can mediate the relationship between broader social dispositions and motivation, supporting attention to normative mechanisms rather than structural indicators alone (Yan, 2026). Gender-sensitive research in another domain has also found distinct male-female behavioral and psychosocial profiles within the same institutional setting, reinforcing the importance of treating gendered outcomes as context-specific rather than mechanically inferred from aggregate participation measures (Quinto et al., 2025).

3. Methodology

3.1 Research Design

The study employed a quantitative cross-national observational design using secondary data from the World Development Indicators. The analysis examined associations between structural indicators of female education and economic participation and women's acceptance of wife beating across countries.

Because the principal outcome variable was derived primarily from intermittently administered household surveys rather than from annual administrative records, the dataset was treated as a country-survey-year panel rather than as a conventional balanced annual panel. The analytical design incorporated both cross-sectional and repeated-observation specifications to distinguish between cross-national differences and within-country change over time.

3.2 Data Source and Analytical Sample

The principal dependent variable was SG.VAW.REAS.ZS, representing the percentage of women aged 15–49 who believe that a husband is justified in beating his wife for at least one of five reasons. The five specified circumstances were arguing with the husband, refusing sexual relations, burning food, going out without informing him, and neglecting the children.

The available dataset contained 190 non-missing country-survey observations from 72 countries covering the period from 1999 to 2023. For the latest-observation cross-sectional analysis, the most recent usable observation was retained for each country. Sixty-four countries had complete information for the three principal explanatory variables.

For the repeated-observation analysis, countries were included if they contributed at least two usable survey observations. This specification contained 149 country-survey observations from 47 countries.

3.3 Measures and Variables

Female education was measured using SE.SEC.CMPT.LO.FE.ZS, representing the female lower-secondary completion rate as a percentage of the relevant age group.

Women's employment structure was measured using SL.EMP.WORK.FE.ZS, representing wage and salaried workers as a percentage of total female employment based on modeled International Labour Organization estimates.

Gender parity in economic participation was measured using SL.TLF.CACT.FM.ZS, representing the ratio of female to male labor-force participation rates based on modeled International Labour Organization estimates.

The latter two variables were treated as conceptually distinct. The female-to-male labor-force participation ratio indicates the relative extent to which women participate in economic activity compared with men, whereas the female wage and salaried employment indicator reflects the structure of women's employment.

The adjusted models also included GDP per capita at purchasing-power parity, urban population as a percentage of total population, total fertility rate, and survey year.

3.4 Data Matching Procedure

Because the wife-beating attitude indicator is based on intermittently administered surveys, predictor and control variables were matched to the corresponding survey year.

Female educational observations were matched to the wife-beating survey year using the exact year where available. When an exact-year educational observation was unavailable, the nearest observation within a maximum two-year window was used.

The labor-force indicators and other annually modeled controls were matched to the nearest available observation within one year of the survey year.

3.5 Data Analysis

Three complementary analytical strategies were employed.

First, a latest-observation cross-sectional dataset was constructed to examine contemporary differences in wife-beating acceptance across countries. Bivariate correlations were used to assess the direction and magnitude of associations between the principal explanatory variables, selected development indicators, and the outcome.

Second, multiple regression models were estimated to examine whether female education, female wage and salaried employment, and female-to-male labor-force participation were independently associated with wife-beating acceptance. Adjusted specifications incorporated GDP per capita, urbanization, fertility, and survey year. Heteroskedasticity-robust standard errors were used for the cross-sectional models.

Third, reason-specific models were estimated separately for each of the five circumstances constituting the composite wife-beating indicator. These models examined whether the relationships of female education and economic participation were consistent across different behavioral justifications for violence.

To distinguish between-country differences from within-country change, country fixed-effects models were subsequently estimated using the 149 country-survey observations from 47 countries with repeated observations. Country fixed effects absorbed time-invariant national characteristics, allowing the analysis to assess whether changes in education and employment indicators within countries corresponded with changes in women's acceptance of wife beating. Standard errors in the fixed-effects models were clustered by country.

The analysis was interpreted as associational rather than causal. Cross-sectional coefficients were used to identify structural relationships across countries, while the fixed-effects models were used to examine whether changes within countries followed similar patterns over time.

4. Results and Discussion

4.1 Descriptive Patterns in Women's Acceptance of Wife Beating

Across the 190 available country-survey observations, the mean proportion of women who considered wife beating justified for at least one of the five specified reasons was approximately 40.5%, while the median was 40.3%. The similarity of the mean and median indicates that the central tendency of the pooled observations was relatively stable despite substantial cross-national heterogeneity.

Variation across countries was pronounced. Within the latest-observation analytical sample, acceptance was below 10% in several countries but exceeded 70% in others. Such dispersion indicates that the social legitimacy attached to intimate partner violence differs markedly across national environments. This pattern is consistent with previous multi-country evidence showing substantial geographic and socioeconomic differences in attitudes toward wife beating (Sardinha & Nájera Catalán, 2018; Tran et al., 2016).

The magnitude of this variation also supports the treatment of wife-beating acceptance as a broader social and behavioral indicator rather than merely an individual attitude. National differences may reflect disparities in education, economic development, household organization, legal institutions, media exposure, gender-role expectations, and other contextual characteristics that operate simultaneously.

4.2 Cross-National Associations

Table 1 presents the bivariate relationships between selected structural indicators and women's acceptance of wife beating using the latest available country observations.

Table 1. *Cross-National Correlations with Women's Acceptance of Wife Beating*

Predictor	Correlation with Wife-Beating Acceptance
Female lower-secondary completion	−0.544
Female wage and salaried employment	−0.586
Female-to-male labor-force participation ratio	+0.112
GDP per capita, PPP	−0.590
Urban population	−0.620
Total fertility rate	+0.635

Female lower-secondary completion exhibited a substantial negative relationship with wife-beating acceptance ($r = -.544$). Countries with higher female educational completion therefore tended to report lower levels of acceptance of intimate partner violence. This pattern is consistent with the literature identifying education as one of the more persistent socioeconomic correlates of rejection of wife beating (Paintsil et al., 2023; Tran et al., 2016).

Female wage and salaried employment displayed an even stronger negative correlation ($r = -.586$). In contrast, the female-to-male labor-force participation ratio showed only a weak positive relationship ($r = .112$). The difference is analytically important because it suggests that greater parity in economic participation does not necessarily correspond with lower acceptance of gender-based violence. Rather, the structure of women's employment may be more informative than participation itself.

The development controls showed similarly strong relationships. GDP per capita was negatively correlated with acceptance ($r = -.590$), as was urbanization ($r = -.620$), while fertility was positively correlated ($r = .635$). These patterns indicate that violence-supporting gender norms are embedded within broader socioeconomic conditions and caution against interpreting any single predictor independently of the national development context.

4.3 Regression Models of Cross-National Differences

The baseline regression model examined the independent associations of female educational completion, female wage and salaried employment, and female-to-male labor-force participation with wife-beating acceptance. The model explained approximately 41.3% of the cross-national variance.

Table 2. *Regression Models Predicting Women's Acceptance of Wife Beating*

Panel A. Baseline Model

Predictor	B	p
Female lower-secondary completion	-0.254	.028
Female wage and salaried employment	-0.417	.001
Female-to-male labor-force participation ratio	-0.107	.288

Note. $R^2 = .413$.

Both female educational completion and female wage and salaried employment were statistically significant negative predictors in the baseline model. Holding the other principal predictors constant, a 10-percentage-point increase in female lower-secondary completion was associated with approximately 2.5 percentage points lower wife-beating acceptance. A 10-point increase in the proportion of employed women working as wage or salaried workers corresponded with approximately 4.2 percentage points lower acceptance.

The female-to-male labor-force participation ratio was not statistically significant. Thus, greater female participation relative to male participation did not independently distinguish countries with lower acceptance of wife beating.

When GDP per capita was added to the model, the educational coefficient ceased to be statistically significant, whereas female wage and salaried employment remained significant ($B = -0.325$, $p = .025$). This attenuation indicates that part of the apparent education relationship overlaps with broader national development.

Panel B. Fully Adjusted Model: Reported Significant Coefficients

Predictor	B	p	Standardized β
Female wage and salaried employment	-0.281	.043	approximately -.30
Urban population	-0.461	.005	approximately -.39

Note. $R^2 \approx .577$. The source analysis reports that female education, female-to-male labor-force participation, GDP per capita, fertility, and survey year were not statistically significant in the fully adjusted specification but does not provide all corresponding numerical coefficients.

The fully adjusted model explained approximately 57.7% of the variation in wife-beating acceptance. Female wage and salaried employment remained negatively associated with acceptance ($B = -0.281$, $p = .043$), while urbanization was also independently significant ($B = -0.461$, $p = .005$). Female education, labor-force participation parity, GDP per capita, fertility, and survey year did not attain statistical significance.

These results refine the initial bivariate interpretation. Education is strongly associated with lower acceptance across countries, but much of that relationship overlaps with other dimensions of national development. Female wage and

salaried employment, by contrast, retains an independent negative association even after the broader structural characteristics are taken into account.

The finding is consistent with the conceptual distinction between participation and empowerment developed in the literature. Employment alone may not confer autonomy, especially when work is precarious, informal, unpaid, or performed under highly unequal household conditions (Bourey et al., 2023). Wage and salaried employment may capture a different aspect of women's economic position, although it should still be interpreted as an employment-structure indicator rather than a direct measure of autonomy.

4.4 Reason-Specific Justifications for Wife Beating

The composite outcome conceals possible differences in the social expectations attached to particular forms of perceived marital misconduct. Separate models were therefore estimated for each of the five circumstances used to construct the wife-beating acceptance indicator.

Table 3. *Associations of Female Education and Wage Employment with Specific Justifications for Wife Beating*

Circumstance	Female Education B	p	Female Wage Employment B	p
Wife argues with husband	−0.235	.021	−0.266	.020
Wife burns food	−0.180	.003	−0.119	.046
Wife goes out without informing husband	−0.215	.047	−0.321	.008
Wife neglects children	−0.157	.104	−0.317	.002
Wife refuses sex	−0.276	< .001	−0.206	.019

Female wage and salaried employment was negatively and significantly associated with all five specific justifications. The largest reported negative coefficients appeared for going out without informing the husband and neglecting the children. The consistency across all five scenarios strengthens the evidence that the relationship is not dependent on one particular behavioral justification.

Female education was also negatively associated with all five reasons and reached statistical significance in four cases. The only exception was neglecting the children ($B = -0.157$, $p = .104$). The strongest educational relationship was found for refusing sexual relations ($B = -0.276$, $p < .001$).

The female-to-male labor-force participation ratio was not statistically significant in any of the five reason-specific models. This provides further evidence that the proportion of women participating economically relative to men is insufficient, by itself, to distinguish countries with less permissive attitudes toward marital violence.

The findings are behaviorally meaningful because the five scenarios involve different dimensions of conventional gender expectations. Arguing concerns interpersonal authority; going out without informing the husband concerns mobility and control; refusing sex concerns sexual autonomy; burning food concerns domestic performance; and neglecting children concerns caregiving expectations. The broadly negative relationships observed for education and particularly for wage employment suggest that the structural position of women is associated with rejection of violence across multiple domains of expected marital behavior rather than only a single form of perceived transgression.

4.5 Within-Country Changes in Violence-Accepting Norms

The country fixed-effects analysis produced a substantially different pattern from the cross-sectional models. By absorbing stable country characteristics, the analysis assessed whether changes in female education and economic participation within the same country were associated with changes in wife-beating acceptance.

Table 4. *Country Fixed-Effects Estimates of Within-Country Change in Wife-Beating Acceptance*

Predictor	B	p
Female lower-secondary completion	0.095	.558
Female wage and salaried employment	0.225	.595
Female-to-male labor-force participation ratio	0.145	.596
Survey year	−1.451	< .001

Note. The repeated-observation specification contained 149 country-survey observations from 47 countries.

Neither female educational completion nor either measure of women's economic participation significantly predicted within-country changes in wife-beating acceptance. Education produced $B = 0.095$ ($p = .558$), female wage employment produced $B = 0.225$ ($p = .595$), and female-to-male labor-force participation produced $B = 0.145$ ($p = .596$).

Survey year, however, was strongly negative ($B = -1.451$, $p < .001$). In the fully controlled fixed-effects specification, the temporal coefficient remained negative and statistically significant at approximately $B = -1.326$ ($p = .040$).

The descriptive longitudinal pattern was similarly pronounced. Of the 47 countries contributing repeated observations, 42 recorded lower wife-beating acceptance in their latest observation than in their earliest observation. The mean first-to-last reduction was approximately 14.4 percentage points.

Nevertheless, first-difference analysis again indicated that changes in female education, wage employment, and labor-force participation parity did not independently account for these declines. The passage of time between observations remained important, suggesting that a broader secular process of normative change was occurring.

These results are consistent with emerging international evidence documenting long-term reductions in acceptance of intimate partner violence across many countries while also finding substantial heterogeneity in national trajectories (Bergenfeld et al., 2025; Vartanova et al., 2026). The results therefore caution against attributing normative change directly to a single structural indicator.

4.6 Discussion

The findings reveal a fundamental distinction between cross-national structural association and within-country normative change.

At the cross-national level, countries with higher female educational attainment and a larger proportion of women in wage and salaried employment generally exhibited substantially lower acceptance of wife beating. Urbanization and other indicators of national development were also strongly related to lower acceptance. These patterns are consistent with previous multi-country studies demonstrating that education, wealth, residence, and broader societal conditions differentiate environments in which violence-supporting gender norms are more or less prevalent (Paintsil et al., 2023; Sardinha & Nájera Catalán, 2018; Tran et al., 2016).

The wage-employment finding is particularly noteworthy. Female wage and salaried employment retained statistical significance after adjustment for national development and was negatively associated with all five specific justifications for wife beating. Conversely, female-to-male labor-force participation was not significant in the baseline, fully adjusted, or reason-specific models. The evidence therefore supports a distinction between economic participation and economic position. Merely increasing the proportion of women who participate in the labor market does not necessarily indicate that those women possess secure income, bargaining power, occupational protection, decision-making authority, or autonomy.

This interpretation accords with research demonstrating that women's employment can have heterogeneous consequences depending on the conditions under which work occurs. Bourey et al. (2023) found that employment alone did not necessarily protect women from intimate partner violence across low- and middle-income settings. Likewise, experimental evidence reviewed by Eggers del Campo and Steinert (2022) indicates that substantive economic-empowerment interventions can reduce intimate partner violence overall, but their effectiveness may depend on whether economic resources are accompanied by gender-transformative components and protections against household backlash.

The educational results also require qualification. Higher female secondary completion showed a strong negative bivariate relationship and remained significant in the baseline model, but its independent effect disappeared after broader development characteristics were controlled. Education may therefore form part of a larger configuration of structural modernization rather than operate as an isolated determinant of violence-related norms. This interpretation is consistent with Patwary and Esha (2025), who found that community norms can constrain the relationship between educational attainment and rejection of intimate partner violence.

Most importantly, the fixed-effects models show that the characteristics distinguishing countries from one another are not necessarily the same factors explaining how individual countries change over time. Once stable country characteristics were controlled, changes in education, wage employment, and labor-force participation parity did not significantly predict changes in wife-beating acceptance. Yet acceptance declined in 42 of the 47 repeatedly observed countries.

This pattern suggests that relatively persistent country characteristics may account for a substantial portion of the cross-sectional relationships. Countries with higher education and more formal employment may also have stronger legal protections, more extensive media penetration, different family systems, greater urbanization, stronger civil society institutions, different religious or cultural traditions, or greater exposure to transnational gender-equality norms. Such

characteristics may shape both women's structural opportunities and their attitudes toward violence without being fully captured by the available WDI variables.

The strong temporal decline observed in the fixed-effects analysis is also consistent with recent evidence of a broader international shift in attitudes. Bergenfeld et al. (2025) documented substantial reductions in acceptance of intimate partner violence across 83 countries, while Vartanova et al. (2026) found declining acceptance in the overwhelming majority of countries covered by repeated Demographic and Health Surveys. Both studies nevertheless emphasize that normative change is heterogeneous and cannot be reduced to a single development mechanism.

The present study therefore contributes to behavioral and social analytics by demonstrating why between-country association should not be interpreted automatically as within-country transformation. Education and formalized employment characterize societies in which violence-supporting norms are less prevalent, but the available evidence does not establish that short- or medium-term changes in these indicators independently produce changes in those norms.

A final implication concerns the conceptualization of women's empowerment. The findings do not suggest that education or economic advancement is unimportant. Rather, they indicate that structural resources and normative empowerment should be analytically distinguished. Women may enter education and employment systems while continuing to operate within household and community environments that preserve unequal gender expectations. Sustainable reductions in the normalization of intimate partner violence may therefore require educational and economic advancement to occur alongside changes in household decision-making, institutional protections, community expectations, legal awareness, and the social legitimacy of coercive male authority.

5. Conclusions, Recommendations, and Implications

5.1 Conclusions

This study examined the relationships of female education, women's employment structure, and female-to-male labor-force participation with women's acceptance of wife beating across countries. The findings demonstrate that structural advancement and normative change are related but analytically distinct processes.

At the cross-national level, higher female lower-secondary completion and a greater proportion of women in wage and salaried employment were associated with lower acceptance of wife beating. Female wage and salaried employment emerged as the more consistent economic predictor. Its negative relationship remained significant after adjustment for broader national characteristics and was also observed across all five specific justifications for wife beating.

By contrast, the female-to-male labor-force participation ratio was not significantly associated with wife-beating acceptance in the principal regression models or in the reason-specific analyses. This finding indicates that greater parity in economic participation does not necessarily correspond with more egalitarian gender attitudes. Economic activity alone should therefore not be equated with substantive empowerment.

The educational relationship was also more conditional than the initial cross-national association suggested. Female education exhibited a strong negative bivariate relationship with wife-beating acceptance and remained significant in the baseline model, but its independent association disappeared once broader structural characteristics were controlled. Educational attainment may therefore operate alongside other dimensions of socioeconomic development rather than as an isolated predictor of violence-related attitudes.

Most importantly, the fixed-effects analysis produced a different interpretation from the cross-sectional results. Changes in female education, wage and salaried employment, and labor-force participation parity did not significantly explain within-country changes in wife-beating acceptance. Nevertheless, 42 of the 47 countries with repeated observations recorded lower acceptance in their most recent survey than in their earliest survey, with an average reduction of approximately 14.4 percentage points.

The central conclusion is therefore that countries characterized by higher levels of female education and more formalized female employment tend to exhibit lower acceptance of wife beating, but changes in these structural indicators do not independently account for the substantial normative decline observed within countries over time. Structural empowerment and transformation of gendered violence norms should consequently be treated as connected but distinct dimensions of social change.

5.2 Recommendations

The findings suggest that policies addressing the normalization of intimate partner violence should not rely exclusively on increasing female education or labor-force participation. These structural improvements remain important, but their effects on social attitudes appear to depend on the broader institutional and normative environment.

First, policies promoting women's economic advancement should place greater emphasis on the quality and security of employment rather than on labor-force participation alone. Initiatives that expand access to wage and salaried employment, regular income, occupational protection, and formal labor-market participation may be more relevant to substantive empowerment than programs assessed only through participation rates.

Second, educational policies should be accompanied by direct gender-transformative interventions. Formal schooling may provide important capabilities, but educational attainment alone may not be sufficient where community norms continue to legitimize coercive male authority. Gender equality, legal rights, nonviolent conflict resolution, sexual autonomy, and household decision-making should therefore be integrated into educational and community-based programs.

Third, governments and development institutions should combine economic and educational policies with interventions explicitly designed to change social norms. These may include public information campaigns, community engagement, media-based initiatives, legal-awareness programs, and institutional mechanisms that challenge the acceptability of violence within intimate relationships.

Fourth, policy monitoring should distinguish between female participation in economic activity and more substantive indicators of empowerment. Labor-force participation rates should be interpreted alongside measures of employment quality, income control, occupational security, household decision-making, and access to institutional protections.

Fifth, future cross-national research should incorporate additional indicators capturing legal enforcement, media penetration, civil society activity, household decision-making, gender-role attitudes, and institutional protections. The fixed-effects results indicate that broader social and institutional changes may account for normative transformation more effectively than the selected education and employment indicators alone.

Finally, future research should continue to separate between-country comparisons from within-country change. Cross-sectional relationships remain useful for identifying structural characteristics associated with lower violence acceptance, but they should not be interpreted automatically as evidence of the mechanisms responsible for normative change.

5.3 Implications of the Study

The study has theoretical, methodological, behavioral, and policy implications.

Theoretically, the findings support a multidimensional conception of women's empowerment. Educational attainment, economic participation, employment structure, household autonomy, and normative transformation should not be treated as interchangeable indicators. A woman may be economically active without possessing secure income, decision-making power, or freedom from restrictive gender expectations. The results therefore reinforce the distinction between access to structural resources and the capacity to convert those resources into meaningful autonomy.

Methodologically, the study demonstrates the importance of distinguishing between cross-national association and within-country change. Variables that differentiate countries with lower acceptance of wife beating may not necessarily explain how attitudes change within the same countries over time. The use of both cross-sectional and fixed-effects analyses provides a more cautious basis for interpretation and reduces the risk of attributing normative change to relationships that primarily reflect persistent national differences.

For behavioral and social analytics, the findings show the value of treating attitudes toward wife beating as measurable manifestations of underlying social norms. Such attitudes provide information about the extent to which coercive gender relations remain socially legitimate, even when countries exhibit progress in education, employment, or other conventional development indicators.

From a policy perspective, the findings indicate that improvements in education and economic participation should be complemented by interventions directly addressing the social legitimacy of violence, gender-role expectations, household authority, and women's autonomy. Reducing the acceptance of intimate partner violence is therefore not solely an economic-development objective but also a process of behavioral, institutional, and normative transformation.

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