ORIGINAL RESEARCH ARTICLE

Gender theory and female homicide victimization: A cross-national analysis 2000-2019

DOI: 10.29063/ajrh2025/v29i7.8

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Abstract

This study examines the association between gender inequality and female homicide victimization using cross-national panel datasets from the WHO Mortality Database. While the "Ameliorative Hypothesis" and "Backlash Hypothesis" exhibit strong explanatory power, their contradictory conclusions caution against unidimensional analytical frameworks, underscoring the need for typologizing gender inequality. Through multidimensional analysis of economic income, political status, labor participation, and educational attainment, results reveal that economic gender equality correlates with increased female homicide victimization rates, while political gender equality demonstrates mitigating effects. No significant associations were observed for labor participation and educational attainment dimensions. Social environment indicators also show differential impacts on victimization rates. These findings highlight the multifaceted nature of female homicide victimization determinants, necessitating context-specific legal and policy interventions for women's rights protection. *(Afr J Reprod Health 2025; 29 [7]: 83-93).*

Keywords: Gender inequality; female homicide victimization; violence against women; cross-national

Résumé

Cette étude analyse les liens entre inégalités de genre et taux de victimation par homicide des femmes via des données transnationales de l'OMS. Bien que les hypothèses d'« amélioration » et de « réaction violente » soient pertinentes, leurs contradictions soulignent la complexité des inégalités. Une analyse multidimensionnelle révèle que l'égalité économique entre les sexes corrèle avec une augmentation des homicides, tandis que l'égalité politique réduit ces risques. Aucun lien significatif n'est trouvé pour la participation au travail ou l'éducation. Les indicateurs sociaux montrent des effets variables. Les résultats insistent sur la nécessité d'interventions politiques et juridiques adaptées pour protéger les droits des femmes. *(Afr J Reprod Health 2024; 29 [7]: 83-93).*

Mots-clés: : Inégalités de genre; victimation par homicide; violence contre les femmes; données transnationales

Introduction

Preventing and reducing femicide remains a critical global priority, as it directly impacts women's right to life, fundamental human rights, public health outcomes, and societal well-being. Since the 1993 Declaration on the Elimination of Violence Against Women, United Nations (UN) and World Health Organization (WHO) have successively adopted multiple international instruments aimed at eliminating violence against women and promoting sociocultural transformations toward gender equality. While recent decades have witnessed unprecedented advancements in women's economic empowerment, political representation, labor participation, and educational attainment, global femicide rates continue to rise. A United Nations Office on Drugs and Crime (UNODC) report further corroborates this trend, documenting a global annual increase of 4% in female homicide victimization rates.[1] These developments underscore the persistent necessity and practical significance of eliminating gender-based violence and enhancing protections for women's rights.

Understanding the root causes of female homicide victimization is foundational to establishing preventive mechanisms and ensuring rights-based protections. Feminist scholarship, particularly gender-sensitive theories, offers robust explanatory frameworks for this phenomenon, positing gender inequality as a critical determinant. Two primary hypotheses emerge from this theoretical lens: the ameliorative hypothesis postulates that progress toward gender equality correlates with reduced female homicide victimization rates,[2] while the backlash

hypothesis posits that such societal advancements paradoxically increase women's vulnerability to lethal violence.[3] These divergent perspectives underscore the complex, multidimensional spillover effects of gender inequality, which manifest variably across contexts and regions. Consequently, overgeneralized analyses relying on singular indicators or localized data risk compromising the precision and validity of empirical conclusions. This complexity necessitates a typological approach to studying female homicide victimization, enabling nuanced, context-sensitive interpretations of gender inequality's role in shaping violence against women.

This study seeks to advance gender-sensitive theoretical frameworks by diversifying the dimensional configurations of gender inequality across multiple societal domains, while simultaneously augmenting prior investigations through the integration of multinational panel data from the WHO Mortality Database. Building upon the feminist epistemological consensus that both absolute female status and relative gender equality constitute equally critical predictors of gender-based violence,[4] our analytical model systematically examines four institutional dimensions: economic income, political status, labor participation, and educational attainment. Through this multidimensional lens, we interrogate the heterogeneous effects of gender inequality on female homicide victimization rates, further endeavoring to elucidate the socio-structural mechanisms underlying these differential patterns.

Theory and literature review

Gender sensitive theories

Gender role differentiation and their relative rigidity constitute one of the most prominent manifestations of gender inequality. Eagly's Social Role Theory posits that group stereotypes originate from observations of social roles, asserting that gender stereotypes emerge when perceived gender differences become systematically associated with social roles.[5] Such gender-based stereotypes progressively shape gender consciousness, indirectly determine productive capacities, and ultimately perpetuate gender inequality. This prolonged transformation inevitably expands the scope of gender inequality's societal impacts, particularly evident in phenomena like gender-based violence. Feminist scholars contend that gender-based violence epitomizes a distinct form of violence stemming from systemic gender inequality, with female homicide victimization representing its most extreme culmination. Two competing theoretical frameworks emerge in this discourse: The amelioration hypothesis contends that enhanced gender equality improves women's social status, thereby reducing femicide rates. Conversely, the backlash hypothesis suggests that progress in gender equality may paradoxically escalate femicide rates as some males resort to violence to reclaim perceived lost privileges.[6] Emerging empirical evidence reveals a non-linear relationship between gender equality and femicide rates, demonstrating curvilinear patterns contingent upon regional gender ideologies and societal welfare development levels.[7] This variation underscores the necessity of employing cross-national empirical data to comprehensively examine the complex mechanisms through which gender inequality influences femicide prevalence.

Empirical literature

Current empirical literature demonstrates substantial evidence validating the ameliorative hypothesis and backlash hypothesis. Vieraitis and Morris further demonstrated that educational, economic, and occupational gender equality improves women's access to institutional protections, including restraining orders, women's shelters, and self-defense training programs. These collective findings substantiate that initiatives elevating female social status effectively reduce female homicide victimization rates.[8] Notably, Lui and Fullerton's statewide investigation across 32 Mexican states established a significant inverse relationship between women's educational attainment and female homicide victimization rates.[9] Palma-Solis et al.'s legislative analysis revealed that increased female parliamentary representation substantially lowers female homicide victimization rates, indicating robust negative associations between political gender equality and lethal violence against women.[10] The Backlash Hypothesis has garnered preliminary

empirical support, with studies indicating gender equality's paradoxical association with elevated violence against women and increased female homicide victimization rates.[11] Recent scholarship has further substantiated this counterintuitive relationship. Chon's multidimensional analysis employing five gender equality indices revealed that economic parity specifically demonstrates significant positive correlations with female homicide victimization rates.[12] Beyond economic dimensions, Vieraitis et al.'s longitudinal research identified positive correlations between female labor force participation rates, corporate leadership representation, and female homicide victimization rates.[13]

Emerging research has demonstrated concurrent validation of both Ameliorative Hypothesis and Backlash Hypothesis through contextual analyses. Whaley and Messner's metropolitan-level investigation across U.S. regions revealed diametrically opposed patterns: Southern urban areas exhibited heightened female homicide victimization rates with advancing gender equality, supporting the Backlash Hypothesis, whereas Western, Midwestern, and Northeastern metropolitan regions showed inverse correlations aligning with the Ameliorative Hypothesis.[14] Gu and Zhong's innovative integration of Chinese judicial records with the UN Gender Inequality Index (GII) yielded multidimensional insights: Empowerment-oriented gender inequality demonstrated significant negative correlations with female homicide victimization rates, substantiating the Backlash Hypothesis. Conversely, labor participation gender inequality manifested positive associations with victimization rates, thereby confirming the Ameliorative Hypothesis.[15]

Limitations of existing studies and the current study

Existing studies have accumulated substantial research materials for investigating the impact of gender inequality on female homicide victimization, while still leaving room for further exploration. The predominant reliance on cross-sectional data in existing studies examining female homicide victimization. However, analyses relying solely on cross-sectional data face inherent limitations in capturing temporal dynamics of gender inequality's impact on female homicide victimization rates. To address these methodological challenges, this study employs panel data that can comprehensively track temporal changes and cross-national differences, thereby enhancing the robustness of causal inferences regarding gender inequality's sustained effects on female homicide victimization. Secondly, existing studies have predominantly been confined to single-region analyses, lacking cross-national investigations of female homicide victimization. The current study will also employ cross-national datasets to examine how gender inequality affects female homicide victimization rates. Lastly, prevailing analytical frameworks frequently adopt reductionist approaches to conceptualizing gender inequality. The predominant binary paradigm while providing foundational insights, fails to account for the multidimensional nature of gender stratification. This conceptual oversimplification obstructs precise identification of specific institutional mechanisms through which particular facets of gender inequality modulate female homicide victimization rates. Our study innovates by implementing a typological differentiation framework, dissecting composite gender inequality indices into discrete socioeconomic domains for granular analysis.

This study constructs its hypothesis model based on the ameliorative hypothesis. Contemporary gender studies are undergoing a paradigm shift "from conflict theory to institutionalism."[16] The ameliorative hypothesis aligns with the theoretical approach of Institutional Feminism, effectively interfacing with the United Nations Sustainable Development Goal (SDG 5) monitoring framework to better reflect the relationship between gender inequality and female homicide victimization. In contrast, the backlash hypothesis remains rooted in meso-level social psychological explanations and becomes susceptible to cultural variable interference when addressing cross-national disparities. This manifests specifically in how the localized backlash phenomena emphasized by the Backlash Hypothesis may be diluted by structural trends under the aggregation effects of cross-national panel data. While we acknowledge the academic value of examining backlash phenomena in specific

micro-level contexts, the construction of a hypothesis model based on institutionalist Ameliorative Hypothesis demonstrates superior methodological advantages and policy implications at the transnational macro-analytical level.

Building upon this analytical framework, the present study operationalizes gender inequality through four distinct dimensions: economic income, political representation, labor force participation, and educational attainment. Correspondingly, we propose the following four hypotheses for empirical testing:

Hypothesis 1 (H1): Gender inequality in economic income will exacerbate female homicide victimization rates.

Hypothesis 2 (H2): Gender inequality in political representation will exacerbate female homicide victimization rates.

Hypothesis 3 (H3): Gender inequality in labor force participation will exacerbate female homicide victimization rates.

Hypothesis 4 (H4): Gender inequality in educational attainment will exacerbate female homicide victimization rates

Methods

To rigorously examine the relationship between gender inequality and female homicide victimization through cross-national data, we utilized panel data from the WHO Mortality Database spanning 2000 to 2019. Countries/regions with populations under 1 million were excluded to mitigate random fluctuations in homicide rates caused by small population bases. After data refinement, the study obtained 977 valid samples across 69 nations.

Dependent variables

The dependent variable in this study is the female homicide victimization rates across countries and regions from the WHO Mortality Database.[17] WHO Mortality Database serves as the authoritative global source for mortality statistics, utilizing the medically standardized International Classification of Diseases (ICD) to systematically categorize causes of death with gender-specific homicide case breakdowns. Longitudinal analysis of this database enables tracking temporal trends in female homicide victimization rates across diverse geographical contexts, providing empirical evidence for understanding evolving gender inequality patterns. This variable selection considers methodological robustness for cross-national comparative analysis, ensuring both explanatory power and policy relevance.

Gender inequality variables

To examine the multidimensional impacts of gender inequality across different domains on female homicide victimization rates, we developed four core independent variables based on the Human Development Index framework published by the United Nations Development Programme (UNDP).[18] These indicators systematically measure gender disparities in economic income, political representation, labor force participation, and educational attainment. Regarding economic inequality, we calculated the gender income ratio using UNDP's per capita gross national income statistics for males and females. This ratio reflects the relative economic standing between genders, where higher values indicate lower economic gender inequality, while lower values signify more pronounced disparities. For political inequality, we operationalized the concept through the proportion of female parliamentary representatives derived from UNDP data, with higher percentages corresponding to reduced gender inequality in political representation. In the domain of labor market participation, we computed the gender parity index using UNDP's labor force participation rates for both sexes. A ratio approaching unity suggests greater gender equity in workforce engagement, whereas deviations from parity reveal systematic imbalances. Finally, educational inequality was measured through the comparative analysis of average years of schooling completed by males and females aged 25 and above, as documented in UNDP records. Higher ratios in this metric denote diminished gender disparities in educational attainment.

Control variables

Existing empirical evidence indicates that socioenvironmental factors beyond gender inequality, including poverty levels, demographic

composition, national development status, and political stability, significantly influence female homicide victimization.[19] To account for these confounding elements, we incorporated the following control variables in our analytical framework:

Scholarly consensus confirms that both absolute and relative poverty significantly influence homicide rates, necessitating precise poverty measurement.[20] Leveraging the well-documented link between infant mortality and poverty severity evidenced in comparative studies,[21] we employed World Bank data on Infant Mortality Rates (IMR) as a proxy measure for poverty intensity. Demographic controls were instituted considering the predominant male perpetration of homicides against women. Empirical studies identify 20 years as the threshold age for male homicide offending,[22] prompting our inclusion of the proportion of males aged 15-29 within national populations, utilizing demographic data from the United Nations Population Division. Urbanization rate serves not only as a critical indicator of national development levels but also demonstrates a positive correlation with the rule of law within a nation.[23] Therefore, drawing from World Bank data, we incorporate urbanization rate as a control variable in this study. Political stability may also correlate with female homicide victimization rates. We measure political stability using the Worldwide Governance Indicators (WGI) published by the World Bank. Additionally, this research controls for male per capita alcohol consumption based on Global Health Observatory (GHO) data from the World Health Organization, along with female population proportion, ethnic minority percentage, and Gini coefficient. Descriptive statistics for all variables are presented in Appendix B.

Since the data in this study consist of panel data from 69 countries, to better analyze the data, we employ mixed-level modeling. This is a two-level mixed model with random intercepts, where countries are treated as level-2 units (random effects) and time is treated as level-1 units (fixed effects). After combining fixed effects and random effects, the complete formula of this mixed-level modeling can be expressed as:

$$FemaleHomicideRate_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 Control_{1it} + \cdots + \beta_{12} Control_{8it} + \gamma_t + u_i + \epsilon_{it}$$

Herein, *FemaleHomicideRate* denotes the dependent variable in this study. X_1 - X_4 correspond to the four gender inequality variables, while $Control_1$ - $Control_8$ represent the control variables. Additionally, γ_t indicates that the model incorporates year-fixed effects (Year) to mitigate the impact of temporal factors on the statistical conclusions. The term u_i signifies the random intercept at the country level, accounting for the variations in the dependent variable across different groups in the panel data, with ϵ_{it} representing the residual term. All statistical analyses were conducted using SPSS 27

Results

Descriptive statistics

Table 1 presents the descriptive statistics of all variables. The dataset encompasses 977 observations across 69 countries, with female homicide victimization rates per 100,000 women ranging from 0.1 to 12.18. The independent variables measuring gender inequality in economic income, political participation, and labor force engagement exhibit considerable variation. Control variables including poverty levels, political stability, and ethnic minority proportions also display substantial cross-national differences, particularly in regional comparisons that underscore the necessity of transnational investigation.

Figure 1 presents regional variations in female homicide victimization rates from 2000 to 2019, encompassing global averages and data from five regions: Africa, Americas, Asia, Europe, and Oceania. Globally, the female homicide rate demonstrated a substantial decline from 2.099 in 2000 to 0.907 in 2019, representing a 56.8% reduction, with only a minor rebound observed in 2009. While all regions exhibited downward trajectories, significant interregional disparities emerged in absolute values. Notably, Asia, Europe, and Oceania maintained rates persistently below the global average throughout the study period.

Table 1: Descriptive Statistics

Variables	N	Min	Max	M	SD
Dependent variable					
Female homicide victimization rate	977	0.10	12.18	1.75	2.07
Independent variable					
Female-to-male income ratio	977	0.52	0.84	0.64	0.37
Female seats in parliament (%)	977	0	48.11	21.79	8.49
Female-to-male labor participation ratio	977	0.31	1.07	0.65	0.43
Female-to-male education ratio	977	0.65	1.15	0.88	0.18
Control variables					
IMR (‰)	977	2.07	54.23	9.75	9.03
Male population (%)	977	8.12	20.89	11.38	1.97
Female population (%)	977	7.43	19.75	45.81	1.13
Urban population (%)	977	18	88	68	12
WGI	977	-2.39	1.73	0.22	0.78
Male per capita alcohol consumption	977	0.25	30.14	14.72	5.99
Minority (%)	977	1.51	81.66	25.69	18.73
Gini coefficient	977	0.24	0.63	0.38	0.08

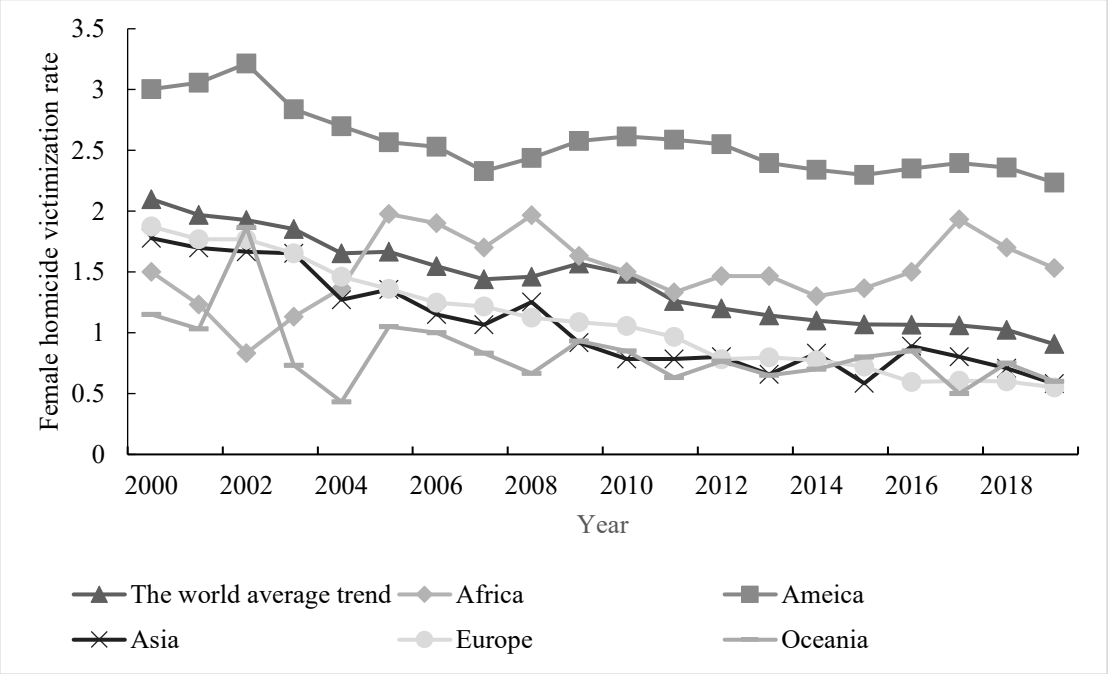

Figure 1: Trends in female homicide victimization rate, 2000-2019

Table 2: Regression Results for Female Homicide Rate (Log Transformed), n = 977

Variables	1	2	3	4	5	Robustness Tests
Female-to-male income ratio	0.092*** (0.277)				1.225*** (0.234)	1.247*** (0.236)
Female seats in parliament (%)		-0.556** (0.324)			-0.592** (0.352)	-0.595** (0.344)
Female-to-male labor participation ratio			0.109 (0.229)		0.567 (0.354)	0.521 (0.323)
				0.227	0.856	0.783

Female-to-male education ratio				(0.244)	(0.523)	(0.634)
IMR (‰)	0.332***	0.331***	0.326***	0.335***	0.429***	0.417***
Male population (%)	(0.227)	(0.224)	(0.228)	(0.229)	(0.379)	(0.373)
Female population (%)	7.654***	7.644***	7.556***	7.528***	7.633***	7.634***
Urban population (%)	(1.043)	(1.042)	(1.044)	(1.044)	(1.155)	(1.534)
WGI	0.009	0.010	0.009	0.012	0.008	0.007
Male per capita alcohol consumption	(0.024)	(0.023)	(0.023)	(0.024)	(0.024)	(0.023)
Minority (%)	0.954***	0.952***	0.953***	0.953***	1.087***	1.088***
Gin coefficient	(0.313)	(0.311)	(0.312)	(0.312)	(0.332)	(0.331)
Fixed (Year)	-0.102**	-0.103**	-0.103**	-0.104**	-0.099**	-0.098**
Adjusted R^2	(0.025)	(0.028)	(0.027)	(0.026)	(0.025)	(0.025)
	0.005	0.006	0.007	0.007	0.006	0.009
	(0.131)	(0.132)	(0.131)	(0.133)	(0.132)	(0.133)
	0.085	0.086	0.086	0.088	0.085	0.088
	(0.128)	(0.127)	(0.127)	(0.128)	(0.126)	(0.161)
	0.016**	0.016**	0.015**	0.015**	0.014**	0.016**
	(0.345)	(0.346)	(0.345)	(0.344)	(0.345)	(0.345)
	Yes	Yes	Yes	Yes	Yes	Yes
	0.520	0.510	0.520	0.520	0.540	0.540

Note: The Dependent variable is Female homicide victimization rate.
*p<0.05, **p<0.01, ***p<0.001.

Appendix A: Selected country list

Region	Count	Countries (Alphabetical Order)
Africa	3	Egypt, Mauritius, South Africa
East Asia	3	Japan, Mongolia, South Korea
Eastern Europe	13	Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Hungary, Lithuania, Poland, Romania, Russia, Serbia, Slovakia, Ukraine
North America	3	Canada, Mexico, United States
Oceania	3	Australia, Fiji, New Zealand
South America	9	Argentina, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, Venezuela
Southeast Asia	6	Brunei, Malaysia, Philippines, Singapore, Sri Lanka, Thailand
Western Europe	17	Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom
Central & West Asia	12	Georgia, Iran, Iraq, Israel, Jordan, Kazakhstan, Kuwait, Qatar, Saudi Arabia, Syria, Turkey, United Arab Emirates, Uzbekistan

Notes

A.1. Region Definitions:

A.1.1 North America: geographically referring to North America (including Mexico).

A.1.2 Central and Western Asia: Includes Middle Eastern and Central Asian countries.

A.2. Population Criteria: All countries have a population ≥1 million (e.g., excluded small nations like Suriname and Maldives).

A.3. Data Availability: The selected countries all provide complete and public data in the WHO mortality database

Appendix B: Variable description

Variables	Description	Information sources
Dependent variable		
Female homicide victimization rate	Female homicide victimization rate per 100,000 population	WHO
Independent variable		
Female-to-male. income ratio	Female income per capita is divided by male income per capita	UNDP
Female seats in parliament (%)	The percentage of females in the national parliament	UNDP
Female-to-male labor participation ratio	Female labor participation ratio is divided by male labor participation ratio	UNDP
Female-to-male education ratio	Female education index is divided by male education index	UNDP
Control variables		
IMR	Infant mortality rate, number of infants dying before reaching one year of age, per 1,000 live births in a given year	WB
Male population	The percentage of male population, age 15-19	UNPD
Female population	The percentage of female population, age 15-29	UNPD
Urban population	Urban population refers to people living in urban areas as defined by national statistical offices	WB
WGI	Worldwide governance indicators, indicator is scored on a scale from -2.5 (weakest) to +2.5 (strongest)	WB
Male per capita alcohol consumption	Average pure alcohol consumption per male aged 15 years and older (litres per year)	WHO
Minority (%)		
Gini coefficient	The percentage of an ethnic minority in a country	UNPD
	Household income inequality ranging from 0-100	UNDP

Africa displayed slightly elevated levels with marked fluctuations, ranging from 0.833 (2003) to 1.933 (2017). In contrast, the Americas recorded the most severe situation, sustaining rates substantially exceeding global norms. Despite an overall decreasing trend, this region exhibited the smallest reduction magnitude and the highest regional average (2.569).

Regression analysis

Table 2 presents the regression analysis results. The first four groups of regression models individually examine the impact of the four gender-inequality independent variables designed in this study on female homicide victimization rates. In the fifth model group, we simultaneously incorporate these four independent variables to test the validity of the four hypotheses proposed in this study. Each model group accounts for both fixed effects (Time) and random effects (Countries) in the mixed-level modeling framework. Data analysis was conducted using SPSS 27.

Our phased analytical framework reveals differentiated impacts across gender inequality dimensions. The first four models demonstrate that diminishing economic inequality corresponds to elevated female victimization rates, while reduced political disparity associates with decreased rates. Labor participation and educational equality exhibits no measurable association. The fifth model confirms these core relationships persist through multivariate adjustment. Notably, the paradoxical elevation of victimization accompanying economic parity substantiates the Backlash hypothesis, thereby rejecting Hypothesis 1. Conversely, political empowerment's protective effect validates the Ameliorative hypothesis through demonstrated

risk reduction mechanisms, confirming Hypothesis 2. Labor and education dimensions, showing attenuated effects in integrated modeling, suggest these factors operate through secondary pathways rather than direct causal relationships, nullify Hypothesis 3 and 4. Control variables also provide strong explanatory power for female homicide victimization. Infant mortality rate, male population proportion, and urbanization rate were found to significantly increase victimization rates, whereas enhanced political stability exhibited a mitigating effect.

To verify the robustness of our findings, we conducted sensitivity analyses by trimming the top and bottom 10% of samples. Average Variance Inflation Factor (VIF) values remained below 2.1, indicating no severe multicollinearity. Breusch-Pagan tests yielded p-values of 1.00 across all models, confirming homoscedasticity. Durbin-Watson statistics between 1.85 and 2.13 suggested no autocorrelation issues. Collectively, these diagnostic tests affirm the reliability and stability of our statistical conclusions.

Discussion

This study analyzes the impact of gender inequality across four dimensions on female homicide rates using WHO mortality data from 2000 to 2019. Despite regional and temporal variations global female homicide rates have declined overall linked to socio-environmental shifts and gender equality policies. The 2009 rebound likely reflects heightened poverty and political instability during the global financial crisis while the 2015-2019 decline may reflect SDG 5's impact on reducing gender-based violence. These findings contrast with UNODC reports due to methodological differences WHO's health-system data with ICD-coded causes of death provide gender-disaggregated homicide statistics whereas UNODC's police-reported data often lack such granularity. Additionally, WHO long-term trend analysis shows a two-decade decline whereas UNODC focuses on recent short-term fluctuations driven by factors like the pandemic or economic instability.

Our findings reveal that gender inequality manifests substantively different effects across distinct empowerment domains. Enhanced gender equality in economic income demonstrates a counterintuitive positive association with female homicide victimization rates, conversely, progress in political status equality shows a significant negative correlation with victimization rates. Gender parity in labor participation and educational attainment failed to demonstrate statistically significant associations.

While gender equality in economic income enhances women's private rights, it simultaneously elevates the probability of intergender conflicts. Research on domestic violence similarly reveals that income parity between spouses correlates with increased probabilities of husband-perpetrated abuse.[24] Violence, including homicide, frequently emerges from resistance. During historical periods of severe gender inequality, women's limited access to economic resources and opportunities generally led to conflict resolution through avoidance or compromise rather than resistance. However, with advancing economic parity, women have gained enhanced financial capacity and autonomous status, expanding their options regarding marital continuity and emboldening them to confront domestic conflicts. When masculinity faces challenges, retreat or conciliatory approaches are frequently perceived as weakness, making violence the predominant means of asserting masculine identity.[25] Sociological studies further indicate that egalitarian relationships are more prone to conflict than hierarchical ones, with escalating conflicts potentially increasing female homicide victimization rates.[26] Gender equality in political status substantiates the Ameliorative Hypothesis, which likely stems from the distinctive nature of political power as a form of public authority.[27] Gender parity in political status transforms social power distribution through structural empowerment, thereby undermining the institutional foundations that perpetuate traditional gender-based violence. When women attain greater decision-making authority in legislative, judicial, and administrative domains, they can promote more effective legal and policy protections for women's rights. As women's influence expands in the public sphere, social moral condemnation and legal regulation of gender-based violence intensify concurrently, thereby mitigating female homicide

victimization rates. This underscores that merely addressing economic gender disparities is insufficient to prevent violence against women.

Our analysis reveals significant impacts from specific control variables on female homicide victimization rates. As a proxy for poverty levels, IMR demonstrates a statistically significant positive correlation with female homicide victimization rates, aligning consistently with existing scholarship on poverty-crime relationships where poverty serves as a catalyst for criminal behavior.[28] At the macro level, heightened poverty correlates with resource scarcity and intensified survival competition, thereby increasing the likelihood of conflict emergence. This framework also elucidates the correlations between WGI/Gini coefficient and female homicide victimization rates, as political instability and income inequality ultimately contribute to the failure of social governance, consequently fostering criminal proliferation. As demonstrated in the temporal analysis of Figure 1, the moderate reversal in female homicide rates observed in 2009 may reflect the cascading effects of the 2008 global financial crisis. At the micro level, poverty may cultivate a violent subculture that normalizes conflict resolution through aggression.[29] For males in higher social strata, achievements and status may compensate for perceived losses resulting from gender equality. Conversely, males in disadvantaged socioeconomic positions often lack nonviolent, civilized means to demonstrate masculinity, rendering violence a direct and straightforward behavioral alternative, suggesting that poverty-induced violent subcultures represent intersectional outcomes of class divisions and gender dynamics. Thus, poverty's influence on female homicide victimization operates through multifaceted pathways.

Conclusion

This study inevitably possesses certain limitations. Primarily, the temporal lag in panel data reported to the WHO mortality database by various nations constrained our analysis. Although weighted imputation was applied to address missing values across countries and regions for specific years, complete restoration of data accuracy remains unattainable. Additionally, while our research design incorporated gender inequality indicators across four dimensions, it proved insufficient in conducting granular examinations of individual metrics, potentially overlooking nuanced questions and discoveries worthy of scholarly exploration.

Despite its limitations, this study offers a novel perspective on female homicide victimization. Data from 2000-2019 reveal a declining trend in female homicide victimization rates amid global gender equality policies, with only minor fluctuations in select years. Analysis of gender inequality indicators shows contrasting effects: economic inequality exacerbates risks while political inequality reduces them. Socio-environmental factors demonstrate strong explanatory power—poverty levels and income inequality heighten victimization risks, whereas political stability mitigates them

Conflict of interest

None

Funding

Key Project of Postgraduate Research & Practice Innovation Program of Jiangsu Province: Empirical Study on Judicial Efficiency of Specialized Courts (KYCX24_0347).

References

1. United Nations Office on Drugs and Crime. Global Study on homicide. UNODC. 2019.
2. Ellis L and Beattie C. The feminist explanation for rape: An empirical test. *Journal of Sex Research*, 1983: 19(1), 74-93.
3. Russell DEH. The politics of rape: The victim's perspective. New York: Stein and Day, 1975.
4. Eisenstein Z. Developing a theory of capitalist patriarchy and socialist feminism. *Capitalist patriarchy and the case for socialist feminism,* 1979: 5-40.
5. Eagly AH. Sex differences in social behavior: A social-role interpretation. Psychology Press, 2013.
6. Williams JE and Holmes KA. The second assault: Rape and public attitudes. Westport, CT: Greenwood Press, 1981.
7. Whaley RB, Messner SF and Veysey BM. The relationship between gender equality and rates of inter-and intra-sexual lethal violence: An exploration of functional form. *Justice Quarterly*, 2013: 30(4), 732-754.
8. Vieraitis LM, Britto S and Morris RG. Assessing the impact of changes in gender equality on female homicide victimization: 1980-2000. *Crime & Delinquency*, 2015: 61(3), 428-453.

9. Liu Y and Fullerton Jr TM. Evidence from Mexico on social status and violence against women. *Applied Economics*, 2015: 47(40), 4260-4274.
10. Palma-Solis M, Vives-Cases C and Álvarez-Dardet C. Gender progress and government expenditure as determinants of femicide. *Annals of epidemiology*, 2008: 18(4), 322-329.
11. Avame EF. Females' labor force participation and intimate femicide: An empirical assessment of the backlash hypothesis. *Violence and Victims*, 1999: 14(3).
12. Chon DS and Clifford JE. Cross-national examination of the relationship between gender equality and female homicide and rape victimization. *Violence against women*, 2021: 27(10), 1796-1819.
13. Vieraitis LM and Williams MR. Assessing the impact of gender inequality on female homicide victimization across US cities: A racially disaggregated analysis. *Violence Against Women*, 2002: 8(1), 35-63.
14. Whaley RB and Messner SF. Gender equality and gendered homicides. *Homicide Studies*, 2002: 6(3), 188-210.
15. Gu GY and Zhong H. The Relationship Between Gender Inequality and Female-Victim Intimate Partner Homicide in China: Amelioration, Backlash or Both? *Justice Quarterly*, 2024: 1-26.
16. Roberts C and Connell R. Feminist theory and the global South. *Feminist Theory*, 2016: 17(2), 135-140.
17. World Health Organization, WHO Mortality Database, WHO, 9 January, 2025, https://platform.who.int/mortality.
18. United Nations Development Programme, Human Development Data, UNDP, 10 January, 2025, https://hdr.undp.org/data-center/documentation-and-downloads.
19. Nivette AE. Cross-national predictors of crime: A meta-analysis. *Homicide Studies*, 2011: 15(2), 103-131.
20. Nadanovsky P and Cunha-Cruz J. The relative contribution of income inequality and imprisonment to thevariation in homicide rates among developed (OECD), South and Central American countries. *Social Science & Medicine*, 2009: 69(9), 1343-1350.
21. Pridemore WA. A methodological addition to the cross-national empirical literature on social structure and homicide: A first test of the poverty-homicide thesis. *Criminology*, 2008: 46(1), 133-154.
22. Blumstein A. Some trends in homicide and its age-crime curves. *The handbook of homicide*, 2017: 44-53.
23. Dima B, Barna F and Nachescu ML. Does rule of law support the capital market? *Economic research-Ekonomska istraživanja*, 2018: 31(1), 461-479.
24. Anderson KL. Gender, status, and domestic violence: An integration of feminist and family violence approaches. *Domestic violence.* Routledge, 2017: 263-277.
25. Miller J and Mullins CW. The status of feminist theories in criminology. *Taking stock*, 2017: 217-249.
26. Stöckl H, Devries K, Rotstein A, Abrahams N, Campbell J, Watts C, and Moreno CG. The global prevalence of intimate partner homicide: a systematic review. *The Lancet*, 2013: 382(9895), 859-865.
27. Bourdieu P, Wacquant LJD and Farage S. Rethinking the state: Genesis and structure of the bureaucratic field. *Sociological theory*, 1994: 12, 1-1.
28. PPare PP and Felson R. Income inequality, poverty and crime across nations. *The British journal of sociology*, 2014: 65(3), 434-458.
29. Lee S. Poverty and violence. *Social Theory and Practice*, 1996: 22(1), 67-82