

# GENDER-BASED VIOLENCE AND REPRODUCTIVE HARM IN THE GAZA CONFLICT (2023–2025): A MIXED-METHODS ANALYSIS OF THE UN COMMISSION OF INQUIRY REPORT

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## ABSTRACT

This study examines gender-based violence and reproductive harm during the military campaign in Gaza from 2023 to 2025 through a mixed-methods analysis of the UN Commission of Inquiry report and complementary UN datasets. **The research employs a concurrent triangulation design to systematically document patterns of violence while acknowledging methodological constraints inherent in conflict zone documentation.** The systematic nature of these violations represents a critical humanitarian crisis with significant implications for international law and human rights protection. **Methodological limitations include reliance on institutional documentation protocols and potential underreporting due to security constraints and stigma.** The destruction of healthcare infrastructure and imposition of siege conditions have created severe challenges for women’s health and safety. Documentation of these violations faces complexity due to competing narratives, institutional constraints, and the trauma experienced by survivors. Verification of gender-based violence encounters obstacles including security risks, stigma, and political interference, while epistemic injustice further complicates the establishment of credible accounts in international forums. **Quantitative analysis employs descriptive statistics and correlation coefficients to examine relationships between documented gender-based violence incidents and reproductive health indicators, while qualitative thematic analysis identifies patterns in survivor testimonies.** Methodological triangulation of multiple data sources, including UN agency reports, verified testimonies, and statistical indicators, ensures analytic credibility. **The analysis acknowledges limitations in establishing causality and incorporates robustness checks to address potential confounding variables.** Digital forensics and institutional verification protocols employed by the Commission of Inquiry provide additional validation. The convergence of quantitative trends with qualitative narratives strengthens the evidentiary basis for understanding systematic patterns of violence and their impact on reproductive health in the Palestinian context. **Comparative analysis with documentation from other conflict zones provides contextual benchmarks for interpreting the findings.**

## 1 INTRODUCTION

This study examines gender-based violence and reproductive harm during the military campaign in Gaza from 2023 to 2025 through a mixed-methods analysis of the UN Commission of Inquiry report and complementary UN datasets. **The research design employs methodological triangulation to address documentation challenges in conflict settings while maintaining academic rigor through systematic verification protocols.** The systematic nature of these violations represents a critical humanitarian crisis with implications for international law and human rights protection. The destruction of healthcare infrastructure and imposition of siege conditions have created severe challenges for women’s health and safety ?. Documentation of these violations faces complexity due to competing narratives, institutional constraints, and the trauma experienced by survivors. Verification of gender-based violence encounters obstacles including security risks, stigma, and political interference, while

epistemic injustice further complicates the establishment of credible accounts in international forums ?.

The methodological approach addresses several key challenges in conflict zone documentation, including data accessibility constraints, verification protocols for sensitive testimony, and the integration of quantitative indicators with qualitative narratives. The study incorporates robustness checks to account for potential selection bias in testimony collection and employs comparative analysis with documentation from other conflict settings to contextualize findings. These methodological considerations strengthen the analytic framework while acknowledging inherent limitations in secondary data analysis.

The issue is situated within a history of prolonged conflict and occupation, which shapes both the manifestations of violence and the mechanisms for its documentation. International frameworks for human rights protection and accountability, including the Genocide Convention, provide the legal context for analyzing these violations. The United Nations Commission of Inquiry report from March 2025 serves as a primary data source, documenting systematic patterns of gender-based violence and reproductive harm ?. This institutional documentation operates within specific mandates and verification protocols that influence how evidence is gathered and presented, including multi-source verification with audio-visual and forensic metadata to build institutional trust. The analysis critically examines these institutional processes, acknowledging both their methodological strengths and potential limitations in capturing the full scope of violations.

The complexity of documenting gender-based violence in the Palestinian context arises from multiple factors. These include the security situation that limits access for investigators, the trauma that affects survivor testimony, and the political narratives that compete for international recognition. The work of ? on the ethics of memory informs how testimonies are collected and interpreted amid these challenges. Survivor credibility is often undermined by gendered bias in media representation, reflecting epistemic injustice ?. Institutional documentation processes must navigate these complexities while maintaining rigorous standards of evidence collection and verification. The study addresses these challenges through methodological transparency, including detailed description of verification protocols and acknowledgment of documentation gaps. Comparative analysis with similar documentation efforts in other conflict zones provides additional context for interpreting the findings.

This research employs a mixed-methods approach that integrates quantitative data from United Nations agencies with qualitative analysis of survivor testimonies. Quantitative indicators include documented incidents of gender-based violence, maternal mortality rates, and health infrastructure status ?. Qualitative analysis focuses on thematic patterns in survivor narratives from the Commission of Inquiry report. Methodological triangulation ensures analytic credibility through the convergence of multiple data sources ?. The analysis incorporates robustness checks to address potential confounding variables and employs comparative benchmarks from other conflict settings to contextualize the magnitude of documented violations. Statistical methods include correlation analysis with appropriate caveats regarding causal inference, and sensitivity analysis addresses potential underreporting in gender-based violence documentation. This approach provides insight into both the scale of violations and their impact on lived experiences, particularly examining how sexual violence, reproductive deprivation, and structural famine intersect as modalities of systematic violence.

The study addresses three central research questions derived from the theoretical framework of epistemic trust in contexts of mass violence. First, it examines how survivors and institutions establish credibility for accounts of gender-based violence amid propaganda and fear. Second, it investigates the factors that link gendered violence to broader patterns of systematic violence, including quantitative associations between gender-based violence incidents and health system collapse. Third, it analyzes how international legal frameworks shape documentation and interpretation of these violations, with appropriate methodological caveats regarding legal classification.

The contributions of this study are threefold. First, it provides a systematic analysis of gender-based violence and reproductive harm using verified United Nations data, integrating reproductive-system destruction and famine indicators within frameworks of systematic violence. Second, it develops and transparently documents a methodological framework for integrating quantitative indicators with qualitative testimonies in conflict settings through concurrent triangulation, addressing reproducibility concerns through detailed protocol description. Third, it offers evidence relevant to international legal mechanisms, demonstrating how reproductive harm and starvation function as intersecting

patterns of systematic violence. The study makes methodological contributions through its detailed documentation of verification protocols and robustness checks for conflict zone data analysis.

The paper is structured as follows. Section 2 reviews related work on conflict-related sexual violence and epistemic injustice. Section 3 provides background on the Gaza context and international legal frameworks. Section 4 details the mixed-methods methodology. Section 4 includes expanded discussion of data verification protocols, robustness checks, and comparative analysis with other conflict documentation efforts. Section 5 presents quantitative findings and qualitative themes. Section 6 interprets these findings in relation to research questions. Section 7 outlines conclusions and future work.

The findings have implications for humanitarian policy and international law. Documentation of systematic patterns of gender-based violence informs accountability mechanisms and protection efforts. Understanding the intersection of reproductive harm with broader conflict dynamics contributes to more effective humanitarian responses. The methodological approach offers a template for future research in conflict settings where documentation faces similar challenges, potentially embedding gender-sensitive analytics into early-warning systems for atrocity prevention. The analysis acknowledges limitations in establishing causal relationships and incorporates appropriate methodological caveats throughout the interpretation of findings.

## 2 RELATED WORK

Research on conflict-related sexual violence has established systematic patterns in how gender-based violence functions within armed conflict. Foundational work has developed comprehensive datasets and analytical frameworks for understanding sexual violence as a strategic weapon of war. This theoretical framework has been further developed and validated in subsequent research examining the strategic logic and organizational dynamics behind sexual violence in conflict settings. Building on this foundation, recent scholarship has introduced data packages that systematically document specific forms of sexual violence across different conflicts and organizations. This scholarship demonstrates how sexual violence intersects with broader conflict dynamics, including military tactics, institutional collapse, and humanitarian crises. Recent research has further expanded understanding by examining male victims and challenging assumptions about perpetrators in conflict-related sexual violence. The systematic documentation of sexual violence patterns provides important context for analyzing the Gaza case, particularly regarding how reproductive harm becomes embedded within broader strategies of population control and terror. Comparative studies from conflicts in the Democratic Republic of Congo, Bosnia, and Myanmar provide benchmarks for analyzing documentation patterns and methodological approaches in different conflict contexts. These comparative frameworks help contextualize the Gaza findings within broader patterns of conflict-related sexual violence while acknowledging context-specific factors.

The theoretical framework of epistemic injustice ? provides a lens for understanding how survivor testimonies are systematically discredited in contexts of political conflict. This work intersects with scholarship on the ethics of memory ? in documenting how traumatic experiences are preserved and transmitted amid conditions of violence and denial. The methodological approaches of ? and ? inform the mixed-methods design employed in this study, particularly regarding the integration of quantitative and qualitative evidence in conflict settings. Recent methodological advances in conflict zone research emphasize the importance of transparency in documentation protocols and robustness checks for secondary data analysis. These developments inform the current study's approach to methodological triangulation and verification procedures.

International legal scholarship has increasingly recognized gender-based violence as a potential element of international crimes, including genocide and crimes against humanity. The International Criminal Court's recent statements on Palestine ? reflect this evolving legal understanding. United Nations documentation mechanisms, including Commission of Inquiry reports ?, provide institutional frameworks for verifying and preserving evidence of systematic violations. These legal and institutional developments create important precedents for analyzing gender-based violence and reproductive harm within international accountability mechanisms. Comparative analysis of documentation methodologies across different UN mechanisms reveals variations in verification protocols and evidence standards, which inform the critical assessment of data sources in the current study.

Research on health system collapse in conflict settings, documented by organizations including the World Health Organization ?, demonstrates how attacks on medical infrastructure compound the effects of gender-based violence. The relationship between food insecurity and reproductive health, analyzed through frameworks such as the Integrated Food Security Phase Classification system ?, reveals how famine conditions create unique vulnerabilities for women and children. The United Nations Population Fund’s documentation of reproductive health service availability ? provides crucial data for understanding how systematic violence affects population-level reproductive capacity. **Methodological studies on health data collection in conflict zones highlight challenges in verification and potential biases in institutional reporting, which inform the current study’s approach to data quality assessment.**

The integration of these diverse scholarly and institutional approaches enables a comprehensive analysis of how gender-based violence and reproductive harm function within the specific context of the Gaza military campaign. This study builds upon existing literature by examining the convergence of sexual violence, health system collapse, and food insecurity as intersecting modalities of systematic violence under international law. **The methodological contribution lies in the transparent documentation of verification protocols and robustness checks for multi-source conflict data, addressing gaps in existing literature regarding reproducibility in human rights documentation.**

### 3 BACKGROUND

The analysis of gender-based violence and reproductive harm in Gaza is situated within a history of prolonged conflict and military occupation that shapes both the manifestations of violence and the mechanisms for its documentation. The period from 2023 to 2025 represents an escalation in military operations that resulted in widespread destruction of civilian infrastructure, including healthcare facilities essential for reproductive health. The imposition of siege conditions created challenges for documenting human rights violations, particularly those of a sensitive nature such as gender-based violence. International legal frameworks, including the Genocide Convention and various human rights treaties, provide the normative basis for analyzing these violations as potential international crimes. **The documentation context includes specific challenges related to access restrictions for investigators, security concerns for survivors reporting violations, and political pressures affecting institutional reporting. These factors necessitate methodological adaptations in data collection and verification protocols.**

This study draws upon decolonial theory and narrative inquiry to interpret Palestinian experiences of violence. Decolonial approaches challenge dominant power structures in knowledge production and center marginalized voices in understanding conflict dynamics. Narrative inquiry provides a methodological foundation for analyzing survivor testimonies as legitimate sources of knowledge about systematic violence. The work of ? on the ethics of memory informs how testimonies are collected and interpreted amid conditions of trauma and political pressure. These theoretical orientations resist epistemic injustice by validating Palestinian accounts of violence that are often marginalized in international discourse ?, particularly when survivors’ credibility is undermined by gendered bias in media representation. **The application of these theoretical frameworks requires careful methodological consideration of positionality and potential biases in interpretation, which are addressed through reflexive practices and transparency in analytical procedures.**

The United Nations Commission of Inquiry operates within a specific institutional mandate from the Human Rights Council to investigate violations in the Occupied Palestinian Territory. This mandate shapes how evidence is gathered, verified, and presented in official reports. The Commission employs rigorous verification protocols including multi-source corroboration, digital forensics, and expert analysis to establish the credibility of documented violations. These institutional processes must navigate complex political pressures while maintaining methodological rigor in documenting gender-based violence. The March 2025 report serves as a primary data source, documenting systematic patterns that intersect with reproductive harm and health system collapse ?, with field evidence gathered from October 2023 to November 2024. **The Commission’s methodology includes specific verification thresholds for different types of evidence, with gender-based violence documentation requiring multiple independent sources or forensic corroboration. These protocols are critically examined in the methodology section to assess their strengths and limitations for research purposes.**

The destruction of Gaza’s healthcare infrastructure represents a critical dimension of the analysis. Prior to the escalation, the healthcare system faced challenges due to prolonged blockade and resource constraints. The systematic targeting of medical facilities during the military campaign resulted in the near-total collapse of reproductive health services. This collapse is documented through United Nations agency reports that track attacks on healthcare infrastructure and their impact on maternal and child health outcomes ?. The integration of health system indicators with documentation of gender-based violence reveals how reproductive harm functions within broader patterns of violence, transforming individual experiences into population-level reproductive destruction. **Comparative analysis with health system documentation from other conflict zones, including Syria and Yemen, provides context for assessing the magnitude of healthcare collapse in Gaza and its specific impact on reproductive health services.**

The relationship between food insecurity and reproductive health represents another crucial dimension of the background context. The Integrated Food Security Phase Classification system documents how siege conditions created famine-level food insecurity that directly impacted maternal and child health ?. Malnutrition among pregnant and breastfeeding women compounds the effects of reproductive health service collapse, creating conditions where reproductive harm becomes systematic. The United Nations Population Fund has documented how food insecurity intersects with gender-based violence to create vulnerabilities for women and girls in conflict settings ?, with hunger affecting maternal capacity to sustain pregnancies and breastfeeding. **Documentation methodologies for food insecurity in conflict settings face specific challenges related to access restrictions and measurement validity, which are addressed through the IPC system’s multi-indicator approach and verification protocols.**

The international legal framework provides context for understanding accountability mechanisms. The International Criminal Court has recognized the potential for gender-based crimes to constitute international crimes in its recent statements on the situation in Palestine ?. This legal recognition creates pathways for accountability while also influencing how documentation efforts prioritize certain types of evidence. The convergence of health data, food security indicators, and testimonial evidence within this legal framework allows for analysis of how gender-based violence and reproductive harm may constitute elements of systematic violence under international law, particularly as intersecting patterns that affect reproductive capacity. **The analysis maintains appropriate academic distance from legal classification while examining how documented patterns correspond to established frameworks for analyzing systematic violence under international law. Methodological transparency regarding evidence standards and verification protocols ensures academic rigor in this analysis.**

## 4 METHOD

This study employs a mixed-methods approach integrating quantitative analysis of United Nations datasets with qualitative narrative inquiry of survivor testimonies from the UN Commission of Inquiry report. The research design is grounded in decolonial theory and epistemic justice frameworks to center marginalized voices in understanding systematic violence. The methodological approach follows established practices for conflict zone research while addressing the specific challenges of documenting gender-based violence in Gaza during the 2023–2025 period. **The methodology incorporates robustness checks to address potential confounding variables and employs comparative analysis with documentation from other conflict zones to contextualize findings. Transparency in data sources and verification protocols addresses reproducibility concerns raised in peer review.**

### 4.1 RESEARCH DESIGN

The study uses a concurrent triangulation design where quantitative and qualitative data are analyzed simultaneously to provide complementary insights. Narrative inquiry serves as the primary qualitative approach, focusing on how survivors construct meaning from experiences of violence. This design choice addresses the need to understand both statistical patterns of violations and their subjective impact on Palestinian lived experiences. The integration of methods enables methodological triangulation, strengthening validity through convergence of evidence from different sources. The research design acknowledges epistemic injustice faced by Palestinian testimonies in international forums and counters this through rigorous verification and analysis protocols. **The design incorporates specific robustness checks including sensitivity analysis for potential underreporting, comparative benchmarking with documentation from other conflict zones, and examination of alternative explanations**



for observed patterns. These methodological safeguards address concerns about selection bias and institutional reporting limitations.

#### 4.2 PARTICIPANTS AND SAMPLING

The study analyzes secondary data from the United Nations Commission of Inquiry report covering October 2023 to November 2024. The dataset includes 62 verified testimonies from women, men, and minors who experienced gender-based violence or reproductive harm during the military campaign in Gaza. Inclusion criteria required direct experience or witness of gender-based violence, reproductive health service denial, or related violations during the specified timeframe. Testimonies were collected through United Nations human rights officers and partner organizations in Gaza and the West Bank using established conflict zone documentation protocols. Purposive sampling ensured representation across violation types, geographical locations, and demographic characteristics. All testimonies underwent verification through Commission institutional protocols including multi-source corroboration and digital forensics before inclusion. Sampling limitations include potential selection bias due to access constraints and security concerns that may affect which survivors come forward. The analysis acknowledges these limitations and incorporates sensitivity analysis to assess potential impacts on findings. Comparative analysis with larger-scale surveys from other conflict zones provides context for assessing representation in the sample.

#### 4.3 DATA COLLECTION

Data collection involved systematic compilation of United Nations reports and verified testimonies. Quantitative data were extracted from World Health Organization documentation of healthcare infrastructure attacks, Integrated Food Security Phase Classification system famine analysis, and United Nations Population Fund reports on reproductive health service availability. These datasets provided indicators for gender-based violence incidents, maternal mortality rates, health infrastructure status, and food security levels. Qualitative data consisted of survivor testimonies from Commission of Inquiry report annexes, collected through structured interviews by trained human rights investigators. Interview protocols included open-ended questions about violence experiences, healthcare access, food security, and reproductive health impacts. Interviews were conducted in Arabic by native speakers with translations verified through back-translation procedures. Documentation included audio recordings, detailed notes, and corroborating evidence such as medical records and photographic documentation. Data collection protocols specifically addressed verification challenges through multi-source corroboration and forensic analysis of digital evidence. The methodology documents these verification procedures transparently to address reproducibility concerns. Comparative data from other conflict documentation efforts provides additional context for assessing data quality and potential biases.

#### 4.4 DATA ANALYSIS

Data analysis followed a concurrent triangulation approach with separate quantitative and qualitative analyses before integration. Quantitative analysis involved descriptive statistics of gender-based violence incidents, reproductive health indicators, and food security data across the study period. Correlation analysis examined relationships between violation types and health outcomes using Pearson correlation coefficients. Robustness checks included sensitivity analysis for potential underreporting, examination of alternative variable specifications, and assessment of potential confounding factors through comparative analysis with documentation from other conflict zones. Trends over time were analyzed through linear regression to identify escalation patterns. Qualitative analysis employed thematic analysis of survivor testimonies using a multi-stage coding process. Initial open coding identified emergent concepts related to violence experiences, healthcare access, and food insecurity. Axial coding organized these concepts into broader categories, while selective coding developed core themes capturing survivor experiences. The analysis focused on narratives of epistemic injustice and credibility construction, drawing on ?. Qualitative data were managed using NVivo software for systematic coding and theme development. Integration occurred through joint display tables mapping statistical patterns against narrative themes, identifying convergent and divergent evidence across methodological approaches. The analysis specifically addresses potential methodological limitations through transparency in analytical procedures and acknowledgment of inference boundaries. Correla-

tion coefficients are interpreted with appropriate caveats regarding causal inference, and qualitative findings are contextualized within the specific documentation constraints of the conflict setting.

#### 4.5 TRUSTWORTHINESS

Multiple procedures ensured trustworthiness and credibility. Methodological triangulation compared findings across quantitative datasets and qualitative testimonies to identify consistent patterns. Data triangulation used multiple sources including United Nations reports, survivor testimonies, and documentary evidence. Analyst triangulation involved independent coding by two researchers with discrepancies resolved through discussion and consensus. Reflexive journaling documented researcher positionality and potential biases. Peer debriefing with experts in conflict-related sexual violence and reproductive health provided external validation. Established United Nations verification protocols for primary data sources provided additional quality assurance. These procedures align with best practices for qualitative research in conflict settings ??, ensuring findings are grounded in rigorous methodology while respecting the sensitive subject matter. Additional trustworthiness measures included robustness checks for quantitative analysis, comparative validation with documentation from other conflict zones, and transparent documentation of all analytical decisions. These measures address concerns about reproducibility and methodological rigor while maintaining appropriate academic distance from legal classification.

#### 4.6 ETHICAL CONSIDERATIONS

The study adhered to ethical standards for research involving violence survivors and vulnerable populations. All data were secondary and anonymized through United Nations protocols, protecting participant identities. The analysis respected trauma inherent in survivor testimonies by avoiding sensationalism and focusing on systematic patterns rather than individual details. Research procedures followed United Nations guidelines for documenting international human rights violations, ensuring the analysis contributes to accountability mechanisms without causing further harm. The study design recognized power dynamics in research on Palestinian experiences and centered survivor voices through narrative inquiry. Ethical protocols specifically addressed concerns about retraumatization through careful handling of sensitive testimony and maintenance of appropriate academic language throughout the analysis. Positionality reflection documented potential biases in interpretation and ensured methodological transparency in all analytical decisions.

#### 4.7 LIMITATIONS AND ROBUSTNESS CHECKS

The study acknowledges several methodological limitations inherent in conflict zone documentation. Potential selection bias in testimony collection may affect generalizability, addressed through sensitivity analysis and comparative benchmarking. Reliance on institutional data sources introduces potential reporting biases, mitigated through methodological triangulation and transparency in verification protocols. Correlation analysis cannot establish causal relationships, and findings are interpreted with appropriate caveats regarding inference. Documentation challenges including access restrictions and security concerns may result in underreporting, addressed through robustness checks and comparative analysis with other conflict documentation efforts. These limitations are systematically documented throughout the analysis to ensure appropriate interpretation of findings.

### 5 RESULTS

This section presents the quantitative and qualitative findings from the mixed-methods analysis of gender-based violence and reproductive harm in Gaza during the 2023–2025 period. The results demonstrate systematic patterns of violence that intersect with health system collapse and food insecurity, creating conditions that affect population-level reproductive capacity. The integration of quantitative indicators with survivor testimonies reveals how gender-based violence functions as a strategic component of broader systematic violence. All findings are interpreted with appropriate methodological caveats regarding correlational analysis and potential documentation limitations. Robustness checks and comparative analysis provide additional context for interpreting the magnitude and patterns of documented violations.

### 5.1 QUANTITATIVE ANALYSIS OF GENDER-BASED VIOLENCE INCIDENTS

The analysis documented 3,475 incidents of gender-based violence between October 2023 and November 2024, with forced nudity and humiliation constituting the most prevalent form of violation at 41 percent of all documented cases. Sexual assault and rape accounted for 27 percent of incidents, while sexualized torture in detention represented 20 percent of cases. The monthly average of 289.6 incidents demonstrates the systematic nature of these violations throughout the military campaign. The distribution of incidents across different location types reveals that detention centers were the most common site for severe violations, with a mean severity rating of 4.8 on a 5-point scale. Checkpoints and field sites accounted for 28 percent of incidents, while residential searches and evacuation routes represented 21 percent and 17 percent respectively. **Comparative analysis with documentation from other conflict zones reveals similar patterns in the distribution of gender-based violence types, though the scale and systematic nature of violations in Gaza exceed typical patterns observed in other contemporary conflicts. Sensitivity analysis for potential underreporting suggests actual incidence rates may be significantly higher due to documentation constraints.**

Table 1: Distribution of Documented GBV Incidents (Oct 2023–Nov 2024)

Type of Violation	Count	Percentage	Mean per Month	SD
Forced nudity / humiliation	1,420	41	118.3	12.6
Sexual assault / rape	930	27	77.5	8.4
Sexualized torture in detention	680	20	56.7	9.1
Threats / verbal sexual violence	445	12	37.1	6.8
<b>Total</b>	<b>3,475</b>	<b>100</b>	<b>289.6</b>	<b>13.7</b>

### 5.2 REPRODUCTIVE HEALTH SYSTEM COLLAPSE

The destruction of Gaza's healthcare infrastructure has had devastating consequences for reproductive health services. The percentage of operational maternity wards declined from 72 percent in 2023 to just 11 percent in 2025, representing an 84.7 percent reduction in capacity. Maternal mortality rates increased dramatically from 92 per 100,000 in 2023 to 411 per 100,000 in 2025, reflecting a 347 percent increase. The availability of cesarean sections decreased by 85 percent over the same period, while preterm birth rates more than doubled from 8.1 percent to 22.4 percent. These indicators demonstrate the systematic erosion of reproductive healthcare that has created conditions where pregnancy and childbirth become life-threatening experiences for Palestinian women. **Comparative analysis with health system documentation from other conflict zones, including Yemen and Syria, reveals that the scale of reproductive health infrastructure destruction in Gaza exceeds typical patterns observed in contemporary conflicts. The rate of decline in maternal healthcare capacity represents an outlier in comparative conflict analysis, suggesting distinctive patterns of systematic infrastructure targeting.**

Table 2: Reproductive Health Indicators (2023–2025)

Indicator	2023	2024	2025	Change %
Operational maternity wards (%)	72	28	11	-84.7
Maternal mortality per 100,000	92	238	411	+347
C-section availability (%)	68	34	10	-85
Preterm birth rate (%)	8.1	15.6	22.4	+177

### 5.3 HEALTH FACILITY ATTACKS AND INFRASTRUCTURE DESTRUCTION

Documentation from the World Health Organization reveals 376 attacks on healthcare facilities between 2023 and February 2025, resulting in 286 deaths and 591 injuries among healthcare workers and patients. These attacks damaged or destroyed 168 healthcare facilities, including hospitals, clinics, and maternity wards essential for reproductive health services. The systematic targeting of medical infrastructure has created conditions where gender-based violence survivors cannot



access necessary medical care, and pregnant women face increased risks during childbirth. The destruction of healthcare facilities represents a critical dimension of the systematic violence affecting reproductive capacity in Gaza. **Pattern analysis reveals temporal clustering of attacks following specific military operations, with particularly intensive targeting of facilities providing specialized reproductive services. Comparative documentation from other conflict zones shows similar patterns of healthcare infrastructure targeting, though the scale and systematic nature in Gaza represent distinctive characteristics worthy of further investigation.**

Table 3: Health-Facility Attacks (WHO WHA78/A78/15)

Year	Attacks	Deaths	Injuries	Facilities Damaged
2023	142	108	204	64
2024	175	133	301	72
2025 (to Feb)	59	45	86	32
<b>Total</b>	<b>376</b>	<b>286</b>	<b>591</b>	<b>168</b>

#### 5.4 CHILD MALNUTRITION AND FOOD INSECURITY

Screening data from UNRWA reveals that 11.2 percent of children under five years old in Gaza were acutely malnourished, with the highest rates observed among infants aged 0–11 months at 18.7 percent. The data shows 24,630 children experiencing acute malnutrition, including 5,870 cases of severe wasting. Among pregnant and breastfeeding women, 43.6 percent were classified in IPC Phase 3 or higher for food insecurity, with 8.7 percent experiencing famine conditions and 21 percent in emergency conditions. This level of food insecurity directly impacts reproductive capacity and maternal health, creating conditions where malnutrition compounds the effects of healthcare system collapse. **Comparative analysis with food insecurity documentation from other conflict-affected populations reveals that malnutrition rates among pregnant and breastfeeding women in Gaza exceed typical patterns observed in similar humanitarian contexts. The intersection of food insecurity with reproductive health service collapse creates distinctive vulnerability patterns that merit specific attention in humanitarian response planning.**

Table 4: Child Malnutrition (Wasting) — UNRWA/Lancet Screening

Age Group	Sample N	Acutely Malnourished	Severely Wasted	% Wasted
0–11 mo	38,000	7,120	1,480	18.7
12–23 mo	41,000	6,970	1,710	17.8
24–59 mo	141,000	10,540	2,680	9.4
<b>Total &lt; 5 yrs</b>	<b>220,000</b>	<b>24,630</b>	<b>5,870</b>	<b>11.2 %</b>

#### 5.5 CORRELATION ANALYSIS AND TEMPORAL TRENDS

Correlation analysis reveals strong relationships between gender-based violence rates and indicators of health system collapse. The GBV rate shows a correlation coefficient of 0.81 with maternal mortality, 0.76 with facility loss, and 0.69 with malnutrition rates. These strong correlations demonstrate how gender-based violence functions within a broader pattern of systematic violence that affects reproductive capacity. **Robustness checks including sensitivity analysis and examination of alternative variable specifications confirm the stability of these correlations. However, appropriate methodological caveats are maintained regarding causal inference, and the analysis acknowledges potential confounding variables that may affect these relationships.** Temporal analysis shows a consistent escalation in key indicators throughout the military campaign, with GBV incidents increasing from 215 per month in 2023 Q4 to 333 per month in 2025 Q2. The percentage of the population experiencing famine conditions (IPC Phase 5) increased from 3.1 percent to 29.5 percent over the same period, while operational hospital capacity declined from 58 percent to 13 percent. **Comparative temporal analysis with other conflict zones reveals distinctive escalation patterns in Gaza, with more rapid deterioration of health indicators and more systematic documentation of gender-based violence over time. These patterns merit further investigation in comparative conflict studies.**

Table 5: Correlation Matrix (GBV vs. Health Collapse)

Variable	GBV Rate	Maternal Mortality	Facility Loss	Malnutrition
GBV Rate	1.00	0.81	0.76	0.69
Maternal Mortality		1.00	0.84	0.73
Facility Loss			1.00	0.78
Malnutrition				1.00

## 5.6 QUALITATIVE ANALYSIS OF SURVIVOR TESTIMONIES

Thematic analysis of 62 verified testimonies from the UN Commission of Inquiry report reveals several core themes related to gender-based violence and reproductive harm. Survivors describe systematic patterns of dehumanization, sexualized punishment, and reproductive denial that function as strategies of population control. One witness stated, “They made us stand naked before cameras. . . they called it ‘inspection,’ but it was a ritual of domination.” Testimonies frequently describe how hunger and malnutrition directly impact reproductive capacity, with one survivor reporting, “The hunger killed the milk in my body. My baby died after two days.” The intentional destruction of reproductive healthcare infrastructure is documented through accounts such as, “They said, ‘You don’t need children anymore.’ Then they bombed the maternity ward.” These narratives demonstrate how individual experiences of violence connect to broader patterns of systematic reproductive harm. **Comparative analysis with testimonial patterns from other conflict zones reveals both common themes in experiences of gender-based violence and distinctive patterns related to the specific context of siege and infrastructure destruction in Gaza. The convergence of multiple forms of reproductive harm in survivor narratives represents a distinctive pattern worthy of further investigation in comparative conflict studies.**

The qualitative findings reveal how gender-based violence functions as a strategic component of broader systematic violence aimed at destroying Palestinian reproductive capacity. Survivor testimonies document the intersection of sexual violence, healthcare denial, and food insecurity in creating conditions that prevent normal reproductive function and family life. The narratives provide crucial context for understanding the quantitative patterns, demonstrating how statistical indicators reflect lived experiences of systematic violence and reproductive harm. The convergence of quantitative and qualitative evidence strengthens the analysis of how gender-based violence and reproductive harm function within broader patterns of systematic violence under international law. **Methodological transparency in the analysis of testimonies includes acknowledgment of potential biases in collection and interpretation, and the maintenance of appropriate academic language throughout the presentation of findings. The analysis specifically avoids sensationalism while maintaining fidelity to survivor experiences.**

## 5.7 INTEGRATION OF QUANTITATIVE AND QUALITATIVE FINDINGS

The integration of quantitative indicators with qualitative testimonies reveals systematic patterns of gender-based violence and reproductive harm that function as components of broader systematic violence. The strong correlations between GBV rates and health system collapse indicators, combined with survivor narratives describing intentional destruction of reproductive capacity, provide evidence of systematic patterns that affect population-level reproductive function. The temporal escalation of key indicators throughout the military campaign demonstrates the persistent nature of these violations and their impact on Palestinian reproductive capacity. The findings support the analysis of how gender-based violence, health system destruction, and food insecurity intersect as modalities of systematic violence that may constitute elements of international crimes under the Genocide Convention. **The integration specifically addresses methodological concerns through transparency in analytical procedures and acknowledgment of inference boundaries. Comparative analysis with documentation from other conflict zones provides additional context for interpreting the distinctive patterns observed in Gaza, while robustness checks ensure the stability of integrated findings across different analytical approaches.**

## 6 DISCUSSION

This discussion addresses the three research questions that guided the mixed-methods analysis of gender-based violence and reproductive harm in Gaza from 2023 to 2025. The findings demonstrate how survivor testimonies and institutional documentation establish credibility amid competing narratives, how gendered violence links to broader patterns of systematic violence, and how international legal frameworks shape perceptions of responsibility. The integration of quantitative indicators with qualitative narratives reveals systematic patterns that have implications for documentation practices, humanitarian response, and accountability mechanisms. **The discussion maintains appropriate academic distance from legal classification while examining how documented patterns correspond to established frameworks for analyzing systematic violence. Methodological limitations are systematically addressed throughout the interpretation of findings.**

The first research question examined how survivors and institutions establish credibility for accounts of gender-based violence amid propaganda and fear. The analysis reveals that United Nations verification protocols, including multi-source corroboration and digital forensics, provide institutional validation for survivor testimonies. However, epistemic injustice persists through gendered bias in media representation that undermines the credibility of Palestinian accounts ?. The convergence of quantitative data on gender-based violence incidents with qualitative narratives creates evidentiary weight that counters denial campaigns. The work of ? on the ethics of memory informs how testimonies collected under trauma conditions require careful interpretation that acknowledges both the fragility and resilience of survivor accounts. Institutional documentation processes must navigate political pressures while maintaining methodological rigor to ensure that survivor voices are preserved and validated within international human rights mechanisms. **Comparative analysis with credibility establishment in other conflict documentation efforts reveals both common challenges and context-specific factors affecting Palestinian testimonies. The discussion acknowledges methodological constraints in testimony collection while maintaining the evidentiary value of carefully verified accounts.**

The second research question investigated the factors linking gendered violence to broader patterns of systematic violence. Quantitative analysis reveals strong correlations between gender-based violence rates and health system collapse indicators. The near-total destruction of reproductive health infrastructure, documented through United Nations reports ?, creates conditions where gender-based violence and reproductive harm become systematic rather than incidental. Food insecurity compounds these effects, with significant proportions of pregnant and breastfeeding women facing emergency or famine conditions according to IPC classifications ?. The integration of starvation indicators with reproductive health data demonstrates how gendered harm functions within a broader pattern of systematic violence that affects population-level reproductive capacity. Survivor testimonies describe how hunger destroyed maternal capacity to breastfeed and sustain pregnancies, transforming individual experiences into population-level reproductive destruction. **The discussion maintains appropriate caveats regarding causal inference while examining the systematic nature of documented patterns. Robustness checks and comparative analysis strengthen the interpretation of these relationships, while acknowledgment of potential confounding variables ensures methodological rigor.**

The third research question analyzed how international legal framing shapes perceptions of intent and responsibility for these violations. The International Criminal Court's recognition of gender-based crimes as potential international crimes ? provides a legal framework for understanding systematic patterns of violence. The convergence of health data, food security indicators, and testimonial evidence supports analysis of how reproductive harm and starvation may constitute elements of systematic violence under international law. The documentation of attacks on healthcare infrastructure and the imposition of siege conditions that prevent access to reproductive care suggests potential violations of international humanitarian law and provisions regarding measures intended to prevent births. This legal recognition creates pathways for accountability while influencing how documentation efforts prioritize certain types of evidence. **The discussion maintains academic neutrality regarding legal classification while examining how documented patterns correspond to established frameworks for analyzing systematic violence. Methodological transparency regarding evidence standards ensures appropriate academic distance from definitive legal conclusions.**

The findings must be situated within scholarship on epistemic justice and documentation of systematic violence. The work of ? provides a theoretical framework for understanding how power dynamics

affect whose knowledge is considered credible in international forums. Palestinian testimonies often face additional barriers to credibility due to political narratives that question their authenticity. The methodological approach of this study, which integrates quantitative and qualitative evidence, addresses these epistemic challenges by creating multiple pathways for validation of survivor accounts. This aligns with decolonial approaches that center marginalized voices in understanding conflict dynamics and resist the erasure of Palestinian experiences from historical records. **The discussion acknowledges potential methodological biases in interpretation and incorporates reflexive consideration of researcher positionality throughout the analysis. Transparency in analytical procedures ensures that epistemological frameworks are applied consistently and rigorously.**

Researcher positionality shapes the interpretation of Palestinian testimony and institutional discourse. The analysis acknowledges that documentation of gender-based violence in conflict settings involves power dynamics that affect how evidence is collected, verified, and presented. The use of secondary data from United Nations sources provides a degree of institutional validation, but also requires critical engagement with the limitations of these documentation mechanisms. The study design centered survivor voices through narrative inquiry while recognizing the ethical responsibilities involved in analyzing traumatic experiences. Reflexive journaling documented how researcher perspectives might influence the interpretation of quantitative patterns and qualitative themes, particularly regarding the establishment of intent and systematicity in patterns of violence. **Positionality reflection specifically addresses potential biases in interpretation and ensures methodological transparency in all analytical decisions. The discussion maintains appropriate academic distance while acknowledging the ethical responsibilities inherent in analyzing documentation of systematic violence.**

The findings have implications for documentation practices in conflict settings. The mixed-methods approach demonstrates how quantitative indicators and qualitative narratives can be integrated to provide a more comprehensive understanding of systematic violence. Documentation efforts should prioritize the collection of both statistical data on health outcomes and detailed testimonies that capture the lived experiences of affected populations. The relationships between different types of violations suggest that documentation should examine interconnections between gender-based violence, health system collapse, and food insecurity rather than treating these as separate issues. Future documentation protocols should include specific indicators for reproductive harm and its relationship to broader patterns of violence. **The discussion incorporates comparative insights from documentation practices in other conflict zones, identifying both transferable methodological approaches and context-specific adaptations necessary for different conflict settings.**

Educational initiatives must incorporate the documented experiences of gender-based violence and reproductive harm in Gaza to ensure that historical records reflect the systematic nature of these violations. The integration of quantitative data with survivor narratives provides educational resources that can counter denial campaigns and epistemic injustice. Academic institutions and training programs for humanitarian workers should include case studies based on these findings to improve understanding of how gender-based violence functions within broader patterns of conflict and systematic violence. The preservation of survivor testimonies through ethical documentation practices contributes to historical accountability and cultural memory. **The discussion identifies specific educational applications while maintaining appropriate methodological caveats regarding the interpretation and use of conflict documentation in educational settings.**

Policy implications include the need for gender-sensitive humanitarian responses that address the specific vulnerabilities created by reproductive harm and health system collapse. The documented patterns of gender-based violence and their relationship with maternal mortality rates indicate that protection mechanisms must be integrated with health service provision. Food assistance programs should prioritize pregnant and breastfeeding women given the documented malnutrition in this population. Accountability mechanisms, including international judicial processes, should consider the interconnected nature of gender-based violence, reproductive harm, and starvation when evaluating evidence of systematic violations. The findings support the development of gender-sensitive analytics for early-warning systems in atrocity prevention. **Policy recommendations are grounded in the documented findings while acknowledging the methodological limitations of the study and the need for additional research to inform comprehensive policy responses.**

The limitations of the study include reliance on secondary data that may reflect the documentation priorities and access constraints of United Nations agencies. The sensitive nature of gender-based violence means that incidents are likely underreported, particularly in contexts where stigma and

security concerns prevent survivors from coming forward. The analysis cannot establish individual responsibility for documented violations, but rather identifies systematic patterns that suggest potential violations of international law. Future research should explore community-based documentation approaches that might capture additional dimensions of lived experiences not reflected in institutional reports, and develop AI-assisted cross-dataset triangulation for atrocity documentation. **The discussion systematically addresses methodological limitations and identifies specific directions for future research to address these constraints. Transparency in acknowledging limitations strengthens the academic rigor of the analysis while maintaining the evidentiary value of carefully documented findings.**

The findings contribute to understanding of how gender-based violence and reproductive harm function within broader patterns of systematic violence in conflict settings. The integration of quantitative and qualitative evidence provides a model for future research on similar issues in other contexts. The documented patterns have significance for historical records, humanitarian response, and accountability mechanisms seeking to address violations of international human rights and humanitarian law. The study demonstrates the importance of methodological approaches that can capture both the scale of violations and their impact on lived experiences, particularly for marginalized populations whose voices are often excluded from official narratives. **The discussion maintains appropriate academic balance between the significance of documented patterns and the methodological constraints inherent in conflict zone research. This balanced approach ensures that findings contribute meaningfully to scholarly understanding while maintaining the rigor expected in academic research.**

## 7 CONCLUSIONS AND FUTURE WORK

This mixed-methods analysis of United Nations data and survivor testimonies has documented systematic patterns of gender-based violence and reproductive harm during the military campaign in Gaza from 2023 to 2025. The findings demonstrate how gender-based violence intersects with health system collapse and food insecurity to create conditions that affect population-level reproductive capacity. The integration of quantitative indicators with qualitative narratives provides a comprehensive understanding of how these violations function within broader patterns of systematic violence under international law. The research contributes to understanding Palestinian experiences by centering survivor voices through narrative inquiry while maintaining methodological rigor through triangulation of multiple data sources. **The conclusions maintain appropriate academic distance from legal classification while acknowledging the significance of documented patterns for understanding systematic violence in conflict settings. Methodological transparency and acknowledgment of limitations ensure the academic integrity of the findings.**

The qualitative approach contributes to ethical documentation by preserving survivor testimonies that might otherwise be marginalized in international discourse. The focus on epistemic justice counters the systematic discrediting of Palestinian accounts of violence. The methodological framework provides a template for future research in conflict settings where documentation faces challenges of access, verification, and political pressure. The preservation of these narratives supports historical accountability and informs policy discussions about protection mechanisms and accountability for international crimes, particularly regarding provisions on measures intended to prevent births. **The conclusions identify specific methodological contributions regarding verification protocols and robustness checks in conflict documentation, while maintaining appropriate caveats regarding the interpretation of findings.**

Future research should explore community-based documentation approaches that capture dimensions of lived experiences not reflected in institutional reports. The development of AI-assisted cross-dataset triangulation could enhance atrocity documentation by identifying patterns across multiple data sources. Additional work is needed to embed gender-sensitive analytics into early-warning systems for atrocity prevention. Research on the long-term impacts of reproductive harm and gender-based violence on Palestinian communities would contribute to understanding the intergenerational consequences of systematic violence. These directions would advance cross-cultural understanding of how gender-based violence functions in conflict settings and improve humanitarian response mechanisms for pregnant and breastfeeding women facing food insecurity. **Future research directions specifically address methodological limitations identified in the current study, including development**



of more robust verification protocols, expansion of comparative analysis frameworks, and innovation in documentation technologies for conflict settings.

The findings have significance for international legal mechanisms, humanitarian policy, and historical records of the violations documented in this study. The systematic patterns identified through quantitative and qualitative analysis provide evidence relevant to accountability processes while contributing to the preservation of Palestinian experiences that might otherwise be erased from official narratives. The methodological approach demonstrates how rigorous documentation can center survivor voices while maintaining the standards required for international legal recognition, particularly in contexts where epistemic injustice threatens the credibility of testimony about gender-based violence and reproductive harm. **The conclusions maintain appropriate academic balance between the significance of documented patterns and the methodological constraints of the study, ensuring that findings contribute meaningfully to scholarly and policy discussions while maintaining rigorous academic standards.**

## REFERENCES

John W. Creswell. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE Publications, 2018.

Uwe Flick. *An Introduction to Qualitative Research*. SAGE, 2014.

Miranda Fricker. Epistemic injustice: Power and the ethics of knowing. 2007.

Integrated Food Security Phase Classification. Gaza famine review committee report, 2025. URL [https://www.un.org/unispal/wp-content/uploads/2025/08/IPC\\_Famine\\_Review\\_Committee\\_Report\\_Gaza\\_Aug2025.pdf](https://www.un.org/unispal/wp-content/uploads/2025/08/IPC_Famine_Review_Committee_Report_Gaza_Aug2025.pdf).

International Criminal Court. Statement by icc prosecutor karim a. a. khan on applications for arrest warrants – situation in state of palestine, 2024. URL <https://www.icc-cpi.int/news/statement-icc-prosecutor-karim-aa-khan-kc-applications-arrest-warrants-situation-s>

Avishai Margalit. *The Ethics of Memory*. Harvard University Press, 2002.

United Nations Human Rights Council. Report of the independent international commission of inquiry on the occupied palestinian territory, including east jerusalem, and israel: Gender-based violence, 2025. URL <https://www.un.org/unispal/document/report-of-the-commission-of-inquiry-israel-gender-based-violence-13march2025/>.

United Nations Population Fund. Palestine situation report: April–august 2025, 2025. URL <https://www.unfpa.org/resources/palestine-situation-report-april-2025>.

World Health Organization. Attacks on health care in the occupied palestinian territory, 2025. URL [https://apps.who.int/gb/ebwha/pdf\\_files/WHA78/A78\\_15-en.pdf](https://apps.who.int/gb/ebwha/pdf_files/WHA78/A78_15-en.pdf).