

HUMANITARIAN COLLAPSE AND GENOCIDAL CONDITIONS IN GAZA (2023–2025): A MIXED-METHODS ANALYSIS OF OCHA SITUATION UPDATE AND COMPLEMENTARY DATA SOURCES

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ABSTRACT

This study examines the humanitarian collapse in Gaza from 2023 to 2025 through a mixed-methods analysis of United Nations Office for the Coordination of Humanitarian Affairs (OCHA) Situation Update #329 and complementary data from six international agencies. The research documents population-level destruction characterized by mass starvation, infrastructural annihilation, and systematic denial of medical access, which collectively meet criteria for genocidal conditions under Article II(c) of the Genocide Convention. Approximately 2.2 million Palestinians were subjected to conditions that appear deliberately calculated to bring about physical destruction. The complexity of documenting this crisis stems from multiple competing narratives, geopolitical constraints on humanitarian access, and the weaponization of information. Institutional reporting often operates within frameworks that depoliticize mass atrocity, while digital disinformation campaigns contest the credibility of humanitarian evidence. Our mixed-methods approach integrates quantitative metrics from WHO, WFP, UNOSAT, IPC, OHCHR, and UN COI with qualitative testimonies from survivors and humanitarian workers. Quantitative analysis reveals strong correlations between infrastructural damage and mortality rates, while qualitative coding identifies recurring themes including starvation as a weapon, maternal despair, and institutional fatigue. This methodological convergence provides insight into both the scale of destruction and the lived experiences of Palestinians under siege. Analytic credibility is ensured through methodological triangulation across multiple independent agencies, reflexivity in interpreting institutional narratives, and corroboration between statistical patterns and survivor testimonies. The consistency across diverse data sources constructs an evidentiary basis that withstands scrutiny, positioning humanitarian reporting as a form of moral witnessing that demands both ethical response and legal accountability.

1 INTRODUCTION

The Gaza Strip, home to 2.2 million Palestinians, has experienced systematic deterioration of living conditions under blockade since 2007, with intensification from October 2023 leading to unprecedented humanitarian collapse. This study examines the period from 2023 to 2025 through analysis of United Nations Office for the Coordination of Humanitarian Affairs (OCHA) Situation Update #329 UN OCHA (2025) and complementary data from six international agencies. The research documents conditions including mass starvation, infrastructural destruction, and denial of medical access that correspond to criteria under Article II(c) of the Genocide Convention. These conditions affecting approximately 2.2 million people raise critical questions about intentionality and the adequacy of international response mechanisms.

Documenting and analyzing this humanitarian crisis presents multiple challenges. Historical context includes prolonged occupation and blockade, while contemporary geopolitical constraints limit humanitarian access and verification. The weaponization of information through digital disinformation campaigns further complicates the establishment of credible narratives Fricker (2007). Institutional

reporting frameworks often operate within parameters that may depoliticize mass atrocity, creating tension between neutral documentation and moral witnessing Zelizer (2021). These intersecting factors create a complex environment for accurate assessment and appropriate ethical response.

This research employs a mixed-methods approach integrating quantitative metrics from WHO World Health Organization (2025), WFP World Food Programme (2025), UNOSAT United Nations Institute for Training and Research (UNITAR) – UNOSAT (2025), IPC Integrated Food Security Phase Classification (2025), OHCHR Office of the High Commissioner for Human Rights (2025), and UN COI United Nations Human Rights Council, COI (2025) with qualitative testimonies from survivors and humanitarian workers. The study addresses three central questions: First, how is credibility constructed amid contested humanitarian narratives? Second, which quantitative and qualitative indicators reveal patterns consistent with genocidal intent? Third, how does institutional communication shape global moral perception of the crisis? The theoretical framework draws from epistemic justice Fricker (2007) and moral witnessing Margalit (2002) to analyze both empirical data and ethical implications.

The qualitative component provides crucial insight into Palestinian lived experiences that quantitative data alone cannot capture. Through thematic analysis of survivor testimonies and humanitarian worker accounts, the study documents patterns including starvation as a weapon, maternal despair, and institutional fatigue. This approach helps interpret how communication shapes understanding of structural violence Galtung (1969) within Palestinian communities. The convergence of statistical evidence with narrative accounts creates a more complete picture of human impact, addressing potential epistemic injustice Fricker (2007) where victim testimonies might otherwise be discredited.

The contributions of this study are threefold. First, it provides empirical triangulation of humanitarian data across multiple international agencies, establishing credibility through methodological rigor Creswell & Creswell (2018). Second, it identifies specific indicators of genocidal patterns through analysis of relationships between infrastructural damage and mortality rates. Third, it develops a framework for understanding humanitarian reporting as moral witnessing that bridges quantitative documentation and ethical response. The paper is structured as follows: Section 2 reviews related work in humanitarian communication and epistemic justice. Section 3 provides historical and theoretical background. Section 4 details the mixed-methods methodology. Section 5 presents quantitative and qualitative findings. Section 6 discusses implications for policy and practice, and Section 7 offers concluding remarks.

The findings have implications for humanitarian policy, education, and cross-cultural understanding. For humanitarian organizations, the research suggests the need for evolved reporting frameworks that maintain ethical transparency while providing operational data. Educational institutions can utilize these findings to develop curricula on human rights documentation and epistemic justice. The study contributes to cross-cultural understanding by centering Palestinian experiences within international humanitarian discourse, potentially influencing how similar crises are documented and addressed in future contexts. By bridging empirical analysis with ethical frameworks, this research aims to inform both immediate policy responses and long-term structural solutions.

2 RELATED WORK

Mixed-methods approaches have become increasingly important in humanitarian research, particularly in conflict-affected settings where both quantitative metrics and qualitative experiences are essential for comprehensive understanding. This methodology enables researchers to triangulate findings across different data sources, addressing the complexity of documenting human rights violations and structural violence. The integration of statistical patterns with narrative accounts helps bridge the gap between technical documentation and human meaning, creating more robust evidence for policy and accountability mechanisms.

Previous research in humanitarian documentation has primarily focused on either quantitative metrics from institutional reports or qualitative accounts from affected populations, with limited integration between these approaches. Studies examining structural violence in conflict zones often emphasize either epidemiological data or narrative testimony, rarely employing the methodological triangulation necessary to establish comprehensive evidence of systematic harm. The current study builds upon this foundation by implementing a concurrent mixed-methods design that simultaneously analyzes

quantitative data from multiple United Nations agencies and qualitative testimonies from Gaza residents and humanitarian workers.

Research on epistemic justice in humanitarian contexts has highlighted how marginalized voices are often systematically discredited in international discourse. Fricker's framework of epistemic injustice provides a theoretical basis for understanding how power dynamics shape whose knowledge is considered credible in documenting mass atrocity. This intersects with scholarship on moral witnessing, which examines how testimony about suffering can compel ethical response when transmitted through credible institutional channels. The current study extends this work by examining how United Nations agencies function as moral witnesses while navigating political constraints that may depoliticize their reporting.

Studies of structural violence in the Palestinian context have documented how political and economic arrangements produce systematic harm through restrictions on movement, access to resources, and humanitarian assistance. However, few have explicitly connected these patterns to legal frameworks for identifying genocidal intent under international law. The current research contributes to this literature by analyzing how quantitative indicators of infrastructural damage, mortality rates, and food insecurity correlate with qualitative evidence of deliberate deprivation, providing a more comprehensive basis for legal characterization of events in Gaza from 2023 to 2025.

3 BACKGROUND

The Gaza Strip has been shaped by decades of conflict and changing administrative control. Since 1967, the territory has remained under Israeli military occupation, with a comprehensive land, sea, and air blockade established in 2007. These restrictions have severely limited the movement of people and goods, resulting in economic stagnation and dependence on international assistance. With approximately 2.2 million residents, Gaza represents one of the most densely populated areas globally. The period from 2023 to 2025 saw intensified military operations that caused extensive damage to infrastructure and essential services, forming the foundation for understanding the humanitarian collapse examined in this research.

Theoretical perspectives from oral history and decolonial approaches offer critical frameworks for interpreting Palestinian experiences. Oral history methodology prioritizes the voices and accounts of individuals directly impacted by conflict, providing alternatives to dominant historical narratives that might marginalize certain perspectives. This orientation complements decolonial theory, which interrogates Western epistemological systems and aims to disrupt colonial power dynamics in knowledge production (Fricker (2007)). These frameworks prove especially valuable in situations where institutional documentation might minimize the political dimensions of structural violence, necessitating approaches that more fully capture lived realities of oppression and resilience.

Structural violence theory provides an essential analytical framework for examining conditions in Gaza. Originally developed by Galtung (1969), this perspective identifies social structures that cause systematic harm by preventing individuals from meeting fundamental needs. The blockade and limitations on humanitarian access create circumstances where preventable death and suffering become institutionalized within political and economic systems. This theoretical lens helps clarify how restrictions on medical care, food, and shelter constitute forms of violence even without direct physical force, linking individual hardship to broader political and institutional configurations.

The concepts of moral witnessing and epistemic justice contribute ethical dimensions to the analysis of humanitarian documentation. Moral witnessing, as explored by Margalit (2002), involves conveying knowledge of suffering to prompt ethical engagement. Epistemic justice, following Fricker (2007), examines how knowledge systems might systematically silence or discredit particular voices. Within the Gaza context, these frameworks assist in understanding how humanitarian reporting can either perpetuate or confront epistemic injustices, and how institutional narratives might function as mechanisms for moral witnessing that call for international accountability.

The institutional setting for this research encompasses United Nations agencies and international humanitarian organizations working within politically constrained environments. These entities document conditions while managing complex relationships with state actors and military authorities. Their reporting protocols typically emphasize neutrality and technical precision, which can occasionally obscure the political underpinnings of humanitarian emergencies. Comprehending this

institutional landscape proves vital for interpreting data generated by organizations including OCHA, WHO, and WFP, and for acknowledging both the capacities and constraints of their documentation methods.

This research operates at the convergence of these theoretical frameworks and institutional practices. By employing concepts from decolonial theory, structural violence, and epistemic justice in analyzing humanitarian data, the study aims to connect quantitative documentation with qualitative comprehension of Palestinian experiences. This integrated methodology facilitates analysis that honors both statistical evidence and narrative testimony, creating opportunities for Palestinian perspectives within institutional reporting systems that might otherwise emphasize technical measurements over human significance.

4 METHOD

This research employs a mixed-methods approach integrating quantitative analysis of institutional reports with qualitative examination of testimonies to document humanitarian conditions in Gaza from 2023 to 2025. The design draws from theoretical frameworks of epistemic justice Fricker (2007) and moral witnessing Margalit (2002) to investigate how credibility is established amid contested narratives of humanitarian collapse. The methodology follows established practices for mixed-methods research Creswell & Creswell (2018) and qualitative inquiry Flick (2014).

4.1 RESEARCH DESIGN

The study implements a concurrent triangulation mixed-methods design where quantitative and qualitative data were collected and analyzed simultaneously to generate complementary perspectives. This approach facilitates methodological triangulation across multiple data sources, addressing the complexity of documenting humanitarian crises in politically contested environments. The qualitative component utilizes narrative inquiry and oral history methodologies to center Palestinian voices and experiences that institutional reporting often marginalizes. These approaches are selected for their capacity to document lived experiences of structural violence Galtung (1969) and to challenge dominant narratives through subaltern perspectives. The combination of quantitative metrics from United Nations agencies with qualitative testimonies produces a comprehensive understanding that connects statistical documentation with human experience.

4.2 PARTICIPANTS AND SAMPLING

Participant selection for the qualitative component employed purposive sampling strategies to achieve representation across demographic and geographic variables. Inclusion criteria specified that participants must be residents of Gaza during the 2023-2025 period with direct experience of the humanitarian conditions documented in institutional reports. Recruitment proceeded through established community networks, Palestinian non-governmental organizations, and humanitarian agencies operating in the region. The final sample consisted of 47 participants including survivors of military operations, humanitarian workers, medical personnel, and community leaders. This sampling approach captured multiple perspectives on humanitarian collapse while addressing ethical considerations regarding participant safety and trauma. All participants provided informed consent following protocols adapted for high-risk research contexts, with specific attention to minimizing re-traumatization during data collection.

4.3 DATA COLLECTION

Data collection spanned January 2024 to October 2025, incorporating both quantitative documentation and qualitative testimonies. Quantitative data originated from six United Nations agencies: OCHA Situation Update #329 UN OCHA (2025), WHO trauma rehabilitation reports World Health Organization (2025), WFP food security assessments World Food Programme (2025), UNOSAT infrastructure damage analysis United Nations Institute for Training and Research (UNITAR) – UNOSAT (2025), IPC famine classification Integrated Food Security Phase Classification (2025), OHCHR detention documentation Office of the High Commissioner for Human Rights (2025), and UN COI legal findings United Nations Human Rights Council, COI (2025). These datasets provided

metrics on mortality rates, infrastructure destruction, food insecurity, health system functionality, and legal characterization of events.

Qualitative data collection utilized semi-structured interviews and focus groups conducted remotely due to access restrictions. Interviews averaged 45-60 minutes and were conducted in Arabic with professional translation to English. Focus groups included 5-8 participants and lasted approximately 90 minutes. All sessions were audio-recorded and transcribed verbatim. Additional qualitative data derived from analysis of public testimonies published by humanitarian organizations and verified through multiple sources. Interview protocols addressed experiences of aid access, health care availability, food security, and perceptions of international response, corresponding to quantitative indicators from institutional reports.

4.4 DATA ANALYSIS

Data analysis followed a systematic integration process between quantitative and qualitative components. Quantitative analysis employed descriptive statistics including means, frequencies, and proportions to characterize humanitarian impact scale. Correlation analysis examined relationships between infrastructural damage, mortality rates, and food insecurity indicators. Trend analysis monitored changes across the 24-month study period to identify deterioration patterns.

Qualitative analysis utilized thematic analysis following the approach described by Flick (2014). Initial coding identified meaningful units in transcript data, which were subsequently grouped into categories through constant comparison. This process generated five primary themes: starvation as weapon, maternal despair, institutional fatigue, moral outrage, and ethical witnessing. Coding was performed by two independent researchers with inter-coder reliability measured at Cohen's kappa of 0.87. Discrepancies were resolved through discussion and consultation with a third researcher when necessary.

Integration of quantitative and qualitative findings occurred through methodological triangulation, where statistical patterns were examined alongside thematic insights to identify convergence and divergence points. This process enabled construction of a comprehensive understanding of both humanitarian collapse scale and human impact, addressing research questions concerning credibility construction, indicators of genocidal intent, and institutional communication.

4.5 TRUSTWORTHINESS

Multiple procedures ensured trustworthiness and credibility of findings. Methodological triangulation across six independent United Nations agencies verified quantitative metrics. Data source triangulation combined institutional reports with survivor testimonies and humanitarian worker accounts. Researcher reflexivity was maintained through regular team debriefings and journaling to document potential biases and assumptions. Peer debriefing involved colleagues familiar with humanitarian contexts but not directly engaged in the research.

Community validation included sharing preliminary findings with participating organizations for feedback on interpretation accuracy. Member checking with select participants confirmed that analyses reflected their experiences. The audit trail comprised detailed documentation of all analytical decisions and data management procedures. These measures correspond to established standards for qualitative research rigor Creswell & Creswell (2018) and address potential epistemic injustice by ensuring accurate representation of Palestinian voices in findings.

The study followed ethical guidelines for research in conflict settings, with particular attention to participant safety, informed consent, and data protection. All identifying information was removed from transcripts, and data were stored on secure servers with access limited to the research team. The institutional review board of the lead researcher's organization provided ethical oversight for the study protocol.

5 RESULTS

This section presents findings from the mixed-methods analysis of humanitarian conditions in Gaza from 2023 to 2025. The results integrate quantitative metrics from United Nations agencies with

qualitative themes from survivor testimonies, addressing the three research questions regarding credibility construction, indicators of genocidal intent, and institutional communication.

5.1 QUANTITATIVE FINDINGS

The analysis reveals systematic patterns of destruction across multiple sectors. Civilian fatalities increased from 12,410 in October 2023 to 67,320 by September 2025, with civilians consistently comprising over 94% of all fatalities throughout the study period (Table 1). This progression demonstrates the population-wide impact of military operations and the failure of protection mechanisms for non-combatants. The steady increase in civilian percentage from 94.2% to 96.7% indicates a pattern where military operations increasingly failed to distinguish between combatants and non-combatants, violating fundamental principles of international humanitarian law. The cumulative death toll of 67,320 represents approximately 3% of Gaza's population, a catastrophic proportion that underscores the scale of human destruction.

Infrastructure damage assessment by UNOSAT shows extensive destruction across Gaza, with Gaza City experiencing 83% structural damage and 78% cropland destruction (Table 2). The systematic targeting of residential areas, agricultural land, and energy infrastructure reveals a comprehensive approach to dismantling the basic conditions necessary for sustaining human life. The differential destruction rates across regions—from 83% in Gaza City to 68% in Rafah—correspond to the intensity and duration of military operations in each area. The destruction of 78% of cropland in Gaza City represents a deliberate attack on food production capacity, compounding the effects of the blockade and aid restrictions. The energy grid damage of 65% in Gaza City crippled essential services including water purification, medical facilities, and communication systems, creating conditions incompatible with sustaining human life at a population level.

The correlation matrix reveals strong relationships between infrastructural damage, fatalities, and food insecurity, with correlation coefficients ranging from 0.87 to 0.96 (Table 4). These exceptionally high correlations indicate that infrastructural annihilation systematically corresponds with increased mortality and deprivation. The correlation of 0.89 between infrastructure damage and fatalities suggests that destruction of the built environment directly contributes to loss of life through both immediate violence and the subsequent collapse of life-sustaining systems. The correlation of 0.91 between fatalities and food insecurity demonstrates how population-level destruction creates conditions where malnutrition becomes a weapon of war. These statistical relationships provide quantitative evidence of systematic patterns consistent with genocidal intent under Article II(c) of the Genocide Convention.

Nutrition and mortality indicators show catastrophic deterioration, with acute malnutrition among children under five increasing by 125% from 2024 to 2025, reaching 27.9% (Table 3). Severe wasting in the same demographic increased by 144%, surpassing famine thresholds. The number of households in IPC Phase 5 (famine) increased by 28% to 640,000, confirming systematic food deprivation at population scale. The doubling of malnutrition deaths among children from 73 to 157 represents a failure of the international community to implement effective protection mechanisms despite clear early warning signs. The progression to famine conditions affecting 640,000 households demonstrates how the combination of agricultural destruction, market collapse, and aid obstruction created conditions deliberately calculated to bring about physical destruction through starvation.

Health system functionality collapsed progressively, with only 14% of hospitals operational by 2025 compared to 47% in 2023 (Table 5). Average bed occupancy reached 214%, indicating extreme overcrowding and resource strain. Health worker fatalities increased from 310 to 565 during the study period, demonstrating the systematic targeting of medical infrastructure and personnel. The reduction in patient evacuations from 4,230 to 790 reflects the complete breakdown of medical referral systems and the impossibility of providing adequate care under siege conditions. The dramatic increase in bed occupancy to 214% represents a health system operating at more than double its designed capacity, leading to preventable deaths from treatable conditions and the spread of infectious diseases in overcrowded facilities.

Detention and torture documentation by OHCHR reveals 8,400 reported cases of civilian detention, with 75 verified deaths and medical neglect affecting 68-77% of detainees across different categories (Table 6). These findings indicate systematic violations of international human rights standards in detention practices. The particularly high rate of medical neglect affecting 77% of detained women

suggests gender-specific patterns of abuse and neglect. The detention of 470 minors represents a grave violation of children's rights under international law. The 75 verified deaths in detention facilities point to conditions incompatible with human dignity and the right to life, with the actual number likely higher due to reporting limitations under military censorship and access restrictions.

Aid access denial rates increased from 36.6% in Q4 2023 to 63.6% by Q3 2025 (Table 7), demonstrating progressive restriction of humanitarian assistance. This systematic obstruction of aid convoys corresponds with the deterioration in nutrition indicators and health system collapse, revealing coordinated constraints on life-sustaining resources. The increasing denial rates occurred despite growing international awareness of the humanitarian catastrophe, suggesting intentional policy decisions rather than operational constraints. The denial of 560 out of 880 planned convoys in Q3 2025 represents a deliberate strategy to prevent life-saving assistance from reaching a civilian population experiencing famine and epidemic disease. This pattern of obstruction, when combined with the destruction of local food production and health infrastructure, creates conditions of deliberate deprivation calculated to bring about physical destruction.

5.2 QUALITATIVE FINDINGS

Thematic analysis of survivor testimonies and humanitarian worker accounts yielded five primary themes that provide human context to the quantitative metrics. The theme of starvation as a weapon emerged in 42 instances, with expressions describing deliberate deprivation of food and water. One testimony stated: "We waited for bread until the sky rained fire," illustrating the connection between military action and systematic hunger.

Maternal despair appeared in 35 instances, capturing the trauma of parents unable to protect or provide for children. Accounts included "Milk became a dream," reflecting the collapse of basic nutrition systems and the intergenerational impact of deprivation. This theme demonstrates how structural violence manifests in intimate family contexts and child-rearing experiences.

Institutional fatigue was documented in 28 instances, with humanitarian workers expressing the psychological burden of documenting atrocities they cannot prevent. One worker noted: "We record, but cannot heal," highlighting the moral distress of witnessing systematic suffering without adequate intervention capacity.

Moral outrage emerged in 47 instances, with expressions condemning international inaction. Testimonies included: "The world counts corpses, not causes," criticizing the depoliticization of mortality statistics and the failure to address root causes of violence.

Ethical witnessing appeared in 31 instances, representing attempts to transform documentation into moral accountability. One analyst stated: "Every dataset is a testimony," emphasizing how quantitative metrics can serve as evidence for historical record and legal proceedings.

5.3 INTEGRATION OF QUANTITATIVE AND QUALITATIVE FINDINGS

The convergence between quantitative metrics and qualitative themes provides robust evidence for addressing the research questions. Credibility construction occurs through the alignment of statistical patterns across multiple agencies with consistent narrative accounts from diverse sources. Indicators of genocidal intent emerge from the correlation between infrastructural damage and mortality rates, combined with thematic evidence of deliberate deprivation and systematic obstruction.

Institutional communication shapes moral perception through the tension between technical documentation and ethical witnessing. While OCHA reports maintain neutral framing, the UN COI's conclusion of genocide represents institutional moral positioning that re-politicizes humanitarian data. Survivor testimonies restore human meaning to statistical abstractions, creating a more complete understanding of the crisis that demands both operational response and ethical accountability.

6 DISCUSSION

This study examined three research questions regarding credibility construction in humanitarian narratives, indicators of genocidal intent, and institutional communication's role in shaping moral perception of the Gaza crisis from 2023 to 2025. The findings demonstrate that credibility emerges

through methodological triangulation across multiple United Nations agencies, where quantitative metrics from OCHA, WHO, WFP, UNOSAT, IPC, OHCHR, and UN COI converge with qualitative testimonies from survivors and humanitarian workers. The correlation between infrastructural damage and mortality rates, combined with thematic patterns of starvation as a weapon and maternal despair, reveals systematic patterns consistent with Article II(c) of the Genocide Convention. Institutional reporting frameworks, while often depoliticized in their presentation, function as vehicles for moral witnessing when integrated with survivor narratives that restore human meaning to statistical data.

The findings contribute to scholarship on epistemic justice Fricker (2007) by demonstrating how institutional documentation can either perpetuate or mitigate epistemic injustice in contexts of mass atrocity. The systematic discrediting of Palestinian testimonies in some international discourse creates conditions where quantitative data from multiple agencies becomes essential for establishing credible accounts of suffering. This aligns with Fricker's conceptualization of hermeneutical injustice, where marginalized groups lack the interpretive resources to make their experiences intelligible to dominant social institutions. The convergence between satellite imagery documenting destruction and survivor accounts illustrates how different forms of evidence can mutually reinforce credibility when institutional power is marshaled to document subaltern experiences.

The documentation of structural violence Galtung (1969) through both quantitative metrics and qualitative accounts reveals how political and economic arrangements produce systematic harm. The blockade restrictions, aid convoy denials, and the correlation between infrastructure damage and food insecurity demonstrate how violence becomes embedded in social structures rather than resulting solely from direct physical force. This extends Galtung's framework by showing how humanitarian data can operationalize structural violence through measurable indicators including health system collapse, famine declaration, and mass displacement. The high proportion of civilian fatalities further illustrates the population-wide nature of this structural harm.

The concept of moral witnessing Margalit (2002) provides a framework for understanding how humanitarian reporting transcends technical documentation to become ethical testimony. The UN COI's conclusion that genocide occurred in Gaza represents an institutional act of moral witnessing that re-politicizes humanitarian data. This contrasts with OCHA's situation reports, which maintain technical neutrality while documenting the same underlying realities. The tension between these approaches reflects broader dilemmas in humanitarian communication, where neutrality facilitates access while potentially obscuring moral responsibility. The testimonies from humanitarian workers expressing institutional fatigue and moral outrage illustrate how individual acts of witnessing occur within these constrained institutional contexts.

Researcher positionality shapes the interpretation of both quantitative data and qualitative testimonies. As independent researchers operating outside institutional humanitarian frameworks, we acknowledge the privilege of analyzing data without the operational constraints faced by field workers. This position allows for explicit connection between statistical patterns and legal characterization of events, particularly regarding genocidal intent. However, it also creates distance from the immediate realities documented in the reports. The decision to center Palestinian voices through qualitative testimonies represents an intentional effort to address potential epistemic injustice by ensuring that survivor experiences inform the interpretation of quantitative metrics. This approach recognizes that statistical data alone cannot capture the human meaning of mass starvation or the destruction of medical infrastructure.

The findings have implications for humanitarian documentation practices. The strong correlations between different types of metrics suggest that integrated reporting frameworks capturing both quantitative indicators and qualitative experiences could enhance both operational effectiveness and moral witnessing. The consistency across agencies supports the development of standardized monitoring protocols for documenting potential genocidal conditions in future conflicts. However, the increasing denial of humanitarian access presents challenges for verification that may require greater reliance on remote sensing technologies and digital testimony collection. The use of satellite imagery demonstrates how technological innovations can supplement ground-based documentation when physical access is restricted.

Educational implications include the need for curricula that integrate quantitative humanitarian metrics with ethical frameworks for interpretation. The findings suggest that students in human rights, public health, and international relations would benefit from understanding how statistical

patterns relate to legal concepts like genocidal intent and to ethical concepts like moral witnessing. Training in epistemic justice could help future humanitarian workers recognize and address potential hermeneutical injustices in their documentation practices. The thematic patterns identified in survivor testimonies could inform case studies that ground abstract legal principles in concrete human experiences.

Policy implications emerge from the documented patterns of aid obstruction and health system collapse. The increasing denial rates for humanitarian convoys suggest the need for stronger international mechanisms to enforce humanitarian access in conflict zones. The correlation between infrastructure damage and mortality rates indicates that protection of civilian infrastructure should be prioritized in ceasefire negotiations and humanitarian response planning. The UN COI's legal finding of genocide creates obligations under international law for state parties to the Genocide Convention, suggesting that diplomatic and legal responses should align with these documented patterns of systematic destruction.

The integration of quantitative and qualitative methods in this study demonstrates how mixed-methods approaches can address complex humanitarian crises where both statistical scale and human meaning are essential for understanding. The consistency between different data sources strengthens the credibility of findings while providing multiple entry points for different audiences. Statistical patterns may resonate with policymakers and legal professionals, while qualitative testimonies may engage broader public consciousness. This methodological approach could be adapted for documenting other contexts where mass atrocity occurs amid contested narratives and information warfare.

Limitations of this research include reliance on institutional data collection methods that may be constrained by access restrictions and reporting protocols. The qualitative sample, while diverse, cannot represent all experiences in Gaza during the study period. The remote data collection methods necessitated by security concerns may have affected the depth of qualitative engagement. Future research could explore how digital technologies are transforming humanitarian documentation and moral witnessing in real-time, and how computational methods might assist in detecting patterns of systematic violence across multiple data streams.

The findings contribute to cultural memory by documenting Palestinian experiences of systematic destruction through both statistical records and narrative accounts. This documentation serves as an archival resource for historical accountability and transitional justice processes that may occur in the future. The convergence of evidence across multiple independent sources creates a robust historical record that withstands scrutiny and counters disinformation campaigns. By centering Palestinian voices within institutional documentation frameworks, this research contributes to epistemic justice in how this period will be remembered and understood by future generations.

7 CONCLUSIONS AND FUTURE WORK

This study documented the humanitarian collapse in Gaza from 2023 to 2025 through mixed-methods analysis of United Nations agency reports and survivor testimonies. The research established credibility through methodological triangulation across six independent data sources, revealing systematic patterns consistent with genocidal conditions under Article II(c) of the Genocide Convention. Quantitative correlations between infrastructural damage and mortality rates, combined with qualitative themes of starvation as a weapon and maternal despair, provide comprehensive evidence of population-level destruction. These findings contribute to understanding how institutional documentation can serve as moral witnessing while addressing epistemic injustice in humanitarian reporting.

The qualitative approach centered Palestinian voices and experiences that quantitative metrics alone cannot capture, contributing to ethical documentation and narrative preservation. By integrating survivor testimonies with institutional data, this research creates a more complete record of structural violence that informs both policy responses and educational initiatives. The thematic patterns identified provide insights for developing trauma-informed humanitarian interventions and human rights curricula that acknowledge the lived realities of Palestinian communities under siege. This methodological integration demonstrates how mixed-methods approaches can bridge the gap between statistical documentation and human meaning in contexts of mass atrocity.

Future research should explore the application of computational methods to detect early warning signs of systematic violence across multiple data streams. Studies could examine how digital technologies transform real-time humanitarian documentation and moral witnessing in conflict zones. Additional work is needed to develop epistemically just communication models that preserve the integrity of survivor testimonies while maintaining methodological rigor. Research in conflict medicine could investigate the long-term health impacts of systematic medical infrastructure destruction and aid obstruction on Palestinian populations. Cross-cultural understanding would benefit from comparative analysis of how different societies document and respond to mass atrocity, potentially informing more effective international response mechanisms to prevent future humanitarian collapses.

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