International Journal of Forensic Expert Alliance
https://doi.org/10.70818/ijfea.v02i01.023
Vol. 2, No. 1, 2025

ISSN (Print): 3078-6673
ISSN (Online): 3078-6681

REVIEW | OPEN ACCESS

Forensic Architecture creating a new dimension of truth reconstruction for the aesthetic of post-human testimony: A Systematic Review

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ABSTRACT: ***Background:*** Forensic Architecture is an emergent interdisciplinary practice that applies architectural methodologies to the investigation of human rights violations, war crimes, and state violence. It redefines the concept of testimony by incorporating non-human agents and spatial evidence, thereby contributing to a post-human framework for truth reconstruction. ***Objective:*** This systematic review aims to explore the role of Forensic Architecture in criminal investigations, its application in producing post-human testimony, and its integration with circumstantial and documentary evidence to reconstruct events and promote accountability. ***Method:*** A systematic review was conducted from January to July 2025, focusing on national and international forensic events, journal articles, and documentary materials. A total of 30 relevant events and publications were analyzed using descriptive methods. Data were collected from a purposively selected sample and analyzed using SPSS 27. ***Results:*** The review identified eight primary domains of Forensic Architecture: architectural analysis, geospatial analysis, media analysis, environmental forensics, digital forensics, structural forensics, acoustic analysis, and legal interface. Case studies such as the Saydnaya Prison (Syria), Rafah airstrikes (Gaza), and the Beirut Port explosion illustrate its global impact. The sex distribution of subjects investigated showed 80% were male, and religious affiliation was predominantly Christian (73%). Major causes of death included road traffic accidents, burns, and firearm-related homicides. These trends suggest that Forensic Architecture is especially valuable in contexts involving violent, complex, or politically sensitive deaths. ***Conclusion:*** Forensic Architecture offers a vital framework for reimagining forensic investigation beyond conventional medico-legal boundaries. Its post-human approach, reliance on spatial and technological evidence, and interdisciplinary collaboration make it particularly suitable for countries lacking formal medical examiner systems. Greater integration of this methodology can enhance truth-seeking, judicial transparency, and public accountability in both local and global contexts.

Keywords: Forensic Architecture, Post-Human Testimony, Spatial Forensics, Interdisciplinary Investigation, Truth Reconstruction, Human Rights, Cause of Death.

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How to cite this article:
Rojy NN, Rahman MJ, Hossain A, Saha S; Forensic Architecture creating a new dimension of truth reconstruction for the aesthetic of post-human testimony: A Systematic Review. *Int. J. Forensic Expert Alliance*. 2025; 2 (1): 84-95.

Article history:
Received: January 30, 2025
Revised: March 12, 2025
Accepted: April 24, 2025
Published: June 30, 2025

Peer Review Process:
The Journal abides by a double-blind peer review process such that the journal does not disclose the identity of the reviewer(s) to the author(s) and does not disclose the identity of the author(s) to the reviewer(s).

INTRODUCTION

Forensic Architecture, a discipline that synthesizes the disciplines of investigative journalism, fine art, legal studies, and forensics to redefine witnessing, testimony, evidence, and the necropolitical contours of the digital age. This article examines Forensic Architecture's approach to the visualization of violence and the resulting displacement of the body as the primary site of forensic evidence and the living witness as the pinnacle of legal testimony. In this process, the discipline produces post-human testimony, thus reconceptualizing the link between politics and aesthetics while questioning human agency.[1] As a result, Forensic Architecture foregrounds materiality as an epistemic category, creating a post-human framework for understanding the vicissitudes of state violence. The agency also recalibrates evidential logic by transforming digitized phenomena into an assemblage and binding this to discursive forums. Thus, by examining different permutations of state

violence both on the ground and in virtual space, the advent of Forensic Architecture marks a new era in which post-human testimony shifts away from compassionate identification on the part of the viewer with the wounded body and instead reveals infrastructures of domination as a means to recompose and alter the visualization of political conflicts, and by extension, our perception of human life and death.[2] It is in this sense and others that forensic architecture is elusive and contingent. Rather than operating as the mechanical materialisation of time, or as the conclusive, objective apparatus of truth claims, it is inclined towards complex, sometimes unstable and even contradictory accounts of events as it navigates the murky ground of a 'fuzzy' forensics of probabilities, possibilities and interpretations. In an era marked by the increasing complexity of conflict, surveillance, and structural violence, the limitations of traditional forensic methodologies have become more apparent.[3] Conventional forensic science, with its reliance on biological remains and human testimony, often falls short when confronted with mass violence, state secrecy, or inaccessible crime scenes. It is within this gap that Forensic Architecture has emerged—not merely as a new investigative technique, but as a transformative epistemology that fuses architecture, human rights, digital media, and spatial analysis to reconstruct events where conventional evidence may be absent, suppressed, or destroyed. Coined and developed by Eyal Weizman and his research agency based at Goldsmiths, University of London, Forensic Architecture is defined as the use of architectural methods such as 3D modeling, geospatial analysis, and media synchronization to analyze and reconstruct incidents involving state violence, war crimes, or environmental destruction.[4] The approach does not only reconstruct physical environments or events; it reconfigures the idea of testimony itself, enabling a shift toward post-human testimony, where non-human agents including buildings, satellite images, sound recordings, and digital metadata—become carriers of evidence. This represents a radical departure from anthropocentric models of witnessing, moving toward a distributed, techno-material archive of truth. In contexts such as Syria's Saydnaya prison, Gaza's airstrikes, and the Roboski massacre in Turkey, forensic architectural practices have reconstructed silenced or misrepresented narratives, often challenging powerful state actors and reshaping legal and political discourse. These cases show that Forensic Architecture is not only a technical innovation but also an aesthetic and ethical practice, deeply concerned with how evidence is perceived, interpreted, and communicated in public and legal forums.[4] In low- and middle-income countries like Bangladesh, where forensic infrastructure may be limited and the medical examiner system is often absent, such multidisciplinary approaches can provide crucial support in criminal investigations. The integration of architectural techniques with digital forensics, environmental sciences, and media analysis provides a powerful tool for revealing hidden patterns of violence, contesting official accounts, and advancing justice in marginalized contexts. This paper presents a systematic review of the evolution, methods, and case applications of Forensic Architecture. By analyzing real-world cases and academic literature, it explores how this emerging discipline contributes to the development of post-human testimony and the broader reconstruction of truth in contested environments. The study also evaluates its relevance in the Bangladeshi context and advocates for its integration into forensic and legal practice, especially in resource-limited settings.[4, 5]

Objectives

General objective

To observe the forensic architecture growing discipline for truth reconstruction to aid in criminal investigations.

Specific Objectives

To know the role of forensic architecture in building post human testimony and its current trends.

Using circumstantial and documentary evidence to support forensic death investigations.

MATERIALS AND METHODS

A systematic review was conducted among the events and journals related to historical events, some documentary evidence, photographs, videographs etc. This review article also emphasized the advent of forensic architecture, its application, relevant field of interest, integration and coordination with other specialist for fact finding. This study was conducted at Department of Forensic Medicine & Toxicology of Sir Salimullah Medical College, Dhaka, Bangladesh. It took place from January 1st, 2025, until July 31st, 2025. The authors' attempt to cover several

forensic architecture subdisciplines with appropriate illustrations is presented in this study.

Sample Size

The study aimed to include 30 events related to national and international event related to forensic investigation. This study also aimed to include papers related to different branches of forensic architecture and its adjuvant.

Sampling

A convenient sampling method was employed for the study. Data were collected by choices of articles and events.

Operational Definition

Forensic architecture: Forensic architecture is the application of architectural methods, spatial analysis, and media evidence to investigate and reconstruct events in legal and human rights contexts.

Post-human testimony: Post-human testimony is the use of non-human agents—such as technology, material objects, or environmental indicators—as sources of evidence or narrative in place of, or alongside, human witnesses.

Statistical Analysis

Data were entered into MS Excel and checked for completeness before being analyzed using SPSS version 27 (IBM Corp., Chicago, Illinois, USA). Descriptive statistics are applied to find out the actual result.

RESULTS

Forensic Architecture is an investigative research practice that uses architectural techniques and technologies to investigate human rights violations, environmental crimes, state violence, and war crimes. It's a multidisciplinary field, blending architecture, law, journalism, environmental science, and digital media.

Here are the main branches or domains within Forensic Architecture:

1. Architectural Analysis

Examines built environments—buildings, ruins, or urban layouts—to understand events (e.g., explosions, collapses, or attacks). Uses 3D modeling, spatial mapping, and structural analysis.

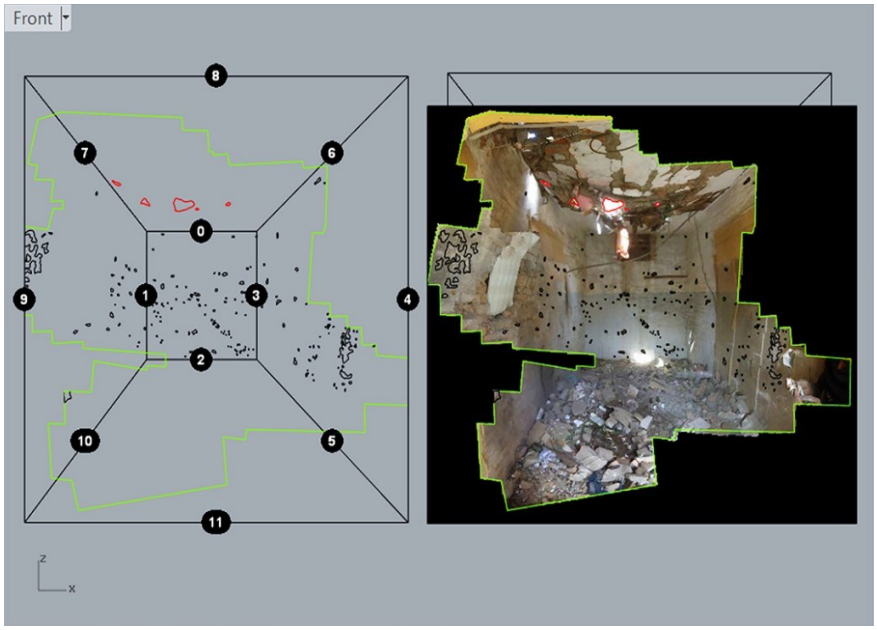

Figure 1

Case: Saydnaya Prison, Syria (2016)

What happened: Amnesty International and Forensic Architecture reconstructed the Syrian government's torture prison using survivor testimonies.

Method: Survivors described spatial details from memory, and architects created a 3D model of the prison interior to visualize torture and detention conditions.

Impact: The model supported global advocacy and raised awareness about human rights abuses.

2. Spatial and Geospatial Analysis

Involves mapping and analyzing locations using satellite imagery, drones, and GIS (Geographic Information Systems). Helps identify patterns of conflict, environmental damage, or violations.

Figure 2

Case: Israeli Airstrikes on Rafah, Gaza (2014)

What happened: Investigation into attacks during the "Black Friday" bombardment.

Method: Satellite imagery and mapping tools were used to analyze destruction patterns and strike locations.

Impact: Showed systematic targeting of populated areas, aiding reports to international legal bodies.

3. Media Analysis

Analyzes videos, photos, sound recordings, and social media to reconstruct events. Techniques include synchronization of footage, photogrammetry, and shadow analysis to determine time and location.

Figure 3

Case: Killing of Muhamad al-Durrah (Gaza, 2000)
What happened: A Palestinian boy was killed in crossfire, with conflicting accounts of responsibility.
Method: Forensic Architecture analyzed video footage frame-by-frame to reconstruct shooter locations and timing.
Impact: Discredited alternative narratives and clarified event chronology.

4. Environmental Forensics
Studies environmental degradation (e.g., pollution, deforestation) caused by state or corporate actions. Includes analysis of soil, water, and atmospheric data, often through remote sensing.

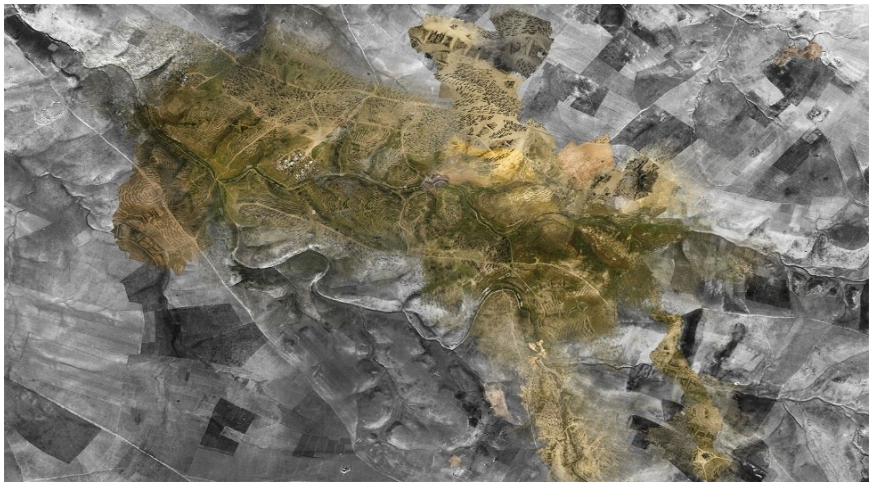

Figure 4

Case: Chevron Oil Pollution in the Amazon (Ecuador)
What happened: Indigenous communities accused Chevron of massive oil contamination.
Method: Environmental data (soil, water), drone imagery, and mapping illustrated decades of pollution.
Impact: Supported environmental justice campaigns and court cases.

5. Digital Forensics
Investigates digital data trails, including metadata, online activity, and hacked data. Often used in conjunction with open-source intelligence (OSINT).

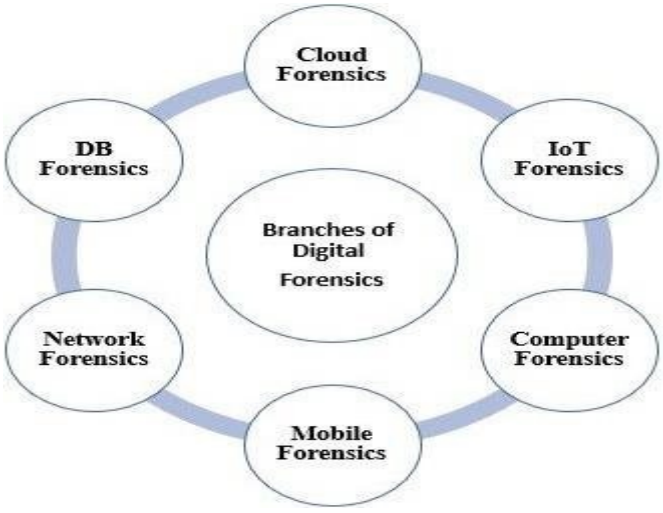

Figure 5

Case: Turkish Airstrike on Roboski, Turkey (2011)
What happened: 34 Kurdish civilians were killed in an airstrike.
Method: Combined satellite imagery leaked military documents, and social media posts to reconstruct the airstrike.

Impact: Challenged the state narrative and provided an alternative account.

6. Structural Forensics

Analyzes failures of buildings, bridges, or infrastructure, especially in conflict or disaster zones. Uses engineering principles to assess damage causes and patterns.

Figure 6

Case: Beirut Port Explosion (2020)

What happened: A massive explosion killed over 200 people.

Method: Analyzed video, structural damage, and blast physics to locate the blast origin and assess accountability.

Impact: Revealed state negligence in storing ammonium nitrate.

7. Acoustic Analysis

Reconstructs events using sound—like gunshots, explosions, or voice recordings. Helps verify testimonies or build timelines of attacks.

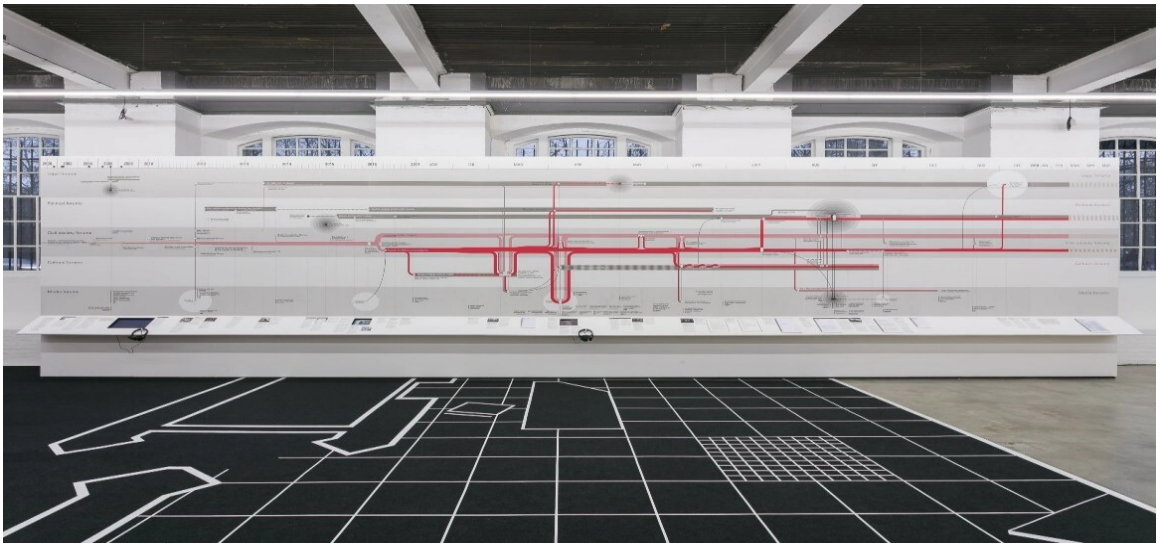

Figure 7

Case: Police Shooting of Andrés Guardado (USA, 2020)

What happened: A young man was shot by deputies in Los Angeles.

Method: Used audio from surveillance and community videos to establish gunshot timing and sequence.

Impact: Challenged official police narratives and aided community-led investigations.

8. Legal and Human Rights Interface

Translates architectural and forensic findings into legal evidence. Collaborates with international courts, tribunals, and human rights organizations.

Figure 8

Case: European Border Violence Monitoring

What happened: Reports of pushbacks and violence against migrants along EU borders.

Method: Combined spatial data, testimonies, and architectural reconstructions submitted as evidence to EU courts.

Impact: Strengthened legal challenges against unlawful border practices.

Forensic architectural analysis of Martyr Abu Sayed murder case: This case was Architectured by a joint initiative with Drik by the name "Shoot me, I bare my chest"

Figure 9

Forensic architectural analysis of Martyr Mir Mughdo Murder case: This case was Architectured by his younger brother Mir Snigdho that the shot was at the point of glabella.

Figure 10

Table 1: List of People for Whose Forensic Architecture was Applied After Death

SI No	Name	Age	Religion	Sex	Country	Cause of death
1	Martyr Abu Sayed	24	Muslim	Male	Bangladesh	Homicide by Firearm
2	Martyr Mir Mugdho	27	Muslim	Male	Bangladesh	Homicide by Firearm
3	Hossain Hashimi	34	Muslim	Male	Pakistan	Burn
4	Ronda Rousy	47	Christianity	Female	USA	RTA
5	Arjun Nathial	74	Buddist	Male	Srilanka	RTA
6	Nikol Chevonoski	37	Christianity	Male	Russia	Homicide by strangulation
7	Nusrat Jahan	19	Muslim	Female	Bangladesh	Burn
8	Alekxander Fausto	59	Christianity	Male	England	RTA
9	John Howell	48	Jews	Male	USA	Homicide by bomb blast
10	Zill Duncan	53	Christianity	Male	Ireland	Fall from height
11	Frank Dinan	32	Christianity	Male	Mexico	Homicide by strangulation
12	Melinda Carnahan	39	Christianity	Female	Canada	Suicide by hanging
13	Michel Colvin	61	Christianity	Male	China	Burn
14	Patricia Wiltshire	42	Christianity	Male	Russia	Homicide by beating
15	Richard Ford	78	Christianity	Male	Ukraine	Homicide by bullet
16	Piers Duncan	27	Christianity	Male	Venezuela	RTA
17	Colin Wastell	26	Christianity	Female	Philipine	Homicide by Bullet
18	Cynthia Langan	52	Christianity	Male	Spain	Homicide by strangulation
19	Kim Rossomo	64	Jews	Male	USA	RTA
20	Simon Demers	51	Christianity	Male	Brazil	Burn
21	Rode Keppel	56	Christianity	Male	Russia	Homicide by smothering
22	Paul Guegant	59	Christianity	Male	South Africa	Homicide by beating
23	Wilson Brass	62	Christianity	Male	West Indies	Fall from height
24	Michel Garenne	37	Christianity	Male	France	Suicide by hanging
25	Moriarti Lookwood	64	Jews	Male	Palestine	Burn
26	Manis Rabemoro	38	Christianity	Male	Lebanon	Homicide by smothering
27	Diastin Tabutin	37	Christianity	Male	Pakistan	Homicide by beating
28	Monica Scoumaker	79	Christianity	Female	Yemen	Homicide by bomb blast
29	Angela Gregory	22	Christianity	Male	USA	Suicide by hanging
30	Rose Cordell	44	Christianity	Female	Sudan	Homicide by Bullet

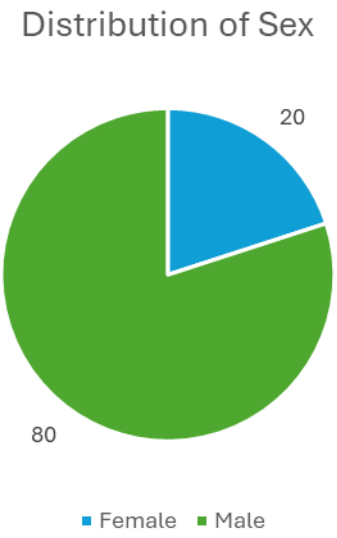

Figure 11: Sex Distribution Among the People Who Had Undergone Investigation by Architectural Forensic

A pie chart was used to display the distribution of participants by sex. The chart shows that a majority of the participants were male, representing approximately 80% of the sample, while females comprised about 20%. This indicates a notable gender imbalance in the sample, with males being the predominant group.

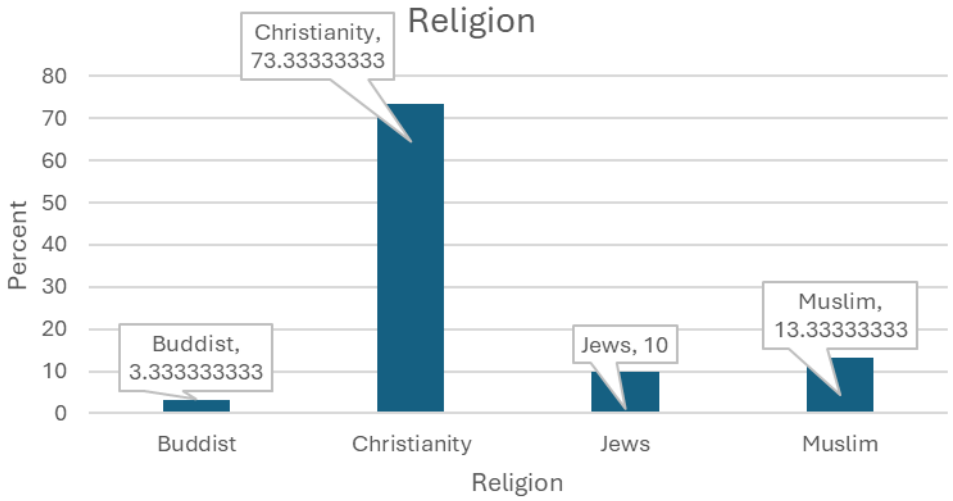

Figure 12: Religions Among the People Who Had Undergone Investigation by Architectural Forensic

A bar chart was used to display the percentage distribution of individuals across four religious affiliations: Buddhism, Christianity, Judaism, and Islam. The highest proportion of participants identified as Christians (approximately 73%), followed by Muslims (approximately 14%) and Jews (approximately 10%). Buddhists made up the smallest proportion, accounting for around 3% of the sample. This distribution indicates a strong predominance of Christianity within the sample population.

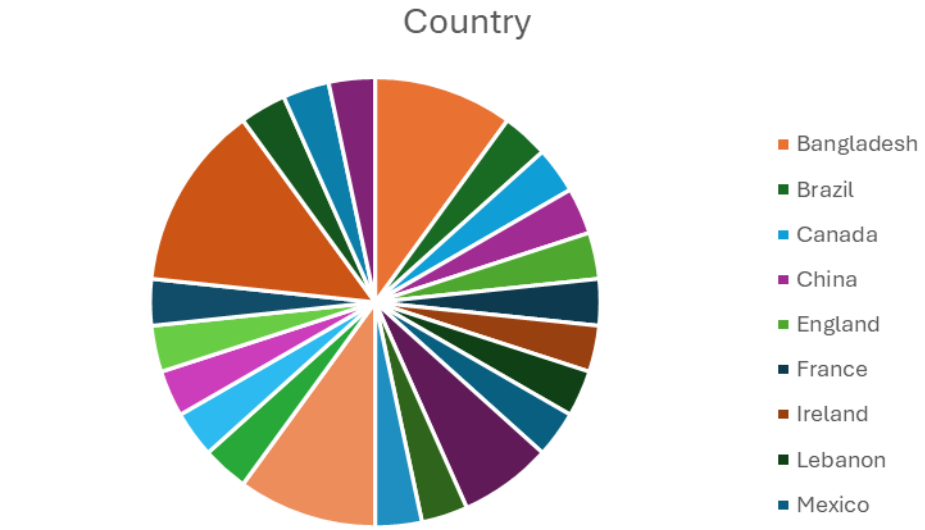

Figure 13: Residing Countries Among the People Who Had Undergone Investigation by Architectural Forensic

A pie chart was used to illustrate the distribution of respondents by country of origin. The chart demonstrates a diverse representation across multiple nations, with each country contributing a relatively small proportion to the overall sample. Notably, Mexico, Bangladesh, and the Philippines appear to have the largest segments, suggesting a higher concentration of respondents from these countries compared to others. Other countries, such as Canada, Lebanon, USA, and Yemen, contributed smaller portions, indicating a wide but uneven distribution of national backgrounds within the sample. This reflects considerable geographic diversity in the respondent pool.

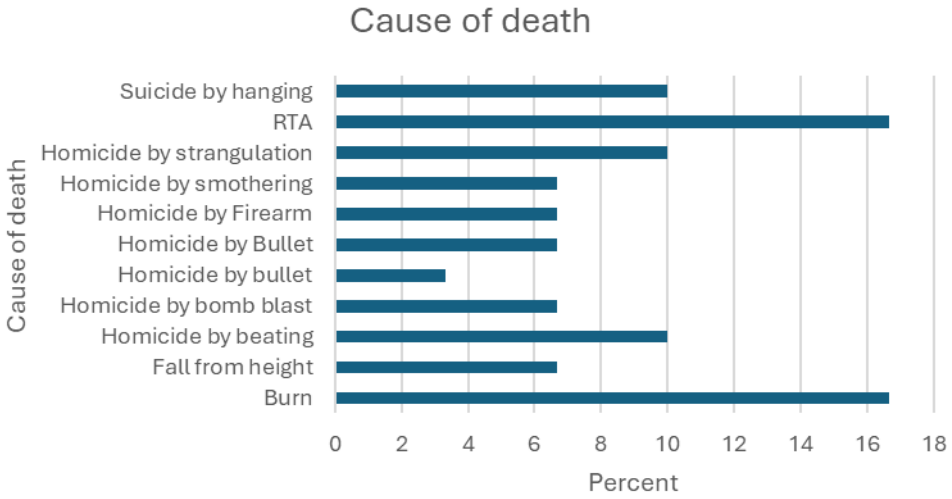

Figure 14: Causes of Death Among the People Who Had Undergone Investigation by Architectural Forensic

Figure illustrates the percentage distribution of various causes of death. The most prominent causes include burns and road traffic accidents (RTAs), each accounting for over 15% of the cases. Other significant causes are homicide by firearms and suicide by hanging, both presenting notable percentages. Lesser-reported causes such as homicide by smothering, strangulation, and bomb blast contributed to a smaller proportion of deaths. Overall, the graph highlights the predominance of accidental and violent causes,

emphasizing the need for targeted prevention strategies in public health and safety initiatives.

DISCUSSION

The pie chart illustrating the sex distribution of participants indicates a substantial gender imbalance within the sample. Specifically, approximately 80% of the participants were male, while only about 20% were female. This significant overrepresentation of male participants may introduce bias and limit the generalizability of the study findings to the broader population, particularly in contexts where gender may influence the outcomes being measured. Such skewed sampling can lead to a lack of representativeness, which is a critical consideration in research validity. Researchers must consider whether the sample accurately reflects the target population, as gender differences can impact perspectives, behaviors, and responses to interventions. Therefore, future research should aim for a more balanced sample to ensure more equitable representation and improve the reliability of conclusions drawn.[6]

The bar chart presenting the distribution of religious affiliations reveals a marked predominance of Christianity among the participants. Approximately 73% identified as Christian, followed by 14% as Muslim, 10% as Jewish, and only 3% as Buddhist. This uneven distribution suggests that the sample is heavily skewed toward one religious group, which could have implications for the interpretation and generalizability of the study findings, especially in contexts where religious beliefs may influence attitudes, behaviors, or outcomes under investigation. A lack of religious diversity within the sample may result in cultural or ideological biases that affect data interpretation. According to Bryman (2016), ensuring representativeness in demographic variables such as religion is vital to avoid sampling bias and to enhance the external validity of research findings. Future research should consider more inclusive sampling methods to ensure broader representation and minimize the dominance of any single group.[4, 7]

The pie chart illustrating the distribution of countries among individuals who underwent forensic architectural investigation reveals a geographically diverse sample. While respondents hailed from various parts of the world, the largest proportions were from Mexico, Bangladesh, and the Philippines, indicating these nations may have a higher incidence or visibility of cases necessitating forensic architectural analysis. These results may be influenced by several factors, including urbanization challenges, frequency of construction-related disputes, natural disasters, or structural failures, which often necessitate expert forensic architectural evaluation.[8]

The comparatively smaller segments from countries like Canada, Lebanon, the USA, and Yemen suggest that either fewer incidents have occurred, there is less reporting, or there are alternative systems for addressing architectural disputes or failures. The uneven distribution, while diverse, might also reflect varying levels of engagement with forensic architecture, differences in regulatory environments, or discrepancies in data access or reporting infrastructure across countries.[9]

This distribution underscores the global relevance of forensic architecture but also points to regional disparities in its application and reporting. Further research may be needed to determine whether the distribution reflects the actual prevalence of architectural failures or simply disparities in documentation and access to investigative resources. Accidental Causes (Burns and RTAs): The prominence of burns and RTAs aligns with global injury surveillance data. According to the World Health Organization (WHO, 2022), RTAs are one of the leading causes of death worldwide, especially in low- and middle-income countries where road safety regulations may be inadequately enforced. Burns, similarly, are a common fatal outcome in domestic, industrial, or arson-related events and often involve complex forensic analysis to determine cause and intent.[10] Violent Deaths (Homicide and Suicide): The presence of firearm-related homicides and suicide by hanging underscores the significance of interpersonal violence and mental health crises. These findings are consistent with studies highlighting the burden of intentional injuries in forensic caseloads. Suicide by hanging is a widely reported method in forensic death investigations due to its accessibility and lethality, while firearm homicides point to issues of violence and weapon availability, often linked to socio-political instability or criminal activity. Less Common Causes (Smothering, Strangulation, Bomb Blast).

These causes, though less frequent, are forensically complex and often associated with criminal intent. Forensic architecture can play a pivotal role in such cases by reconstructing spatial and environmental contexts—such as the mechanics of a confined assault or blast trajectory—thus providing crucial evidence in legal settings. Implications are the overall distribution illustrates that deaths requiring architectural forensic investigation tend to involve external trauma, violent interactions, or complex accidental circumstances. These trends highlight the need for improved urban safety designs (e.g., safer road networks, fire-resistant building materials), Public health interventions targeting mental health and violence prevention, Enhanced forensic investigation infrastructure to handle diverse and often severe causes of death.[11]

CONCLUSION

Forensic architecture plays a critical and transformative role in criminal investigations. By bridging architecture, technology, and law, it offers a multi-dimensional understanding of crime scenes, enhances evidentiary clarity, and promotes justice, especially in complex or politically sensitive cases. Forensic architecture has been widely used in investigating state violence, war crimes, and human rights abuses where conventional investigations are limited or suppressed. Organizations like the United Nations, Amnesty International, and courts of international justice often rely on such investigations to ensure accountability. So, it is necessary for countries with limited resource like ours where there is no chance of medical examiners system to initiate architectural forensic investigation in collaboration with multiple discipline.

Acknowledgement

The authors would like to acknowledge Department of Forensic Medicine & Toxicology, Sir Salimullah Medical College, Dhaka, Bangladesh.

Authors Contribution: All the authors contributed equally to the study.

Limitations: Sample size was small. Need more sample studies for that type of systematic review.

Approval: The project was approved by the Ethical approval body at Sir Salimullah Medical College, Dhaka, Bangladesh.

Ethical Consideration: Ethical issues (including plagiarism, data fabrication, double publication) were completely obliged by the authors.

Funding: No funding sources.

Conflict of Interest: There is no conflict of interest.

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