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**Fatalities in the Israeli-Palestinian  
2000-2023**

# **“Analysis of Fatalities in the Palestine- Israel Conflict”**

## **Introduction**

The Israel-Palestine conflict has resulted in significant loss of life over the years. This report analyzes a dataset containing fatalities recorded between 2000 and 2023, aiming to provide insights into trends, demographics, and circumstances of deaths. The objective is to present findings that help understand the conflict’s human impact.

## **Dataset Overview**

- **Source: Kaggle**
  - ✓ By **Willian Olivea** under the name “**Fatalities in the Israeli-Palestinian**”.
  - ✓ **Link:** <https://www.kaggle.com/datasets/willianoliveiragabin/fatalities-in-the-israeli-palestinian>
- **Total Records:** 11,124 fatalities
- **Columns Include:**
  - ✓ Name, Age, Gender, Citizenship
  - ✓ Date of Event, Date of Death
  - ✓ Location Details (City, District, Region)
  - ✓ Cause of Death, Ammunition Used
  - ✓ Killed By, Notes
- **Data Quality Considerations:** Some missing values in attributes such as ammunition type and involvement in hostilities.

## **Objectives of the Analysis**

- Identify trends in fatalities over time.
- Analyze demographic distributions (age, gender, citizenship).
- Examine geographical patterns of incidents.
- Explore the relationship between involvement in hostilities and cause of death.

## **Preliminary Insights**

- Most fatalities are recorded in the West Bank and Gaza.
- Gunfire is the most common cause of death.
- Many fatalities involve young individuals.
- Majority of the victims are Palestinian civilians.

## **Project's Steps**

- **Data Exploration & Cleaning:** Handling missing values, checking data consistency.
- **Statistical & Visual Analysis:** Creating charts with Python (Pandas, Seaborn, Matplotlib).
- **Power BI Dashboard:** Summarizing insights for non-technical audiences.
- **Conclusions & Recommendations:** Final interpretations based on findings.

## **“Data Cleaning”**

### **Handling “Age” Outliers & Missing Values**

#### **✓ Problem & Solution:**

There were 129 missing values in the “age” column. They were filled with the average value of the remaining predefined values.

#### **✓ Comment:**

Many victims in the dataset are young, and missing values in age can distort analysis. To preserve accuracy, we fill missing ages with the median and remove extreme outliers.

#### **✓ Conclusion:**

Younger individuals form most victims. This indicates that the Palestinian population, including children and young adults, suffers heavily from conflict-related deaths.

### **Handling “Gender” Missing Values**

#### **✓ Problem & Solution:**

There were 20 missing values in the “gender” column. They were filled with the “Unknown” text.

#### **✓ Conclusion:**

Significant female casualties indicate a high toll on civilians.

## **Handling “Took Part in Hostilities” Column**

### **✓ Problem & Solution:**

There were 1430 missing values in the “took part in hostilities” column. These values can never be neglected, they affect directly on the studies made on the dataset, so they were filled with the “Unknown” text.

### **✓ Conclusion:**

Many fatalities are civilians. This supports the argument that many Palestinian casualties are non-combatants.

## **Handling “Took Part in Hostilities” Column**

### **✓ Problem & Solution:**

There were 5253 missing values in the “ammunition” column. Since this column doesn’t affect our studies and more than 50% of the data are missing, we can drop it.

## “Data Exploration & Key Relationships”

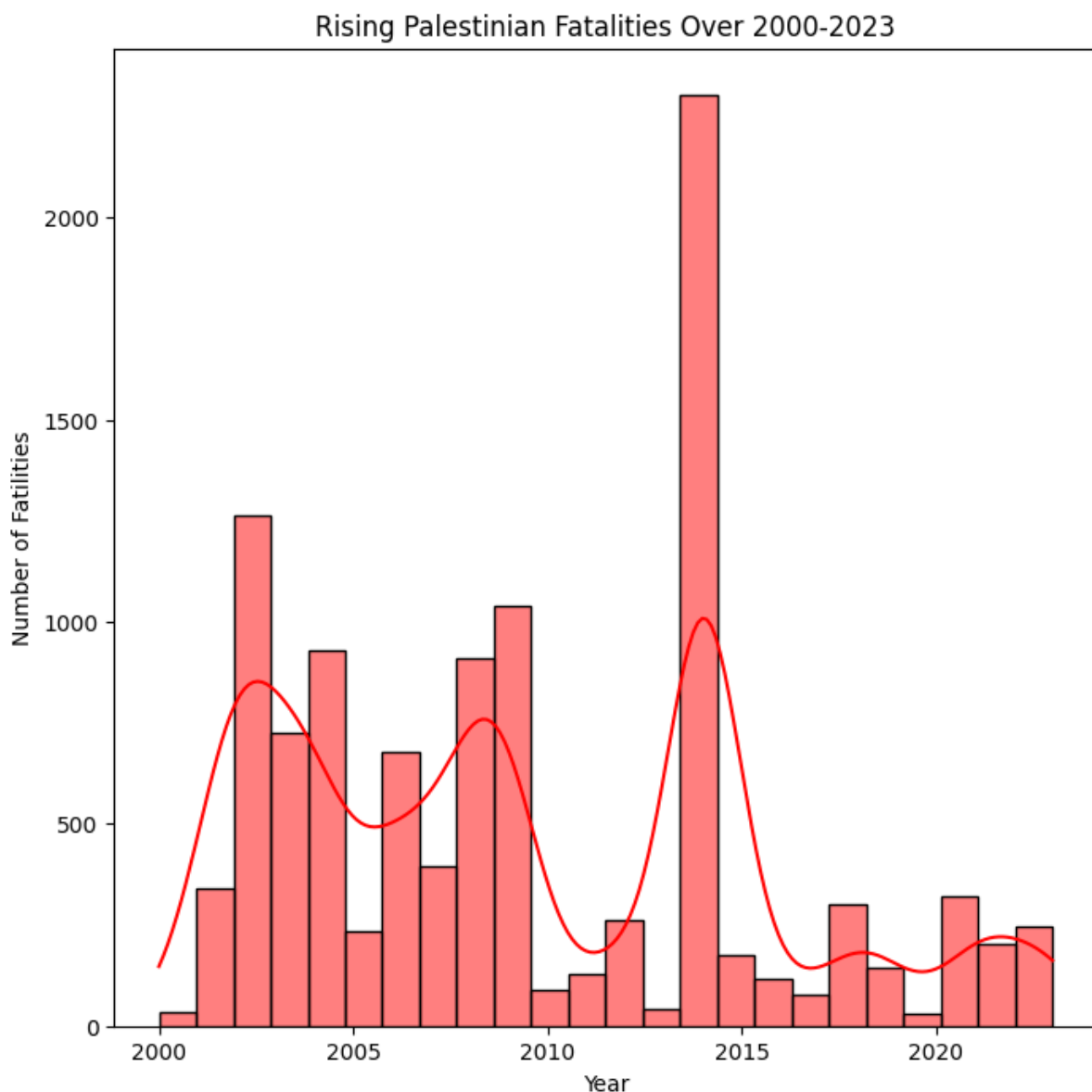
### Number of Fatalities Over Time

#### ✓ **Comment:**

This graph demonstrates a significant increase in fatalities over time, with sharp rises during periods of intense Israeli military operations, reinforcing the argument of ongoing and escalating violence against Palestinians.

#### ✓ **Interpretation:**

Clear upward trend in Palestinian fatalities. Certain years have extreme spikes, indicating escalations in Israeli military operations.



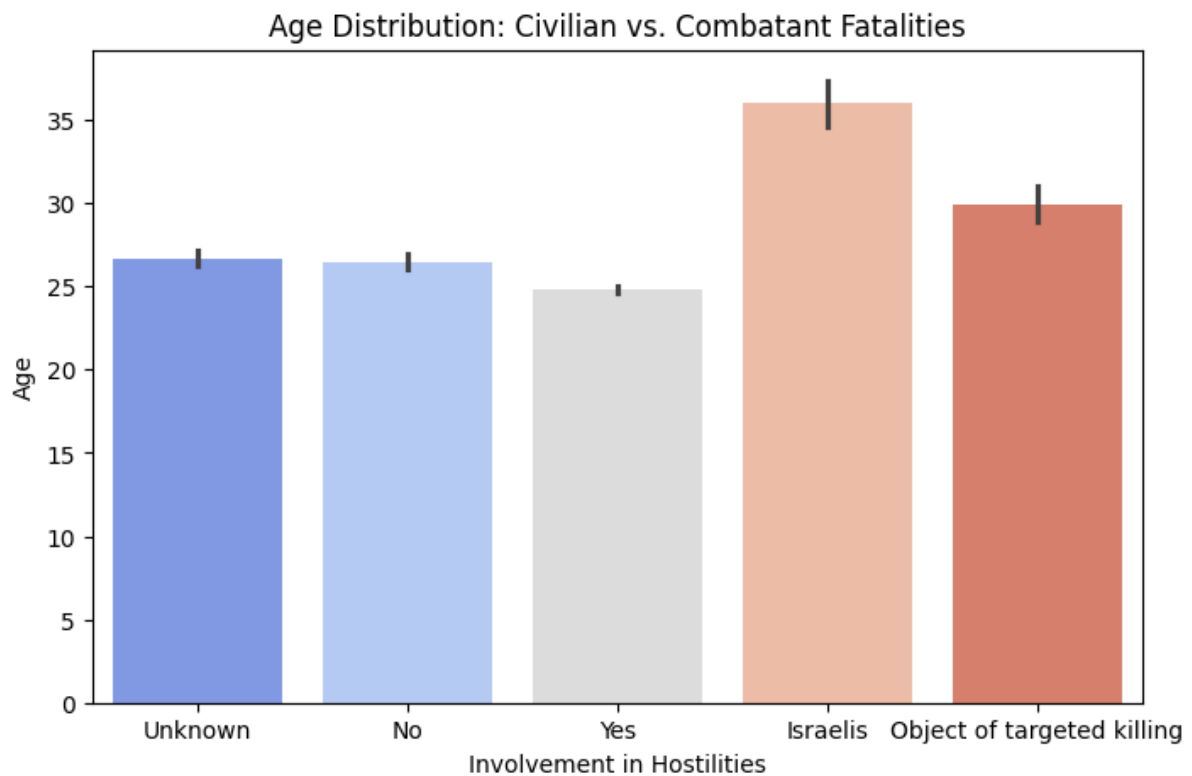
## **Age vs. Participation in Hostilities:**

### **✓ Comment:**

This visualization highlights that many victims are minors and non-combatants, underscoring the toll on Palestinian civilians rather than just combatants.

### **✓ Interpretation:**

Children and young adults are frequently victims, even when not involved in hostilities. This further emphasizes that Palestinian civilians, including minors, are disproportionately affected.



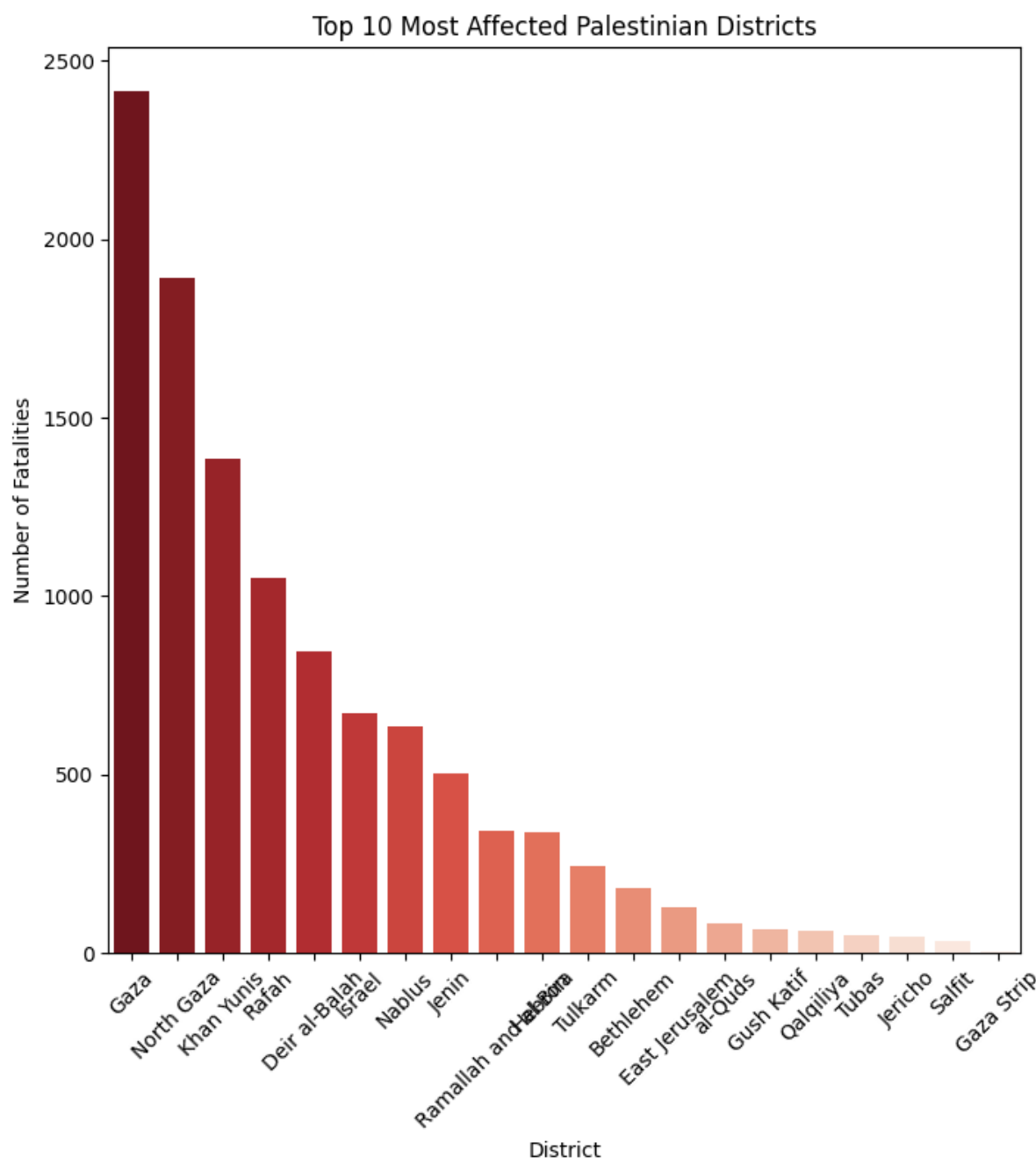
## Regions with the highest number of fatalities

✓ **Comment:**

This visualization highlights that many victims are minors and non-combatants, underscoring the toll on Palestinian civilians rather than just combatants.

✓ **Interpretation:**

Certain Palestinian districts face an overwhelmingly high number of casualties. This suggests areas under prolonged Israeli military pressure.





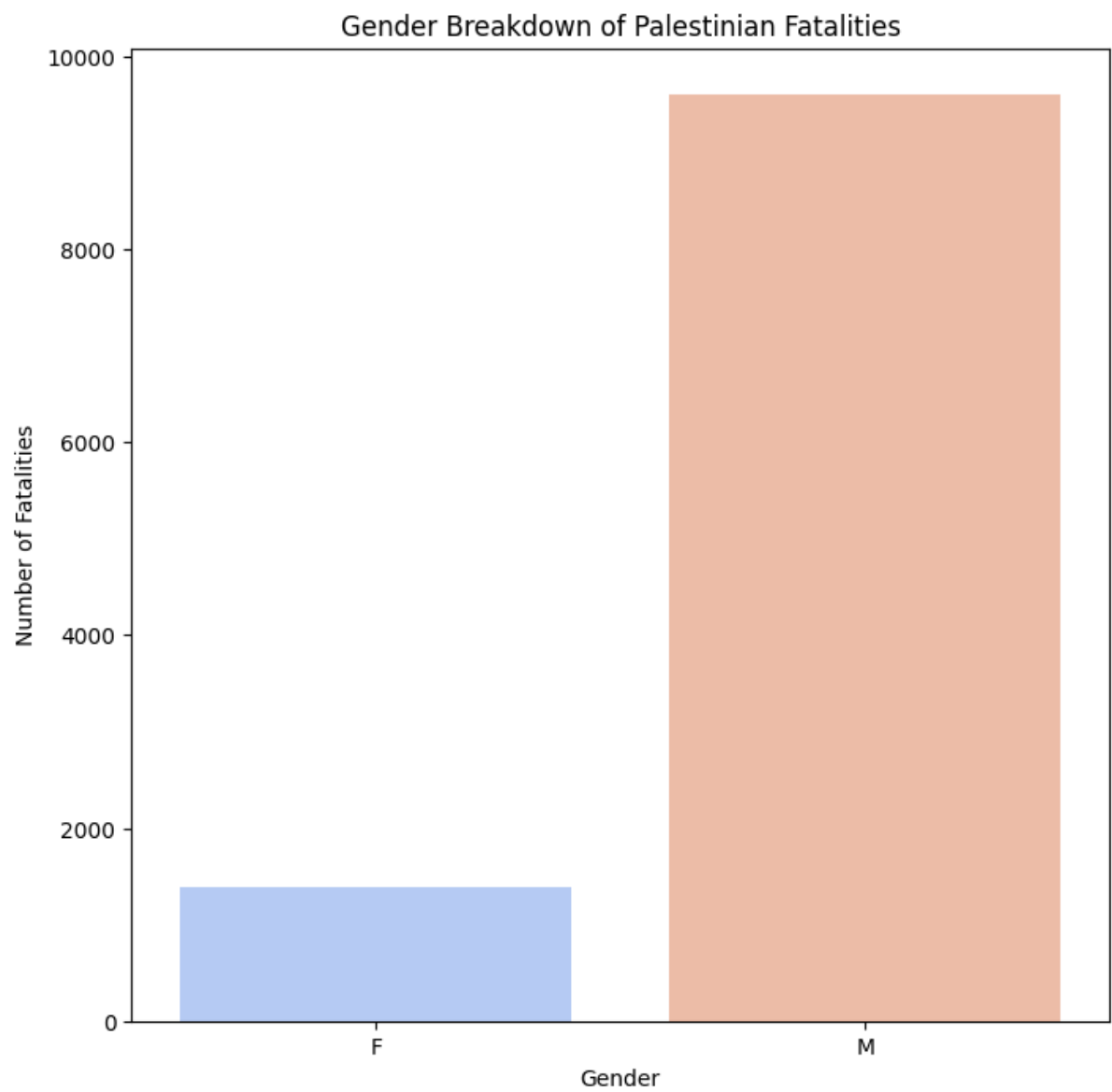
## Gender vs Fatalities

✓ **Comment:**

The gender distribution shows that while men form the majority of fatalities, the significant number of female deaths underscores the toll on civilians and the indiscriminate nature of the conflict.

✓ **Interpretation:**

Men account for the majority of deaths, but female casualties highlight civilian impact. The high number of male fatalities suggests targeted operations, while the presence of women victims further emphasizes indiscriminate violence.



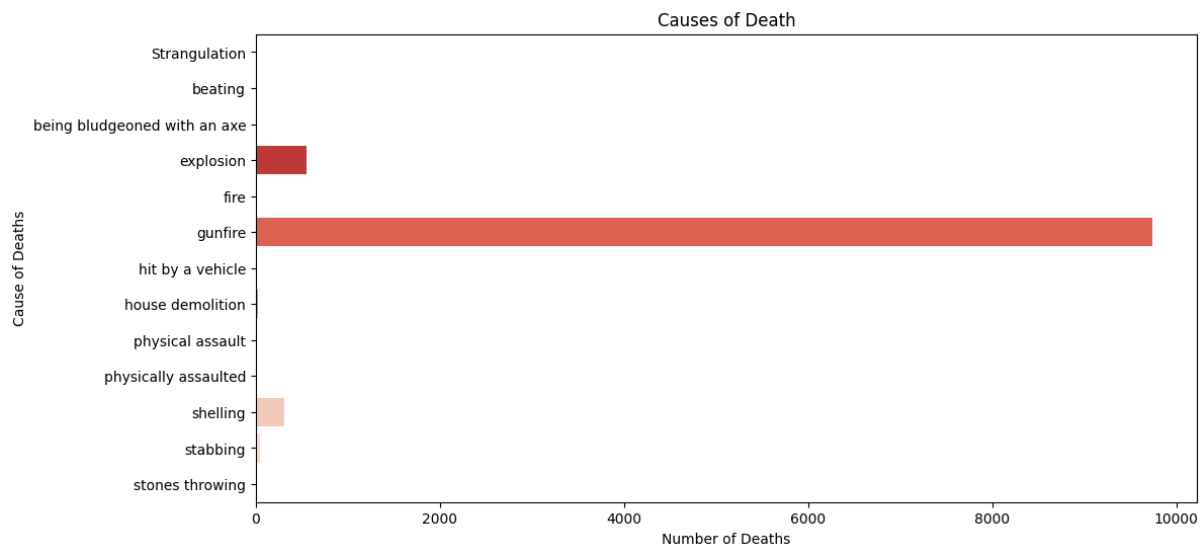
## **Causes of Deaths**

### **✓ Comment:**

The chart shows that gunfire is the leading cause of death by an overwhelming margin. The visualization effectively highlights the dominance of military force in the conflict.

### **✓ Interpretation:**

The data suggests that Israeli military actions are responsible for most fatalities, as gunfire is the primary cause of death. This contradicts the narrative that the conflict is balanced, showing that lethal force is disproportionately used against Palestinians.



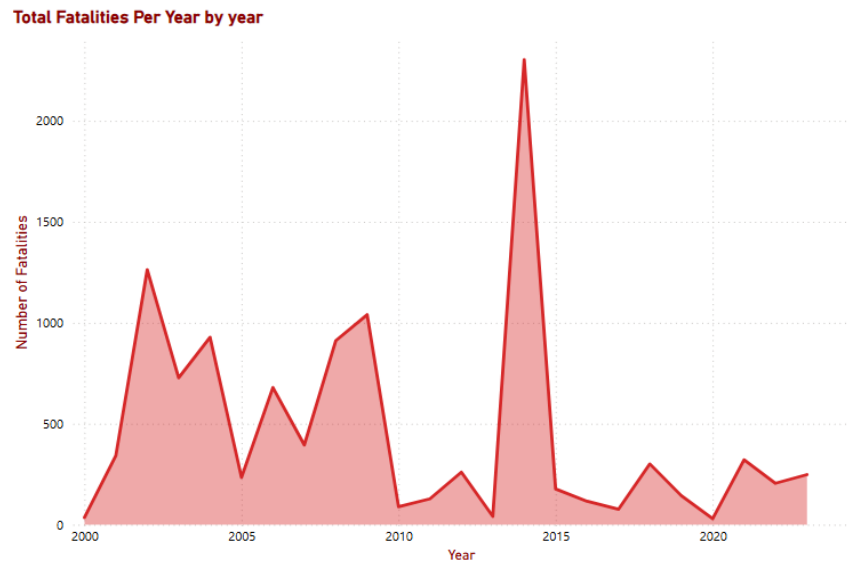
## **Overall Conclusion:**

- Fatalities among Palestinians have increased over time, with spikes during Israeli military actions.
- A large portion of the deaths are civilians, including children and women.
- Some Palestinian districts are consistently the most affected, showing regional targeting.
- Hostilities involvement data suggests that many fatalities were non-combatants.

# “Power BI & Dashboards”

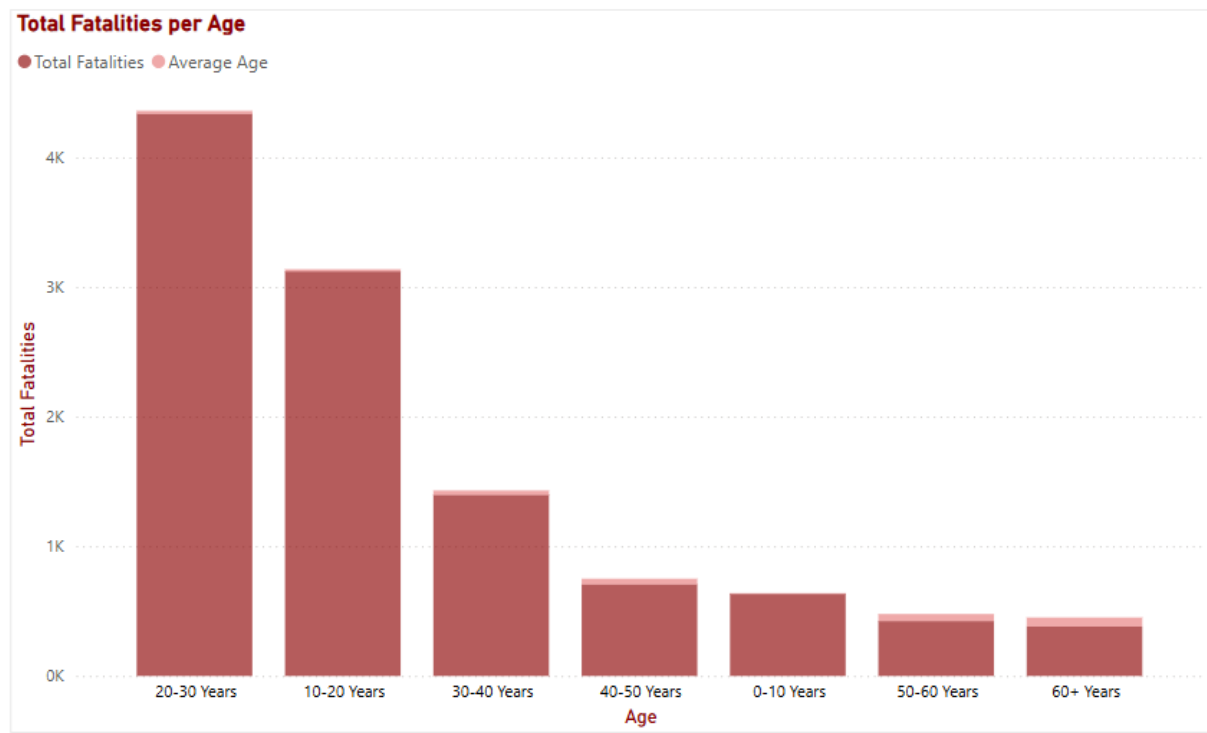
## Total Fatalities Over the Years

"When we look at fatalities over the years, we notice fluctuations—periods of increased violence followed by relative declines. These trends may reflect periods of political or military escalation and de-escalation."



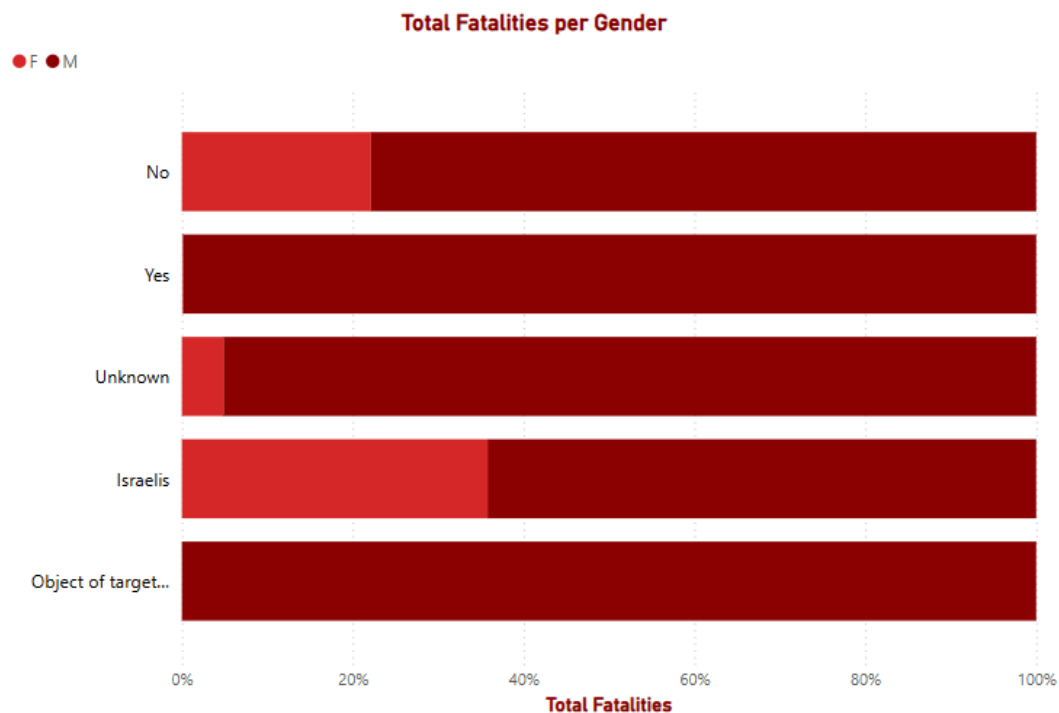
## Total Fatalities per Age

"This visualization shows the distribution of victims by age group. The highest fatality rates are among young adults (20-40 years old), suggesting that this demographic is the most affected or engaged in the conflict."



## Fatalities by Gender

"This chart highlights the gender disparity in fatalities. Clearly, male fatalities significantly outnumber female ones, which may be linked to patterns of participation in conflicts or targeted actions."



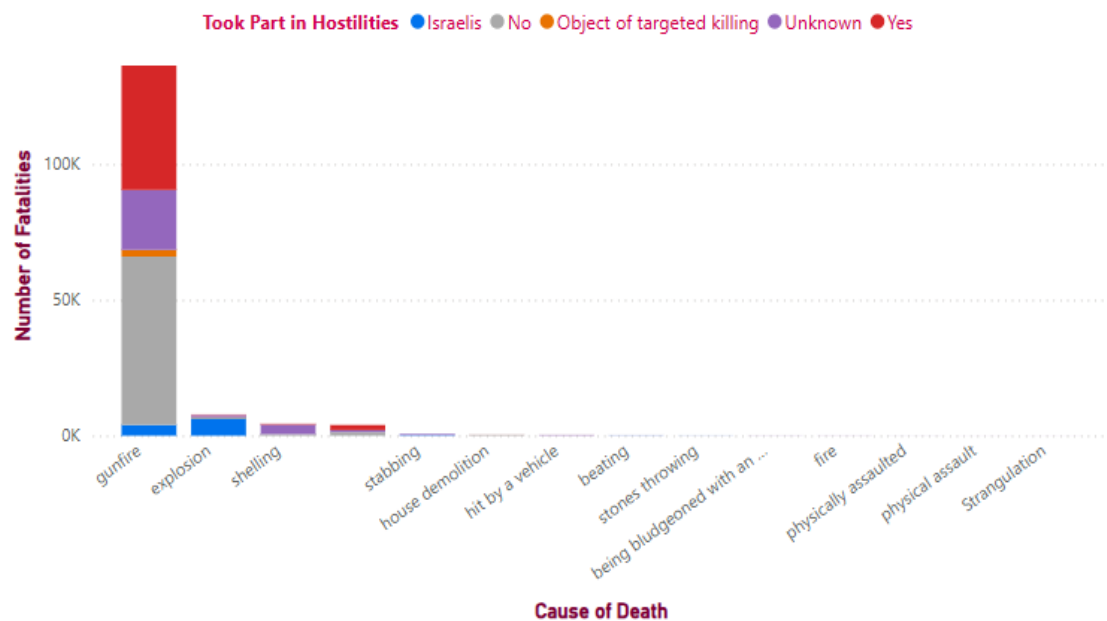
## Total Fatalities by Geographic Location

"Here, we see how fatalities are distributed geographically. The data reveals whether violence is concentrated in specific regions or spread across multiple areas."



## Fatalities by Cause of Death

"This breakdown analyzes different causes of death—gunfire, explosions, shelling, and others—while also considering whether the victims were directly involved in hostilities. Were these fatalities the result of targeted attacks, or were civilians caught in conflict zones?"



## Total Fatalities by Nationality and Gender

"This visualization categorizes fatalities by nationality and gender, highlighting whether certain groups were disproportionately affected. Are there noticeable differences in how men and women from different nationalities were impacted?"

Female vs Male Fatalities



## Total Fatalities by Perpetrator (Killed By)

"This chart identifies the responsible parties behind the fatalities—whether security forces, civilians, or other entities. Understanding these dynamics is crucial for assessing the nature of the conflict and its key actors."

### Killed by



## **Overall Conclusion for the Project**

Over the past two decades, the data reveals a distressing trend of increasing Palestinian fatalities, particularly during Israeli military escalations. Most of these deaths are civilian casualties, including women and children, highlighting the indiscriminate nature of the violence.

Gunfire remains the primary cause of death, further indicating the militarized approach to the conflict. Geographical analysis shows that certain Palestinian regions, especially Gaza and the West Bank, are disproportionately affected, experiencing sustained and severe violence.

The dataset also indicates that many of the deceased were not involved in hostilities, challenging narratives that frame these deaths as purely combat-related. Instead, the evidence suggests systemic targeting of Palestinian civilians, contributing to the ongoing humanitarian crisis.

This analysis underscores the urgent need for international accountability and intervention to prevent further loss of innocent lives.