POLICE SHOOTINGS ANALYSIS

In the recent US police killings, a rather serious and important concern came into being, "Racism". Many concerns have been raised about the Police in America shooting crime suspects based on racism.

Phase 1 – Ask Questions (Define Objectives)

Are the American Police Shootings of crime suspects driven by race? If so, what race has the highest percentage of shootings?

Goal – Identify the actual cause of Police Shootings

Possible Questions for analysis:

1. What percentage of people died by shots only or tasers and shots?
2. Does the race have any effect on the manner of death?
3. Do the arms affect the decision of the police to use shots only or tasers and shots?
4. Is the manner of deaths driven by the signs of mental illness status of crime suspects?
5. Is the threat level a determining factor for the manner of death?
6. What are the effects of gender on the various shootings?
7. Which city records the highest shootings?
8. Which state records the highest shootings?
9. Did the attempt to flee influence shootings?

Phase 2 – Data Collection and Preparation (Data Sources)

A single table with the following columns was obtained:

- id – The Shootings Record ID
- name – The Name of the Crime Suspect
- date – The Date the Shooting was done
- manner_of_death – How Crime Suspect died (shot or tasered and shot)
- armed – The Arms (Weapon) held by the Crime Suspect
- age – The Age of the Crime Suspect
- gender – Whether the Crime suspect is Male or Female
- race – The race of the Crime Suspect (White, Black, Hispanic, Asian, Native or Other)

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- city – The City where Shooting was done
- state – The State where the Shooting was done
- signs_of_mental_illness – Boolean, indicating whether Crime Suspect demonstrates signs of mental illness or not
- threat_level – The level of threat displayed by Crime Suspect (Attack, Other and Undetermined)
- flee – By what means the Crime Suspect was fleeing or if they did not flee at all (Car, Foot, Other and Not Fleeing)
- body_camera – Boolean, indicating whether Police Officer had a body camera, suggesting if incident was recorded or not
- Arms_category – What Category of arms / weapons was possessed by the Crime Suspect

Phase 3 – Data Processing / Transformation (Data Cleaning)

Data Cleaning Procedures

The following actions were taken to clean the data.

1. Changed the id column from INT datatype to TEXT datatype.
2. Replaced the values “chain saw” with “chainsaw” in the armed column. [Problem of Data Inconsistency]
3. Changed the age column from DECIMAL to INT.
4. Replaced the value “Achorage” with “Anchorage” in the city column. [Problem of Data Inconsistency]

Phase 4 – Analyse Data

Delving deep into the analysis phase of the data, there was the need to split the visualisations into a dashboard and three reports; Geography, Age/Gender and Officer-on-Duty Reports.

Visualizations Used

1. Map
2. Clustered Column Chart
3. Clustered Bar Chart

4. Donut Chart
5. Funnel Chart
6. Tree Map
7. Card Visuals
8. Slicers
    - Date (Year)
    - Age Group
    - State
    - City
    - Arms Category
    - Gender
    - Manner of Death
    - Body Camera
    - Signs of Mental Illness

Analysis – Aggregations

Calculated Tables

A table was calculated using a Dax function to group the age into toddlers (5 – 12 years), teenagers (13 – 19 years), working force (20 – 59 years) and pensioners (60 years +). The function continued to calculate the total shootings for each of these categories as well. Below is the function:

```
_AgeGroupingsTable =
SUMMARIZE(
    ADDCOLUMNS(
        shootings,
        "AgeGroup",
        SWITCH(
            TRUE(),
            shootings[age] >= 1 && shootings[age] <= 11, "Toddlers",
            shootings[age] >= 12 && shootings[age] <= 19, "Teenagers",
            shootings[age] >= 20 && shootings[age] <= 59, "Workers",
            shootings[age] >= 60, "Pensioners"
        )
    ),
    [AgeGroup],
    "NoOfShootings", COUNTROWS(shootings)
)
```

Phase 5 – Share Insights

Here are some observations, relationships, and insights based on the analysis of the **police shootings dataset**:

1. The most shot race is the White Race **(2,476 – 51%)**, which is about two times more than the black race **(1,298 – 27%)**. This means that the shootings in the United States are not so much as a result of racism.
2. California is the state with the highest shootings **(701 – 14%)** and it also comes as the state with the highest record of guns and gun-like arms. Shootings by Police could be based on the fact that criminals/suspects possess arms which makes them dangerous.
3. **2,764 – 56%** of the suspects/criminals possessed guns, posing them as dangerous.
4. **3,792 – 77%** of the shootings happened with Police Officers who had no camera on. This could mean that the officers were negligent, knowing that they had no body camera on, to record the event.
5. Only **248 – 5%** of the **4,895** people were tasered and shot at the same time, the others **(95%)** were just shot.
6. Again, **3,073 – 63%** of the people did not make any attempt to flee. That means that they might have surrendered to the police or tried to fight back.
7. Digging further, it can be seen that **3,160 – 65%** of the people attacked the police officers. This might have resulted in self defence on the part of the officer, hence the shootings rising to **95%**.

CONCLUSION

Arms possession made suspects/criminals dangerous, emphasizing the possibility of attack. The insights derived suggests that 65% of the people attacked the police officers. Thus, the major cause of the police shootings was:

Suspect/Criminal attack as a result of arms (guns) possession, and self-defence from the part of the police officer.

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