

GUNS AND PENS

Harsh Realities of School Shootings

- 1.) My dataset represents the shooting happened at schools in United States from 1970 to 2022.
- 2.) The data represents the incident of each shooting, represented by unique incident ID. Data table consists of very important elements like, school name, location, city, incident date, school level, duration of day, targets, shots fired etc..
- 3) this data only exhibits data on no of shots fired, no of casualties , or injured is not discussed.
- 4.) Further data of location, school level, time period, targets, are summarized to few categories for easy understanding.
- 5.) this data is downloaded from Kaggle.com

A ^B C	Column1	A ^B C	Column2
1	Incident_ID	Unique code of incident	
2	Reliability	Quality of source data	
3	Date	Actual date of incident occurrence	
4	Quarter	Either Spring, fall, summer, winter Quarter	
5	School	school name	
6	City	city incident occurred	
7	State	State incident occurred	
8	School_Level	Level of school incident occurred, either elementry, high, junior, middl...	
9	Location	permises of incident	
10	Location_Type	Type of location	
11	During_School	Is incident happened during school or not	
12	Time_Period	period of day	
13	Situation	what kind of situaltion does incident occur	
14	Targets	is attack targeted or not	
15	Accomplice	is someone helped in the crime	
16	Hostages	is anyone held hostages	
17	Domestic_Violence	is anyone is harmed dues to domestics voilence	
18	Gang_Related	is gand involved	
19	Preplanned	is attack pre planned	
20	Shots_Fired	no of shots fired on incident	

A mass shooting is a incident with more than 20 shots fired.
show the total number of mass shootings by state and region,
along with identifying the state with the fewest incidents. See if
there any hostage or Domestic violence

Relation: Nominal comparison

Year, M... ▼

✓ □ 1971

✓ □ 1974

1000

1900

✓ □ 1990

✓ 1991

✓ □ 1998

✓ 1000

□ 1995

2001

✓ 2004

✓ □ 2014

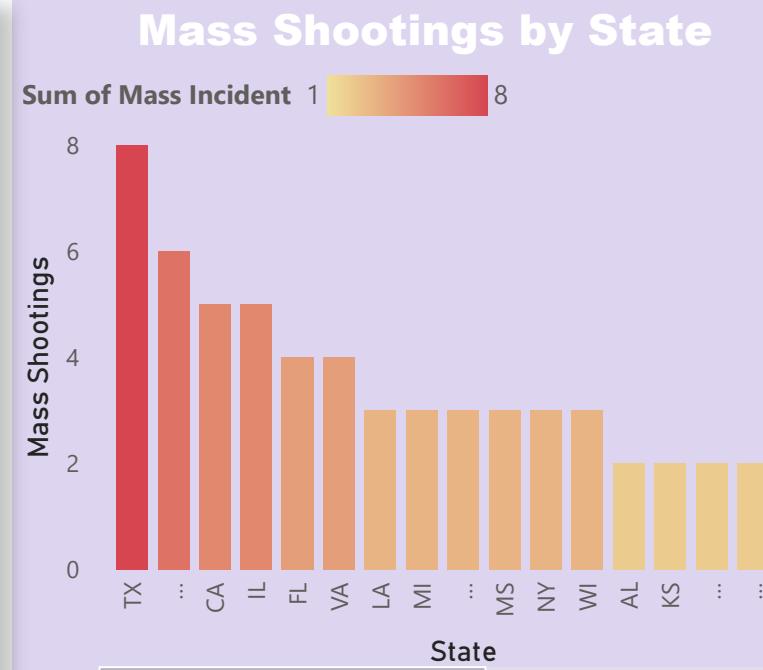
Midwest

Northeast

South

West

3 Dangerous Places to be in Mass Incidents



Out of all 952 incidents, there is only 77 mass incidents. Out of which 29 are from south region only. Texas is the most effected state.

Interestingly there is no single incident of hostages or domestic violence
Hallway, parking lot, classroom are top3 dangerous places to be in during
mass shooting

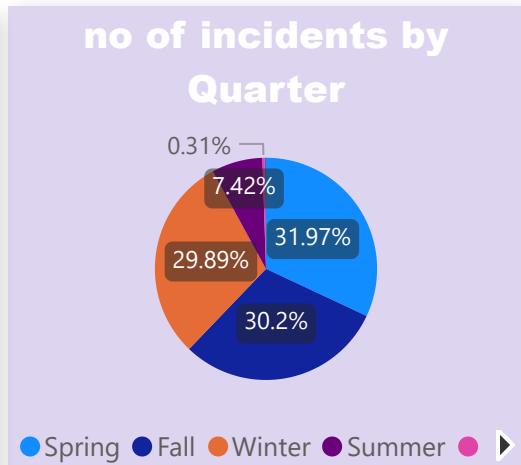
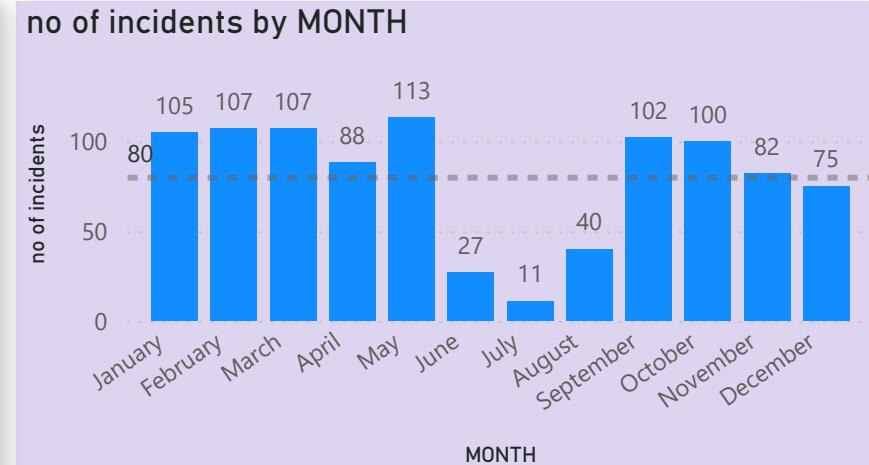
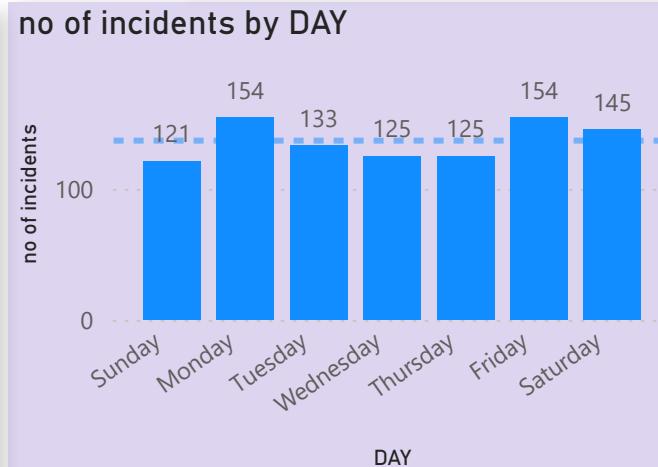
What is the overall analysis of shooting incidents, including totals, trends over time, breakdowns by state, days/months/seasons with highest incidents, top years ,high-risk states

Relation: Time series, part to whole, Ranking, deviation

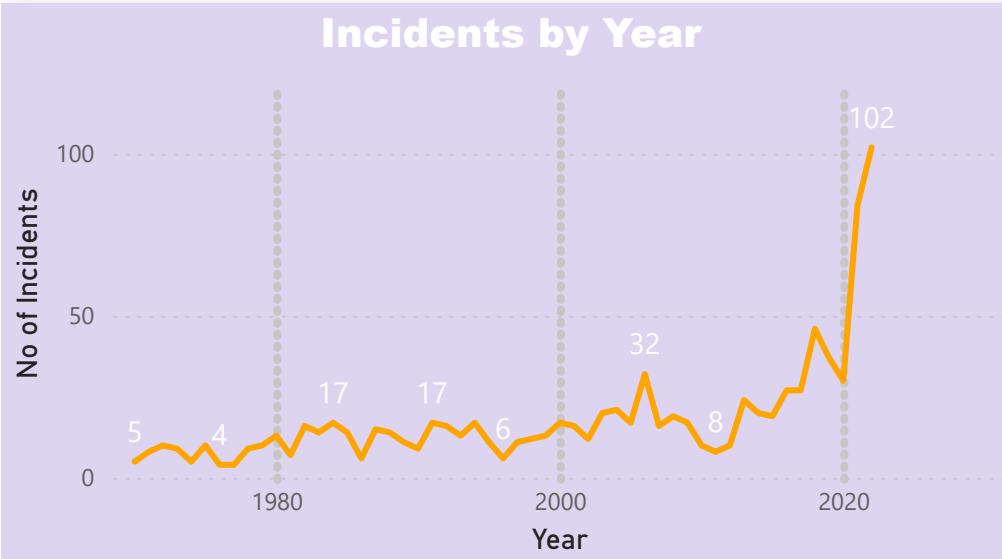
Analysis of Incidents By year/Quarter/month/weekday/state

957

no of incidents

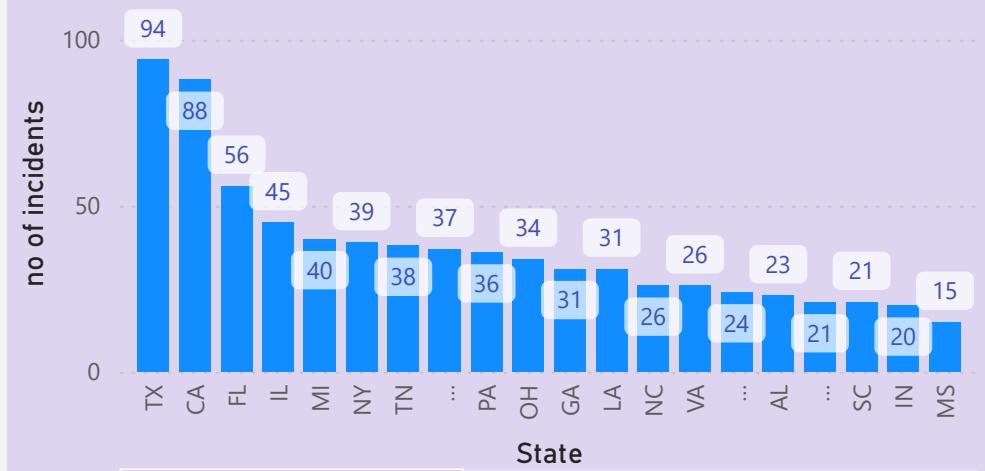


Incidents by Year



19%
2021 & 2022 contribution

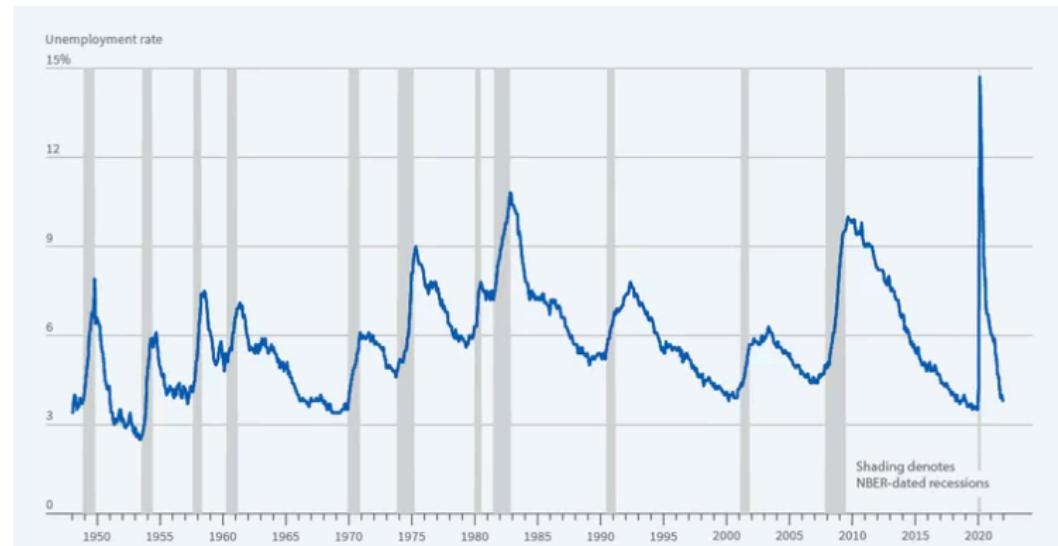
no of incidents by State



Start of week and end of week has highest incidents, Saturday has more incidents than average ,likely more than Tues, Wed, Thursday. it is surprising to see Sunday having significant incidents.

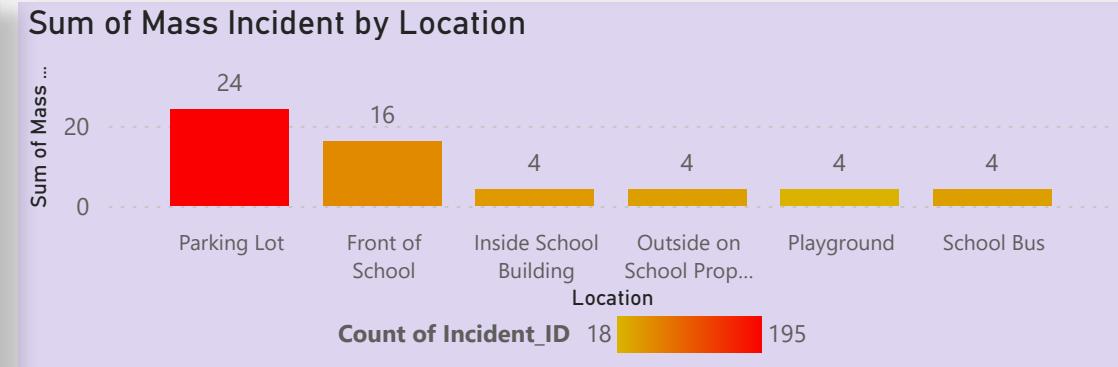
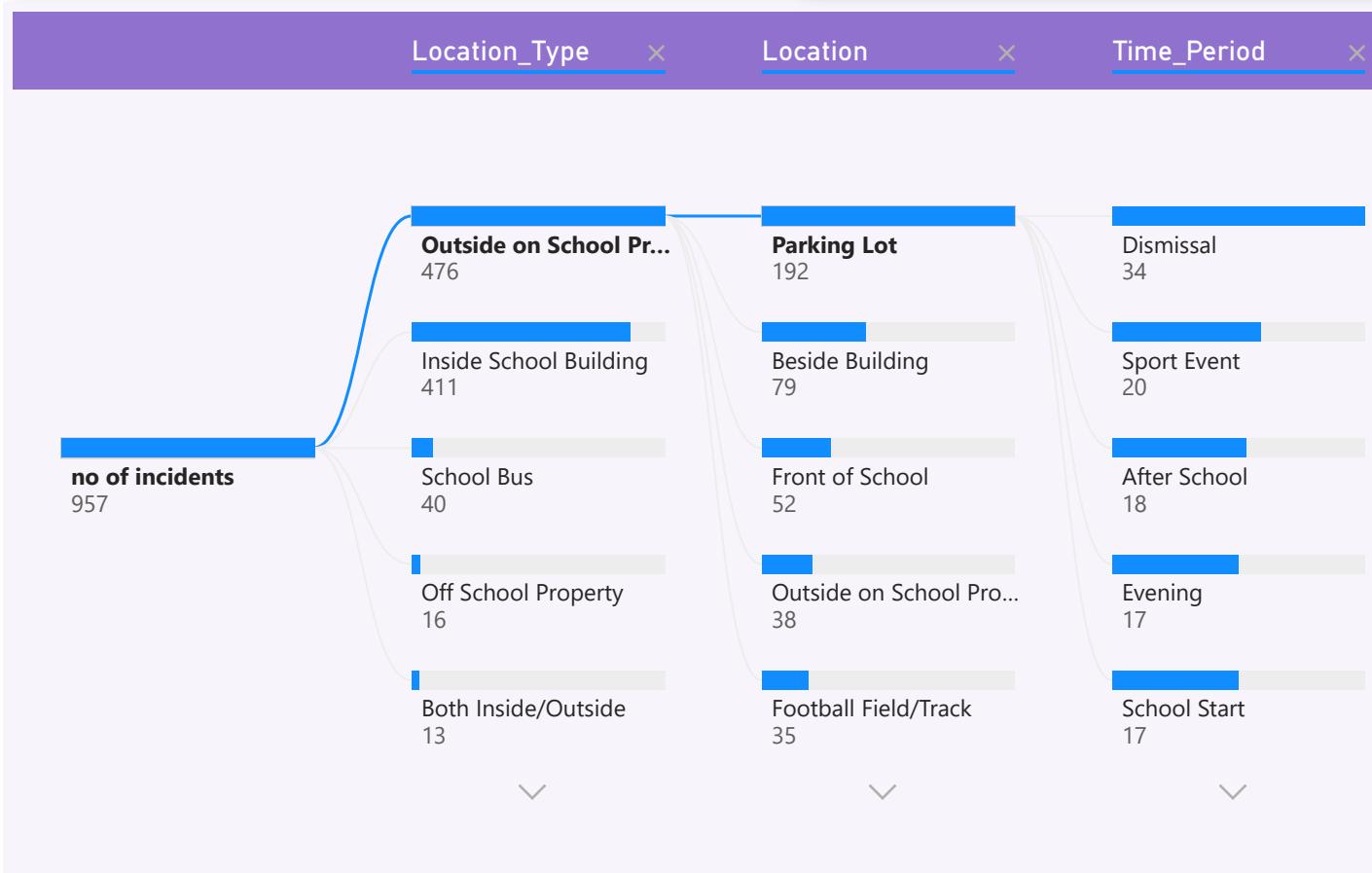
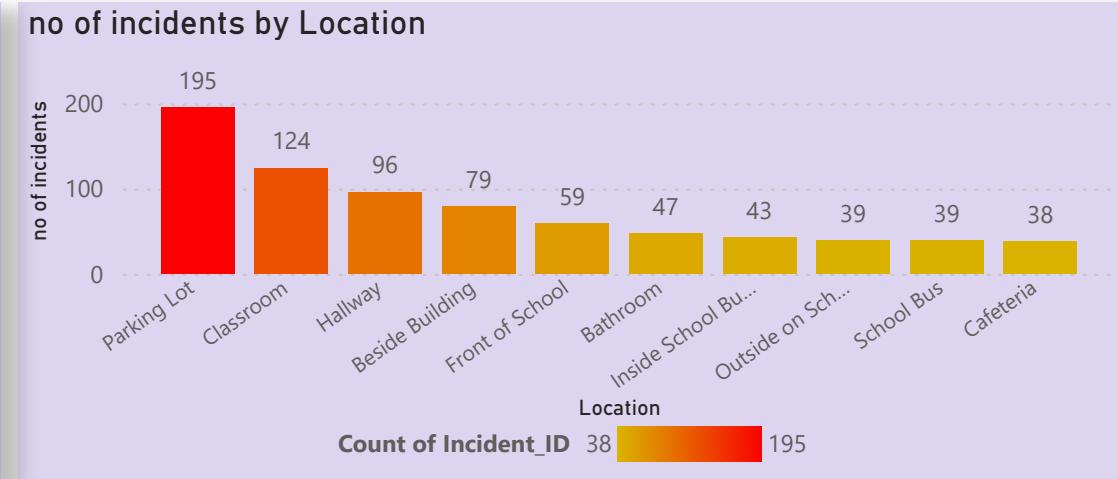
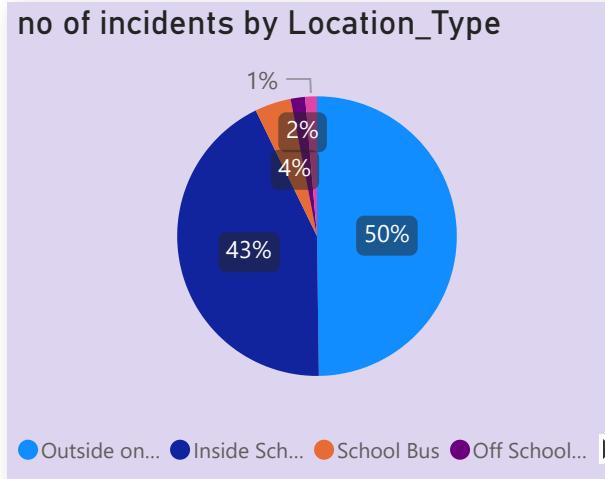
Summer months have lower incidents, since holidays. Fall has a decreasing trend from Sept to Dec and Spring has a increasing trend from Jan to May

Years 2021 & 2022 has highest increase in incidents, contributing 19% of total incidents in last 5 decades. every time unemployment rate increased there is a spike in incidents, observed in 1982,1992,2000 and 2006, when unemployment rate is high is 2000, Incidents peaked



By analyzing factors such as location types, time periods, incidents, which specific places and times should be avoided to minimize exposure to potential shooting incidents on school grounds or campuses
Relation: Nominal comparison, Part to Whole, ranking

High Risky Index



50% of incidents happened Outside the school property of which majority happened at parking lot

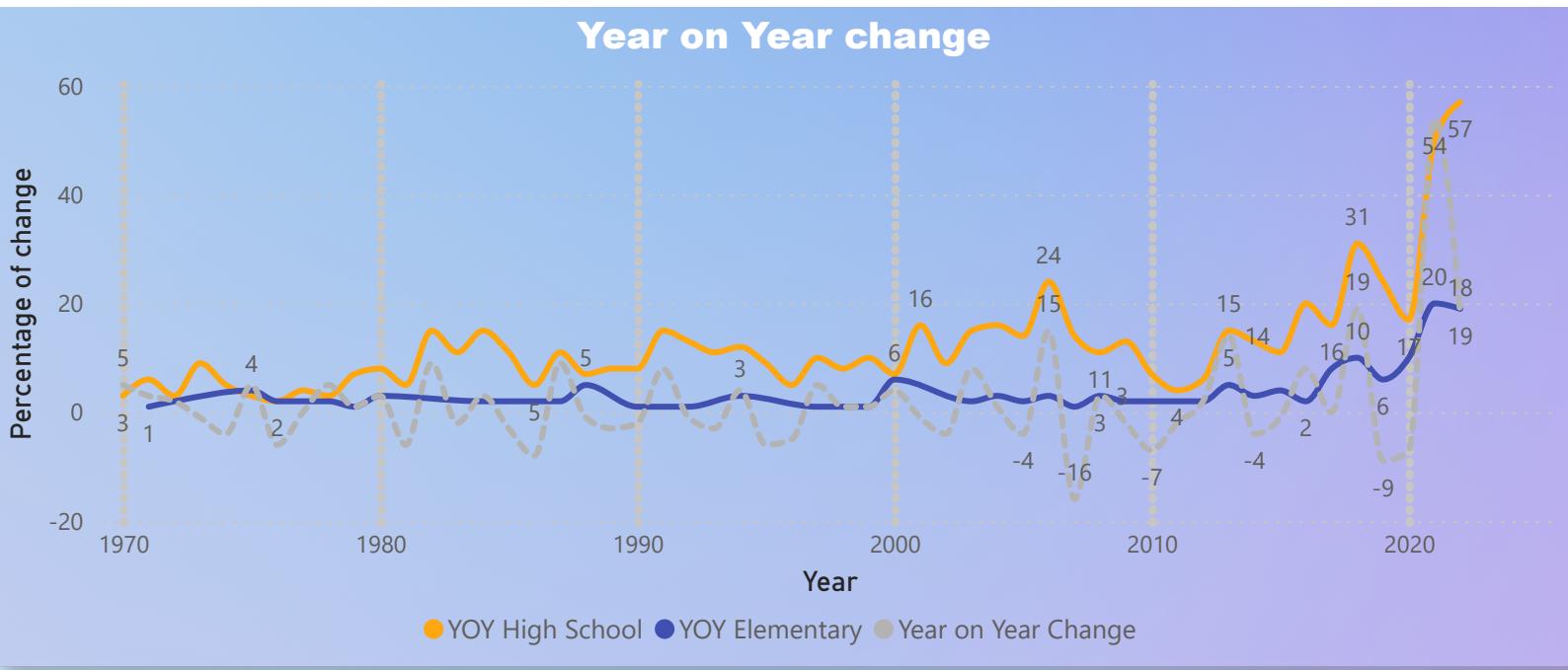
During classes is the riskiest phase during shootings, out of which Morning class tops list followed by afternoon class

located in parking lot and entrance during an incident has highest chance to get shot, as no of incidents and mass shootings are high

Across the different school levels (e.g. elementary, middle, high school), which level has experienced the highest number of incidents involving factors such as shots fired, preplanned incidents.

Draw a YOY change for such levels

Relations: Time series, Nominal, Part to Whole



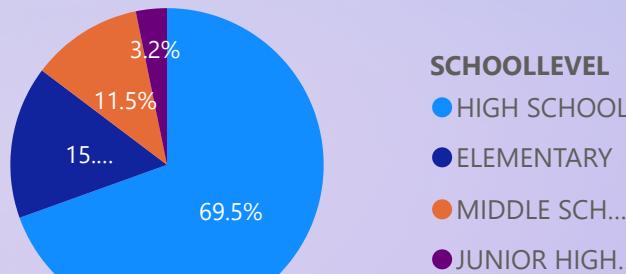
School Level Index

Preplanned

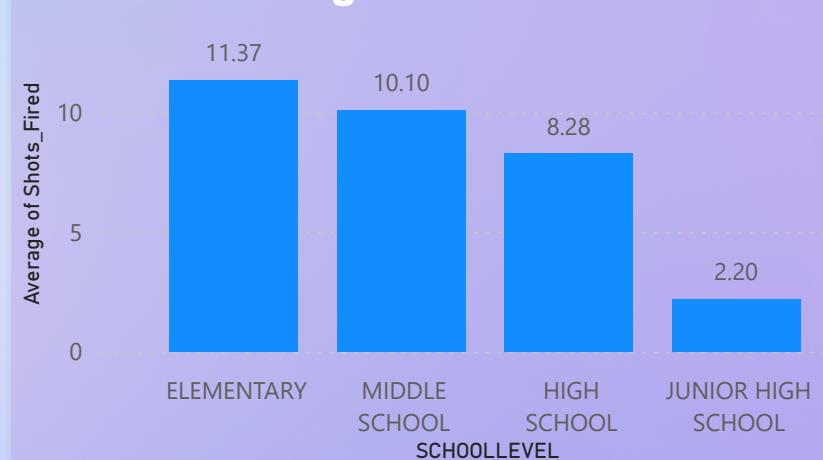
No

Yes

Count of Incident_ID by SCHOOLLEVEL



Average of Shots Fired



No of High School Incidents



Attackers are Ruthless with Kids

Data Shows ~70% of incidents are happened in high schools

However , the Avg no of shots fired in elementary schools are much higher than a high school 11.3 against 8.3.

If it is preplanned, Average shots fired raged to 85 in elementary against 22.4 in high school

The YOY change graphs shows sudden increase in last 5 years both in high schools and elementary, although there is dip in 2019 & 2020 in overall incidents, incidents in elementary and high school kept increasing and a concerning question

Junior High School kids are less affected with this incidents

What percentage of incidents targeted specific individuals versus the general population

Which location types have the highest ratio of incidents involving hostages

Relation: Part to Whole

SCHOOL LEVEL

ELEMENTARY

HIGH SCHOOL

JUNIOR HIGH...

MIDDLE...

Victim Target Index

Targeted Victims Percentage by Location_Type and Location

Outside on School Property				Both Inside/Out...		Off School Pro...	
	Courtyard 73%	Beside Building 6...		Footba...	Bathro...	Classroom; Besid...	Outside on Sch...
Hallway 100%							
	Basketball Court 73%	Outside on Schoo...		Front of School 4...			
Other 100%	Parking Lot 70%	Field (General) 59%	Playground 44%				
Inside School Building							
	Office 80%	Bathroom 62%				Front ...	Parkin...
Basketball Court 1...							
	Auditorium 75%	Hallway 62%					
Field (General) 100%	Other 67%	Cafeteria 58%	Classroo...	Entry...	ND 100%	School...	School ...

Percentage of times Victims

59%

59% of times, Victims are targeted in an incident
Junior High School kids are never in focus except here, 80% of times they
were targeted, unlike any other
Victims are highly targeted in hallway when outside building and in
basketball court, office and auditorium when inside building

Is it safe to be in the Local region(DE,NJ,MD,PA). calculate the chances of incidents. what is the contribution of north east region in total incidents

Relation: Nominal Comparison

Safety Metrix

Percentage of Local region incidents

9%

Percentage of Northeast Incidents

16%

Percentage of bottom 5 states incidents

0.94%

Local

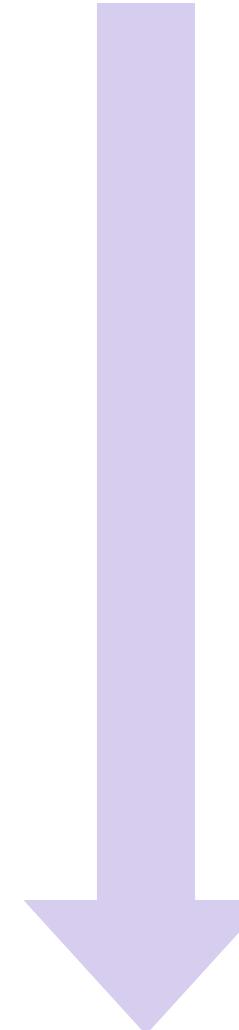
State	no of incidents
DE	5
NJ	7
PA	36
MD	37

North East

State	no of incidents
VT	1
ME	2
RI	4
CT	5
DE	5

Overall 5 Safe States

State	no of incidents
VT	1
AK	2
ME	2
ND	2
MS	2



Yes it is safe to live in local region, as it only contribute 9% incidents. DE has only 5 incidents in last 5 decades.

North east region is likely safer to other regions with 16% contribution to incidents.

However states like PA & MD are major contributors in this both regions.

Other states to live safely is AK,ME,ND,VT,WV which has less than 1% of incidents