Gun Violence Analysis Report

#solution 1

per_month <- gun_deaths%>%count(month). This produces the following output

```
> per_month
   month    n
1      1 8273
2      2 7093
3      3 8289
4      4 8455
5      5 8669
6      6 8677
7      7 8989
8      8 8783
9      9 8508
10    10 8406
11    11 8243
12    12 8413
```

#solution 2

barplot(per_month$n~per_month$month, mainlab= "Deaths per Month", xlab= "Months", ylab= Deaths", names.arg=c("Jan", "Feb",March","April","May","June","July","Aug","Sept","Oct","Nov","Dec") ,width = c(6,6,6,6,6,6,6,6,6,6,6,6))

The output for the above code is :
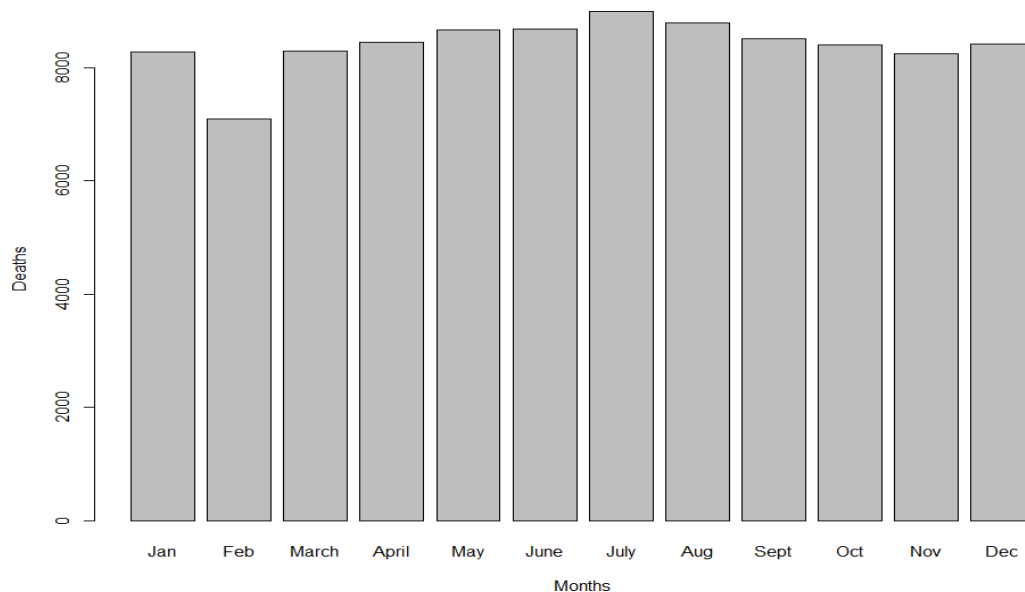
#solution 3

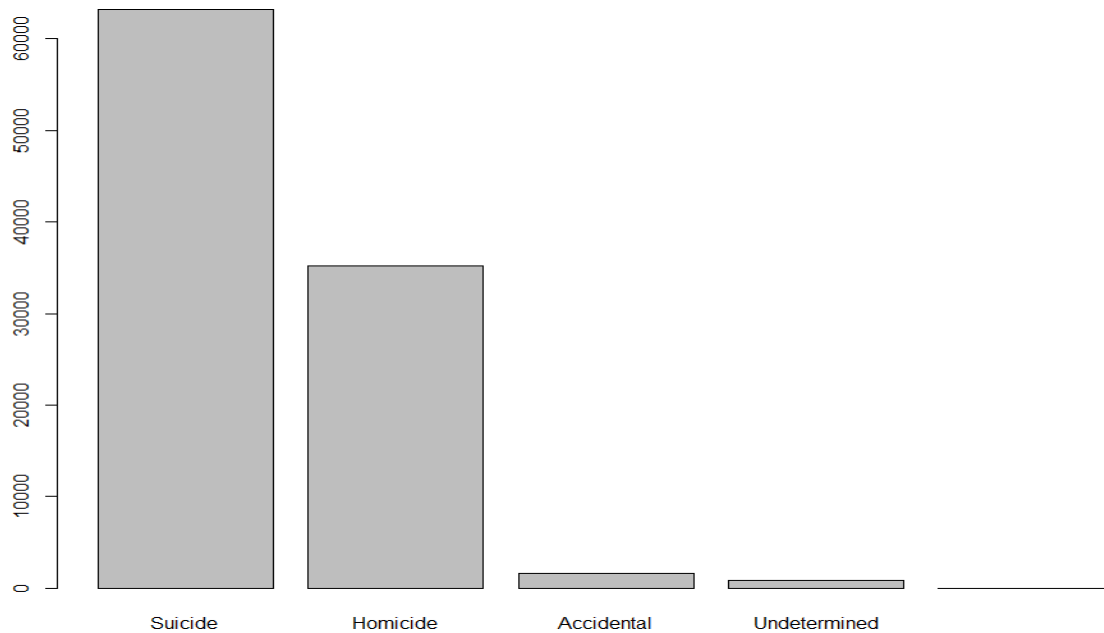**per_intent <- gun_deaths%>%count(intent)**

df <- per_intent[order(per_intent$n,decreasing = TRUE),]

barplot(df$n,names.arg = df$intent)

PerIntent and barplot as follows:

```
> per_intent
          intent     n
1    Accidental  1639
2      Homicide 35176
3       Suicide 63175
4  Undetermined   807
5          <NA>     1
```
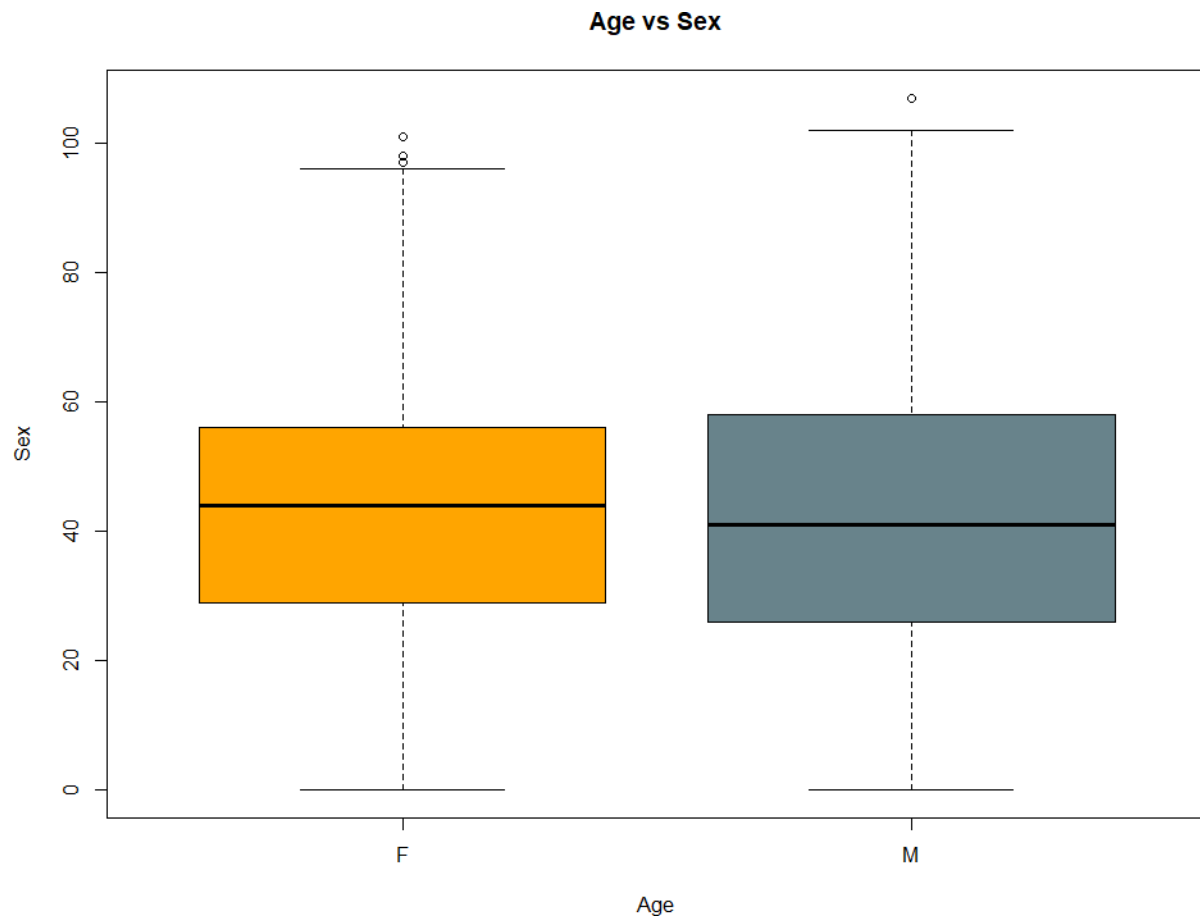

#solution 4

boxplot(age ~ sex, data=gun_deaths, main="Age vs Sex", xlab="Age", ylab="Sex",col=c("orange", "lightblue4"))

age_sex <- na.omit(gun_deaths[,c("age","sex")])

age_sex %>% group_by(sex) %>% summarise(avg = mean(age))

The averages ages of each gender and boxplot as follows:

Age vs Sex

#solution 5

White1 <- gun_deaths[(gun_deaths$race=='White' & gun_deaths$year=='2012' & gun_deaths$sex=='M'),]

subdf1 <- White1[!(White1$education=='Less than HS'),]

count(subdf1) gives **15,485 white male who at least have a high school education got shot in 2012**

#solution 6

gun_deaths$month <- as.factor(gun_deaths$month)

winter <- gun_deaths[(gun_deaths$month==1 | gun_deaths$month==2 |gun_deaths$month==3),]

count(winter) #23,656

Spring <- gun_deaths[(gun_deaths$month==4 | gun_deaths$month==5 |gun_deaths$month==6),]

count(Spring) #25,801

Summer <- gun_deaths[(gun_deaths$month==7 | gun_deaths$month==8 |gun_deaths$month==9),]

count(Summer) #26,281

Fall <- gun_deaths[(gun_deaths$month==10 | gun_deaths$month==11 |gun_deaths$month==12),]

count(Fall) #25,063

Spring has the maximum number of deaths

compare_deaths <- table(gun_deaths$race, gun_deaths$intent)

This gives the following table:

```
> compare_deaths

                              Accidental Homicide Suicide Undetermined
Asian/Pacific Islander                12      559     745           10
Black                                328    19510    3332          126
Hispanic                             145     5634    3171           72
Native American/Native Alaskan        22      326     555           14
White                               1132     9147   55372          585
```

From the table, its clear that whites who are killed by guns are more likely to die because of Suicide whereas Black and Hispanic die because of Homicide.