

08_Maternal Mortality_eda

Group K

2025-09-09

1. Loading the dataset

```
## # A tibble: 5 x 29
##   ISO3    DataId Indicator Value Precision DHS_CountryCode CountryName SurveyYear
##   <chr>  <chr>   <chr>    <chr> <chr>      <chr>          <chr>      <chr>
## 1 #coun~ #meta~ #indicat~ #ind~ #indicat~ <NA>          #country+n~ #date+year
## 2 ZAF    91409 Female d~ 5.5    1        ZA           South Afri~ 1998
## 3 ZAF    91377 Number o~ 19     0        ZA           South Afri~ 1998
## 4 ZAF    768646 Years of~ 1227~ 0        ZA           South Afri~ 1998
## 5 ZAF    768647 Years of~ 1237~ 0        ZA           South Afri~ 1998
## # i 21 more variables: SurveyId <chr>, IndicatorId <chr>, IndicatorOrder <dbl>,
## #   IndicatorType <chr>, CharacteristicId <dbl>, CharacteristicOrder <dbl>,
## #   CharacteristicCategory <chr>, CharacteristicLabel <chr>,
## #   ByVariableId <chr>, ByVariableLabel <chr>, IsTotal <dbl>,
## #   IsPreferred <dbl>, SDRID <chr>, RegionId <lgl>, SurveyYearLabel <dbl>,
## #   SurveyType <chr>, DenominatorWeighted <dbl>, DenominatorUnweighted <dbl>,
## #   CILow <dbl>, CIHigh <dbl>, LevelRank <lgl>
```

2. Data Overview

Glimpse and summary statistics

```
## Rows: 22
## Columns: 29
## $ ISO3                <chr> "#country+code", "ZAF", "ZAF", "ZAF", "ZAF", "Z~
## $ DataId              <chr> "#meta+id", "91409", "91377", "768646", "768647~
## $ Indicator           <chr> "#indicator+name", "Female deaths that are preg~
## $ Value               <chr> "#indicator+value+num", "5.5", "19", "122701", ~
## $ Precision           <chr> "#indicator+precision", "1", "0", "0", "0", "2"~
## $ DHS_CountryCode     <chr> NA, "ZA", "ZA", "ZA", "ZA", "ZA", "ZA", "ZA", "ZA", "~
## $ CountryName         <chr> "#country+name", "South Africa", "South Africa"~
## $ SurveyYear          <chr> "#date+year", "1998", "1998", "1998", "1998", "~
## $ SurveyId            <chr> "#survey+id", "ZA1998DHS", "ZA1998DHS", "ZA1998~
## $ IndicatorId         <chr> "#indicator+code", "MM_MMRT_W_FDP", "MM_MMRT_W_~
## $ IndicatorOrder      <dbl> NA, 77003010, 77003020, 77003030, 77003040, 770~
## $ IndicatorType       <chr> NA, "I", "N", "D", "U", "I", "I", "I", "C", "C"~
## $ CharacteristicId    <dbl> NA, 10000, 10000, 10000, 10000, 10000, 1000, 10~
## $ CharacteristicOrder <dbl> NA, 10000, 10000, 10000, 10000, 10000, 0, 0, 0,~
## $ CharacteristicCategory <chr> NA, "Total 15-49", "Total 15-49", "Total 15-49"~
```

```

## $ CharacteristicLabel <chr> NA, "Total 15-49", "Total 15-49", "Total 15-49"~
## $ ByVariableId <chr> "#indicator+label+code", "0", "0", "0", "0", "0~
## $ ByVariableLabel <chr> "#indicator+label", NA, NA, NA, NA, NA, NA, NA,~
## $ IsTotal <dbl> NA, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1~
## $ IsPreferred <dbl> NA, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1~
## $ SDRID <chr> NA, "MMMRTWFDP", "MMMRTWPD", "MMMRTWEXP", "~
## $ RegionId <lgl> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,~
## $ SurveyYearLabel <dbl> NA, 1998, 1998, 1998, 1998, 1998, 1998, 1998, 1~
## $ SurveyType <chr> NA, "DHS", "DHS", "DHS", "DHS", "DHS", "DHS", "~
## $ DenominatorWeighted <dbl> NA, NA, NA, NA, NA, 122701, NA, NA, NA, NA, NA,~
## $ DenominatorUnweighted <dbl> NA, NA, NA, 123738, 123738, 123738, NA, NA, NA,~
## $ CILow <dbl> NA, NA, NA, NA, NA, NA, NA, NA, 77, NA, NA, NA, NA,~
## $ CIHigh <dbl> NA, NA, NA, NA, NA, NA, NA, NA, 223, NA, NA, NA, NA~
## $ LevelRank <lgl> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,~

```

```

##      ISO3      DataId      Indicator      Value
## Length:22 Length:22 Length:22 Length:22
## Class :character Class :character Class :character Class :character
## Mode :character Mode :character Mode :character Mode :character
##
##
##

```

```

##      Precision      DHS_CountryCode      CountryName      SurveyYear
## Length:22 Length:22 Length:22 Length:22
## Class :character Class :character Class :character Class :character
## Mode :character Mode :character Mode :character Mode :character
##
##
##

```

```

##      SurveyId      IndicatorId      IndicatorOrder      IndicatorType
## Length:22 Length:22 Min. :77003010 Length:22
## Class :character Class :character 1st Qu.:77003030 Class :character
## Mode :character Mode :character Median :77033010 Mode :character
## Mean :77018746
## 3rd Qu.:77033030
## Max. :77033060
## NA's :1

```

```

##      CharacteristicId CharacteristicOrder CharacteristicCategory
## Min. : 1000 Min. : 0 Length:22
## 1st Qu.: 1000 1st Qu.: 0 Class :character
## Median : 1000 Median : 0 Mode :character
## Mean : 5286 Mean : 4762
## 3rd Qu.:10000 3rd Qu.:10000
## Max. :10000 Max. :10000
## NA's :1 NA's :1

```

```

##      CharacteristicLabel ByVariableId ByVariableLabel IsTotal
## Length:22 Length:22 Length:22 Min. :1
## Class :character Class :character Class :character 1st Qu.:1
## Mode :character Mode :character Mode :character Median :1
## Mean :1
## 3rd Qu.:1
## Max. :1

```

```

##                                     NA's      :1
##   IsPreferred      SDRID           RegionId   SurveyYearLabel
##   Min.      :1      Length:22           Mode:logical   Min.      :1998
##   1st Qu.:1      Class :character   NA's:22           1st Qu.:1998
##   Median :1      Mode  :character           Median :2016
##   Mean   :1                                     Mean   :2007
##   3rd Qu.:1                                     3rd Qu.:2016
##   Max.   :1                                     Max.   :2016
##   NA's   :1                                     NA's   :1
##   SurveyType      DenominatorWeighted DenominatorUnweighted   CILow
##   Length:22      Min.      : 62768      Min.      : 63523      Min.      : 77.0
##   Class :character 1st Qu.: 77751      1st Qu.: 63523      1st Qu.:155.5
##   Mode  :character Median : 92735      Median : 93631      Median :234.0
##                                     Mean   : 92735      Mean   : 93631      Mean   :193.7
##                                     3rd Qu.:107718     3rd Qu.:123738     3rd Qu.:252.0
##                                     Max.      :122701     Max.      :123738     Max.      :270.0
##                                     NA's      :20      NA's      :16      NA's      :19
##   CIHigh      LevelRank
##   Min.      :223.0      Mode:logical
##   1st Qu.:469.0      NA's:22
##   Median :715.0
##   Mean   :580.0
##   3rd Qu.:758.5
##   Max.   :802.0
##   NA's   :19

```

3. Data Quality

Missing values per column

```

##           IS03           DataId           Indicator
##           0           0           0
##           Value           Precision           DHS_CountryCode
##           0           0           1
##           CountryName           SurveyYear           SurveyId
##           0           0           0
##           IndicatorId           IndicatorOrder           IndicatorType
##           0           1           1
##           CharacteristicId           CharacteristicOrder           CharacteristicCategory
##           1           1           1
##           CharacteristicLabel           ByVariableId           ByVariableLabel
##           1           0           21
##           IsTotal           IsPreferred           SDRID
##           1           1           1
##           RegionId           SurveyYearLabel           SurveyType
##           22           1           1
##           DenominatorWeighted           DenominatorUnweighted           CILow
##           20           16           19
##           CIHigh           LevelRank
##           19           22

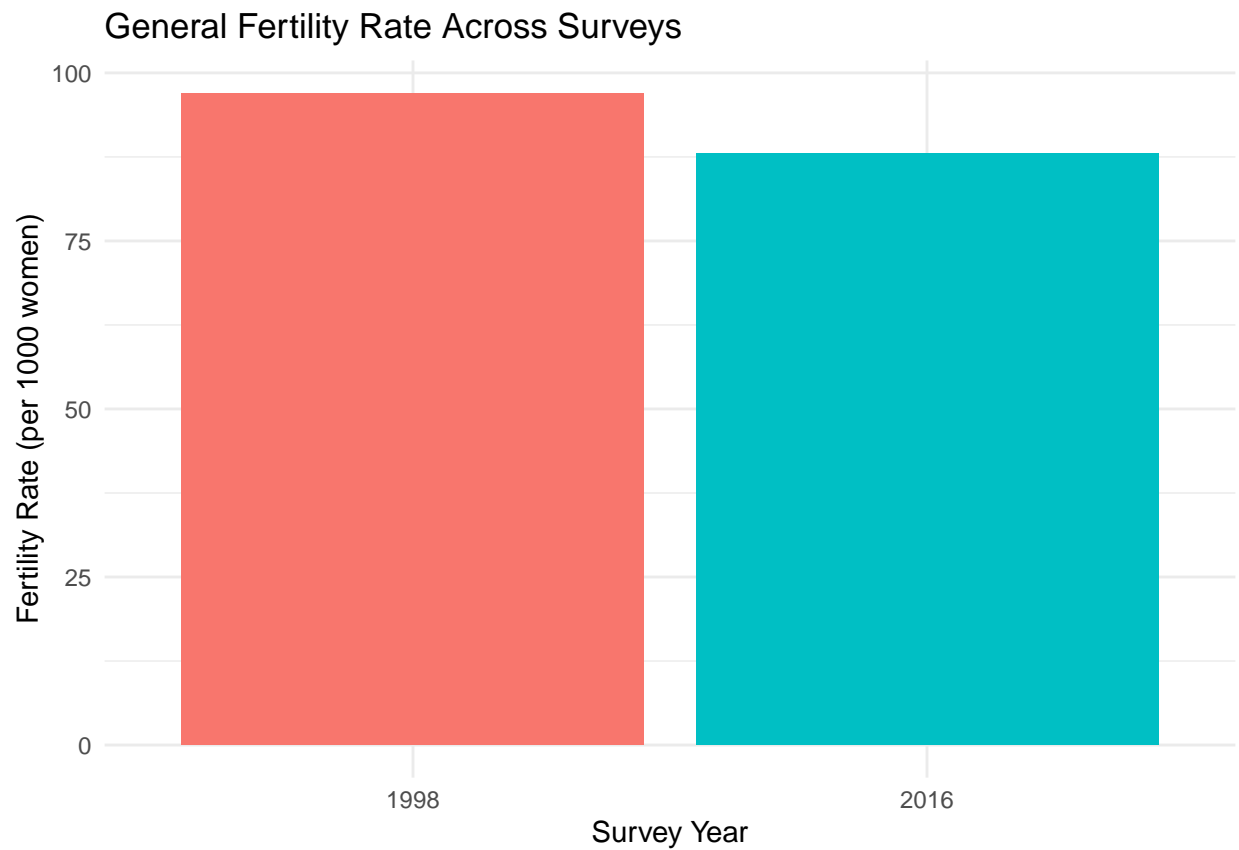
```

Dupilcates

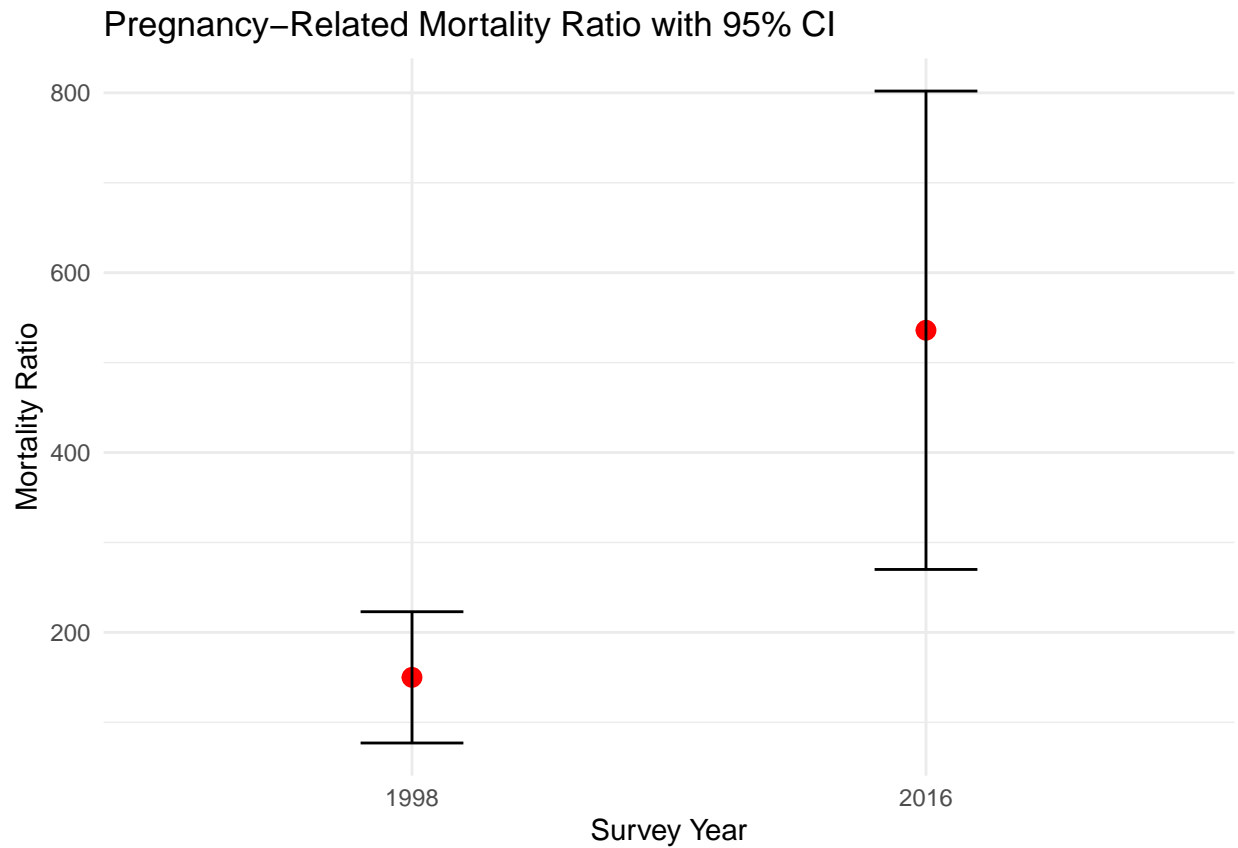
```
## [1] 0
```

4. Visualizations

Bar plot showing the distribution of fertility-related indicators



Point plot with error bars to visualize the Pregnancy-related mortality ratio along with its lower and upper bounds.



5. Summary Tables

```
## # A tibble: 20 x 3
##   Variable      Statistic      Value
##   <chr>         <chr>         <dbl>
## 1 CIHigh       mean          580
## 2 CIHigh       sd            312.
## 3 CIHigh       min           223
## 4 CIHigh       max           802
## 5 CILow        mean          194.
## 6 CILow        sd            103.
## 7 CILow        min            77
## 8 CILow        max           270
## 9 DenominatorUnweighted mean    93630.
## 10 DenominatorUnweighted sd      32981.
## 11 DenominatorUnweighted min     63523
## 12 DenominatorUnweighted max    123738
## 13 DenominatorWeighted mean     92734.
## 14 DenominatorWeighted sd      42379.
## 15 DenominatorWeighted min     62768
## 16 DenominatorWeighted max    122701
```

## 17 Value	mean	17882.
## 18 Value	sd	39767.
## 19 Value	min	0.005
## 20 Value	max	123738