EDA_Child_Mortality_Rates_National_03

$Group\ K$

2025-09-09

1. Loading the dataset

Dislay the first 5 rows

Table 1: First 5 rows of the Access to Health Care Dataset (excluding first row)

ISO3	DataId	Indicator	Value	CountryName	SurveyYear
ZAF	85995	Neonatal mortality rate (5 year periods)	20	South Africa	1998
ZAF	794581	Postneonatal mortality (5 year periods)	26	South Africa	1998
ZAF	785930	Infant mortality rate (5 year periods)	45	South Africa	1998
ZAF	56239	Child mortality (5 year periods)	15	South Africa	1998
ZAF	101014	Under-five mortality rate (5 year periods)	59	South Africa	1998

2. Data Overview

Summary statistics

Table 2: Summary Statistics for Numeric Variables in the Dataset

Variable	Statistic	Value
CIHigh	mean	3.520000e+01
CIHigh	sd	1.760368e+01
CIHigh	\min	1.0000000e+01
CIHigh	max	6.800000e+01
CILow	mean	2.276667e + 01
CILow	sd	1.436875e + 01
CILow	\min	4.000000e+00
CILow	max	5.0000000e+01
CharacteristicId	mean	6.250000e+03
CharacteristicId	sd	5.424304e + 03
CharacteristicId	\min	1.0000000e+03
CharacteristicId	max	1.300000e+04
CharacteristicOrder	mean	2.250000e+04
CharacteristicOrder	sd	3.387382e+04
CharacteristicOrder	min	0.000000e+00

Variable	Statistic	Value
CharacteristicOrder	max	8.000000e+04
DenominatorUnweighted	mean	4.373000e+03
DenominatorUnweighted	sd	9.353074e+02
DenominatorUnweighted	min	3.563000e+03
DenominatorUnweighted	max	5.183000e+03
DenominatorWeighted	mean	4.348000e+03
DenominatorWeighted	sd	$8.902741e{+02}$
DenominatorWeighted	\min	3.577000e+03
DenominatorWeighted	max	5.119000e+03
IndicatorOrder	mean	6.320353e+07
IndicatorOrder	sd	2.519158e + 04
IndicatorOrder	min	6.316601e + 07
IndicatorOrder	max	6.323605e+07
IsPreferred	mean	7.500000e-01
IsPreferred	sd	4.385290 e-01
IsPreferred	\min	0.0000000e+00
IsPreferred	max	1.0000000e+00
IsTotal	mean	1.000000e+00
IsTotal	sd	0.0000000e+00
IsTotal	\min	1.000000e+00
IsTotal	max	1.000000e+00
SurveyYearLabel	mean	2.007000e+03
SurveyYearLabel	sd	9.114654e+00
SurveyYearLabel	min	1.998000e+03
SurveyYearLabel	max	2.016000e+03

3. Data Quality

Find duplicated values

[1] 0

 $\# \mbox{Inspect columns}$ for missing/empty data as values and pecentages respectively

##	ISO3	DataId	Indicator
##	0	0	0
##	Value	Precision	DHS_CountryCode
##	1	0	1
##	${\tt CountryName}$	SurveyYear	SurveyId
##	0	0	0
##	${\tt IndicatorId}$	IndicatorOrder	${\tt IndicatorType}$
##	0	1	1
##	U	1	1
##	CharacteristicId	CharacteristicOrder	CharacteristicCategory
	CharacteristicId 1	CharacteristicOrder	CharacteristicCategory
##	CharacteristicId 1 CharacteristicLabel	CharacteristicOrder 1 ByVariableId	CharacteristicCategory 1 ByVariableLabel
## ##	1	1	1
## ## ##	1	1	1 ByVariableLabel
## ## ## ##	1 CharacteristicLabel	1 ByVariableId O	1 ByVariableLabel 20
## ## ## ##	1 CharacteristicLabel	1 ByVariableId O	1 ByVariableLabel 20

## ## ## ##	DenominatorWeighted 37 CIHigh 11	DenominatorUnweighted 37 LevelRank 41	CILow 11
##	ISO3	DataId	Indicator
##	0.00	0.00	0.00
##	Value	Precision	DHS_CountryCode
##	2.44	0.00	2.44
##	CountryName	SurveyYear	SurveyId
##	0.00	0.00	0.00
##	${\tt IndicatorId}$	IndicatorOrder	${ t Indicator Type}$
##	0.00	2.44	2.44
##	CharacteristicId	CharacteristicOrder	CharacteristicCategory
##	2.44	2.44	2.44
##	${\tt CharacteristicLabel}$	${ t ByVariableId}$	${ t ByVariableLabel}$
##	2.44	0.00	48.78
##	IsTotal	IsPreferred	SDRID
##	2.44	2.44	2.44
##	RegionId	SurveyYearLabel	SurveyType
##	100.00	2.44	2.44
##	${\tt DenominatorWeighted}$	DenominatorUnweighted	CILow
##	90.24	90.24	26.83
##	CIHigh	LevelRank	
##	26.83	100.00	

Check for unique values

## 1505 Batalu 116 ## Value Precision DHS_CountryCode ## 28 2 2 ## CountryName SurveyYear SurveyId ## 1 10 10 10 10 10 10 10 10 10 10 10 10 1	##	ISO3	DataId	Indicator
## Value Precision DHS_CountryCode ## 28 2 2 2 ## CountryName SurveyYear SurveyId ## 1				
## CountryName SurveyYear SurveyId ## CountryName SurveyYear SurveyId ## 2 3 3 3 ## IndicatorId IndicatorOrder IndicatorType ## 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		_		
## CountryName SurveyYear SurveyId ## 2 3 3 3 ## IndicatorId IndicatorOrder IndicatorType ## 16 6 16 4 ## CharacteristicId CharacteristicOrder CharacteristicCategory ## 4 4 4 4 ## CharacteristicLabel ByVariableId ByVariableLabel ## 4 4 4 4 ## IsTotal IsPreferred SDRID ## 2 3 3 16 ## RegionId SurveyYearLabel SurveyType ## 1 3 2 ## DenominatorWeighted DenominatorUnweighted CILow ## 3 3 19 ## CIHigh LevelRank	##	Value	Precision	DHS_CountryCode
## IndicatorId IndicatorOrder IndicatorType ## TindicatorId IndicatorOrder IndicatorType ## CharacteristicId CharacteristicOrder CharacteristicCategory ## CharacteristicLabel ByVariableId ByVariableLabel ## CharacteristicLabel IndicatorOrder CharacteristicCategory ## A 4 4 ## CharacteristicLabel IndicatorOrder CharacteristicCategory ## A 4 4 ## CharacteristicLabel IndicatorOrder CharacteristicCategory ## A 4 4 ## ByVariableLabel ## IsTotal IndicatorOrder CharacteristicCategory ## IndicatorType ## IndicatorType ## A 4 ## SyvariableId ByVariableId ## SDRID ## RegionId SurveyYearLabel SurveyType ## DenominatorWeighted DenominatorUnweighted CILow ## DenominatorWeighted DenominatorUnweighted CILow ## CIHigh LevelRank	##	28	2	2
## IndicatorId IndicatorOrder IndicatorType ## 16 16 16 4 ## CharacteristicId CharacteristicOrder CharacteristicCategory ## 4 4 4 ## CharacteristicLabel ByVariableId ByVariableLabel ## 1sTotal IsPreferred SDRID ## 2 3 16 ## RegionId SurveyYearLabel SurveyType ## 1 1 3 2 ## DenominatorWeighted DenominatorUnweighted CILow ## 3 3 19 ## CIHigh LevelRank	##	${\tt CountryName}$	SurveyYear	SurveyId
## CharacteristicId CharacteristicOrder CharacteristicCategory ## CharacteristicLabel ByVariableId ByVariableLabel ## CharacteristicLabel ByVariableId ByVariableLabel ## IsTotal IsPreferred SDRID ## RegionId SurveyYearLabel SurveyType ## RegionId SurveyYearLabel SurveyType ## DenominatorWeighted DenominatorUnweighted CILow ## CIHigh LevelRank	##	2	3	3
## CharacteristicId CharacteristicOrder CharacteristicCategory ## 4 4 4 ## CharacteristicLabel ByVariableId ByVariableLabel ## ISTotal IsPreferred SDRID ## 2 3 16 ## RegionId SurveyYearLabel SurveyType ## 1 3 2 2 ## DenominatorWeighted DenominatorUnweighted CILow ## 3 3 19 ## CIHigh LevelRank	##	${\tt IndicatorId}$	IndicatorOrder	${ t Indicator Type}$
## CharacteristicLabel ByVariableId ByVariableLabel ## 4 4 4 ## IsTotal IsPreferred SDRID ## 2 3 3 16 ## RegionId SurveyYearLabel SurveyType ## 1 3 3 2 ## DenominatorWeighted DenominatorUnweighted CILow ## 3 3 3 19 ## CIHigh LevelRank	##	16	16	4
## CharacteristicLabel ByVariableId ByVariableLabel ## 4 4 4 ## IsTotal IsPreferred SDRID ## 2 3 3 16 ## RegionId SurveyYearLabel SurveyType ## 1 3 2 2 ## DenominatorWeighted DenominatorUnweighted CILow ## 5 3 3 19 ## CIHigh LevelRank	##	${\tt CharacteristicId}$	CharacteristicOrder	CharacteristicCategory
## 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	##	4	4	4
## IsTotal IsPreferred SDRID ## 2 3 16 ## RegionId SurveyYearLabel SurveyType ## 1 3 2 ## DenominatorWeighted DenominatorUnweighted CILow ## 3 3 19 ## CIHigh LevelRank	##	${\tt CharacteristicLabel}$	${ t ByVariableId}$	${ t ByVariableLabel}$
## RegionId SurveyYearLabel SurveyType ## 1 1 3 2 ## DenominatorWeighted DenominatorUnweighted CILow ## 3 3 19 ## CIHigh LevelRank	##	4	4	4
## RegionId SurveyYearLabel SurveyType ## 1 3 2 ## DenominatorWeighted DenominatorUnweighted CILow ## 3 3 19 ## CIHigh LevelRank	##	IsTotal	IsPreferred	SDRID
## 1 3 2 ## DenominatorWeighted DenominatorUnweighted CILow ## 3 3 19 ## CIHigh LevelRank	##	2	3	16
## DenominatorWeighted DenominatorUnweighted CILow ## 3 3 19 ## CIHigh LevelRank	##	RegionId	SurveyYearLabel	SurveyType
## 3 3 19 ## CIHigh LevelRank	##	1	3	2
## CIHigh LevelRank	##	DenominatorWeighted	DenominatorUnweighted	CILow
0	##	3	3	19
## 16 1	##	CIHigh	LevelRank	
	##	16	1	

4. Visualizations

Bar plot of mortality indicators for a specific year

