DIABETES HEALTH METRICS IN EGYPT


Introduction

This project aims to analyze diabetes prevalence and treatment trends in Egypt using data analysis techniques. The project involves data cleaning, exploratory data analysis, visualization, and dashboard creation using Python. The goal is to gain insights into diabetes trends, gender-based differences, and potential factors influencing treatment rates over time.

DATA DESCRIPTION

Resources

Basic Identifier Columns

Column Name	Explanation	Example
Country	The country being studied	"Egypt"
ISO	3-letter country code (standardized)	"EGY"
Sex	Gender category	"Men", "Women"
Year	The year of data recording	1990-2022

Diabetes Prevelence Metrics

Column Name	Explanation	Key Notes
Age-standardised prevalence of diabetes (18+ years)	% of adults with diabetes, adjusted for age distribution	Allows fair comparisons across years
Lower/Upper 95% uncertainty interval	Statistical confidence range for prevalence estimate	True value likely falls between these numbers
Crude prevalence of diabetes (18+ years)	Raw % without age adjustment	Shows actual disease burden

Diabetes Treatment Metrics

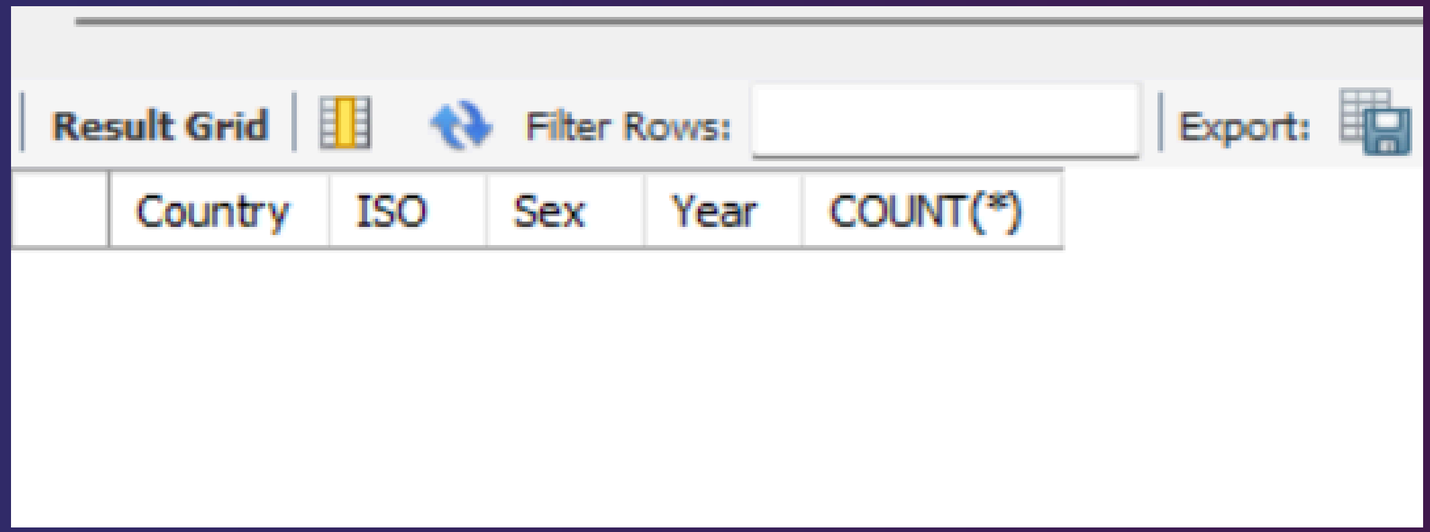
Column Name	Explanation	Why It Matters
Age-standardised proportion treated (30+ years)	% of diabetic adults receiving care (age-adjusted)	Measures healthcare system performance
Crude proportion treated (30+ years)	Raw % receiving treatment	Reflects real-world treatment gaps

Data Cleaning

1- using Mysql:

1-Checking for duplicates:

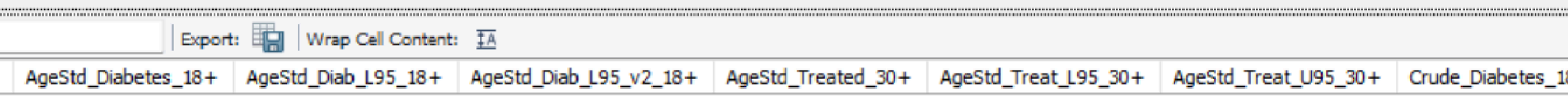
```
SELECT Country, ISO, Sex, Year, COUNT(*)
FROM refined_diabetes_data
GROUP BY Country, ISO, Sex, Year
HAVING COUNT(*) > 1;
```



2-Checking for null values

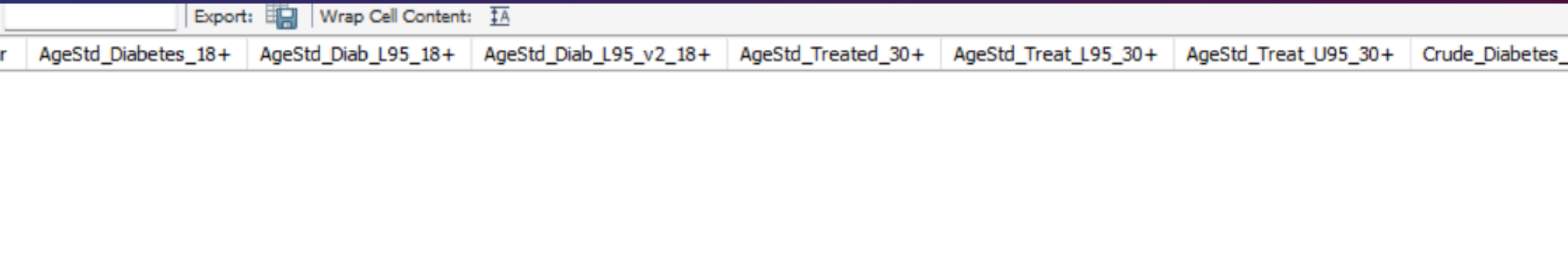
```
SELECT *
FROM refined_diabetes_data
WHERE Country IS NULL
OR ISO IS NULL
OR Sex IS NULL
OR Year IS NULL
OR `AgeStd_Diabetes_18+` IS NULL
OR `AgeStd_Diab_L95_18+` IS NULL
OR `AgeStd_Diab_L95_v2_18+` IS NULL
OR `AgeStd_Treated_30+` IS NULL
OR `AgeStd_Treat_L95_30+` IS NULL
OR `AgeStd_Treat_U95_30+` IS NULL
OR `Crude_Diabetes_18+` IS NULL
OR `Crude_Diab_L95_18+` IS NULL
OR `Crude_Diab_U95_18+` IS NULL
OR `Crude_Treated_30+` IS NULL
OR `Crude_Treat_L95_30+` IS NULL
OR `Crude_Treat_U95_30+` IS NULL;
```

there is no null values



3-Checking for negative values

```
SELECT * FROM cleaned_diabetes
WHERE `AgeStd_Diabetes_18+` < 0
    OR `AgeStd_Treated_30+` < 0
    OR `Crude_Diabetes_18+` < 0
```



4-Normalized percentage columns:

```
UPDATE cleaned_diabetes
SET
`AgeStd_Diabetes_18+` = `AgeStd_Diabetes_18+` * 100,
`AgeStd_Treated_30+` = `AgeStd_Treated_30+` * 100,
`Crude_Diabetes_18+` = `Crude_Diabetes_18+` * 100,
`AgeStd_Diab_L95_18+` = `AgeStd_Diab_L95_18+` * 100,
`AgeStd_Diab_L95_v2_18+` = `AgeStd_Diab_L95_v2_18+` * 100,
`AgeStd_Treat_L95_30+` = `AgeStd_Treat_L95_30+` * 100,
`AgeStd_Treat_U95_30+` = `AgeStd_Treat_U95_30+` * 100,
`Crude_Diab_L95_18+` = `Crude_Diab_L95_18+` * 100,
`Crude_Diab_U95_18+` = `Crude_Diab_U95_18+` * 100,
`Crude_Treated_30+` = `Crude_Treated_30+` * 100,
`Crude_Treat_L95_30+` = `Crude_Treat_L95_30+` * 100,
`Crude_Treat_U95_30+` = `Crude_Treat_U95_30+` * 100;
```

5-Checking incorrect confidence intervals(lower bound should be less than upper bound)

```
UPDATE cleaned_diabetes
SET `AgeStd_Diab_L95_18+` = `AgeStd_Diab_L95_v2_18+`
WHERE `AgeStd_Diab_L95_18+` > `AgeStd_Diab_L95_v2_18+`;

UPDATE cleaned_diabetes
SET `AgeStd_Treat_L95_30+` = `AgeStd_Treat_U95_30+`
WHERE `AgeStd_Treat_L95_30+` > `AgeStd_Treat_U95_30+`;

UPDATE cleaned_diabetes
SET `Crude_Diab_L95_18+` = `Crude_Diab_U95_18+`
WHERE `Crude_Diab_L95_18+` > `Crude_Diab_U95_18+`;

UPDATE cleaned_diabetes
SET `Crude_Treat_L95_30+` = `Crude_Treat_U95_30+`
WHERE `Crude_Treat_L95_30+` > `Crude_Treat_U95_30+`;
```

SQL QUERY AND INSIGHTS

1 How has the age-standardized prevalence of diabetes (AgeStd_Diabetes_18+) in Egypt changed from 1990 to 2022, and what are the differences between men and women??

```
3 •  select year, sex,`AgeStd_Diabetes_18+` as diabetes_prevalence
4    from cleaned_diabetes
5    where country = 'Egypt'
6    order by year and Sex;
```

output

Result Grid | Filter Rows:

year	sex	diabetes_prevalence
1990	Men	1036529040
1990	Women	1088099880
1991	Men	1047191930.0000001
1991	Women	1126530870
1992	Men	1060035129.9999999
1992	Women	1165667890.0000002
1993	Men	1074169800
1993	Women	1205256610
1994	Men	1089965710.0000002
1994	Women	1244865310
1995	Men	1107145590
1995	Women	1284669920
1996	Men	1126130080
1996	Women	1324050639.9999998
1997	Men	1147245120
1997	Women	1362742130.0000002
1998	Men	1170533340
1998	Women	1400840340

2 What are the differences in diabetes prevalence (AgeStd_Diabetes_18+) and treatment rates (AgeStd_Treated_30+) between men and women in Egypt from 1990 to 2022?

```
10 •  SELECT Year, Sex, `AgeStd_Diabetes_18+`, `AgeStd_Treated_30+`
11    FROM cleaned_diabetes
12    WHERE Year BETWEEN 1990 AND 2022
13    ORDER BY Year, Sex;
```

output

Result Grid | Filter Rows: | Export: | Wr

Year	Sex	AgeStd_Diabetes_18+	AgeStd_Treated_30+
1990	Men	1036529040	39720646.9
1990	Women	1088099880	39015169.900000006
1991	Men	1047191930.0000001	40498989.5
1991	Women	1126530870	39544217.699999996
1992	Men	1060035129.9999999	41270558.699999996
1992	Women	1165667890.0000002	40072010.400000006
1993	Men	1074169800	42028477.1
1993	Women	1205256610	40598495.400000006
1994	Men	1089965710.0000002	42774636.7
1994	Women	1244865310	41116967.9
1995	Men	1107145590	43497742.4
1995	Women	1284669920	41631714.1
1996	Men	1126130080	44208220
1996	Women	1324050639.9999998	42149536.6
1997	Men	1147245120	44900620.6
1997	Women	1362742130.0000002	42651646.300000004
1998	Men	1170533340	45576195.800000004

3 What proportion of people with diabetes in Egypt remain untreated, and how has this proportion changed from 2000 to 2021?

```sql
SELECT Year, Sex, `AgeStd_Diabetes_18+`, `AgeStd_Treated_30+`,
(1 - (`AgeStd_Treated_30+` / `AgeStd_Diabetes_18+`)) * 100 AS Untreated_Percentage
FROM cleaned_diabetes
WHERE Year BETWEEN 2000 AND 2021
ORDER BY Year, Sex;
```

output

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Year	Sex	AgeStd_Diabetes_18+	AgeStd_Treated_30+	Untreated_Percentage
2000	Men	1225443900	46861764.900000006	96.17593552018171
2000	Women	1474906790.0000005	44091834.400000006	97.01053417755301
2001	Men	1257994070	47457675.4	96.22751199455178
2001	Women	1512080329.9999998	44531436.7	97.05495562527422
2002	Men	1294240070	48020931.300000004	96.28964267038958
2002	Women	1549680389.9999998	44957199.9	97.09893729119202
2003	Men	1334700149.9999998	48547514.8	96.36266506750599
2003	Women	1589399950	45359848.4	97.1461023136436
2004	Men	1380548820	49010021.5	96.44996100174133
2004	Women	1632086310.0000002	45744534.7	97.19717429037193
2005	Men	1432869290	49399019.8	96.5524406067772
2005	Women	1679311719.9999995	46090641.1	97.25538501571346
2006	Men	1491590560.0000002	49703392.5	96.66775897938105
2006	Women	1731435460.0000002	46395886.300000004	97.32038026413066
2007	Men	1556834770	49922438.599999994	96.79333738158995
2007	Women	1788883539.9999998	46668890.300000004	97.39117224478458
2008	Men	1628308059.9999998	50072209.5	96.92489334604166
2008	Women	1852744320	46011856.6	97.46708000708485

4 How has the uncertainty in diabetes prevalence estimates (AgeStd_Diabetes_18+) changed over time in Egypt, and are there significant differences between men and women?

```sql
SELECT Year, Sex, `AgeStd_Diabetes_18+`,`AgeStd_Diab_L95_18+` AS Lower_Bound,
`AgeStd_Diab_L95_v2_18+` AS Upper_Bound,
(`AgeStd_Diab_L95_v2_18+` - `AgeStd_Diab_L95_18+`) AS Uncertainty_Range
FROM cleaned_diabetes
WHERE Year BETWEEN 1990 AND 2022
ORDER BY Year, Sex;
```

output

Year	Sex	AgeStd_Diabetes_18+	Lower_Bound	Upper_Bound	Uncertainty_Range
1990	Men	1036529040	6136349.100000001	15804437.299999997	9668088.199999996
1990	Women	1088099880	5952616.199999999	17074136.700000003	11121520.500000004
1991	Men	1047191930.0000001	6415638.8999999985	15779379.9	9363741.000000002
1991	Women	1126530870	6515948.300000002	17115224.3	10599276
1992	Men	1060035129.9999999	6701342.100000001	15556948.000000002	8855605.900000002
1992	Women	1165667890.0000002	7000121.300000001	17294656.799999997	10294535.499999996
1993	Men	1074169800	6984862.699999999	15424119.5	8439256.8
1993	Women	1205256610	7470823.399999999	17581713.800000004	10110890.400000006
1994	Men	1089965710.0000002	7176152.7	15443774.299999999	8267621.599999999
1994	Women	1244865310	7971603.200000001	17828047.2	9856443.999999998
1995	Men	1107145590	7385031.8999999985	15417996.699999997	8032964.799999999
1995	Women	1284669920	8480805.5	18078866.099999998	9598060.599999998
1996	Men	1126130080	7642182.000000001	15474015.6	7831833.599999999
1996	Women	1324050639.9999998	8903420.3	18421579.7	9518159.399999999
1997	Men	1147245120	7861447.899999999	15671665.600000001	7810217.700000002
1997	Women	1362742130.0000002	9393791.899999999	18647162.999999996	9253371.099999998
1998	Men	1170533340	8181833.4	15821571.4	7639738
1998	Women	1400840340	9887700.1	18880180.4	8992471.200000000

Result 17

5 How do crude diabetes prevalence rates (Crude_Diabetes_18+) compare to age-standardized rates (AgeStd_Diabetes_18+) in Egypt from 1990 to 2022?

```
34 •  SELECT Year, `AgeStd_Diabetes_18+`, `Crude_Diabetes_18+`,
35    (`AgeStd_Diabetes_18+` - `Crude_Diabetes_18+`) AS Difference
36    FROM cleaned_diabetes
37    WHERE Year BETWEEN 1990 AND 2022
38    ORDER BY Year;
39
```

output

Year	AgeStd_Diabetes_18+	Crude_Diabetes_18+	Difference
1990	1036529040	7922620.3	1028606419.7
1990	1088099880	9013465.3	1079086414.7
1991	1047191930.0000001	7994627.7	1039197302.3000001
1991	1126530870	9306073.900000002	1117224796.1
1992	1060035129.9999999	8105793.899999999	1051929336.0999999
1992	1165667890.0000002	9621152.400000002	1156046737.6000001
1993	1074169800	8231585.800000001	1065938214.2
1993	1205256610	9940656.7	1195315953.3
1994	1089965710.0000002	8376609.799999998	1081589100.2000003
1994	1244865310	10262071.600000001	1234603238.4
1995	1107145590	8534527.399999999	1098611062.6
1995	1284669920	10586388.6	1274083531.4
1996	1126130080	8711745.2	1117418334.8
1996	1324050639.9999998	10912416.100000001	1313138223.8999999
1997	1147245120	8912166.2	1138332953.8
1997	1362742130.0000002	11237804.399999999	1351504325.6000001
1998	1170533340	9130102.299999999	1161403237.7

6 What percentage of people with diabetes in Egypt receive treatment (AgeStd_Treated_30+), and how has this percentage changed from 1990 to 2022?

```sql
SELECT Year, (`AgeStd_Treated_30+` / `AgeStd_Diabetes_18+`) * 100 AS Treatment_Percentage
FROM Cleaned_Diabetes
WHERE Year BETWEEN 1990 AND 2022
ORDER BY Year;
```

output

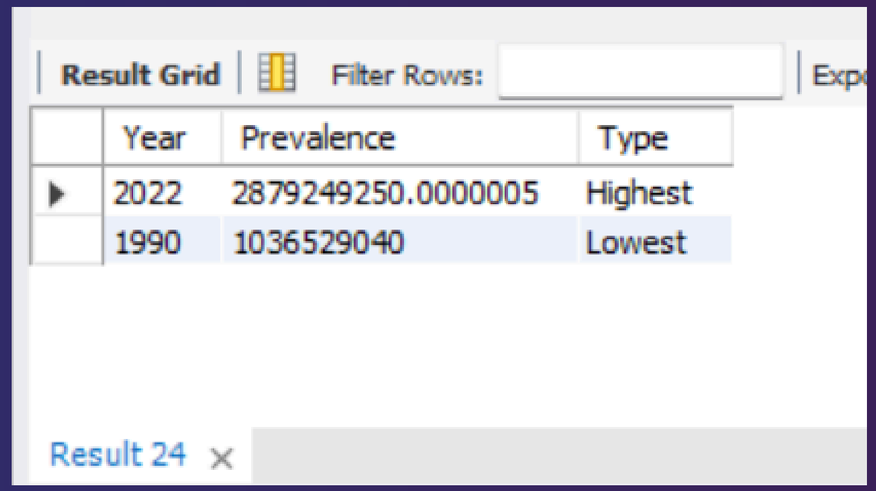
Year	Treatment_Percentage
1990	3.8320823987719623
1990	3.5856239502572143
1991	3.8673893810468916
1991	3.510264898466563
1992	3.8933199034639543
1992	3.437686732539231
1993	3.912647432463657
1993	3.3684524161207463
1994	3.924402052978345
1994	3.3029250288932865
1995	3.928818647961195
1995	3.2406545410512924
1996	3.9256761527940007
1996	3.1833779862075375
1997	3.91377743232414
1997	3.129839854587896
1998	3.8936264557829685

7

year with the highest and lowest diabetes prevalence.

```
(SELECT `Year`, `AgeStd_Diabetes_18+` AS `Prevalence`, 'Highest' AS `Type`
FROM `cleaned_diabetes`
ORDER BY `AgeStd_Diabetes_18+` DESC
LIMIT 1)
UNION ALL
(SELECT `Year`, `AgeStd_Diabetes_18+` AS `Prevalence`, 'Lowest' AS `Type`
FROM `cleaned_diabetes`
ORDER BY `AgeStd_Diabetes_18+` ASC
    LIMIT 1
);
```

output



Result Grid | Filter Rows: | Expo

Year	Prevalence	Type
2022	2879249250.0000005	Highest
1990	1036529040	Lowest

Result 24 ×

8

Compare treatment rates over the years

```
SELECT `Year`,AVG(`Crude_Treated_30+`) AS `Avg_Treatment_Rate`
FROM `cleaned_diabetes`
GROUP BY `Year`
ORDER BY `Year`;
```

output

Result Grid | Filter Rows:

Year	Avg_Treatment_Rate
1990	39118132.2
1991	39626505
1992	40145469.2
1993	40659482.75
1994	41166545.75
1995	41665622.5
1996	42171512.55
1997	42673112.349999994
1998	43166086
1999	43644960.8
2000	44108777.4
2001	44554080.650000006
2002	44987211.150000006
2003	45397342.55
2004	45768124.2
2005	46084017.05
2006	46344930.7
2007	46557844.45

Result 25

9 Check if treatment rates increase when prevalence is higher

```
SELECT `Year`,AVG(`Crude_Diabetes_18+`) AS `Avg_Diabetes_Prevalence`,AVG(`Crude_Treated_30+`) AS `Avg_Treatment_Rate`
FROM `cleaned_diabetes`
GROUP BY `Year`
ORDER BY `Year`;
```

output

Result Grid | Filter Rows: | Export: | Wrap Ce

Year	Avg_Diabetes_Prevalence	Avg_Treatment_Rate
1990	8468042.8	39118132.2
1991	8650350.8	39626505
1992	8863473.15	40145469.2
1993	9086121.25	40659482.75
1994	9319340.7	41166545.75
1995	9560458	41665622.5
1996	9812080.65	42171512.55
1997	10074985.299999999	42673112.349999994
1998	10343535.3	43166086
1999	10619718.75	43644960.8
2000	10911026.45	44108777.4
2001	11221241.55	44554080.650000006
2002	11553821.350000001	44987211.150000006
2003	11918214.35	45397342.55
2004	12323630.4	45768124.2
2005	12784898.5	46084017.05
2006	13308310.4	46344930.7
2007	13901500.3	46557844.45

Result 26

10

Predict future diabetes prevalence based on past trends.

```
SELECT `Year`,AVG(`Crude_Diabetes_18+`)
OVER
(ORDER BY `Year` ROWS BETWEEN 4 PRECEDING AND CURRENT ROW) AS `Moving_Avg_
FROM `cleaned_diabetes`
ORDER BY `Year`;
```

output

Result Grid | Filter Rows:

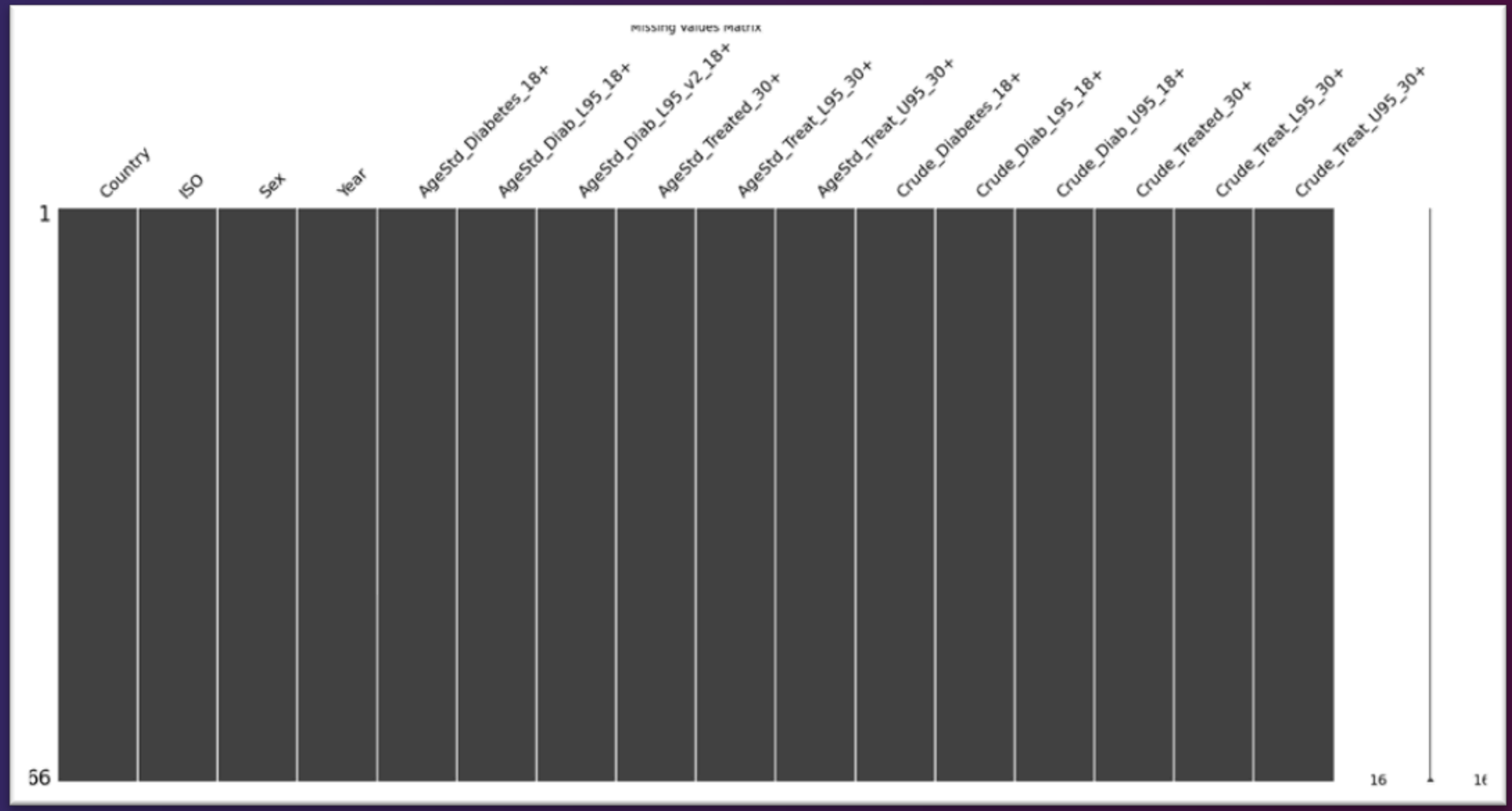
Year	Moving_Avg_Prediction
1990	7922620.3
1990	8468042.8
1991	8310237.766666667
1991	8559196.8
1992	8468516.22
1992	8808222.64
1993	8651846.74
1993	9041052.540000001
1994	8855159.719999999
1994	9286415.260000002
1995	9069090.26
1995	9540050.82
1996	9294268.52
1996	9801429.78
1997	9531448.7
1997	10072104.099999998
1998	9780846.84
1998	10340801.450000000

Result 27

DATA VISUALIZATION

	0
Country	0.0
ISO	0.0
Sex	0.0
Year	0.0
AgeStd_Diabetes_18+	0.0
AgeStd_Diab_L95_18+	0.0
AgeStd_Diab_L95_v2_18+	0.0
AgeStd_Treated_30+	0.0
AgeStd_Treat_L95_30+	0.0
AgeStd_Treat_U95_30+	0.0
Crude_Diabetes_18+	0.0
Crude_Diab_L95_18+	0.0
Crude_Diab_U95_18+	0.0
Crude_Treated_30+	0.0
Crude_Treat_L95_30+	0.0
Crude_Treat_U95_30+	0.0

dtype: float64




```
#duplicated
df1.duplicated().sum()
```

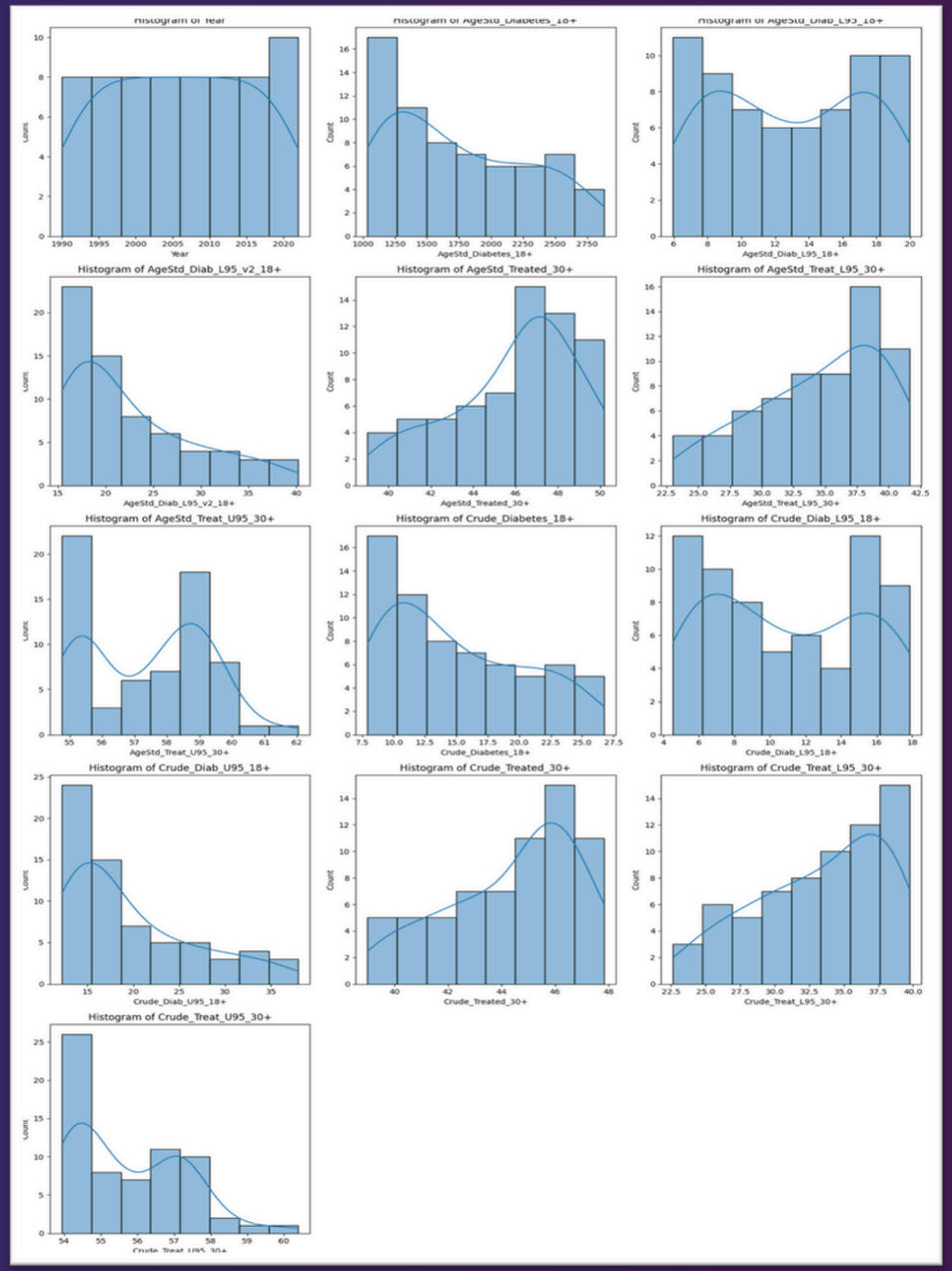
```
0
```

no missing and no duplicate

	count	mean	std	min	25%	50%	75%	max
Year	66.0	2006.000000	9.594870	1990.000000	1998.000000	2006.000000	2014.000000	2022.000000
AgeStd_Diabetes_18+	66.0	1751.859534	547.889596	1036.529040	1264.663033	1630.197185	2214.462208	2879.249250
AgeStd_Diab_L95_18+	66.0	12.994183	4.510211	5.952616	8.775115	12.867067	17.175021	19.959260
AgeStd_Diab_L95_v2_18+	66.0	22.617216	6.716619	15.417997	17.335021	20.156436	26.464334	40.231389
AgeStd_Treated_30+	66.0	45.882367	3.011998	39.015170	44.120931	46.816190	47.671807	50.171416
AgeStd_Treat_L95_30+	66.0	34.532382	5.136334	23.018557	30.808964	35.543696	38.716687	41.627865
AgeStd_Treat_U95_30+	66.0	57.423373	1.845119	54.757226	55.432588	57.651367	58.897114	62.043200
Crude_Diabetes_18+	66.0	15.000591	5.529359	7.922620	10.266597	13.526945	19.409313	26.733137
Crude_Diab_L95_18+	66.0	10.960903	4.351620	4.538051	6.910314	10.515684	15.222261	17.846227
Crude_Diab_U95_18+	66.0	19.643543	6.993125	12.220487	14.449807	16.928717	23.566113	37.962187
Crude_Treated_30+	66.0	44.384895	2.470025	38.988317	42.584010	45.126291	46.202507	47.826786
Crude_Treat_L95_30+	66.0	33.309091	4.744979	22.642864	30.016246	34.177280	37.552864	39.748838
Crude_Treat_U95_30+	66.0	55.756455	1.543721	53.930791	54.416643	55.364339	57.082639	60.394216

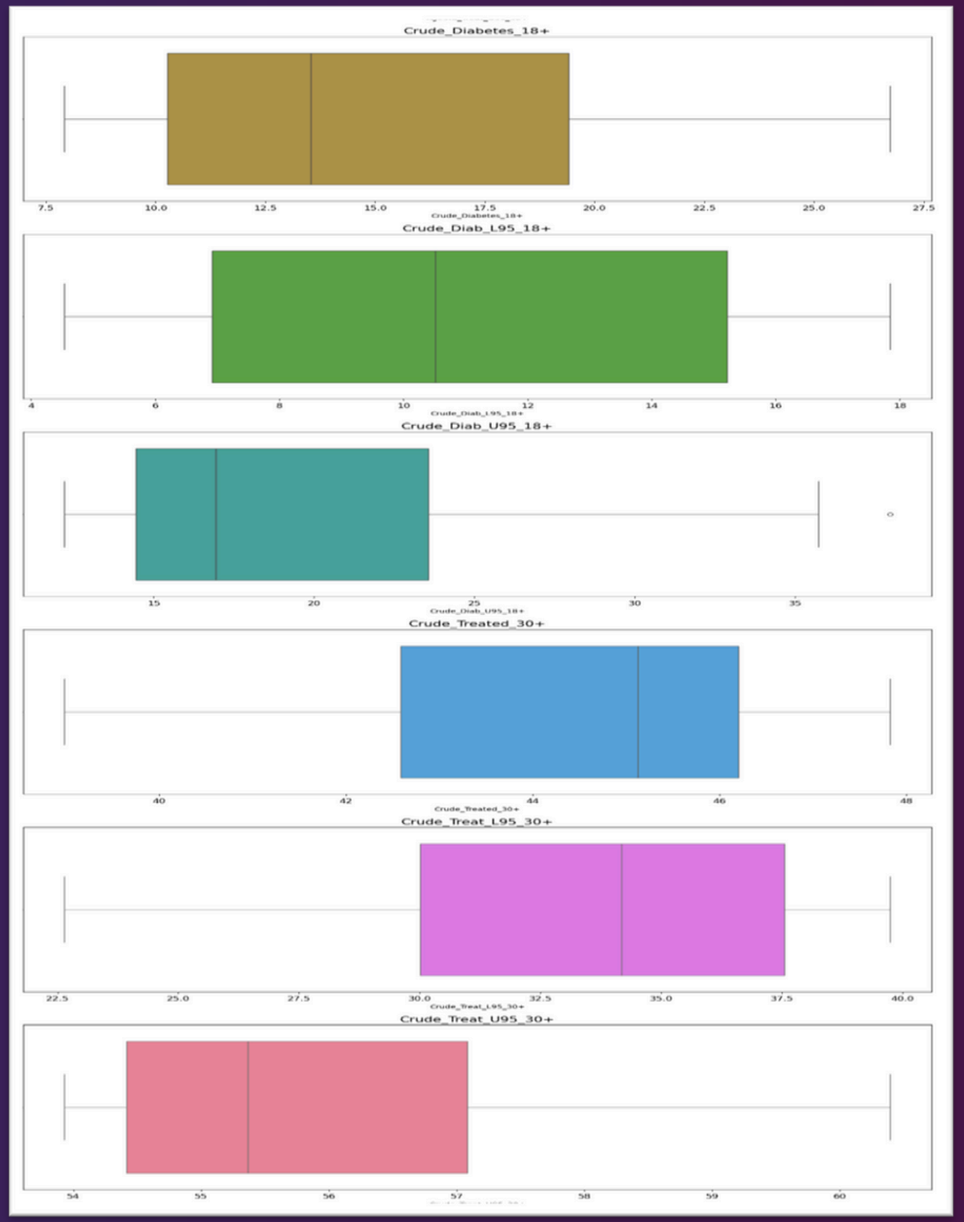
statistical measure

What are the distributions of the numerical variables in the dataset?

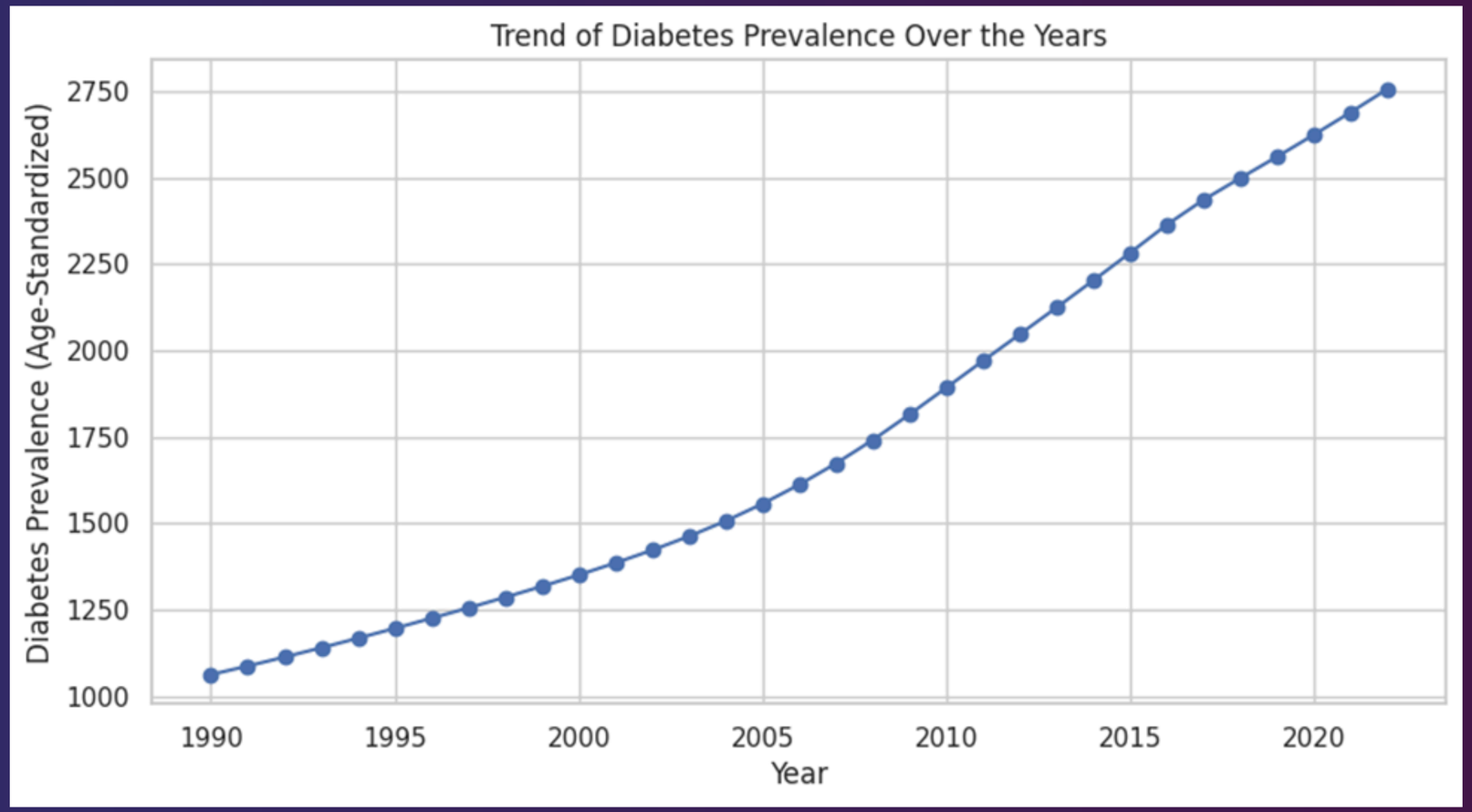


no outlier


Box Plots of Numeric Variables
Year
AgeStd_Diabetes_18+
AgeStd_Diab_L95_18+
AgeStd_Diab_L95_v2_18+
AgeStd_Treated_30+
AgeStd_Treat_L95_30+
AgeStd_Treat_U95_30+

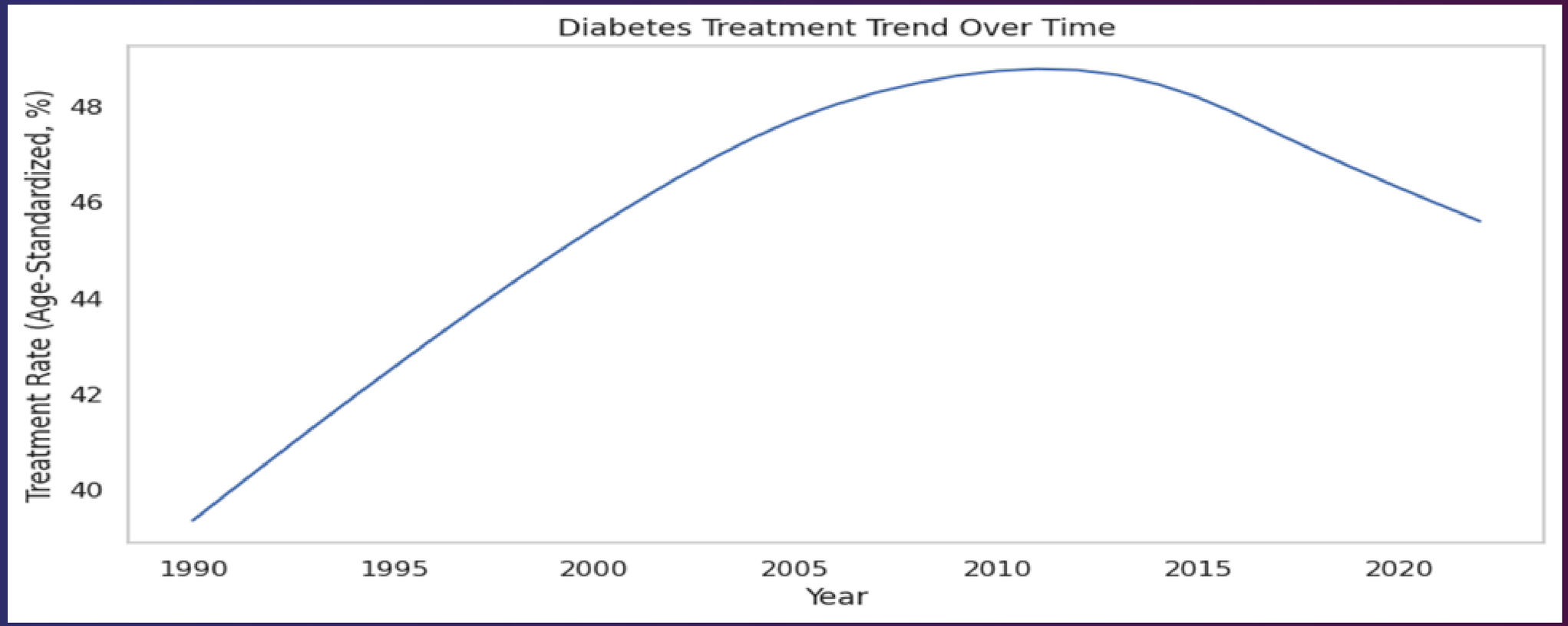

Crude_Diabetes_18+
Crude_Diab_L95_18+
Crude_Diab_U95_18+
Crude_Treated_30+
Crude_Treat_L95_30+
Crude_Treat_U95_30+

How has diabetes prevalence changed over the years?



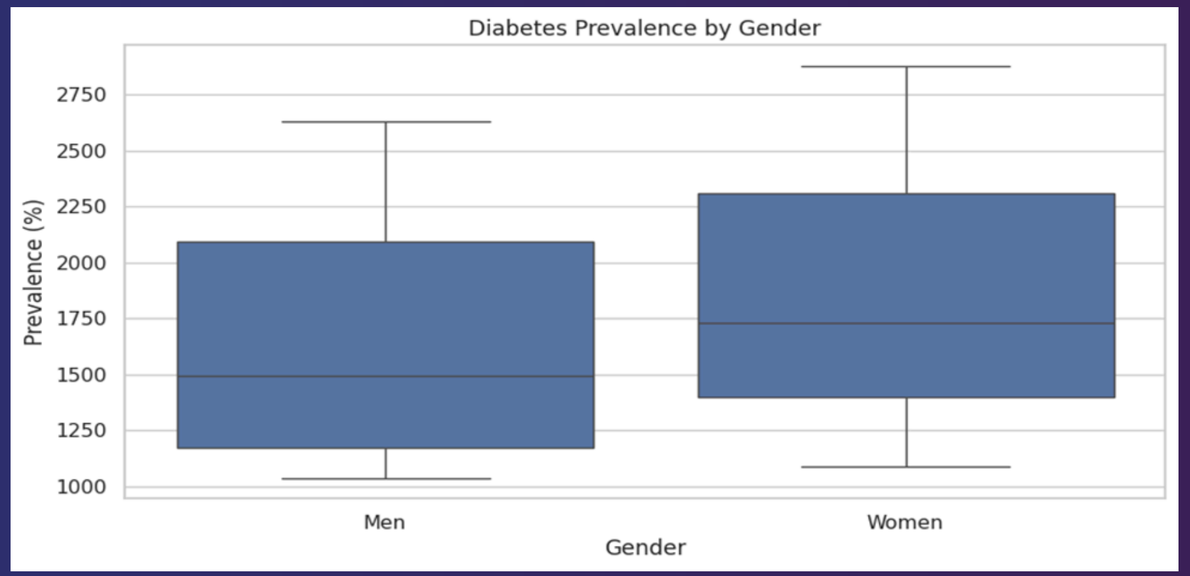
The graph shows a consistent and significant increase in the prevalence of diabetes in Egypt from 1990 to 2022, indicating that more people have been affected by the disease over time.

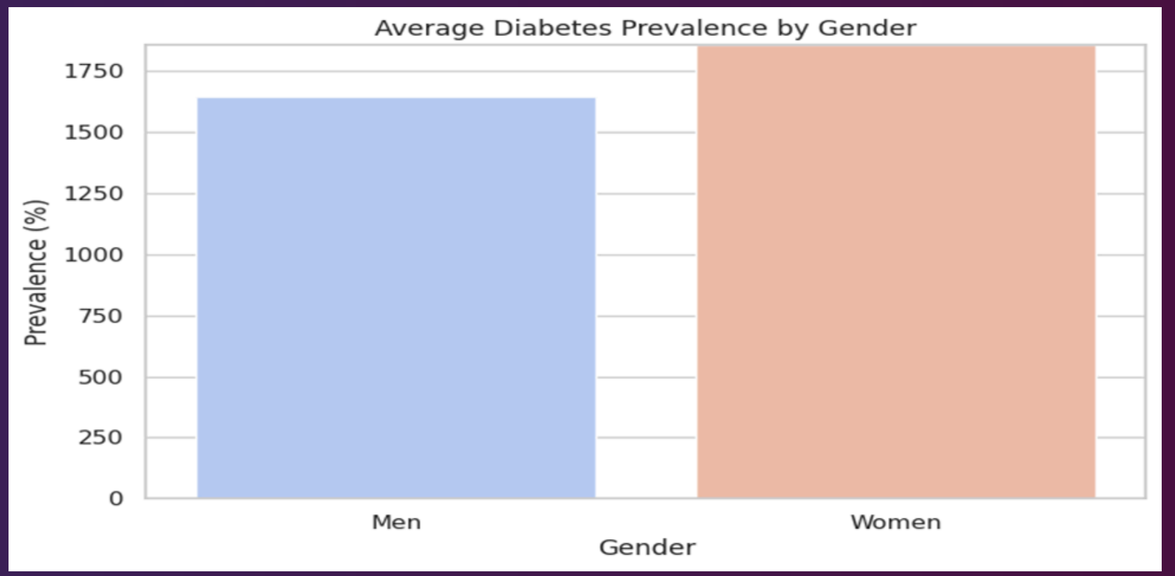
What is the trend in diabetes treatment over time?



The graph shows that diabetes treatment rates in Egypt increased steadily until 2010, then declined, which may indicate issues with healthcare access and treatment follow-up.

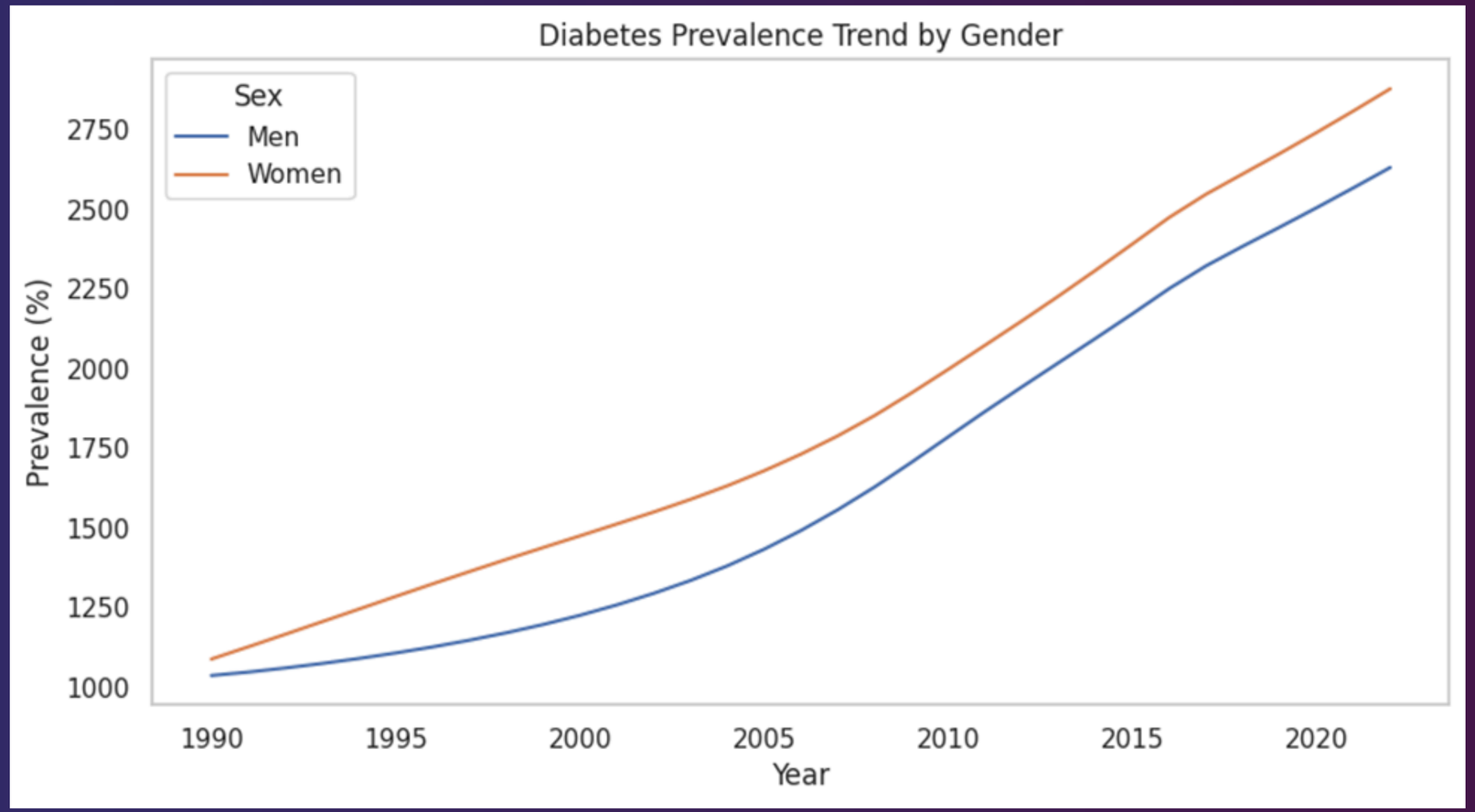
Do men and women have different diabetes prevalence rates?





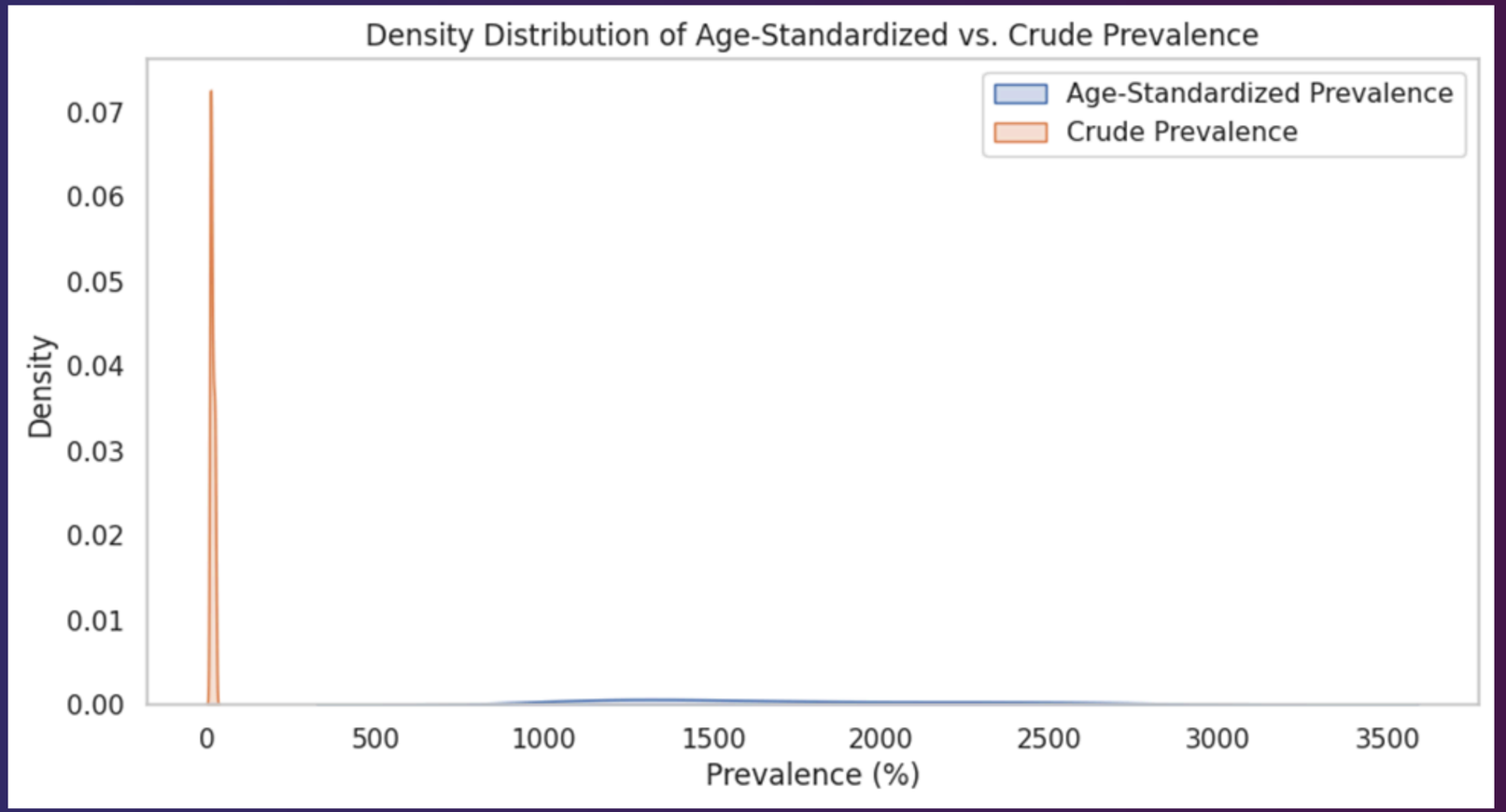
The graph shows a steady rise in diabetes prevalence in Egypt from 1990 to 2022, with women having a higher rate than men. This suggests possible factors like lifestyle, biology, or socioeconomics affecting diabetes risk.

Has the gender gap in diabetes prevalence changed over time?



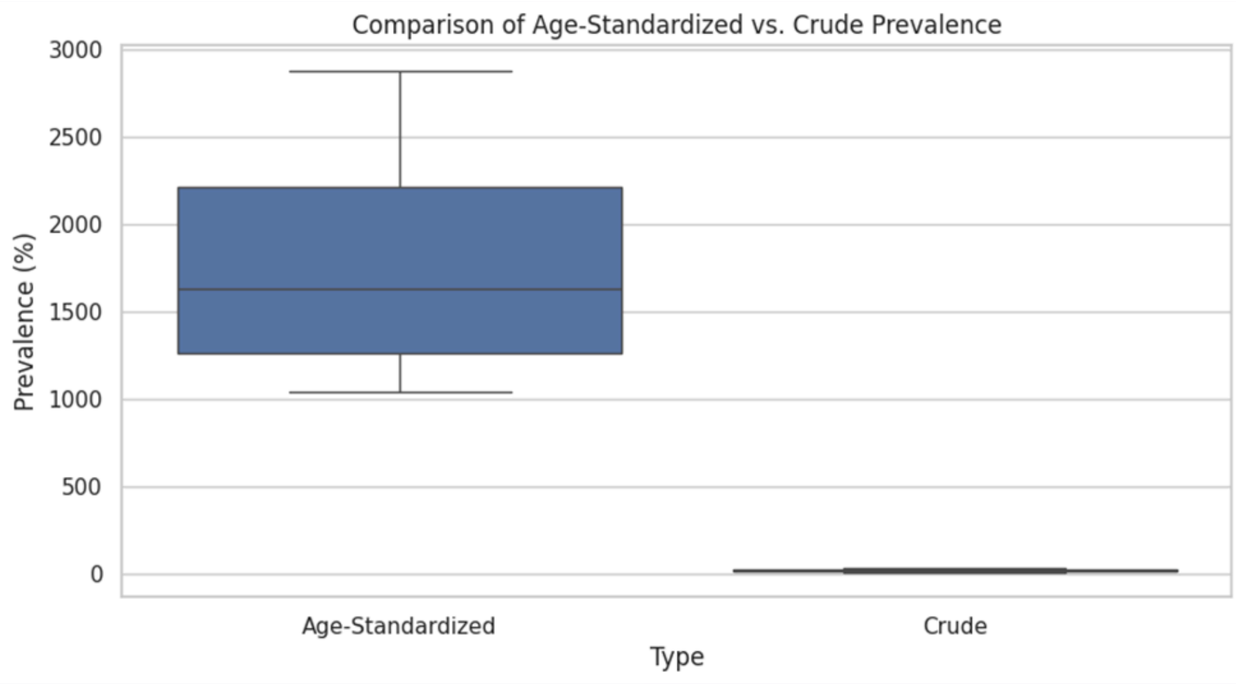
The graph shows that diabetes is more common in women than men in Egypt from 1990 to 2022, with the gap growing over time, especially after 2005.

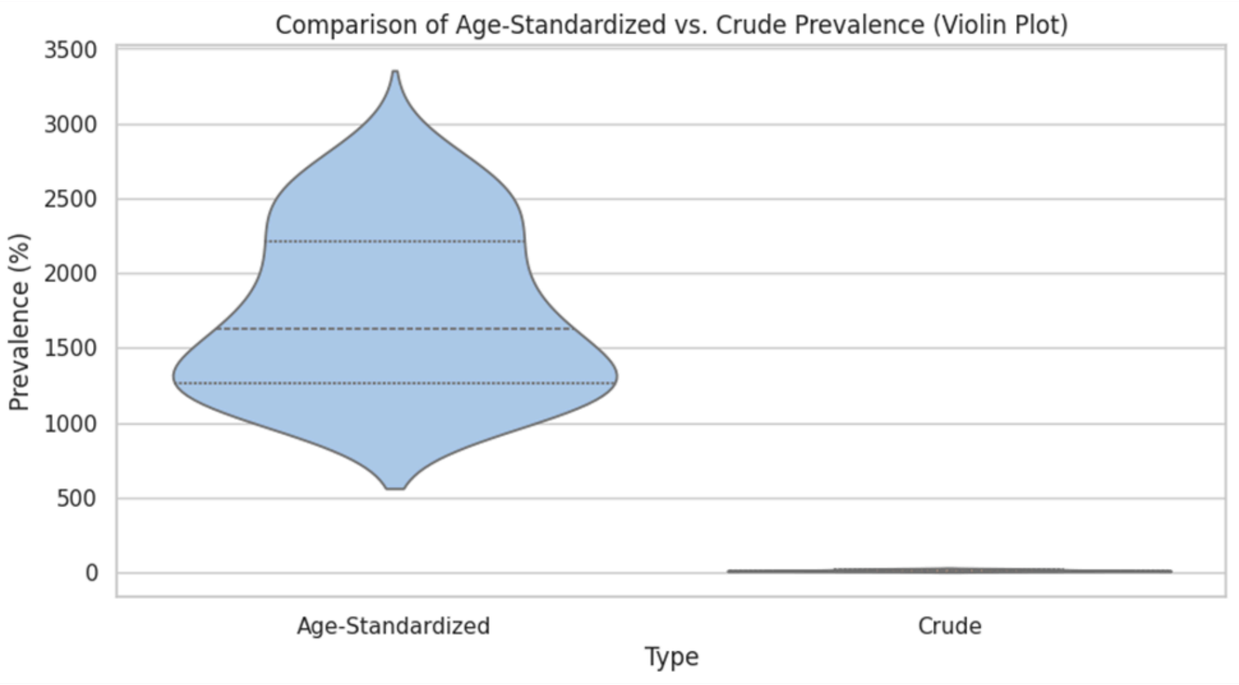
Density Distribution of Age-Standardized vs. Crude Prevalence



The graph shows that the crude prevalence of diabetes in Egypt is concentrated around lower values, while the age-standardized prevalence is more spread out, indicating that diabetes increases with age.

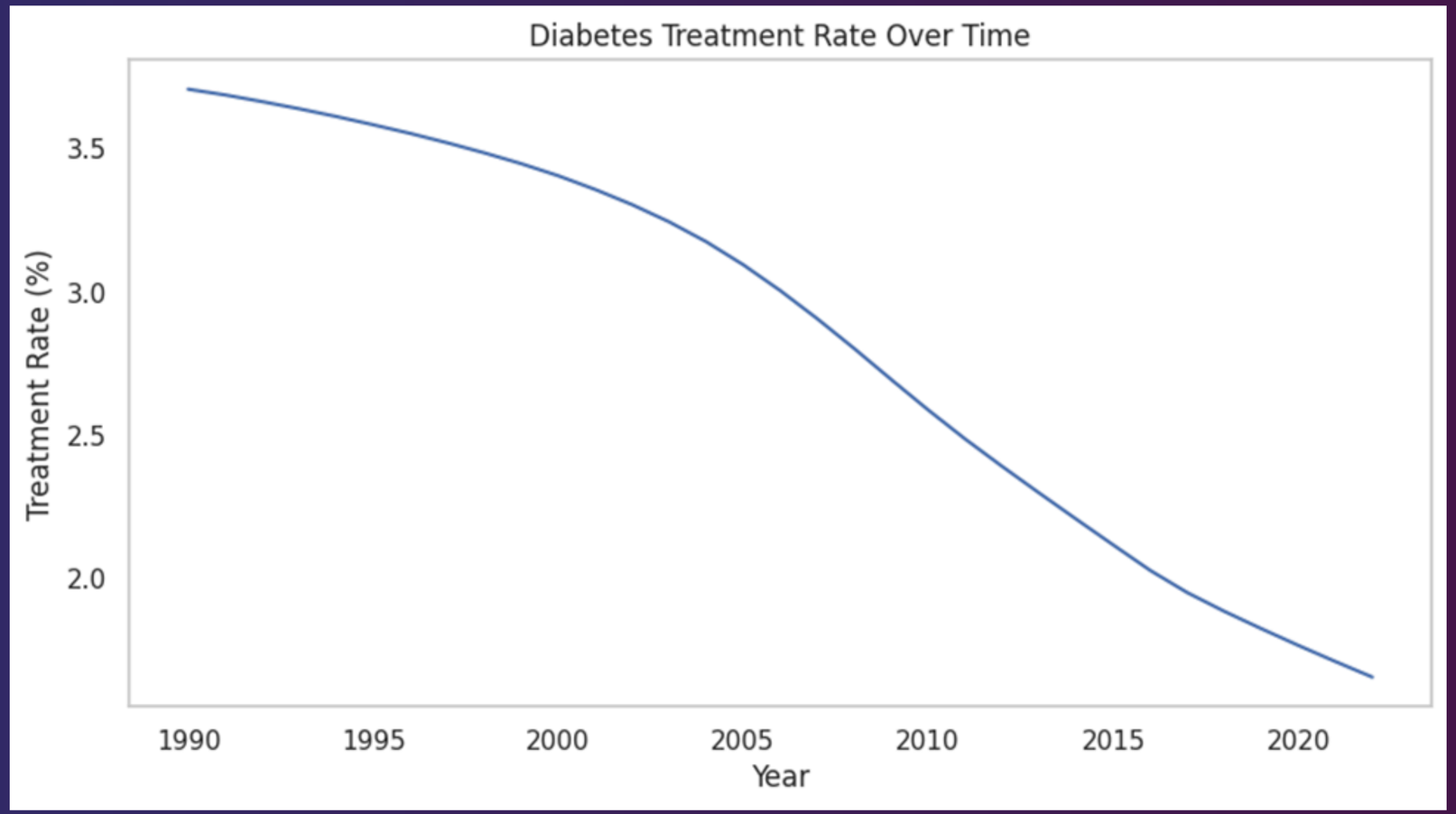
Age-Standardized vs. Crude Prevalence





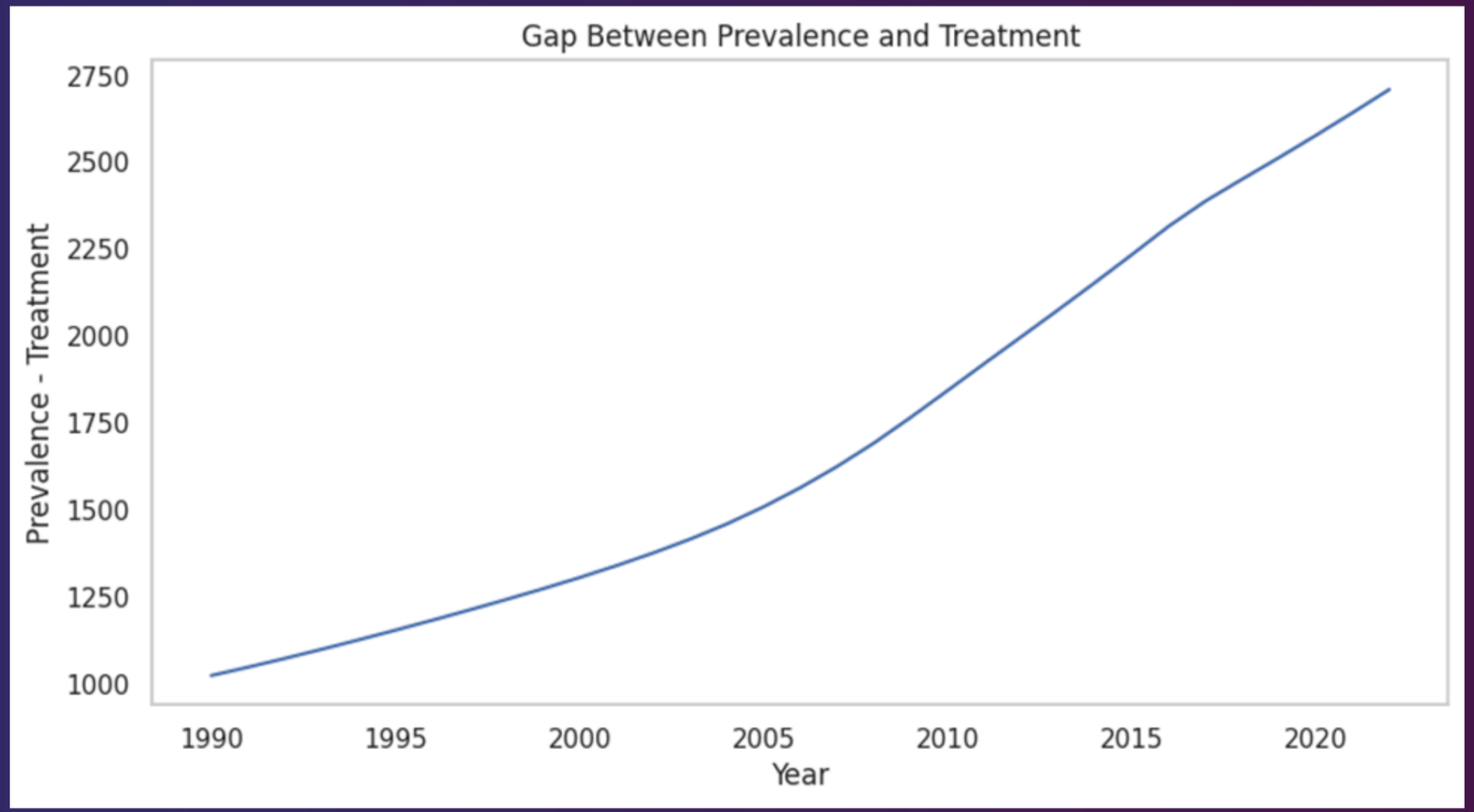
The violin and box plots show that age-standardized diabetes prevalence has a wider range and higher rates, suggesting that older populations have a greater risk of diabetes. The crude prevalence is lower, indicating younger groups have fewer cases.

What percentage of people with diabetes receive treatment?



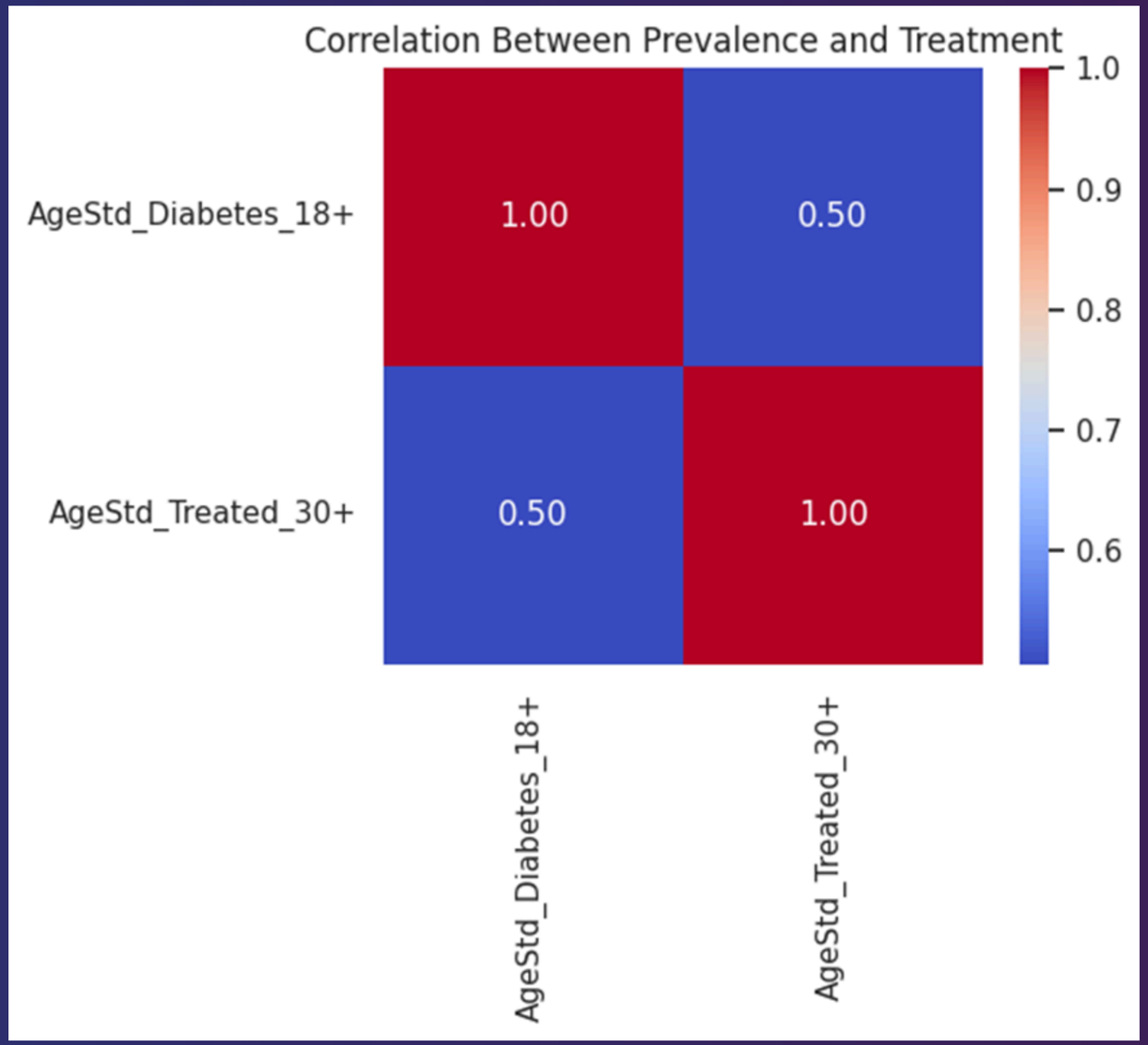
The graph shows a steady decrease in diabetes treatment rates in Egypt from 1990 to 2022, suggesting problems like less access to healthcare or people not following treatment.

Is there a gap between prevalence and treatment rates?



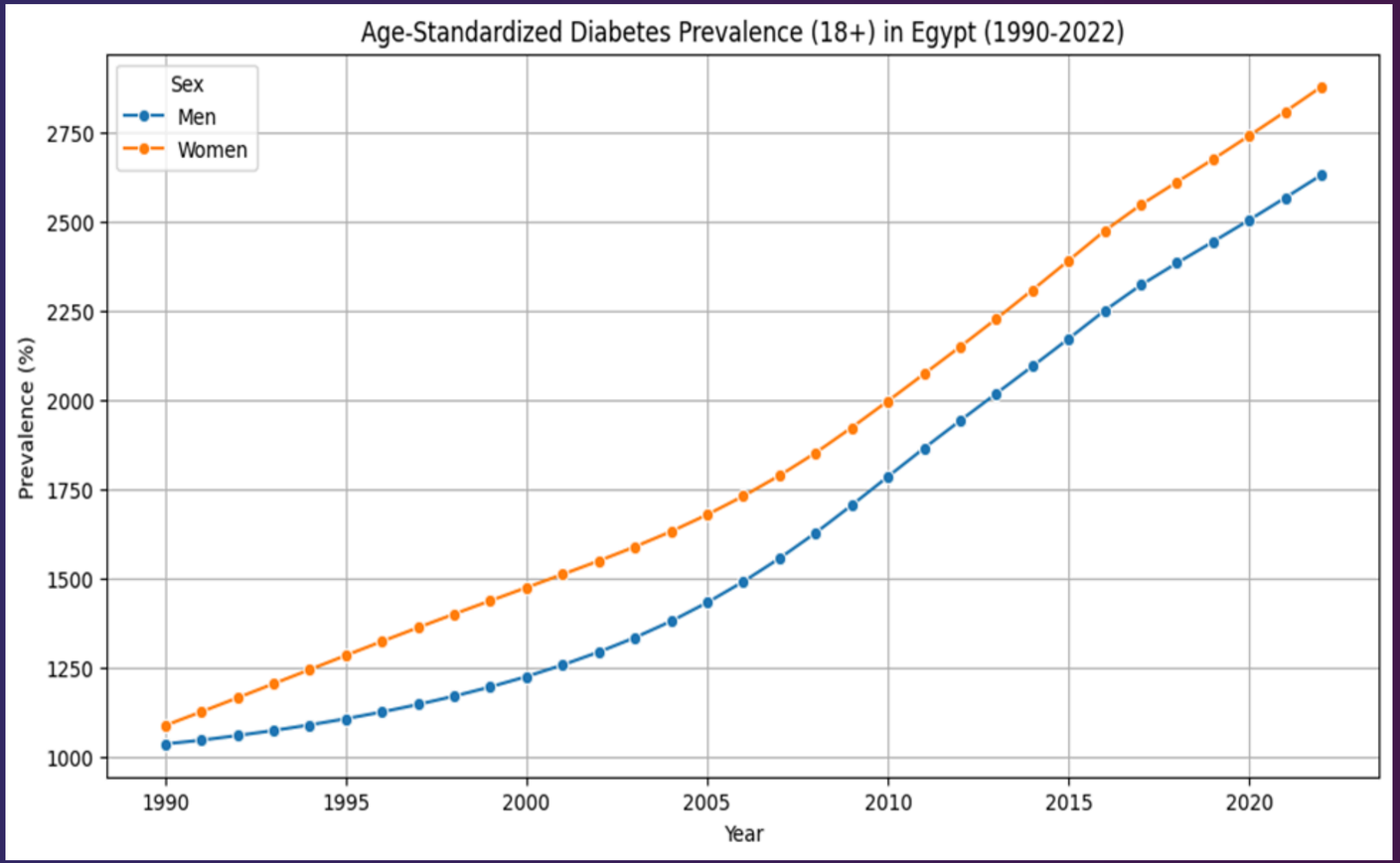
The graph shows that as diabetes prevalence rises in Egypt from 1990 to 2022, the treatment rates are not increasing at the same pace. The growing gap suggests challenges like limited healthcare access or lack of awareness.

Is there a correlation between prevalence and treatment?



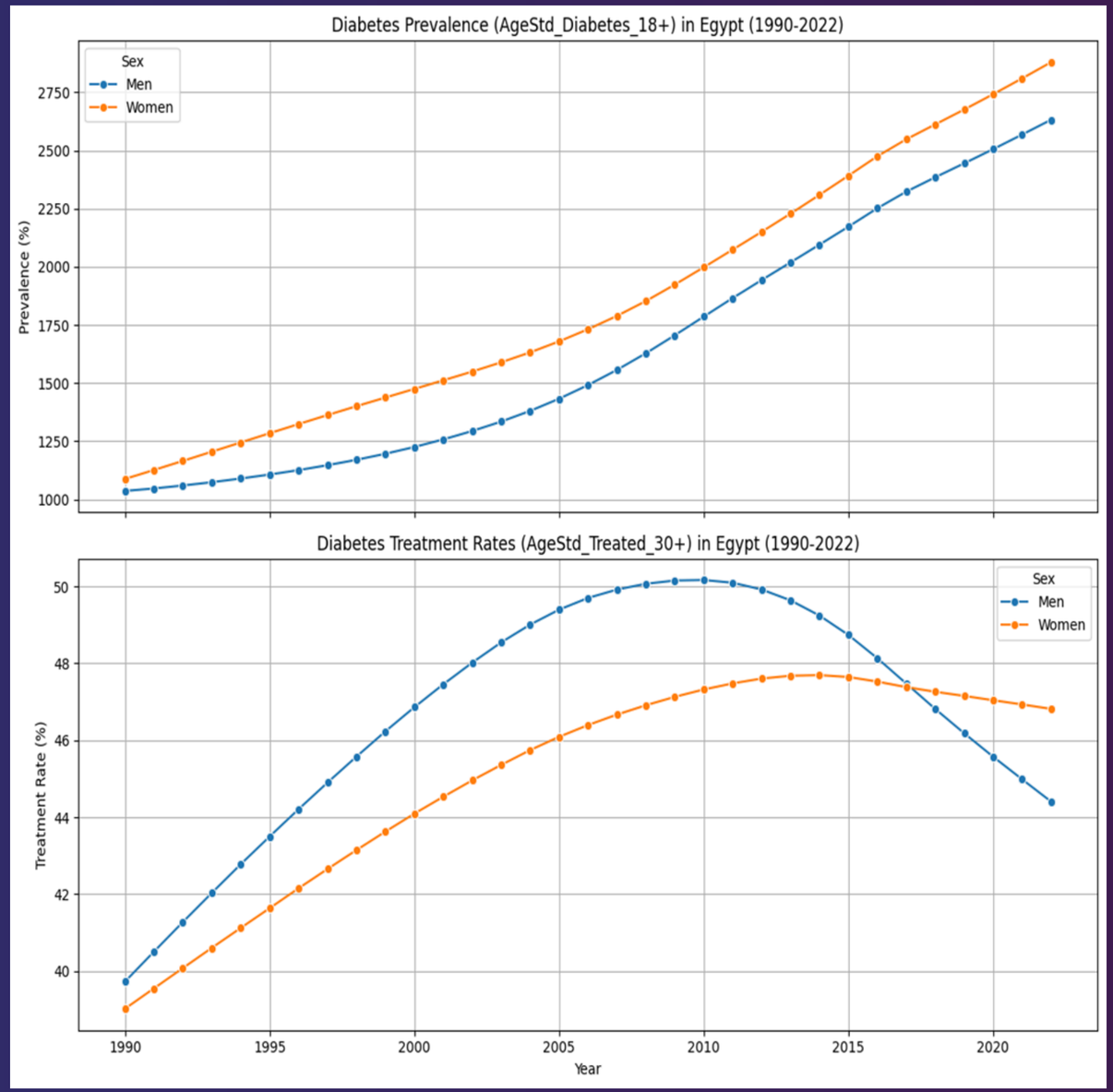
The heatmap shows a moderate positive correlation (0.50) between diabetes prevalence and treatment rates in Egypt.

How has the age-standardized prevalence of diabetes (AgeStd_Diabetes_18+) in Egypt changed from 1990 to 2022, and what are the differences between men and women?



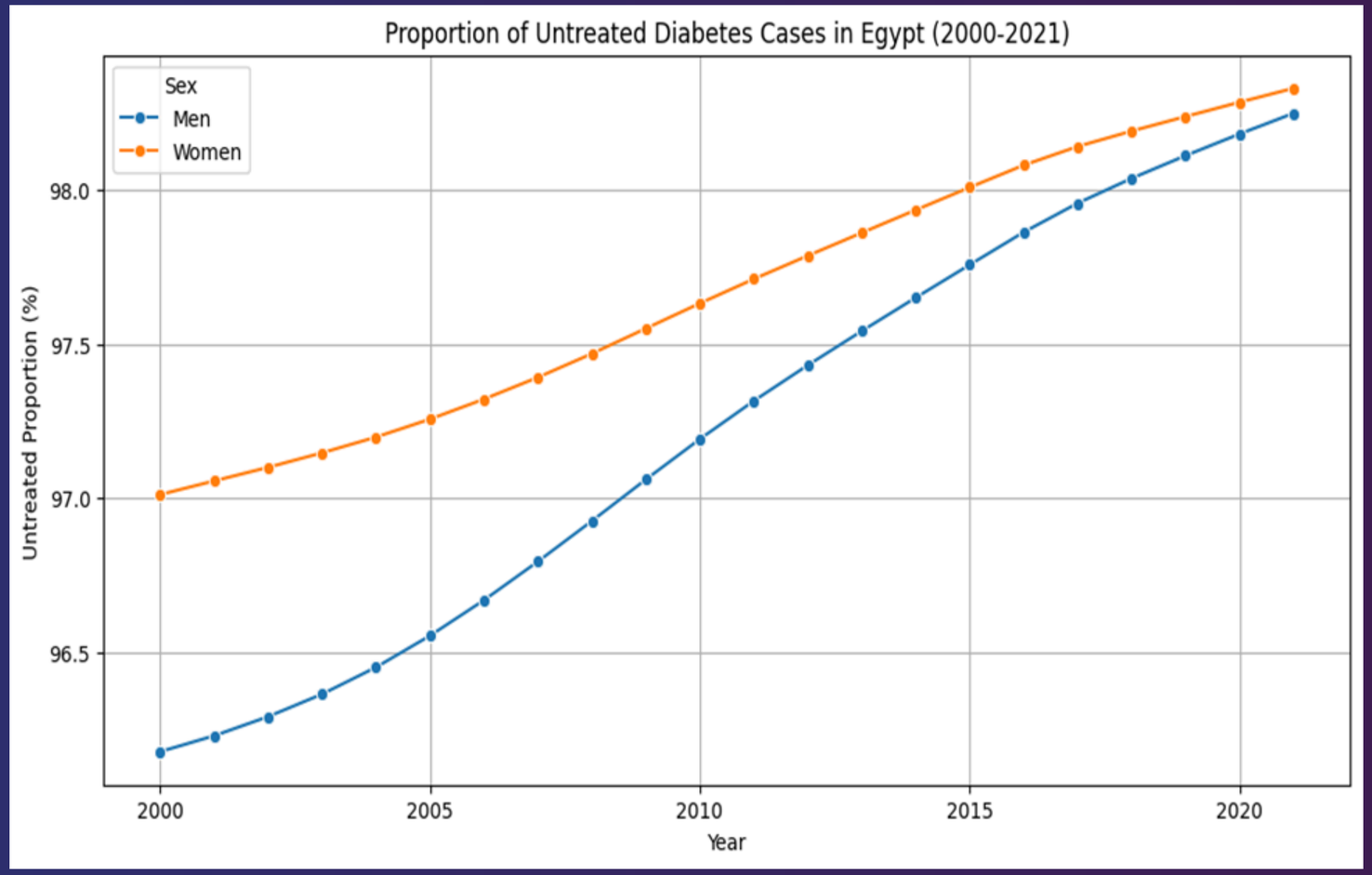
Diabetes prevalence in Egypt has steadily increased from 1990 to 2022 for both men and women, with women consistently having higher rates.

What are the differences in diabetes prevalence (AgeStd_Diabetes_18+) and treatment rates (AgeStd_Treated_30+) between men and women in Egypt from 1990 to 2022?



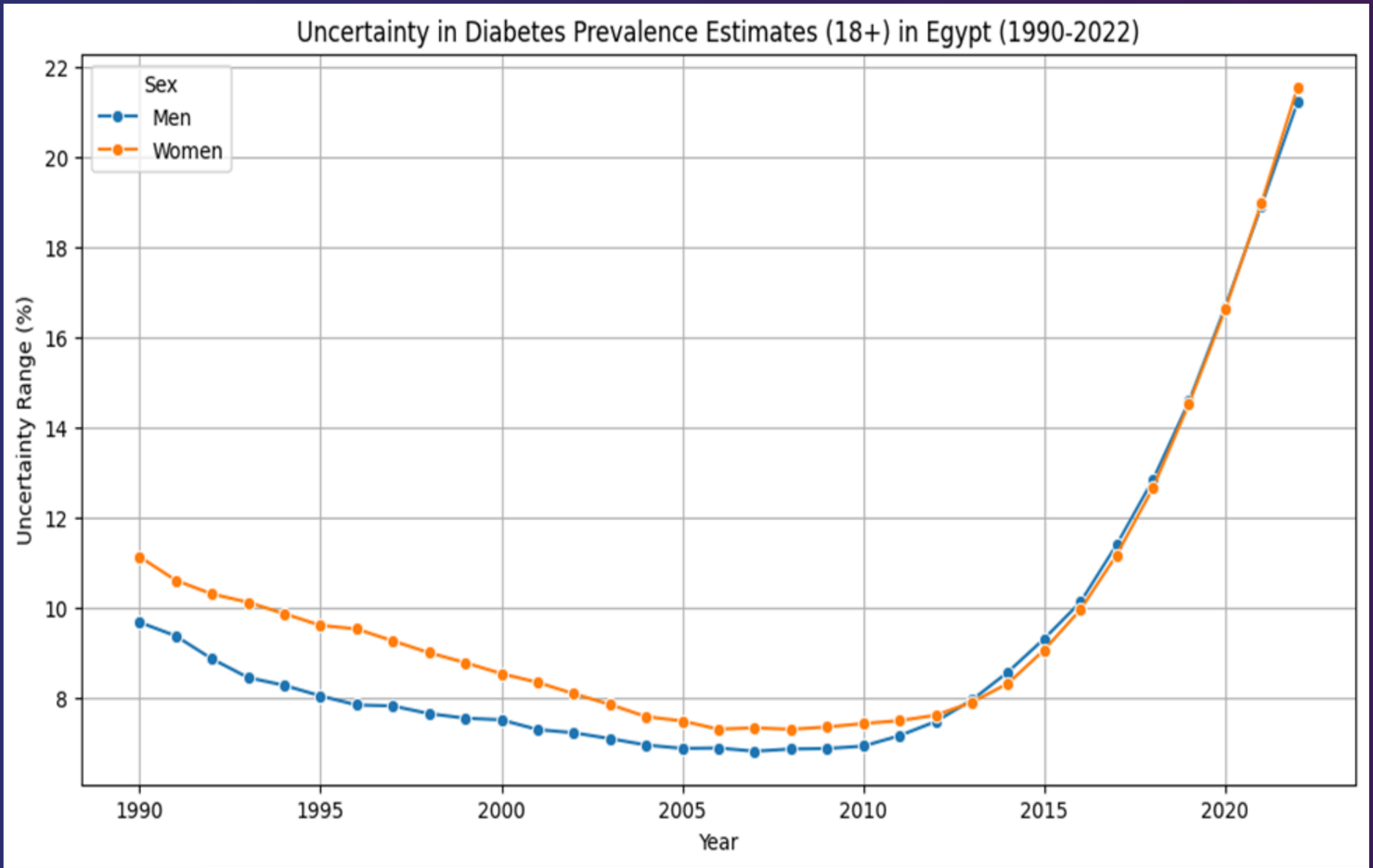
The charts show that diabetes prevalence in Egypt has increased for both men and women, with women having higher rates. However, treatment rates rose until around 2005-

What proportion of people with diabetes in Egypt remain untreated, and how has this proportion changed from 2000 to 2021?



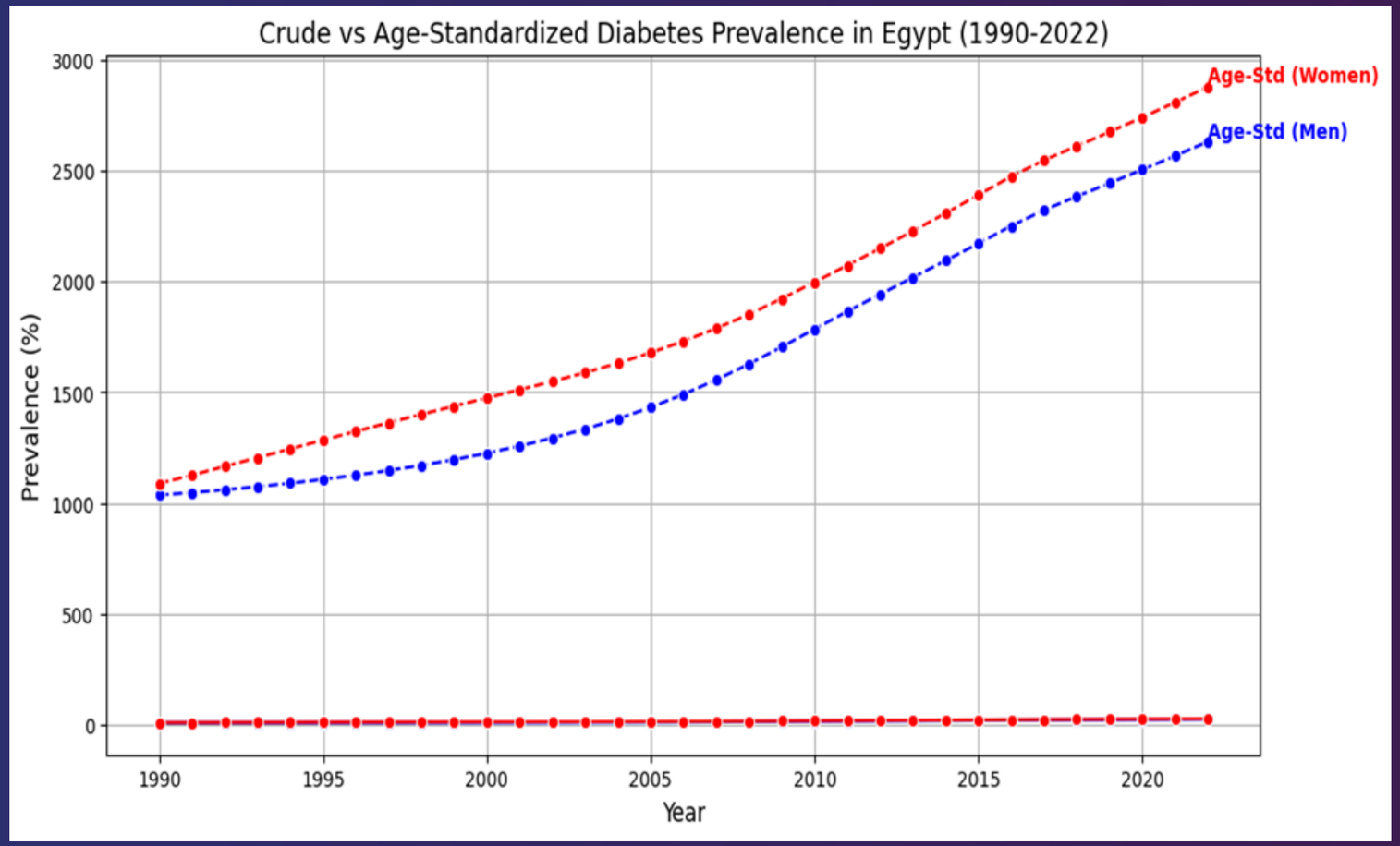
The chart shows that the proportion of untreated diabetes cases in Egypt increased steadily from 2000 to 2021 for both men and women, with women having slightly higher rates. This suggests a growing gap in diabetes care over time.

How has the uncertainty in diabetes prevalence estimates (AgeStd_Diabetes_18+) changed over time in Egypt, and are there significant differences between men and women?



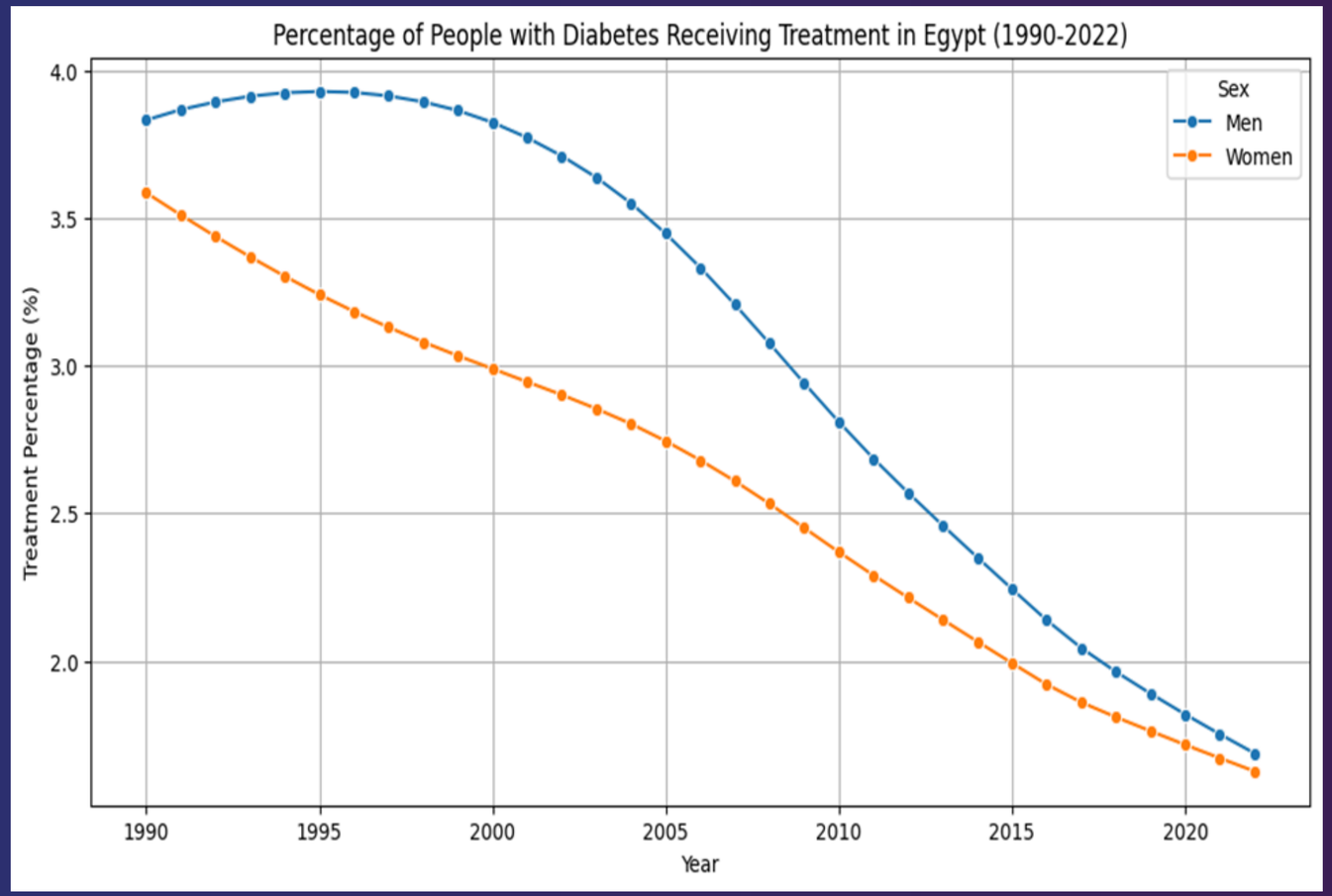
The chart shows the uncertainty in diabetes prevalence estimates for adults (18+) in Egypt from 1990 to 2022. Uncertainty decreased from the early 1990s to the mid-2000s, then rose sharply after 2010, suggesting growing challenges in getting accurate data on diabetes rates.

crude vs age standardized diabetes prevalence in egypt



The chart compares crude and age-standardized diabetes prevalence in Egypt from 1990 to 2022. Both men and women show a consistent increase in age-standardized prevalence, with women having higher rates.

What percentage of people with diabetes in Egypt receive treatment (AgeStd_Treated_30+), and how has this percentage changed from 1990 to 2022?



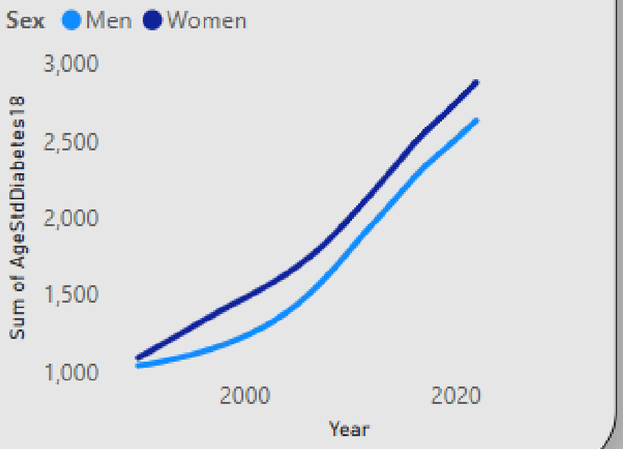
The chart shows the percentage of people with diabetes getting treatment in Egypt from 1990 to 2022, broken down by gender. At first, men had slightly higher treatment rates than women, but both groups declined over time. The gap between genders shows that women received less treatment, possibly due to healthcare or financial challenges.


DASHBOARD

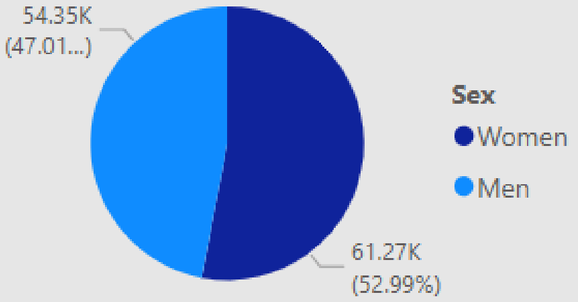
Diabetes Health Metrics in Egypt

pie chart | bar chart | question 1 | question 2

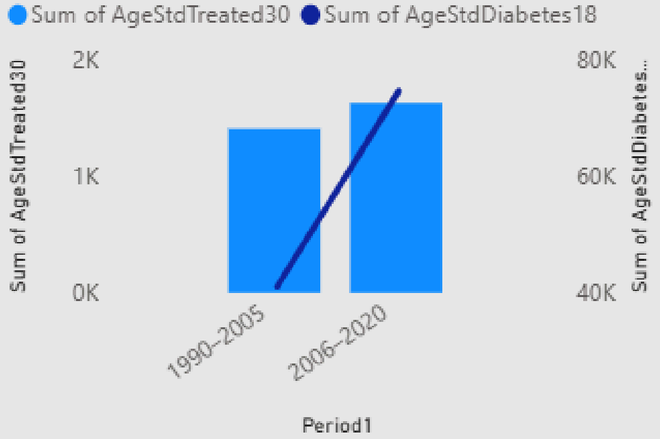
Sum of AgeStdDiabetes18 by Year and Sex



Sum of AgeStdDiabetes18 by Sex



Sum of AgeStdTreated30 and Sum of AgeStdDiabetes18 by Period1

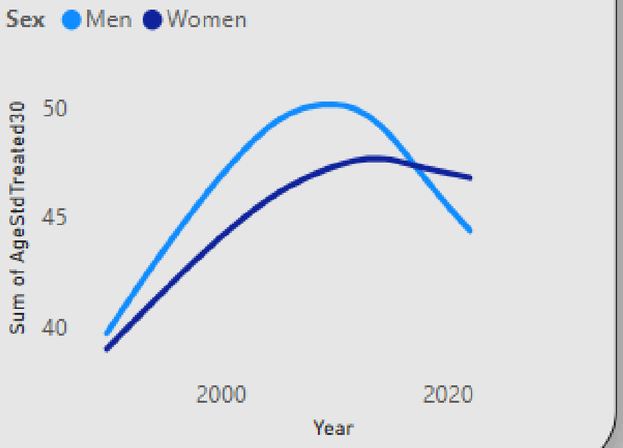


Sex
All

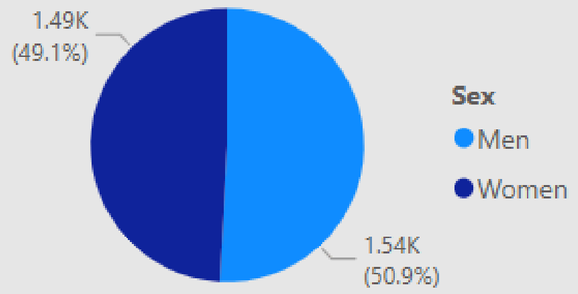
Year
1990 2022

Period1
1990–2005
2006–2020

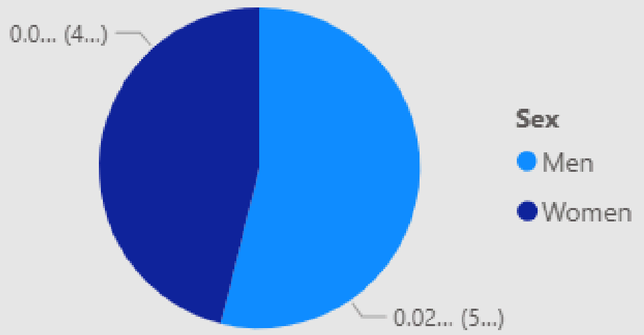
Sum of AgeStdTreated30 by Year and Sex



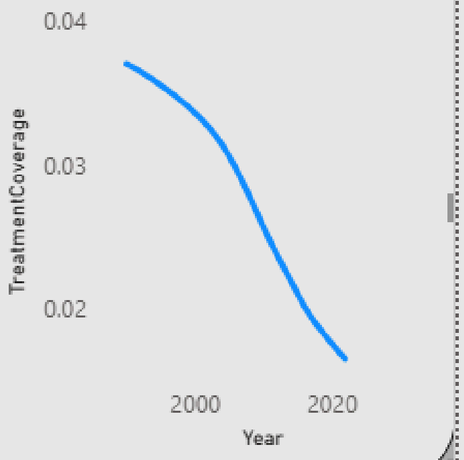
Sum of AgeStdTreated30 by Sex



TreatmentCoverage by Sex



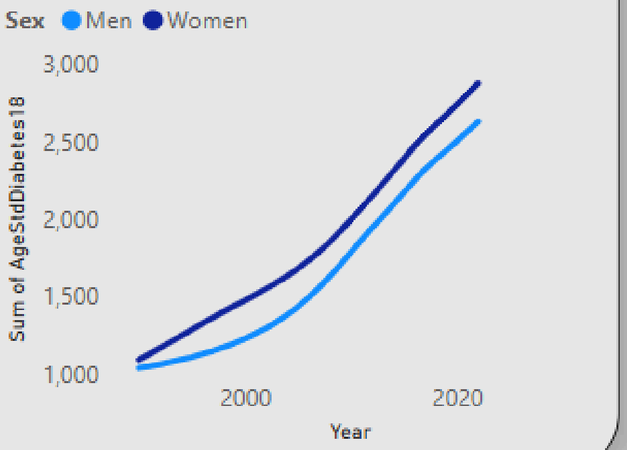
TreatmentCoverage by Year



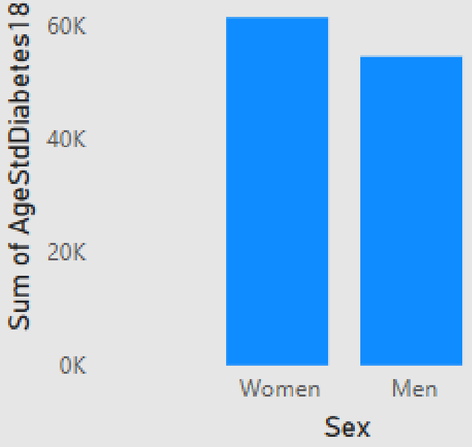
Diabetes Health Metrics in Egypt

pie chart | bar chart | question 1 | question 2

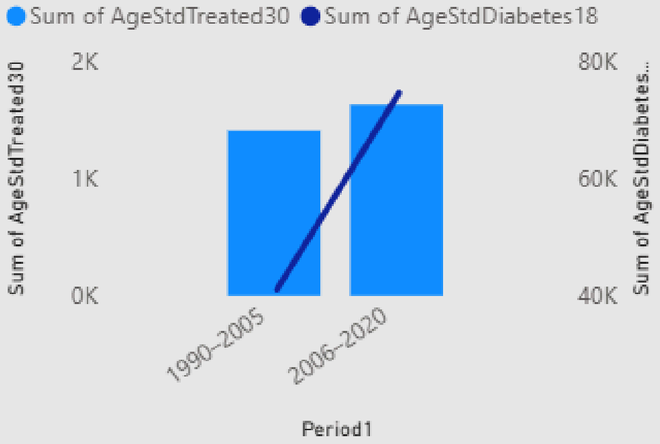
Sum of AgeStdDiabetes18 by Year and Sex



Sum of AgeStdDiabetes18 by Sex



Sum of AgeStdTreated30 and Sum of AgeStdDiabetes18 by Period1



Sex

All

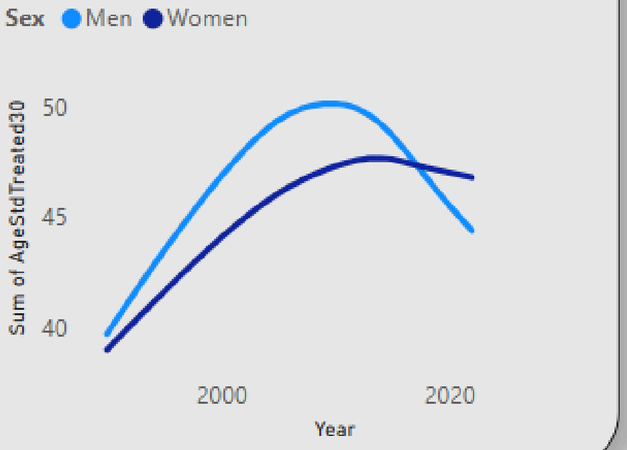
Year

1990 2022

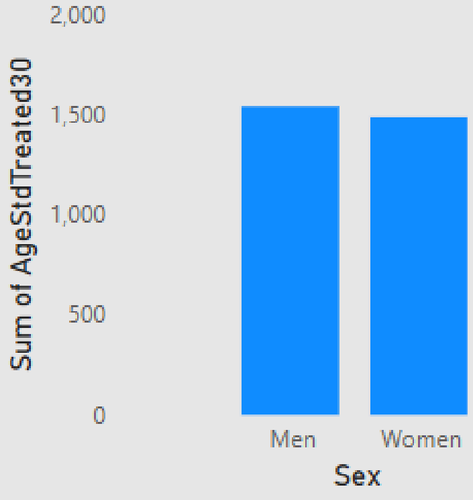
Period1

- 1990–2005
- 2006–2020

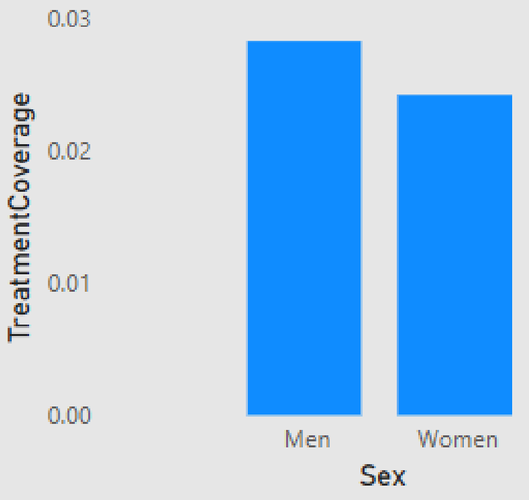
Sum of AgeStdTreated30 by Year and Sex



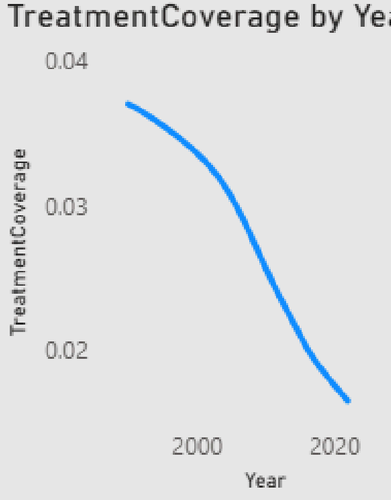
Sum of AgeStdTreated30 by Sex



TreatmentCoverage by Sex



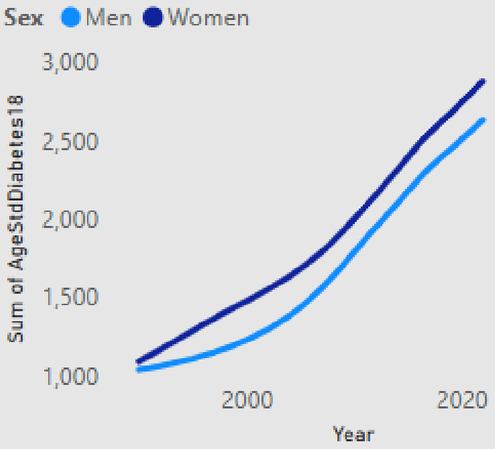
TreatmentCoverage by Year



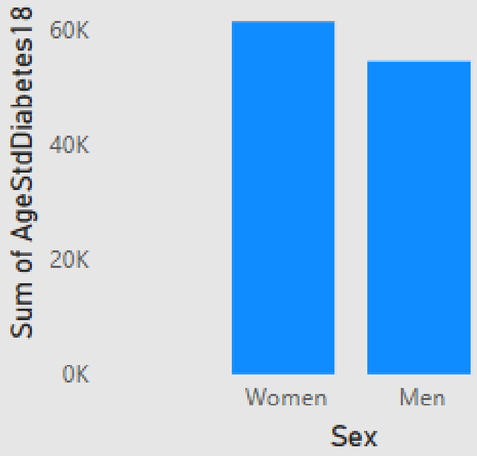
Diabetes Health Metrics in Egypt

pie chart | bar chart | question 1 | question 2

Sum of AgeStdDiabetes18 by Year and Sex



Sum of AgeStdDiabetes18 by Sex



Sum of AgeStdTreated30 and Sum of AgeStdDiabetes18 by Period1

Sex

All

Year

1990 2022

Period1

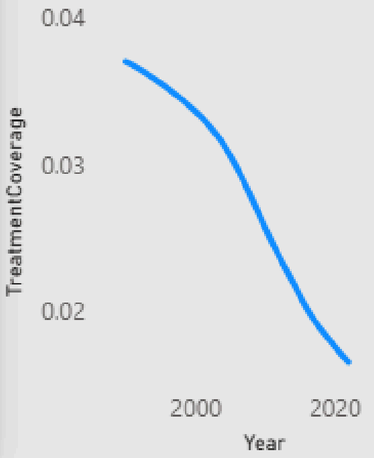
- [ ] 1990–2005
- [ ] 2006–2020

How has the age-standardized diabetes rate among adults (18+) changed over time for males and females?

what percentage of treated diabetes cases vary by sex ?

How does the average diabetes rate ,treatment from 1990–2005 compare to the rate from 2006–2020?

TreatmentCoverage by Year



Diabetes Health Metrics in Egypt

pie chart | bar chart | question 1 | question 2

How has the age-standardized treatment rate (AgeStdTreated30) changed over time for men and women?

which sex has a higher number of diabetes cases?

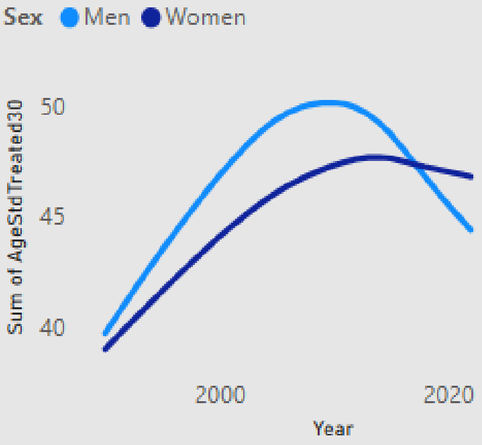
what percentage of treated diabetes cases by year ?

Sex
All

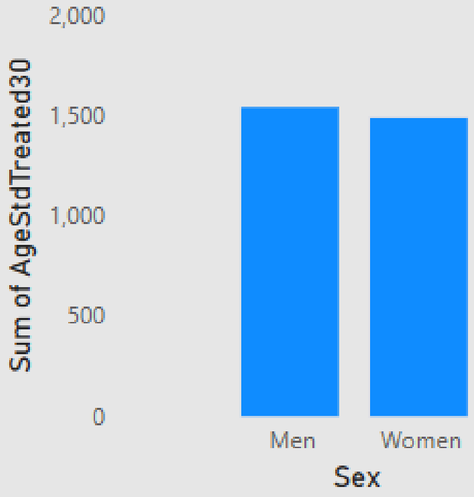
Year
1990 2022

Which sex has a higher treatment?

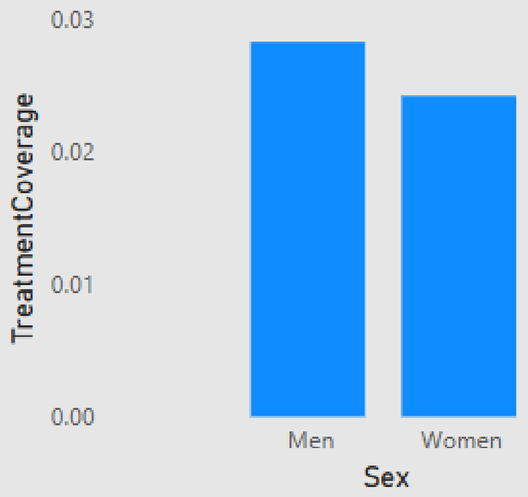
Sum of AgeStdTreated30 by Year and Sex



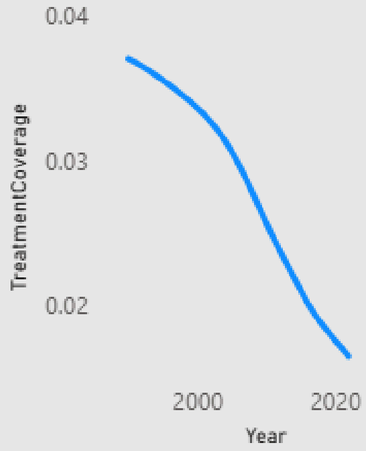
Sum of AgeStdTreated30 by Sex



TreatmentCoverage by Sex



TreatmentCoverage by Year



SUMMARY

- Rising Prevalence: Diabetes prevalence in Egypt has steadily increased, with women having higher rates than men. In 2022, prevalence is 2631.99 for men and 2879.25 for women.
- Declining Treatment Rates: Treatment rates rose initially but started declining after 2010.
- Correlation: Moderate positive correlation (0.44) between prevalence and treatment; stronger for women (0.79) than men (0.21).
- Key Trends:
  - Highest prevalence: 2022 (2879.25 per 100,000 people)
  - Lowest prevalence: 1990 (1036.53 per 100,000 people)
  - Declining treatment coverage: From 3.8–3.5% in 1990 to 1.69–1.63% in 2022.


RECOMMENDATION

Improve Public Awareness & Prevention

- Launch national campaigns to promote healthy living, exercise, and early screening.
- Encourage healthier diets and obesity management programs.

Expand Access to Diabetes Treatment

- Improve healthcare systems to make treatment more available.
- Offer affordable treatment plans.
- Expand outreach programs to rural and low-income areas.

Address Gender-Based Disparities

- Create healthcare policies that ensure fair treatment for both men and women.
- Run awareness campaigns for women, focusing on early diagnosis and treatment.

Enhance Data Accuracy & Monitoring

- Improve methods for collecting data to make diabetes estimates more accurate.
- Invest in digital health records and AI tools to track diabetes better.

Strengthen Policy Interventions

- Introduce mandatory diabetes screenings for high-risk people.
- Promote workplace programs to encourage healthier habits.

Comprehensive Strategies for Combating Diabetes Nationally

Gender Equity

Policies ensuring fair treatment and awareness for women.

Treatment Access

Improving healthcare systems and affordable treatment plans.

Data Accuracy

Enhancing data collection and monitoring methods.

Public Awareness

Campaigns promoting healthy living and early screening.

Policy Interventions

Mandatory screenings and workplace health programs.


E
A
M
F

- Nancy Nabil
- Ganna Allah Saleh
- Seif Nour
- Marwan Ahmed
- Ahmed Hatem

THANK YOU!