

# Gender disparities in Portugal:

Why are there so many fewer women in prison compared to men?

An Exploratory Data Analysis

# 01 - Introduction

In 2022

Women made up

57.9%

of university graduates

Women earned less

6.3%

than men

Women were

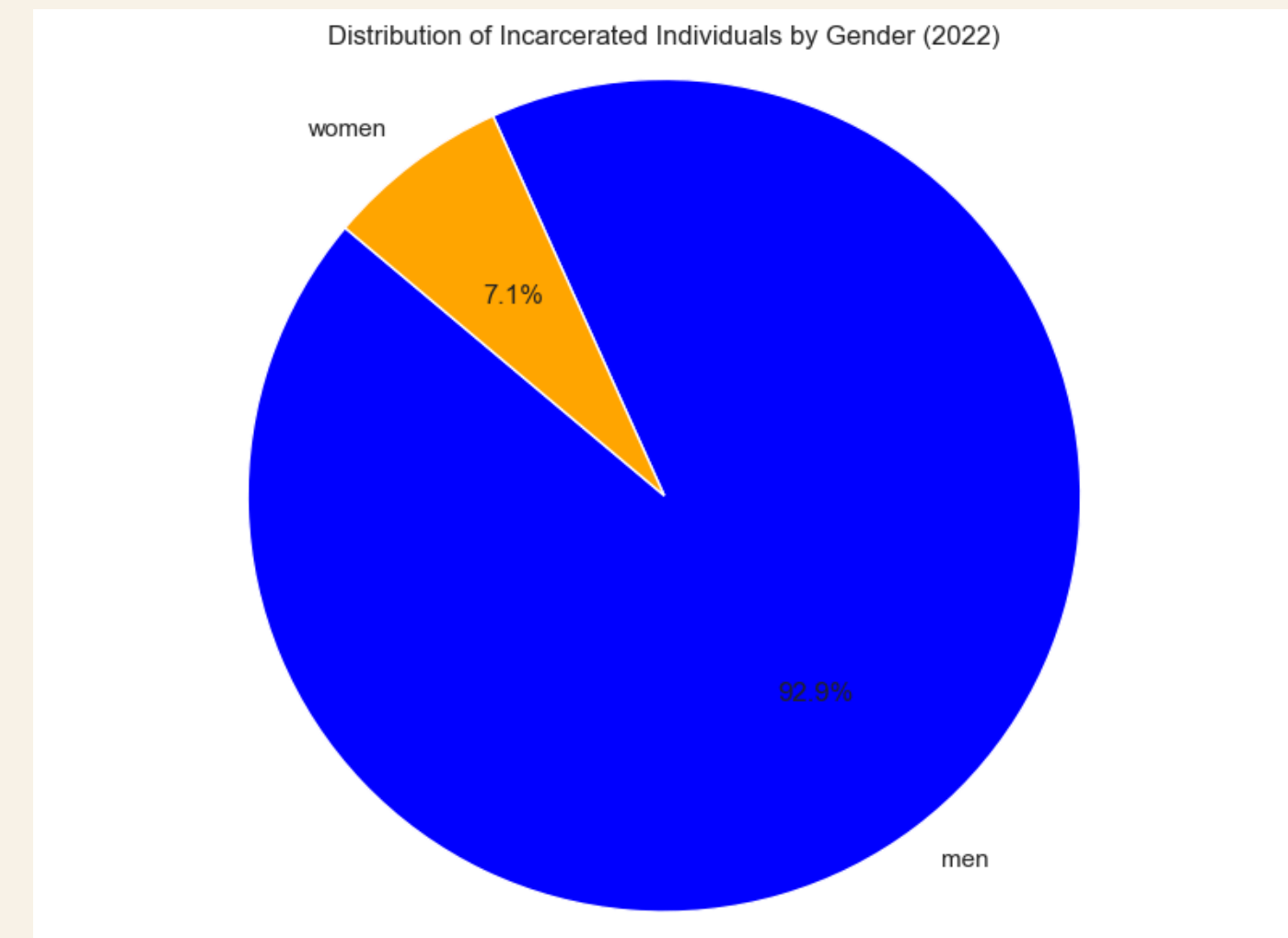
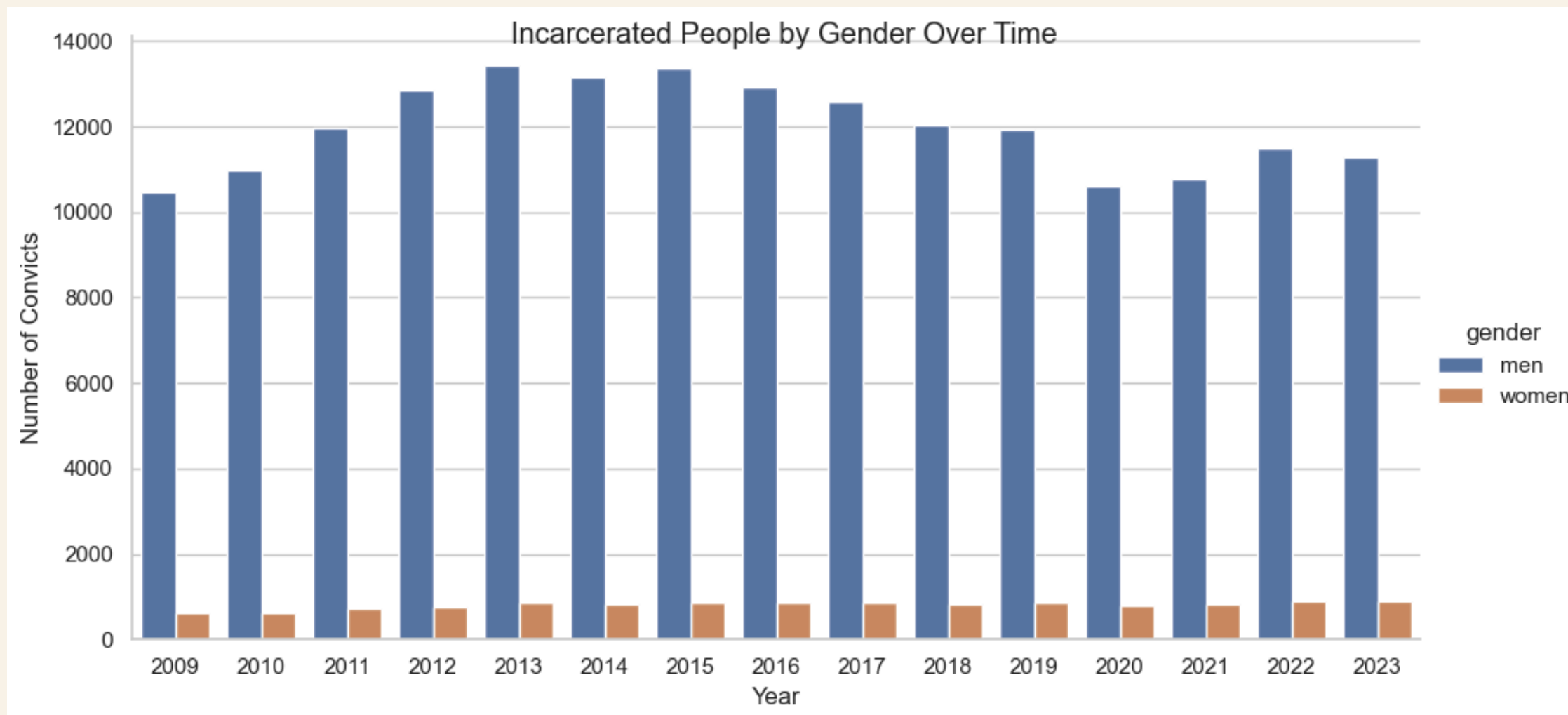
55%

of the unemployed people

Women were

73%

of domestic violence victims



# 01 – Introduction

## Question 1:

Are women committing less crimes? Why?

## Hypotheses

- People with higher education levels commit less crimes.
- Unemployment influences crime rates.
- Lower salaries may increase the likelihood of criminal behavior.

## Question 2:

Is the judicial system biased?

## Hypothesis

The justice system can introduce bias in sentencing.

# 01 – Introduction

- Initially had 17 DataFrames
- Cleaning & Merging: 6 DataFrames
- Mainly data from 2011 until 2023, only in Portugal
- Extracted from INE (National Institute of Statistics)



# 01 – Introduction



## Education

- Enrollment rate in primary education (%)
- Enrollment rate in high school (%)
- Enrollment rate in superior education (%)
- Early school dropout rate



## Labor Market

- Number of unemployed people 1997-2023
- Gender disparity (%)
- Annual gross average salary



## Domestic Violence

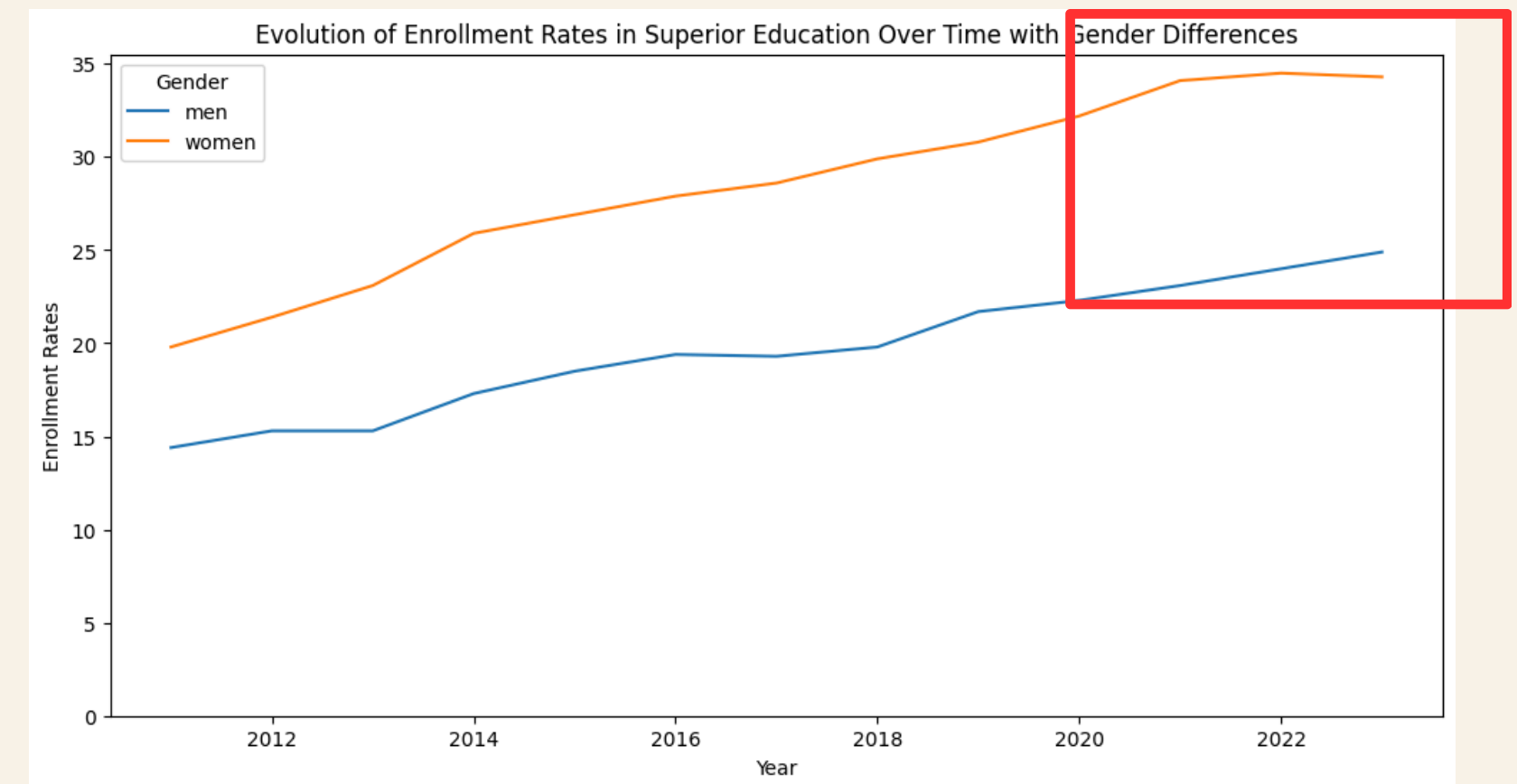
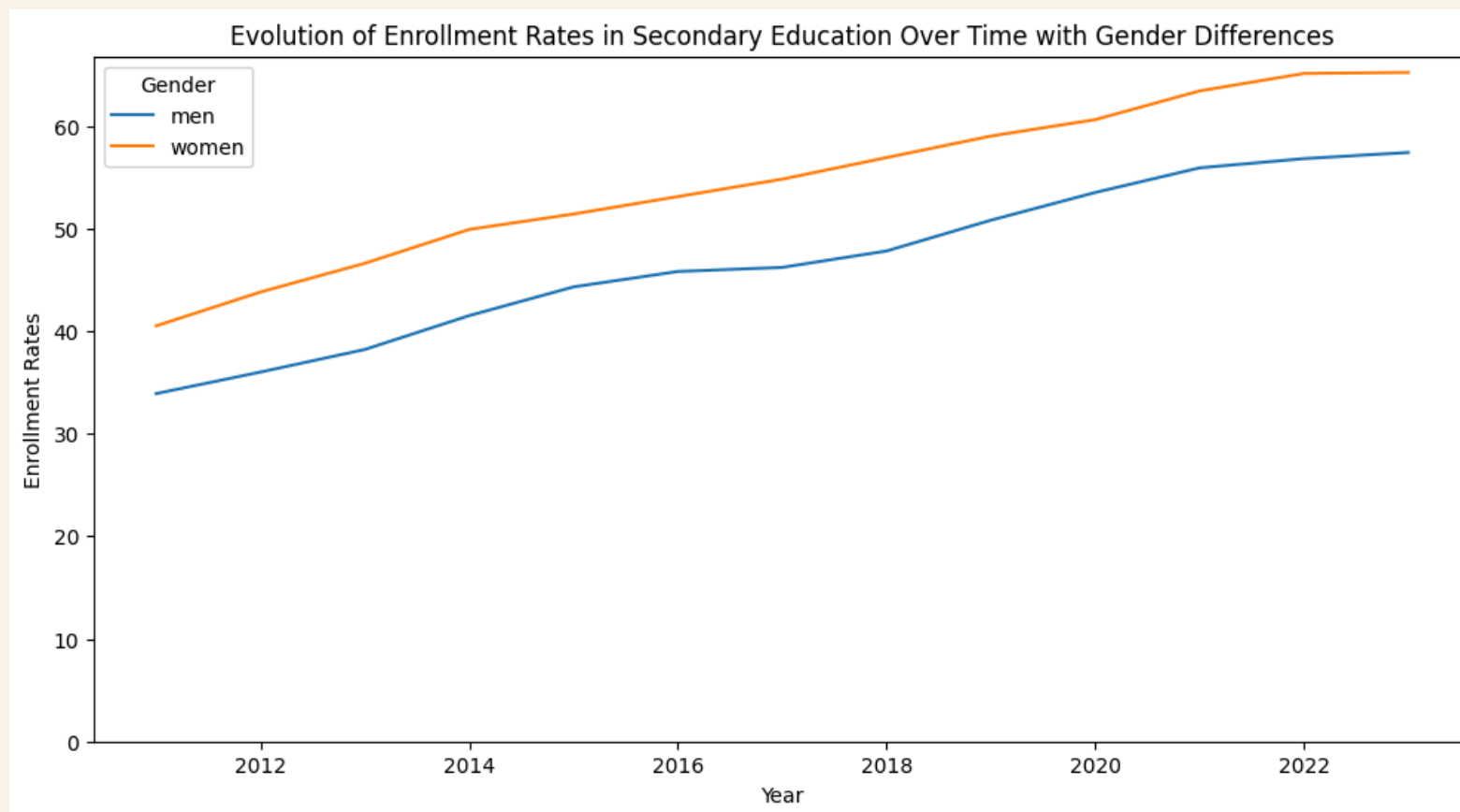
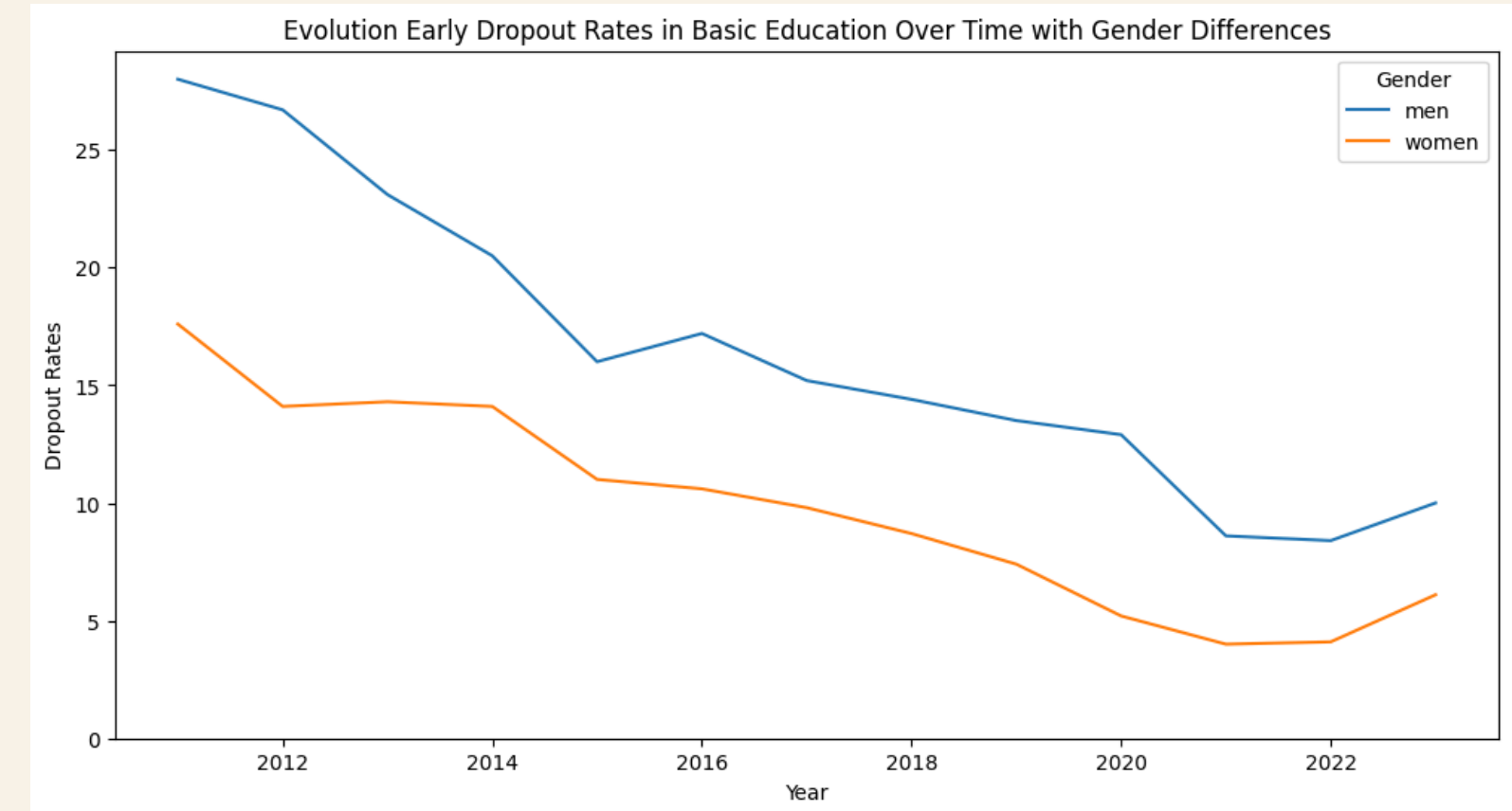
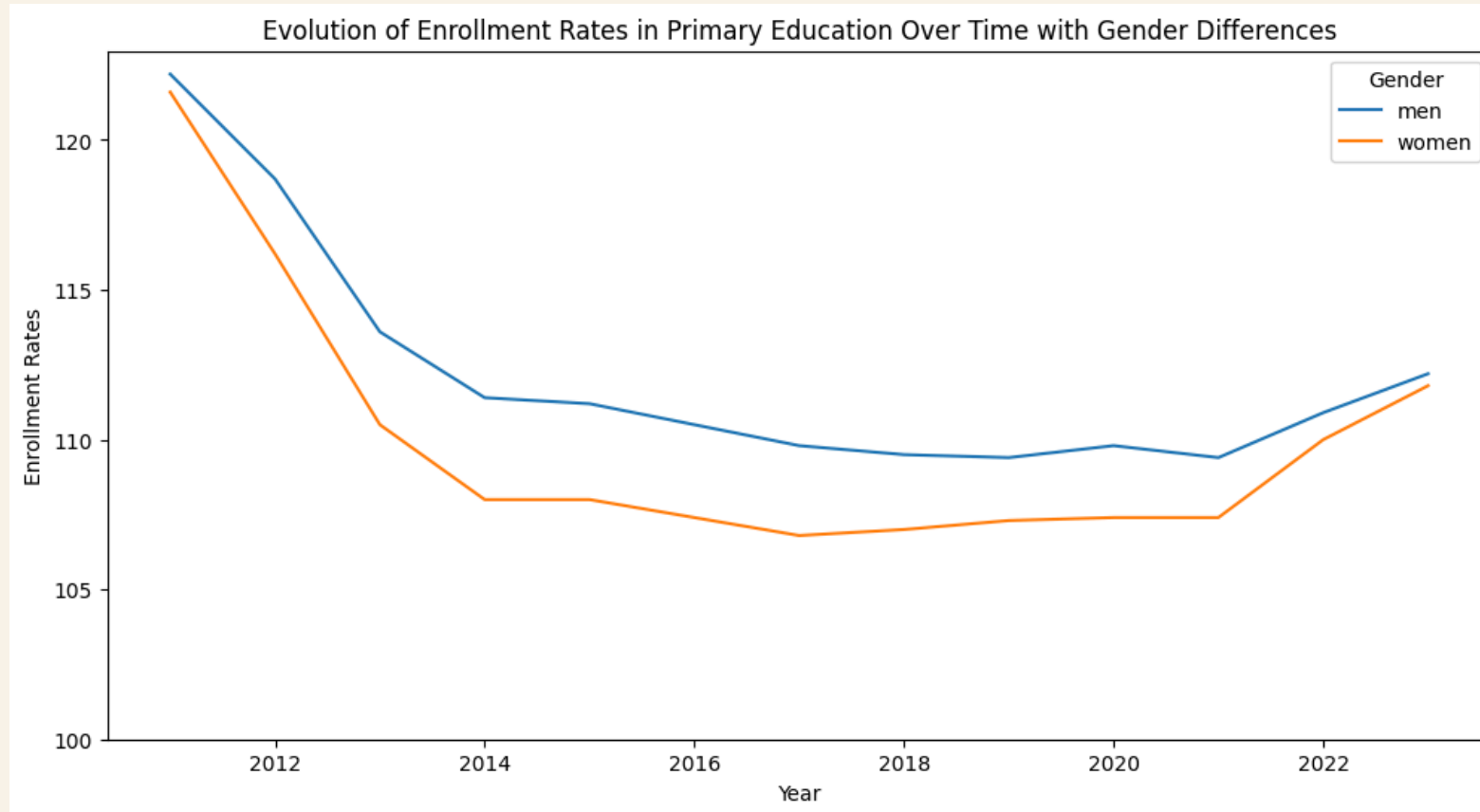
- Number of victims
- Number of criminals



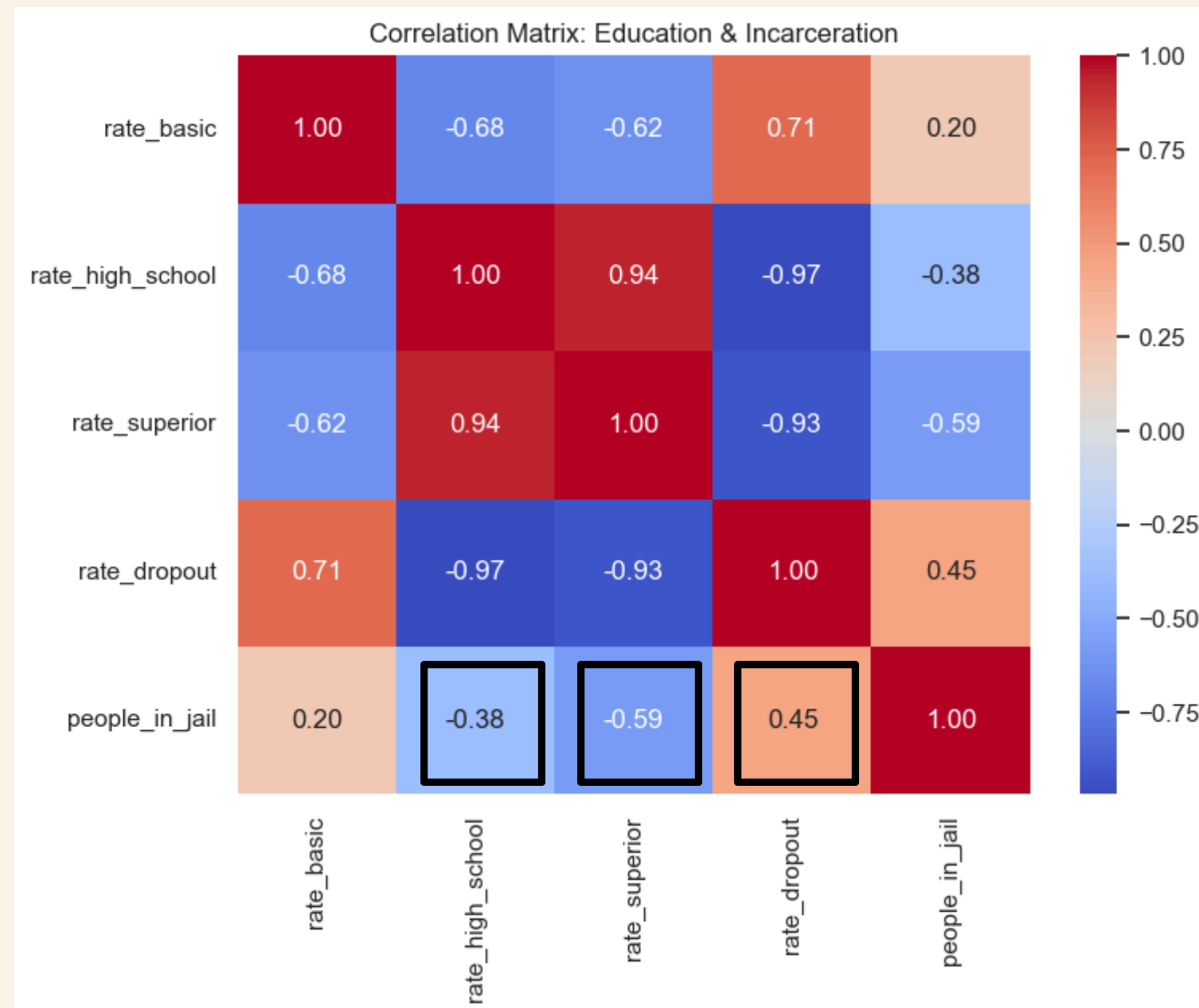
## Judicial System

- Type of crimes committed by gender
- Identified suspects
- Number of people incarcerated by education level
- Gender in judicial positions
- Judges by gender

# 02 - Education



## 02 – Education



**rate\_basic:** Enrolment rate in primary education

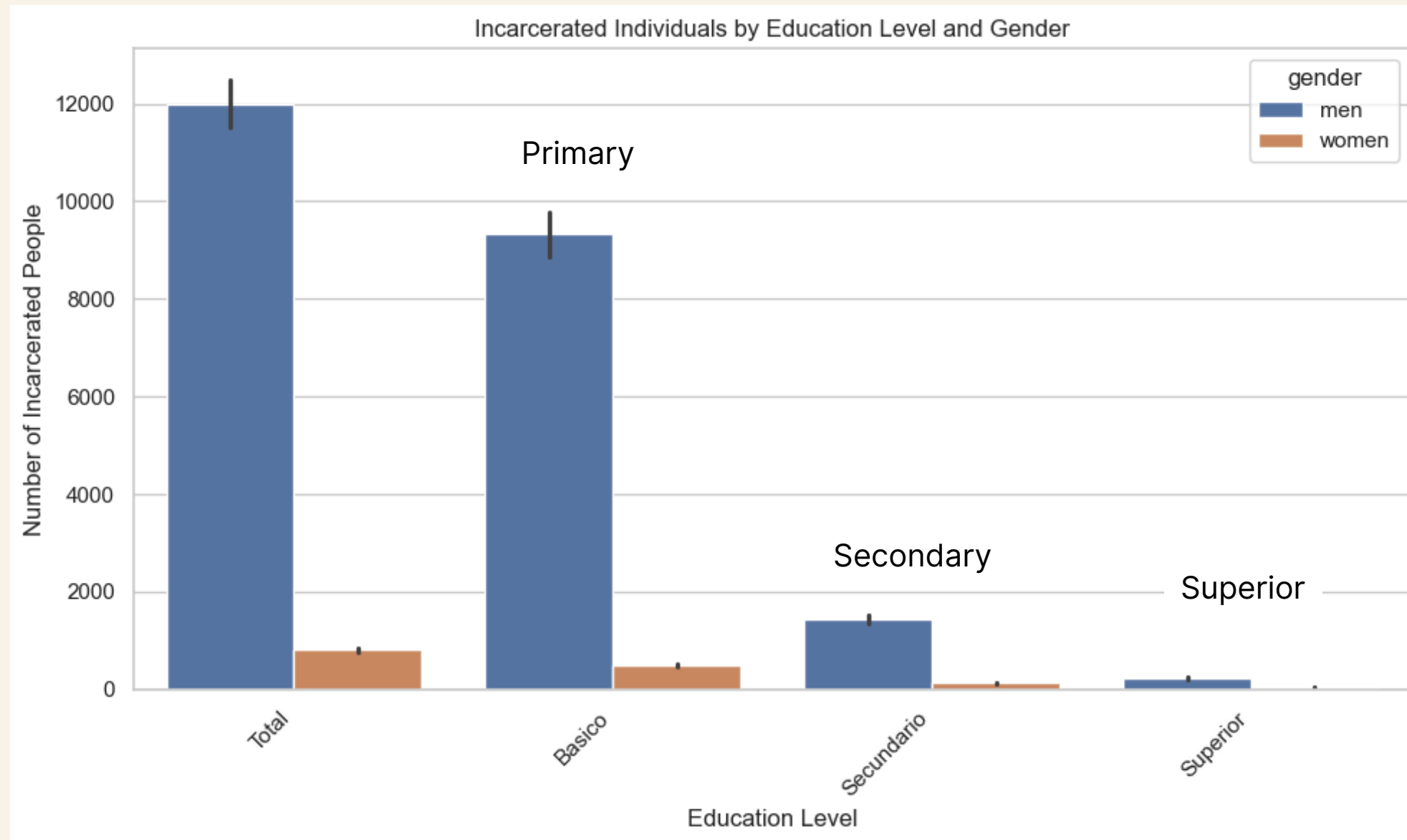
**rate\_high\_school:** Enrolment rate in secondary education (-0.38)

**rate\_superior:** Enrolment rate in university (-0.59)

**rate\_dropout:** Early school dropout rate (0.45)

**people\_in\_jail:** Number of people in jail

## 02 - Education



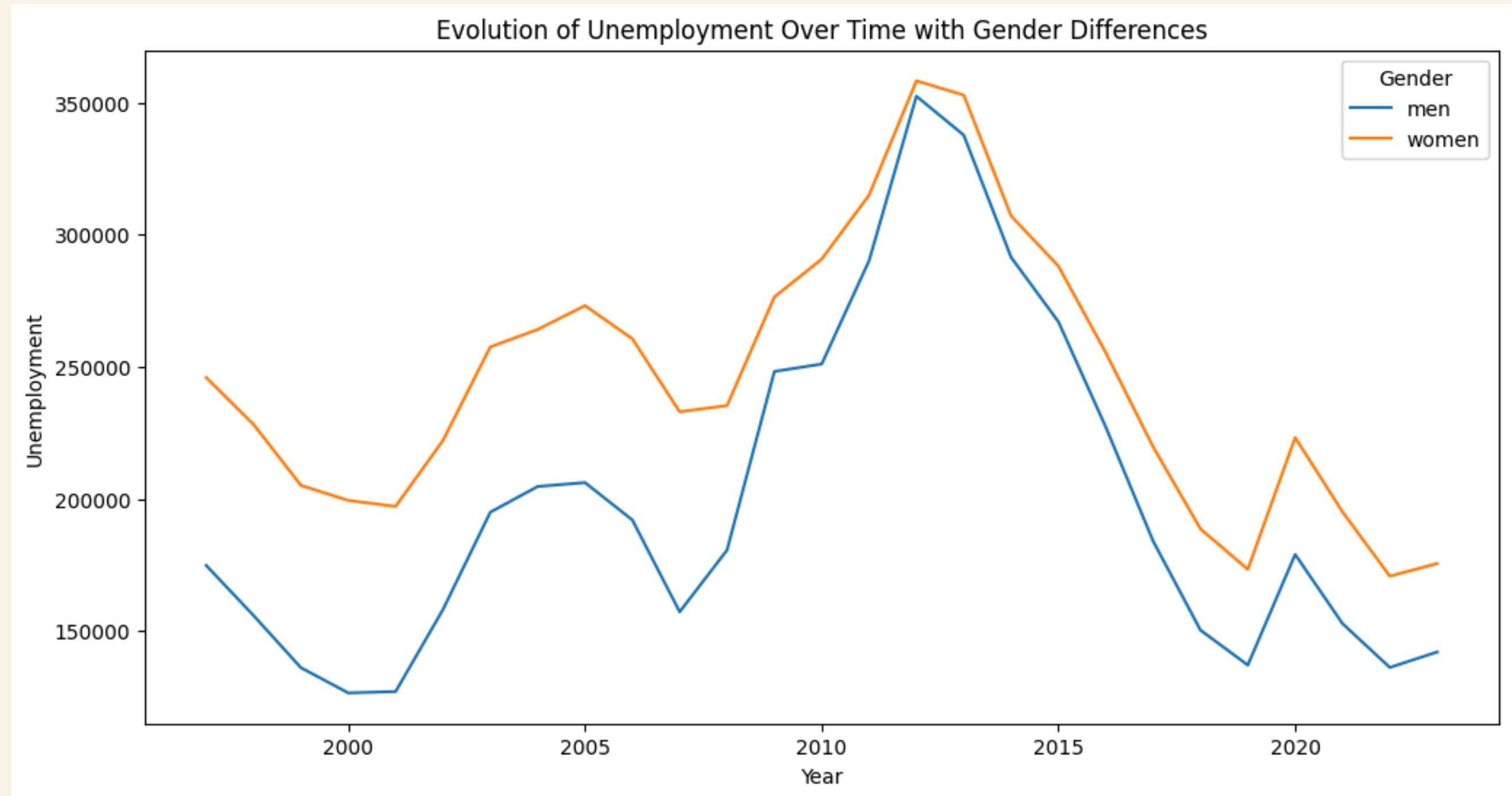
**Hypothesis 1: People with higher education levels commit less crimes.**

If women achieve higher educational levels and have lower dropout rates in basic education, these could be a contributing factor to their lower incarceration rates.



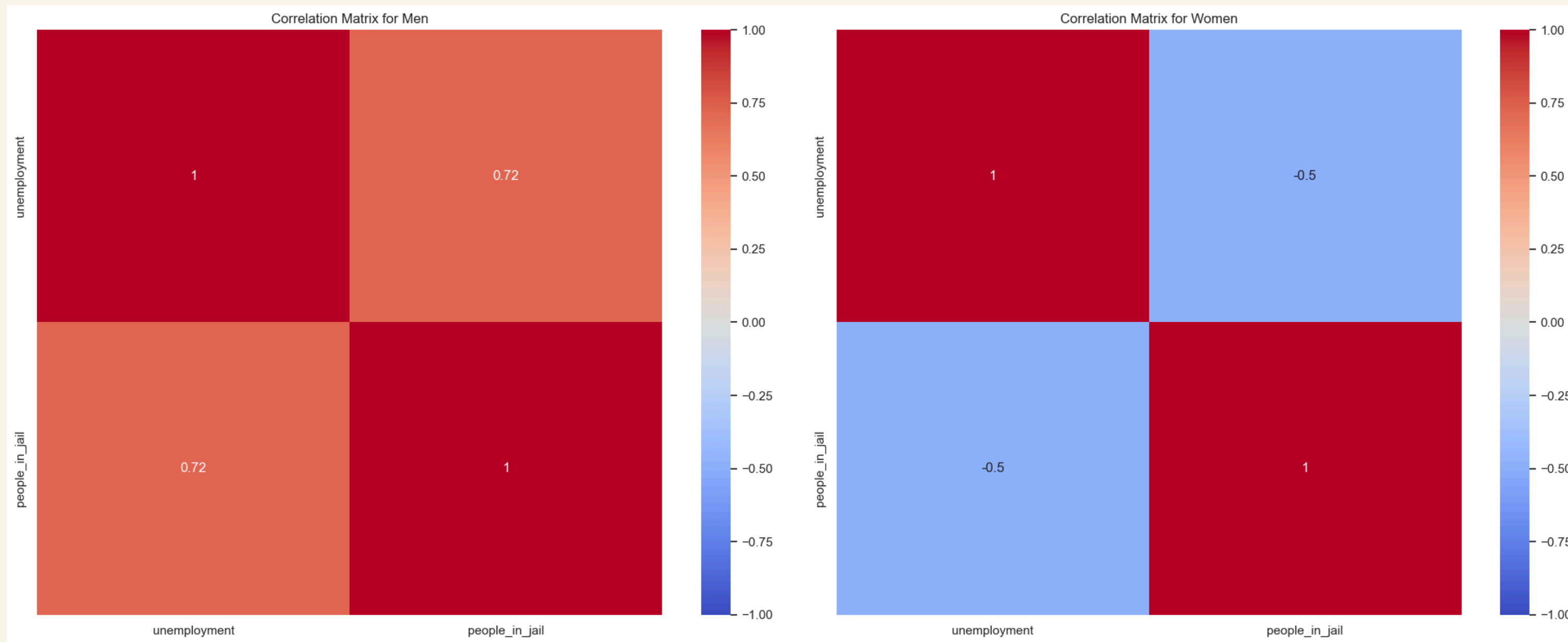
# 03 - Labor Market

## Unemployment



# 03 – Labor Market

## Unemployment



Paradox:  
Why don't  
women commit  
more crimes?

# 03 – Labor Market

## Unemployment

Figure 26 - Distribution of active and inactive population by sex 2022 (%)  
Source: INE

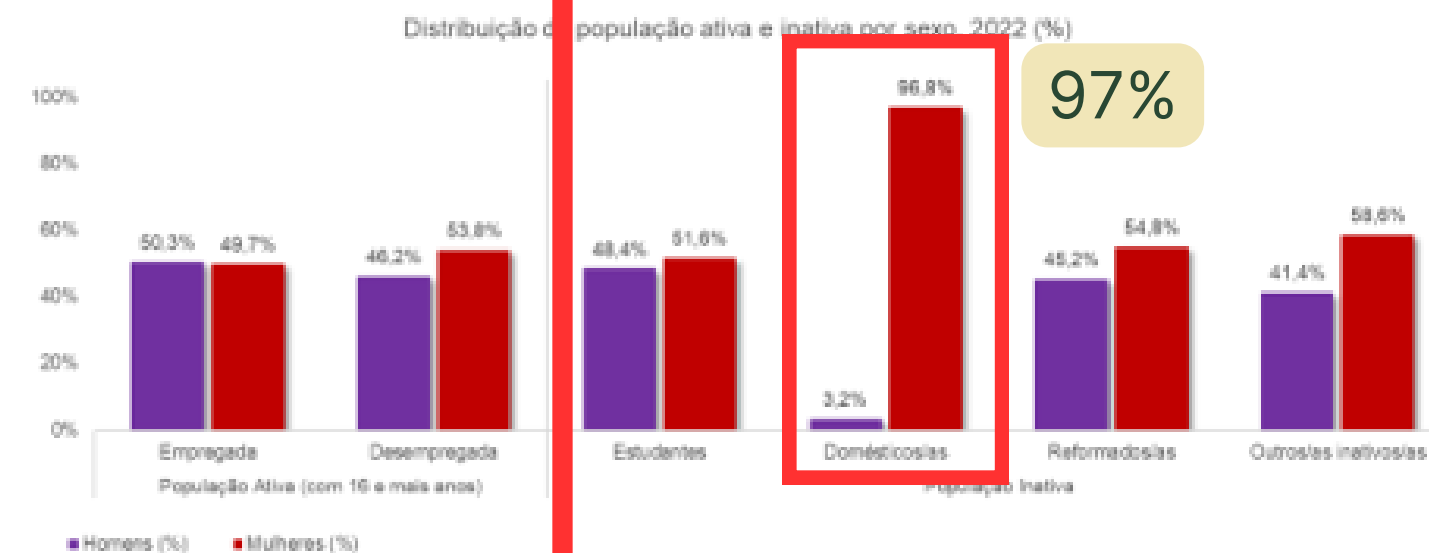


Figura 26 - Distribuição da população ativa e inativa por sexo 2022 (%)

INE/PORDATA (Dados consultados a 23 de agosto de 2023)

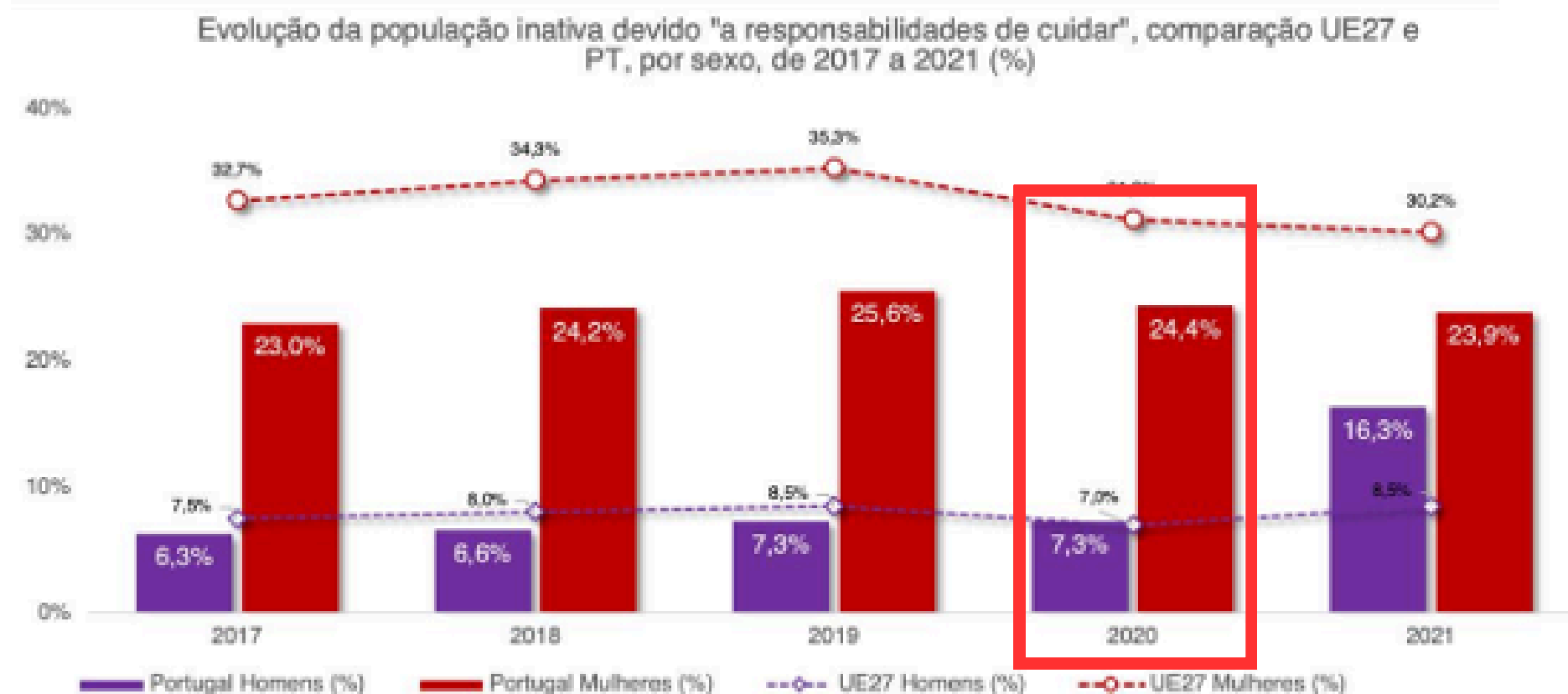


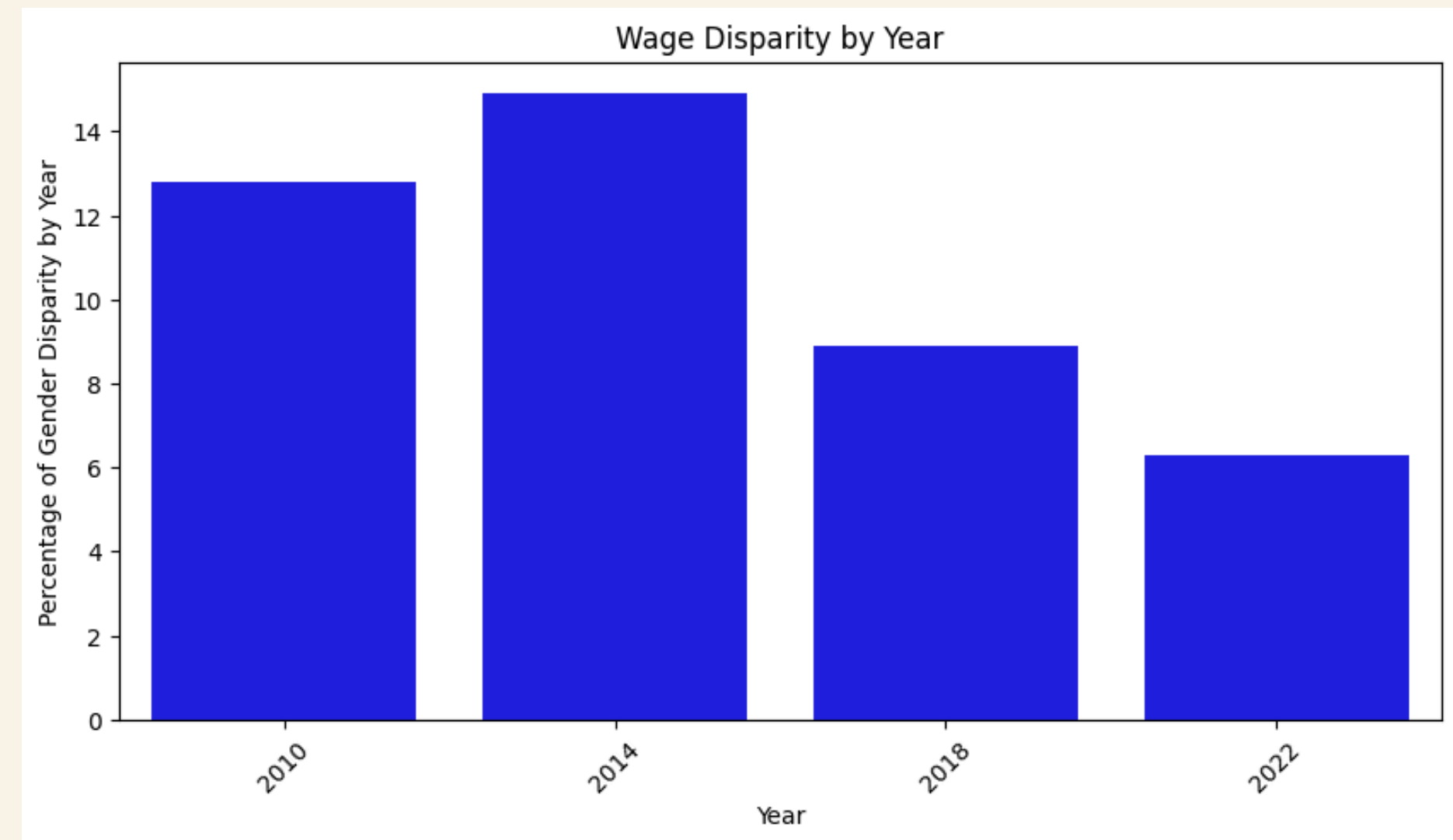
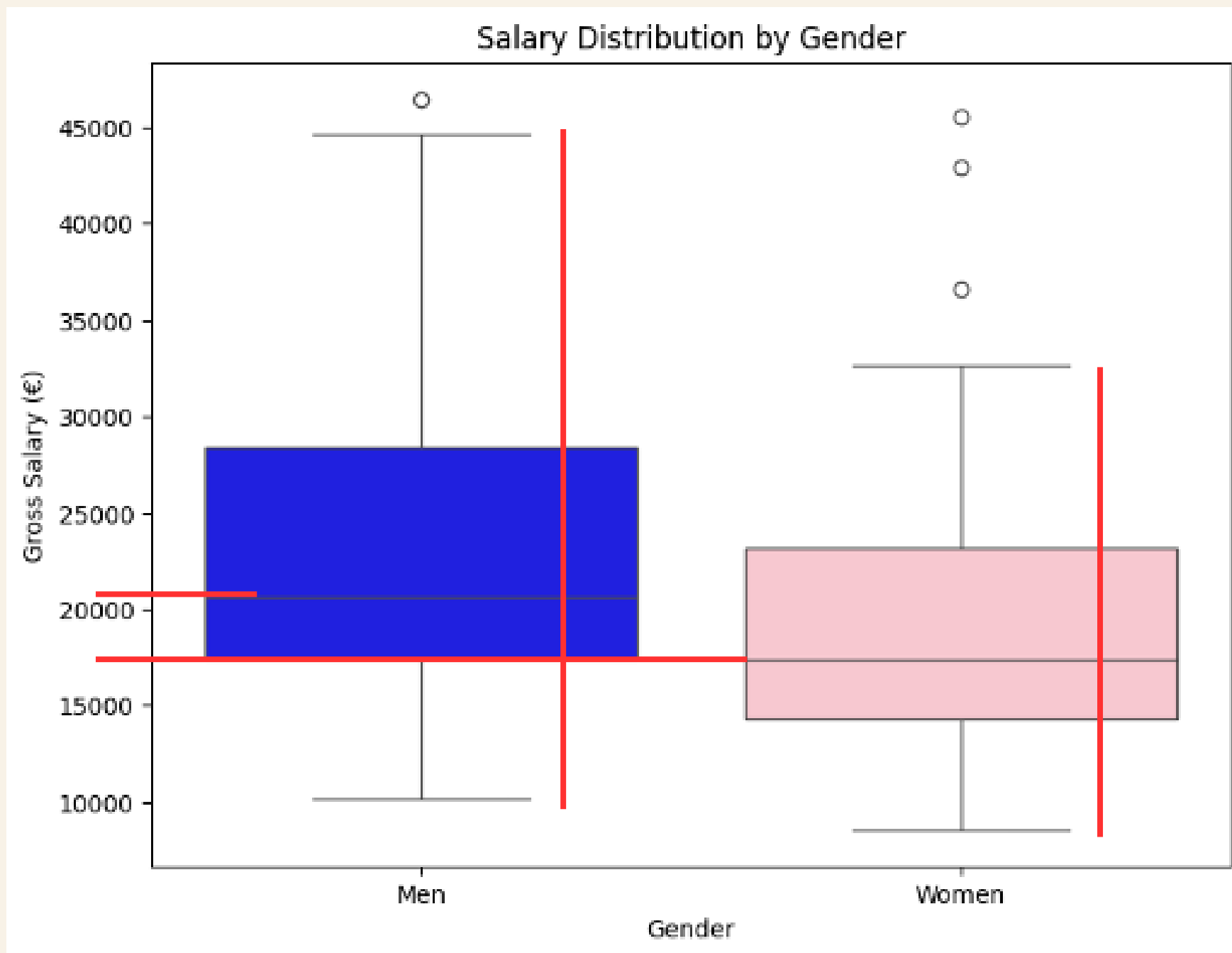
Figura 28 - Evolução da população inativa devido “a responsabilidades de cuidar”, comparação UE27 e Portugal, por sexo, de 2017 a 2021 (%)

EUROSTAT (Dados consultados a 23 de agosto de 2022)

Figure 28 - Evolution of the inactive population due to “care responsibilities”, comparison between EU27 and Portugal, by sex, from 2017 to 2021 (%)  
Source: Eurostat

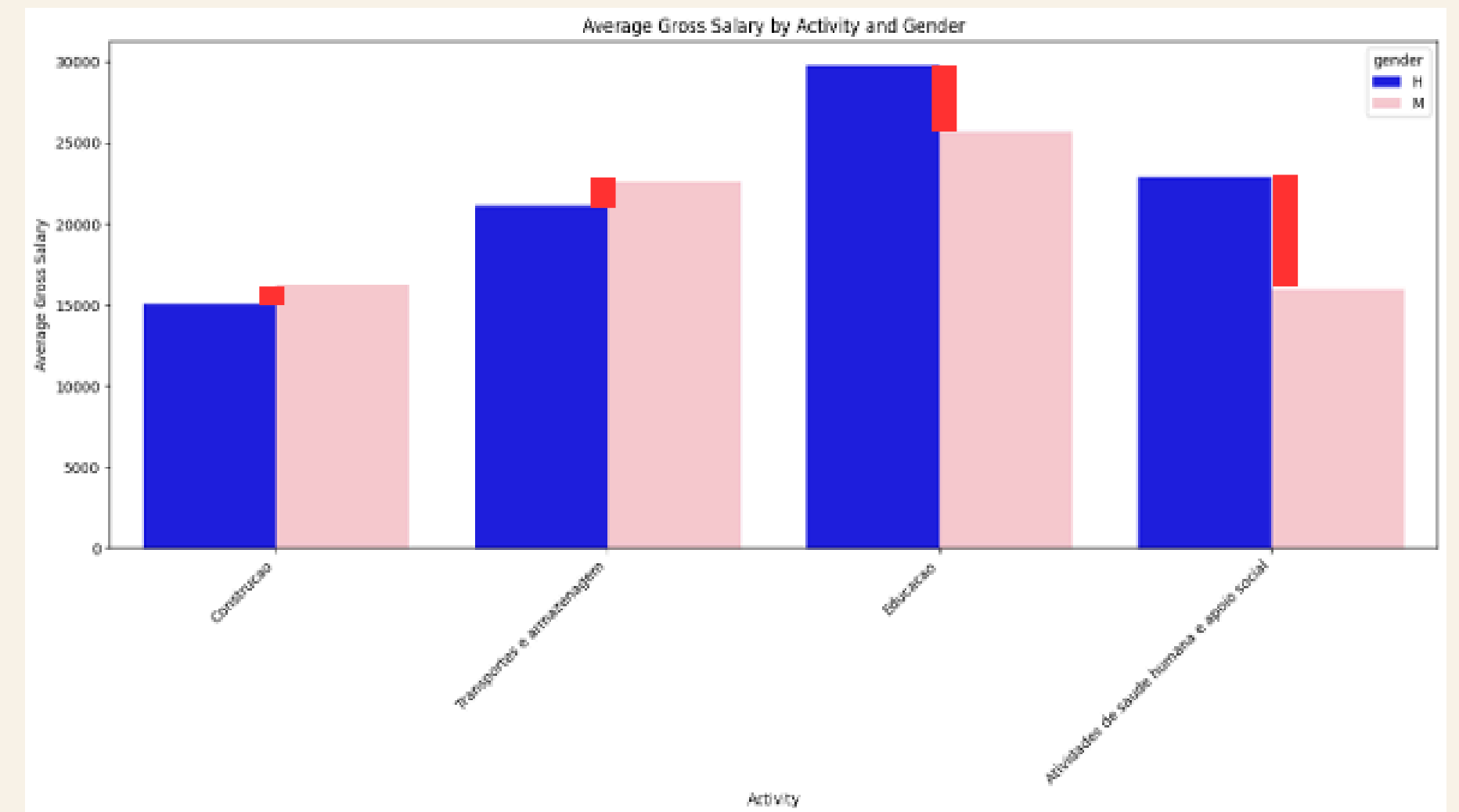
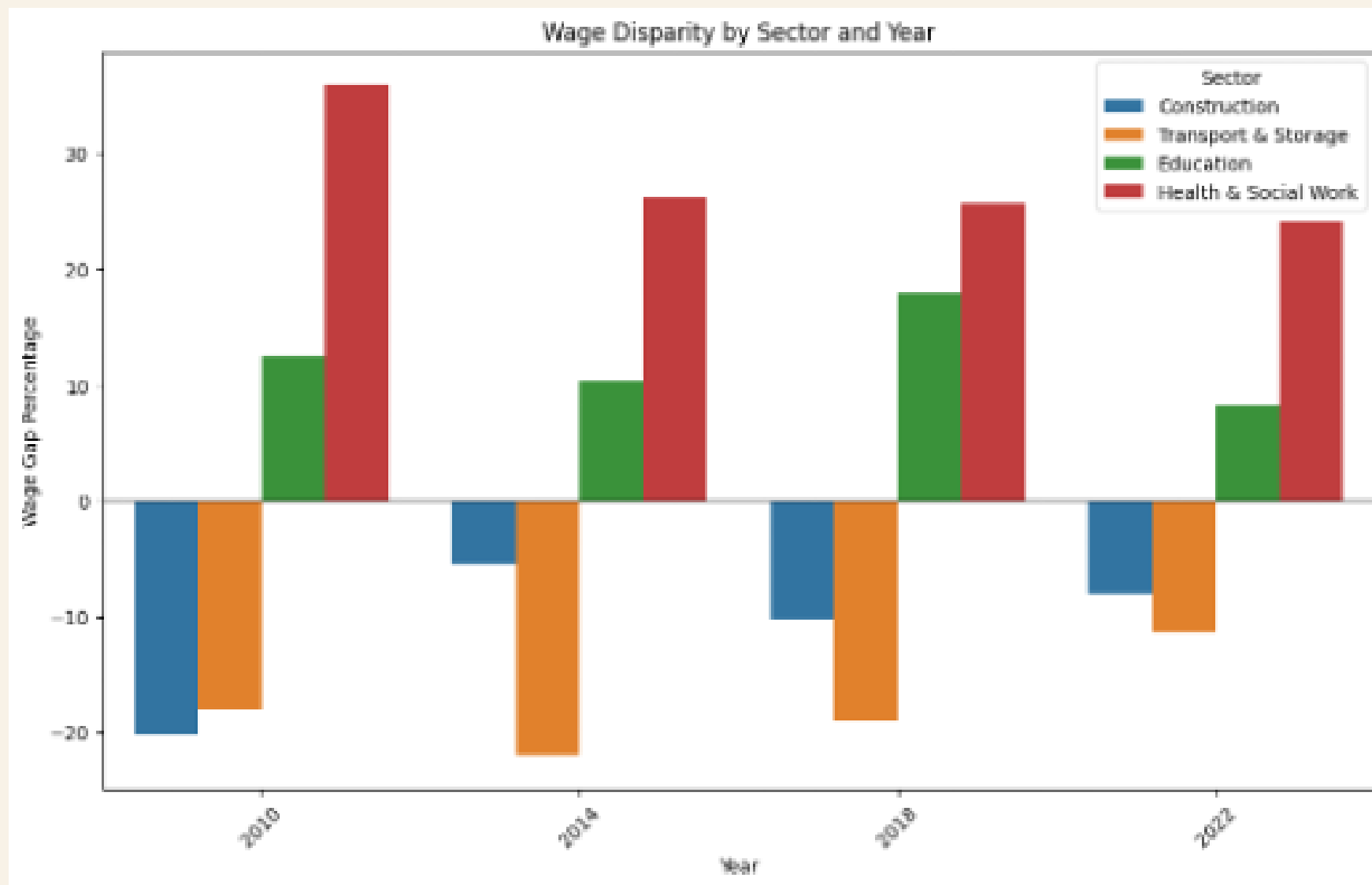
# 03 - Labor Market

## Salary



# 03 - Labor Market

## Salary



## 03 – Labor Market

**Hypothesis 2: Unemployment influences crime rates.**



Men

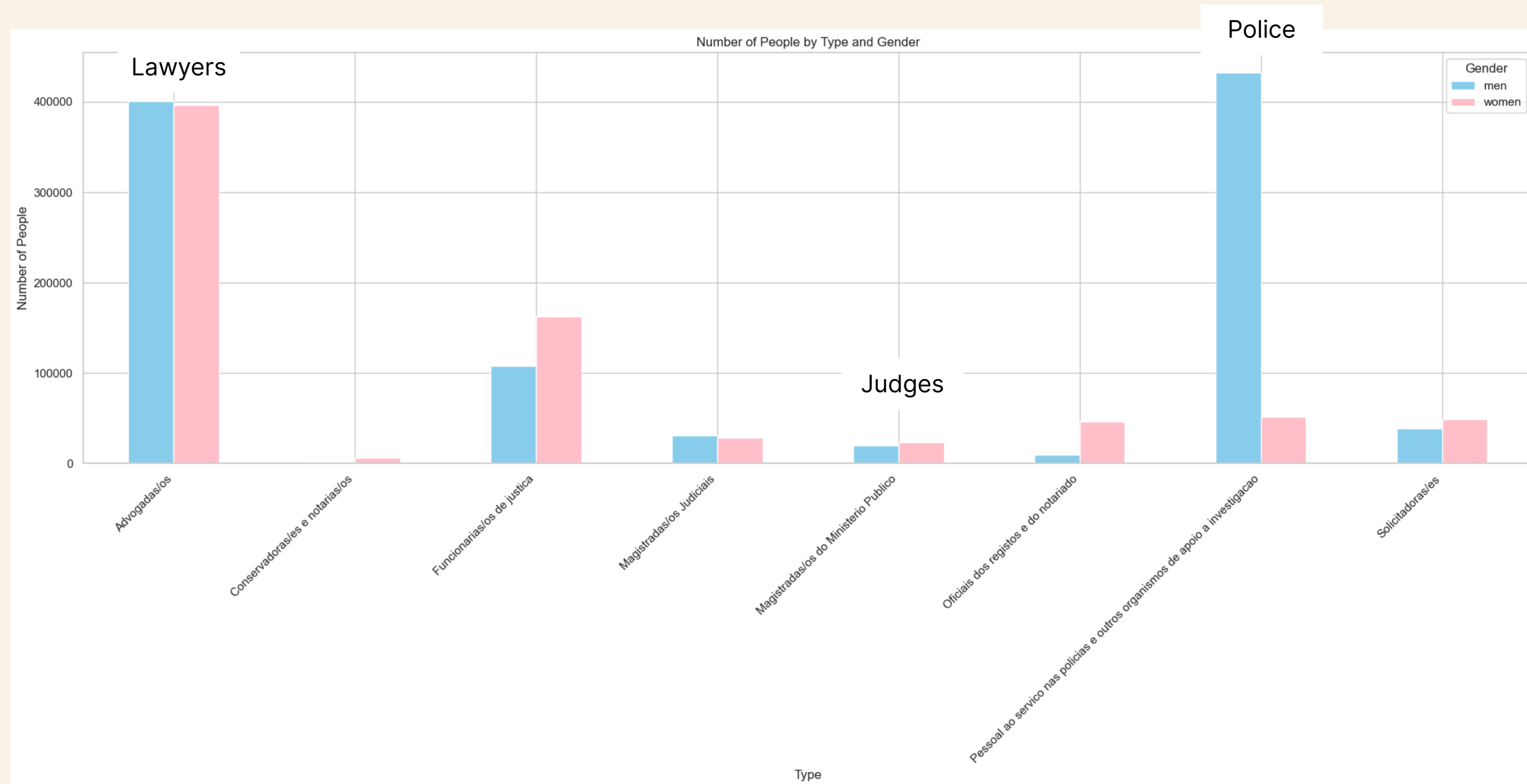


Women

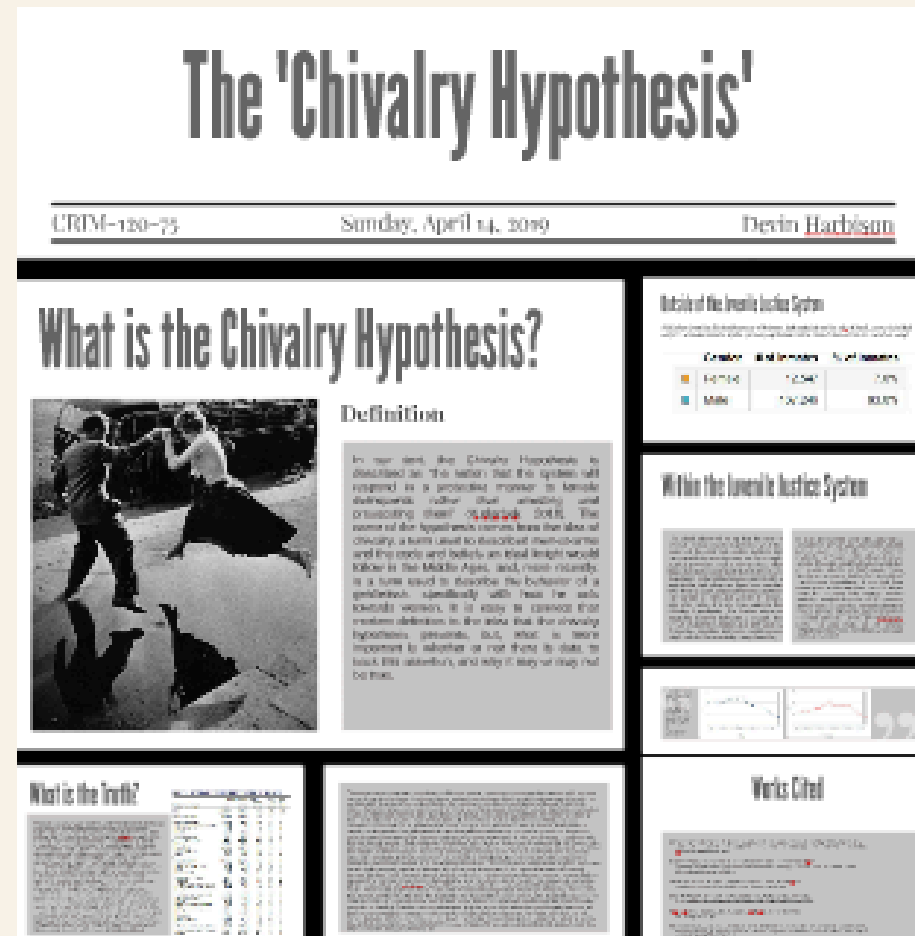
**Hypothesis 3: Lower salaries may increase the likelihood of criminal behavior.**



# 04 – Judicial System

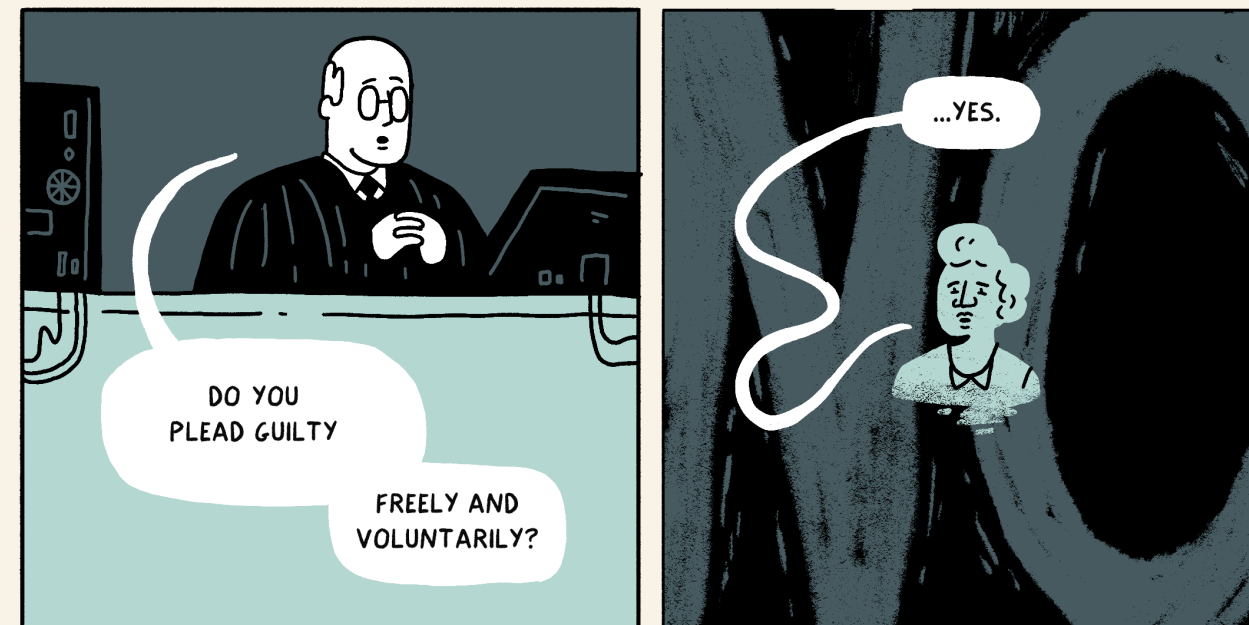


# 04 – Judicial System



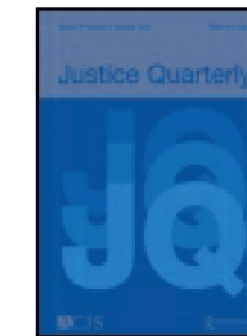
## Gender Disparities in Plea Bargaining

Study: Michele Miller & Lucian E. Dervan (2019)  
Method: Experimental vignette study



Steffensmeier, Ulmer & Kramer (1998)  
Title: "The Interaction of Race, Gender, and Age in Criminal Sentencing: The Punishment Cost of Being Young, Black, and Male"

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**Justice Quarterly**  
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<http://www.tandfonline.com/loi/rjqy20>  
**The Independent and Joint Effects of Race/Ethnicity, Gender, and Age on Sentencing Outcomes in U.S. Federal Courts**  
Jill K. Doerner & Stephen Demuth  
Published online: 20 May 2009.

To cite this article: Jill K. Doerner & Stephen Demuth (2010) The Independent and Joint Effects of Race/Ethnicity, Gender, and Age on Sentencing Outcomes in U.S. Federal Courts, Justice Quarterly, 27:1, 1-27, DOI: [10.1080/07418820902926197](https://doi.org/10.1080/07418820902926197)

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# 04 – Judicial System

Study	Type	Methodology	Key Findings	Implications
Steffensmeier, Ulmer & Kramer (1998)“The Punishment Cost of Being Young, Black, and Male”	Theoretical / Empirical	Statistical analysis of sentencing data in U.S. courts	Men, especially young Black men, receive significantly harsher sentences. Women benefit from leniency, especially older white women.	Supports the Chivalry Hypothesis. Sentencing reflects societal stereotypes.
Miller & Dervan (2019)“The Intersection of Plea Bargaining and Gender”	Experimental	Vignette study: identical scenarios with only the defendant’s gender changed	Female defendants perceived as less guilty, more sympathetic; more likely to be offered lenient plea deals.	Demonstrates gender bias even before trial; affects pre-trial decision-making.
Doerner & Demuth (2010)“Independent and Joint Effects of Race/Ethnicity, Gender, and Age”	Empirical	Large-scale analysis of U.S. federal court data	Women receive lighter sentences than men; Black and Hispanic men receive the harshest. Age, gender, and race interact in sentencing outcomes.	Confirms systemic disparities; sentencing is shaped by intersecting biases.

# 05 - Conclusions

- **Education levels** can have an impact on how likely someone is to commit crimes.
- While unemployed men don't have jobs, **unemployed women often do unpaid work**, which may explain why they're less likely to commit crimes.
- Even with the right qualifications, women still hit **glass ceilings** at work, which limits their chances to move up.
- People tend to see men as **more violent and aggressive**, while women are often viewed as **less guilty and more sympathetic**.
- There are many factors, like **age, ethnicity, and social class**, that need to be considered and studied more to fully understand the issue.

# Thank you!