

MISSING MIGRANTS

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Abstract

This study examines a dataset on missing immigrants obtained from The International Organization for Migration (IOM). The dataset focuses on immigrants who have lost their lives or disappeared during migration in the first quarter of 2023, encompassing various variables. Key variables include the region where incidents occurred, the year and month of occurrence, the gender of the deceased individuals, the region they were attempting to migrate to, among others. The dataset comprises 220 observations and 23 variables, though only a subset of these will be utilized for analysis in this study. The primary research question to be addressed in the literature review section is “Where and in which regions do the highest numbers of deaths occur during migration, and what are the primary causes of these immigrant fatalities?” This question directly aligns with existing literature and the dataset at hand, and will be explored comprehensively in the literature review section

1 Introduction

The purpose of my work is to examine the dataset on missing-immigrants. First of all, I accessed this dataset from the website of The International Organization for Migration (IOM). This dataset includes immigrants who lost their lives or disappeared in the first quarter of 2023, taking into account various variables. Some of these variables are: the region where the incident occurred, the year and month it occurred, the gender of those who lost their lives, the region in which they were trying to migrate, etc. This dataset I found includes 220 observations and 23 variables, but some of these observations and variables will not be included in the analysis in this study. The basic question that I will try to answer in the literature review section is “Where and in which region the most deaths occur during migration and how these immigrants lose their lives?” will be. This question is directly related to the articles I found and my dataset, and I will address this question in detail in the literature review section.

*20080503, [Github Repo](#)

1.1 Literature Review

Due to various reasons such as economic inadequacy, violation of human rights, destruction of the rule of law, severe restriction of individual freedoms, chaos in the country, racism, individuals may decide to immigrate from their country of origin, either on their own or with their families, and may be compelled to do so. . The loss of their lives on the migration route of these individuals who decide to immigrate is called “missing immigrants” in the international arena. Since 2014, when the missing migrants were documented, more than 50 thousand people lost their lives during this migration. 29,126 of these 50 thousand people planned to migrate to Europe. Of these 29,126 people, 25,104 died by drowning in the Mediterranean.(Ahmad-Yar & Bircan (2021),). Autopsies are usually not performed for these immigrants who lost their lives because most of them died by drowning. Identification of the deceased migrant is usually done by their close relatives - if there is a specific mark on their body. Otherwise, it is identified and identified by fingerprint(Robins (2022),). The data currently available indicate that deaths directly related to border control at land borders are higher than at sea. However, for the vast majority, the cause of death is only indirectly related to border control. While most boat migrants die from suffocation, hypothermia and thirst, most stowaways seem to die of suffocation and thirst(Last & Spijkerboer (2014),). This issue of missing immigrants is an issue that the international public does not pay enough attention to. Most deaths occur in the Mediterranean, as immigrants usually plan to migrate to Europe via the Mediterranean. There are certain families that want to attract the attention of the international public on this issue, one of them is a family that mourns and struggles for every common grave in the Mediterranean, and often takes political steps to find the truth about their loved ones and honor their remains (Kovras & Robins (2016),).

2 Data

This dataset is taken from the official site of The International Organization for Migration (IOM) and includes migrants who lost their lives or disappeared in 2023. Certain arrangements were made on this dataset with 220 observations and 23 variables, and 23 variables were reduced to 13 variables and variables that would not be used in this study were discarded. As can be seen in (Table 1), in this study, all the variables that can be obtained numerical data were examined and certain numerical data were extracted from them. These numerical data are “mean, median, standard deviation, minimum and maximum” values.

3 Methods and Data Analysis

The objective of this study was to determine the region with the highest number of cases and deaths among immigrants, as well as the causes of their fatalities. The study utilized various codes to visually present the number of lives lost and rescued in each region. Figure (2) illustrates the number of people rescued by region, while Figure (3) displays the number

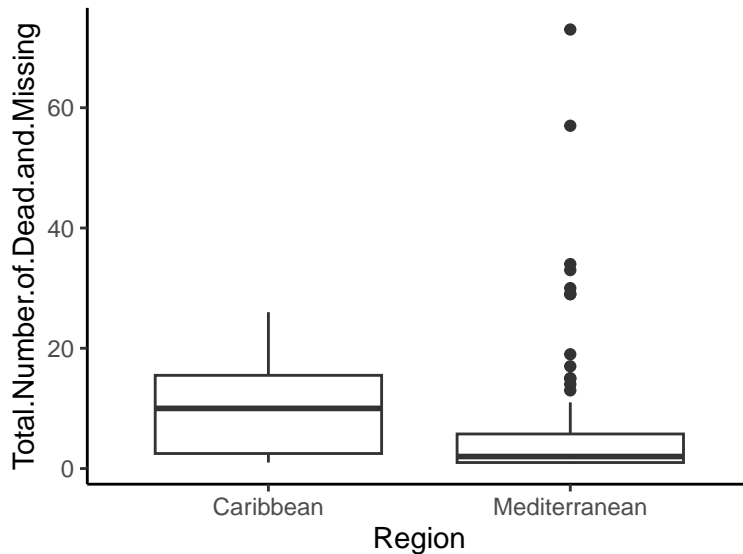
Table 1: Summary Statistics

| | Mean | Std.Dev | Min | Median | Max |
|-------------------------------------|-------|---------|-------|--------|--------|
| Minimum Estimated Number of Missing | 7.67 | 10.52 | 0.00 | 3.00 | 53.00 |
| Number Dead | 3.61 | 7.03 | 1.00 | 1.00 | 57.00 |
| Number of Children | 2.55 | 3.60 | 1.00 | 1.00 | 16.00 |
| Number of Females | 1.56 | 1.81 | 1.00 | 1.00 | 13.00 |
| Number of Males | 1.87 | 2.64 | 1.00 | 1.00 | 23.00 |
| Number of Survivors | 27.39 | 30.95 | -3.00 | 17.00 | 176.00 |
| Total Number of Dead and Missing | 4.76 | 9.32 | 1.00 | 1.00 | 73.00 |

of casualties by region. Additionally, an analysis was conducted to identify the most common causes of death among these immigrants, which was graphically depicted in Figure (1).

Furthermore, a t-test was performed to establish a confidence interval for the accuracy of the data. The null hypothesis (H_0) stated that there was no difference between the number of immigrants who died in the Mediterranean and the number of immigrants who died in the Caribbean. On the other hand, the alternative hypothesis (H_1) proposed that a difference did exist between the two regions. The t-test yielded several values, including $t = 0.81902$, $df = 79$, and $p\text{-value} = 0.4152$. Based on the alternative hypothesis, the actual difference between the Caribbean and the Mediterranean was found to be non-zero. At a 95 percent confidence interval, the values were -4.805374 for the Caribbean and 11.524855 for the Mediterranean. The mean value for the Caribbean group was 10.545455 , while the mean value for the Mediterranean group was 7.185714 .

In conclusion, the data obtained from this study allowed us to reject the null hypothesis and confirm the alternative hypothesis. This suggests that there is indeed a difference between the number of immigrants who died in the Mediterranean and those who died in the Caribbean.



##

```
## Two Sample t-test
##
## data: Total.Number.of.Dead.and.Missing by Region
## t = 0.81902, df = 79, p-value = 0.4152
## alternative hypothesis: true difference in means between group Caribbean and group Me
## 95 percent confidence interval:
## -4.805374 11.524855
## sample estimates:
##      mean in group Caribbean mean in group Mediterranean
##                10.545455                7.185714
```

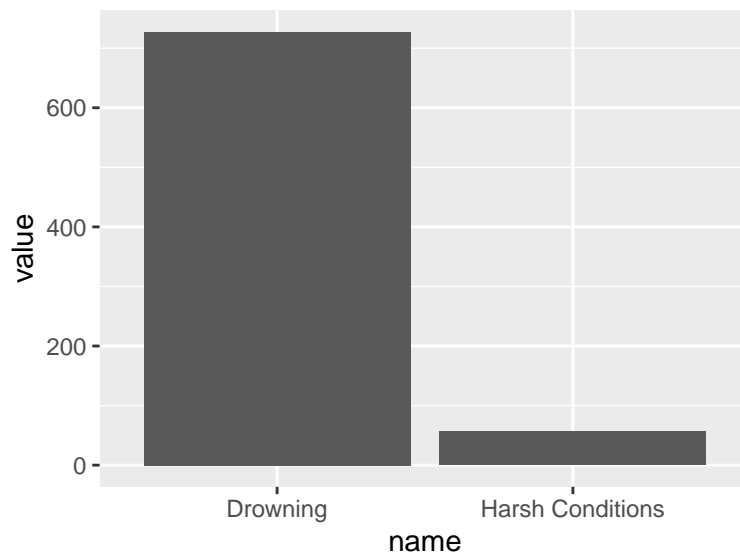


Figure 1: In what way did they die?

```
## [1] 503
## [1] 1128
## [1] 727
```

4 Conclusion

Prior to commencing the study, two fundamental questions were posed: Firstly, regarding the issue of missing immigrants, it was inquired as to which region experiences the highest frequency of fatalities. Secondly, the manner in which these immigrants lost their lives was examined. Based on the data collected and analyzed, along with the application of a t-test, it has been determined that the Mediterranean region exhibits the highest number of

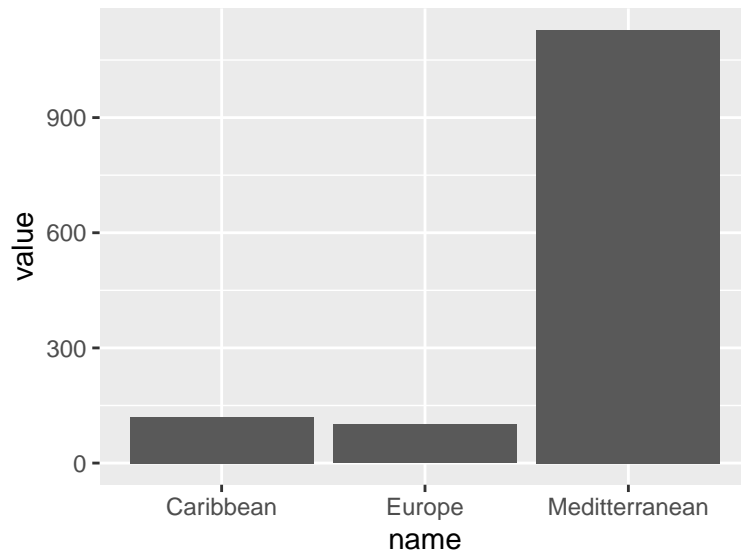


Figure 2: Number of Survivors by Region

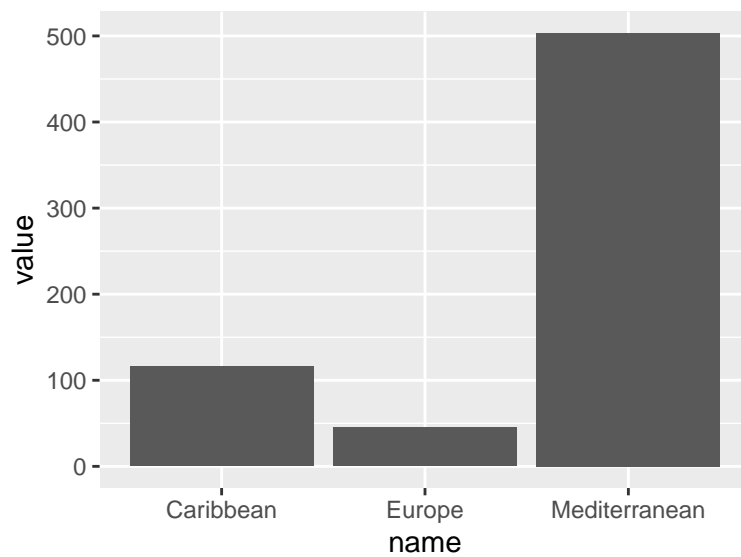


Figure 3: Total Number of Dead and Missing by Region

cases and loss of life. Moreover, the predominant cause of death among these individuals is drowning. The Mediterranean region has emerged as a popular transit route for migrants, leading to a significant number of fatalities. Several factors contribute to this outcome. Firstly, during their sea journey, migrants often embark on perilous voyages aboard unsafe and overcrowded vessels. These boats typically lack proper sanitary conditions and fail to meet safety standards. Adverse weather conditions and turbulent waves further exacerbate the dangers associated with these journeys. Tragically, a considerable number of migrants succumb to drowning while at sea. Another significant factor is the involvement of human smugglers and organized crime networks orchestrating treacherous crossings. These criminal entities offer migrants the opportunity to travel through illegal means, often employing unsafe vehicles and routes. Such journeys expose migrants to human rights violations and ill-treatment. Research has demonstrated that migrants are subject to mistreatment by smugglers, who sometimes abandon them or overcrowd them under deplorable conditions. These circumstances can result in the loss of migrants' lives. Additionally, factors such as hunger, thirst, and health issues contribute to the mortality rate among missing immigrants. Migrants may experience inadequate access to nourishment and clean water during their arduous and prolonged journeys. Furthermore, those with pre-existing health conditions may lack access to medical assistance and treatment, further jeopardizing their lives. In conclusion, the analysis reveals that the Mediterranean region exhibits the highest occurrence of missing immigrants, and the majority of individuals who lost their lives experienced death by drowning. This distressing reality can be attributed to a combination of unsafe crossings, human smuggling, and harsh living conditions. Resolving this issue requires addressing the risks associated with sea journeys, enhancing humanitarian efforts, and ensuring the protection of migrants' rights and well-being.

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5 References

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