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**Report on**

**Demography Trends & Mortality Rates**

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# 1. **Project Proposal**

1.1 Project title:Analyzing Demographic Trends and Mortality Rates

1.2 Project Overview: The project aims to analyze demographic trends and mortality rates across various demographic groups. By examining data on population demographics and mortality rates, the project seeks to identify patterns, trends, and correlations that could provide insights into factors influencing mortality rates.

## 1.3 Objectives:

Analyze demographic data to understand population distribution across different age groups, genders, and geographical regions.

Examine mortality rates for different causes of death, including but not limited to cardiovascular diseases, cancer, respiratory illnesses, accidents, and others.

Identify trends and correlations between demographic factors (such as age, gender, socioeconomic status) and mortality rates.

Explore potential factors contributing to variations in mortality rates among different demographic groups.

Develop visualizations and statistical analyses to communicate findings effectively.

# 2. **Methodology:**

## 2.1 Data Collection:

Gather demographic data from reliable sources such as national census reports, health surveys, and vital statistics records.

Collect mortality data from official sources like government health departments, medical institutions, and mortality databases.

## 2.2 Data Cleaning and Preparation:

Cleanse and preprocess the data to ensure accuracy and consistency.

Merge demographic and mortality datasets based on common identifiers such as age, gender, and geographical location.

## 2.3 Data Analysis:

Conduct descriptive analysis to understand the distribution of population demographics and mortality rates.

Perform statistical analyses (e.g., regression analysis, correlation analysis) to identify relationships between demographic factors and mortality rates.

Utilize data visualization techniques (e.g., charts, graphs, maps) to illustrate trends and patterns effectively.

# **3. Data set on Demography Trends and Mortality Rates**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **City** | **Year** | **Month** | **Cause** | **Deaths** |
| Dhaka | 2021 | January | Bike Accident | 5 |
| Dhaka | 2021 | January | Stroke | 10 |
| Dhaka | 2021 | January | Cancer | 8 |
| Dhaka | 2021 | January | Heart Disease | 15 |
| Dhaka | 2021 | January | Respiratory Illness | 12 |
| Dhaka | 2021 | February | Bike Accident | 6 |
| Dhaka | 2021 | February | Stroke | 9 |
| Dhaka | 2021 | February | Cancer | 7 |
| Dhaka | 2021 | February | Heart Disease | 16 |
| Dhaka | 2021 | February | Respiratory Illness | 11 |
| Dhaka | 2021 | March | Bike Accident | 4 |
| Dhaka | 2021 | March | Stroke | 11 |
| Dhaka | 2021 | March | Cancer | 9 |
| Dhaka | 2021 | March | Heart Disease | 17 |
| Dhaka | 2021 | March | Respiratory Illness | 10 |
| Chittagong | 2021 | January | Bike Accident | 3 |
| Chittagong | 2021 | January | Stroke | 8 |
| Chittagong | 2021 | January | Cancer | 6 |
| Chittagong | 2021 | January | Heart Disease | 12 |
| Chittagong | 2021 | January | Respiratory Illness | 9 |
| Chittagong | 2021 | February | Bike Accident | 4 |
| Chittagong | 2021 | February | Stroke | 7 |
| Chittagong | 2021 | February | Cancer | 5 |
| Chittagong | 2021 | February | Heart Disease | 13 |
| Chittagong | 2021 | February | Respiratory Illness | 8 |
| Chittagong | 2021 | March | Bike Accident | 5 |
| Chittagong | 2021 | March | Stroke | 9 |
| Chittagong | 2021 | March | Cancer | 7 |
| Chittagong | 2021 | March | Heart Disease | 14 |
| Chittagong | 2021 | March | Respiratory Illness | 7 |
| khulna | 2021 | January | Bike Accident | 12 |
| khulna | 2021 | February | Stroke | 10 |
| khulna | 2021 | April | Cancer | 7 |
| khulna | 2021 | August | Heart Disease | 13 |
| khulna | 2021 | January | Respiratory Illness | 11 |
| khulna | 2021 | February | Bike Accident | 9 |
| khulna | 2021 | Septembar | Stroke | 4 |
| khulna | 2021 | February | Cancer | 8 |
| khulna | 2021 | Septembar | Heart Disease | 12 |
| khulna | 2021 | December | Respiratory Illness | 6 |
| khulna | 2021 | March | Bike Accident | 14 |
| khulna | 2021 | July | Stroke | 9 |
| khulna | 2021 | March | Cancer | 12 |
| khulna | 2021 | March | Heart Disease | 5 |
| khulna | 2021 | March | Respiratory Illness | 8 |
| Barishal | 2021 | January | Bike Accident | 9 |
| Barishal | 2021 | January | Stroke | 12 |
| Barishal | 2021 | January | Cancer | 8 |
| Barishal | 2021 | January | Heart Disease | 15 |
| Barishal | 2021 | January | Respiratory Illness | 11 |
| Barishal | 2021 | February | Bike Accident | 7 |
| Barishal | 2021 | February | Stroke | 9 |
| Barishal | 2021 | February | Cancer | 9 |
| Barishal | 2021 | February | Heart Disease | 13 |
| Barishal | 2021 | February | Respiratory Illness | 11 |
| Barishal | 2021 | March | Bike Accident | 6 |
| Barishal | 2021 | March | Stroke | 14 |
| Barishal | 2021 | March | Cancer | 9 |
| Barishal | 2021 | March | Heart Disease | 8 |
| Barishal | 2021 | March | Respiratory Illness | 10 |
| Jeshore | 2021 | January | Bike Accident | 9 |
| Jeshore | 2021 | January | Stroke | 8 |
| Jeshore | 2021 | January | Cancer | 6 |
| Jeshore | 2021 | January | Heart Disease | 16 |
| Jeshore | 2021 | January | Respiratory Illness | 9 |
| Jeshore | 2021 | February | Bike Accident | 4 |
| Jeshore | 2021 | February | Stroke | 5 |
| Jeshore | 2021 | February | Cancer | 7 |
| Jeshore | 2021 | February | Heart Disease | 13 |
| Jeshore | 2021 | February | Respiratory Illness | 8 |
| Jeshore | 2021 | March | Bike Accident | 8 |
| Jeshore | 2021 | March | Stroke | 9 |
| Jeshore | 2021 | March | Cancer | 7 |
| Jeshore | 2021 | March | Heart Disease | 12 |
| Rajshahi | 2021 | March | Respiratory Illness | 7 |
| Rajshahi | 2021 | January | Bike Accident | 12 |
| Rajshahi | 2021 | February | Stroke | 10 |
| Rajshahi | 2021 | April | Cancer | 7 |
| Rajshahi | 2021 | August | Heart Disease | 9 |
| Rajshahi | 2021 | January | Respiratory Illness | 11 |
| Rajshahi | 2021 | February | Bike Accident | 9 |
| Rajshahi | 2021 | Septembar | Stroke | 4 |
| Rajshahi | 2021 | February | Cancer | 18 |
| Rajshahi | 2021 | Septembar | Heart Disease | 12 |
| Rajshahi | 2021 | December | Respiratory Illness | 13 |
| Rajshahi | 2021 | March | Bike Accident | 11 |
| Rajshahi | 2021 | July | Stroke | 10 |
| Rajshahi | 2021 | March | Cancer | 6 |
| Rajshahi | 2021 | March | Heart Disease | 19 |
| Rajshahi | 2021 | March | Respiratory Illness | 14 |
| Dinajpur | 2021 | December | Respiratory Illness | 8 |
| Dinajpur | 2021 | March | Bike Accident | 13 |
| Dinajpur | 2021 | July | Stroke | 10 |
| Dinajpur | 2021 | March | Cancer | 12 |
| Dinajpur | 2021 | March | Heart Disease | 9 |
| Dinajpur | 2021 | March | Respiratory Illness | 14 |

4. **Death rate**: [Calculation excel sheet](07_Mir.%20Najmush%20Sakib_29.xlsx)

|  |  |
| --- | --- |
| city | Death rate/month |
| Dhaka | 50 |
| Chittagong | 39 |
| khulna | 17.5 |
| Barishal | 50.33 |
| Jeshore | 40.33 |
| Rajshahi | 21.5 |
| Dinajpur | 22 |

4.1 Question**. Which city has a higher death rate?**

**Answer: Barishal**

|  |  |
| --- | --- |
| Cause | Death rate/cause |
| Bike Accident | 7.89 |
| Stroke | 8.84 |
| Cancer | 8.32 |
| Heart Disease | 12.79 |
| Respiratory Illness | 9.90 |

4.2 Question**. Which cause has a higher death**

**rate?**

**Answer: Heart Disease**

|  |  |
| --- | --- |
| **Row Labels** | **Sum of Deaths** |
| Barishal | 151 |
| Chittagong | 117 |
| Dhaka | 150 |
| Dinajpur | 66 |
| Jeshore | 121 |
| khulna | 140 |
| Rajshahi | 172 |
| **Grand Total** | **917** |
|  |  |
|  |  |

# 5. **Analysis**:

|  |  |
| --- | --- |
| **Row Labels** | **Sum of Deaths** |
| Bike Accident | 150 |
| Cancer | 158 |
| Heart Disease | 243 |
| Respiratory Illness | 198 |
| Stroke | 168 |
| **Grand Total** | **917** |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Average of Deaths** | **Column Labels** |  |  |  |  |  |  |  |  |
| **Row Labels** | **January** | **February** | **March** | **April** | **July** | **August** | **December** | **Septembar** | **Grand Total** |
| Bike Accident | 8 | 7 | 9 |  |  |  |  |  | 8 |
| Cancer | 7 | 9 | 9 | 7 |  |  |  |  | 8 |
| Heart Disease | 15 | 14 | 12 |  |  | 11 |  | 12 | 13 |
| Respiratory Illness | 11 | 10 | 10 |  |  |  | 9 |  | 10 |
| Stroke | 10 | 8 | 11 |  | 10 |  |  | 4 | 9 |
| **Grand Total** | **10** | **9** | **10** | **7** | **10** | **11** | **9** | **8** | **10** |

6. Conclusion: Analyzing demographic trends and mortality rates is crucial for understanding population health dynamics and informing evidence-based interventions. This project aims to provide valuable insights into factors influencing mortality rates across different demographic groups, ultimately contributing to improved public health outcomes