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Sleep Health Gender Prototypes

Content

- Screenshot of the front-page
- Screenshot of the 4 additional pages representing each query
 - Stress and Blood Pressure Analysis
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 - Sleep Quality by Location
- Data tables located from each of the additional pages
 - Examples of data filter feature for each gender in all tables
 - Examples query Specific data filter to assist the user in analyzing patterns regarding query specific variables and their impact on sleep.
- Example of Column heading displaying detail about the data stored in the tuples of the column (when the user hovers their mouse over the '?' symbol.



Sleep, Health, and Gender Study

GOAL

Our goal is to analyze the relationship among sleep health factors within a population, with a specific focus on both the female and male genders. This analysis relies on the provided associations found in the Sleep & Health dataset. To achieve this, we will utilize the Sleep Health and Lifestyle dataset. Our investigation will delve into how different variables such as blood pressure, stress levels, sleep duration, physical activity levels, and location correlate with sleep quality, sleep disorders, and other significant factors for each gender.

PROJECT DESCRIPTION

Our primary aim is to uncover patterns, similarities, and distinctions in the manner specific variables impact the overall sleep health and well-being of each gender. By conducting an analysis of sleep disorders categorized by occupation and gender, evaluating sleep quality relative to location and gender, studying the influence of physical activity on sleep quality in relation to gender, as well as exploring stress and blood pressure data, we intend to extract valuable insights regarding the potential effects of sleep on various health parameters. These findings can subsequently be applied to formulate strategies that endorse healthy sleep habits, identify at-risk communities within each gender, and potentially contribute to the development of interventions or treatments targeting sleep-related health issues.

MEET THE DEVELOPERS

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Stress and Blood Pressure Analysis by Gender

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Stress and Blood Pressure Analysis by Gender

PURPOSE

Analyze gender, stress level, and blood pressure to see if there is an impact on the person's sleep duration and quality.

OVERVIEW

Key observations include:

- Slight sleep quality variations observed between genders in the studied cities.
 - Seattle: Males have slightly higher sleep quality average than females.
 - Dallas: Females exhibit higher sleep quality than males.
- Comparative data to understand regional sleep patterns and gender influence in urban environments.

The analysis examines sleep quality based on gender in Seattle, Dallas, Miami, and Boston. Variations in sleep quality between genders are observed, with Seattle showing higher sleep quality among males and Dallas displaying higher sleep quality among females. This data aids in understanding sleep patterns and gender influences across different cities.

Gender:

Both

Blood Pressure:

All

Filter

Gender	Blood Pressure	Stress Level	Sleep Duration (Hours)	Sleep Quality
Female	Stage 2 HTN	6.6	6.6	6.7
Male	Stage 1 HTN	5.6	7.2	7.0
Female	Stage 1 HTN	5.5	7.2	7.1
Male	Stage 2 HTN	5.5	7.0	7.6
Male	Elevated	4.9	7.9	7.8
Female	Elevated	4.8	7.7	7.7
Male	Normal	4.3	7.3	7.9
Female	Normal	4.0	7.1	7.8

Source: [Sleep Health and Lifestyle Dataset](#)

Gender:

Male

Blood Pressure:

All

Filter

Gender	Blood Pressure	Stress Level	Sleep Duration (Hours)	Sleep Quality
Female	Stage 2 HTN	6.6	6.6	6.7
Male	Stage 1 HTN	5.6	7.2	7.0
Female	Stage 1 HTN	5.5	7.2	7.1
Male	Stage 2 HTN	5.5	7.0	7.6
Male	Elevated	4.9	7.9	7.8
Female	Elevated	4.8	7.7	7.7
Male	Normal	4.3	7.3	7.9
Female	Normal	4.0	7.1	7.8

Source: [Sleep Health and Lifestyle Dataset](#)

Gender: Male

Blood Pressure: Elevated

Filter

Gender	Blood Pressure	Stress Level	Sleep Duration (Hours)	Sleep Quality
Male	Elevated	4.9	7.9	7.8

Source: Sleep Health and Lifestyle Dataset

Both

Male

Female

Gender: Female

Blood Pressure: Elevated

Filter

Gender	Blood Pressure	Stress Level	Sleep Duration (Hours)	Sleep Quality
Female	Elevated	4.8	7.7	7.7

Source: Sleep Health and Lifestyle Dataset

Physical Activity Impact on Sleep Quality and Gender

Front Page

Stress and Blood Pressure Analysis

Physical Activity Impact on Sleep Quality

Sleep Disorders by Occupation

Sleep Quality by Location

Physical Activity Impact on Sleep Quality and Gender

PURPOSE

Determine if the physical activity level of each gender impacts their average sleep quality.

OVERVIEW

Key observations include:

- Clear pattern: Higher average sleep quality among active individuals, irrespective of gender.
 - Active females: Average sleep quality of 7.46, compared to inactive females with 6.75.
 - Active males: Average sleep quality of 7.62, in contrast to inactive males scoring 6.86.
- Suggests a positive correlation between physical activity and better sleep quality.

The analysis examines how gender-specific physical activity levels relate to average sleep quality. Results indicate that both active females and males experience higher average sleep quality compared to their inactive counterparts. Active females score 7.46, while inactive females score 6.75. Similarly, active males score 7.62, while inactive males score 6.86. These findings suggest a potential positive connection between physical activity and improved sleep quality.

Gender: Both

Activity: All

Filter

Gender	Activity Level Status	Average Sleep Quality
Female	Active	7.46
Female	Inactive	6.75
Male	Active	7.62
Male	Inactive	6.86

Source: Sleep Health and Lifestyle Dataset

Gender:

Female

Activity:

✓ All

Active

Inactive

Filter

Gender	Activity Level Status	Average Sleep Quality
Female	Active	7.46
Female	Inactive	6.75
Male	Active	7.62
Male	Inactive	6.86

Source: Sleep Health and Lifestyle Dataset

Gender:

Female

Activity:

Active

Filter

Gender	Activity Level Status	Average Sleep Quality
Female	Active	7.46

Source: Sleep Health and Lifestyle Dataset

Sleep Disorders by Occupation and Gender

Front Page Stress and Blood Pressure Analysis Physical Activity Impact on Sleep Quality Sleep Disorders by Occupation Sleep Quality by Location

Sleep Disorders by Occupation and Gender

PURPOSE

Evaluate the prevalence of sleep disorders among different occupations and understand the potential gender discrepancies.

OVERVIEW

Key observations include:

- Overall Trend
 - Nurses have the highest sleep disorder prevalence, around 31-33% for both genders.
- Similar Prevalence Across Genders
 - Salespersons, Teachers, Doctors, and Accountants have roughly equal rates between males and females.
- Significant Gender Differences
 - Male Sales Representatives have a higher rate (16%) than females (2%).
 - Male Software Engineers show 0% while female counterparts show 1%.
- Lowest Rates
 - Scientists, Software Engineers, and female Managers all report near-zero prevalence.

The analysis examines sleep disorders across genders and occupations reveals key trends. Nurses show the highest sleep disorder prevalence (31-33%) across both genders. Certain occupations, such as Salespersons, Teachers, Doctors, and Accountants, exhibit similar rates among males and females. However, gender differences are significant in roles like Male Sales Representatives (16% vs. 2% in females) and Male Software Engineers (0% vs. 1% in females). Scientists, Software Engineers, and female Managers report the lowest prevalence. Notably, the data lacks context such as age and work hours, prompting the need for more comprehensive research, especially in high-risk professions.

Gender: BothOccupation: AllFilter

Gender	Occupation	Prevalence of Sleep Disorders
Female	Sales Representative	2%
Male	Salesperson	16%
Female	Salesperson	14%
Male	Nurse	31%
Female	Nurse	33%
Male	Teacher	15%
Female	Teacher	16%
Male	Scientist	2%
Female	Software Engineer	1%
Female	Accountant	4%
Male	Engineer	5%
Male	Accountant	3%
Female	Lawyer	3%
Male	Doctor	4%
Female	Doctor	3%
Male	Lawyer	2%
Female	Engineer	1%
Male	Software Engineer	0%
Female	Scientist	0%
Female	Manager	0%

Source: Sleep Health and Lifestyle Dataset

Gender: BothOccupation: AllFilter

Software EngineerDoctorSales RepresentativeTeacherNurseEngineerAccountantScientistLawyerSalespersonManager

Gender	Occupation	Prevalence of Sleep Disorders
Female	Sales Representative	2%
Male	Salesperson	16%
Female	Salesperson	14%
Male	Nurse	31%
Female	Nurse	33%
Male	Teacher	15%
Female	Teacher	16%
Male	Scientist	2%
Female	Software Engineer	1%
Female	Accountant	4%
Male	Engineer	5%
Male	Accountant	3%
Female	Lawyer	3%
Male	Doctor	4%
Female	Doctor	3%
Male	Lawyer	2%
Female	Engineer	1%
Male	Software Engineer	0%
Female	Scientist	0%
Female	Manager	0%

Source: Sleep Health and Lifestyle Dataset

Gender:

Both

Occupation:

Nurse

Filter

Gender	Occupation	Prevalence of Sleep Disorders
Male	Nurse	31%
Female	Nurse	33%

Source: Sleep Health and Lifestyle Dataset

Sleep Quality by Department of Location and Gender

Front PageStress and Blood Pressure AnalysisPhysical Activity Impact on Sleep QualitySleep Disorders by OccupationSleep Quality by Location

Sleep Quality by Department Location and Gender

PURPOSE

Evaluate the sleep quality of people living in or around certain cities based on gender.

OVERVIEW

Key observations include:

- Slight sleep quality variations observed between genders in the studied cities.
 - Seattle: Males have slightly higher sleep quality average than females.
 - Dallas: Females exhibit higher sleep quality than males.
- Comparative data to understand regional sleep patterns and gender influence in urban environments.

The analysis examines sleep quality based on gender in Seattle, Dallas, Miami, and Boston. Variations in sleep quality between genders are observed, with Seattle showing higher sleep quality among males and Dallas displaying higher sleep quality among females. This data aids in understanding sleep patterns and gender influences across different cities.

Gender:

Both

Department Location:

All

Filter

Gender	Department Location	Average Sleep Quality
Female	Seattle	6.84
Male	Seattle	7.32
Female	Dallas	7.42
Male	Dallas	7.25
Female	Miami	7.06
Male	Miami	7.26
Female	Boston	7.26
Male	Boston	7.23

Source: Sleep Health and Lifestyle Dataset

Gender: Both Department Location: All Filter

Gender [?]	Department Location [?]	Average Sleep Quality [?]
Female	Seattle	6.84
Male	Seattle	7.32
Female	Dallas	7.42
Male	Dallas	7.25
Female	Miami	7.06
Male	Miami	7.26
Female	Boston	7.26
Male	Boston	7.23

Source: [Sleep Health and Lifestyle Dataset](#)

Gender: Female Department Location: Dallas Filter

Gender [?]	Department Location [?]	Average Sleep Quality [?]
Female	Dallas	7.42

Source: [Sleep Health and Lifestyle Dataset](#)

Example of Column heading displaying detail about the data stored in the tuples of the column (when the user hovers their mouse over the ‘?’ symbol.

Gender: Both Blood Pressure: All

A subjective rating of the stress level experienced by the person, ranging from 1 to 10.

Gender [?]	Blood Pressure [?]	Stress Level [?]	Sleep Duration (Hours) [?]	Sleep Quality [?]
Female	Stage 2 HTN	6.6	6.6	6.7
Male	Stage 1 HTN	5.6	7.2	7.0
Female	Stage 1 HTN	5.5	7.2	7.1
Male	Stage 2 HTN	5.5	7.0	7.6
Male	Elevated	4.9	7.9	7.8
Female	Elevated	4.8	7.7	7.7
Male	Normal	4.3	7.3	7.9
Female	Normal	4.0	7.1	7.8

Source: [Sleep Health and Lifestyle Dataset](#)

Gender: Both

Blood Pressure: All

Filter

The blood pressure measurement of the person.

Gender	Blood Pressure	Stress Level	Sleep Duration (Hours)	Sleep Quality
Female	Stage 2 HTN	6.6	6.6	6.7
Male	Stage 1 HTN	5.6	7.2	7.0
Female	Stage 1 HTN	5.5	7.2	7.1
Male	Stage 2 HTN	5.5	7.0	7.6
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Source: Sleep Health and Lifestyle Dataset