



# SUMMARY

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This report analyzes the sleep duration, sleep quality, stress level, lifestyle activity, occupation, age group & BMI using an interactive EXCEL DASHBOARD.

# OBJECTIVE

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To identify key behavioral & factors influencing sleep quality & stress levels.

The analysis also reveals that **highly active individual report better average sleep duration** while **higher stress levels welcomes sleep disorders**. Occupation & age factor also influences the sleeping patterns.

These insights can support targeted wellness programs & lifestyle improvement strategies.

## **KEY BUSINESS QUESTION**

- 1) Does longer sleep duration means better sleep quality?
- 2) Lifestyle of various gender & their average sleep duration.
- 3) BMI related to various lifestyle.
- 4) Which stress levels are associated with sleep disorders?
- 5) Do occupation and age impact sleep quality?

## **DATASET OVERVIEW**

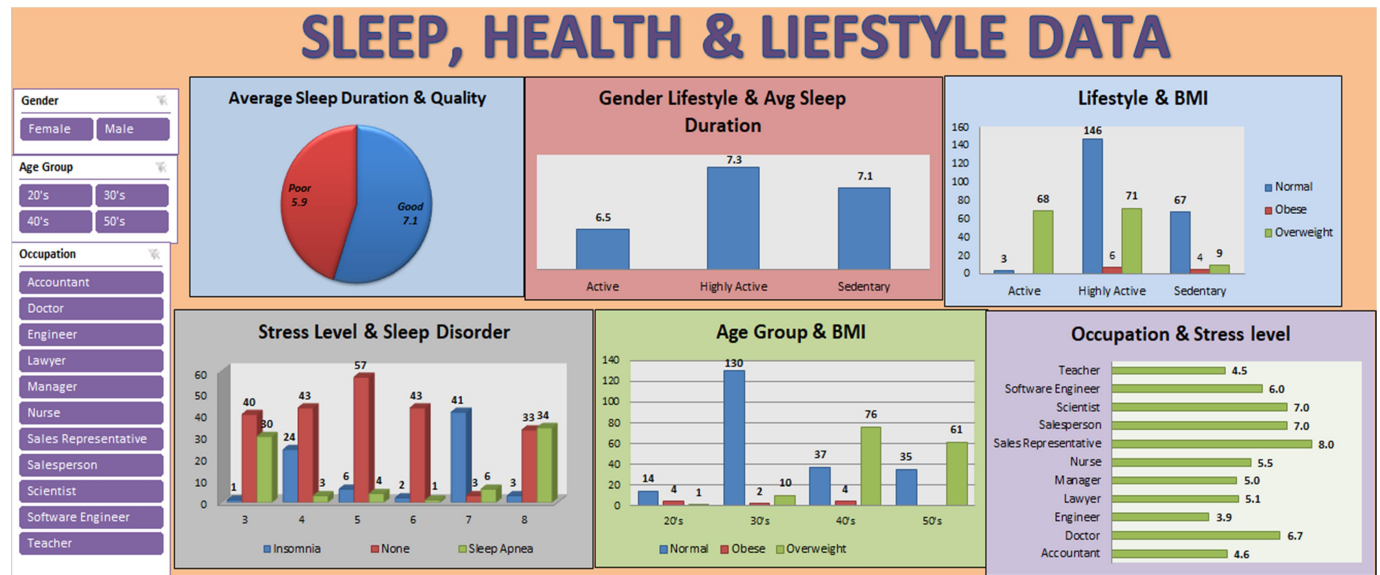
**Source** – Survey based sleep & lifestyle dataset

### **Key attributes**

- i) Gender
- ii) Age group
- iii) Occupation
- iv) Sleep Duration
- v) Quality of sleep
- vi) Physical activity level
- vii) Stress level
- viii) Blood pressure
- ix) Heart rate
- x) Daily steps
- xi) Sleep disorder

Used **EXCEL** to transform data and creating related columns like **age group, Sleep duration group, Quality group, PAL Range, Lifestyle, Steps group**.

## DASHBOARD OVERVIEW



Dashboard allows to filter insights by **gender, age group & occupation** and helps in **comparing & analyzing** the impact of different criteria on sleeping pattern, sleep disorder and quality of sleep.

## KEY INSIGHT AND ANALYSIS

### INSIGHT 1: Sleep duration and quality

- i) Individual sleeping for **minimum 6 hours** get **good quality** of sleep.
- ii) Same has been observed in all **age groups** & for **both male & female**.

### INSIGHT 2: Lifestyle & Average sleep duration

- i) Relation of sleeping hours & lifestyle is **always flexible** as it depends upon person to person, however **increase of physical activity may increase sleep duration**.
- ii) People who are **HIGHLY ACTIVE** (exercising for minimum 2 hours/day) have avg. sleep of **7.3 hours**
- iii) People who are **ACTIVE** (exercising for minimum 1.7 hours/day) have avg. sleep of **6.5 hours**

iv) People who have **SEDENTARY LIFESTYLE** (exercising for maximum 1.7 hours/day) have avg. sleep of **7.1 hours**

### **INSIGHT 3:** Lifestyle & BMI

- **BMI** (Body Mass Index) is **impacted by lifestyle** as observed from the dashboard.

#### **Male**

- i) Majority of **HIGHLY ACTIVE** men (age group 20's & 30's) were found to have **normal BMI**
- ii) However for men in **age group of 40's**, both **overweight & normal BMI** were approx. **same in number**.

#### **Female**

- i) BMI was **majorly normal** for age group of **20's & 30's**.
- ii) **Majority** of women (age group **40's & 50's**) falled in category of **overweight**.

### **INSIGHT 4:** Stress level & Sleep disorder

#### **Male**

- i) **Majority** of men in age group **20's & 30's** found to have **no sleep disorder**, irrespective of stress level.
- ii) Men in **age group 40's**, **high stress level** brings **more sleep disorder**.

#### **Female**

- i) For age group 20's & 30's **no major sleep disorder** found even with increase of stress level.
- ii) Women in age group **40's & 50's** suffered from **sleep disorder** even with **minor stress level**.

### **INSIGHT 5:** Age Group & BMI

### Male

i) **Overweight** men **majorly** found in **40's age group**. **Lower age group** have **no complexity** regarding BMI as mostly fall in the category of *normal* and **few in obese category**.

### Female

i) **Overweight** women **majorly** found in **40's & 50's age group**. Concluding that **with increase in age, more women face BMI related issues such as obese & overweight**.

ii) Possibly due to the **hormonal changes** that occur in **female's body** after certain age, hence women are found to face **health issues** after certain age **despite** having **healthy & sedentary lifestyle**.

### INSIGHT 6: Occupation & Stress Level

i) **Highest** stress level found in **men** involved in occupation of **sales representative** & for **women** highest in **scientist** occupation.

ii) **Lowest** stress level for **men** in occupation of **Engineer** & for **women** in occupation of **Engineer & Doctor**.

## CONCLUSION & POSSIBLE REASONS

i) Sleep duration & quality is not a guaranteed result of **ACTIVE LIFESTYLE** as *other factors* also influence it.

Example:- A person with *sedentary lifestyle* works a hectic schedule throughout the day, hence sleeps for longer duration and gets a good sleep quality.

ii) *Food Habits* influences a person's BMI, so a person might be **HIGHLY ACTIVE** but eats *junk food* due to his **OCCUPATION**.

Example:- Sales Representative & other field jobs

iii) Stress level is *directly proportional* to sleep quality, hence resulting in sleep disorders & it is not found in *young age group* as they are more involved in various activities (*Big friend circle, vacations, parties etc.*) hence less impact of stress level is seen in them

iv) As an individual gets older, his/her body functions in a different way (*slow digestion, diseases etc.*) hence impacting a person's BMI and overall health. Since health gets impacted it raises *cortisol level* (STRESS HORMONE) hence increasing *stress* & impacting *sleep & it's quality*.

## POSSIBLE SOLUTIONS

i) *Small, Achievable & Practical* work targets should be set by companies in orders to let the employee balance his/her work & health.

ii) More *Healthy Food Options* should be offered in the *workspace*.

iii) More *Health Workers* should be hire by the government & *home drives* should be carried out by them, inspecting and giving appropriate *free/low cost medicines* to the beneficiaries.

iv) Special focus & awareness drive be done for the *women* who are reaching *old age*.

v) *Consultation facility* should be provided to the employees.

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