Exploring Sleep Patterns Through Data

Using Visualization to Uncover Patterns in Sleep Health

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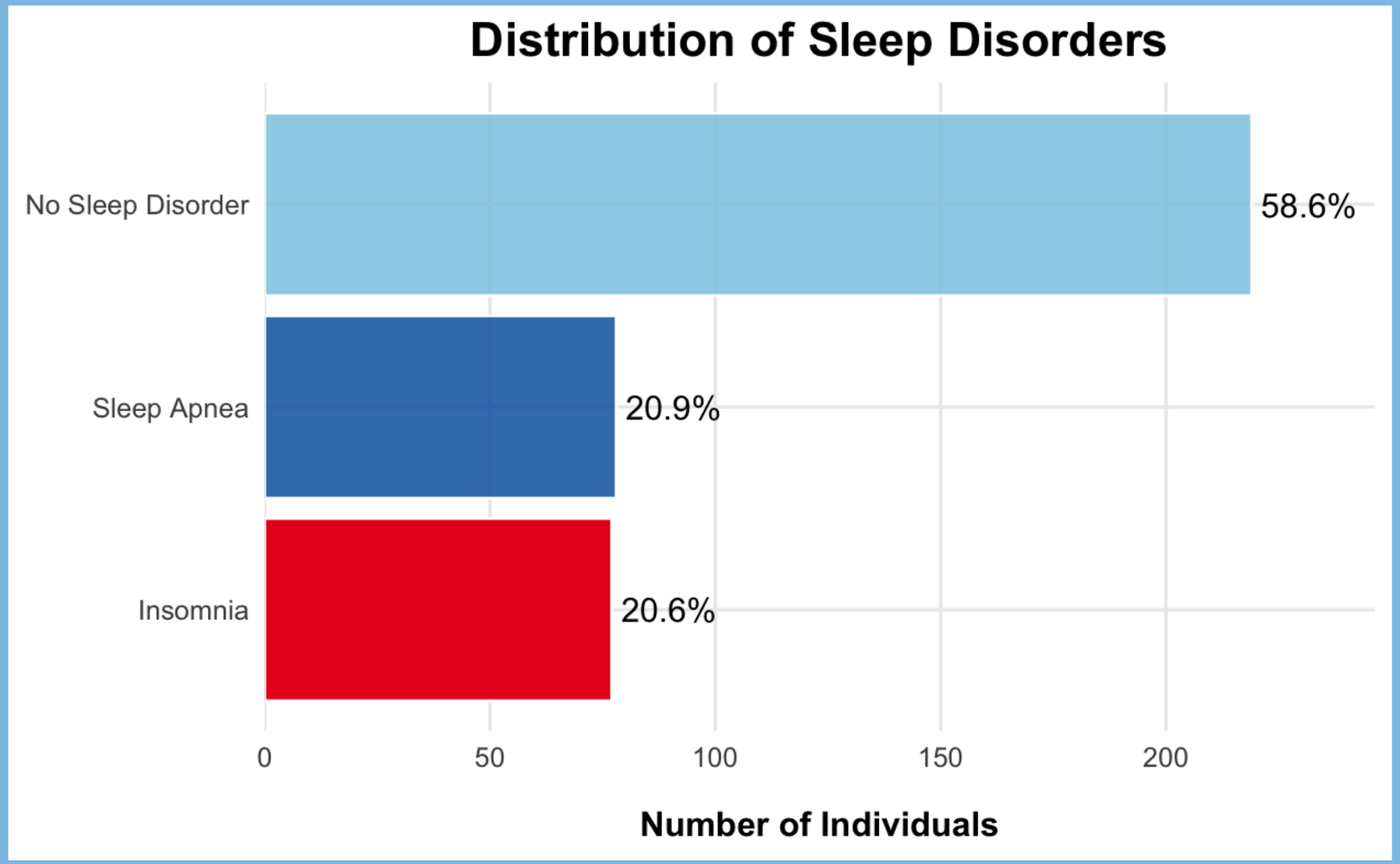
About the Data

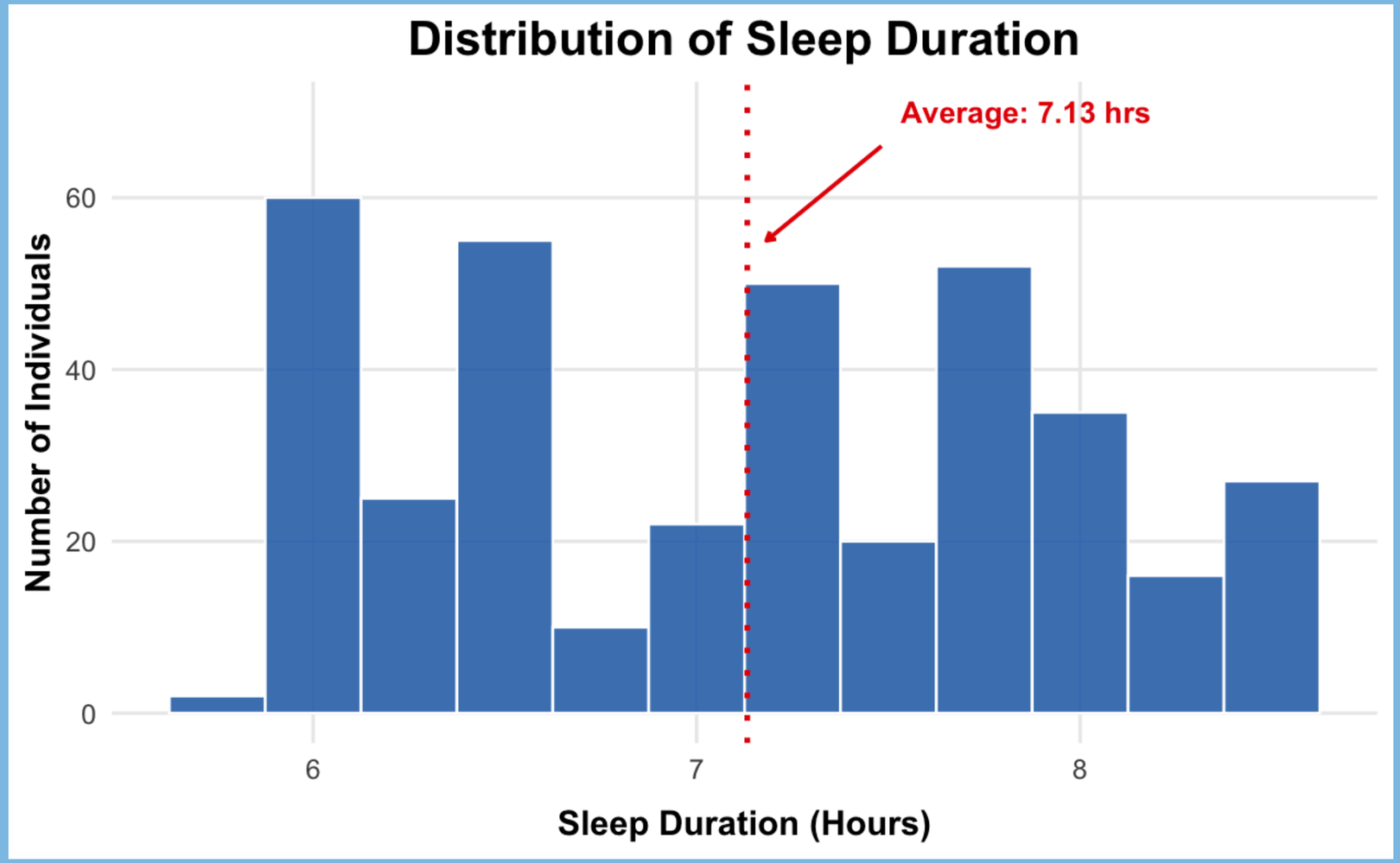
- 374 individuals
- Sleep health and lifestyle information
- Individuals across various occupations and ages
- Variables include:
  - BMI
  - Duration of Sleep
  - Sleep Disorder Diagnosis
  - Age/Gender
  - Stress Level

Gender	Age	Occupation	Sleep Duration	Quality of Sleep	Physical Activity Level	Stress Level	BMI Category	Blood Pressure	Heart Rate	Daily Steps	Sleep Disorder
Male	27	Software Engineer	6.1	6	42	6	Overweight	126/83	77	4200	None
Male	28	Doctor	6.2	6	60	8	Normal	125/80	75	10000	None
Male	28	Doctor	6.2	6	60	8	Normal	125/80	75	10000	None
Male	28	Sales Representative	5.9	4	30	8	Obese	140/90	85	3000	Sleep Apnea
Male	28	Sales Representative	5.9	4	30	8	Obese	140/90	85	3000	Sleep Apnea
Male	28	Software Engineer	5.9	4	30	8	Obese	140/90	85	3000	Insomnia
Male	29	Teacher	6.3	6	40	7	Obese	140/90	82	3500	Insomnia
Male	29	Doctor	7.8	7	75	6	Normal	120/80	70	8000	None
Male	29	Doctor	7.8	7	75	6	Normal	120/80	70	8000	None
Male	29	Doctor	7.8	7	75	6	Normal	120/80	70	8000	None
Male	29	Doctor	6.1	6	30	8	Normal	120/80	70	8000	None
Male	29	Doctor	7.8	7	75	6	Normal	120/80	70	8000	None
Male	29	Doctor	6.1	6	30	8	Normal	120/80	70	8000	None
Male	29	Doctor	6	6	30	8	Normal	120/80	70	8000	None
Male	29	Doctor	6	6	30	8	Normal	120/80	70	8000	None
Male	29	Doctor	6	6	30	8	Normal	120/80	70	8000	None
Female	29	Nurse	6.5	5	40	7	Normal Weight	132/87	80	4000	Sleep Apnea

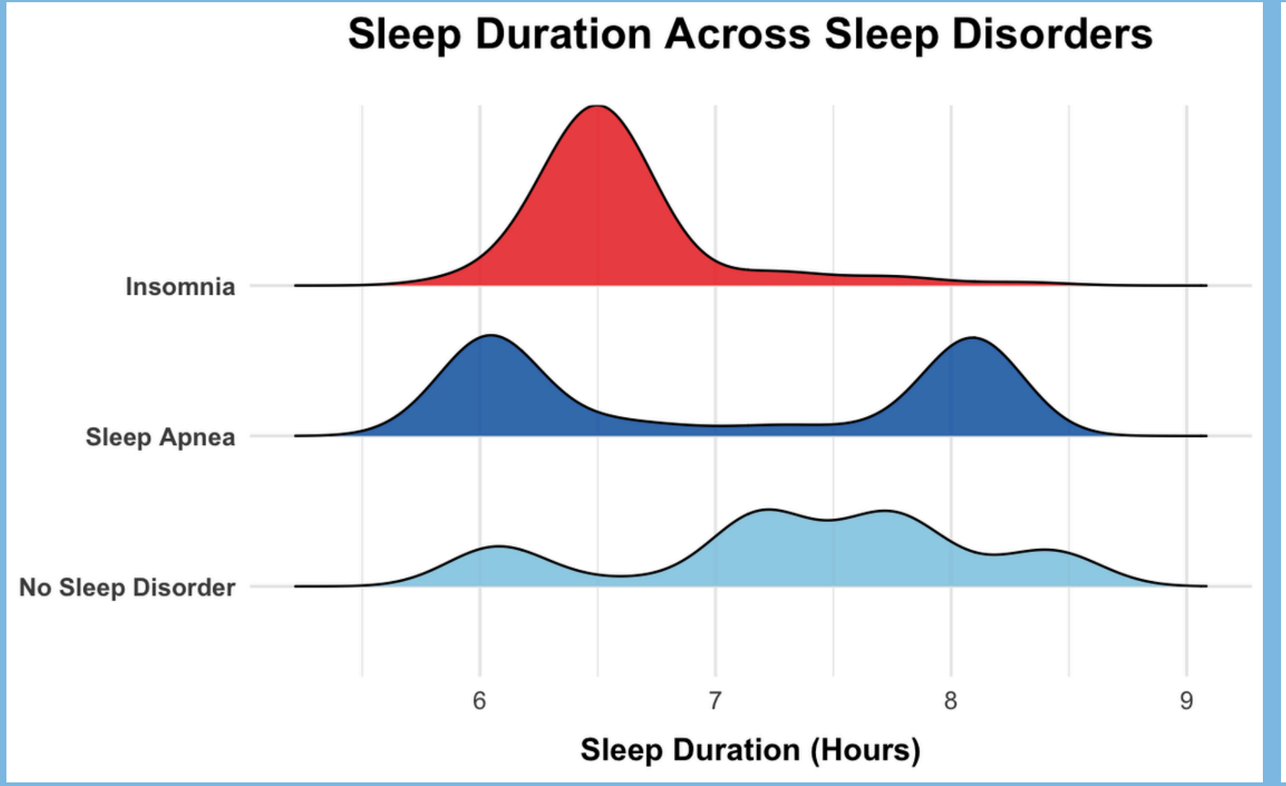
Distribution of Sleep Disorders

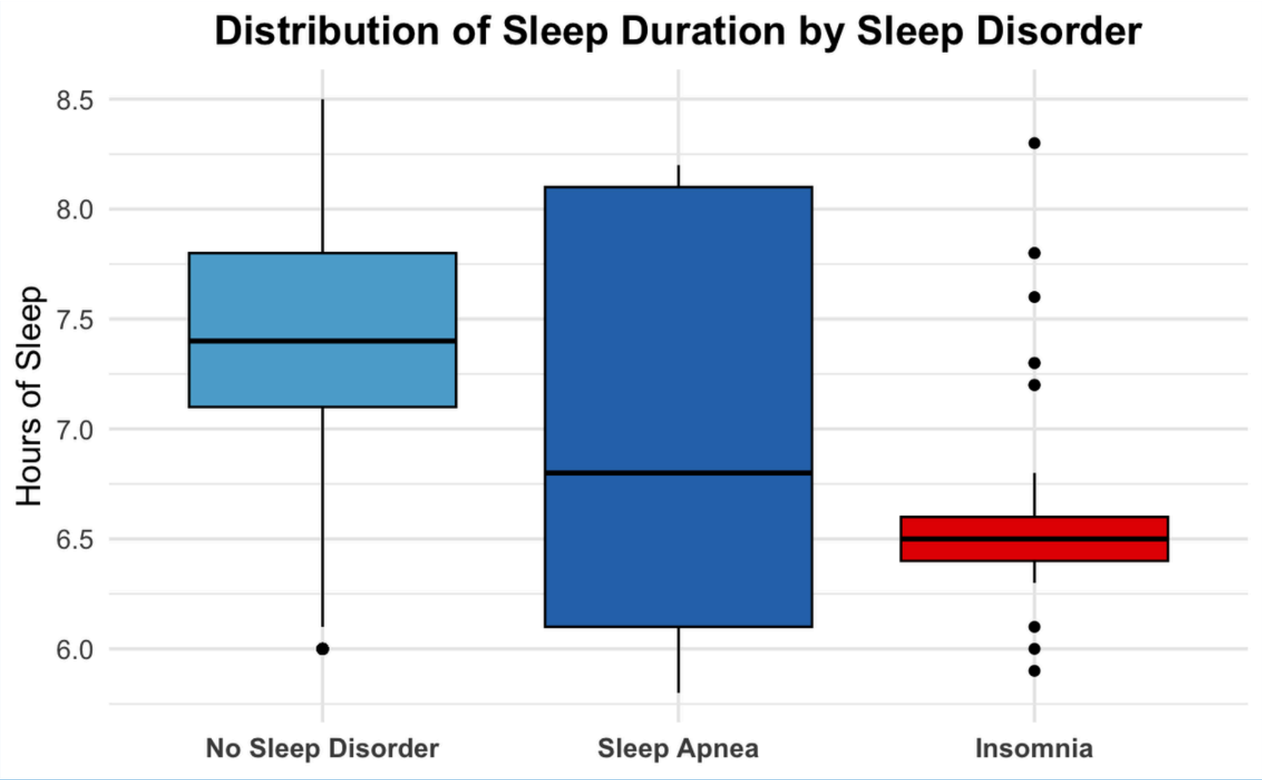


Distribution of Sleep Durations

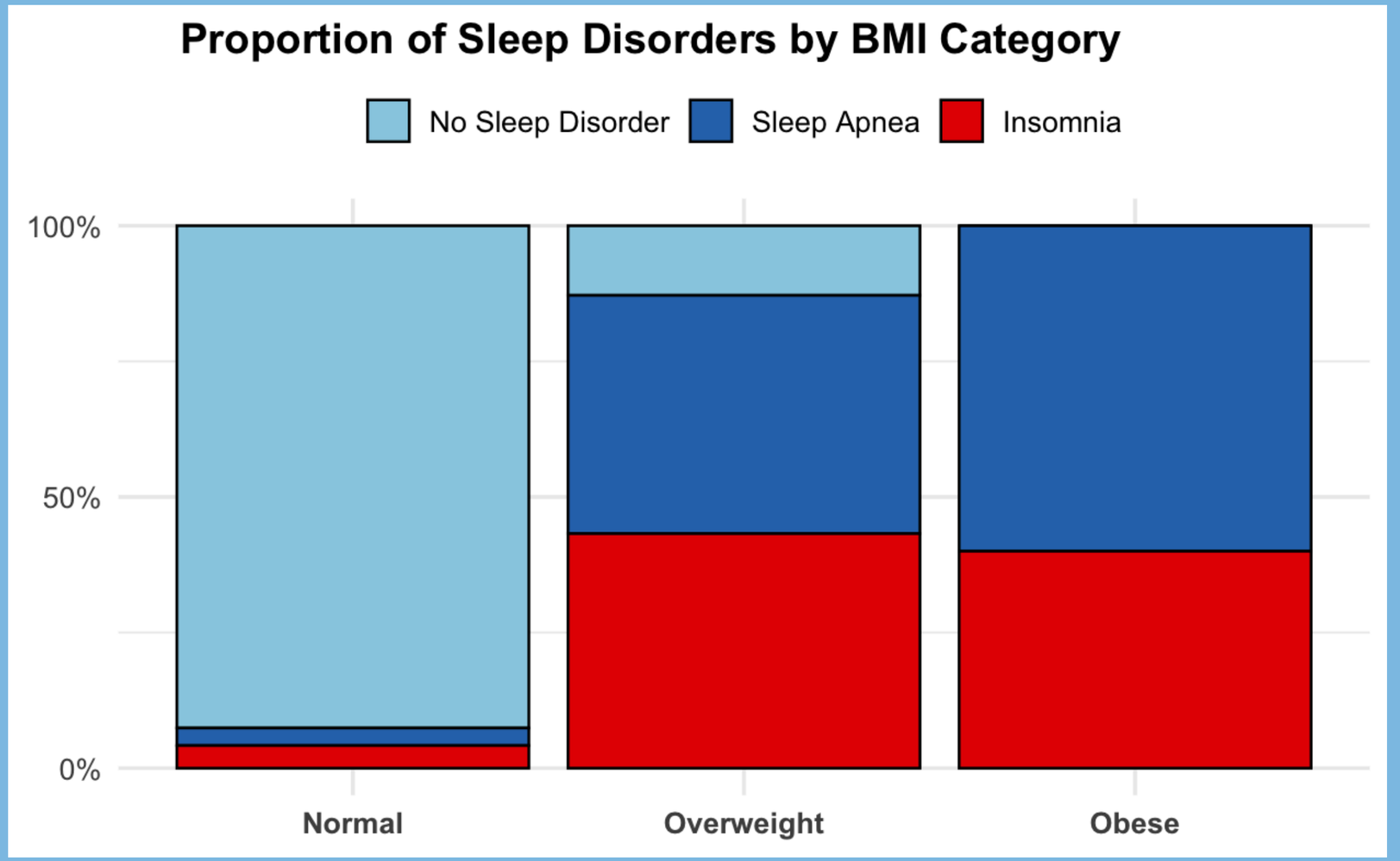


How Does the Presence of a Sleep Disorder Impact Sleep Durations?

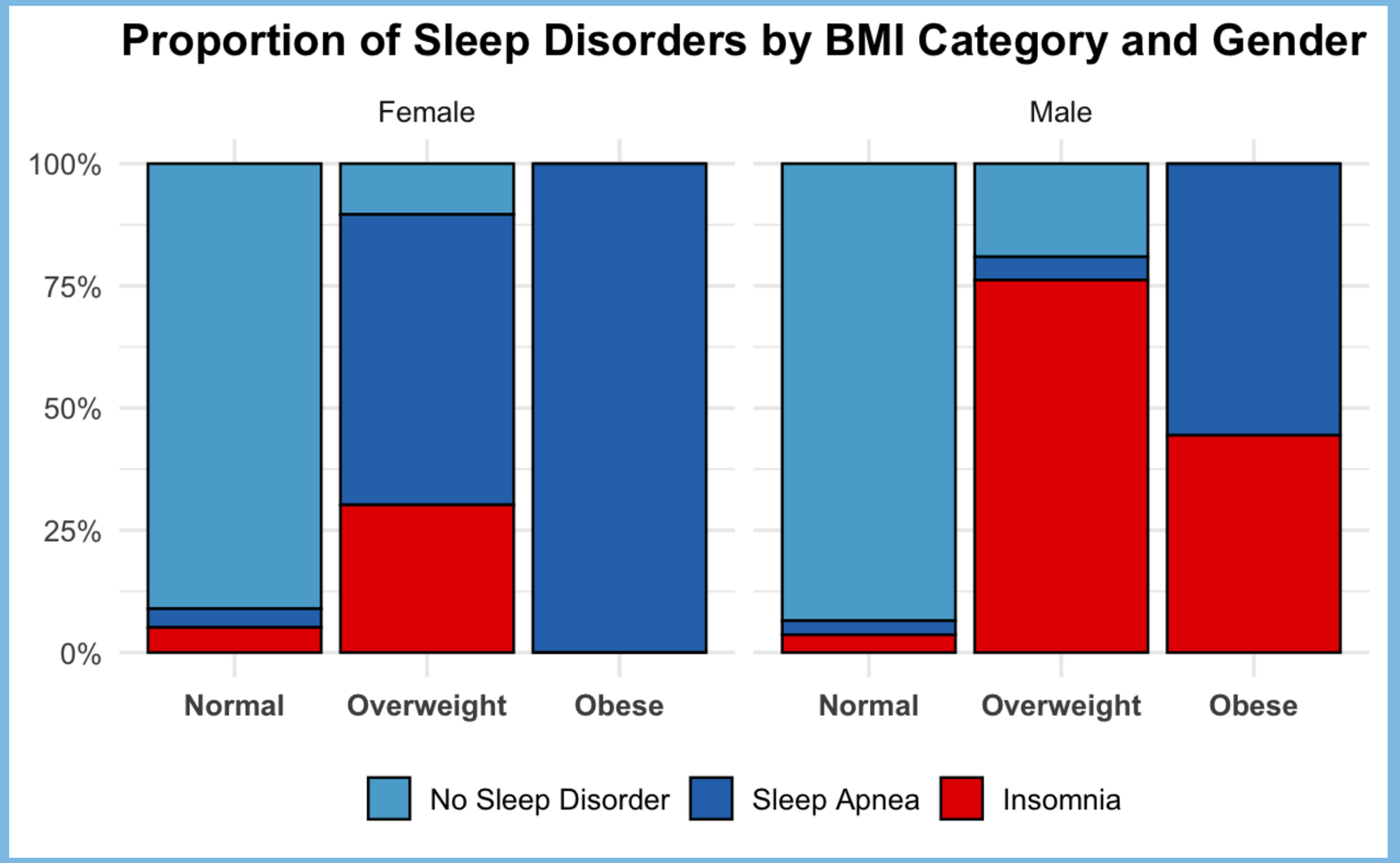




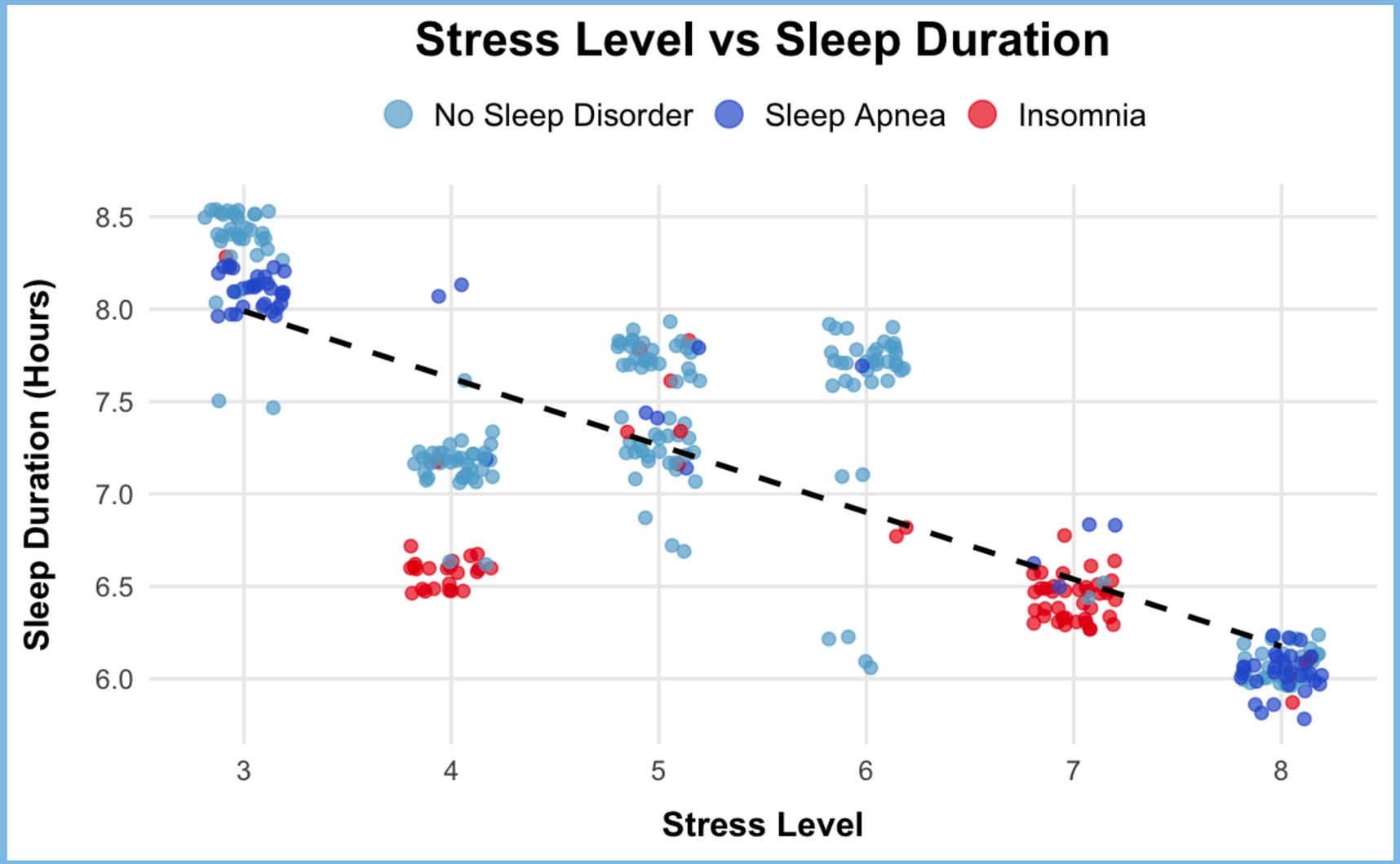
Sleep Disorders Across BMI Categories



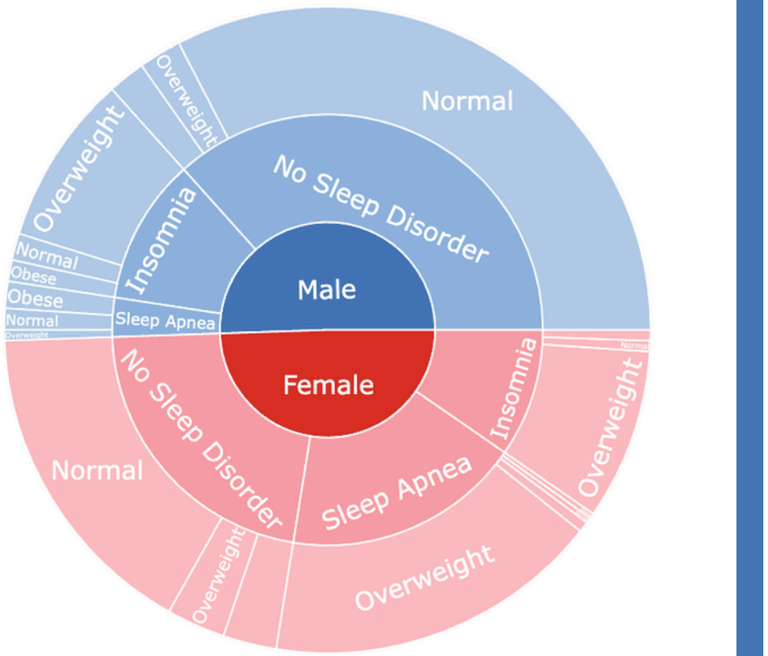
How Do Gender & BMI Affect Sleep Disorders?

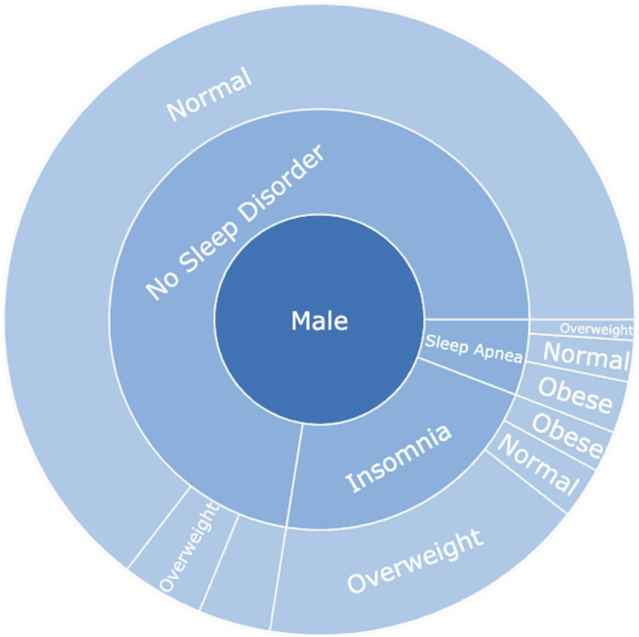


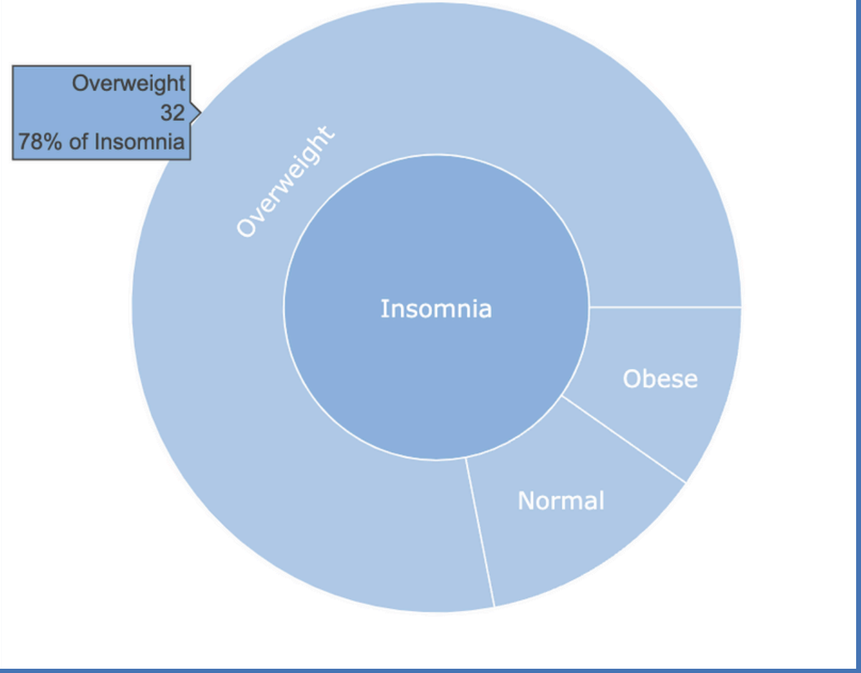
How Does Stress Impact Sleep Duration?



Visualizing Using Sunburst Plots







- Read inside-to-outside
- Center ring → Gender
  - Middle ring → Sleep Disorder
    - Outer ring → BMI Category

Key Findings

- Sleep disorders are common
- Sleep patterns are heavily impacted by sleep disorder type
- Higher BMI's may be linked to more sleep disorders in both men and women
- Stress is a major influence on sleep