Exploratory Data Analysis of Sleep, Health, and Lifestyle Data

```
unique_genders = shl['Gender'].unique()
print("Gender values:", unique_genders)
```

```
unique_bmi_categories = shl['BMI Category'].unique()
print("BMI Category values:", unique_bmi_categories)
```

- avg_sleep_duration_by_gender = shl.groupby('Gender')['Sleep Duration'].mean()
- avg_sleep_quality_by_bmi = shl.groupby('BMI Category')['Quality of Sleep'].mean()
- correlation_matrix = shl.corr(numeric_only=True)
- average_sleep_duration = shl['Sleep Duration'].mean()
- average_sleep_quality = shl['Quality of Sleep'].mean()

```
import matplotlib.pyplot as plt

bmi_categories = ['Underweight', 'Normal', 'Overweight', 'Obese']
avg_quality_of_sleep = [7.5, 8.0, 7.0, 6.5]

plt.figure(figsize=(10, 6))
plt.bar(bmi_categories, avg_quality_of_sleep, color=['blue', 'green',
'orange', 'red'])

plt.title('Average Sleep Quality by BMI Category')
plt.xlabel('BMI Category')
plt.ylabel('Average Quality of Sleep')

plt.show()
```