

*Data Analysis*

# ***Sleep Efficiency***

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## **Abstract**

Title: **Investigating the Impact of Lifestyle Factors on Sleep Quality: A Comprehensive Analysis**

## **Proposal**

Our study aims to investigate the impact of lifestyle factors, specifically smoking, alcohol consumption, and exercise frequency, on sleep quality. We will analyze how these factors influence sleep efficiency, and the duration of light and deep sleep stages. Utilizing data from reputable sources and our collected dataset, we will examine these lifestyle variables and their effects on sleep metrics. Our hypothesis posits that smoking and alcohol consumption negatively impact sleep quality, leading to reduced sleep efficiency and a decrease in deep sleep duration. Conversely, regular exercise is expected to enhance sleep quality, increasing sleep efficiency and deep sleep duration while reducing light sleep. Through regression analysis and other statistical modeling techniques, we aim to identify and understand the relationships between these lifestyle factors and sleep quality indicators.