Many sleep tracking applications are available but the point is that they are designed for individuals to measure their sleep pattern by keeping a track of their sleeping hours .But my goal is to design a specific version for mental health professionals like psychiatrists and psychologist which provide them with accurate result in less time other already existing applications are based on routine tracking and thus need significant amount of data of past to predict but this version would rather focus on chemical composition of sleep chemicals i.e melatonin , neurological activity, etc. Keeping the information of sleep cycle in mind also the effect of other activities (can both be physical or not).Because the fact that people who don’t get right amount of sleep have swallon red eyes is rather not an accurate description

There are studies that explore the phenomenon where individuals can be sleep-deprived but not immediately show visible symptoms, such as bloodshot or puffy eyes. One potential explanation is that some people may have a higher tolerance to sleep deprivation, or their bodies might adapt in ways that mask the physical symptoms that are usually associated with lack of sleep.

**Hirshkowitz et al. (2015)**

**– National Sleep Foundation Sleep Duration Recommendations**:

This paper discusses how different people have varying sleep needs and tolerances, and while lack of sleep can affect cognitive and physical health, not everyone shows obvious signs (such as red or puffy eyes) immediately.

**Van Dongen, H. P., & Dinges, D. F. (2000).**

**"Sleep deprivation: Effects on sleepiness, performance, and mood."**:

This research focuses on the cognitive and mood effects of sleep deprivation, and while the study emphasizes performance deficits, it does not always find clear external indicators like eye redness in every case.

**Bowers, A., & Moyer, A. (2017).**

**"Effects of Sleep Deprivation on Physical Performance:**

**A Meta-Analysis."**

: This meta-analysis explores how sleep deprivation impacts physical performance, noting that some individuals may experience impaired performance without showing overt symptoms like droopy eyes or visible tiredness.

**Zhdanova, I. V., Wurtman, R. J., & Regan, M. M. (2001).**

**"Melatonin and Sleep."**

: This study looks at the biochemical aspects of sleep and shows that individuals may still engage in certain activities without obvious external signs of sleep deprivation, though they may still experience underlying cognitive and neurological disruptions.

These references suggest that while some individuals exhibit noticeable symptoms like tired eyes when sleep-deprived, others may not show those physical signs immediately. You might also want to explore individual variability in sleep patterns and how people can tolerate sleep deprivation differently

In Short we gotta keep that fact in mind because most people only belief that eyes became red and puffy when you are having lack of sleep however, medicine and science have proven otherwise.