



# WHOOOP: A wearable technology as a metric of resident wellness

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**Background:** The increasing rate of resident burnout has become more apparent through the years. Ishak, et al. determined that nearly 44% of residents experience burnout throughout their residency. In addition, nearly 39% of residents with reported burnout say they lack resources to make any positive impact in preventing this<sup>1</sup>. Research has been conducted to determine reliable metrics to quantify the impact stress has on the body. Through this review we have looked at several factors that will ultimately contribute to empowering residents to improve their wellness and to ultimately impact their performance, efficiency, and collaboration.

**METHODS:** To examine the impact that factors such as exercise, sleep, and alcohol have on HRV. By tracking resting heart rate and HRV by the wearable WHOOP™ device, informed decisions can be made to optimize performance in categories that contribute to HRV.

## Highlights of Literature Review:

- Relating stress to HRV.
- Evaluating impacts of exercise, alcohol and sleep on HRV.
- wearable technology's effect on resident wellness through tracking the above metrics.

**Conclusion:** Resident burnout identification and prevention strategies are necessary to facilitate an environment of patient safety and resident well-being. We propose WHOOP™ could pioneer analysis through HRV and bring about a revolution of change due to the above-mentioned effect, improving the physician's mental and physical health, and ultimately, the ability to perform optimal patient care. Assessments of HRV can provide real time, objective insight into resident well-being. Despite the use of routine surveys and adjustments to resident work hours, burnout continues to be a topic of discussion. We hypothesize that evaluation of HRV is an accurate and objective substitute for labor and time-intensive surveys and tracking methods which may have a great deal of subjectivity.

## Future Directions:

- Identifying baseline stress and physical conditioning level for residents as well as potential parameters to evaluate further for key performance indicators.
- Measure sleep, exercise, and nutrition trends among various residency programs and within specific rotations.
- Data driven insights to building program, site, and individualized wellness programs for residents.
- Investigating potential trends and key indicators for burnout as well as potential windows for critical intervention strategies for minimizing moral injury from work-related stress.

## REFERENCES

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