



# DISCONNECTION BETWEEN SELF-REPORTED WELLBEING AND HEART RATE VARIABILITY DATA FROM WEARABLES

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**Purpose: To assess the association between daily self-reported emotional and mental readiness and their association with overnight resting heart rate variability.**



18 females



21 males



3 months



Daily Biometrics



Daily Journal

Activity tracker provided to all subjects (n=39) for continuous wear on non-dominant wrist for 3 months. Measurements used for calculation of heart rate variability (HRV).



Hydrated sufficiently  
Feel motivated  
Feel recovered  
Feeling sick or ill  
Feel stress

Felt nervous or anxious  
Have any alcoholic drinks  
Have caffeine  
Feel emotionally & mentally stable  
Feel energized

Journal Engagement > 80%

## RESULTS

### No Association with HRV



Nervous Stressed

### Negative Association with HRV



Sick Alcohol Use Energized Motivated

### Positive Association with HRV



Emotionally Stable Felt Recovered Hydrated Caffeine Use

## CONCLUSION

**Subjective feelings of readiness may not correspond to activity tracker biometrics** and should be taken into consideration when calculating readiness scores and providing personalized recommendations based on heart rate variability. Caution should be taken when using heart rate variability based recommendations to guide a user's health and wellness journey.

The authors are employed by the Gatorade Sports Science Institute and PepsiCo R&D Data Science and Analytics. The views expressed in this article are those of the authors and do not necessarily reflect the position or policy of PepsiCo, Inc.

