

Review of: "Exploring the Multidimensional Influences on Sleep and Active Heart Rate Dynamics: A Comprehensive Study"

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Potential competing interests: No potential competing interests to declare.

To the authors

This is a comprehensive study with many participants, over a long period, and with numerous variables. The problem with 'big data' is that statistics may provide appealing associations, but not causalities. And indeed, a lot of statistics are used in this study, but there is almost no attempt to explain the many associations. As a result, the discussion explains the statistics themselves but cites only one single reference.

A series of specific suggestions is made further down. Additionally, it is suggested to consider whether this work might be more appropriately published in a journal that focuses on applied statistics.

Comments

About Line 40: on should read or

Table 1: no need to present heart rate with two decimals. This is calculation and not accuracy of the measurements.

Numbers in brackets do confuse. What is meant with (%).

How to read daily physical activity? Please provide units. (0.51) meaning what? If SD, then .20 - .51 units. Range could be more meaningful, if not misunderstood.

Number of cases? Which ones?

Females = 50.72%. Please don't provide results of calculations but sensible data.

BMI please, units.

Extraversion: is -0.05 much? In what range? In brackets: SD? If yes, then $-0.05 + 0.72 = +0.67$?

Please clarify throughout.

Table 1, legend: time to visit classes is contained in the table. Why here again and no other variables?

Table 3 is a data graveyard and unreadable for the interested party. Maybe an appendix would solve the problem.

Anyway, what do you present? Is it r or r^2 or none of both?

What is stated with p-values of 0.05 vs 0.01 vs 0.001? Will you discuss such differences differently?

Peer influence affects participants' sleep and active heart rates: it increases or decreases?

In relation to behavioral factors, physical activity level is positively linked to all four dependent variables. Which ones?

Discussion: If variability of heart rate is mentioned, the reader might think about HRV. If this is meant, the term is fine, although no single measure of HRV has been presented. Otherwise, scatter or variance would be more appropriate terms.

For instance, the effects on sleep heart rate span from -1.592 for conscientiousness (suggesting a substantial impact) to 0.001 for minutes in bed (exerting a more modest effect), and 5.325 for female gender, indicating a notable increase.

Maybe tell the reader the meaning of your finding. And what is meant by 'a notable increase'? Increase in what? And what could the reason be?

.... in future research for comprehensive cardiovascular insights.

That might well be. However, some remarks on the relation between sleep patterns and cardiovascular health are needed. Consider, e.g., HRV measures that are associated with an increased cardiovascular risk once they are reduced.

Conclusion: It highlights how peer influence, gender, ethnicity, personality

traits, mental health, daily routines, physical activity, and academic life contribute to heart health.

This reviewer suggests better explaining what has been described to confirm that statement.