ISSN 2692-5877
DOI: 10.46998/IJCMCR.2023.27.000660

International Journal of
Clinical Studies & Medical Case Reports

Research Article

Relaxing Effect of Mozart's Classical Music on the Autonomic Nervous System and Stress Index in an Elderly Man

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Received: March 10, 2023 **Published:** June 14, 2023

Introduction

A person's longevity depends to a large extent on life stressors. That is why ensuring a peaceful life is one of the decisive circumstances for achieving vital longevity.

It has long been known that good music has a beneficial effect on a person's nervous system and psyche.

Measuring Heart Rate Variability (HRV) is the only accurate quantitative method for studying the autonomic nervous system and determining the human body's response to stress.

Material

The subject of our study is a 61-year-old man, 178 cm tall and weighing 75 kg (BMI =24).

Method

The gold standard for measuring of the heart rate variability (HRV) is the morning measurement immediately after waking up from a night's sleep.

For heart rate recording, we used the "Polar H10" Chest Strap (with Bluetooth BLE signal transmission). The analysis of the results obtained from the Heart Rate Variability (HRV) measurement was carried out with the "Kubios HRV" software.

We took the first (basal) HRV measurement in the morning at 7:30 a.m. immediately after waking up. The examination was performed at complete rest (in a supine position, complete silence and comfortable room temperature). We performed a short term (3 min.) measurement of HRV parameters.

The subject then listens in a supine position for 30 minutes to relaxing classical music by Mozart **(Figure 1,2,3)**.

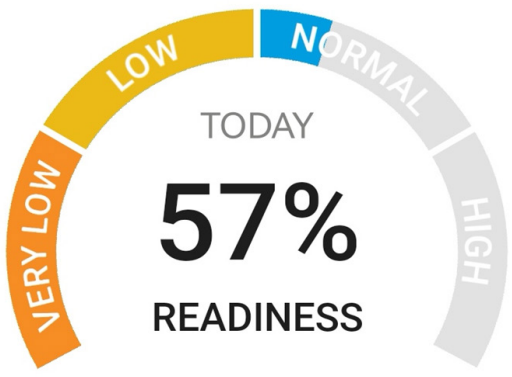

Figure 1: Basal HRV-measurement.

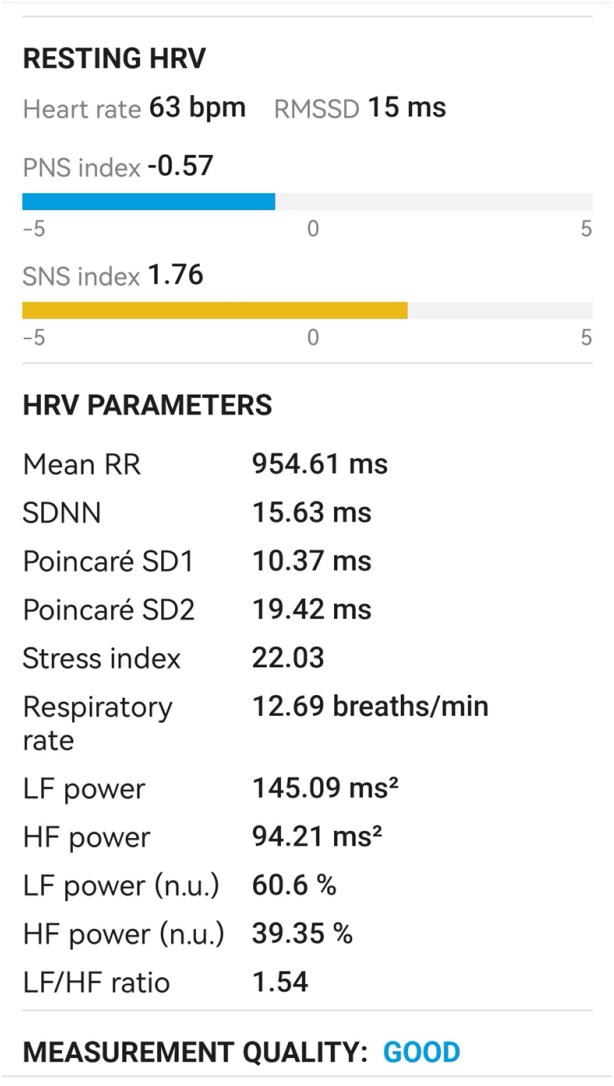

Figure 2: Basal HRV-measurement.

The second measurement of HRV parameters was made after 30 minutes of listening to this music (**Figure. 1A, 2A, 3A**).

Results

The results obtained in this study are presented in Figure 1, 2, 3, 1A, 2A, 3A.

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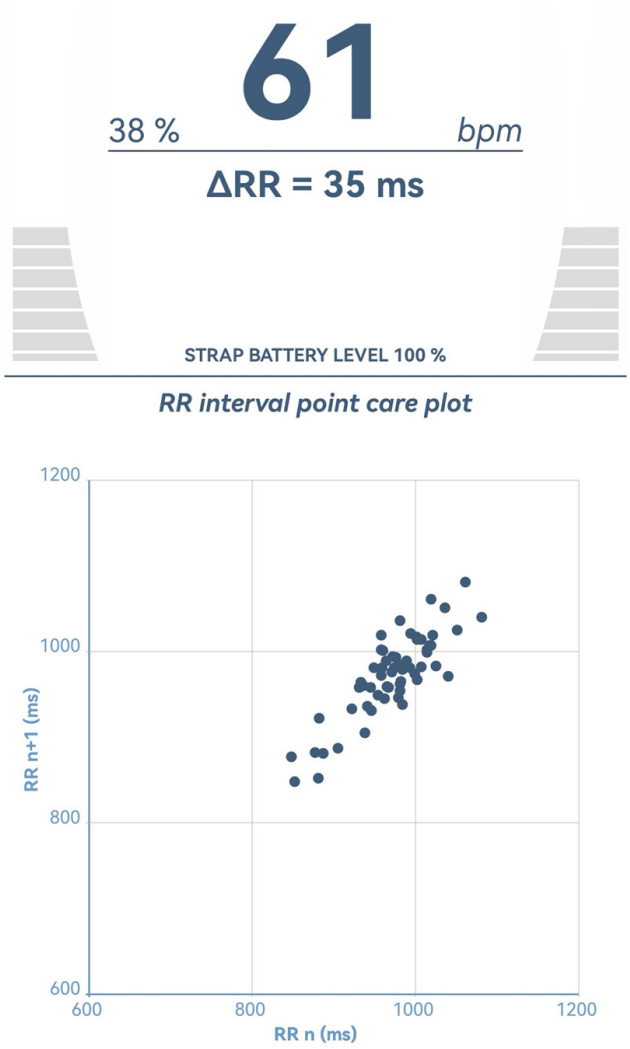


Figure 3: Basal HRV-measurement.

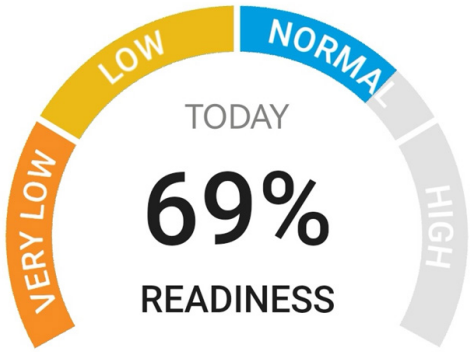


Figure 1A: After Mozart's music.

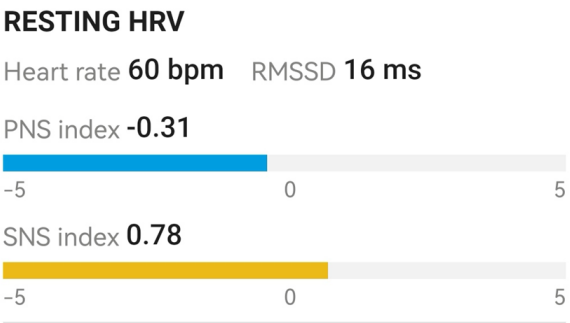
Discussion

From the results we obtained in this study, there was an increase in the readiness index (from 57 % to 69 %), a decrease in the stress index (from 22,03 to 16,93). The sympatho-vagal balance is not significantly altered.

Conclusion

In this study, we observe the relaxing effect of Mozart's classical music.

Therefore, we recommend this music to be listened to more often by people to achieve relaxation in their hectic and stressful daily life.



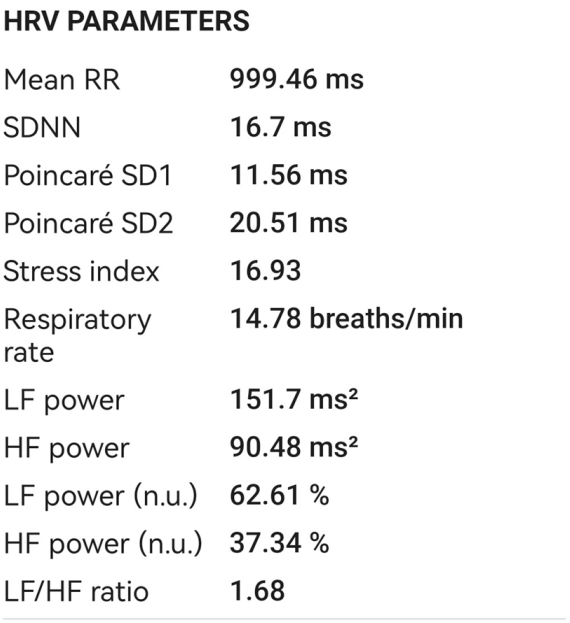
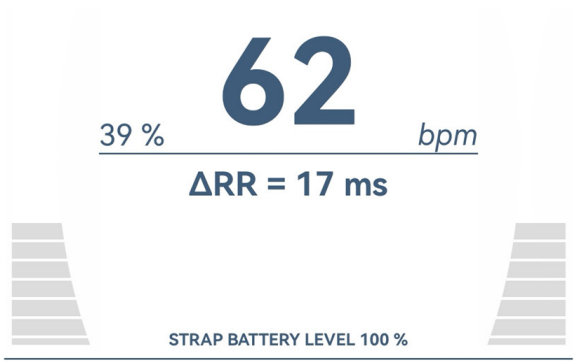


Figure 2A: After Mozart's music.



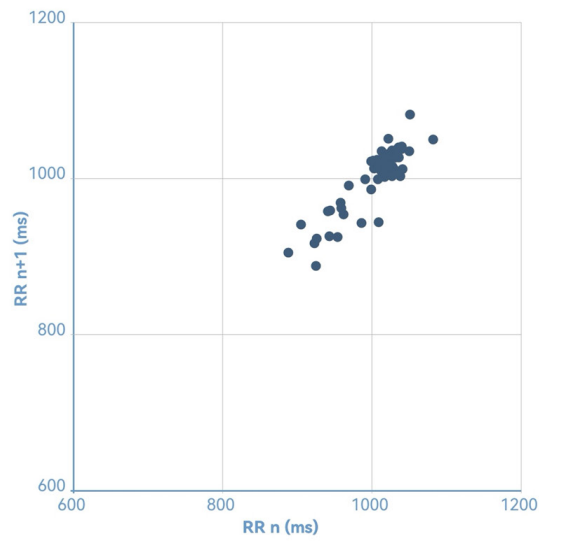


Figure 3A: After Mozart's music.

Citation: Ivan Domuschiev*. Relaxing Effect of Mozart's Classical Music on the Autonomic Nervous System and Stress Index in an Elderly Man. *IJCMCR. 2023; 27(2): 005*

DOI: *10.46998/IJCMCR.2023.27.000660*

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