

## Comment on “Relationship between the number of comorbidities, quality of life, and cardiac autonomic modulation in patients with coronary disease: a cross-sectional study”

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Editor,

We read with great interest the original article entitled “Relationship between the number of comorbidities, quality of life, and cardiac autonomic modulation in patients with coronary disease: a cross-sectional study,” by Valente et al.<sup>1</sup> in *Revista da Associação Médica Brasileira*. In this article, the authors used the Medical Outcome Study 36-Item—Short Form Health Survey (SF-36) to assess the quality of life of the subjects. Their results found that the number of comorbidities is inversely related to the pain domain of the SF-36, suggesting a stronger association between higher pain levels and the number of comorbidities in patients with coronary artery disease. Although discussed in detail, our team still believes that there are some issues that need further in-depth study.

First, the authors used the RR interval as an important indicator of cardiac function to measure heart rate. However, the heart beat frequency is affected by many factors, and hormones in the body are one of the factors that need to be considered. For example, thyroid disease<sup>2</sup>, pituitary disease<sup>3</sup>, and kidney or adrenal disease<sup>3,4</sup> will directly or indirectly affect the basal metabolic rate of the human body, which in turn affects the

beating frequency of the heart and hence reflects the difference in value, that is, RR.

In addition, we noted that during the subjects’ baseline data collection, the researchers collected only general demographic characteristics such as age, gender, and BMI, which were incomplete. Items such as occupation, culture, income, and permanent residence were not collected. Occupation is the determinant of a person’s living habits, and poor living habits may lead to the decline of the pain domain of the SF-36. Therefore, occupational factors may be another potential factor that causes difference in the pain domain of the SF-36<sup>5,6</sup>.

In general, we believe that the baseline data of the patients are not complete enough, and the comparability of the groups is weak. We suggest that the authors improve the baseline data of the subjects and conduct random grouping so that the observation group (experimental group) and the control group are balanced.

### AUTHORS’ CONTRIBUTIONS

**Y-FW:** Conceptualization, Data curation. **YZ:** Writing – original draft. **YL:** Writing – review & editing.

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