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Heart & Lung

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Response to letter to the editor: Seasonal variation in physical activity in patients with heart failure



Dear Editor,

Thank you for the opportunity to respond to the letter of the editor concerning our article published in your journal: "Seasonal variation in physical activity in patients with heart failure".¹

The authors of the letter to the editor state that we used one-way ANOVA to compare physical activity, self-efficacy, motivation and symptom severity between the summer and the winter. This statement is incorrect, as we used repeated measures ANOVA to compare these variables within the patients with heart failure over two time points. As stated in our article, no difference was found between physical activity, self-efficacy, motivation and symptom severity between summer and winter (see [Table 1](#)).

Table 1

Amount of physical activity (Mets/week), motivation, self-efficacy and symptom severity in 87 patients with heart failure and comparison during the summer and the winter.

	Summer	Winter
Physical activity* Median (Q1 – Q3)	1428 (297–3665)	1408 (231–3219)
Low	26 (30%)	28 (32%)
Moderate	36 (41%)	36 (41%)
High	25 (29%)	25 (29%)
Motivation	1.88±0.84	1.80±0.91
Self-efficacy	3.61±2.02	3.59±2.13
Fatigue	5.25±2.29	5.21±2.39
Shortness of breath	5.40±2.51	5.39±2.47

* Physical activity in metabolic equivalent of tasks (Mets) a week.

Additionally, we looked at differences in patients that stayed the same or increased in their physical activity compared with patients that decreased in physical activity, in line with the purpose presented in our article: to describe the seasonal differences in physical activity

in patients with heart failure and assess factors that influence these differences in a country with markedly different winter-to-summer weather conditions (in temperature, hours of daylight and snow fall). For these additional analyses we used Student's t-tests or Chi-square where appropriate to examine the association of the change in physical activity between the seasons with demographic variables, motivation, self-efficacy and symptom severity.

We believe we used the correct statistical analysis, so this article can be used as citable evidence.

Reference

1. Klompstra L, Jaarsma T, Strömberg A. Seasonal variation in physical activity in patients with heart failure. *Heart & Lung*. 2019 May 20. <https://doi.org/10.1016/j.hrtlng.2019.04.003>. pii: S0147-9563(18)30293-0.

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DOI of original article: <http://dx.doi.org/10.1016/j.hrtlng.2019.06.004>.

<https://doi.org/10.1016/j.hrtlng.2019.08.015>

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