



## Quality of life and fear of disease progression in MS patients with post-traumatic stress disorder

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### Background and aims

The presence of post-traumatic stress disorder (PTSD) is associated with reduced quality of life (QOL). We aimed to study the association between PTSD and fear of disease progression and QOL in MS patients.

### Methods

127 MS patients (89 females, 38 males) were included. 61 patients had PTSD symptoms that developed in connection with the underlying disease. The control group included 67 patients with MS who were resistant to stress.

To assess the cognitive, emotional and behavioural aspects of fear about progression the integrative model of N.A. Sirota, D.V. Moskovchenko based on "The Fear of Progression Questionnaire – Short Form (FoP-Q-SF)" and "The Illness Cognition Questionnaire" was used. The QOL was assessed using the 36-Item Short-Form Health Survey (SF-36) questionnaire. Age, MS duration, MS course, Expanded Disability Status Scale (EDSS) score was assessed.

Mann–Whitney U-test, Welch's t-test and Pearson's chi-squared test with Yates' continuity correction with Bonferroni–Holm method for multiple comparisons were conducted to determine statistically significant differences between patients with and without PTSD.

### Results

There were no differences in age, sex, disease course and median age, MS duration, EDSS score between the two groups.

The patients with PTSD had significantly lower scores of both physical ( $p=0.03$ ) and mental ( $p<0.001$ ) functioning when assessing the QOL (see Table 1).

At the same time, patients with PTSD are characterized by a higher intensity of fear about progression ( $p=0.03$ ), negative thinking ( $p=0.01$ ), and emotional reactions associated with the disease ( $p=0.03$ ) (see Figure 1).

### Conclusion

MS patients with post-traumatic stress disorder had significantly worse results in both physical and mental functioning, which did not correspond to the severity of the disease on the EDSS scale. At the same time, patients with PTSD are characterized by a higher intensity of fear about progression, negative thinking, and emotional reactions associated with the disease.

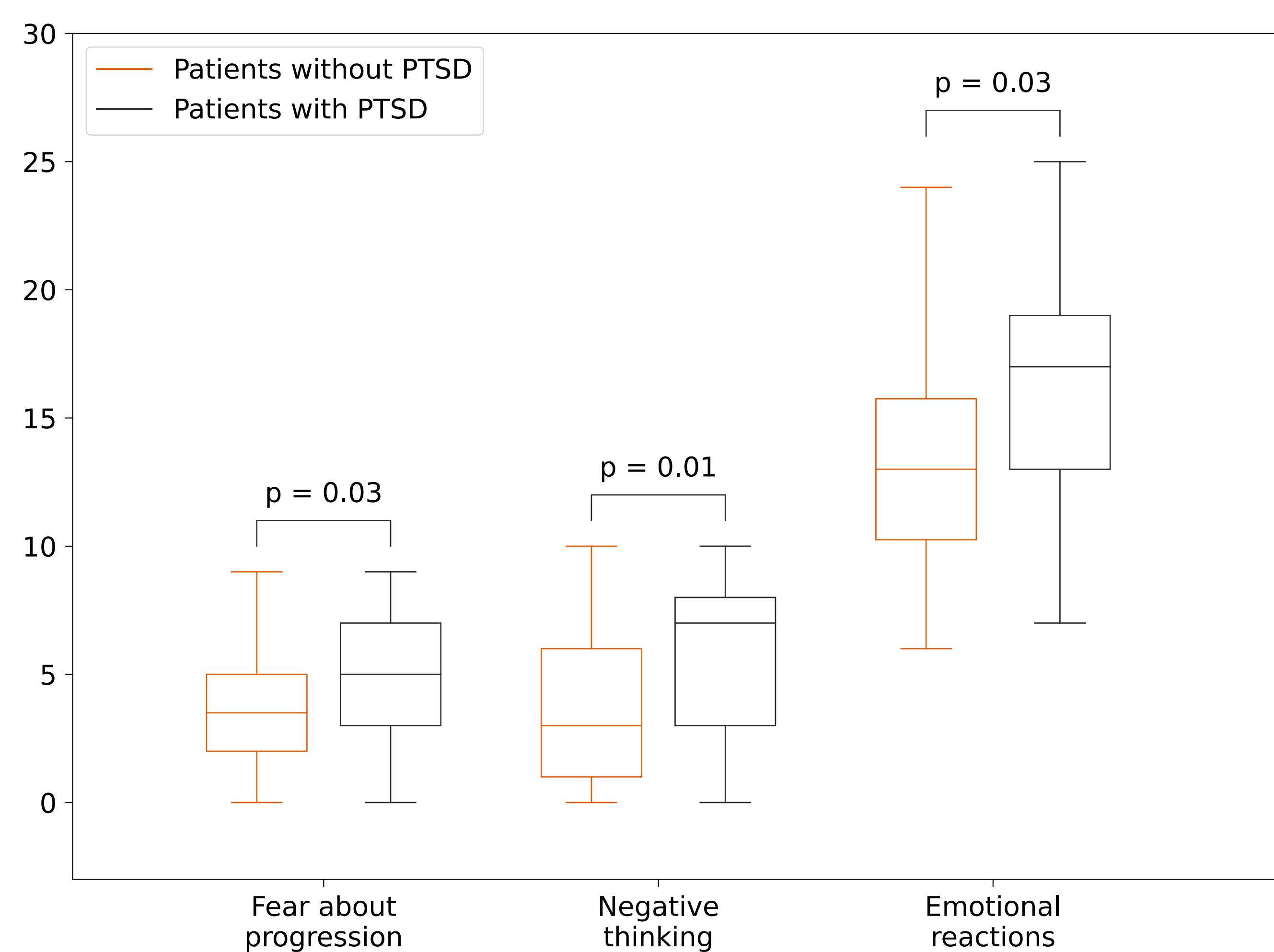
**Table 1. Quality of life in patients with MS according to the PTSD-status**

	Patients without PTSD (n = 66)	Patients with PTSD (n = 61)	p-value
Physical Functioning	87.5 (55, 95)	65 (40, 90)	0.03*
Role-Physical	75 (6.25, 100)	25 (0, 75)	0.003*
Bodily Pain	82 (72, 100)	52 (41, 74)	< 0.001*
General Health	60 (42.75, 71.5)	40 (25, 50)	< 0.001*
Physical health	46.3 (9.4)	41.2 (9.6)	0.006**
Vitality	60 (35, 73.75)	35 (15, 50)	< 0.001*
Social Functioning	87.5 (62.5, 100)	50 (25, 75)	< 0.001*
Role-Emotional	100 (41.7, 100)	33.3 (0, 66.7)	< 0.001*
Mental Health	68 (48, 76)	44 (28, 56)	< 0.001*
Overall Mental Health	45.7 (11.6)	34.2 (10.5)	< 0.001**

\* – Pearson's Chi-squared test with Yates' continuity correction was used;

\*\* – Fischer's Exact test was used; Bonferroni–Holm method for multiple comparisons was conducted.

**Figure 1. The Fear of Progression in patients with MS according to the PTSD-status**



Bonferroni–Holm method for multiple comparisons was conducted.