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One-item self-assessment tool for screening of depression in cardiovascular patients

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One-item self-assessment tool for screening of depression in cardiovascular patients

- **Background.** According to recent European and American cardiovascular disease prevention guidelines, it is highly recommended to assess psychosocial risk factors, including depression as it may result in premature death and a more severe psychopathology. Several validated screening instruments are developed, but there is a need for quick, easy and suitable tool in daily clinician practice.
- **Aim.** To explore single self-assessment Likert-type item for detecting depression symptoms in cardiovascular patients comparing with validated Patient Health Questionnaire (PHQ-9).
- **Methods**
 - A cross - sectional study;
 - Included CVD patients (3 groups) admitted to two major hospitals of Riga;
 - Filled PHQ-9, self-assessment questionnaire (depression, anxiety, satisfaction, happiness, and others);
 - IBM SPSS software v.26 (IBM, USA) and R v.4.0.1 (Vienna, Austria) used for data processing.

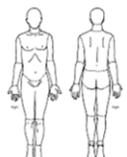
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Nav noguruma	0	1	2	3	4	5	6	7	8	9	10	Vissīpākā iespējamā nogurums
Nav depresijas	0	1	2	3	4	5	6	7	8	9	10	Vissīpākā iespējamā depresija
Nav trauksmes	0	1	2	3	4	5	6	7	8	9	10	Vissīpākā iespējamā trauksme
Nav miega traucējumu	0	1	2	3	4	5	6	7	8	9	10	Vissīpākā iespējamā miega traucējumi
Vislabākā apetīte	0	1	2	3	4	5	6	7	8	9	10	Vissīpākā iespējamā apetīte
Vislabākā pašajūta	0	1	2	3	4	5	6	7	8	9	10	Vissīpākā iespējamā pašajūta
Cita sāpība	0	1	2	3	4	5	6	7	8	9	10	Cita sāpība
Nemot vērā visu kopumā cik laimīgs Jūs jūtaties pēdējā dienā??												
Ļoti nelaimīgs	0	1	2	3	4	5	6	7	8	9	10	Ļoti laimīgs
Lūdz norādīt, cik apmierināts Jūs esat ar savu dzīvi kopumā												
Ļoti neapmierināts	0	1	2	3	4	5	6	7	8	9	10	Ļoti apmierināts

Table 1. Main Characteristics of the Study population

	Total population (N=879)
Variable	
Age (years), median [Q1-Q3]	66.0 [59.0, 73.0]
Sex, N (%)	
Female	368 (41.9%)
Male	511 (58.1%)
Nationality, N (%)	
Latvian	517 (58.8%)
Russian	330 (37.5%)
Education level	
Basic/ Low	65 (7.4%)
Medium/Middle	540 (61.4%)
High	234 (26.6%)
Diagnosis, N (%)	
Acute coronary syndrome	262 (29.8%)
Atrial fibrillation	338 (38.5%)
PCI	279 (31.7%)
Hospital, N (%)	
1	461 (52.4%)
2	418 (47.6%)
Smoking, N (%)	
Current every day	166 (18.9%)
Never smokers	410 (46.6%)

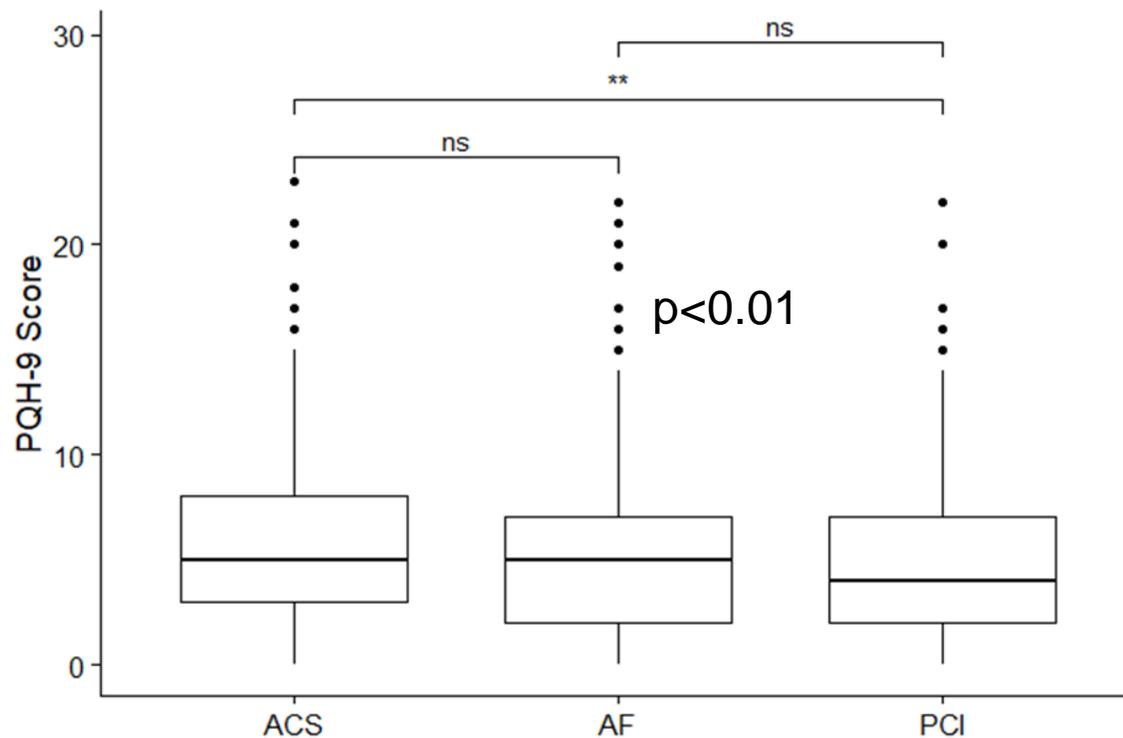
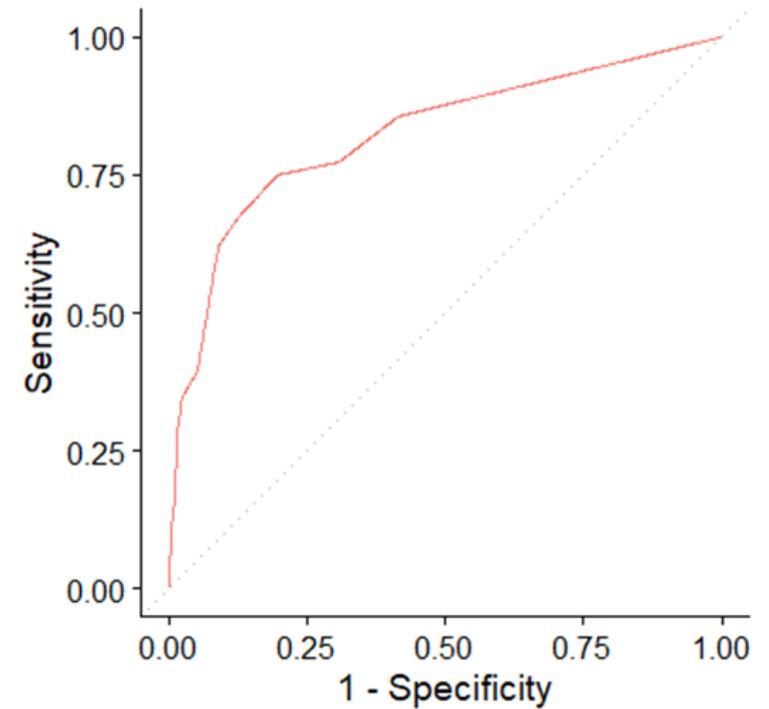
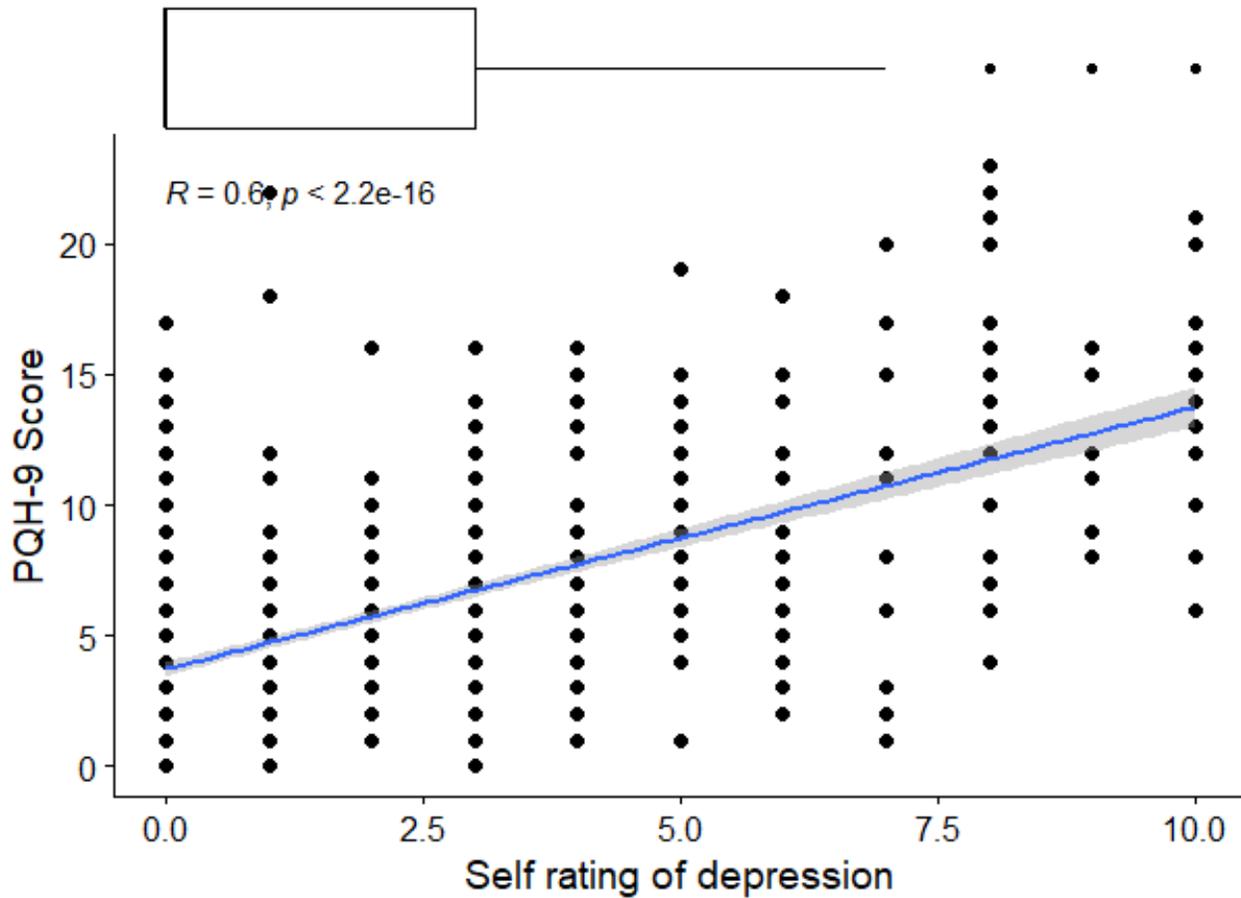


Table 2. Level of Depression

PHQ-9	Overall (N=879)
Depression, N (%)	
No depression	424 (48.2%)
Mild	322 (36.6%)
Moderate	96 (10.9%)
Moderate severe	28 (3.2%)
Severe	9 (1.0%)



ROC curve analysis showed that question for self-assessment of depression was fair predictor for diagnosis of tested depression (PHQ-9) (AUC=0.74 (CI: 0.71–0.78)), the most appropriate cut-off value was 3 (Se=52% (CI: 46–57); Sp=88% (CI: 85–91); NPV=72% (CI: 70–74); PPV=76% (CI: 71–80)), and predictive accuracy was 73% (CI: 70–76).

Conclusions

- Likert-type single-item tool for self-assessment of depression can be used in clinical settings for primary screening of depression.
- Additional work is needed to exclude other modifiers and to improve the predictability of depression.