

Keessen P., den Uijl I., Visser B., van den Berg-Emons H.J.G., Latour C.H.M., Sunamura M., Jorstad H.T., ter Riet G., Scholte op Reimer WJM, Kraaijenhagen R.A., ter Hoeve N., *Fear of movement in patients attending cardiac rehabilitation: a validation study*. J Rehabil Med 2020; 52: jrm00021

The authors have unfortunately discovered that the originally published version of this article contains errors, due to the incorrect merging of two datasets. These errors lead to minor changes of the paper, but need to be corrected.

In this corrigendum, we supply the corrected data in Table I and also updated abstract, results and discussion sections.

These corrections do not alter the study's findings of significance or overall interpretation of the study results. The authors regret for any inconvenience caused.

**Table I.** Population characteristics (changes highlighted)

Characteristics	
Male, n (%)	107 (70.4)
Age, years, mean (SD)	61.5 (11.6)
Referral Diagnosis (%) <sup>a</sup>	
Acute Coronary Syndrome	
STEMI	34 (22.4)
NSTEMI	30 (19.7)
Unstable AP	1 (0.7)
Stable AP	29 (19.1)
Valvular Disease	21 (11.8)
Congestive Heart Failure	12 (7.9)
Acute Aortic Syndrome	5 (2.9)
Ventricular Tachycardia	
With ICD	4 (2.6)
Without ICD	3 (2.0)
Supraventricular Tachycardia	
Atrial Fibrillation	17 (6.6)
Atrial Flutter	2 (1.3)
A specific thoracic pain	3 (2.0)
Intervention <sup>b</sup> , n (%)	
PCI	65 (42.8)
CABG	22 (14.5)
Valve Procedure	20 (13.2)
ICD implantation	8 (5.3)
ECV	4 (2.0)
Ablation	5 (3.2)
Aortic replacement	3 (1.9)
Admission, n (%)	
Acute	79 (52.0)
Elective	73 (48.0)
Procedure, n (%)	
Surgical	38 (25.0)
Interventional	82 (53.9)
Medication only	32 (21.1)
Cardiac disease history and comorbidities, n (%)	
Myocardial infarction	21 (13.8)
Angina pectoris	8 (5.3)
OHCA	1 (0.7)
Hypertension	54 (35.5)
Heart failure	5 (2.9)
Hypercholesterolemia	34 (22.4)
Diabetes	20 (13.2)
Obesity	4 (2.6)
Stroke	2 (1.3)
TIA	5 (3.2)
COPD	11 (7.2)
OSAS	9 (5.9)
Rheumatic disease	8 (5.2)
Musculoskeletal disorder	10 (6.6)
Oncological disease	9 (5.9)
Renal failure	4 (2.6)
CAQ score, median (min-max)	25 (0-48)
HADS Anxiety, median (min-max)	5 (0-19)
HADS Anxiety Categories, n (%)	
No Anxiety disorder	103 (67.7)
Possible Anxiety disorder	17 (11.2)
Likely Anxiety disorder	24 (15.8)
Missing	8 (5.3)

<sup>a</sup>Multiple diagnoses possible.

<sup>b</sup>Multiple interventions possible.

STEMI: ST-elevated myocardial infarction; NSTEMI: non-ST-elevated myocardial infarction; AP: angina pectoris; ICD: internal cardiac defibrillator; PCI: percutaneous coronary intervention CABG: coronary artery bypass grafting; OHCA: out of hospital cardiac arrest; COPD: chronic obstructive pulmonary disease; OSAS: obstructive sleep apnoea syndrome; TIA: temporary ischaemic accident; TSK: Tampa Scale for Kinesiophobia; CAQ: Cardiac Anxiety Questionnaire; HADS: Hospital Anxiety and Depression Questionnaire.

## ABSTRACT

In the Abstract the following sentence is changed:

### *Original abstract sentence*

A strong negative correlation was found between the TSK-NL Heart and the HADS (Anxiety) ( $r_s = -0.51$ ).

### *Corrected abstract sentence*

Strong positive correlations were found between the TSK-NL Heart and de HADS (Anxiety) ( $r_s = 0.60$ ) and between the TSK-NL Heart and the CAQ ( $r_s = 0.61$ ).

## RESULTS

In the Results section the following sentence is changed in the paragraph on *Construct validity, Relationship TSK-NL Heart and external measures*:

### *Original*

A strong negative correlation was found between the TSK-NL Heart (13-items) and HADS-A:  $r_s = -0.51$  (95% CI:  $-0.42-0.60$ ).

### *Corrected*

A strong positive correlation was found between the TSK-NL Heart (13-items) and HADS-A:  $r_s = 0.60$  (95% CI:  $0.48-0.70$ ).

## DISCUSSION

In the Discussion section the following paragraph is changed:

### *Original paragraph*

A strong negative correlation was found between the TSK-NL Heart and the HADS-A. A more detailed look at our data revealed that a substantial proportion of patients (62%) had high levels of general anxiety (HADS-A >11) without being fearful of movement, while general anxiety and kinesiophobia co-existed in only in a small proportion (38%). This explains the negative correlation between the HADS-A and the TSK-NL Heart. Theoretically it is unsurprising that almost all patients with kinesiophobia also have high levels of general anxiety, since anxiety is the primary factor in kinesiophobia (18). The HADS-A is commonly used in to assess the level of anxiety in patients in CR (19), but it appears unsuitable to determine the level of specific anxiety symptoms (19), such as kinesiophobia. Based on the current results, we conclude that the HADS-A and TSK-NL Heart measure

different constructs (anxiety vs kinesiophobia) and recommend including the TSK-NL Heart in the psychological evaluation of patients referred to CR

### *Corrected paragraph*

A strong correlation was found between the TSK-NL heart and the HADS-A. This finding is in line with a previous study of Back et al. that showed that anxiety, measured on the HADS, increased the odds of having kinesiophobia with 19,2% (5). Theoretically this makes sense since anxiety is the primary affective component in phobias (18). In our study, 27% of the patients were classified with an anxiety disorder (possible anxiety disorder: 11,2%, likely anxiety disorder: 15,8%) on the HADS-A, while 45,4% had high kinesiophobic scores measured on the TSK-NL Heart. The HADS-A is commonly used to assess the level of general anxiety in patients in CR (19) however, it does not measure specific anxiety symptoms related to (avoidance of) physical activity (19), such as kinesiophobia.

The correlation between the TSK-NL Heart and the CAQ was also classified as strong.