

The Interoceptive Awareness Questionnaire (IAQ) differentiates between and within patient groups with stress-related bodily complaints versus healthy controls

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Background

- We developed the Interoceptive Awareness Questionnaire (IAQ) to respond to two concerns related to existing assessment tools for body awareness:
 - the lack of a clear distinction between sensations and symptoms
 - the limited number of interoceptive response channels
- IAQ is a 19-item multi-modal self-report measure assessing awareness of interoceptive stimuli. Factor analysis performed on a large healthy sample ($N=1366$) revealed two subscales with good psychometric properties: (F1) awareness of sensations, referring to sensory information from within the body, and (F2) awareness of symptoms, denoting experiences of bodily information in a negative manner

Aim:

- ✓ to explore whether patients who experience stress-related physical complaints in daily life differ in scores on the IAQ compared to healthy controls
- ✓ to investigate whether there are differences between patient groups with regard to the IAQ

Methods

Table 1. Descriptives

	Dataset						Total
	1	2	3	4	5	6	
Healthy controls	0	20 (100)	30 (70)	24 (79)	25 (100)	41 (88)	140
Fibromyalgia/Chronic Fatigue Syndrome (CFS)	23 (70)	18 (100)	28 (96)	0	0	80 (88)	149
Overstrain	34 (68)	0	30 (67)	0	0	0	64
Panic disorder	27 (59)	0	29 (59)	0	0	0	56
Burn-out	0	0	30 (70)	0	0	0	30
Irritable Bowel Syndrome (IBS)	0	14 (100)	0	26 (81)	0	0	40
Medically Unexplained Dyspnea (MUD)	0	0	0	0	29 (100)	0	29
Total	84	52	147	50	54	121	508

IAQ data were compared in 6 datasets. A series of one-way ANOVAs were conducted to determine whether scores on IAQ Sensations (F1) and IAQ Symptoms (F2) were different for patients and controls, and whether they differed between patient groups. For exploratory reasons, Pearson's correlations were calculated between IAQ and other questionnaires in the largest patient group (dataset 6).

Results

Table 2. F1 IAQ Sensations: means, SD and group differences as determined by one-way ANOVAs

	dataset					
	1	2	3	4	5	6
Healthy controls	. 29,94 (6,32) ^a	29,5 (6,53) ^a	30,41 (5,96) ^a	30,4 (7,60) ^a	32,02 (4,80) ^a	
FM/CFS	30,57 (5,91) ^a	34,94 (5,42) ^b	35,19 (7,67) ^b	.	34,57 (5,59) ^b	
Overstrain	29,94 (8,33) ^a	.	31,7 (6,05) ^b	.	.	
Panic disorder	31,75 (4,57) ^a	.	33,55 (5,69) ^b	.	.	
Burn-out	.	.	31,4 (7,49) ^b	.	.	
IBS	.	30,64 (5,93) ^b	.	30,66 (5,13) ^a	.	
MUD	.	.	.	34,52 (6,63) ^b	.	
Main test						
df1	2	2	4	1	1	1
df2	83	49	142	48	52	119
F-test	0,56	3,79	3,04	0,02	4,52	6,13
P-value	0,5735	0,0295	0,0193	0,876	0,0383	0,0147

Table 3. F1 IAQ Symptoms: means, SD and group differences as determined by one-way ANOVAs

	dataset					
	1	2	3	4	5	6
Healthy controls	. 26,1 (5,12) ^a	26,47 (5,90) ^a	26,00 (4,97) ^a	22,4 (6,12) ^a	26,44 (4,00) ^a	
FM/CFS	28,39 (5,24) ^a	27,83 (5,22) ^a	26,07 (7,64) ^a	.	27,68 (5,39) ^a	
Overstrain	28,97 (5,94) ^a	.	29,23 (5,85) ^{ab}	.	.	
Panic disorder	34,48 (3,53) ^b	.	32,07 (4,99) ^b	.	.	
Burn-out	.	.	28,47 (6,30) ^{ab}	.	.	
IBS	.	27,15 (6,09) ^a	.	26,35 (6,27) ^a	.	
MUD	.	.	.	30,79 (7,49) ^b	.	
Main test						
df1	2	2	4	1	1	1
df2	81	49	142	48	52	119
F-test	11,8	0,49	4,41	0,05	19,92	1,68
P-value	<.0001	0,6162	0,0022	0,8305	<.0001	0,1976

Table 4. Significant differences between patient groups for F2 IAQ Symptoms

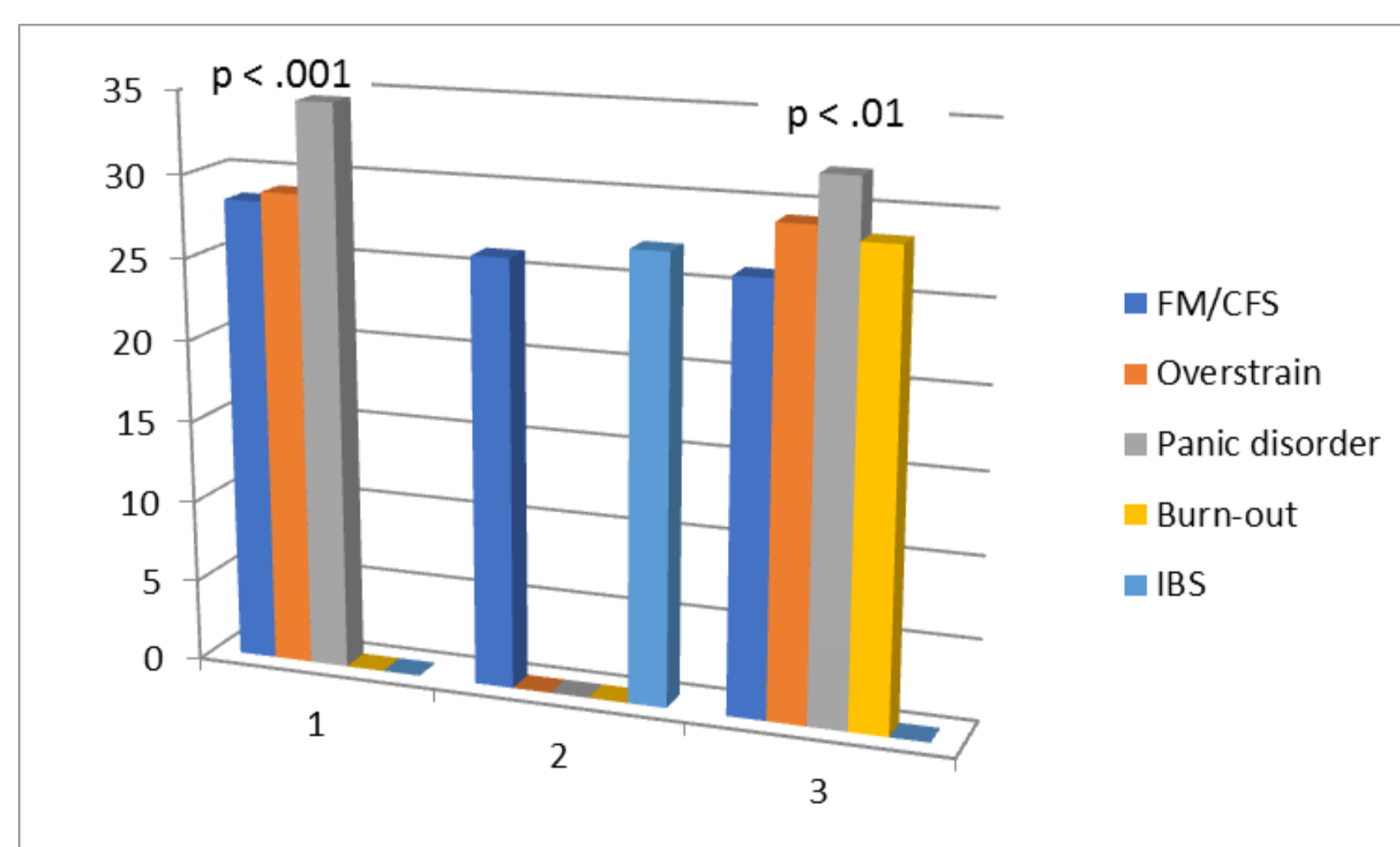


Table 5. Correlations of the IAQ with other questionnaires in patients of dataset 6 ($N = 80$)

	NA	PA	SSS	MCS	PCS	Health anxiety	Illness behavior	DIF	DDF	EOT	Childhood trauma	F1
F1	0,00	0,06	0,23	-0,08	-0,1	0,18	0,01	-0,01	-0,04	0,04		-0,09
F2	0,29	-0,36	0,17	-0,14	-0,06	0,4	0,12	0,43	0,33	0,28		-0,17

P-values are corrected for multiple comparisons with the False Discovery Rate (FDR) method. NA = Negative Affectivity. PA = Positive Affectivity. SSS = Somatic Symptom Severity scale of the PHQ-15. MCS / PCS = mental / physical component summary scores of the RAND-36. DIF = Difficulty identifying feelings. DDF = Difficulty describing feelings. EOT = Externally-oriented thinking of the Toronto Alexithymia Scale (TAS-20)

Conclusions

Overall, patients scored higher on IAQ than healthy controls, more specifically on the Sensations subscale (F1). Within patient groups who report stress-related physical complaints in daily life, panic patients had higher scores on the Symptom subscale (F2) compared with other patient groups.

Whereas awareness of sensations differentiates between patients and healthy controls, awareness of symptoms differs between patient groups. The results may help to further disentangle adaptive and maladaptive aspects of interoceptive awareness.