Traumatic experiences and interoceptive awareness: comparing medically unexplained pain and fatigue to panic disorder and emotional exhaustion

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Background and aims

A common feature that characterizes patients with medically unexplained pain and fatigue, panic disorder, and emotional exhaustion is that they often report high levels of distress, disability and psychiatric comorbidity. Although acute stress can be regarded as adaptive, **chronic stress** can be considered **maladaptive**, and may cause bodily damage (Bogaerts et al., 2016). Previous research has shown that both acute and chronic stress may precede somatic complaints (e.g., van Gils et al. 2014; McEwen, 2000). Furthermore, these disorders have shown to be associated with enhanced awareness to one's own internal state, that is, **interoceptive awareness**, and enhanced interoceptive sensitivity (Ceunen et al., 2013), which in turn may be associated with several underlying traits and vulnerability factors such as childhood trauma.

As such, it may be argued that emotional exhaustion and medically unexplained syndromes such as Fibromyalgia and CFS exist on a **continuum**, rather than being categorically distinct disorders (Caspi et al., 2014). As research on this topic is rather scarce, the aim of the study was to explore differences and similarities between these groups in symptom reporting and its relation to traumatic experiences.

The **aim** of the study is twofold:

1) Exploring differences between panic disorder (PD), emotional exhaustion (EE) and Fibromyalgia/CFS (Medically Unexplained pain and fatigue; MUS) in **recognizing bodily distress**
2) Exploring the **role of trauma** (aversive experiences during childhood) in the relation between physical complaints and psychological distress

Methods

Participants. 118 outpatients aged between 18 and 65 years old seeking cognitive-behavioral therapy (CBT) in Tumi Therapeutics (Heusden-Zolder, Belgium), a multidisciplinary expertise center specialized in the prevention, diagnostics and treatment of stress-related disorders, functional syndromes and psychological disorders with a somatic component were invited to complete questionnaires and filling out a self-observation tool. Of these patients, **93 patients** agreed to participate.

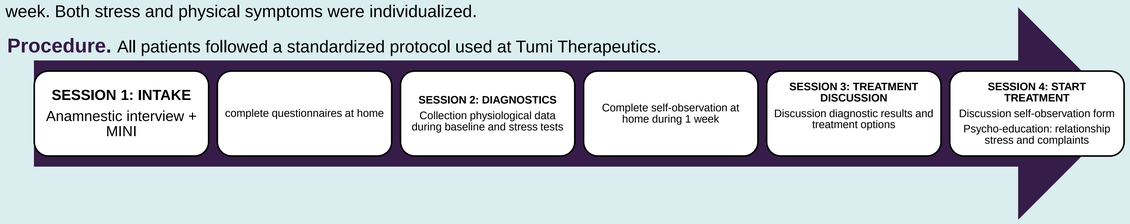
Patients were divided into three groups, dependent on their diagnoses, based on the clinical interview and the MINI.

		Panic disorder (PD)	Emotional Exhaustion (EE)	Fibromyalgia/CFS (MUS)	F
Sample size	*N*	31	36	26	
Gender	*Female*	18	24	19	(0.71;2)
	Male	13	12	7	
Age	*M(SD)*	33.06(9.06)	39.5(13.43)	41.19(13.80)	(1.46;2)
SES	*Primary School*	0	2	0	(0.37;2)
	Secondary School	5	7	8	
	Higher Education (college/University)	17	23	16	

Measures. Patients completed several **questionnaires** assessing alexithymia (TAS-20), positive and negative affect (PANAS), maladaptive thoughts about possible consequences of anxiety/panic (ACQ), fear of anxiety-related symptoms (ASI), fear of physical sensations experienced during periods of anxiety/panic (BSQ), interoceptive awareness (IAQ), traumatic experiences (VBE), and the SCL-90.

Additionally, patients completed a **self-observation form**: participants are requested to log which activity they were doing and rate how much psychological stress and physical complaints they were experiencing on a 10-point Likert Scale (0 = none; 10 = extreme) during the past hour for 1 week. Both stress and physical symptoms were individualized.

Procedure. All patients followed a standardized protocol used at Tumi Therapeutics.



Results

Interoceptive awareness (IAQ)

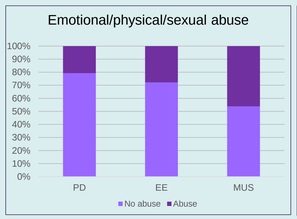
The IAQ comprises of two scales: awareness of bodily sensations and attention to unpleasant bodily sensations.

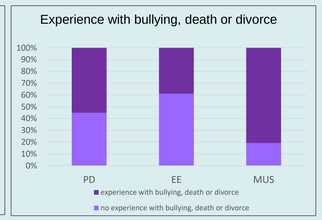
	PD		EE		MUS	
Variable	N	M(SD)	N	M(SD)	N	M(SD)
Awareness of bodily sensations	27	31.64 (4.58)	33	29.79(8.35)	23	30.57(5.91)
Attention to unpleasant bodily sensations***	27	34.52(3.70)	33	29 (6.13)	23	28.39(5.24)

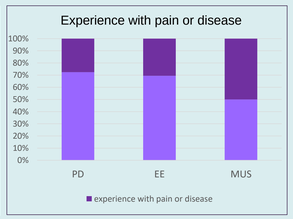
- No significant group differences for awareness of bodily sensations: $\chi^2(2) = .03$; $p = .98$
- Group differences for attention to unpleasant bodily sensations: $\chi^2(2) = 15.41$; $p < .001$
  - Patients with panic disorder are more attentive to unpleasant bodily sensations than patients suffering from emotional exhaustion or medically unexplained pain and/or fatigue

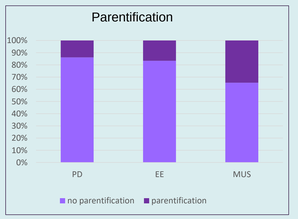
Traumatic Experiences (VBE)

- There is a significant difference between the groups regarding the **total number** of traumatic experiences encountered, $\chi^2(2) = 10{:}43$, $p < .01$
  - PD(M = 3.15; SD = 3,70) < EE (M = 3.25; SD = 3.35) < MUS (M = 6.84; SD = 4.88)









Link between physical complaints and psycholocial distress

	variable	1	2	3	4	5	6	7	8
1	link physical complaints - emotional distress								
2	alexithymia (TAS)	-.14							
	traumatic experiences (VBE)								
3	*total*	-.30***	.13						
4	*bullying, divorce, death*	-.10	.11	.76****					
5	*abuse*	-.22*	.18*	.64****	.37****				
6	*other*	-.29***	.12	.95****	.80****	.42****			
7	anxiety (SCL)	.22**	.18*	.20*	.12	.10	.21*		
8	Somatic complaints (SCL)	-.12	.18*	.25**	.15	.26**	.22**	.58****	
	Interoceptive awareness (IAQ)								
9	attention to unpleasant bodily sensations	.19*	-.05	-.013	.15	-.05	.00	.31***	.07

- Anxiety/anxiety sensitivity positively associated with being able to see the link between emotional distress and physical complaints
- Traumatic experiences negatively associated with being able to see the link between emotional distress and physical complaints

Discussion

- Differences between patient groups arise in trait anxiety and anxiety sensitivity as well as traumatic experiences
- Patients experiencing medically unexplained pain and/or fatigue are less anxious and often have experienced more early childhood adversity, which in turn relates to a worse recognition of distress in the body than in panic patients or patients experiencing emotional exhaustion
- These findings may have implications for clinical practice: need for tailormade treatment strategies
- More systematic research is needed to investigate the role of trauma, interoceptive awareness and its impact on the relation between physical complaints and psychological distress

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