



The relationship between adrenal exhaustion and syndrome burnout at workplace



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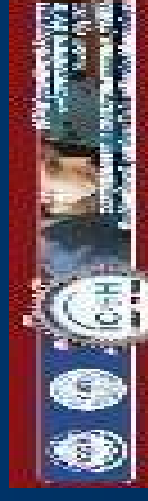
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INTRODUCTION/ OBJECTIVE/

- To assess the association of burnout syndrome with adrenal exhaustion specific symptoms and signs among 116 patients who were exposed to various stressors, mobbing and act of violence at workplace and ask health care during 2005 to 2008 in Department of Occupational Pathology and Toxicology Tuzla.

METHODS

- data used as the initial phase study material:
- data of 86 employees who were exposed to various stressors at Workplace (often associated with mobbing) during > 1 years,
 - and data of 30 employees who were exposed to acute traumatic crisis event (often act of violence; pre and post control observation 6 months later).

RESULTS

- Among 116 participants, there were 84 (72.4%) women.
- The median age of participants was 40 years (range: 24-55).

Individual characteristics of respondents	No of respondents (%)		P*
	Exposed to crisis events No=30	Long-term exposed to distress No=86	
Gender:			
men	10 (33.3)	22 (25.6)	
women	20 (66.7)	64 (74.4)	0.448
Job title:			
secretary	7 (23.3)	26 (30.2)	
teaching staff	9 (30.0)	21 (24.4)	
manager	1 (3.3)	3 (3.5)	
health workers	5 (16.7)	28 (32.6)	
others	8 (26.7)	8 (9.3)	0.111
Age			
30-40	12 (39.9)	52 (60.4)	
41-50	7 (23.4)	22 (25.6)	
>51	11 (36.7)	12 (14.0)	0.105

Teaching staff and secretaries together with health care workers were vulnerable groups for stress .



RESULTS

Patients who are exposed to chronic stress suffered all symptoms associated with adrenal exhaustion (range from 45% to 95%)

Symptoms and signs of Adrenal Exhaustion/	No of respondents (%)			P*
	Exist	Not exist	Not sure exist	
Have you recently difficulties of concentrating or decision making.	82 (95.3)	1 (1.1)	3 (3.6)	0.001
Have you felt depressed	67(77.9)	6 (7.2)	13 (15.1)	0.001
Could not you learning new or could not do your tasks	54 (62.8)	19(22.1)	13 (15.1)	0.001
Have you recently negative attitude and poor perception	66 (76.6)	6 (7.2)	14 (16.2)	0.001
Have you recently exhaustion, fatigued or apathy	82 (95.3)	1 (1.1)	3 (3.6)	0.001
Reduced or loss self- esteem	67(77.9)	6 (7.2)	13 (15.1)	0.001
Have you recently sleep disorders	67 (77.9)	6 (7.2)	13 (15.1)	0.001
Have you been feeling anxiety and irritations	82 (95.3)	1 (1.1)	3 (3.6)	0.001
Have you been getting panicky for no good reason	79 (92.0)	1 (1.1)	6 (6.9)	0.001
Have you suppression of sexual activity	43 (50.0)	12 (14)	31 (36)	0.004
Do you making mistake at workplace	50 (58.1)	19(22.1)	17 (19.7)	0.010
Have you recently reduced or loss of concentration	67 (77.9)	6 (7.2)	13 (15.1)	0.001
Have you felt constantly under strain	83 (95.3)	1 (1.1)	2 (3.6)	0.001
Have you felt you are ill	69 (80.2)	9 (10.5)	8 (9.3)	0.001

Eighty- six participants were chronic exposed to stressors at workplace more than 1 year and they were suffered Syndrome burnout too.

Thirty participants suffered acute crisis situation (catastrophic event) as occupational accident at workplace (10 of them were men.

Dimension of MBI	No. of respondents (%)			p*
	Exposed to chronic stress (No= 86)	Exposed to crisis situation (No=30)	Time after crisis situation (No=30)	
<i>Personal accomplishment (PA):</i>				
High level	14 (16.3)	26 (86.7)	11 (36.7)	0.002
Moderate level	27 (31.4)	4 (13.3)	14 (46.7)	0.001
Low level	45 (52.3)	0 (0)	5 (16.7)	0.001
<i>Emotional exhaustion (EE):</i>				
High level	85 (98.8)	3(10.0)	30 (100)	0.001
Moderate level	1 (1.2)	10 (33.3)	0 (0)	0.002
Low level	0 (0)	17 (56.7)	0 (0)	0.001
Depersonalization (DP):				
High level	81 (94.2)	13 (43.3)	23(76.7)	0.001
Moderate level	4(4.6)	17(47.0)	7 (23.3)	0.004
Low level	1(1.2)	0 (0)	0 (0)	0.272

The assessments of the level of three dimensions of burnout (MBI) between groups; the assessment in group who suffered crisis situation in two intervals (in nearly time of event and later 3 -6 months

RESULTS

- There were significantly worsened level scores of WAI among group of patients chronic exposed to stressors than patients in group exposed to acute stress event at workplace (P= 0.040).

- **Lack of personal accomplishment** was found particularly among 52.3% participants who were long term exposed to stress.

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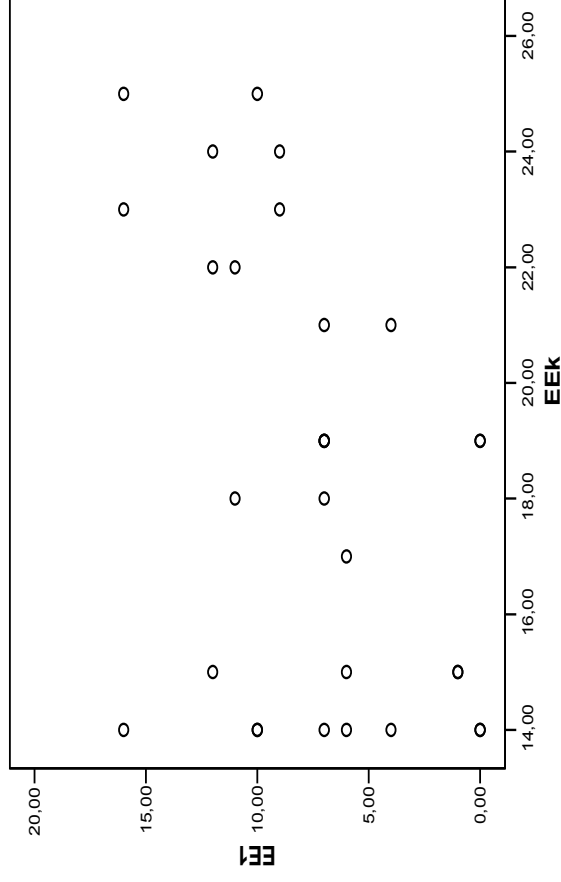
Two Axes Theory of Hormone	Exposure to acute catastrophic stress event: (fight flight): Adrenalin	Passive Stress reaction: Adrenal fatigue (Cortizol)
Memory	Less concentration, difficulties of decision making	Cognitive fatigue: difficulties of concentrating or decision making ("tunnel vision", making of mistakes, risk taking and accidents
Cognitive Association	Short term memory difficulties	Hampers learning or/and learning inhibits stress
Mood	Positive attitudes, good perception	Negative attitudes, poor perception, memory lapses
Drive	Anxiousness, Aggressiveness	Irritations, depression, sleep disorders, production errors and near-accidents
Libido	Euphoric, Active feeling, Dynamics	Exhaust, Fatigue, Apathy
Immune-System	Low libido	Suppresses sexual activity
Metabolism	Increase number of NK-cells	Decrease number of NK-cells
Digestion	X -metabolic Syndrome Increase level of cholesterol, pulse, High blood pressure	Increase blood sugar
Self-esteem	Indigestion, Constipation	Ill- health
Concentration	High level	Reduced, loss

RESULTS

- According to the figure we found significantly individual changes over the 6 months interval among patients who were exposed to acute catastrophic stress reaction.

$\rho = -0.396$
 $P = 0.030$

Emotional exhaustion



The relationship between **emotional exhaustion points (MBI)** in the time and 6 months later (retest measuring) in group who exposed to acute crisis situation (often violence)



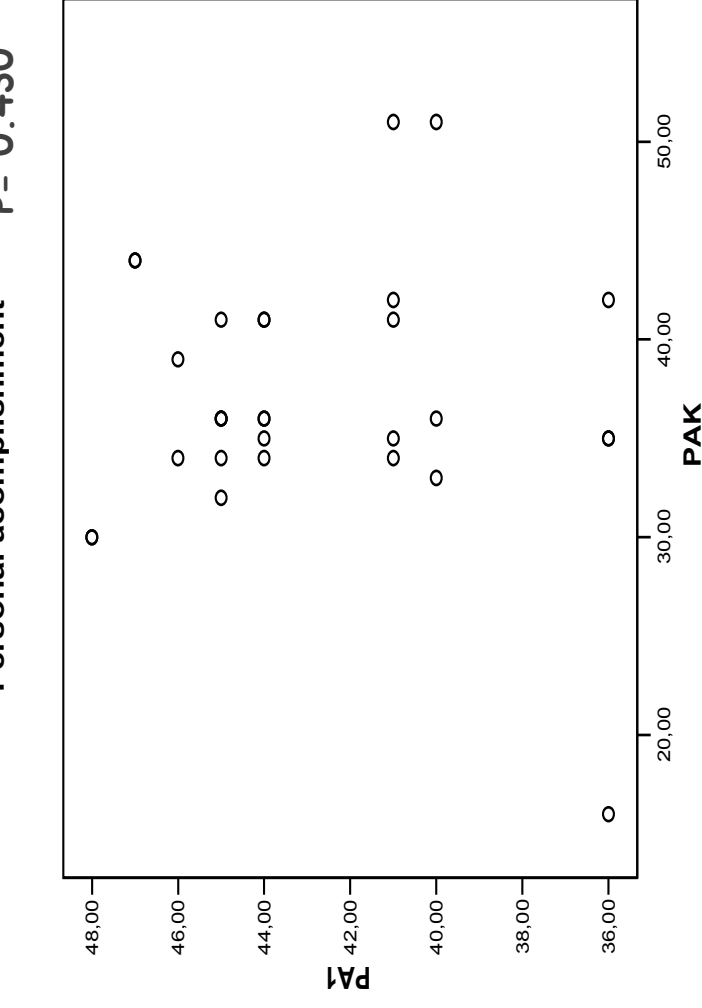
RESULTS

The perception of personal accomplishment long time remains on high level during exposure to stress at workplace.

In this way, results found in second step that predictors for decrease of personal accomplishment was only age ($Rsq= 0.053$, $\beta_0=25.6$; $\beta_1=0.16$; $P= 0.020$; data not presented).

$\rho= -0.150$
 $P= 0.430$

Personal accomplishment



The relationship between personal accomplishment points in the time and 6 months later (retest measuring) in group who exposed to crisis situation



CONCLUSION

- On our opinion there are no differences between following synonyms: adrenal exhaustion, emotional and somatic exhaustion, fatigue, adrenal fatigue or burnout (burn- out) syndrome in cases of long- term exposure to stress at workplace or exposure to crisis situation- high level of stress at workplace.
- Adrenal exhaustion or effects of exposure to repeated, persistent stress, burnout syndrome or adrenal fatigue.
- It is important to know that acute stress at workplace often presents acute incidences/ injures at workplace (violence act of sexual harassment or physical attack).
- We are now sure that we have answer to questions is adrenal exhaustion synonym with emotional exhaustion.
- **Adrenal Exhaustion is a quiet health epidemic which is becoming more and more common.**