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Presentation of PhD Thesis

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RECIPROCAL BURNOUT MODEL

INTERCONNECTEDNESS OF INTERPERSONAL AND INTRAPERSONAL FACTORS OF BURNOUT SYNDROM

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ABSTRACT

The aim of our study was to ascertain (examine) what personality characteristics are associated with burnout, their impact on the emergence of burnout, and how this can lead to dissatisfaction of basic needs, exhaustion and burnout.

In the quantitative survey we included a sample of 1480 and 615 persons, participants of seminars and workshops in companies and visitors to the website www.burnout.si. Qualitative research was conducted among 147 burnout victims who were seeking psychotherapeutic support at the Institute for The Development of Human Resources in Ljubljana, and 59 participants in seminars and workshops, which showed no signs of burnout and were classified themselves as engaged in work.

We investigated the relationship between personality dimensions, values, satisfaction with life, satisfaction of basic needs and performance based self-esteem and burnout and what kind of object relations is related to the performance based self-esteem.

In quantitative survey, we measured a higher level of burnout in less emotional stabile, more introvert and less conscientious participants. These dimensions together explained 10 percent of the variance of burnout. More burned out were also those with lower values, particularly for the values that relate to the enjoyment of life (sense, hedonic, dionisic), as well as the achievements (potential, apolonic). However, the values explain only a small proportion (3 percent) variability of burnout. The performance based self esteem is intrapersonal factor the highest associated with the level of burnout, in particular, with a factor of workaholism. It explains 57.3 percent of the variability of burnout. The performance based self-esteem is also medium-strong associated with the postponement of fulfiilment of their needs. In those who are more postponing the fulfiilment of their own needs, the needs are less satisfied and they are more burned out.

Subjective well-being is a medium-strong negative associated with the degree of burnout. We can not, however, argue that the subjective well-being and burnout are sharing the same dimension, since different intrapersonal factors are related with them. **More satisfied with life** are those who have **better fulfilled basic needs, who are emotionally stable, more conscientious and have higher sensory values** (a total of 47.4 percent explained variance). **More burned out** are those in which the **self is more dependent on external validation, those with less satisfied basic needs and those who consider their status more important** than the fulfillment of themselves (64.5 percent of total explained variance).

After the adrenal burnout the signs of increased cortisol reduce and the signs of low cortisol rise. Also, after the adrenal burnout may change some values and personality characteristics. The importance of productivity is reduced, but the self value and the importance of fulfilling of basic needs is higher. The characteristics that are most strongly associated with the burnout, is therefore reduced by adrenal burnout.

Since the performance based self-esteem is personality characteristic that is most strongly associated with burnout, we compared the testees whose self-esteem is more dependent on confirmation (burned-out) and those where it is more independent (work engaged) in qualitative survey. We found out that they are describing the different types of object relations in which they grew up. **Most burned-out has described the various forms of conditional love – the relationship in which children are primarily meet the needs of parents, while the majority engaged report about unconditional love, which is supported by their separation and individuation proces.**

INTRODUCTION

Though the concept of burnout occurred in clinical practice (Freudenberger, 1974), later researchers have only rarely directed toward intrapersonal psychodynamic factors of burnout, mayorty was devoting attention to the interpersonal aspects.

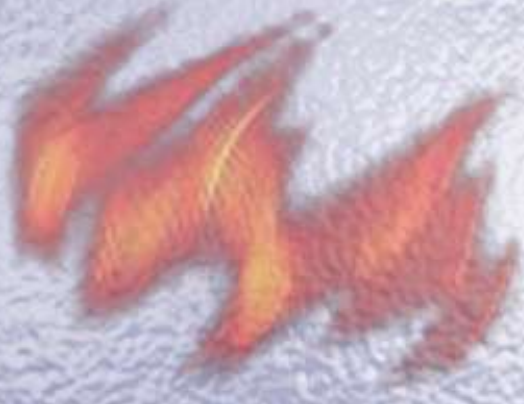
The most widely-established definition of burnout is Christine Maslach's (1976):

Burnout is psychological syndrome, which is reflected as emotional exhaustion, depersonalization and reduced performance as a result of chronic interpersonal stressors at work with people.

Iterpersonal_factors

Most researchers that prioritize interpersonal factors, considers that burnout is the result of inadequate psychological circumstances in the workplace and that it affects people without psychopathological features, but have less effective coping strategies.

Reviews of most cross-sectional studies show a strong positive correlation between burnout and qualitative and quantitative work overload and time pressures, moderate positive correlation with uncertainty or role conflict, and lack of feedback and weak positive correlation with the lack of social support from colleagues and superiors and lack of impact on working conditions, such as communication channels, autonomy, demanding clients, influencing on deciding.



Studies have also shown that the subjective experience of psychological work conditions is more important for burnout than a real burden, that a feeling of woek overload is more important than the real number of working hours (Schaufeli & Buunk, 2003). So it is reasonable to pose the question which personal characteristics influence to a different perception of the situation.

Intrapersonal_factors

The second group of researchers is seeking for the causes of burnout in the intrapersonal factors.

Personality characteristics may explain why people in the same working environment, working with the same superior, with the same qualifications and experience often respond differently to the same burden / stresor.

Even Freudenberger (1974) considered that the narcissistic omnipotence may be the drive, which leads to depletion of the individuals.

Among the personality traits neuroticism and introvercy are most strongly correlated with burnout, but no less strong is the link between burnout and hardiness or ego resiliency. Burnout is negatively associated with self-image, self-esteem, self-evaluation and self-assessment.

Psychodynamic oriented researchers have confirmed the link between burnout and narcistic need to maintain the ominipotent eksternal self-imagine. They also pointed out the masochistic personality traits of burnout victims.

New insights in recent years

Over the past ten years, the research of factors, linked with burnout is extended to new areas and new concepts, indicating the complexity of this syndrome.

Hallsten et al (2005) have indicated a strong correlation between burnout abd labile performance-based self-esteem which explain the difference between burnout and wornout.

Schaufelli et al (2008) in recent years intensively studied difference between workaholism and work engagement and their relationship with burnout.

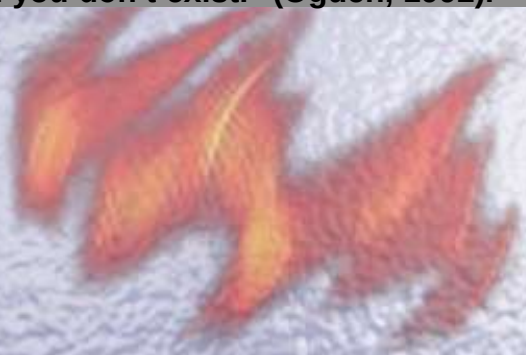
More researchers also linked burnout with psychoticism as well as other psychological health variables (impulsivity, anxiety and depression).

Neuropsychological research has led to the conclusion that the functional changes resulting from the combustion of the neuroendocrine system. which is seen as a disorder of the HHA axis (hypothalamic pituitary adrenal axis).

Performance-based self-esteem

Research shows that at the core of burnout victim identity is probably performance-based self-esteem (Hallsten, Josephson & Torgén, 2005), which is labile, subject of permanent self-evaluation through recent achievements and comparison with others in the reference environment (and also with those outside).

Often is the result of upbringing by subject to conditional love (Assor, Roth & decimal, 2004) and may lead to neglect (disposal) of their own needs, as meeting the other's needs bring more external recognition. The ppbringing by subject to conditional love occurs when the relationship between children and parents (object relation) support primarily to meet the expectations of parents. Expectations of their parents are actually their projective identifications, which give to the child a message: "I can only see in you what I project onto you. If I do not see this, then you don't exist." (Ogden, 1992).



The need to maintain a fragile performance-based self-esteem is the main cause of burnout (Hallsten, Josephson & Torgén, 2005) .

Therefore, two distinct types of exhaustion: WORNOUT, which is due to external demands and burdens, and BURNOUT , which occurs as a result of the long term effort to maintain high performance-based self-esteem .

Workaholism and work engagement

Workaholism is extremely hard work due to strong, uncontrolled internal coupulsion. Unlike engaged in workaholic workers typical compulsivity is observed. **Work engagement** is positive, fulfilling focus on work. Typical is energetic, dedication and a strong interest in the AMD filling of absorbtion (Schaufeli, Salanova & González-Roma, 2002).

We think that at work engaged the practicing is autonomous, but the practicing of workaholics is preudoauthonomous. Workaholism, in our opinion is **behavioral reflection of internal constraints**, which is shown on the cognitive and emotional leve as performance based self-esteem.

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In our view, **workaholism** is behavioral characteristics which can distinguish between the **wornout and burnout victims**, since it is the result of internal constraints (performance based self-esteem) and not from external pressures. Internal drive, which raises workaholism, is the the need to maintain high performance based self-esteem and aims to relieve anxiety and feelings of guilt. Therefore in our study, we searched for linkage between workaholism, burnout and performance based self-esteem.

In contrast the **work engagement** is derived from interest, orientation to the goal, fom **autonomous motivation.**

Neuroendocrine changes

Burning out and buruout is monitored by changes in cortisol levels. Prolonged pressure in life and working environment, and internal conflicts increasing cortisol levels. Chronically elevated cortisol as feedback stimulate neurotransmitters and hypothalamus to **increase activity of hipotalamo-pituitary-adrenal axis (first and second degree of burning out).**

Final result of chronic HHA axis hyperactivity is reduced responsiveness of postsynaptic monoamine neurotransmitter receptors. This means that it in the hypothalamus detecting signals from the feedback of cortisol is blocked (a negative feedback loop). The result is **decreased secretion of cortisol (adrenal burnout, secondary cortisol insufficiency**), which can be seen as a **decreased morning basic cortisol, a reduced total daily cortisol basic curve or a reduced cortisol secretion in stress situations.**

Causes of burnout

Factors for the emergence of burnout were classified into three groups:

1. **socioeconomic circumstances,**
2. **work and life circumstances and**
3. **personality characteristics.**

First and second are interpersonal, third factors are intrapersonal. We are confident that lead to burnout the combined effects of all three groups of factors, which are closely interdependent.

Socio-economic circumstances create social-production relations, which form the socializing mechanisms, namely the way of education, value systems, etc.. In the postmodern period, the three key dejavmiki shows: (1) changes in forms and employment status, (2) individuation, that affects the formation identity by changing values and (3) inability to influence the wider social environment.

Education influence over which types of personality organizations will be prevailing. Personality structure of the people around us, along with social and production relations, shape the psychological circumstances in which we live and work, and influence how we respond to such circumstances.

Similarly, we ourselves (with our personality structure) every moment co-form the psychological circumstances of the life and work (and social and production relationships) and respond to them in accordance with our personality characteristics.

Reciprocal burnout model includes all these factors and their interactions.

Reciprocity of exchange with the environment is seen as investment of energy into relations (extraction) and loading resources through fulfilling of needs. If in the long-term we are investing more in (working and living) relations then we manage through them meet basic needs, then this unreciprocity can lead to burnout.

Such investments usually tend to over-come if the expectations and demands of the environment coincidence with internal constraints.

Burning-out as a process, burnout as a condition

Data show, that according to the symptoms, can be distinguished "normal" tiredness and fatigue from the burning-out, and the **burning-out process to adrenal burnout (condition)** itself can be divided into **four stages**. We take into consideration both physical and psychological reactions to the exhaustion (psychological and neuroendocrine responses) and behavioral signs. **For the first two stages** (exhaustion and capture), we use the term **burning-out**, a process that leads to a third and fouth stage, condition, for which we use the term **adrenal burnout syndrome (ABS), adrenal burnout.**

Burning-out stages

1st burning-out stage - EXHAUSTION:

the person does not recognize the **feeling of chronic fatigue** and constantly exceeds it with the activation of new personal resources. This state appears as highly productivity oriented performance (**workaholism**). Characteristic is the feeling of chronic fatigue, reduced resilliency (flexibility, performance, hardiness) and the denial of ill-being.

2nd burning-out stage – CAPTURE:

The person suffers from **feeling being caught** in the way od life, work or relationships. This condition is monitored by overexhaustion, to which a candidate for burnout often responds actively, by **changing working or living environment**, but in a new environment transfer its old **inner compulsions** and thus causes further burning-out. Characteristic is the feeling of being trapped, but also feelings of guilt and labile self-esteem. In the first and second stage neuroendocrine stress response is dominated, the signs of an increased of cortisol are present.

3rd and 4th burnout stage – ADRENAL BURNOUT:

In this stage is included the condition **just before the adrenal collapse (3rd stage)**, when all symptoms at the peak and **adrenal collapse (4th stage)**, . Adrenal burnout means almost complete loss of power with great psychophysical and neurological breakdown (**HHA axis dysfunction, decreased cortisol**) are very often appear as a mental disorder, usually in the form of major depressive and / or severe anxiety symptoms, as well as somatic signs.

ABS QUESTIONNAIRE DEVELOPMENT

For the purposes of our research, we developed a new questionnaire.

We decided to develop a new questionnaire of adrenal burnout syndrome (ABS questionnaire) because the other questionnaires does not include new knowledge about burnout. Even those who do not focus only on the working environment does not (1) distinguish between burning-out and adrenal burnout, and do not include (2) intrapersonal factors, such as performance based self-esteem, workaholism, and inner (introjective) motivation, which affect the orientation to meet our own needs, and also not include findings on the (3) role of cortisol in this disorder.

Reliability of the ABS questionnaire by the method of Cronbach, was α = 0.98.

ABS questionnaire consists of four scales, depending on the type of symptoms:

ABS - F (physical symptoms - 45 items)
ABS - E (emotional symptoms - 94 items)
ABS - B (behavioral symptoms - 61 items) and the
ABS - C (cognitive symptoms - 46 items).

Factor structure of the ABS questionnaire

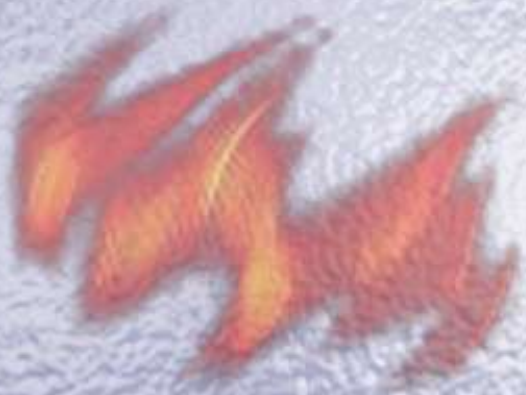
Eksploratory factor analysis (method of least squares) with Promax rotation eliminated four factors:

1. **The loss of intrinsic motivation - (loss of motivation, apathy, helplessness, frustration ....).**
2. **Workaholism - (work as a primary value, canceling rest, reducing demand)**
3. **Cognitive exhaustion - (impaired concentration, memory and decision-making ...)**
4. **Physical exhaustion – (fatigue after rest, pain, sudden drop of energy ...)**

RESEARCH PROBLEM

Our goal was to explore relationship between interpersonal and intrapersonal factors that influence the develop of burnout. We want to determine which personality characteristics are associated with burnout, what kind of object relations involved in their formation and how they are related to unfulfilment of basic needs, life satisfaction and burnout.

Also was of interest, if burnout, especially adrenal collapse, may lead to changes in personality characteristics and values. We were interested if there are differences in reported signs of increased and decreased cortisol levels between stages of burnout. Finally, we examined connection between the stages of burnout and the evaluation of fulfilment of basic needs and attitude toward persons own needs.



MAIN HYPOTHESIS

Reciprocal burnout model: The cause of the burning-out and burnout is the imbalance (unreciprocity) between exhaustion (unloading) of energy (physical, emotional, cognitive) and meet the needs of (restoring energy) and how people respond to unreciprocial situations (personality traits) in living and working conditions .

In order to verify the main hypotheses we set up 14 working hypothesis, 8 in the quantitative part of the study, 6 are in qualitative.

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METHOD

General procedure

The survey was divided into quantitative and qualitative part. In quantitative part, we examined the relation of personality characteristics, basic needs fulfilment and subjective well-being with burnout. In qualitative part we examine what kind of object relations are involved in the development of these personal characteristics (psychogenesis of burnout).

Participants and measures

1. **quantitative research (testing hypotheses H1 to H8):**

   a / "general" sample of 1480 subjects (analysis of the ABS questionnaire): (factor structure, discriminant analysis)

   b / "general" sample of 615 subjects (Testing of hypothesis): Adrenal Burnout Syndrome Questionnaire (ABSQ), Basic needs satisfaction questionnaire (NSQ) and Performance based self-esteem scale (PBS), Big five Inventory (BFI) and Subjective well-being scale (SB) and Musek scale of values (MLV);

2. **qualitative research (testing hypotheses H9 to H14):**

   a / "burnout" sample of 147 persons: the same questionnaires as in the "general" sample and questionnaires: Anamnese, Self-image, Workaholism and Conditional love.

   b / "engaged" sample of 59 persons: the same questionnaires as in the "general" sample and questionnaires: Anamnese, Self-image, Workaholism and Conditional love.

RESULTS

Sample	General		Burnout		Engaged	
	M	SD	M	SD	M	SD
Average burnout level (ABL)	0,89	0,69	1,76	0,40	0,19	0,23
Average needs satisfaction (ANS)	3,01	0,79	2,52	0,64	3,50	0,72
Performance based self-esteem (PBS)	2,09	1,09	3,06	1,03	1,28	0,53
Subjective weel-being (SB)	18,6	7,10	16,7	6,4	20,42	6,60
Nevroticism	77,8	15,7	81,8	13,0	61,17	16,79
Ekstraversion	71,9	14,6	68,4	12,5	85,89	14,26
Openess	87,7	11,7	86,2	13,0	93,61	8,97
Agreeableness	85,5	10,1	85,2	10,2	87,33	11,69
Conscientiousness	83,7	13,0	84,0	12,0	90,67	9,80
Apolonic values	8,20	1,46	8,01	1,37	8,28	1,75
Dionisic values	7,40	1,82	7,27	1,66	7,64	1,64
Diligence	8,58	1,78	8,63	1,54	8,73	2,09

Tabele 1: Deskriptiv statistics of results

Results of quantitative research

Hypothesis H1: The level of burnout differ according to gender, age, educational level and employment status.

Although the data are not uniform, most of the studies reported that the burnout is more common among women, AMD that are more at risk the elderly employees, managers, entrepreneurs and higher-educated people. We expected a similar result. In comparison, we also include the unemployed, because it is believed that the burnout is a result of working conditions, ie the unemployed should be measured a lower level of burnout.

Tabele 2: Comparison of average burout level (ABL) following demographic indicators in the general sample (615 people) with a summary for t-test (gender) and analysis of variance (age, education level, employment status)

Gender	M	SD	Age/years	M	SD	Education level	M	SD	Employment status	M	SD
male	0,89	0,68	under 20	0,68	0,61	4. degree	0,85	0,63	unemployed	0,87	0,63
female	0,89	0,70	20 to 30	0,95	0,67	5. degree	0,91	0,68	Worker/employee	0,86	0,69
			30 to 40	0,86	0,70	6. degree	0,95	0,74	manager	1,08	0,74
			40 to 50	0,87	0,75	7. degree	0,84	0,69	enterpreneur	0,91	0,73
			50 to 60	0,88	0,68	more	0,91	0,71	no data	1,01	0,95
			over 60	0,73	0,54	no data	0,85	0,60			
t	df	p	F	df	p	F	df	p	F	df	p
0.14	613	0,89	0,89	5;609	0,49	0,44	5;609	0,82	1,17	4;610	0,32

In general sample had reached the highest average burnout degree testees between 20 and 30 years, of 6. education level and those in leadership positions, but the differences are not statistically significant. Even the unemployed are not significantly different from the employees.

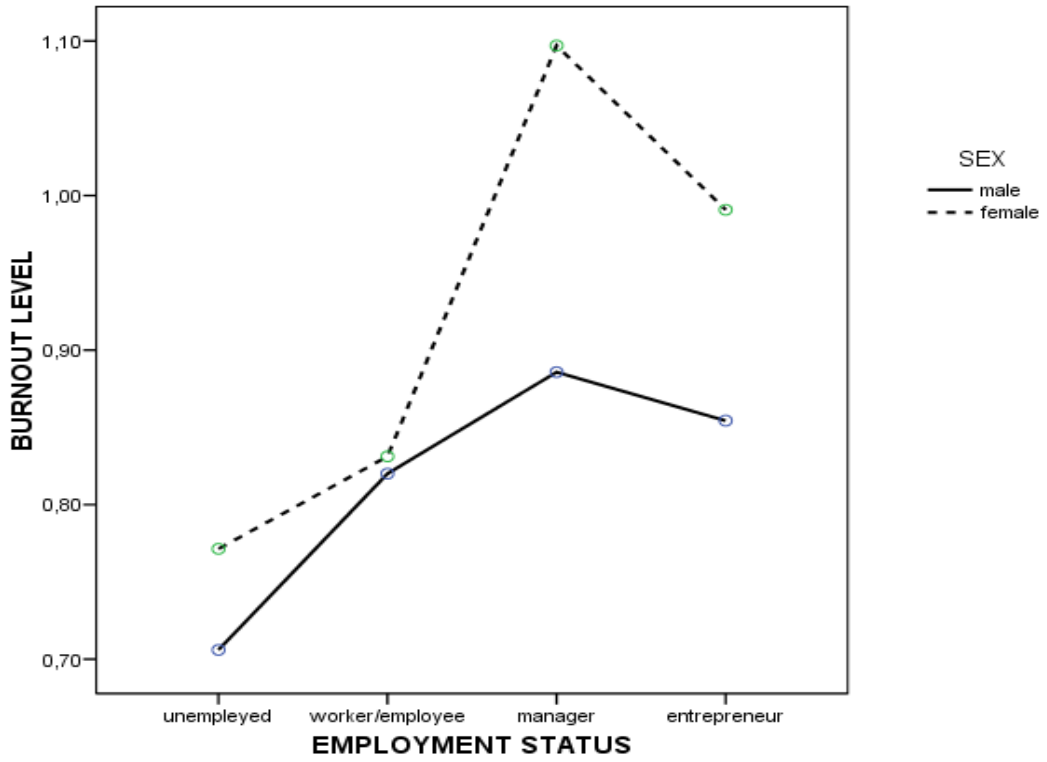

Figure 1: Burnout level (BL) by sex and employment status in the general sample

Women in leadership positions and female entrepreneurs show a higher level of burnout than their male counterparts of the same or similar status ($F(3) = 3.35$, $p < 0.05$), while between workers / employees and the unemployed, there are no differences between sexes .

The first hypothesis was rejected. All demographic groups are equally at risk, only women in leadership positions and female entrepreneurs are at higher risk.

Hypothesis H2: Some personality characteristics (neuroticism, introvercy, conscientiousness) and values (status, power, enjoyment of life) are associated with burnout.

Researches show that all the big five personality dimensions, ie. neuroticism (emotional stability), extraversion, openness, agreeableness and conscientiousness, to some extent relate to burnout and unanimously confirme the positive correlation of neuroticism and negative correlation of **extraversion with burnout.**

Although we often find in the literature claims about the importance of (personal and professional) values as a motivational factor in relation to burnout, we managed to find only one study on the relationship between burnout and values (Altun, 2002).

We investigared to what extent and in what way the results of the questionnaire SAI correlate with personality characteristics that were measured by the BFI. We expect similar results as given in the literature, so that the personality dimensions of BFI (neuroticism, extraversion, agreeableness, openness, conscientiousness) correlate with the burnout level (BL) and factors ABS: neuroticism would grow trhrough burnout stages, meanwhile extraversion would decrease from stage to stage.

Table 3: Relationship (Pearson r) between five personality dimensions, burnout level (BL) and four factors of ABS questionnairie (the loss of intrinsic motivation, workaholism, cognitive and physical exhaustion)

	BL	The loss of intristic motivation	Workaholism	Cognitive exhaustion	Physical exhaustion
Neuroticism	**0,30***	**0,26***	**0,03**	**0,25***	**0,20***
Ekstraversion	**-0,21***	**-0,15***	**0,04**	**-0,26***	**-0,12***
Openess	**-0,04**	**-0,01**	**0,06**	**-0,08**	**0,01**
Agreeableness	**-0,01**	**-0,05**	**-0,1**	**-0,02**	**0,04**
Conscientiousness	***-0,10****	***-0,06***	***0,05***	***-0,15****	***0,00***

Accepted linear regression model showed that the personality dimensions together explain about 10% of the variance of burnout level (R2 = 0.097).

Table 4: Connections (Spearmans ρ) between the burnout level (BL) and achievements in the MLV

	Spearman		Spearman
MLV – values	ρ	MLV – values	ρ
Sensory values	-0,13*	Cultural values	-0,08*
Safety values	-0,02*	Religious values	-0,01
Cognitive values	-0,15*	Hedonic values	-0,14*
Patriotic values	-0,16*	Potential values	-0,17*
Demokratične vrednote	-0,08*	Moral values	-0,07
Social values	-0,01	Humanistic values	-0,11*
Traditional values	-0,08*	Apollonic values	-0,11*
Actualisation values	-0,10*	Dionysic values	-0,16*
Spoznavne vrednote	-0,06	Diligence	-0,09*

The ratio between apollonic and dionysic values at testees with signs of burnout (M = 1.47, SD = 0.55) compared with those without signs (M = 1.35, SD = 0.39) shows increased values in favor of apollonic (t (588.133) = 3.06, p <0.05).

Values explain the 3 percent rate of burnout level variance (R2 = 0.030).

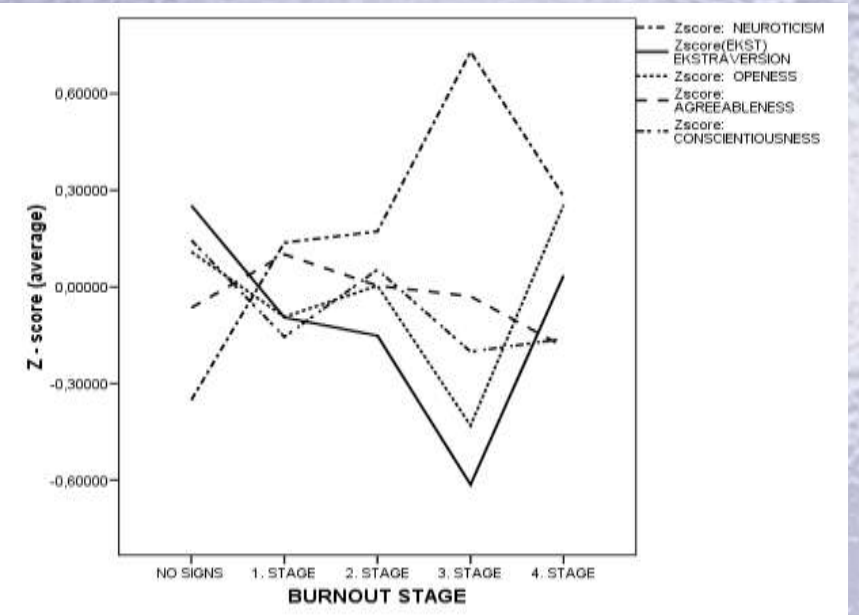

Figure 2: Comparison of results (shown in the Z-values) for each personality dimension in burnout stages (BS)

The second hypothesis was accepted. Relationship between the level of burnout and values is negative (relatively low, but statistically significant), which raises the question, what is, if not values, that motivate people to excessively diligence.

Differences between burnout stages in nevroticism, extraversion, openness and conscientiousness are statistically significant (F (16) = 6.935, p <0.05).

Hypothesis H3: Performance based self-esteem is strongly present in people with symptoms of burnout and is associated with postponement of meeting basic needs.

Sources indicate that performance based self-esteem medium to strong correlates with burnout, we expect that our research will also confirm this findings. We also wanted to find out, if performance based self-esteem correlates with postponement of meeting basic needs, therefore, whether this is also one of the personality characteristics which, according to Reciprocal burnout model affects the response to living and working conditions.

Performance based self-esteem is in testees with the signs of burnout testirancih significantly more present (t (613) = 16.50, p <0.05) (M = 2.56, SD = 1.07) than in those without signs of burnout (M = 1.30, SD = 0.54). Even in the unemployed testees with signs of burnout performance based self-esteem is significantly more present (t (72.299) =- 4.40).

Table 5: Percentage of testees, in which is the result of* performance based self-esteem (PBS) *under the arithmetic mean (PBS below average) and above (above average PBS) to the stages of burnout

Burnout stage (BS)	Under average PBS	Over average PBS
No signs	58,4	9,7
1. stage	32,1	30,9
2. stage	8,09	40,5
3. stage	0	11,5
4. stage	1,45	7,43

The burnout level and performance based self-esteem are strongly positively related (r = 0.67, p <0.05).

Among the burnout factors ABS is performance based self-esteem the strongest correlate with workaholism (r = 0.61). Corelation with other factors is also significant : with cognitive exhaustion (r = 0.53), physical exhaustion (r = 0.47) and the loss of intrinsic motivation (r = 0.41). All correlations are statistically significant (p <0.05).

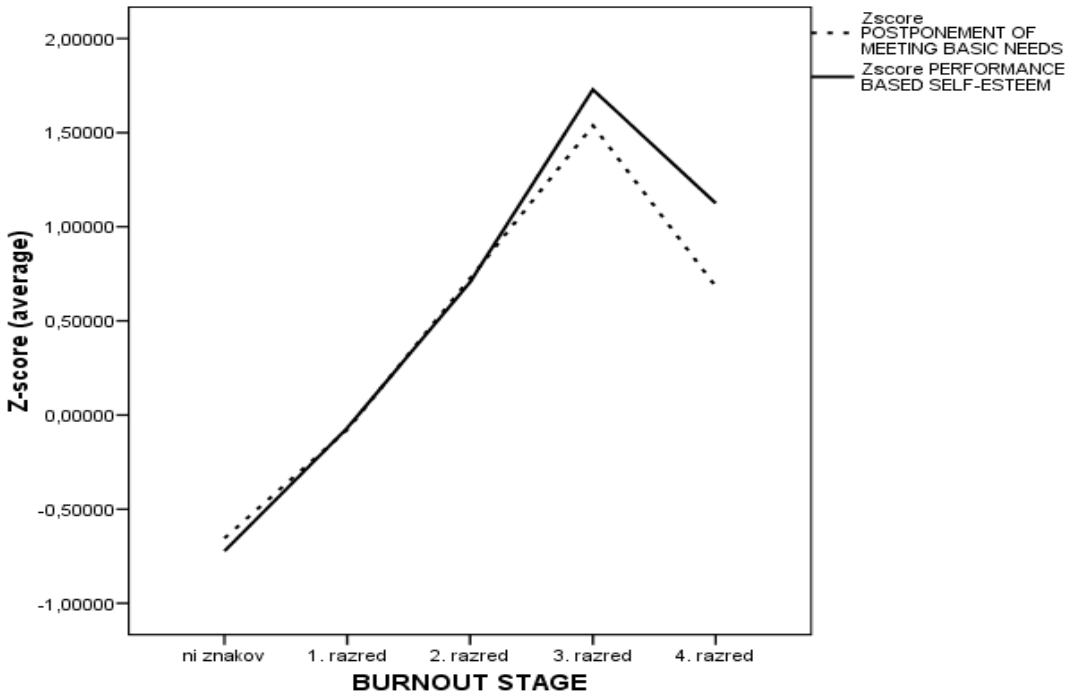

Figure 3: Comparison of results (shown in the Z-values) of the average shares of selected items that reflect the postponement of meeting basic needs (DN) and **performance based self-esteem (PBS)** ***upon the burnout*** **stages**

Partial correlations showed that performance based self-esteem to some extent affect the postponement of meeting needs and through that to the burnout level, while the opposite effect would be negligible.

The third hypothesis was fully confirmed. Persons with higher performance based self-esteem more postpone to meet basic needs and have higher burnout level.

Hypothesis H4: Postponement of meeting the needs leads into dissatisfaction of basic needs, which is linked to burnout.

We expected that the estimate of needs satisfaction is negatively associated with the postponing of needs, and that by the rising burnout stage will decreased average estimate of needs satisfaction.

The rate of burnout is moderate negatively correlated to the estimate of needs satisfaction (r =- 0.57, p <0.05) and strong positively associated with the postponement of needs (r = 0.63, p <0.05). Between the estimate of needs satisfaction and postponement of needs is a moderately negative correlation (r =- 0.43, p <0.05).

The strongest predictors of burnout, which together explain 33% of the variance of burnout rates are satisfacion of social (□ =- 0.209, t =- 4.80, p <0.05), physical (□ =- 0.176 t =- 4.35, p <.05), emotional (□ =- 0.174 t =- 4.58, p <0.05), intellectual needs (□ =- 0.127 t =- 3.05, p <0.05) and the security needs (□ =- 0.084 t =- 1.97, p <0.05).

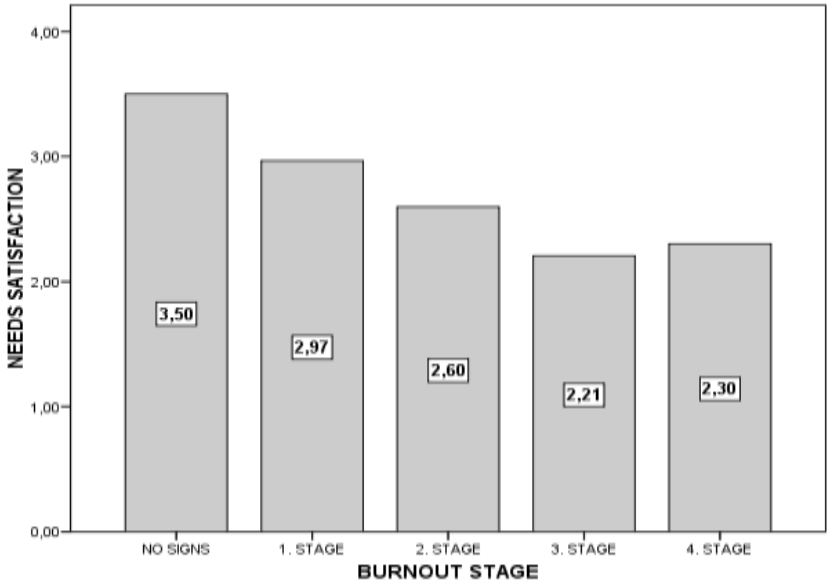

Figure 4: Average estimates of the needs satisfaction in burnout stages (F (4.610) = 61.91, p <0.05)

The fourth hypothesis was fully confirmed. For those who more postopne to meet their have lower need satisfaction and are strongly burned out.

Hypothesis H5: Certain personality characteristics (neuroticism, introversion, conscientiousness) and values (status, power, enjoyment of life) as weel as satisfaction of basic needs are related to subjective well-being, which is negatively correlated with burnout.

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Sources reported that burnout and life satisfaction (subjective well-being) negatively correlated. We expect that life satisfaction in addition to personality characteristics and values also (negative) correlate to estimate of the needs satisfaction.

Table 6: Relationship between* subjective well-being, satisfaction of basic *needs (SN) (Pearson r coefficient), personality dimensions BFI (Pearson r coefficient) and values (MLV) (Spearmans ρ)

SN	r	Personality dimensions BFI	r	MLV	ρ	MLV	ρ
Material needs	0,40*	Neuroticism	-0,47*	Sensory values	0,15*	Cultural values	0,11*
Phisycal needs	0,47*	Ekstraversion	0,41*	Safety values	0,10*	Religious values	0,06
Security needs	0,49*	Openess	0,23*	Cognitive values	0,15*	Hedonic values	0,11*
Emotional needs	0,43*	Agreeableness	0,07	Patriotic values	0,12*	Potential values	0,13*
Social needs	0,42*	Conscientiousness	0,33*	Demokratične vrednote	0,04	Moral values	0,08
Respect needs	0,45*			Social values	0,10*	Humanistic values	0,17*
Intelektual needs	0,46*			Traditional values	0,11*	Apollonic values	0,11*
Personal Growth	0,48*			Actualisation values	0,16*	Dionysic values	0,13*
Average SN	0,63*			Spoznavne vrednote	0,07		

The strongest correlation is between subjective well-being and average estimate of needs satisfaction (Average SN).

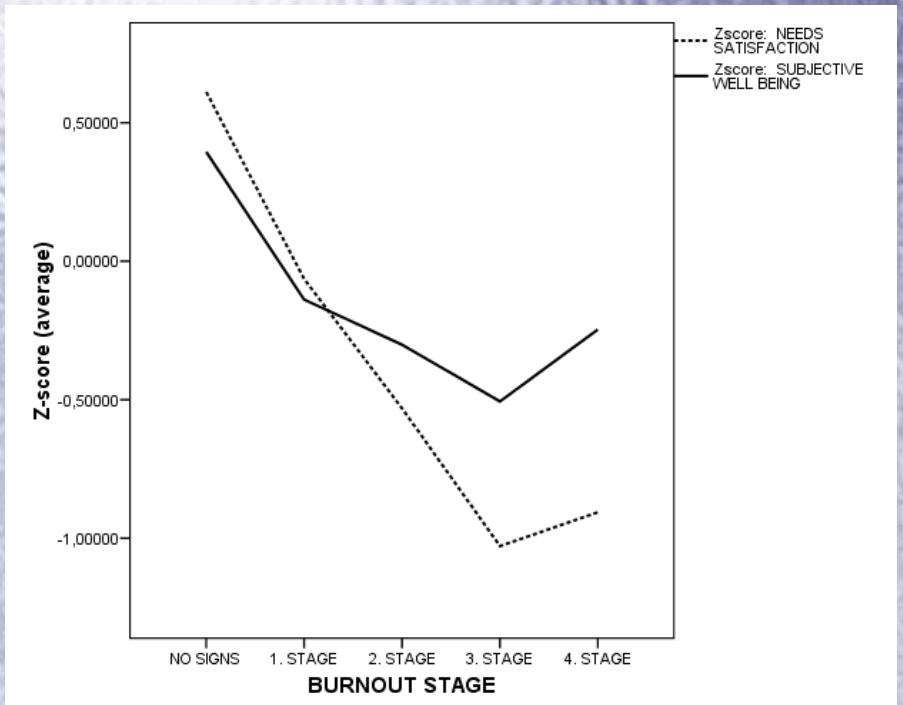


***Figure 5: Comparison of results (shown in the Z-values) average estimate of needs satisfaction and subjective well being in burnout* stages**

Partial correlation between subjective well-being and estimate of the needs satisfaction is quite independent of performance based self-esteem and personality dimensions - neuroticism, extraversion and conscientiousness (r = 0.53, p <0.05), as well as the burnout level (r = 0 , 58, p <0.05).

This result suggests a considerable extent, that is (at least partial) satisfacion of basic needs a necessary (although probably not a sufficient) condition for satisfaction with life.

As expected, the relationship between the subjective well-being and the burnout level is negative (r =- 0.33, p <0.05).

But when we control the impact of a average estimate of needs satisfaction, that interaction becomes nonsignificant (r = 0.05, p = 0.211).

The fifth hypothesis was partially accepted. Agreeableness and some values are not statistically significantly associated with subjective well-being.

Hypothesis H6:* subjective well-being *and burnout predict the same intrapersonal factors, but with opposite sign.

For* life satisfaction *and burnout might be said that they are the opposite pole of subjective being , despite the fact that people in the early stages of burnout are still happy and productive in other areas of life (Pines 1993). Therefore we were interested if* subjective well-being *and burnout in fact are predicted by the same intrapersonal factors, but with opposite sign. We expected that the strongest predictors would be* performance based self-esteem *, neuroticism, extraversion and estimate of needs satisfaction.

Intrapersonal factors	BL	SB
Average SN	-0,57*	0,63*
PBS	0,67*	-0,28*
Neuroticism	0,30*	-0,48*
Ekstraversion	-0,21*	0,43*
Conscientiousness	-0,10*	0,35*
Sensory values	-0,11*	0,20*
Status values	-0,16*	0,15*
Patriotic values	-0,15*	0,12*
Hedonic values	-0,12*	0,15*
Potential values	-0,17*	0,14*
Humanistic values	-0,10*	0,20*
Apollonic values	-0,09*	0,14*
Dionysic values	-0,15*	0,16*

Table 7: The correlation (Pearson r coefficient) between burnout level (BL) and subjective well-being (SB) with an average estimate of needs satisfaction (Average SN), performance based self-esteem *(PBS), personality dimensions and values*

Subjective well-being is most strongly associated with the average estimate of needs satisfaction (Average SN), the relationship is practically independent on corrrelation with other factors.

Burnout is most strongly associated with performance based self-esteem (PBS), which is also almost independent on correlation with other factors.

Relationship between burnout and neuroticism is significantly reduced if we exclude correlation with* performance based self-esteem, *while remaining correlation of burnout and the PBS virtually unchanged if we exclude the impact of nevroticizma.

Using multiple regression with the stepwise integration of predictors we examined if *subjective well-being* and burnout in fact, predict the same intrapersonal factors.

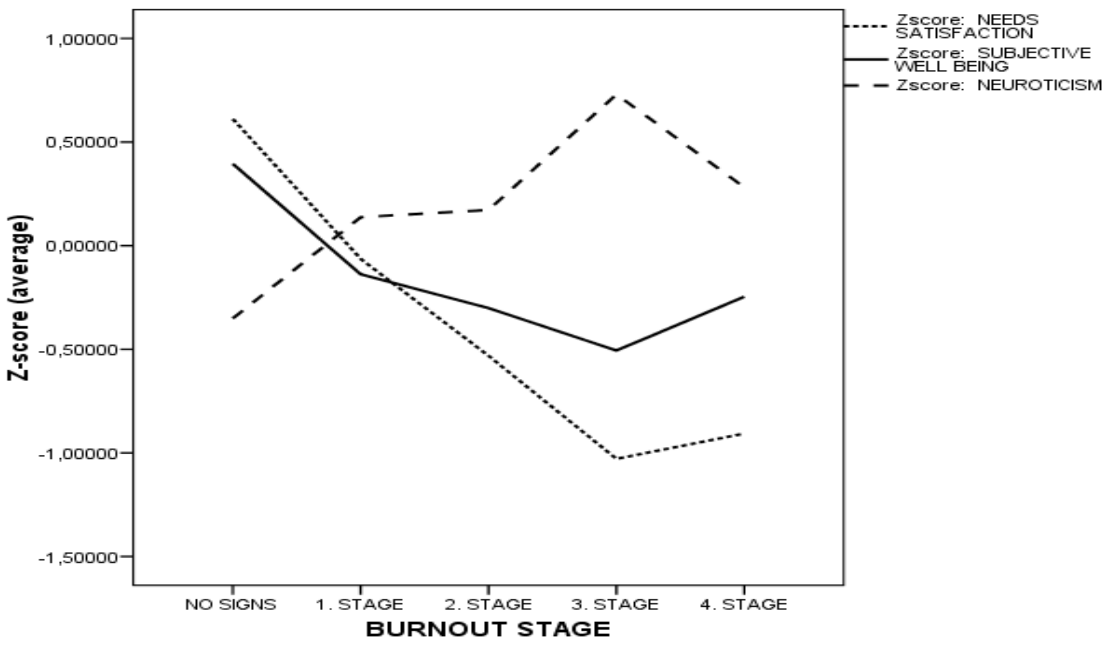


Figure 6: Average Z-values of subjective well-being and the two strongest predictors: average estimate of needs satisfaction and neuroticism in burnout stages

Statistically significant predictors of subjective well-being together explain 47.4 percent of the variance (SEestimate = 5.19, F (4.610) = 137.22, p <0.05). Most of the variance - 40.1 percent explains average estimate of needs satisfaction (β =- 0.514 t =- 15.59, p <0.05), 5.2 percent explains neuroticism (β =- 0.18, t =- 4.76 p <0.05), 1.5 percent explains conscientiousness (β = 0.113, t = 4.02, p <0.05), and sensory values 0.5 percent (β = 0.073, t = 2.43, p <0.05). If the level of burnout is included as a predictor in, the result does not change.

S

Intrapersonal predictors of burnout level explain even more, 56.3 per cent of its variance. In the accepted model (R^2adj. = 0.645, SEestimate = 0.412, F (4.610) = 280.82, p <0.05) are the best predictors of the burnout level performance based self-esteem (β = 0.531, t = 28.28, p <0, 05), which explained 44.5 percent of the variance, estimate of needs satisfaction 11.0 percent (β =- 0346, t =- 11.78, p <0.05), 0.6 percent status values (β =- 0083, t =- 3.07, p <0.05), 0.2 percent of the humanistic values (β =- 0.054, t =- 2.10, p <0.05).

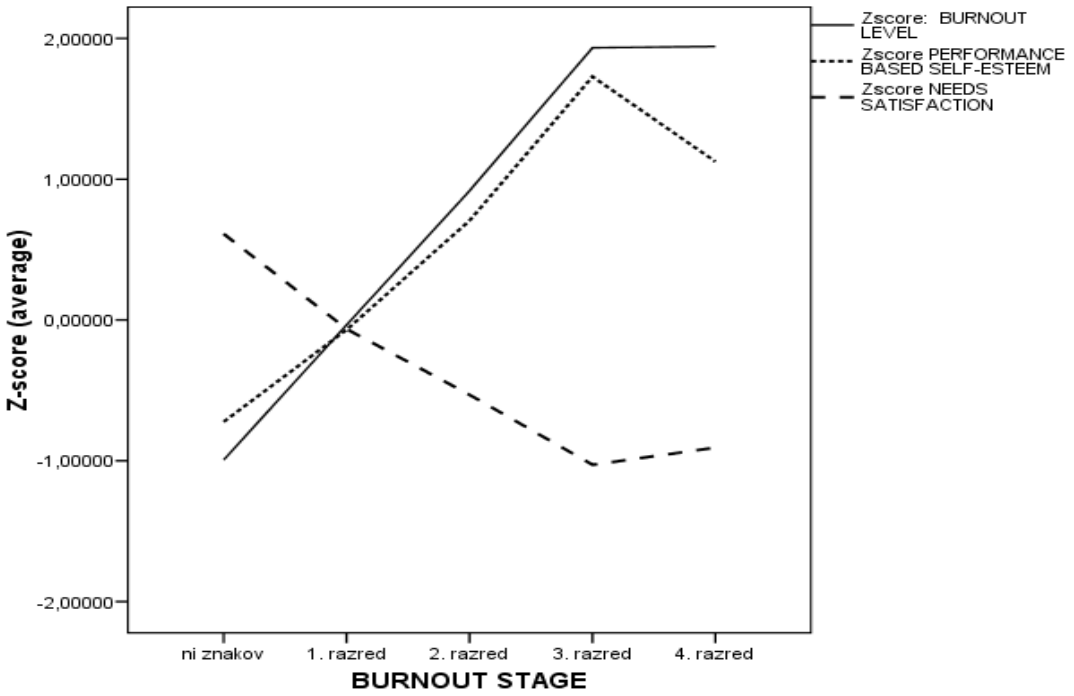


Figure 7: Average Z-value of burnout level and the two main predictors: performance based self-esteem and estimate of needs satisfaction in burnout stages

The sixth hypothesis was rejected. The only predictor shared by both the burnout and subjective well-being, the estimate of needs satisfaction is **with them in oposite correlation. However, this is most powerful predictor of of subjective well-being only. The main predictor of burnout is performance based self-esteem, which is non-existent between the predictors of satisfaction with life.**

Hypothesis H7: During the proces of burning out a basic level of cortisol is increased but after adrenal collapse, however, falls below normal levels.

Paine (1981) proposed a distinction between "Burnout Stress Syndrome" (BOSS) and "Burnout Mental Disability" (BOMD). BOSS is described as relatively mild psychological reaction to stress in the workplace and frustration (sleep and concentration disturbance,, fatigue, emotional withdrawal ...). However, it may develop in the final stage of burning out process - BOMD (intensive depressive and anxiety symptoms) that could be described as mental illness.

We have proposed a distinction between two-stage burning out process (exhaustion and capture), which could be included in the burnout stress syndrome BOSS), and final stage adrenal burnout. We believe that the burning out process increases cortisol, but after adrenal collapse, when cortisol is reduced, the state of mental dissability occurs because of burnout.

Therefore, we examined whether the people who are burning out (1st to 3rd stage of burnout), report of more signs of increased cortisol, but those who have experienced adrenal collapse (4th stage of burnout) report of less signs of increased cortisol levels in more signs of decreased cortisol levels.

As in Slovenia in burnout patients is not usually performing the test of basic levels of cortisol, we tried through the reporting of signs in testees indirect find out whether cortisol is increased or reduced.

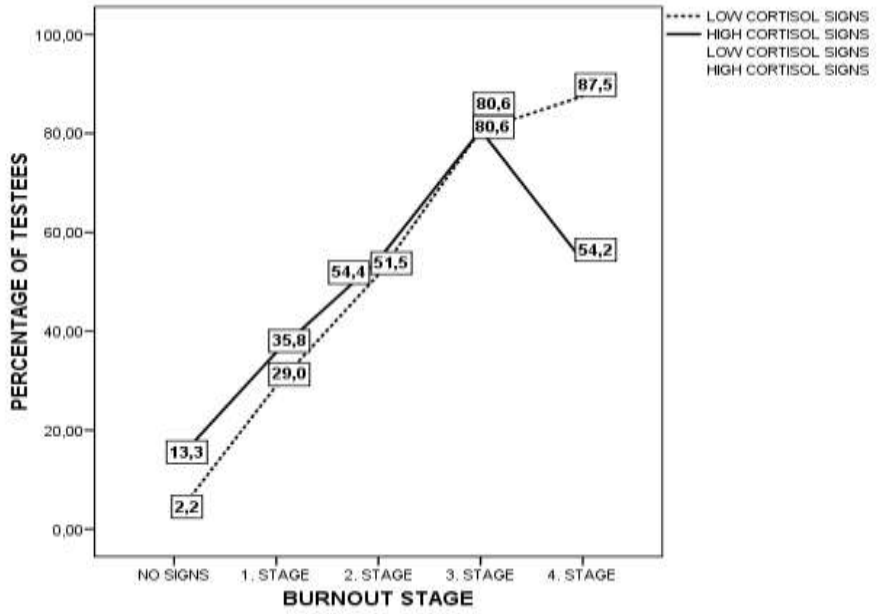


Figure 8: ***Average portions of testees (in %) with signs of increased levels of cortisol (high) and decreased levels of cortisol (low) to the burnout stages***

The portion of people who are reporting about signs of high cortisol levels, is increasing from 1 to 3 stage, but in the 4th stage is dropped. The proportion of those who are reporting about signs of low cortisol levels grow out from class to class.

We can only conclude that most people in the 4th stage of burnout reported about signs of low cortisol levels, then it is possible that in this stage of burnout cortisol is really decreased, as well as at the same time is reduced the proportion of those who report about signs of high cortisol.

The reliable conclusion would require measurements of blood pressure and heart rate, as well as laboratory testing of basic cortisol levels, together with the diary recording of state of health and feeling.

The seventh hypothesis was partially confirmed. Signs of high cortisol levels are indeed reduced in the 4 stage, signs of low cortisol levels rise from stage to stage. While this suggests the possibility that during the burning out process a cortisol is probably really increased and after burout collpase in reduced, but signs are also strong overlaping. The most likely explanation for the ambiguous result is the methodology - the descriptions of signs are only indirectly report on what is happening at the level of neuroendocrine hormones .

Hypothesis H8: In the 4th burnout level (after adrenal collapse) the changes in personality characteristics and values appears.

Experience of advisory work with buronut victims at the Institute for human resource development have shown that bournout persons after adrenal collapse report of changes in values and certain personality characteristics. To research the changes in personality characteristics and values during the burning out process, we compared the portions of selected items in the ABS questionnaire relating to the changes of enduring personality characteristics and values between burnout stages.

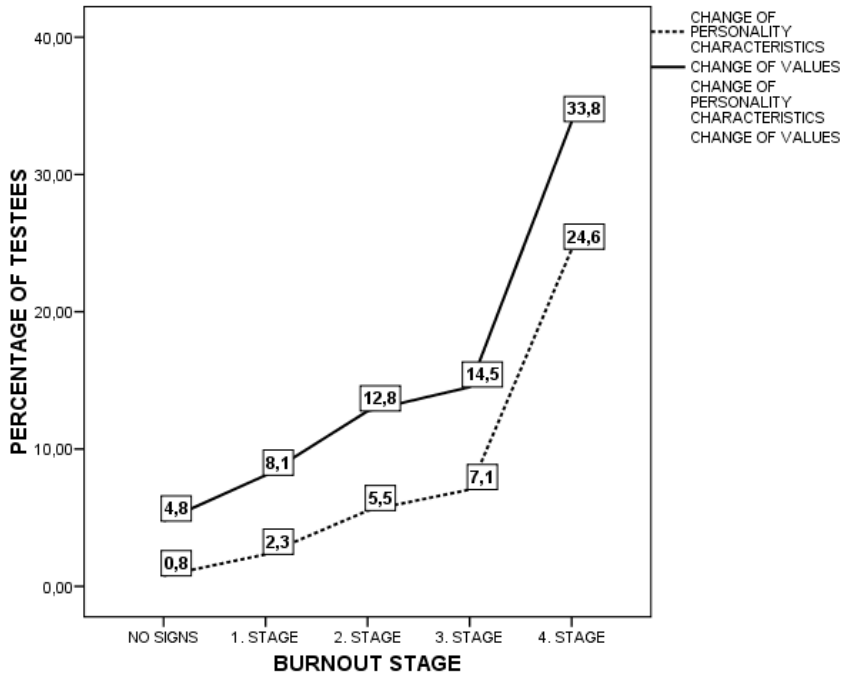


Figure 9: The average portion of selected items (in %) which describe the change of values (VA) and personality characteristics (PC) in burnout stages

Average portions of selected items about changd personality characteristics and values were significantly different between the classes burnout. Testees in the 4th class are manifesting lower performance orientation, higher self-esteem, lower emotional vulnerability, and better meet their own needs.

Reduced the importance of performance is consistent with a decline in performance based self-esteem after the adrenal collapse, with awareness of the importance of care for themselves is reflected in better fullfilment of basic needs.

People with higher performance based self-esteem and less fullfiled basic needs report higher portion of changes of personality characteristics and values.

The eighth hypothesis was accepted. People after adrenal collapse are more aware of the importance of caring for themselves.

The results of qualitative research

The quantitative part of our research has shown that intrapersonal factors were included in this survey, explained 64.5 percent variability of burnout level. Among them is the most important predictor the performance based self-esteem , which alone explains 44.5 percent of the variability.

Workaholism is the burnout factor which is the strongest related with the performance based self-esteem (r = 0.61), and for which we believe that is its behavior indicator.

Therefore, we wanted to explore how performance based self-esteem developed in burnout victims , which seems, in fact, that represents their main structural and psihodynamic charactesistic.

Data were collected through a structured anamnestic interview in the two testees samples, “burnout" and “engaged" to work.

We wanted to find out on what kind of object relations with important adults in childhood (interpersonal factors) will report burnout and engaged testees according to the content of their self (internal compulsion), and how it affects the behavior (workaholism), which can lead to burnout. We were also collected data on a kind of interpersonal factors associated with workaholism and burnout (complaints about working conditions).

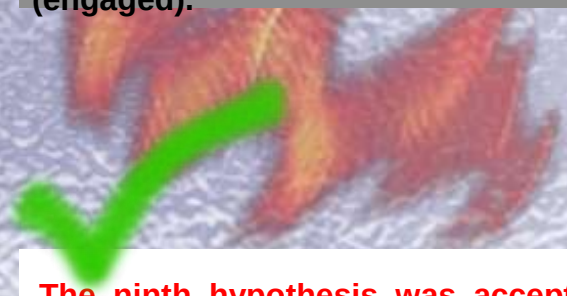
Hypothesis H9: The performance based self-esteem and other intrapersonal factors differ significantly between burnout in engaged testees.

First we want to make sure that the sample of *burnout in engaged testees* have different results of performance based self-esteem and not just the results of an ABS questionnaire based on which we (among others) classify the samples. At the same time we examined whether the samples also differ on other personality characteristics and values that are associated with burnout, because burnout would be an opposite condition of work commitment. We expect that their results will be on opposite sides of results of the general sample (average population).

	The Result –value			Test	General – Burnout	General – Engaged	Burnout– Engaged
	Burnout	General	Engaged				
Average burnout level (ABL)	high	average	low	t	0,000**	0,000**	0,000**
Perform. based self-esteem (PBS)	high	average	low	U	0,000**	0,000**	0,000**
Average needs satisfaction (ANS)	low	average	high	t	0,000**	0,000**	0,000**
Subjective weel-being (SB)	low	average	average	t	0,002**	0,053	0,000**
Nevroticism	high	average	low	t	0,001**	0,038*	0,002**
Ekstraversion	low	average	average	t	0,002**	0,048	0,003**
Sensory values	average	average	high	U	0,169	0,123	0,025*
Status values	average	average	high	U	0,054	0,013*	0,001**
Patriotic values	average	average	high	U	0,181	0,045*	0,009**
Demokratic values	low	average	average	U	0,021**	0,523	0,049*
Hedonic values	average	average	high	U	0,076	0,112	0,012*
Potential values	low	average	high	U	0,045	0,009**	0,000**
Humanistic values	average	average	high	U	0,057	0,161	0,031*
Apolonic values	low	average	average	U	0,021*	0,160	0,016*
Dyonisic values	low	average	high	U	0,027*	0,022*	0,000**

Table 8: *Comparison of the results of questionnaires (low - medium - high) by t-test summaries (t) and Mann-Whitney U tests (U), the general sample, engaged and burnout sample (statistical significance: ** p<0,01, * p<0,05)*

The self-esteem of burnout sample is much more dependent on the achievements and awards as the general pattern, and significantly less dependent in engaged sample. The burnout and engaged sample are diametrically opposed in relation to the general pattern in results of c and other factors and therefore appropriate to compare the type of object relations, typical for people with high performance based self-esteem (burnout) and those with low (engaged).



The ninth hypothesis was accepted. Sample are sufficiently different that they can be used for qualitative comparison .

Hypothesis H10: Testees with high performance based self-esteem (burnout) and low performance based self-esteem (engaged) report similar on the working energy and engagement, but report different about experiencing of themself, object relations and symptoms.

	Burnout	*Engaged*
Energy equipment	high	high
The time they spend at work	most of the day	most of the day
Defensive behavior	overcompensation	overcompensation
Self-esteem	labile or low	stabile
The reason for the high performance	fear and anxiety	enjojement
Dilligence as family value	important, demand	important, value, ideal
Superego	harsh	suitable
Object relation	conditional love	understanding and consideration
Symptoms	exhaustion,anxiety, depression	none or fatigue
*Siblins (*psychopathological characteristics)	frequent	rare

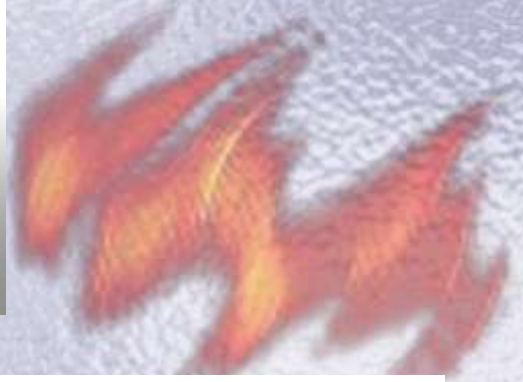
Table 9: *Summary comparison of common features of burnout and engaged sample*

Tenth hypothesis was confirmed. **Burnout and engaged most of their time devoted to work and respond to the barriers with greater labor input. They differ, however, in the specific reasons for the high involvement (in the prevailing joy in engaged, but fear and anxiety in burnout), perceptions of self, object relations and symptoms.**

Hypothesis H11: Burnout and enagaged state various reasons (type of motivation) for a high work engagement.

We started from knowledge of the theory of object relations. Through object relations that do not support individuation and separation (upbringing with conditional love) may develop labile or negative self-esteem and self.

If diligence is also a strong family value, labile self-esteem is often performance based. The need to maintain performance based self-esteem represent inner compulsion, which may trigger workaholism, and this can lead to burnout; workaholism is a form of defense against decompensation.



Because we think that the inner compulsions are the motivational part of performance based self-esteem (aggressive introjects) and that in fact introjective motivation, as seen by Ryan and Deci (2000), we expect that burnout and engaged will report various reasons (type of motivation) for a high work engagement.

Since resources are generally associated burnout with satisfying of narcissistic needs (being the best, otherwise I'm worthless), we expect that burnout will mainly reporton the reasons for this type for workaholic behavior, while in engaged particular pleasure in work would be the main reason.

It turned out to be true that engaged mainly reported the interest and pleasure for work, while burnout indicate FOUR different types of reasons (internal compulsions) for excessive work. Four different forms of introjective motivation reflect different types of needs, from which they arise.

We named them by type of need, which underlies motivation. The first four are quoted mainly by burnout testees:

NARCISTIC

I have to work, because my achievements nust be extraordinary.

BORDERLINE

I have to work, because I must recognize and meet the needs of those around me.

SCHIZOID

I have to work, because I am secure only when I (perfect) do what others ask me to.

ANANKASTIC

I have to work, because I want to be perfect, if I want to be better than others.

In contrast, the motivation to work in engaged is:

AUTHONOMIC

I am interested in work, looking forward, take over by work.

	Izgoreli	Zavzeti
narcistic motivation	18,4	3,4
Borderline motivation	23,1	1,7
schisoid motivation	9,5	3,4
anacastic motivation	46,3	16,9
authonomic motivation	2,7	74,6

($\chi 2(4)=22,98$, $p<0,05$)

Table 10: *Classification of burnout AMD engaged testees at prevailing forms of introjetive and autonomous motivation (in percent)*

Eleventh hypothesis was accepted. It turned out that at the burnout sample we observed four different types of introjective motivation: narcistic, borderline, schizoid and anancastic (obsessive-compulsive), while engaged mainly reported to take on autonomous motivation, at lower rates as well as the anancastic. Therefore, in the following comparations we allocate the data of burnout sample according to type of introjective motivation.

Hypothesis H12: Depending on the type of motivation for high work engagement burnout in engaged testees report different triggering situations and selfdescriptions.

Those with narcistic motivation indicate as the reason for their exhaustion excessive expectations of the environment, overloading, particularly qualitative (highly demanding tasks), and their indispensableness (no one but me can not ...).
They see themselves as an exceptional and successful.

Those with borderline motivation in particular complain of conflict of demands or roles, and lack of social support.

The prevailing description is: emphatic and altruistic.

Engaged indicated the fewer complaints over working conditions, and focused primarily on the objective, the technical conditions of work (equipment, work environement ...).

Most were described as entrepreneurial and creative people.

For those with the shizoid motivation drive to workaholism are demanding clients, undefined instructions and lack of control or autonomy.

They describe themselves as an independent and responsible.

In anankastic motivation prevails mainly feeling of quantitative overload (too many tasks), inadequate reward and conflict with coworkers.

They describe themselves as a diligent and disciplined.

The twelfth hypothesis was accepted, testees with different type of motivation differ in complaints about working conditions, and selfdescriptions and expectations from others.

Hypothesis H13: Depending on the type of motivation for high work engagement burnout in engaged testees report different factors, which drive tp workaholism and different content of **(performance based) self-esteem.**

Among burnout factors the performance based self-esteem is the strongest associated with factor workaholism (r=0.61), for which we believe that is its behavioral indicator. In our view, it is quite a need to maintain unstable (performance based) self-esteem main internal constraint, which leads to continuous activation - workaholism, which in turn can lead to burnout. Workaholism is therefore a behavior that serves to maintain performance based self-esteem , in essence, its behavioral component.

Individuals with narcistic motivation don't refuse excessive tasks, because the feeling they can't do something completely devaluetes in their own eyes.

PBSe: I am good only if I am praised for achievement.

Those with borderline motivation work excessive, because they are constantly afraid that others would have left (fired) them if their effort is not good enough for them (carie for others).

PBSe: I'm not bad, if the otheris content because of my work.

Work engaged are working a lot, because they are interested and looking forward to work, but they can clearly establish the limits to excessive duties and commitments. Self-esteem is stable, even with failure or criticism. They work hard from the desire for new experiences and skills.

Shizoid motivated only feel safe when working, with the appearance of "pseudoindependency."

PBSe: I work because that's who I am; if if I want to exist, I work.

Anankastic motivated with workaholism constantly compete, they try to assert themselves so, that they take care of rivals, otherwise the superego is overflowing them with feelings of guilt.

PBSe: I am hardworking (diligent) man, I want to be perfect.

Thirteenth hypothesis was accepted. Burnout over-work in an attempt to maintain a positive image of themselves, while engaged are interested in work.

Hypothesis H14: Depending on the type of motivation for high work engagement burnout in engaged testees report different about the different types of object relations in childhood.

We expected that burnout testees would mostly report about object relations, which does not support separation and individuation (when the parents do not respond adequately to the child's developmental needs), which may lead to the creation performance based self-esteem , meanwhilw work engaged would experienced in childhood more unconditional love.

Parents' expectations of narcistic motivated were unreasonable and linked to children's exceptional achievements. If children do not meet these expectations, parents tend to devaluated them.

Inner compulsion to read: *My performance must be exceptional.*

Parents of borderline motivated were inconsistent and unclear in their expectations and requirements. Children had to find out, what parents want from them, or they would be rejected.

Internal constraint requires: *I must satisfy people around him.*

Engaged to the work have received from their parents appropriate praise and criticism and a clear and consistent expectations, requirements and limits and unconditional affection regardless of the child's achievements.

Parents of shizoid motivated imposied to child only their own needs, or have a child fully rejected. So he learned, that he wouldn't be isolated only if doing what is expected of him.

Internal constraint is: *I'm safe only when I (perfect) do what they ask me.*

Parents of anankastic motivated did not accept the child's (constructive) aggressiveness - research, assertion, requirements, but supported only diligence and obedience. Child was allowed to compete only in the "dilligence".
Hence the inner compulsion: *I want to make effort, to be better than others.*

Fourteenth hypothesis was accepted, but with certain methodological limitations (cross-sectional study).

The main results of the research are:

1. Those who are burning-out are less emotionally stable, more introvert and have lower values.

2. In those who are burning-out self-esteem is strongly dependent on achievements (performance based). They also more postpone of meeting the needs. Among factors of ABS questionnaire the performance based self-esteem is also most strongly associated with workaholism.

3. More satisfied with life are those who have better satisfied basic needs, are emotionally more stable and more conscientious and have higher expressed sensory values.

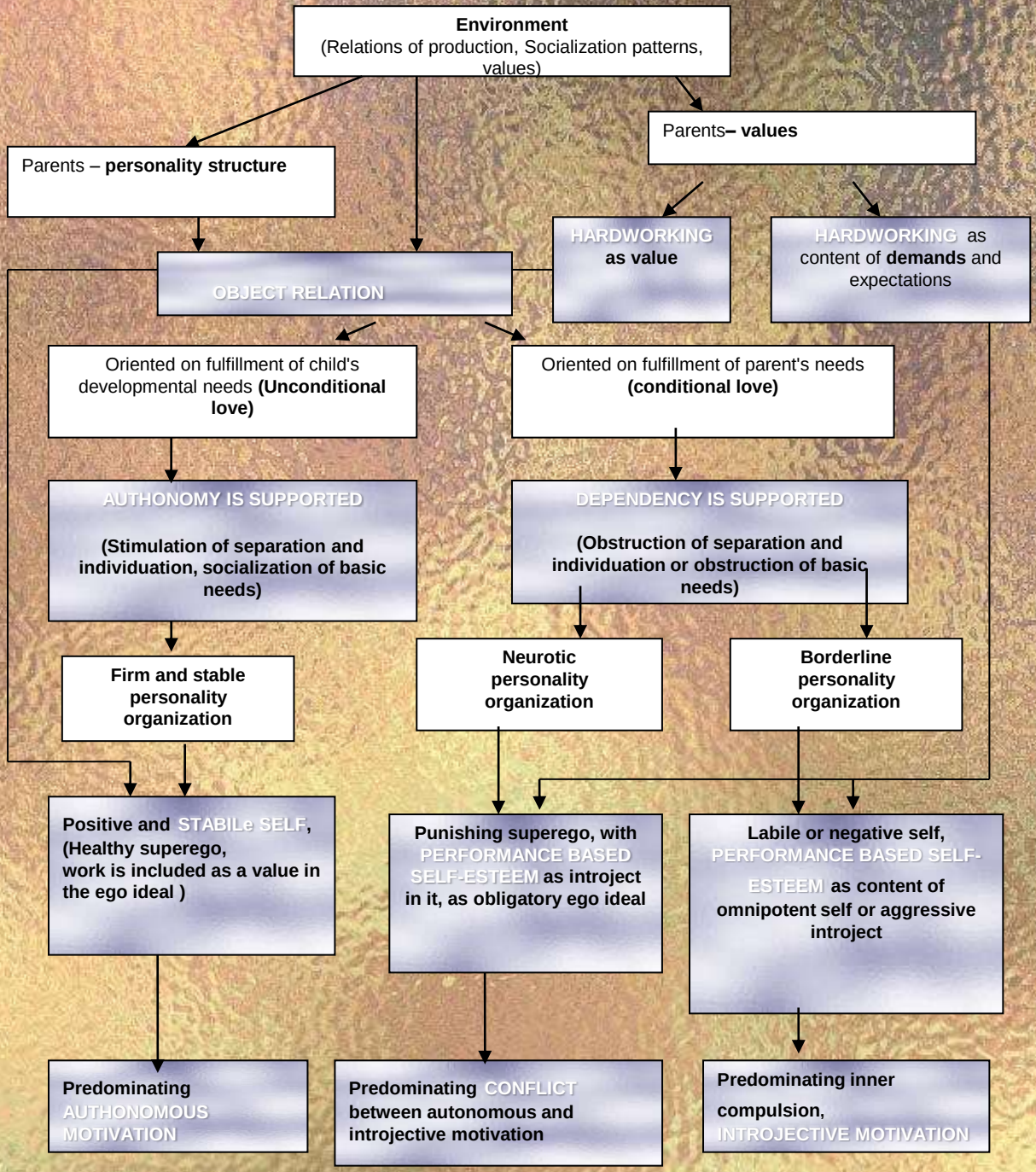
4. More are burning-out those people whose self-esteem is more performance based, which has lower satisfied thire basic needs and for whom their status is more important than self-fulfillment. Of all the intrapersonal factors the performance based self-esteem is most strongly associated with burnout.

5. After adrenal collapse the signs of elevated cortisol are reduced and the signs of reduced cortisol are rised, and also some values and personality traits can be changed. The importance of productivity is reduced, but the self-esteem and the importance of meeting their own basic needs is raised.

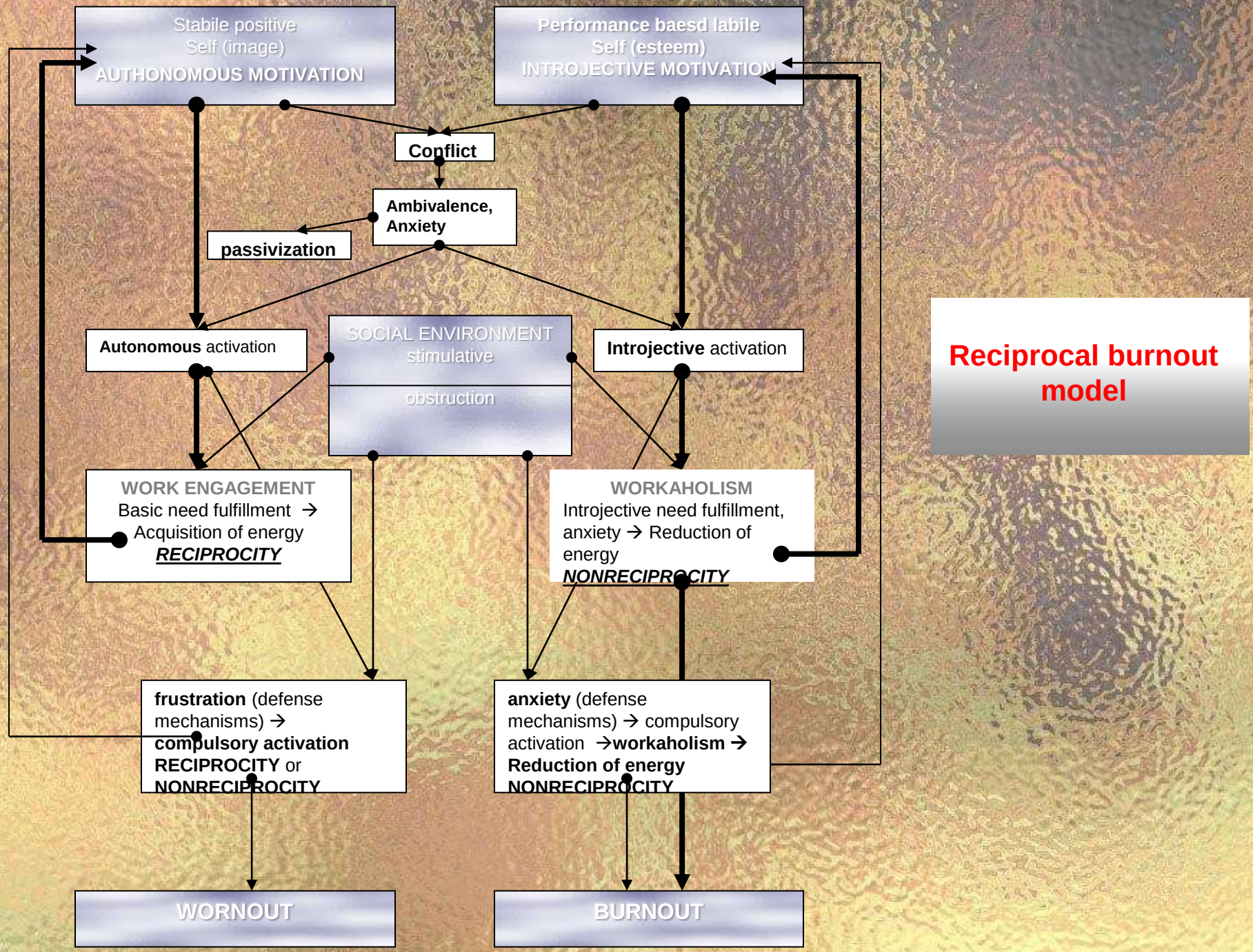
6. Workaholism is the behavioral component of the performance based self-esteem . Burnout and engaged state different reasons (type of motivation) for high working engagement. In burnout testees four types of introjektne motivation occur, in engaged to work the autonomous motivation is main.

7. Burnout report about such forms of object relations, where conditional love is dominated and which do not support the process of separation and individuation.

8. Burning-out may induce long-term psychological work or life circumstances (triggering situations), which are for individual objective or subjective similar to emotional situations from childhood, when they either (unsuccessfully) tried to obtain either unconditional love of parents either have (unsuccessfully) tried to protect themselves from their excessive and intrusive requirements.



Formating of performance based self-esteem as inner compulsion



Reciprocal burnout model

CONCLUSION

Parenting with conditional love in families that strongly emphasize productivity, could lead to this, that demanf for productivity becomes aggressive introjekt. It may lead to the formation of unstable self-image, dependent on external approval (performance based self-esteem), which functions as introjektna motivation.

When external demands objectively coincide with the contents of introjektnih motives, such a persone responds with overcompensate pseudoauthonomous practicing (workaholism).

Burning-out so may trigger long-term psychological circumstances (work or life), which are for individual objective or subjective similar to emotional situations from childhood, when they either (unsuccessfully) tried to obtain either unconditional love of parents either have (unsuccessfully) tried to protect themselves from their excessive and intrusive requirements.

Burning-out can therefore be understood as a process, which is the result of unsuccessful (workaholic) efforts, to with the achievements, that are an integral part of the self-assessment, maintain a stable self-image. Burnout the decompensation, which is the final result of this process of selfexhaustion through overcompensated activity.

Methodological limitations

- Due to ad hoc collection inspite of the sample size is not possible to generalizeto the whole population without any reserve.
- Cross-sectional data collection, for which there is no definite conclusion on causally-consecutively relationships.
- In designing the questionnaire, we are aware of the theoretical possibility of subjective influence of the theoretical background on choice and design of research issues and on the evaluation of responses, as well as the understanding and interpretation of numerical results of quantitative research.
- The results of the qualitative research can be very strong subjective influented as the explorer is the part of context (measuring instrument) and not just an objective observer.
- A further limitation of the qualitative results is the comparison between demographically similar, but unequal in size testees samples.
- Comorbidity possible, particularly with depression.

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The practical application and suggestions of further research

- As a result of this study would be very important to devote an attention to distinction between burnout and wornout and to the role of factors involved in the formation of performance based self-esteem as well as upon those who are decisive to whether the persone will be engaged to work or will become workaholic, who will continually invest his energy in nonreciprocal relations and may with time experience burnout.

- Essential would be researches which coul lead to the combination of the most appropriate intervention approaches to prevent and to cure the effects of burnout, as well as monitoring long-term effects of specific groups of interventions.

- Finally, the need is to continue investigating comorbidity with similar disorders (depression, anxiety, CFU). It should be important to examine whether the performance based self-esteem and even workaholism are maybe those characteristics, whicha are separating burnout and depression in early stages of burning-out, in which cortisol is elevated also among those, who are burning out, and what role might play the energy equipment.

References

Altun, I. (2002). Burnout and Nurses' Personal and Professional Values. *Nursing Ethics*, 9, 3, 269-278.

Assor, A., Roth, G., & Deci, E. L. (2004). The Emotional Costs of Parents' Conditional Regard: A Self-Determination Theory. *Journal of Personality,* 72, 47–88.

Freudenberger, H.J. (1974). Staff Burnout. *Journal of social Issues*, 30, 159-165.

Hallsten, L., Josephson, M., & Torgén, M. (2005). Performance-based self-esteem. A driving force in burnout proces and its assessment, *Arbete och Halsa*, 4, 117--139.

Maslach, C. (1976). Burned-out. *Human Behaviour*, 5, 16-22.

Ogden, T. H. (1992). *Projective Identification and Psychotherapeutic Technique*. London: Karnac Books (str. 90).

Paine, W.S. (1981).The burnout syndrome in context. In J. Jones (Ed.), *The burnout syndrome: Current research, theory, and interventions.* Park Ridge: London House.

Pines, A. M., (1993). Burnout, citirano v Goldberger V.L., Breznitz S., *Handbook of stress, Theoritical and Clinical aspects,* 386-402.

Schaufeli, W.B., Salanova, M., González-Romá. V., & Bakker, A.B. (2002). The measurement of engagement and burnout: A confirmatory factor analytic approach. *Journal of Happiness Studies*, 3, 71–92.

Schaufeli, W.B., & Buunk, B.P. (2003). Burnout: An overview of 25 years of research in theorizing. v Schabracq,. M.J., Winnubst, J.A.M., in. Cooper C.L. (Eds.). *The handbook of work and health psychology,* 383-425. Chichester: Wiley.

Schaufeli, W. B., Taris, T. W., & van Rhenen, W. (2008). Workaholism, Burnout, and Work Engagement: Three of a Kind or Three Different Kinds of Employee Well-being? . *Applied Psychology: An International Review*, 57, 2, 173–203.