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# Burnout Syndrome, Mental Splitting and Depression in Female Health Care Professionals

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**Background:** The early days of a given experience are associated with typically what might be characterized as an idealized enthusiasm. Conversely burnout syndrome experienced later in the given experience is associated with disillusionment, disappointment, and symptoms which resemble a depression. This very common propensity is a parallel to the concept of "splitting" described by Kernberg with a pronounced "black and white" perceptual dichotomy between the early idealization and later disillusionment. This study intends examination of relationships between burnout syndrome, depression, and Kernberg's concept of splitting.




**Material/Methods:** In this present study, we assessed 132 female health care professionals working with a population of diabetic patients utilizing Burnout Measure (BM) Splitting Index (SI), Beck Depression Inventory II (BDI-II), and additional psychometric instruments, the Toronto Alexithymia Scale and the Trauma Symptoms Checklist.

**Results:** The study results indicated significant Spearman correlations between burnout syndrome as measured by BM and depression (BDI-II) ( $R=0.62$ ,  $P<0.01$ ), and burnout syndrome as measured by BM and splitting (SI) ( $R=0.45$ ,  $P<0.01$ ). These findings may have implications for prevention and treatment of burnout syndrome.

**Conclusions:** The current study findings provide implications that the defensive mechanism of splitting may allow for the prediction of burnout symptoms which in turn may allow for the prediction of burnout syndrome. This dynamics may potentially be of use in both the potential detection and prevention of burnout syndrome.

**MeSH Keywords:** **Burnout, Professional • Depression • Stress Disorders, Post-Traumatic**

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## Background

An ongoing debate exists as to the relationship between depression and burnout syndrome. Contention exists as to the potential of burnout as an accelerant of depression or conversely the possibility that both characterizations represent the same disorder, making burnout syndrome rightly classified as a psychopathology [1–3]. Previous research suggests that the 2 conceptualizations are in fact disparate entities, noting as a primary differentiation an association between work or occupation and burnout, while depression exists free of any context [4,5]. However, the findings are mixed with some studies asserting that burnout and depression are not solely independent [6,7]. It appears that the symptomatology of depression and burnout syndrome exhibit similar “qualitative” characteristics, particularly in the most severe forms and those displayed in the final stages of burnout [1,2,8,9].

Previous research has found burnout syndrome originating with attitudes of enthusiasm and idealized visualizations in the afflicted individuals [8–10]. During the earliest stages of burnout, a tendency exists towards overcommitment and assumption of overload reflecting unrealistic expectations about the given individual’s capabilities, and also the neglect or denial of other possibilities. Furthermore, while a general attitudes of “all good” positivity, and naïve enthusiasm is maintained in the early days of the work, this distinctly contrasts with later disillusionment and disappointment [8,9,11]. This propensity towards idealization and a binary “black-and-white” conceptualization exists in parallel to Kernberg’s concept of splitting [12] which is characterized by oscillating between contradictory perceptions towards the same object (based on painful-bad-punishing experiences and pleasurable-good-rewarding). In accordance to these propensities, the experience of a given object’s contradictory qualities (“all good” or “all bad”) is associated with undifferentiated self-object representations [12,13]. These findings strongly suggest that naïve enthusiasm creating false unreal perspective and inappropriate denial of negative consequences which are related to burnout might be in fact produced by defense mechanism of splitting, which is also characterized by inappropriate “black or white seeing”. This splitting mechanism also creates false interpretation of future possibilities with the tendency to create in certain conditions idealized unreal perspectives that later may result in burnout development [8,9,11–13].

In recent research, there has been no evidence about the specific relationships of splitting and symptoms of burnout syndrome. Within this context, this current study aimed to examine the relationships between depression, burnout symptoms, splitting, and additional stress-related psychopathological symptoms and alexithymia.

## Material and Methods

### Participants

Study participants included 132 female members of the Czech Diabetes Society, a non-profit organization representing health care professionals in the Czech Republic with an interest in diabetes and related topics (number of male members who were willing to participate in the study was under statistical significance for the statistical analyses). The group was comprised of 112 medical doctors (diabetologists), 16 medical nurses, and 4 other professionals. Participants in the study included 19% women in the age category 31–40 years, 33% in the category 41–50 year, 34% in 51–60 years, 11% in 61–70 years, and 3% over 70 years of age. Participation in the current study was approved by the Czech Diabetes Society. Questionnaires were administered to all participants via an online system specifically prepared for this research.

### Psychometric measures

#### *Beck Depression Inventory (BDI-II)*

Depressive symptoms were assessed utilizing a Czech version of the Beck Depression Inventory [14] which utilizes a 21-item questionnaire for depression assessment (Cronbach’s alpha 0.89, test-retest reliability after week 0.85). Items are presented on a 4-point Likert scale for indication of severity in depressive symptoms. The scale is sensitive to changes of the mental state of the individual over the course of time.

#### *Splitting Index (SI)*

Symptoms of splitting were evaluated utilizing a self-reported Splitting Index (SI) [13] which has been proposed to test defense mechanisms as described by Otto Kernberg [12]. SI is a 24-item self-reported questionnaire utilizing a on 5-point Likert scale (Cronbach’s alfa 0.92, test-retest reliability after one week 0.82). Factor analysis differentiates 3 clusters of items which are identified to enable description of the splitting process. These 3 identified factor clusters represent the self-factor (splitting of the self-image), the family factor (splitting of images of family members), and the factor of others pertaining to people outside the family.

#### *Burnout Measure (BM)*

The study participant’s level of burnout was assessed utilizing the Burnout Measure (BM) [15,16]. The original 21-item BM total-score was included for reasons of comparability with other studies and for more generic view on burnout as a psychic disorder (rather than other instruments, e.g., the Maslach Burnout Inventory). BM items were scored on a 7-point rating scale ranging from 1 “never” to 7 “always” [17].

### Toronto Alexithymia Scale (TAS-20)

Alexithymia was assessed utilizing the validated Czech version of the 20-item Toronto Alexithymia Scale (TAS-20) (Cronbach's alpha 0.81, test-retest reliability after 1 week 0.77) [18]. Each question is scored on a five-point Likert scale (1-5) and the TAS total score has a range from 20 to 100.

### Trauma Symptoms Checklist (TSC-40)

Traumatic stress symptoms were evaluated utilizing the Trauma Symptoms Checklist (TSC-40) [19]. TSC-40 is a self-reported questionnaire with 40 items scored on a 4-point Likert scale (total score from 0 to 120). TSC-40 assesses stress symptoms in adult individuals associated with childhood or adult traumatic experiences and measures aspects of posttraumatic stress and other symptom clusters found in some traumatized individuals. The scale includes subscales for dissociation, anxiety, depression, sexual abuse trauma index (SATI), sleep disturbances, and sexual problems. The Czech version of the TSC-40 has high reliability and internal consistency (Cronbach's alpha 0.91, test-retest reliability after one week 0.88).

### Statistical methods

Statistical evaluations of psychometric measures included means, standard deviations, and Spearman correlation. The main advantage of using non-parametric analysis is that it's a very conservative approach to outliers and leverage points, which in the case of using parametric correlations or regression analysis may create false results and increase risk of inappropriate rejection of the null hypothesis [20]. In addition, previous research has indicated this statistical analysis is appropriate for psychopathological data reflecting traumatic stress symptoms that usually have not normal distribution [21,22]. All the methods of statistical evaluation were performed using the software package Statistica version 6.

## Results

The primary results of the current study indicate significant Spearman correlations between depression (BDI-II) with burnout syndrome as measured by BM ( $R=0.62$ ,  $P<0.01$ ) and splitting (SI) with burnout syndrome as measured by BM ( $R=0.45$ ,  $P<0.01$ ). Additional results indicate relationships of BM score with traumatic stress symptoms measured by TSC-40 ( $R=0.61$ ,  $P<0.01$ ), BM with alexithymia measured by TAS-20 ( $R=0.32$ ,  $P<0.01$ ), and relationships of SI with TSC-40 ( $R=0.49$ ,  $P<0.01$ ) and SI with TAS-20 ( $R=0.46$ ,  $P<0.01$ ). The results also indicate significant correlations of BDI-II with TSC-40 ( $R=0.77$ ,  $P<0.01$ ) and BDI-II with TAS-20 ( $R=0.41$ ,  $P<0.01$ ). Other results of Spearman analysis are in Table 1.

**Table 1.** Spearman correlations coefficients for psychometric data.

	BM	SI	BDI-II	TSC-40
BM	1			
SI	0.45	1		
BDI-II	0.62	0.48	1	
TSC-40	0.61	0.49	0.77	1
TAS-20	0.32	0.46	0.41	0.50

BM – Burnout Measure; SI – Splitting Index, BDI-II – Beck Depression Inventory II; TAS-20 – Toronto Alexithymia Scale; TSC-40 – Trauma Symptoms Checklist.

## Discussion

The primary results of the current study support the hypothesis assessed in this research study indicating that symptoms of burnout syndrome are related to unstable perceptual and emotional patterns related to “splitting” and depressive symptoms [12,13]. These findings indicate that naïve enthusiasm creating false unreal perspective and inappropriate denial of negative consequences related to burnout are likely psychodynamically linked to defense mechanism of splitting, which is also characterized by inappropriate “black or white seeing” creating idealized unreal perspectives that may result in burnout development [8,9,11–13]. These results strongly suggest that assessment of splitting as an underlying vulnerability which may lead to burnout could be a useful tool for burnout prevention.

Previously there have been no reported findings assessing the relationship between burnout syndrome and conflicting perceptual and emotional patterns related to “splitting”. Splitting reflects shifts of mind related to a consciously experienced conflict of opposing mental forces [12,13]. This fragmentation of conscious experience represented by unexpected shifts between devaluation and idealization of other persons and the self is typically related to acute or long-term stressful experiences that also play a significant role in etiopathogenesis of depression [23]. This is in agreement with the results of the current study which indicates relationships of traumatic stress symptoms with splitting as well as with depression and alexithymia representing emotional blindness and affective instability [18,24]. Additionally, the relationship between depression and burnout syndrome is highly significant and some symptoms are identical particularly in the last stages of burnout (feeling of meaninglessness, loss of energy and motivation). In this context, some researchers have suggested that burnout is a type of depression [7], and for example, according to Bianchi et al. [6] the current research is unable to clearly differentiate depression from burnout, particularly in the last stages

of the burnout process when the symptoms strongly resemble clinical depression. The results of this study, within this context, suggest that assessment of splitting may have efficacy as a possible predictor for burnout symptoms and depression. Certain limitation of this study include that the results represent only a female sample of participants; further research that includes a male population is warranted.

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## Conclusions

Results of the current study suggest that the defense mechanism of splitting could enable prediction of burnout symptoms and might predict development of burnout and could be used in screening and prevention programs of burnout syndrome.

## Conflict of interest

The authors declare no conflict of interest.