

Severe occupational hand eczema, job stress and cumulative sickness absence

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Background	Stress is known to activate or exacerbate dermatoses, but the relationships between chronic stress, job-related stress and sickness absence among occupational hand eczema (OHE) patients are inadequately understood.
Aims	To see whether chronic stress or burnout symptoms were associated with cumulative sickness absence in patients with OHE and to determine which factors predicted sickness absence in a model including measures of job-related and chronic stress.
Methods	We investigated correlations of these factors in employed adult inpatients with a history of sickness absence due to OHE in a retrospective cross-sectional explorative study, which assessed chronic stress (Trier Inventory for the Assessment of Chronic Stress), burnout (Shirom Melamed Burnout Measure), clinical symptom severity (Osnabrück Hand Eczema Severity Index), perceived symptom severity, demographic characteristics and cumulative days of sickness absence.
Results	The study group consisted of 122 patients. OHE symptoms were not more severe among patients experiencing greater stress and burnout. Women reported higher levels of chronic stress on some measures. Cumulative days of sickness absence correlated with individual dimensions of job-related stress and, in multiple regression analysis, with an overall measure of chronic stress.
Conclusions	Chronic stress is an additional factor predicting cumulative sickness absence among severely affected OHE patients. Other relevant factors for this study sample included the 'cognitive weariness' subscale of the Shirom Melamed Burnout Measure and the physical component summary score of the SF-36, a measure of health-related life quality. Prevention and rehabilitation should take job stress into consideration in multidisciplinary treatment strategies for severely affected OHE patients.
Key words	Burnout; job stress; occupational hand eczema; sickness absence.

Introduction

Hand eczema is a common chronic relapsing skin ailment with a poor long-term prognosis. It involves an inflammatory skin response to allergic, irritant and atopic factors. The 1 year prevalence of hand eczema is estimated at nearly 10% of the general population, disproportionately affecting women [1]. Occupational hand eczema (OHE) refers to eczema caused or aggravated by work and resulting in sickness absence. OHE comprises between 9 and 35% of all occupational diseases in advanced industrial

societies [2]. An estimated 5% of affected individuals experience significant negative occupational outcomes such as prolonged sickness absence, payment of disability pensions or benefits, or forced change of occupation [3–5]. Individuals with hand eczema commonly report several kinds of adverse personal health consequences, including lowered quality of life, in terms both of specific aspects of skin health and of general psychological health [6–10]. Severe impairment of quality of life was found to be a strong predictor of prolonged sickness absence in a 1 year longitudinal study [5]. A correlation between

psychological stress and the onset and exacerbation of the skin disorders that are commonly implicated in OHE is moderately well established [11–13]. Individuals who believe that their skin is sensitive to stress ('stress responders') report more severe symptoms, more severe depression and more stressful life events [14]. Hand eczema has been shown in epidemiological studies to be more common among individuals who report high general and job-related stress [15], but the directionality of the relationship between stress and the symptoms of dermatoses has not been established.

Mental disorders such as anxiety and depression are highly prevalent throughout Europe and have become common causes of sickness absence and disability pension and benefit payments [16]. In this context, burnout syndrome has received increasing attention. Burnout is not a recognized stand-alone diagnosis and does not constitute grounds for sickness absence in most countries. However, the symptoms associated with the syndrome are closely related to depression and it is mentioned in the International Statistical Classification of Diseases and Related Health Problems as a factor influencing health status. It is implicated in sickness absence and thought to be a precursor to payment of disability pensions and benefits [17]. The three main symptoms attributed to burnout are mental and physical exhaustion, depersonalization in service professions in which employees must interact emotionally with service users and reduced personal efficacy at work. In theory, burnout syndrome is related to chronic exposure to high job-related stress and a depletion over time of the physical, cognitive and emotional resources that are important for resisting the negative health consequences of stress [18]. Variance in cumulative sickness absence among OHE patients may be explained in part by burnout symptoms, although the predictive power of burnout measures has not yet been shown. Few studies of hand dermatoses look specifically at job stress, examining more often sources of stress not directly related to work such as family relationships or life events [11,14]. The epidemiological study of Anveden *et al.* [15] did, however, find an association between hand eczema prevalence and a measure of 'job strain'. No existing study of the effects of stress assesses symptom severity using a validated clinical instrument administered by physicians.

There is reason to expect significant differences in how men and women react to stress and how they perceive the individual consequences of OHE. Women's perception of stress and sensitivity to impairments has been found to be higher than men's [19,20]. Women are more likely to report higher anxiety or emotional disturbances related to dermatoses as well as disturbances in daily life (as opposed to the workplace) [2,7,10,19]. Women may also have a higher psychological sensitivity to skin problems that appear on parts of the body that are visible in social interaction [21]. These findings may

reflect the fact that women are often more dependent on social interaction for feelings of personal well-being [22] or that hand eczema impairs activities such as housework that are disproportionately borne by women [20].

This study sought to answer five specific questions for employed patients with severe OHE.

1. Are perceived levels of chronic stress and burnout higher among OHE patients relative to reported levels among healthy individuals?
2. Among OHE patients, are differences in perceived chronic stress associated with variance in age, sex, cumulative sickness absence, clinically diagnosed symptom severity, itch, pain, sleeplessness, anxiety, depression, life quality and burnout?
3. Among OHE patients, are differences in perceived burnout associated with variance in age, sex, cumulative sickness absence, clinically diagnosed symptom severity, itch, pain, sleeplessness, anxiety, depression, life quality and chronic stress?
4. Is perceived chronic stress or job burnout associated with longer periods of sickness absence among OHE patients?
5. What factors are associated with sickness absence among employed individuals with severe OHE in a multifactor model?

Methods

The study population consisted of patients absent from work due to OHE. The study was undertaken in two dermatology clinics providing a 3 week multidisciplinary inpatient tertiary prevention regimen for patients with various occupational dermatoses [23]. Selection took place over a 12 month period beginning in May 2008. The inclusion criteria were as follows: minimum age 18 years, OHE resistant to outpatient treatment of at least 6 months' duration, written consent and language competence. Exclusion criteria were occupational dermatoses other than hand eczema and severe chronic internal diseases. Patients whose hand eczema was not due to occupation were excluded. New patients were assessed consecutively for eligibility. All eligible persons participated, filling out questionnaires for the assessment of mental stress, symptoms of depression, anxiety and health-related quality of life before beginning diagnostic investigations or therapy. Physical examination and classification of diagnoses were conducted by board-certified occupational dermatologists. The study was approved by the Hanover Medical School's ethics committee.

For this retrospective cross-sectional explorative design, data were analysed using SPSS for Windows version 19.0 (Released 2010, SPSS Inc., Chicago, IL, USA). Prior to analysis, data distributions were tested for normality using the Kolmogorov–Smirnov method. Normal distributions existed for all variables except for cumulative

sickness absence, which was skewed to the left. Pearson and Spearman correlations were calculated to test for the significance of bivariate associations among variables. Differences in group scores were calculated using *t*-tests. Chi-square analysis was used to examine differences in dichotomized variables between groups. Significance tests were two-tailed. Stepwise linear regression analyses were used to explore factors explaining cumulative sickness absence. Bonferroni correction was not undertaken in these explorative analyses. This lowers the probability of overlooking significant correlations while raising the possibility of attributing significance to insignificant correlations.

Severity of hand eczema was evaluated by a physician using a scoring system (Osnabrück Hand Eczema Severity Index, OHSI). This system involves estimating for each of six morphological signs (erythema, scaling, papules, vesicles, infiltration and fissuring), extent of the affected area on a scale from 0 to 3. The total score (0–18) is obtained by adding the affected area scores. Severe hand eczema was defined as OHSI > 7 [24].

The intensity of pruritus, sleeplessness and pain was self-rated by patients using a visual analogue scale (VAS) ranging from 0 (no symptoms at all) to 10 (worst possible severity). Patients were told to reflect on the past 3 days when answering. For measuring chronic stress, we used the Trier Inventory for the Assessment of Chronic Stress (TICS) in the short 39-item version [25]. It contains six subscales measuring various kinds of chronic stress experience: work overload (eight items), work discontent (five items), social stress (six items), lack of social recognition (eight items), worries (six items) and intrusive memories of an unpleasant nature (six items). Each item is assigned a score from 1 (least stressful) to 5 (most stressful). Patients were asked to consider their condition over the previous month when answering the questions. Because of high correlation among the subscales in the study population ($P < 0.001$; see additional data tables, available as Supplementary data at *Occupational Medicine* Online), a total score was calculated by adding the subscores, although this procedure is not common. The mean total TICS score for the sample was used as a cut-off between 'low' and 'high' chronic stress groups.

Job-related burnout in our sample was measured using a German translation of the Shirom Melamed Burnout Measure (SMBM) [18]. Its 14 items are grouped into three subscales related to different aspects of exhaustion: emotional exhaustion (three items), physical fatigue (six items) and cognitive weariness (five items). Mean values were calculated for each subscale and for the total SMBM separately. All scores range from 0 (best) to 7 (worst). Patients were asked to consider their condition during the past 30 work days when answering the questions. Mean scores exceeding 4.0 were interpreted as indicating significant burnout symptoms, following Norlund *et al.* [26].

The cumulative number of days of sickness absence was used as the sole measure of negative occupational outcome. The study controlled for common explanatory variables including anxiety and depression (German version of the Hospital Anxiety and Depression Scale, HADS), general health-related quality of life (German version of the Short Form Health Survey, SF-36) and skin-related quality of life (German version of the Dermatology Life Quality Index, DLQI) [27–29]. The SF-36 contains eight subscales: physical functioning, role-physical functioning, role-emotional functioning, social functioning, pain, vitality, mental health and general health perception. These can be grouped into mental and physical component summary measures [28]. Patients were asked to answer these questions with reference to their condition during the past month (HADS and SF-36) or week (DLQI). Detailed information on these measures is available from a companion study, which investigated relationships between depression, anxiety, life quality and OHE specifically [10].

Results

From a total of 453 screened individuals, 122 patients met the eligibility requirements. The study population comprised 82 women (67%) and 40 men (33%) with a mean $\pm$ standard deviation age of 42 ± 13 (range 19–65). All were employed. Patients were diagnosed with irritant-induced atopic hand eczema (68%), 'pure' irritant contact dermatitis with no atopic predisposition (25%) and primary allergic contact dermatitis (7%). The mean duration of hand eczema was 74 months (SD $\pm$ 95, range 6–540), with no significant difference between men and women. Twenty-five per cent (30) were on sickness absence due to hand eczema at the time of admission. The mean cumulative number of days of sickness absence was 61 (SD $\pm$ 97, range 0–730) without significant gender differences. Following the criteria of Hanifin and Rajka [30], 35% (43 patients) exhibited eczematous lesions on body parts other than the hands and all of these were clinically diagnosed with mild atopic dermatitis. Women reported significantly ($P < 0.05$) higher symptom intensity for itch, sleeplessness and pain on the VAS.

Complete TICS data were available for 111 patients. The total TICS score was 98 ± 19 (mean $\pm$ standard deviation) for the total study population. Mean TICS absolute values are given in Table 1. The highest reported stress levels were for the subscale 'work overload'. Women had a significantly higher mean total TICS than males and scored significantly higher in the TICS subscales of work overload, worries and intrusive memories.

Using the sample's mean total TICS score as a cut-off point, 52% (58 patients) were classified with 'high' stress and 48% (53) with 'low' stress (Table 2). Greater impairment was present among patients scoring 'high' on chronic

Table 1. Chronic stress (TICS) absolute scores

	Total study population (<i>n</i> = 111) [mean (SD, range)]	Women (<i>n</i> = 74) [mean (SD)]	Men (<i>n</i> = 37) [mean (SD)]
Work overload (eight items)	22.4 (5.9, 9–39)	23.3 (6.0)	20.5 (5.4)*
Work discontent (five items)	12.2 (3.4, 6–23)	12.3 (3.7)	12.0 (2.9)
Social stress (six items)	14.0 (3.3, 6–23)	14.2 (3.3)	13.4 (3.3)
Lack of social recognition (eight items)	18.2 (4.0, 9–29)	17.8 (4.1)	19.1 (3.6)
Worries (six items)	16.4 (4.4, 7–29)	17.1 (4.5)	15.0 (3.8)*
Intrusive memories (six items)	15.0 (4.0, 6–28)	15.8 (4.2)	13.1 (3.0)**
Total score	98.2 (18.7, 47–160)	100.9 (19.1)	92.7 (16.8)*

* $P < 0.05$; ** $P < 0.001$.

stress for the symptoms of anxiety and depression, for all dimensions of burnout, for some dimensions of health-related life quality as measured with the SF-36 (notably role-emotional functioning) and on the daily activities dimension of the DLQI. All subscales showed high intercorrelation ($P < 0.001$; see additional data tables, available as Supplementary data at *Occupational Medicine* Online). The groups did not differ significantly for any other factor, including cumulative days of sickness absence. However, the TICS subscales 'lack of social recognition' and 'work discontent' correlated with cumulative days of sickness absence (Spearman correlation: $r = 0.25$, $P = 0.020$; $r = 0.22$, $P < 0.05$). Here, the direction of causality may operate in both directions.

Complete SMBM data were available for 120 patients (Table 3). Physical fatigue was the most affected dimension of burnout, followed by cognitive weariness and emotional exhaustion. Women scored higher on physical fatigue. All subscales showed high intercorrelation ($P < 0.001$; see additional data tables, available as Supplementary data at *Occupational Medicine* Online). Using an SMBM total score of 4.0 to differentiate patients with 'low' and 'high' burnout, 30% (36 patients) scored 'high' (Table 2). When 'high' and 'low' burnout patients were compared, the former reported more symptoms of anxiety, depression and chronic stress. Greater impairment in the DLQI dimensions of physical health and leisure and in many of the SF-36 subscales was found in patients scoring 'high' on burnout. The groups did not differ on other variables. Using Spearman correlation, the cognitive weariness dimension of the SMBM was found to have varied weakly but significantly with cumulative days of sickness absence ($r = 0.21$; $P < 0.05$).

Known predictors of sickness absence among OHE patients are lowered quality of life, symptom severity, older age and low socioeconomic status [5]. In a stepwise multivariate regression analysis (results in Table 4) looking at these predictors, we examined the effect of three measures of quality of life (SF-36 mental and physical component summary scores and DLQI), OHSI, age and educational attainment on cumulative days of sickness absence. Duration of sickness in months was controlled

for. The only variable of any significance was the physical component summary score of the SF-36 (standardized β -weight -0.27 , $P < 0.05$) such that poorer quality of life was associated with more cumulative sickness absence in our sample. In a second model, we added the two variables of SMBM total score and TICS total score. Adding these factors increased the predictive power of the model, although it remained low overall at 10%; TICS total score was the only significant predictor (standardized β -weight 0.31 , $P < 0.05$). In summary, multivariate models of the predictors of sickness absence suggested a role for chronic stress, albeit at a very low level of overall significance and effect strength.

Discussion

The principal finding of the study was that chronic stress was associated with longer periods of sickness absence in the study population. It was the most significant predictor in a multivariate analysis that included conventional explanatory variables. However, it should be noted that the standard of statistical significance used was lower than the standard for hypothesis testing, as we did not employ Bonferroni correction. The lower standard, which lowers the probability of overlooking significant correlations, is appropriate for explorative research looking into as yet undiscovered relationships among theoretically significant factors. This does not affect the robustness of the multivariate analyses. On average, the patients included in this study did not report especially high stress levels compared with a population of students assessed using the same instrument [25]. Burnout levels were elevated, with 30% of the study sample reporting high burnout symptoms compared with 13% of individuals in a randomly chosen sample of the general working population in Sweden using the same cut-off point [26]. In bivariate analyses, neither TICS total score nor SMBM total score were related to symptom severity, age, cumulative sickness absence or subjective levels of itch, pain, sleeplessness, anxiety, depression or life quality. Chronic stress and burnout symptoms as measured by the SMBM were however related to each other in this sample. Some subscales of our chronic stress

Table 2. Characteristics of high and low TICS ($n = 111$) and SMBM ($n = 120$) groups

	Low TICS [mean (SD)] $n = 58$	High TICS [mean (SD)] $n = 53$	Low SMBM [mean (SD)] $n = 84$	High SMBM [mean (SD)] $n = 36$
Age	41.1 (13.0)	42.1 (13.3)	42.6 (12.8)	42.0 (13.2)
OHSI	6.5 (3.5)	5.5 (2.7)	5.9 (3.2)	6.5 (3.0)
Cumulative days of sickness absence	50.3 (57.9)	66.5 (131.3)	51.8 (60.9)	86.0 (152.5)
VAS				
Pruritus	4.3 (2.9)	4.7 (2.8)	4.5 (2.9)	5.2 (3.1)
Sleeplessness	2.8 (2.9)	3.9 (3.2)	3.2 (3.0)	4.3 (3.5)
Pain	2.7 (3.3)	2.2 (2.9)	3.1 (3.4)	2.4 (3.5)
DLQI				
Symptoms and feelings	2.9 (1.7)	3.1 (1.4)	3.0 (1.6)	3.4 (1.8)
Daily activities	1.8 (1.4)	2.4 (1.7)*	2.0 (1.5)	2.5 (1.8)
Leisure	1.6 (1.8)	2.0 (1.8)	1.6 (1.7)	2.4 (2.0)*
Work/school	1.7 (1.2)	1.9 (1.1)	1.7 (1.1)	2.1 (1.1)
Personal relationships	1.1 (1.5)	1.4 (1.6)	1.2 (1.6)	1.8 (1.7)
Treatment	0.9 (0.9)	0.9 (0.8)	0.9 (0.9)	1.0 (0.8)
Physical health	5.5 (3.6)	6.4 (3.8)	5.6 (3.6)	7.3 (4.1)*
Mental health	4.6 (3.1)	5.2 (3.0)	4.9 (3.3)	5.7 (3.3)
Total score	10.3 (6.2)	11.4 (6.3)	10.6 (6.5)	12.5 (6.7)
SF-36				
Physical functioning	88.6 (12.2)	82.6 (14.7)*	88.2 (11.6)	76.5 (18.4)***
Role-physical functioning	55.6 (42.2)	40.1 (39.9)*	56.0 (42.1)	34.0 (36.4)**
Role-emotional functioning	78.7 (37.3)	47.8 (44.1)***	75.8 (37.8)	37.0 (42.0)***
Social functioning	81.3 (24.1)	67.2 (26.4)**	81.5 (22.8)	57.3 (25.2)***
Pain	47.3 (8.5)	45.1 (10.9)	46.6 (9.0)	46.6 (11.5)
Vitality	51.6 (9.0)	55.5 (11.7)*	50.7 (12.4)	56.8 (7.7)**
Mental health	60.7 (8.5)	59.8 (9.2)	61.2 (9.1)	57.4 (8.0)*
General health perception	64.0 (14.6)	56.9 (15.9)*	63.6 (15.4)	52.0 (15.0)***
Mental component summary	46.2 (6.5)	42.0 (9.0)**	46.0 (7.0)	39.7 (8.2)***
Physical component summary	45.0 (5.6)	43.2 (6.2)	45.0 (5.8)	42.0 (6.4)**
HADS				
Anxiety scale	4.9 (2.7)	9.7 (3.5)***	5.9 (3.2)	10.6 (3.4)***
Depression scale	4.8 (2.7)	8.2 (3.5)***	5.7 (3.4)	8.4 (3.3)***
SMBM				
Emotional exhaustion	1.8 (1.1)	3.1 (1.4)***	—	—
Physical fatigue	3.4 (1.2)	4.9 (1.2)***	—	—
Cognitive weariness	2.7 (1.4)	4.3 (1.4)***	—	—
Total score	2.6 (0.9)	4.1 (0.9)***	—	—
TICS				
Work overload	—	—	20.9 (5.6)	26.3 (4.7)***
Work discontent	—	—	11.1 (2.8)	14.9 (3.5)***
Social stress	—	—	13.1 (3.0)	16.2 (3.0)***
Lack of social recognition	—	—	17.2 (3.6)	21.0 (3.5)***
Worries	—	—	15.2 (3.9)	19.6 (3.9)***
Intrusive memories	—	—	14.1 (3.7)	17.6 (4.0)***
Total score	—	—	91.9 (15.7)	114.7 (15.9)***

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

and burnout measures were associated with cumulative sickness absence: the subscales of social recognition and work discontent of the TICS as well as the cognitive weariness dimension of the SMBM. Some gender differences were seen in reported levels of stress and burnout, but none appeared in multivariate analysis. These findings demonstrate that the TICS measure of chronic stress is an additional factor predicting cumulative sickness absence

among severely affected OHE patients. Other relevant factors for this study sample included the 'cognitive weariness' subscale of the SMBM and the physical component summary score of the SF-36, a measure of health-related life quality.

The results of our analysis complement the conclusions of Agner *et al.* [20], who found lower quality of life (measured using the DLQI) to be associated with

Table 3. Burnout (SMBM) scores by gender (*n* = 120) and somatic severity (*n* = 118)

	Total study population (<i>n</i> = 120) [mean (SD, range)]	Women (<i>n</i> = 82) [mean (SD)]	Men (<i>n</i> = 38) [mean (SD)]	OHSI > 7 (<i>n</i> = 37) [mean (SD)]	OHSI ≤ 7 (<i>n</i> = 81) [mean (SD)]
Physical fatigue	4.2 (1.5, 1.0–7.0)	4.4 (1.4)*	3.8 (1.6)	4.3 (1.5)	4.2 (1.4)
Cognitive weariness	3.5 (1.6, 1.0–7.0)	3.5 (1.6)	3.3 (1.7)	4.0 (1.8)	3.3 (1.5)*
Emotional exhaustion	2.5 (1.5, 1.0–7.0)	2.5 (1.4)	2.6 (1.7)	2.6 (1.6)	2.5 (1.4)
Total SMBM score	3.4 (1.2, 1.0–6.3)	3.5 (1.1)	3.3 (1.4)	3.6 (1.4)	3.3 (1.1)

**P* < 0.05.

Table 4. Significant predictors of cumulative sickness absence

	β (standardized)	R ²
Model 1 Variables included: quality of life, symptom severity, age, duration of sickness and educational attainment Reaching significance: SF-36 physical component summary score	–0.27	0.73*
Model 2 Additional variables: SMBM total score and TICS total score Reaching significance: TICS total score	0.31	0.98*

**P* < 0.05.

sickness absence. Our study augments the finding of Misery *et al.* [19] of an association between reported stress and the mental component summary of the SF-12 (a questionnaire used to evaluate subjective health status) among patients seeking medical assistance for various dermatoses by showing that stress is, in turn, associated with sickness absence. It also supports the findings of Cvetkovski *et al.* [5], who found an association between symptom severity, job type and sickness absence but did not consider measures of job stress.

A principal limitation of the study stems from its focus on severely affected OHE patients. Although the highly selective sample makes the study’s findings more robustly applicable to this patient group, the selection only of patients with severe OHE may have introduced bias by restricting variation in measures of symptom severity, life quality and sickness absence. Thus, the inclusion only of severe cases may explain why the overall predictive power of multivariate models was low. Including a broader range of hand eczema patients could increase the predictive power of other commonly recognized factors such as age and symptom severity in a model with greater overall predictive power. On the other hand, this group of severely affected individuals may have been more sensitive to higher job stress compared with less severely affected individuals such that including a broader range of patients could reduce the significance of stress measures. Future research

could test the relationship between chronic job stress and sickness absence among a greater variety of OHE patients.

Preventive as well as rehabilitative measures for patients with occupational skin diseases would profit by taking the psychosocial implications of these disorders into consideration in the continuing development of multidisciplinary treatment strategies. Severely affected OHE patients experiencing chronic job-related stress and exhaustion should be identified and given access to training in coping strategies for work-related stress. Because the results of this study are most valid for individuals with severe cases of OHE, the results indicate a need for a randomized prospective study of the return-to-work effects of stress-coping therapies among this patient group.

Key points

- Burnout symptoms, but not stress levels, were higher in the patient sample than in normal population samples in this study of patients with severe occupational hand eczema.
- Chronic stress as measured by the Trier Inventory for the Assessment of Chronic Stress was a significant predictor of sickness absence duration among people with severe occupational hand eczema.
- Severely affected occupational hand eczema patients experiencing chronic job-related stress and exhaustion should be identified and given access to training in coping strategies for work-related stress.

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Conflicts of interest

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Subscale Intercorrelation Shirom-Melamed Burnout Measure (SMBM) (N=120), Pearson Correlation

	Physical fatigue	Cognitive weariness	Emotional Exhaustion	Total Score
Physical fatigue	1	,591 ^{***}	,392 ^{***}	,820 ^{***}
Cognitive weariness	,591 ^{***}	1	,411 ^{***}	,845 ^{***}
Emotional Exhaustion	,392 ^{***}	,411 ^{***}	1	,740 ^{***}
Total Score	,820 ^{***}	,845 ^{***}	,740 ^{***}	1

*** p<.001

Subscale Interrelation Trier Inventory for the Assessment of Chronic Stress (TICS) (N=111)), Pearson Correlation

	Work overload	Work discontent	Social stress	Lack of social recognition	Worries	Intrusive memories	Total score
Work overload	1	,445 ^{***}	,496 ^{***}	,427 ^{***}	,640 ^{***}	,507 ^{***}	,810 ^{***}
Work discontent	,445 ^{***}	1	,493 ^{***}	,506 ^{***}	,417 ^{***}	,330 ^{***}	,654 ^{***}
Social stress	,496 ^{***}	,493 ^{***}	1	,531 ^{***}	,478 ^{***}	,535 ^{***}	,745 ^{***}
Lack of social recognition	,427 ^{***}	,506 ^{***}	,531 ^{***}	1	,467 ^{***}	,418 ^{***}	,717 ^{***}
Worries	,640 ^{***}	,417 ^{***}	,478 ^{***}	,467 ^{***}	1	,668 ^{***}	,817 ^{***}
Intrusive memories	,507 ^{***}	,330 ^{***}	,535 ^{***}	,418 ^{***}	,668 ^{***}	1	,754 ^{***}
Total score	,810 ^{***}	,654 ^{***}	,745 ^{***}	,717 ^{***}	,817 ^{***}	,754 ^{***}	1

*** p<.001