

# Age and distress of women—results of a representative population-based study

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**Abstract** Little research has been carried out on prevalence rates of distress (e.g. depression, posttraumatic stress symptoms (PTSS), hopelessness, and burnout) of women in different age groups. The aims of this study were to measure the prevalence rate of depression, posttraumatic stress symptoms, hopelessness, and burnout among women and to clarify the associations between age groups and distress. Cross sectional epidemiological study on women in Sweden ( $n=6,000$ , aged 18–64 years, response rate 64.1%). Measures were questionnaires on socio-economic and work-related characteristics and on depression, post-traumatic stress symptoms, hopelessness, and burnout. Depression was measured with the “General Health Questionnaire” (GHQ), PTSS with the “Posttraumatic Symptom Scale”, hopelessness with the “Hopelessness Scale” and burnout with the “Shiron-Melamed Burnout Questionnaire” (SMBQ). The prevalence rate of depression varied from 12.5% to 14.1%; of posttraumatic stress symptoms from 23.5% to 33.3%; of hopelessness from 11.5% to 16%; and of burnout from 22.9% to 17.1%. Depression was not associated with age group. Hopelessness was associated with age group in univariate analysis but not in multivariate analysis (OR=0.7, 95% CI=0.5–1.0). PTSS

and burnout were associated with age group. Both symptoms were higher in the youngest age group, compared to the eldest age group (posttraumatic stress symptoms: OR=1.6, 95% CI=1.2, 2.1; burnout: OR=1.5, 95% CI=1.1–2.1). Younger women show higher prevalence rates of PTSS and burnout compared to elder women. The higher prevalence rates of PTSS and burnout among younger women may be associated with job strain and/or with violent life events.

**Keywords** Depression · Anxiety · Burnout · Hopelessness · Age

## Introduction

In many populations, women have considerable mental health needs. The conception of woman’s mental health and distress (e.g. depression, posttraumatic stress symptoms (PTSS), burnout and hopelessness) and women’s mental disorders (depressive disorder, posttraumatic stress disorder) has been limited. *Burnout* refers to a symptom caused by chronic stress (Brattberg 2006). Depression and PTSS refer to depressive and posttraumatic symptoms measured by self administered instruments. *Hopelessness* is a construct which was designed to measure pessimism about the future (Beck et al. 1974). *Burnout* is defined as a work related syndrome comprised of the three dimensions: emotional exhaustion (Schaufeli et al. 1993), cognitive weariness (Shirom 1989; Shirom et al. 2005) and a reduced sense of competency in comparison to one’s past functioning (Stenlund et al. 2007). (Bowling 1997; Leiter and Durup 1994; Shirom and Ezrachi 2003; Brenninkmeyer et al. 2001; Glass and McKnight 1996).

*Depression, posttraumatic stress symptoms (PTSS), burnout and hopelessness* are among the most prevalent distress problems among women (Desai and Jann 2000; Golembiewski et al. 1996; Kessler 2007; Malatesta 2007; Nadelson and Dickstein 2002; Ruiz-Cantero et al. 2007;

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Ustun et al. 2004; Soares et al. 2007). Among women in the general population, lifetime prevalence rates of *depression* vary from 7.9% in Europe (Alonso et al. 2004; Ayuso-Mateos et al. (2001); Keita 2007) to 21.3% in the United States (Kessler et al. 1994); prevalence rates of PTSS vary from 1.0–12.3% (Frans 2004; Kessler et al. 1995; Resnick et al. 2000). Depression, anxiety and PTSS are about twice as often diagnosed in women than in men (Weissman and Levine 2007; Stewart et al. 2006). The employment rate for Swedish women is among the highest in Europe and one third of them work part time (European Social Statistics 2003). Among women, the prevalence rate of burnout varies between 2.4% and 17.9% (Grossi et al. 2003; Lindblom et al. 2006).

Multiple factors are known as factors contributing to mental distress among women (e.g. socioeconomic status, stressful life events, relationship issues) (Keita 2007; Bromberger et al. 2009). Few studies investigated age as risk factors for women's mental health (Virtanen et al. 2007). Some studies suggest an age related decrease in symptoms of depression, anxiety, PTSS, burnout with age; others an increase (Ahola et al. 2006). In this study we aimed to investigate the prevalence rates of depression, PTSS, hopelessness and burnout in a randomly selected sample of women in different age groups in Sweden; and to investigate potential associations with age.

## Methods

### Study design and study population

The study is a cross-sectional study based on a randomly selected representative sample of women living in Stockholm County in Sweden. Sampling was done by the company "AdressKompaniet" in 2003 during eight consecutive weeks. To be eligible for this study, subjects had to be born from 1938 to 1985 (18–64 years of age at entry into study) ( $n=6,000$ ). The eligible women received written information on the study together with the questionnaires and were asked to return the questionnaire by post. The women gave their informed consent and confidentiality was emphasised. 3,616 women (64.1%) took part in the study. Exclusion criteria for the final sample were: unknown addresses ( $n=362$ ), poor fluency in Swedish language, no information about age ( $n=89$ ). 3,506 women participated in the final sample.

### Measures

We assessed migrant status, education, occupational position, employment status, self-rated job and financial strain, body mass index, use of cigarettes and/or alcohol (life-style variables), physical health variables and depression, PTSS, hopelessness and burnout.

We assessed migrant status with the question "Do you have a foreign background?". Women answering "no" to this question were considered as native Swedes. Educational level was assessed in three categories: "low" (e.g. primary school or lower), "intermediate" (e.g. upper secondary), and "high" (e.g. university). Items on socio-economic status derived from classification systems regarding socio-demographics used in Sweden (Statistiska Centralbyrån SCB 1990) based on standard Swedish socio-economic classification. We assessed the occupational position in the four categories "blue collar worker", "low white collar-worker" (e.g. clerk), "intermediate white collar-worker" (e.g. nurse), "high white collar worker" (e.g. physician). Current employment status was assessed in six categories ("working", "studying", "sick-leave", "unemployed", and "retired", "other" e.g. social benefits).

We used self report measures to assess job— and financial strain and life-style variables. Job strain is derived from the ratio between job demands and control. Job strain and social support at work were assessed with the Karasek and colleagues "job demand-control-support model" (Karasek and Theorell 1990). This scale contains 18 items (scored 1–4), to measure job control (6 items), job demands (5 items), social support at work (7 items), and job strain. High scores correspond to high levels of job demands, low control and low social support. Cronbach  $\alpha$ 's of job demands, control and social support for the age groups were in range of 0.77–0.86 in our study. Financial strain was assessed with one question in a no / sometimes / often / always format. A woman was defined as having financial strain if she chose any response other than "no". We asked for the weekly working hours, and whether children were living at home.

We assessed life style variables (BMI, use of cigarettes and/or alcohol). Body Mass Index (BMI) was computed for each woman with the formula  $\text{kg/m}^2$ . The use of alcohol and /or cigarettes was measured in a "no-1–4 times/month-2+times/week" format

Physical health was measured by asking for cardiovascular, respiratory, gastrointestinal and other diseases; and for pain in a "yes/no" format (Anrér 1984; Carlsson 1984; Grossi et al. 1999). The items on pain were derived from the "Pain Questionnaire" (Soares and Jablonska 2004).

We used a set of measures to assess depression, PTSS, hopelessness, and burn out. To assess depression the General Health Questionnaire with 12 items (GHQ-12) (Goldberg and Williams 1988) was used. The GHQ-12 consists of 12 items and can be dichotomised into no depression (no/low/moderate, 0–5) and depression (high, 6–12). We assessed PTSS with the "Posttraumatic Symptom Scale" (PTSS-10) (Holen 1990) which is a 10-item scale. Scores 0–2 indicate no stress reactions and scores 3–10 indicate increasing stress reactions. Scores can be dichotomised into no stress reactions and stress reactions.

tomised into no stress (no/low/moderate, 0–4) and stress (high, 5–10). A score more than four is considered a rather severe reaction (Eriksson and Lundin 1996). We assessed hopelessness with the Becks Hopelessness Scale (BHS) (Beck et al. 1974). The BHS is a 20-item inventory designed to measure three major aspects of hopelessness: feelings about the future, loss of motivation, and expectations. High scores correspond to a high level of hopelessness. Scores can be divided into norms indicating hopelessness levels (0–3=no/minimal, 4–8=mild, 9–14=moderate, 15–20=severe) (Beck and Steer 1988). Hopelessness can be dichotomised into “no hopelessness” (no/minimal/mild, 0–8) and “hopelessness” (moderate/severe, 9–20) (Haatainen et al. 2004). Burnout was assessed with the Swedish version of the Shiron-Melamed Burnout Questionnaire (SMBQ) (Melamed et al. 1999). The SMBQ is a 22-item scale to assess different aspects of the burnout syndrome (burnout, tension, listlessness, cognitive difficulties). Items are graded from “almost never” to “almost always”, and high scores correspond to high burnout. Overall burnout index was computed for each participant (mean total burnout). Mean total burnout was dichotomised into “no burnout” (no/low, 1–3.99) and “burnout” (high, 4–7) (Grossi et al. 2003).

#### Statistical analyses

We arranged the participants into three age groups: young adulthood (20–34 years) ( $n=1,203$ ), adulthood (35–49 years) ( $n=1,233$ ), and late adulthood (50–64 years) ( $n=1,070$ ). Differences between age groups were assessed with chi-square tests ( $\chi^2$ ) for categorical variables and with analyses of variance (ANOVA) for continuous variables. We arranged the variables in four blocks: demographic/socio-economic-, work-related-, lifestyle-, and physical health block.

For the univariate analysis post-hoc tests were performed according to the Bonferroni/Dunn method with the significance level set at  $P<0.01$ . The factors that differentiated the age groups in the univariate analyses were considered in multivariate analysis as independent variables. Dependent variables were the dichotomised forms of depression, PTSS, hopelessness, and burnout. We calculated Odds ratios (OR) and their 95% confidence intervals (CI) using block-wise multivariate logistic regression analyses. In block-wise logistic regression variables are entered into the regression equation block by block and the contribution of every block in explaining the dependent variable is expressed in Nagelkerke  $R^2$ . Nagelkerke  $R^2$  is an approximation to describe goodness-of-fit of the proposed logistic model (Hosmer and Lemeshow 2000). For the multivariate analyses, the significance level was set at  $p<0.05$ .

Model fit was examined using the both the  $r$ -squared measure of model fit (the latter derived using a similarly

specified log-linear OLS model). The  $r$ -squared values (which measure overall goodness of fit without a penalty for added degrees of freedom) allowed us to investigate whether our blocks explained most of the variance. The statistical package for the Social Sciences, SPSS version 13.0., was used for statistical analyses.

## Results

### Univariate analysis

In the three age groups above 50% were married/cohabitant and around 20% were of foreign background.

Most women had an educational level higher than low, and were mostly lower white-collar workers. Most women in the age groups 2 and 3 were working; almost 10% of the women were on sick-leave. There were no substantial differences in job strain and in social support at work between the age groups. In univariate analysis, there were no significant differences between the age groups concerning depression, whereas levels of PTSS as well as prevalence of burnout and hopelessness differed according to age group (Tables 1 and 2). Women in age group 1 had higher prevalence rates both of PTSS and of burnout compared to women of the two other age groups. Hopelessness was most prevalent in age group 2.

### Multivariate analysis

In multivariate analyses, PTSS and burnout were significantly associated with age group. Hopelessness was not associated with age group (Table 3). Woman of age group 1 had a 1.6-fold risk (95% CI=1.2, 2.1) for PTSS compared to women in age group 3, and a 1.5-fold risk for burnout (95% CI 1.1, 2.1). Variables significantly associated with PTSS prevalence were foreign background and job strain. Job strain was independently associated with an increased risk for posttraumatic symptoms. Use of alcohol was associated with an increased risk for a high level of PTSS. In addition, gastro-intestinal/other diseases and pain were associated with an increased risk for PTSS. Marital status and having children at home was not associated with PTSS prevalence.

We found no associations between marital status, foreign background, having children at home and prevalence rates of hopelessness. Highly associated with hopelessness were sick-leave, retirement and financial strain. As regards burnout, age 20–34/35–49 years, foreign background, being on sick-leave, and financial strain were associated with an increased risk for a high level of burnout, whereas being a high white-collar worker was associated with a lower risk. In addition, job strain was associated with an increased risk

**Table 1** Demographic, socio-economic, job-related, life-style and physical health characteristics of women in Sweden in three age groups (age group 1: 20–34 years, age group 2: 35–49 years, age group 3: 50–64 years)

Characteristic	Age group 1 No. % or mean (SD)		Age group 2 No. % or mean (SD)		Age group 3 No. % or mean (SD)		Test statistics/Bonferroni/Dunn (p-value)
<b>Marital status</b>							
Single	436	36.5	176	9.2	98	9.2	$\chi^2$ (4)=403.2, (p<0.0001)
Married/cohabitant	708	59.2	897	68.3	725	68.3	
Divorced/widowed	51	4.3	155	22.5	230	22.5	
Total	1195	100.0	1228	100.0	1062	100.0	
<b>Foreign background</b>							
Yes	233	19.7	293	18.2	191	18.2	$\chi^2$ (2)=12.9, (p<0.0015)
Total	1182	100.0	1217	100.0	1048	100.0	
<b>Educational level</b>							
Low □	123	10.3	179	33.1	351	33.1	$\chi^2$ (4)=213.6, (p<0.0001)
Intermediate †	491	40.9	474	30.7	326	30.7	
University	586	48.8	573	36.2	385	36.2	
Total	1200	100.0	1226	100.0	1062	100.0	
<b>Occupational position</b>							
Blue-collar worker	323	2.6	257	19.0	187	19.0	$\chi^2$ (6)=57.9, (p<0.0001)
Low white-collar worker	434	39.4	457	45.2	445	45.2	
Interm. white-collar worker	315	28.6	386	28.8	284	28.8	
High white-collar worker	29	2.6	71	7.0	69	7.0	
Total	1101	100.0	1171	100.0	985	100.0	
<b>Current financial support</b>							
Working	716	59.6	902	73.2	777	73.2	$\chi^2$ (10)=606.1, (p<0.0001)
Studying	259	21.5	70	0.6	6	0.6	
Sick-leave	47	3.9	109	7.3	78	7.3	
Unemployed	40	3.3	33	0.8	9	0.8	
Retired	8	0.7	31	14.1	150	14.1	
Other	132	1.1	83	4.0	42	4.0	
Total	1202	100.0	1228	100.0	1062	100.0	
<b>Weekly working hours</b>							
Mean (SD)		33.9 (14.8)		33.3 (14.9)		30.3 (17.1)	F (2.3342)=17.7, (p<0.0001)
Total	1130	100.0	1189	100.0	1026	100.0	
<b>Children living at home</b>							
Yes	477	39.7	958	35.2	377	35.2	$\chi^2$ (2)=521.2, (p<0.0001)
Total	1232	100.0	1189	100.0	1026	100.0	
<b>Financial strain</b>							
Yes	631	52.7	554	29.6	314	29.6	$\chi^2$ (2)=126.6, (p<0.0001)
Total	1197	100.0	1211	100.0	1059	100.0	
<b>Job strain</b>							
Mean (SD)		0.963		0.934 (0.291)		0.890 (0.258)	F (2.3346)=16.1, (p<0.0005)
Total	1161	100.0	1194	100.0	994	100.0	
<b>Body Mass Index (BMI)</b>							
Mean (SD)		22.9 (4.0)		23.9 (3.8)		24.8 (4)	F (2.3375)=64.2, (p<0.0001)
Total	1166	100.0	1195	100.0	1017	100.0	
<b>Smoking</b>							
1–4 times a month	102	8.6	56	4.6	21	2.0	$\chi^2$ (4)=86.7, (p<0.0001)
>2 times a week	284	23.9	262	21.7	266	15.2	
Total	1188	100.0	1205	100.0	1054	100.0	
<b>Drinking</b>							
1–4 times a month	102	8.6	661	54.4	538	51.0	$\chi^2$ (4)=86.7 (p<0.0001)
>2 times a week	284	23.9	259	21.3	317	30.0	
Total	1188	100.0	1214	100.0	1055	100.0	

**Table 1** (continued)

Characteristic	Age group 1 No. % or mean (SD)		Age group 2 No. % or mean (SD)		Age group 3 No. % or mean (SD)		Test statistics/Bonferroni/Dunn (p-value)
<b>Diseases</b>							
cardiovascular							
Yes	13	1.1	32	2.6	105	10.0	$\chi^2$ (2)=119.6, (p<0.0001)
Total	1183	100.0	1211	100.0	1046	100.0	
Gastrointestinal							
Yes	188	16.0	179	14.8	105	10.0	$\chi^2$ (2)=18.3, (p<0.0001)
Total	1183	100.0	1122	100.0	1052	28.6	
Other							
Yes	176	16.1	264	23.5	273	28.6	$\chi^2$ (2)=45.7 (2), (p<0.0001)
Total	1088	100.0	1122	100.0	956	100.0	
Pain							
Yes	704	58.5	785	63.7	724	67.7	$\chi^2$ (2)=20.6, (p<0.0001)
Total	1203	100.0	1233	100.0	1070	100.0	
Total	1203	100.0	1233	100.0	1070	100.0	

□=primary school/similar/lower

†=upper secondary school/similar

for a high level of burnout. There were no associations between marital status, foreign background, and having children at home and burnout. Neither smoking nor drinking was associated with an increased risk for a high level of burnout, but gastrointestinal/other diseases and pain were associated with an increased risk for a high level of burnout (Table 3). In our study variables of the four blocks accounted for 21.8% of the variation in PTSS, for 19.4% of the variation in hopelessness, and for 25.5% of the variation in burnout (Table 3)

## Discussion

In our study the prevalence rates of depression and hopelessness were not associated with age, but the prevalence rates of PTSS (23.5% in age group 3 vs. 33.3% in age group 1 with OR=1.6, 95% CI=1.2, 2.1) and burnout were associated with age (22.9 in age group 1 vs. 17.1 in age group 3 with OR=1.5, 95% CI=1.1, 2.1).

There were some limitations in our study. Because of the cross-sectional design, we cannot assess causal relationships. We also acknowledge that the accuracy of data was dependent on the women's subjective assessment of their psychological distress and their job situation and we cannot exclude information bias. Because neither instruments nor cut-off points were validated for the three age groups, there was undoubtedly some misclassification. However, this is likely to have been nondifferential, which leads to an attenuation of the odds ratios. A further limitation in our study was that the variance accounted for

by the model was relatively low in all in cases indicating that other factors may also play role in psychological distress. Although we have pointed to the possible higher prevalence rates of PTSS and burnout among women below 50 years, more than 70% of its variation remains unexplained and needs further investigation.

Our study shows examined associations of age group with PTSS, hopelessness and burnout with prevalence rates of PTSS in age group 1 of 33.3%, vs. 23.5% in age group 3. These data are far higher than those found in a study on men and women in a Swedish community sample with prevalence rates of post-traumatic stress disorder (PTSD) of 3.6% (male) and of 7.4% (female) (Weiss et al. 1992), where clinician administered interviews were conducted. First possible reason for our results is that women in our study were assessed for PTSS and not for the clinical syndrome PTSD. The second possible reason is related to the accumulating evidence suggesting that more reliable information on PTSS is likely to be given in questionnaires than in interview settings (Krantz and Östergren 2000).

The risk in the eldest age group of our study was decreased compared with the risk in the youngest age group. Similar to our findings, a study from Canada on mental health of the general population showed that the peak annual prevalence of mental health impairment occurred in the group aged 15 to 25 years (Schaufeli and Enzmann 1998).

Potential explanation for the apparently higher prevalence rate of PTSS among younger age groups is that younger women tend to experience traumatic events (perhaps more

**Table 2** Depression, posttraumatic symptoms, hopelessness and burnout of women in Sweden in three age groups (age group 1: 20–34 years, age group 2: 35–49 years, age group 3: 50–64 years)

Characteristic	Age group 1		Age group 2		Age group 3		Test statistics/Bonferroni/Dunn (p-value)
	No.	% or mean (SD)	No.	% or mean (SD)	No.	% or mean (SD)	
<b>Depression</b>							
Mean (SD)	150	2.3 (2.6)	174	2.3 (2.7)	128	2.2 (2.6)	Not significant
High level		12.5		14.1		12.0	
Total	1200	100.0	1231	100.0	1064	100.0	
<b>Posttraumatic symptoms</b>							
Mean (SD)	399	4.0 (2.9)	334	3.5 (3.0)	250	3.1 (2.9)	F=23.4 (2.3487); $\chi^2(2)=27.8$ (p<0.0001)/20–34>35–49/50–64, p<0.0001, 35–49>50–64, p<0.0016)
High level		33.3		27.2		23.5	
Total	1198	100.0	1227	100.0	1065	100.0	
<b>Hopelessness</b>							
Mean (SD)	137	4.2 (3.5)	159	5.5 (3.7)	169	4.8 (3.9)	F=7.9 (2.3464); $\chi^2(2)=10.2$ (p<0.0004)/50–64>20–34, p<0.0001)
High level		11.5		13.0		4.8	
Total	1193	100.0	1220	100.0	1054	100.0	
<b>Burnout</b>							
Mean (SD)	274	3.5 (0.6)	256	3.5 (0.7)	181	3.3 (0.7)	F=18.2 (2.3481); $\chi^2(2)=11.8$ (p<0.0001)/20–34/35–49>50–64, p<0.0001)
High level		22.9		21.5		17.1	
Total	1199	100.0	1225	100.0	1060	100.0	
Total	1203	100.0	1233	100.0	1070	100.0	

severe or pathogenic events) than do elder women. Studies have suggested that violence is associated with higher risk of PTSS than are other types of traumatic events like accidents or natural disaster; hence, a higher prevalence of these experiences among younger participants than among elder might reasonably be interpreted. The experience of violence or abuse during childhood in Sweden was reported by 32.2% of women, while 15.6% reported being abused as an adult (Messing et al. 1994).

With regard to the prevalence of *burnout* our study is consistent with other studies showing that age is related to burnout with burnout prevalence rates higher among younger age groups (Paoli and Merllié 2001). This has been explained by a reality shock, unsuccessful occupational socialization, or a healthy worker effect. Women in our study scored between 22.9% in age group 1 and 17.1% in age group 3, which are comparable to prevalence rates in a representative Finish study on burnout (prevalence rates of mild burnout 25.2%) (Ahola et al. 2005; Laaksonen et al. 2006). The rates of burnout may be explained by women’s occupational position in the labour market. Most women in our study belonged to low white collar workers. This suggests a division of the labour market, with the female working population concentrated in certain sectors of activity, in certain professions and in the lower categories of the professional hierarchy which accounts for women’s low wages and may explain the financial strain detected in our study. Besides gender differences in wages, there are also gender inequalities in the exposure to psychosocial risks. For example, in the former European Union of 15 members, females’ jobs are characterised by being more monotonous, with lower participation in planning, higher demands, more psychological and sexual harassment, more exposure to the public, and with lower salaries, less promotion prospects and more precariousness (Brisson et al. 2000). The odds for burnout are larger among people reporting more job strain with higher demands in combination with lower job control. Women might be exposed to high psychological demands, and to low decision latitude. This might explain the high prevalence rates in burnout in our study.

In spite of the limitations this study has several strengths. The strengths include large randomly selected study population, and detailed information on demographic, socio-economic and work related factors. The results from this study are likely to be comparable to other European countries because of the similarities of the occupational situation of women in many European countries. We need more research on mental distress and on mental disorders especially on posttraumatic stress disorder and burnout among women in different age groups to prove our findings and to conduct analyses of subgroups (e.g. migrant women).

**Table 3** Factors associated with high levels of posttraumatic symptoms ( $n=2,588$ ), hopelessness ( $n=2,575$ ) and burnout ( $n=2,586$ ) among women in the three age groups

Characteristic	Posttraumatic symptoms		Hopelessness		Burnout	
	OR, R <sup>2</sup> changes (in brackets)	(95% CI)	OR, R <sup>2</sup> changes (in brackets)	(95% CI)	OR, R <sup>2</sup> changes (in brackets)	(95% CI)
<b>Sociodemographics</b>						
Age group						
20–34	1.6	(1.2–2.1)	0.7	(0.5–1.0)	1.5	(1.1–2.1)
35–49	1.3	(0.9–1.7)	0.9	(0.6–1.3)	1.4	(1.1–2.0)
50–64	1*		1*		1*	
Marital status						
Single	0.9	(0.6–1.3)	0.9	(0.6–1.5)	1.1	(0.7–1.6)
Married	0.8	(0.6–1.0)	0.6	(0.4–0.9)	0.7	(0.5–1.0)
Foreign background						
Yes	1.4	(1.1–1.8)	1.1	(0.8–1.5)	1.4	(1.1–1.8)
No	1*		1*		1*	
Children at home						
Yes	0.8	(0.6–1.0)	0.8	(0.5–1.2)	0.8	(0.6–1.1)
No	1*		1*		1*	
Educational level						
Low	1*		1*		1*	
Intermediate	1.0	(0.8–1.3)	1.0	(0.7–1.5)	0.8	(0.6–1.1)
University	1.0	(0.8–1.4)	0.8	(0.5–1.3)	0.9	(0.6–1.3)
Occupational position						
Blue collar worker	1*		1*		1*	
Low white collar worker	1.2	(0.9–1.6)	1.0	(0.5–1.4)	1.2	(0.9–1.4)
Interm. white collar worker	1.0	(0.8–1.4)	0.8	(0.5–1.3)	0.9	(0.7–1.4)
High white collar worker	0.6	(0.4–1.1)	0.2	(0.1–0.7)	0.2	(0.1–0.5)
Current financial support						
Working	0.9	(0.6–1.4)	0.6	(0.4–1.2)	0.8	(0.5–1.3)
Studying	0.7	(0.4–1.3)	0.5	(0.2–0.9)	0.7	(0.4–1.0)
Sick-leave	3	(1.9–5.6)	2.3	(1.1–4.7)	1.7	(0.7–3.9)
Unemployed	1.3	(0.6–2.7)	2.8	(1.1–7.2)	4.6	(2.5–8.7)
Retirement	2.3	(1.2–4.5)	2.1	(0.9–4.8)	2.1	(0.9–4.3)
Other*	1*		1*		1	
Financial strain						
Yes	2.1	(1.7–2.5)	1.7	(1.3–2.2)	2.0	(1.6–2.6)
No	1*		1*		1*	
R <sup>2</sup> change		(2.7)		(2.6)		(2.8)
Work related block						
Weekly working hours	1	(0.9–1.0)	1	(0.9–1.0)	1	(0.9–1.0)
Job strain	2.8	(2.0–3.9)	3.1	(2.0–4.6)	3.3	(2.3–4.7)
R <sup>2</sup> change		(2.7)		(2.6)		(2.8)
Life style block						
BMI (per increase in kg/m <sup>2</sup> )	0.9	(0.9–1.0)				
Smoking						
1–4 times a month	1.3	(0.8–1.9)	0.8	(0.8–1.5)	1.2	(0.7–1.2)
2+times a week	1.2	(0.9–1.5)	1.1	(0.8–1.6)	1.2	(0.8–1.5)
No*	1*		1*		1*	

**Table 3** (continued)

Characteristic	Posttraumatic symptoms		Hopelessness		Burnout	
	OR, R <sup>2</sup> changes (in brackets)	(95% CI)	OR, R <sup>2</sup> changes (in brackets)	(95% CI)	OR, R <sup>2</sup> changes (in brackets)	(95% CI)
Drinking						
1–4 times a month	1.3	(1.0–1.7)	0.7	0.5–1.0)	0.9	(0.7–1.2)
2+times a week	1.5	(1.1–9.0)	0.9	(0.7–1.5)	1.1	(0.8–1.5)
No*	1*		1*		1*	
R <sup>2</sup> change		(0.6)		(0.8)		(0.3)
Physical health block						
Cardiovascular diseases						
yes	1.2	(0.7–2.0)	1.4	(0.8–2.5)	0.7	(0.4–1.3)
no	1*		1*		1*	
Gastrointestinal diseases						
Yes	1.9	(1.5–2.5)	1.4	(0.9–1.9)	1.8	(1.3–2.4)
No	1*		1*		1*	
Other						
Yes	1.3	(1.0–1.6)	1.4	(1.1–1.9)	1.3	(1.0–1.7)
No	1*		1*		1*	
Pain						
Yes	2.3	(1.9–2.9)	1.8	(1.3–2.5)	2.1	(1.6–2.7)
No	1*		1*		1*	
Total R <sup>2</sup> change		(4.9)		(1.9)		(3.2)

OR odds ratio, CI confidence interval

\*Reference category

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