Bachelor's thesis

NTNU
Norwegian University of Science and Technology
Faculty of Social and Educational Sciences
Department of Psychology

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How job-related is burnout?

An empirical investigation

Bachelor's thesis in Psychology
Supervisor: Renzo Bianchi
May 2024

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Candidate Number: 10035

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PREFACE

The study was planned by our supervisor Renzo Bianchi. The objective was to address the question: “how job-related is burnout?”. In addition to examining burnout, we were to compare burnout with psychological distress and exhaustion, conditions regarded as job-unspecific.

Student contribution included reviewing the translated questionnaires for the survey as well as making suggestions for improving it. We were responsible for the collection of data by sharing the survey in our social circles. Our combined sample counted 813 participants.

We generated our hypotheses individually. Our supervisor then provided feedback on our hypotheses. During the semester, we had both physical and digital meetings for information on each section of the thesis and the opportunity to ask questions. The writing process was independent, with two submissions for full readings by our supervisor, the first after finishing our introduction and methods, and the second after results and discussion. We also had a mandatory presentation of our hypotheses, methods, and main findings.

I wish to thank our supervisor for all the constructive feedback on my thesis during the semester and for always answering all my questions. Lastly, I want to thank my mom for reading through the finished thesis and providing suggestions for improvement, as well as words of encouragement when I needed them.

ABSTRACT

In the study, we compared burnout to psychological distress and exhaustion and conducted analyses to compare symptoms based on gender and age. Our study had a cross-sectional design. The sample of 813 participants consisted of both men and women in the age groups of 18-34, 35-49 and 50 or older. We used frequency analysis for how the participants attributed their symptoms to work, and correlation analysis for all main measures and job variables. Regression analysis was conducted for the dependent variables – burnout, psychological distress, and exhaustion. Finally, we conducted t-test for group comparisons based on gender, and ANOVA for group comparisons based on age. Since there were three age groups, we conducted post hoc test for multiple comparisons. Only a minority of respondents attributed their symptoms to work, for all the main measures. The job variables explained 45 % of the variance in burnout, and less for the other measures. Of the variables used, job satisfaction had the biggest negative association with symptoms, and work-nonwork/nonwork-work conflicts increased the risk of symptoms. Women showed more exhaustion symptoms than men, and there were differences between the age groups for all measures. The biggest difference was between the youngest and the oldest. Our study indicated that burnout is not an entirely work-specific syndrome.

Keywords *Burnout, Attribution, Work, Gender, Age*

SAMMENDRAG

I studien sammenlignet vi utbrenthet med uspesifikke psykiske plager og utmattelse, samt gjennomførte analyser for å sammenligne symptomer basert på kjønn og alder. Vår studie hadde et tverrsnittdesign. Utvalget på 813 deltakere besto av både menn og kvinner i aldersgruppene 18-34, 35-49 og 50 år eller eldre. Vi brukte frekvensanalyse for hvordan deltakerne tilskrev sine symptomer til arbeid, og korrelasjonsanalyse for alle tilstandene og jobbvariablene. Regresjonsanalyse ble utført for de avhengige variablene – utbrenthet, uspesifikke psykiske plager og utmattelse. Til slutt gjennomførte vi t-test for gruppesammenligninger basert på kjønn, og ANOVA for sammenligninger basert på alder. Da det var tre aldersgrupper, gjennomførte vi post hoc-test for flere sammenligninger mellom de ulike aldersgruppene. Bare et mindretall av respondentene tilskrev symptomene sine til jobben, for alle de tre tilstandene. Jobbvariablene forklarte kun 45 % av variansen i utbrenthet, og enda mindre for de andre tilstandene. Av variablene som ble benyttet, hadde jobbtilfredshet den største negative assosiasjonen med symptomene, og jobb-fritid-/fritid-jobb-konflikter økte risikoen for symptomer. Kvinner viste flere utmattelsessymptomer enn menn, og det var forskjeller mellom aldersgruppene for alle tilstandene. Den største forskjellen var mellom de yngste og de eldste. Vår studie indikerte at utbrenthet ikke kun er en arbeidsspesifikk tilstand.

Nøkkelord *Utbrenthet, Attribusjon, Arbeid, Kjønn, Alder*

HOW JOB-RELATED IS BURNOUT?

In recent years, the term “burnout” has saturated discussions surrounding workplace stress and mental health, becoming increasingly synonymous with feelings of exhaustion, disappointment, and professional dissatisfaction. While job-induced burnout may represent a significant challenge within work environments, it is essential to acknowledge the nuanced nature of this phenomenon and distinguish it from other conditions that may manifest similarly. How can we separate burnout from psychological distress and exhaustion, and what is the difference between these three conditions?

Burnout

Burnout, commonly referred to as a job-induced syndrome, is a recognized phenomenon arising from prolonged exposure to chronic workplace stressors that remain unaddressed (Bianchi & Brisson, 2019). According to the World Health Organization (WHO, 2024), burnout is conceptualized as a syndrome characterized by three distinct dimensions. Firstly, individuals experience feelings of energy drain or exhaustion, indicating a significant reduction of physical and emotional resources. Secondly, there is an increased mental distance from one’s job, often accompanied by feelings of negativism or cynicism towards work-related responsibilities. Lastly, individuals may struggle with a sense of ineffectiveness and lack of accomplishment, reducing their perceived ability to succeed in their professional roles.

It is important to note that, according to the WHO, burnout is specific to the occupational context and should not be confused with experiences in other areas of life. Recent updates to the definition emphasize the profound impact of burnout on cognitive and emotional processes, further highlighting its crippling nature (De Beer et al., 2023).

Psychological Distress and Exhaustion

Psychological distress and exhaustion are considered general conditions. Neither of them is held to be specifically work-related. Where psychological distress refers to emotional discomfort or suffering, exhaustion is a state of extreme fatigue or lack of physical, mental, or emotional energy. Including these additional conditions help us understand whether burnout is a work-specific condition, an assumption questioned by Guthier and Voelkle (2020) in a recent meta study that researched reciprocal effects between job stressors and burnout. By comparing psychological distress and exhaustion to burnout we were more likely to identify the differences between them and how we can separate the three conditions.

Norwegian Labor

The working life in Norway is characterized by the Nordic model (Gustavsen, 2011). This includes both a high degree of participation, and a collaboration between the parties in working life. Norway has one of the highest employment rates among both genders, which means that few countries have higher female labor force participation (De Beer et al., 2023).

Regarding mental health, Norway has among the lowest frequencies of self-reported anxiety and mentally exhaustion after work. Even though Norway generally reports a better work-life balance than the EU average, employees still feel distressed from work (De Beer et al., 2023).

Additionally, Norway has more sick leaves than other countries in the Organization for Economic Co-operation and Development (OECD). The OECD consists of 38 countries where most of them have high-income economies and are regarded as developed countries. In Norway, the sick-leave compensation and disability benefit is comprehensive and an important component of employee rights and benefits (Hemmings & Prinz, 2020). Even

though Norway has attempted to reduce their high sick leaves, their actions have not been as effective as in other countries. Thus, there may be other reasons for the high sick leave than just the work-related ones.

Is Burnout Work-Specific?

The findings in a study by Bianchi and Brisson (2019) suggest "that burnout may not be a specifically job-induced syndrome and further question the validity of the burnout construct". These suggestions came from the finding that a minority of the people participating in the study attributed their burnout symptoms to their jobs.

Furthermore, they implied that exhaustion appeared to be the core of burnout and the most relevant variable to the study of burnout (Bianchi & Brisson, 2019). Since exhaustion is considered a general condition and not specifically work-related, this raised the question whether burnout confidently could be regarded as a work-specific condition?

Gender and Age

In March of 2023, CNBC published an article about how burnout is on the rise worldwide. Smith (2023) wrote about how women and workers under the age of 30 were at greater risk of burning out than everyone else. Considering how men and women historically have had different roles in a society and how young adults tend to have inferior positions in a company than more experienced workers, there may be important differences between genders and age groups.

Previous studies conducted, examined both the contribution of gender to burnout (Verweij et al., 2017) and how age had a moderating effect on burnout (Reichl et al., 2014). The first study focused on medical residents, and found that "in female residents, home

resources were more often protecting factors against burnout than in male residents, while in male residents job resources such as social support from colleagues and participation in decision-making seemed important against burnout" (Verweij et al., 2017). The second study was a meta-analysis that concluded that "young adults […] showed especially high relations between work-nonwork conflict and burnout" (Reichl et al., 2014).

Additional studies on both how burnout symptoms varied due to gender roles and burnout in relation to age have been conducted. Artz et al. (2022) found that "traditional" women were significantly more likely to report job burnout than men in the United States. Similar to the study by Verweij et al. (2017) different factors played an important part for women than for men in protecting against burnout, thus supporting that the perspectives of women's societal role magnifies the gender gap in job burnout.

A fourth study conducted in Finland concluded that "age was differentially related to burnout in separate age groups of men and women" (Ahola et al., 2008). Their original sample included 9,922 participants, of which 1,894 were aged between 18 and 29 years. There has also been conducted a study in Canada that aimed to conclude on whether age and gender contribute to workers' burnout symptoms (Marchand et al., 2018). Their conclusion suggested that "burnout symptoms varied greatly according to different life stages of working men and women" and reinforces why this would be interesting to study for the population of Norway.

Research Objective and Hypotheses

The primary objective of this study was to investigate two key aspects related to burnout. First, the extent to which individuals reporting symptoms of burnout attribute these symptoms to their jobs. Second, the association between burnout symptoms and job variables. This study will also compare burnout with the other conditions – psychological distress and exhaustion – to clarify whether burnout can be considered work-specific. In contrast to

burnout, psychological distress and exhaustion are general conditions, in the sense that they are not regarded as job-specific.

Additionally, this study aims to investigate whether symptoms of burnout are more common among the younger part of the population, and if women show more signs of burnout than men. This results in the following hypotheses.

Hypothesis 1: Only a minority of individuals with burnout symptoms attribute these symptoms to their work.

Hypothesis 2: Young adults between the age of 18 and 34 show more symptoms of burnout than older adults.

Hypothesis 3: Women experience more burnout symptoms than men.

Figuring out how burnout connects to work is important for preventing burnout before it occurs and helping those already affected. This study can help all the parties in the working life make plans to keep burnout reduced and make work better for everyone. By exploring whether burnout is work-related or not, we gain a better understanding of its causes and contributing factors. This broader perspective allows us to develop more comprehensive strategies for preventing and addressing burnout, regardless of its origin. Ultimately, by uncovering the broader context of burnout, this study can inform more effective and inclusive approaches to supporting individuals' mental health and overall quality of life.

METHODS

Sample and Procedure

The data was collected by 11 psychology students. A cross-sectional online survey was conducted. During the span of three weeks the survey spread through snowball sampling. To take part in the study the participants had to be at least 18 years old and currently employed. After data collection was finished the sample included 917 participants. Since the students only had access to the anonymous data and not the participants, it was not possible to identify any specific individuals in the study. Hence the collection of data was carried out according to the General Data Protection Regulation (GDPR).

The survey contained an attention-check item, that asked the participants to select a specific answer. 104 participants failed the attention check. These participants were excluded from the study. This resulted in a final sample of 813 participants.

The sample consisted of 573 women, 233 men and 7 individuals who did not report their gender. Most of the participants were 50 years or older with a total of 347, almost 43 % of the sample. The second largest age group was between 18 and 34 years old. Of the participants almost three-fourths were working a full-time job. All of this is shown in the overview of the sample below.

Table 1

Demographic View of the Sample

		N	%
Age	18 - 34	313	38.5 %
	35 - 49	146	18.0 %
	50 or older	347	42.7 %
	Unknown	7	0.8 %

Gender	Man	233	28.7 %
	Woman	573	70.5 %
	Unknown	7	0.8 %
Type	Part-Time	222	27.3 %
	Full-Time	591	72.7 %

Measures

During the study we used the BAT-12, K6 and KEDS as the main measures. To consider the total-score reliability of the multi-item scales of all three measures, we calculated both the Cronbach's Alpha and McDonald's Omega coefficients. All the results from the reliability analyses are shown in the table below. Overall, both the Alpha and Omega were above .82 and display similar values for all the measures, thus supporting the internal consistency.

Table 2

Reliability Scores for the Measures

	Burnout	Psychological Distress	Exhaustion
Cronbach's Alpha	.831	.862	.865
McDonald's Omega	.825	.862	.869

Burnout was measured using the 12-item version of the Burnout Assessment Tool (BAT-12). This instrument used a five-point Likert scale ranging from *Never* (1) to *Always* (5). In the study all four underlying aspects were measured, from exhaustion and mental

distance to cognitive and emotional impairment (De Beer et al., 2023). The burnout score of a participant was the mean score on the BAT-12.

Psychological distress was measured using the six-question scale (K6). This instrument asked participants how often they experienced each symptom over a 30-day recall period. In the K6 the respondents were asked how often they had felt nervous, so depressed nothing could cheer them up, hopeless, restless or fidgety, that everything was an effort, and worthless (Kessler et al., 2002). The psychological distress score of a participant was the mean score on the K6.

Exhaustion was measured using a self-rating scale for stress-induced exhaustion disorder, the Karolinska Exhaustion Disorder Scale (KEDS). This instrument consists of nine items, where the respondent must answer reflecting their experiences in the last two weeks. There are seven response alternatives in a Likert scale ranging from *No discomfort* (0) to *Extreme discomfort* (6), where examples of different states of discomfort were given for every question (Besèr et al., 2014). The exhaustion score of a participant was the mean score on the KEDS.

Additionally, selected items from the NIOSH Worker Well-Being Questionnaire were used in the survey. This included interferences between occupational life and personal life, social support at work, job security, job autonomy, job meaningfulness and job satisfaction. The questionnaire measures the worker well-being as a holistic construct and is based on the new framework for worker well-being (Chari et al., 2018).

Descriptive statistics for burnout, psychological distress, and exhaustion are presented in Table 3.

Table 3

Descriptive Statistics of the Measures

	N	Minimum	Maximum	Mean	*SD*
Burnout	813	1.000	4.083	2.118	0.465
Psychological Distress	813	0.000	3.000	0.967	0.639
Exhaustion	813	0.000	4.889	1.682	0.948

Analyses

The dataset was analyzed using IBM SPSS Statistics version 29. We conducted a frequency analysis to see how many of the participants attributed their symptoms of either burnout, psychological distress or exhaustion to their jobs.

In order to explore the relationships between variables, we conducted a Pearson's correlation analysis for all the main measures. From these analyses we got the directions of the correlations, the magnitudes, and if they were statistically significant.

As an extension to the correlational analyses, we also conducted multiple regression analysis for all the main measures. The results from this analysis would give a deeper understanding of how much of the variance, in e.g. burnout, was explained by the different variables.

Last, we conducted a T-test to compare men and women, with an additional Levene's test for equality of variance. To compare the three age groups, we conducted an analysis of variance (ANOVA). Additionally, we conducted a Tukey post hoc test to determine which specific age groups differ from each other. Due to this analysis, we found additional group comparisons and mean differences.

RESULTS

Frequency Analysis

The frequency analysis showed how many individuals attributed their symptoms to work, both in number and percentage. Those who did not experience symptoms were labeled "missing values" in the dataset and were excluded from the calculations.

Table 4

The Participant's Attribution of Symptoms to Work

		N	%
Burnout	Yes	190	27.7 %
	Do not know	181	26.4 %
	No	315	45.9 %
Psychological Distress	Yes	179	26.9 %
	Do not know	158	23.8 %
	No	328	49.3 %
Exhaustion	Yes	195	27.5 %
	Do not know	213	30.0 %
	No	301	42.5 %

Between 26.9 % and 27.7 % of the participants attributed their symptoms of a condition to their work, while between 42.5 % and 49.3 % did not. The excluded participants that did not experience symptoms for the different conditions were less than one-fifth for all measures. Between 23.8 % and 30.0 % did not know whether they attributed their symptoms to work or not.

Correlational Analysis

From the correlational analysis we could see the direction of the correlation between the variables, the magnitude and if the correlation was statistically significant. We used Pearson's correlation analysis to estimate the links between our variables of interest.

For most of the variables the number of observations was 813. Though for 'supervisor support' the number was 797, for 'coworker support' the number was 801, for 'benefits satisfaction' the number was 772, and for 'advancement satisfaction' the number was 629. The reason was simply that for some, those variables were not applicable.

Table 5

Pearson's Correlation Analysis of Burnout

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Burnout	2.12	0.47	-										
2. Work-Nonwork Conflict	3.60	1.34	.38**	-									
3. Nonwork-Work Conflict	2.91	1.15	.35**	.33**	-								
4. Supervisor Support	2.36	0.85	-.31**	-.24**	-.09**	-							
5. Coworker Support	2.61	0.60	-.22**	-.11**	-.15**	.37**	-						
6. Job Security	2.45	0.77	-.24**	-.09*	-.12**	.25**	.24**	-					
7. Job Autonomy	2.12	0.88	-.28**	-.04	.00	.20**	.20**	.18**	-				
8. Meaningful Work	2.44	0.76	-.37**	-.01	-.09*	.19**	.18**	.23**	.31**	-			
9. Job Satisfaction	2.53	0.65	-.53**	-.17**	-.08*	.38**	.27**	.22**	.37**	.54**	-		
10. Wage Satisfaction	1.84	0.84	-.25**	-.12**	-.01	.21**	.14**	.12**	.23**	.07	.27**	-	
11. Benefits Satisfaction	1.93	0.85	-.33**	-.21**	-.07	.40**	.19**	.17**	.28**	.14**	.38**	.46**	-
12. Advancement Satisfaction	1.65	0.87	-.33**	-.19**	-.12**	.36**	.17**	.27**	.28**	.20**	.43**	.44**	.52**

Note. ** $p < .01$ level (2-tailed), * $p < .05$ level (2-tailed).

All the variables showed statistically significant correlations with burnout. We saw that the correlation for 'job autonomy' was insignificant with both 'work-nonwork conflict' and 'nonwork-work conflict'. 'Meaningful work' was also non-significant for the former. The correlation between 'nonwork-work conflict' to 'wage satisfaction' and 'benefits satisfaction' were insignificant too. This was also the case for 'wage satisfaction' with 'meaningful work'.

Table 6

Pearson's Correlation Analysis of Psychological Distress

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Psychological Distress	0.97	0.64	-										
2. Work-Nonwork Conflict	3.60	1.34	.25**	-									
3. Nonwork-Work Conflict	2.91	1.15	.27**	.33**	-								
4. Supervisor Support	2.36	0.85	-.28**	-.24**	-.09**	-							
5. Coworker Support	2.61	0.60	-.27**	-.11**	-.15**	.37**	-						
6. Job Security	2.45	0.77	-.30**	-.09*	-.12**	.25**	.24**	-					
7. Job Autonomy	2.12	0.88	-.32**	-.04	.00	.20**	.20**	.18**	-				
8. Meaningful Work	2.44	0.76	-.31**	-.01	-.09*	.19**	.18**	.23**	.31**	-			
9. Job Satisfaction	2.53	0.65	-.42**	-.17**	-.08*	.38**	.27**	.22**	.37**	.54**	-		
10. Wage Satisfaction	1.84	0.84	-.19**	-.12**	-.01	.21**	.14**	.12**	.23**	.07	.27**	-	
11. Benefits Satisfaction	1.93	0.85	-.19**	-.21**	-.07	.40**	.19**	.17**	.28**	.14**	.38**	.46**	-
12. Advancement Satisfaction	1.65	0.87	-.26**	-.19**	-.12**	.36**	.17**	.27**	.28**	.20**	.43**	.44**	.52**

Note. ** $p < .01$ level (2-tailed), * $p < .05$ level (2-tailed).

All the variables had correlations of statistical significance with psychological distress. 'Job satisfaction' had the largest negative correlation with a value of -.42.

Table 7

Pearson's Correlation Analysis of Exhaustion

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Exhaustion	1.68	0.95	-										
2. Work-Nonwork Conflict	3.60	1.34	.32**	-									
3. Nonwork-Work Conflict	2.91	1.15	.28**	.33**	-								
4. Supervisor Support	2.36	0.85	-.25**	-.24**	-.09**	-							
5. Coworker Support	2.61	0.60	-.23**	-.11**	-.15**	.37**	-						
6. Job Security	2.45	0.77	-.21**	-.09*	-.12**	.25**	.24**	-					
7. Job Autonomy	2.12	0.88	-.26**	-.04	.00	.20**	.20**	.18**	-				
8. Meaningful Work	2.44	0.76	-.21**	-.01	-.09*	.19**	.18**	.23**	.31**	-			
9. Job Satisfaction	2.53	0.65	-.34**	-.17**	-.08*	.38**	.27**	.22**	.37**	.54**	-		
10. Wage Satisfaction	1.84	0.84	-.22**	-.12**	-.01	.21**	.14**	.12**	.23**	.07	.27**	-	
11. Benefits Satisfaction	1.93	0.85	-.24**	-.21**	-.07	.40**	.19**	.17**	.28**	.14**	.38**	.46**	-
12. Advancement Satisfaction	1.65	0.87	-.24**	-.19**	-.12**	.36**	.17**	.27**	.28**	.20**	.43**	.44**	.52**

Note. ** $p < .01$ level (2-tailed), * $p < .05$ level (2-tailed).

All the variables had correlations of statistical significance with exhaustion. For exhaustion as well, the variable with the largest negative correlation was 'job satisfaction' with a slightly lower value of -.34.

Regression Analysis

We conducted the regression analysis to get an overall idea of the variance in the three main measures. The R^2 is the proportion of variance in the dependent variable that is predicted from the independent variables, while the adjusted R^2 adjusts for the number of predictors and is therefore a more accurate estimate since we had many independent variables.

Table 8

Multiple Regression Analysis for the Three Main Measures

		b	SE *b*	β	R^2	Adj. R^2
Burnout					.464***	.454***
	Work-Nonwork Conflict	.075***	.012	.203***		
	Nonwork-Work Conflict	.093***	.014	.220***		
	Supervisor Support	-.002	.020	-.004		
	Coworker Support	-.015	.026	-.019		
	Job Security	-.034	.020	-.054		
	Job Autonomy	-.030	.018	-.056		
	Meaningful Work	-.082***	.024	-.133***		
	Job Satisfaction	-.240***	.031	-.330***		
	Wage Satisfaction	-.037	.020	-.064		
	Benefits Satisfaction	-.052*	.022	-.093*		
	Advancement Satisfaction	.011	.021	.021		

Psychological Distress					.341***	.329***
	Work-Nonwork Conflict	.041*	.018	.082*		
	Nonwork-Work Conflict	.110***	.021	.192***		
	Supervisor Support	-.048	.030	-.063		
	Coworker Support	-.120**	.038	-.115**		
	Job Security	-.110***	.031	-.129***		
	Job Autonomy	-.111***	.028	-.152***		
	Meaningful Work	-.040	.035	-.048		
	Job Satisfaction	-.236***	.047	-.241***		
	Wage Satisfaction	-.064*	.030	-.083*		
	Benefits Satisfaction	.029	.032	.039		
	Advancement Satisfaction	.024	.032	.032		
Exhaustion					.286***	.273***
	Work-Nonwork Conflict	.126***	.029	.167***		
	Nonwork-Work Conflict	.175***	.032	.201***		
	Supervisor Support	-.047	.048	-.041		
	Coworker Support	-.121*	.061	-.077*		
	Job Security	-.078	.048	-.061		
	Job Autonomy	-.132**	.043	-.119**		
	Meaningful Work	-.049	.056	-.038		
	Job Satisfaction	-.266***	.074	-.179***		
	Wage Satisfaction	-.089	.048	-.076		
	Benefits Satisfaction	-.076	.051	-.066		
	Advancement Satisfaction	.058	.050	.051		

Note. *** $p < .001$, ** $p < .01$, * $p < .05$.

For burnout, ‘job satisfaction’ had the highest preventative effect of -.33 while both ‘work-nonwork conflict’ and ‘nonwork-work conflict’ had big effects of respectively .203 and .22. The adjusted R^2 was at .454 which meant that the independent variables explain 45.4 % of the variance in the dependent variable ‘burnout’.

Psychological distress showed similar patterns, where ‘job satisfaction’ had a preventative effect of -.241, a bit lower than for burnout. ‘Job autonomy’ and ‘job security’ also had a negative effect on burnout at -.152 and -.129. In this regression analysis as well, the ‘nonwork-work conflict’ had a big effect on psychological distress of .192. The adjusted R^2 was lower than for burnout and measured .329, that meant 32.9 % of the variance.

For exhaustion as well the ‘job satisfaction’-variable had a preventative effect at -.179. Additionally, we saw that the ‘work-nonwork conflict’ and ‘nonwork-work conflict’ had big effects on exhaustion too, at respectively .167 and .201, indicating that these conflicts increase the symptoms of exhaustion. The adjusted R^2 was at the lowest here, at only .273 or 27.3 % of the variance explained in the dependent variable.

Group Comparisons

Even though our second and third hypotheses only focused on burnout, these tests were conducted for all the main measures. First, we ran an independent samples t-test to make comparisons based on gender. The first thing of interest was the means and standard deviations distributed between men and women.

Table 9

Descriptive Statistics on Main Measures based on Gender

		Mean	*SD*
Burnout	Men*	2.106	0.462
	Women**	2.123	0.464
Psychological Distress	Men*	0.936	0.635
	Women**	0.975	0.638
Exhaustion	Men*	1.536	0.883
	Women**	1.734	0.962

Note. * N = 233, ** N = 573

From the results we saw that the means of symptoms for all the conditions were higher for women than for men. The Levene's test for equality of variances showed that neither of the measures were significant for equal variances assumed. Furthermore, the t-test showed only statistically significance for exhaustion based on gender, at .003 for one-sided *p* and .005 for two-sided *p*. Neither burnout nor psychological distress were statistically significant based on gender, with one-sided *p*-values of respectively .314 and .217. The one-sided *p*-value was of most importance to us, since the test was conducted to study whether women experience more burnout symptoms than men.

Table 10

Independent Samples t-Test based on Gender

	One-Sided *p*	Two-Sided *p*	Cohen's *d*
Burnout	.314	.627	.038
Psychological Distress	.217	.434	.061
Exhaustion	.003	.005	.211

The test showed Cohen's *d* for all the main measures, which indicated the magnitude of the effect sizes. For burnout, Cohen's *d* was at .038, which was the lowest of the measures. A Cohen's *d* should be .5 to be considered a medium effect and .8 or above to be considered a large effect. Exhaustion, as the only measure significant based on gender, had a Cohen's *d* of .211, indicating that gender could be assumed to have a small effect on exhaustion.

To compare comparisons based on age, we conducted one-way ANOVA to explore the symptoms of all conditions in the three age groups. In the table below, the mean and standard deviation for burnout, psychological distress and exhaustion based on age is presented.

Table 11

Descriptive Statistics on Main Measures based on Age

		Mean	*SD*
Burnout	18 - 34*	2.236	0.464
	35 - 49**	2.182	0.460
	50 +***	1.989	0.432
Psychological Distress	18 - 34*	1.230	0.614
	35 - 49**	0.910	0.629
	50 +***	0.762	0.581
Exhaustion	18 - 34*	1.916	0.986
	35 - 49**	1.776	0.966
	50 +***	1.434	0.842

Note. * N = 313, ** N = 146, *** N = 347

The age group between 18 and 34 had higher means for all three conditions than the other age groups. Also, the standard deviation for young adults was slightly larger than for the participants between 35 and 49, and for the participants over 50. The test of homogeneity of

variances in ANOVA showed that there were significant differences in variances across groups for exhaustion. This indicated a violation of the assumption of homogeneity of variances. For burnout and psychological distress, we could conclude that there was no significant difference in variance across groups, supporting the assumption of homogeneity of variances for these two measures.

Table 12

One-Way ANOVA based on Age

	F	*p*-value	Eta^2
Burnout	26.595	<.001	.062
Psychological Distress	50.416	<.001	.112
Exhaustion	23.342	<.001	.055

The large *F*-value for psychological distress indicated that the measure had higher variance between the age groups than within the age groups, than the other measures. The *F* was almost twice as big as for burnout. Generally, a higher *F*-value indicated that the variance between the age groups was bigger than the variance internally. This difference can also be seen in the Eta^2, where psychological distress was at .112 and burnout was at .062. Eta^2 estimated the effect sizes, and we saw that the age groups had a medium effect on burnout symptoms since the value was larger than .06. The age groups had bigger effect on symptoms of psychological distress, where the Eta^2 was approximately .11, almost at .14 which would indicate a large effect.

In addition to the ANOVA, we conducted a post hoc test using Tukey's method. This compared the age groups against each other for all the main measures. From the test we saw that most of the mean differences for all the conditions were significant at the .001 level.

Table 13

Multiple Comparisons using Tukey Post Hoc Test

		18 - 34	35 - 49	50 +
Burnout	18 - 34		.054	.247**
	35 - 49	-.054		.193**
	50 +	-.247**	-.193**	
Psychological Distress	18 - 34		.320**	.468**
	35 - 49	-.320**		.148*
	50 +	-.468**	-.148*	
Exhaustion	18 - 34		.140	.482**
	35 - 49	-.140		.342**
	50 +	-.482**	-.342**	

Note. * $p < .05$, ** $p < .001$

The highest difference in means was found between the age group of 18 to 34 and 50 or older, with a value of .482, for exhaustion. Psychological distress had a difference for the same age groups of .468, and burnout of .247. Additionally, we found a difference in means of .320 between the youngest adults and those between 35 and 49 for psychological distress.

For burnout, the comparison of participants between 18 and 34 to those between 35 and 49 was non-significant. This was also the case with these same age groups for exhaustion. These differences were the only ones not statistically significant.

DISCUSSION

The Objectives of The Study

In conducting this study, the main objectives were to investigate to which extent individuals reporting symptoms of burnout attribute these symptoms to their jobs, and the association between burnout and job variables. Additionally, the study compared burnout with psychological distress and exhaustion to clarify if burnout can be considered work-specific.

The hypotheses tested in the study were:

H1: Only a minority of individuals with burnout symptoms attribute these symptoms to their work.

H2: Young adults between the age of 18 and 34 show more symptoms of burnout than older adults.

H3: Women experience more burnout symptoms than men.

To achieve the objectives of the study, we conducted frequency, correlation, and regression analysis, as well as t-test and ANOVA for the group comparisons.

Main Findings

The first main finding is related to the frequency analysis, where 45.9 % of the participants did not attribute their symptoms of burnout to work compared to 27.7 % who did. In addition, 26.4 % did not know if their work was responsible for their symptoms. Purely based on the percentages, the findings suggest that hypothesis 1 is supported, and most individuals reporting systems of burnout does not attribute these to their jobs. This finding related to the one of Bianchi and Brisson (2019), where “fewer than half of the individuals with burnout symptoms considered their job to be the main cause of these symptoms”. The frequencies of how the participants attributed their symptoms of psychological distress and

exhaustion were similar to those of burnout. For exhaustion there was a slightly lower percentage of people who did not experience symptoms than for burnout, and for psychological distress the percentage was somewhat higher.

Second, we found that the independent job variables explained more of the variance in burnout than in the other conditions, with an adjusted R^2 of .454 versus .329 and .273 for respectively psychological distress and exhaustion. The adjusted R^2 for the explained variance in burnout was still not satisfactory, as the model only explained 45.4 %. This suggested that there were other variables than the work-related ones that should have been included for the model to be sufficient. From the regression analysis, 'job satisfaction' had the highest effect for both burnout and psychological distress. This variable had a negative effect of respectively -.330 and -.241, suggesting that the more satisfied the participants were with their jobs, the lower their symptoms were of the current conditions. The workers' job satisfaction could therefore be a preventative or protective variable. For exhaustion, the highest significant effect came from 'nonwork-work conflict' with a value of .201, meaning that the participants experiencing this conflict had higher chances and more risk of exhaustion symptoms.

Another main finding is related to the participants' gender. The means of women's symptoms of all the conditions were higher than the men's but the findings were only significant for exhaustion. Men's symptoms of exhaustion had a mean of 1.536 while women's symptoms had a mean of 1.734. This difference in means was also indicated by Cohen's *d*, with a value of .211, thus explaining the effect size of exhaustion based on gender. From the study by Marchand et al. (2018) they also found that overall "women reported significantly higher levels of emotional exhaustion". Even though our study suggested that women experienced more exhaustion symptoms than men, this did not support our third hypothesis. Our hypothesis focused on burnout and the potential difference we found in

burnout symptoms based on gender was non-significant. Nevertheless, the difference in exhaustion was an important finding.

In comparing the symptoms based on age groups, the findings were slightly different. The results for exhaustion violated the assumption of homogeneity of variances across the different age groups, suggesting heterogeneity, and the possibility of inaccurate results. This could have a connection with a finding from Marchand et al. (2018) that age "followed a non-linear relationship with emotional exhaustion". Furthermore, the findings from ANOVA indicated that there were significant differences between age groups for all the measures. The biggest value was for psychological distress with a *F*-value of 50.416, almost twice the size of the differences for burnout and exhaustion, meaning that the variation between the age groups was considerably more than the variance within the age group. From the post hoc test, we saw that young adults showed more symptoms of the three conditions throughout. For burnout and exhaustion, the difference between the young adults and those aged between 35 and 49 were non-significant. Nevertheless, the difference between the age group of 18 to 34 and those aged 50 or older was significant with a positive direction, partially supporting our second hypothesis. This was of interest, since the study by Ahola et al. (2008) found that young women were negatively related to the probability of having burnout, while aging women were positively related. In the study, both the young and the aging men were unrelated to the probability of having burnout, thus contradicting our partially supporting finding.

Additional Findings

The correlation analysis showed that 'job satisfaction' had a negative correlation with all the main measures. For burnout the magnitude of this variable was at -.53, and for psychological distress and exhaustion the magnitudes were at -.42 and -.34, respectively. This finding was supported in the regression analysis, where 'job satisfaction' had a negative effect

on all three conditions, indicating a preventive association for all. The variance in burnout explained by 'job satisfaction' was most extensive with -.330. For psychological distress the variance explained was -.241, and for exhaustion the variance explained was -.179. These findings highlight the importance of thriving at the workplace for reducing the occurrence of the three conditions. For burnout, 'meaningful work' also negatively affected the variance in burnout symptoms, with a β of -.133. This was a smaller effect than for 'job satisfaction' but still an important finding to take into consideration when addressing how to prevent burnout. The variables 'job autonomy' and 'job security' had negative effects on psychological distress, with β-values of respectively -.152 and -.129. So, to prevent symptoms of psychological distress, one should consider both autonomy and security at work, as well as satisfaction.

'Work-nonwork conflict' and 'nonwork-work conflict' were positively correlated with all the main measures in the correlational analysis. The correlation was highest for burnout, with .38 for 'work-nonwork conflict' and .35 for 'nonwork-work conflict'. For exhaustion, the correlations were .32 and .28 respectively, and for psychological distress the correlations were lowest at .25 for 'work-nonwork conflict' and .27 for 'nonwork-work conflict'. These findings were amplified by the regression analysis, where burnout was positively affected by both. The 'work-nonwork conflict' had a β of .203 and 'nonwork-work conflict' had a β of .220. So, for burnout the effect was bigger for a nonwork-work than a work-nonwork conflict. Similarly, for exhaustion the β of 'nonwork-work conflict' was bigger than of 'work-nonwork conflict', with values of respectively .201 and .167. The 'nonwork-work conflict' was also significant at the .001-level for psychological distress, with a β-value of .192. These findings from our study were similar to the findings in the meta-analysis by Reichl et al. (2014).

Lastly for the secondary findings, we found small non-significant mean differences for burnout and psychological distress based on gender. The Cohen's *d* were .038 and .061

respectively, explaining the minimal difference between men and women. For burnout the difference was .017 and for psychological distress the difference was .039. We also found bigger differences for psychological distress and exhaustion between young adults and the ones 50 years or older than for burnout. The comparison showed a value of .468 and .482, for psychological distress and exhaustion respectively.

Practical Implications

In suggesting that burnout is not confidently a work-specific condition, the preventions and interventions should not be entirely work-based either. Since Norway have such high rates of sick leave compared to the other OECD countries, and have not been successful in reducing them, there should be more focus on preventative matters.

Preventions could be improved by understanding that differences in gender impact how workers, also outside of the workplace, are affected. These differences could be related to nonwork factors, like marital and parental status as well as the cognitive evolution through different life stages. Women, and especially traditional women, are significantly more likely to report burnout than men (Artz et al., 2022). Traditional women have more responsibilities outside of work, like cooking dinner, cleaning the house, and taking care of the children. There are adaptions the workplace can do to make periods with more nonwork responsibilities easier for both genders, for instance the possibility of home office and overall improving the communication between worker and employer.

Workers' age does also impact the risk of burnout, like Marchand et al. (2018) concluded "occupational health professionals should be aware of the higher risk of burnout in younger men and women". The reason for this could be the position young adults have at work, specifically in the hierarchy, since newly graduated often start at an inferior position in a company. In addition to the responsibilities of young adults outside of work, like paying off

loans and planning for their future. Today's young working generation have had a different childhood than those who grew up around the 1970s, which could influence their work moral. This should be considered in the future, both in the workplace and outside of work.

If preventions for burnout and the other conditions become insufficient, then interventions should be applied to minimize the effects of burnout, psychological distress, and exhaustion. The study by Marchand et al. (2018) suggested that "interventions for burnout should target younger men and women, and women over 55 years of age". Based on our findings, the interventions should at least be differentiated based on age and gender, since there were signs of more symptoms amongst women and young adults. More research including some additional nonwork factors is needed to conclude where the interventions mainly should be focused. Artz et al. (2022) suggested that "other interventions aimed at addressing perceptions of women's role in society may be necessary to reduce the rate of job burnout among women". These interventions occurred due to the more traditional women mentioned earlier, where women had more responsibilities outside of work and could be perceived as inferior to men and the "modern women". Without more knowledge of our participants' life outside of work, it is difficult to imply specific interventions for them. Nevertheless, the one suggested by Artz et al., of addressing the perception of women's role should be implemented either way.

Limitations

This study was conducted in Norway, and even though we had a decent sample size of 813 participants, the representativeness for workers in all of Norway, and additionally for the rest of the world could be limited. The sample consisted of more women than men, as well as more young adults and those over 50 than of the age group between 35 and 49. This could impact the findings of the study, since some parts of the population were more represented.

Furthermore, the study did not directly assess factors outside of work. Specifically marital and parental status would have been interesting to involve, since these additional factors could help explain more of what makes individuals experience symptoms of burnout, psychological distress, and exhaustion. Other factors that could have been included for more accurate results were the rate of extra time in everyday life, as well as the amount of physical activity throughout the week. The latter since engaging in physical activity and exercise regularly can prevent common mental illnesses (Schuch & Vancampfort, 2021).

A limitation that was difficult to avoid, was the self-report bias. All the data was collected through participants' own answers to the questionnaire. Thus, resulting in a potential issue, as it was hard to validate whether what had been reported was true. At the same time, self-report was the best way to assess symptoms of burnout, as it was difficult to collect data in a different way. No one has more, or better, information about their own lives and the probable reasons to why things go wrong than the participants themselves. This made self-report bias a complicated limit to the study.

Finally, it could be possible that those who are more burned out may be less likely to respond to our survey. Since the study relied on the participants' self-reporting, individuals with burnout symptoms could refrain from answering. Further resulting in an incomplete sample, underrepresented by an important part of the population for our study. Therefore, the inclusion of all groups in the society would be important to adequately rely on our findings.

CONCLUSION

Our study showed that only a minority of individuals attributed their burnout symptoms to work. We found that the attribution rate was similar for both psychological distress and exhaustion as well, suggesting that burnout may not be more job-specific than those conditions. Further, the study showed that only 45 % of the variance in burnout was explained by the job variables. The percentage was lower for the other conditions, nevertheless, this could indicate that there are other nonwork factors that explain more than half of the variation in burnout.

Additionally, our study showed that women experience more symptoms than men, with significant difference for exhaustion. We also found that there are significant differences for all measures based on the age groups. For burnout, the young adults were experiencing significantly more symptoms than those aged 50 or older.

In our study, we found that job satisfaction was the most important preventive factor for all the conditions in our sample. The study also showed that work-nonwork conflicts and nonwork-work conflicts affected the risk of symptoms. This indicated that the conflicts between their job and their everyday life, and the other way around, contributed to burnout as well as psychological distress and exhaustion.

Future Research

As mentioned in the limitations, the sample for our study could have been larger. With more participants, specifically more men and those between 35 and 49 years old, the results would be more representative for the population of Norway. Further studies should be conducted with a more extensive sampling period, to get more of the underrepresented groups

included. This is especially important if future research aims to conduct group comparisons based on gender and age.

Additionally, to explain more of the variance in the main measures, other nonwork factors should be included. Both marital and parental status could affect the individuals' risk of burnout and other syndromes and should therefore be a part of further studies. Our study suggested that only a minority attributed their symptoms to their work, thus implying that there are other reasons to be considered. By including other factors like how the participants are affected by the "time crunch" as well as factors concerning the physical activity of the sample, we could deepen the understanding of why some get burned out while others do not.

Lastly, to make studies about burnout and symptoms of burnout, the participation of those who are burned out, psychologically distressed or exhausted is important. Future research should consider different approaches for collecting data to ensure that their sample is truly representative of the population. A potential alternative is a collaboration with the Norwegian Labor and Welfare Administration (NAV) to help reach the workers that are on sick leave due to burnout symptoms. Since Norway have such high sick leaves as well as female labor, this could be an interesting field of study for future research. Additionally, the inclusion of these burned-out workers on sick leave could improve the validity of the study and how much we can rely on the results.

So, How Job-Related is Burnout?

Our study supported the findings of Bianchi and Brisson (2019) that burnout may not be an entirely work-specific syndrome. There are nonwork factors that affect burnout, like psychological distress and exhaustion, thus indicating that work is not the sole reason for why some individuals get burned out. This should be commonly known, so all, both at work and outside of work, can help prevent and reduce how widespread burnout is.

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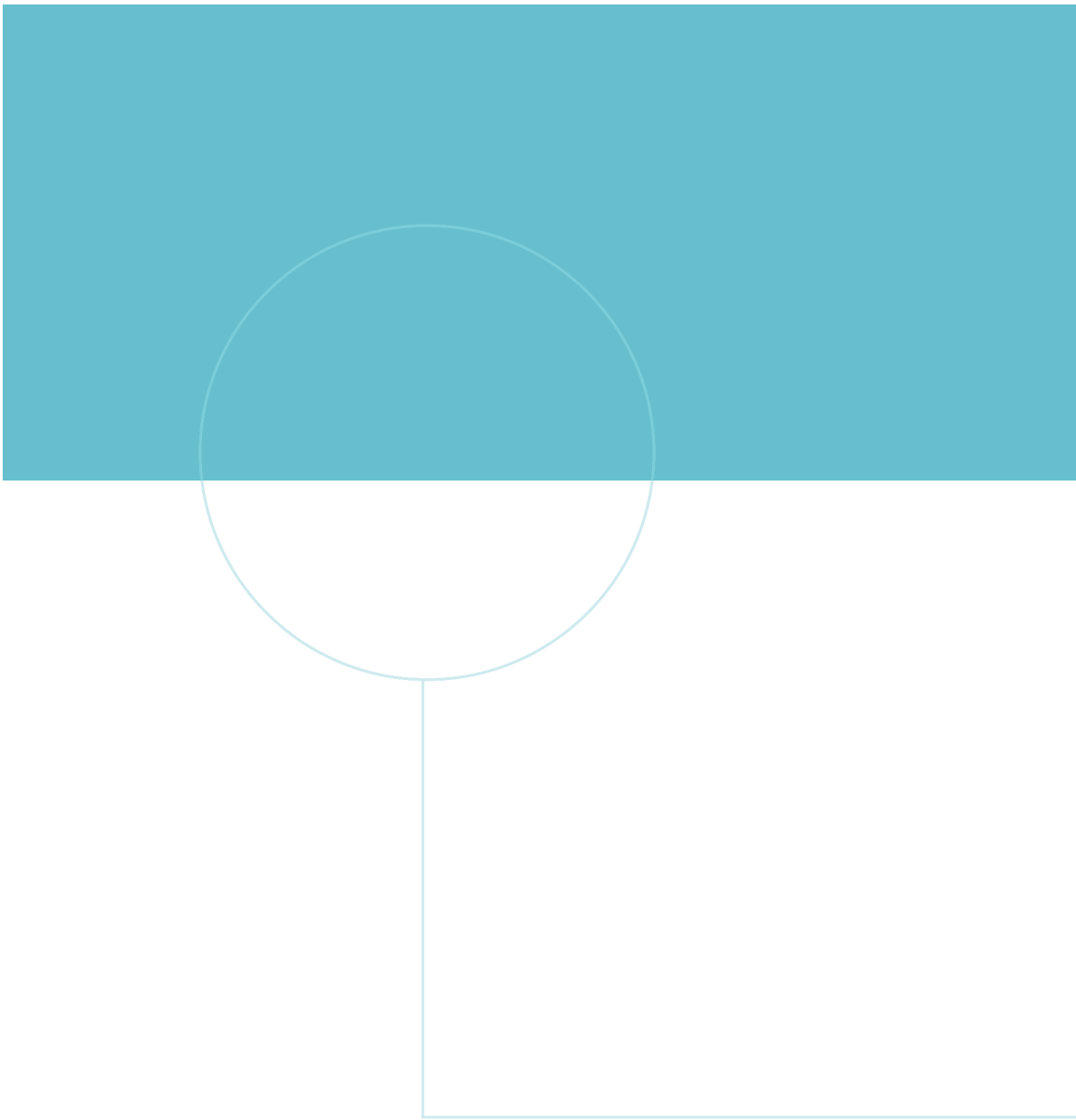

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