

# UNIVERSITY OF TWENTE.

Faculty of Behavioural,  
Management & Social Sciences

## The relationship between work-related stress and job satisfaction: The moderating effect of self-compassion

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**Abstract**

Each year, work related stress causes economical costs of approximately 4,2 billion Euro. Simultaneously to the increase of work-related stress, job satisfaction experienced a constant decrease over the past years. One's working hours cover a big part of life and thus it is important to achieve high job satisfaction in terms of not having excessive stress. This study focuses on the moderating impact that self-compassion might have on the relationship between work-related stress and job satisfaction. Based on the Job Demands-Resources model, it can be suggested that self-compassion might function as a personal resource that buffers against the impact which work-related stressors have on individual outcomes such as job satisfaction. Self-compassion is already known to reduce stress and to be beneficial for one's well-being and therefore thought to benefit that just mentioned relationship. Employed people were surveyed about their levels of work-related stress, self-compassion and job satisfaction. Then correlations were computed, such as a regression analysis and a moderation analysis, using the path model with an interaction term between work-related stress and self-compassion. The results revealed that work-related stress affects 21% of job satisfaction, which got supported by results of other studies. Further, there was no significant moderation effect of self-compassion on that relationship, which might be due to the discovery of a weak correlation between work-related stress and self-compassion. This leads then to the assumption that self-compassion might play a different role on work-related stress than expected within this study. An implication of these results is that it is important to focus more on the factors that trigger work-related stress. Furthermore, it would be highly valuable to investigate if self-compassion functions as personal resource as the Job Demands-Resource model suggests, in order to aid work-related stress and then over long term also job satisfaction.

*Keywords:* work-related stress, self-compassion, job satisfaction, moderation, job demand-resources model, personal resources

## **Introduction**

The biggest cause of absenteeism is found to be work-related stress (Health and Safety, 2001). During the past decades' employees constantly have to deal with an increasing workload and more time pressure, which in turn may trigger psychological problems (Van der Kling, Blonk, Schene & Van Dijk, 2001). Long term statistics from the United Kingdom revealed that work-related stress causes costs about £3,7 billion each year (ca. 4,2 billion Euro) (Johnson, Cooper, Cartwright, Donald, Taylor & Millet, 2005).

Research suggests that work-related stress has been negatively related to job satisfaction (Collie, Shapka & Perry, 2012; Mossholder, Bedeian & Armenakis, 1981). Over the last few decades an ongoing downward trend of the overall job satisfaction has been detected (Green & Tsitsianis, 2005). Therefore, the relation between work-related stress and job satisfaction displays a recent topic that needs more investigation due to above mentioned economical influence and the overall sinking job satisfaction. Especially since work displays such a fundamental part of most people's life, more research is needed in this field (Green & Tsitsianis, 2005).

The recent downward trend of job satisfaction was found to have a negative impact on employee's well-being, which stresses the need of investigating that topic in more detail in terms of causes and possible cure (Green & Tsitsianis, 2005). There have been studies of factors that cause work-related stress and in turn de- or increase one's job satisfaction. Thus, several external factors have already been found to influence work-related stress and on long-term also one's job satisfaction. Adequate salaries, a supportive working environment and social support from colleagues are some few examples that decrease the probability of getting stressed within work settings (cited in Russel, Altmaier & Van Velzen, 1987). However, research does not provide information about possible buffers on that relationship yet.

Therefore, this study will focus on the relationship between work-related stress and job satisfaction, with special regard to self-compassion as possible buffer. Self-compassion is briefly defined as behaving kind and caring towards oneself. A high level of self-compassion has already been found to decrease the impact of general stress on a person (Gilbert, McEwan, Matos & Rivis, 2011). Allen and Leary (2010) confirmed that statement with revealing their findings that self-compassion acts as a buffer against the experience of stress and the feeling of anxiety. Neff, Hsieh and

Dejitterat (2005) even put self-compassion into the role of an effective emotional regulation strategy, since it is found to balance negative emotions with kindness and positivity. Therefore, it could be assumed that self-compassion also might benefit a more particular type of stress, such as work-related stress. Consequently, low levels of work-related stress are assumed to increase one's job satisfaction (Collie et al., 2012; Macdonald & MacIntyre, 1997; Cooper, Rout & Faragher, 1989). Self-compassion enables people to objectively overlook situations, thus they are found to be less likely to overstate negative situations that cause stress or dissatisfaction in oneself (Neff, 2003a). Additionally, it is valuable to mention that self-compassion can increase the sense of autonomy, which might connect indirectly to job satisfaction in terms of not feeling inferior or limited when making decisions at work. Not feeling restricted is namely one crucial factor that increases one's job satisfaction.

Considering all this, the following research question arises: “*Does self-compassion act as a buffer in the relationship between work-related stress and job satisfaction?*” This following article explores this research question and consists out of four parts. First, literature is reviewed on work-related stress, self-compassion and job satisfaction. Next, a detailed description of the used research design and methods is presented, followed by the results section. Finally, possible implications will be discussed, as well as limitations of this study are pointed out with additional suggestions for further research.

## **Literature Review**

From reviewing literature, the importance and the definitions of work-related stress, self-compassion and job satisfaction will be discussed in more detail to create a base for the hypotheses and the study in general.

### ***Work-Related Stress***

Work-related stress causes high rates of tension and carries long-term risks to both the individual (e.g. development of anxiety, depression) and the organisation (e.g. increased absenteeism, lower productivity, higher financial costs) (Van der Klink, Blonk, Schene & Van Dijk, 2001). According to the Health and Safety Executive (HSE) (2001) stress is not considered to be a disease, although it is found to decrease the productivity and ability to perform, as well as the level of well-being. Research has found a combination of factors that promote an increase of work related stress (Johnson et al., 2005). The physical working environment (e.g. management styles, hierarchies), constant time pressure, a lack of job security and also a bad relationship to colleagues or the boss are found to be common sources of work-related stress (Johnson et al., 2005). Additionally, all these factors are found to increase the probability of risk behaviours such as smoking or alcohol consumption that are not beneficial for one's physical health.

From this perspective, work-related stress is defined as an adverse reaction when dealing with excessive pressure, requirements and when expectations are placed on oneself in work settings (Health and Safety Executive, 2004). In support, the World Health Organisation (WHO) (2017) defines work-related stress similarly, but adds that it results from working demands and pressures that do not match with the employee's knowledge and abilities. Especially in the 21<sup>st</sup> century the workplace displays an ever-changing environment, which is highly dynamic and offers a high amount of stimulation every day (HSE, 2004). Therefore, acting proactive or at least reactive creates consistent working pressure and might result in work-related stress (HSE, 2004).

The Job Demands-Resources Model (JD-R model) displays one possible approach that aims at the origins of work-related stress. According to the JD-R model two different types of factors influence someone's experience of well-being and stress at work, namely job demands and job resources (Xanthopoulou, Bakker, Demerouti &

Schaufeli, 2007). Physiological and psychological costs indicate job demands, therefore aspects such as physical effort in social, organizational or physical aspects count as job demands within this model (Bakker, Demerouti & Euwema, 2005). In contrast, job resources are defined to be beneficial for reaching certain goals at work, decrease job demands that are associated with physical costs, as well as achieving personal growth (Bakker et al, 2005). Each individual possesses some personal resources that can positively influence their working environment and well-being (Hobfoll, Johnson, Ennis & Jackson, 2003). Basically, it was found that it is unbeneficial for someone's health and well-being to experience high job demands, as they possibly lead to an exhaustion of one's job resources (Xanthopoulou et al., 2007). Work-related stress and job strain is therefore found to be the result of job demands such as role overload, emotional demands, excessive working pressure or environmental conditions (Bakker, Demerouti & Verbeke, 2004). In turn employees with sufficient job resources (e.g., job security, salary, team climate, authority level) experience lower levels of stress caused by work.

Several causes of work-related stress mentioned above were also found to cause low job satisfaction, such as lacking social relationships, unsatisfying salaries as well as missing social support. Additionally, a high work-related stress level is found to have a negative impact on the perceived job satisfaction of an employee (Johnson et al., 2005; Collie et al., 2012). This brings up the second construct used in the research question, namely job satisfaction which experienced a downward trend over the last years (Green & Tsitsianis, 2005).

### ***Job Satisfaction***

Job satisfaction is a construct that experienced major structural changes in the latest past and still does. These changes occur due to the constantly increasing globalization as well as due to the newly introduced technological and computer-based features of the 21<sup>st</sup> century (Green & Tsitsianis, 2005). Therefore, the working conditions of organizations needed to be adapted in order to address these changes. That in turn asks different skills from employees, which might not match with their former education and therefore increase working pressure and the perceived stress level (as cited in Green & Tsitsianis, 2005). Factors such as the earned salary, the relationship to fellow colleagues or the boss, but especially the amount of stress influence the level of job satisfaction an employee is sensing (Macdonald &

MacIntyre, 1997). Thus, stress could be seen as having a significant impact on job satisfaction. A person with a high job satisfaction level is found to behave in a more prosocial manner against oneself and others as well as being more cooperative at work (Bateman & Organ, 1983).

This research focuses on the definition of job satisfaction by Locke (1969). This definition assumes that job satisfaction is influenced by the discrepancy of the present and the desired situation within the occupation (Locke, 1969). Therefore, a satisfied employee experiences fulfilment in one's occupation implies that job-related needs and demands are met (Evans, 1997; Collie et al., 2012). Job satisfaction needs to be differentiated from 'employee morale', since it is often thought to be interchangeable (Macdonald & MacIntyre, 1997). The former refers namely to the individual level, thus how an employee feels within one's job situation and the latter refers to the organizational level in terms of how the employee identifies with the shared vision of that organization one is working for (Macdonald & MacIntyre, 1997).

### ***Self-Compassion***

Work-related stress is found to have crucial influence on job satisfaction, the third construct of self-compassion is assumed to act as buffer on that relationship. Within this study the construct of self-compassion will be treated as personal resource as this is defined by the JD-R model. According to this model, each individual brings a certain set of aspects of the self that refer to one's capacity and the sense of being able to successfully manage job stressors (Hobfoll et al., 2003). Those aspects of the self are called personal resources (e.g. self-efficacy, self-esteem or optimism) (Xanthopoulou et al., 2007). From the perspective of the JD-R model a personal resource can be defined as a moderator and therefore buffers the impact of job demands on work-related stress or burnout (Bakker et al., 2005). Self-compassion could be seen as such a personal resource as it has already been found to impact stress in terms of decreasing it (Neff, 2003a).

Self-compassion is a relatively new construct, which is based on the broader definition of compassion (Neff, 2003a). It is increasingly used to enhance well-being and in turn to reduce anxiety, depression and stress (Muris, Meester, Pierik & de Kock, 2016). The general construct of compassion is defined as being aware of others suffering, while feeling the desire to relieve that person (Radey & Figley, 2007). Therefore, it can be described as being concerned about other people's well-being,

while being unselfish. When it comes to self-compassion, it can be viewed from two different perspectives: Neff (2003a, b) or Gilbert (2009).

According to Neff (2003a,b) self-compassion is defined through and can be measured with the aid of three bipolar components that emerged from social psychology, but also already from early Buddhist traditions. 'Self-kindness' is the first component which is defined as being understanding and warm to oneself in problematic situations such as failure or stress (Neff, 2003a,b; Gilbert, 2009). Further, 'common humanity' addresses the fact that failures, stress and problems are a normal part of living. The last component 'mindfulness' stresses the process of finding a balance between positive and negative situations, such as success and failure (Neff, 2003a; Gilbert, 2009). The counteragents of these three components are 'self-judgement', 'isolation' and 'over-identification' (Neff, 2003a). Neff (2003a) stated therefore that self-compassionate people display a non-judgemental behaviour towards oneself, while being caring and kind (Neff, 2003a). Nevertheless, acts of failure are not being ignored or stay unnoticed. In turn, a high level of self-compassion provides a person with the possibility of stepping back from the situation in order to take a more objective viewpoint (Neff, 2003a). Therefore, self-compassion enables a person to view negative situations more objectively, without blaming oneself for failure. Rather it helps to understand that everybody fails sometimes (Neff, 2003b). The emotions and feelings that failures or negative events bring with them are thus less likely to be overidentified.

The approach of Gilbert (2005) uses compassion as overarching construct and self-compassion as a sub-construct (compassion for oneself), next to receiving compassion and being compassionate for others. Gilbert (2005) bases this construct on the evolutionary model, thus humans are socially dependent on each other in order to survive. Therefore, being compassionate to others and oneself helps the viability and is thought to be beneficial in terms of natural selection. By further explanation it implies that human capacities, such as selfishness, altruism or compassion, were developed by the brain in order to survive and produce more offspring (Gilbert & Procter, 2006). According to Gilbert et al. (2011) compassion can be measured with the three following components: compassion that one has for others, compassion that one receives from others and compassion for oneself. It is crucial to mention that self-compassion is found to be the antidote of self-criticism or at least that self-critical people experience difficulties in feeling self-compassionate (McKay & Fanning,

1992; Gilbert, Baldwin, Irons, Baccus & Clark, 2006). Research has actually shown that people scoring high on self-criticism have trouble with emotion regulation, which in turn might lower the level of well-being within a person (Gilbert, 2009). Therefore, Gilbert (2009) introduced his 'Compassion Focused Therapy' (CFT) in order to increase compassion. Additionally, it is also aimed at improving well-being, toleration of unpleasant emotions and also at reducing self-critical thoughts.

According to Neff (2003a) self-compassion is found to lower general stress and implies to treat oneself kindly. According to Bateman and Organ (1983) individuals with a high job satisfaction level are found to behave in a more prosocial manner against oneself and others as mentioned in the introduction, while also being more cooperative. This might imply that an increase of the ability of being kind and caring to oneself can be beneficial for one's job satisfaction as one does not blame oneself that easily in negative or stressful situations. Therefore, self-compassion is thought to act as personal resource between work-related stress and job satisfaction.

### ***The relationship between work-related stress, job satisfaction and self-compassion***

These three constructs build therefore the research question mentioned in the introduction. The necessity of combining those constructs will be expounded in more detail below. Firstly, Job satisfaction is crucial for people's overall well-being, especially since most people are spending a crucial of hours per day working (Green & Tsitsianis, 2005). Work-related stress has been found to lower job satisfaction and self-compassion has already been found to be effective in decreasing overall stress and increasing general life satisfaction (Collie et al., 2012; Gilbert & Procter, 2006). Thus, it is of high interest to investigate the role of self-compassion to the relationship between work-related stress and job satisfaction. Secondly, people scoring high on self-compassion are found to experience less fear of failure, to have a higher feeling of competence and they are more likely to be intrinsically motivated (mastery goal orientation) (Neff, 2003a; Neff et al., 2005). Based on these facts it is to be hypothesized that self-compassion might enable one to not blame oneself for failing in a stressful situation. A person would thus be less likely to overidentify the situation and getting stressed due to not feeling competent enough (Neff, 2003a). Thirdly, high levels of self-compassion create a positive self-attitude that is not only based on the evaluation of one's performances (Neff, 2003a).

This finding becomes crucial when experiencing inferiority in terms of power, such as being controlled by one's boss. Gilbert and Procter (2006) state that insecure people might rather feel threatened by the power of their boss and possibly develop concerns of how they are evaluated by them. The relation with the boss is one stressor that influences one's job satisfaction (Gilbert & Procter, 2006). Possessing a high level of self-compassion usually predicts a positive self-attitude and beliefs in one own competences (Neff, 2003a). The above-mentioned evaluation of the boss would therefore be expected to not enhance the stress level in a self-compassionate person. Finally, Gilbert and Procter (2006) have illustrated that CFT can reduce shame, self-criticism and most importantly stress among chronic patients. Moreover, Lutz, Brefczynski-Lewis, Johnstone and Davidson (2008) also supported that compassion trainings positively impact stress. All these facts and findings lead to the final assumption that a high level of self-compassion can possibly lower work-related stress and therefore increase job satisfaction within employees.

### Study hypotheses

Based on the introduction and the literature review, it is of high value to investigate the effect of self-compassion on the relationship of work-related stress and job satisfaction. Although research suggests that personal resources are important buffers against the impact which job related stressors have on job satisfaction, only a few studies attempted to identify important personal resources in this relationship. Further, no research could be found where self-compassion (as a personal resource) acted as a moderator or buffer for work-related stress and job satisfaction. This will therefore be covered by this study and based on the preceding sections, the following research objects and associative research hypothesis are established:

(1) To determine the relationships between work-related stress, self-compassion and job satisfaction.

H<sub>1a</sub>: Work-related stress correlates negatively with job satisfaction.

H<sub>1b</sub>: Work-related stress correlates negatively with self-compassion.

H<sub>1c</sub>: Self-compassion does not correlate with job satisfaction.

(2) To determine the effect of work-related stress on job satisfaction.

H<sub>2a</sub>: Work-related stress negatively effects job satisfaction.

(3) To determine the moderating effect of self-compassion on the relationship between work-related stress and job satisfaction.

H<sub>3a</sub>: Self-compassion moderates the relationship between work-related stress and job satisfaction.

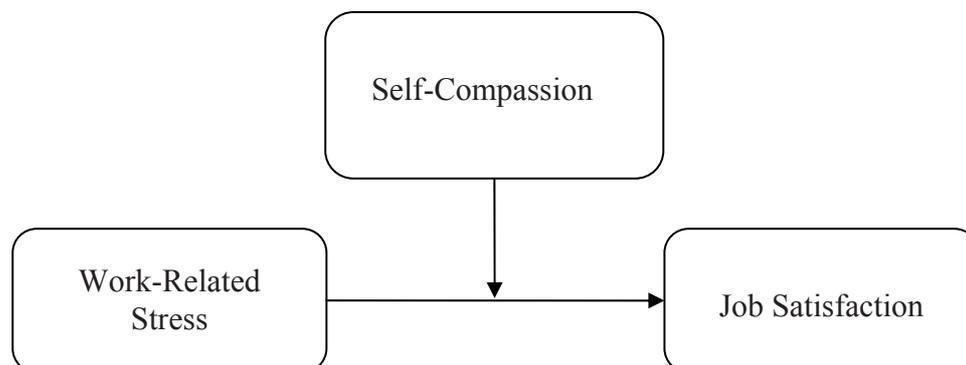


Figure 1. Conceptual model of the expected moderation effect. The relationship of Work-Related Stress and Job Satisfaction is thought to be moderated by Self-Compassion.

## **Method**

### ***Design***

A quantitative cross-sectional electronic survey-based research design was employed to investigate the relationship between work-related stress, self-compassion and job satisfaction. According to Levin (2006) this research design is easily implementable, convenient or 'rapid' in its execution and makes it possible to estimate the prevalence of the outcome of interest within a given timeframe. This is beneficial when investigating whether self-compassion functions differently as a buffer amongst a variety of people. Standardised questionnaires were used as a mean to obtain data. Convenient sampling was used to gather participants due to its benefits in being a fast and keen method for Bachelor-students.

### ***Participants***

A convenience sample ( $n = 130$ ) was drawn to investigate the relationships amongst the variables. Participants were invited via E-mail and social networks (e.g. Facebook, YouTube, Instagram) and were required to be at least 18 years of age and fully master the English language. For this particular research question, the requirement of being employed (full-time, part-time or having a side-job) became important. Individuals who were unemployed were removed or excluded from the analysis.

Table 1 displays the general biographical characteristics of the 130 employed participants. A total of 89 (68,5%) of the participants were female, whereas 41 (31,5%) were male. The ages ranged from 18 to 67 years of age ( $M = 23,32$  ;  $SD = 7,29$ ). 34 (26,2%) participants attended a full-time job ( $\geq 36$  hours/week), whereas 7 (5,4%) participants were occupied with a part-time job ( $\leq 36$  hours/week) and the largest group of 89 (68,5%) participants was occupied by a side-job.

Table 1

*General Biographical Characteristics of the Participants (N = 130).*

<i>Item</i>	<i>Category</i>	<i>Frequency</i>	<i>%</i>
Sex	Male	41	31,5
	Female	89	68,5
Age (years)	18 to 25	75	82,3
	26 to 35	15	11,5
	36 to 45	4	3,1
	46 to 55	2	1,6
	56 to 65	1	0,7
	66 to 67	1	0,8
	Nationality	Dutch	21
German		97	74,6
Other		12	9,2
Employment Status	Full-time ( $\geq 36$ h/w)	34	26,2
	Part-time ( $\leq 35$ h/w)	7	5,4
	Side-job	89	68,5

***Measuring instruments***

In order to gather data to address the main research question, three instruments were presented to participants to measure participants' levels of work-related stress, self-compassion and job satisfaction.

**Work-related stress (WRS)** was measured with the unidimensional General Work Stress Scale (GWSS) developed by de Bruin and Taylor (2005). It consisted of nine statements that were answered with a five-point frequency scale ranging from 1 ("Never") to 5 ("Always"). Factors such as work-life balancing, working relationships, job insecurity, lacking autonomy and several more were covered with these statements (De Bruin, 2006). The scores that are received from each participant provide the level of the overall stress that individuals experience at work (De Bruin, 2006). An example of one item is: "Does work make you so stress that you wish you had a different job?" Psychometrically the GWSS can be rated as reasonable according to de Bruin and Taylor (2005). The reliability was rated as very satisfactory

( $\alpha = 0,92$ ), whereas the data set of this study revealed a satisfactory reliability as well with  $\alpha = 0,86$ . Also, the construct validity got supported by results of several studies and is therefore sufficient (De Bruin & Taylor, 2005; De Bruin, 2006).

**Job satisfaction (JS)** was measured by the short form of the Minnesota Satisfaction Questionnaire (MSQ) developed by the University of Minnesota, consisting out of 20 items. It provides the researcher with information about the job satisfaction level of each participant. The scores emerged by a five-point Likert scale ranging from 1 (“Very Dissatisfied”) to 5 (“Very Satisfied”) and all statements can be subdivided into three subscales. The first subscale is Intrinsic Satisfaction (12 items,  $\alpha = 0,86$ ) with items such as “On my present job, this is how I feel about being able to keep busy all the time”. Secondly, the Extrinsic Satisfaction subscale (six items,  $\alpha = 0,80$ ) such as “On my present job, this is how I feel about the way my boss handles his/her workers” and finally the General Satisfaction subscale consisting of both mentioned scales and two additional items (20 items,  $\alpha = 0,90$ ) such as “On my present job, this is how I feel about the working conditions”. The psychometric quality of the MSQ can be rated as high, since the overall reliability coefficients were found to be high ( $\alpha = 0,88$ ) (University of Minnesota, 1967). The data set of this research revealed a high reliability of this scale ( $\alpha = 0,89$ ). According to research the construct validity could be rated as good for most of the times (University of Minnesota, 1967).

**Self-compassion (SC)** was measured by the three-dimensional Self-Compassion Scale (SCS) developed by Neff (2003a). The English version of the SCS consists out of 26 items that can be answered by a five-point frequency scale (1 = “Almost never” to 5 = “Almost always”). Neff (2003a) divided these items into six subscales to measure self-compassion, from which three subscales were negatively formulated and needed to be scored reverse before the analysis. The three positive subscales were: the Self-Kindness subscale (five items,  $\alpha = 0,78$ ) such as “When I’m going through a very hard time, I give myself the caring and tenderness I need.”, secondly the Common Humanity subscale (four items,  $\alpha = 0,80$ ) such as “When I’m down and out, I remind myself that there are lots of other people in the world feeling like I am.” and lastly the Mindfulness subscale (four items,  $\alpha = 0,75$ ) such as “When something painful happens I try to take a balanced view of the situation.”. The negative subscales of the SCS were: The Self-Judgement subscale (five items,  $\alpha = 0,77$ ) such as “When times

are really difficult, I tend to be tough on myself.”, secondly the Isolation subscale (four items,  $\alpha = 0,79$ ) such as “When I’m feeling down, I tend to feel like most other people are probably happier than I am.” and lastly the Over-identification subscale (four items,  $\alpha = 0,81$ ) such as “When I fail at something important to me I become consumed by feelings of inadequacy.” According to Neff (2003a) the psychometric quality of the SCS is adequate. All six dimensions had a good reliability (Cronbach’s alphas were all above 0,70 and ranged from 0,77 to 0,81) and the overall reliability was rated as high ( $\alpha = 0,90$ ) (Raes, Pommier, Neff & Van Gucht, 2011). With the data set of this research the SCS could be rated with an overall reliability of very high ( $\alpha = 0,91$ ).

### ***Procedure***

Data was collected through the distribution of an electronic link to the survey between 5<sup>th</sup> and 12<sup>th</sup> of April 2017. Prior to distribution of the survey, it was approved by the ethical committee of the psychology department of the University of Twente. Afterwards, a brief explanation of self-compassion was formulated with a short statement of the scope of the study (Bachelor-thesis), which was then send to friends, family and acquaintances of the researchers. E-mail, Facebook, YouTube and Instagram were used to distribute that short introduction with an electronic link. By clicking on the link, the informed consent was displayed. Therein all participants got informed about the confidentiality, anonymity, the estimated duration of filling in the survey (20-30 minutes), the possibility to withdraw at all times and an E-mail address was provided for upcoming questions. After the participant had accepted, general biographical questions were presented and afterwards the actual survey started including ten different scales measuring several psychological constructs. A “thank you for participating” note closed the survey down. This study was part of a larger study of three Bachelor-students. Therefore, the data set of 221 participants was collected in collaboration. After downloading this data set, it was reduced to employed participants only. In total, the data of 130 participants was left for further analyses. Items were scored reverse when necessary before the statistical analyses were computed.

***Statistical analysis***

Data was processed and analysed using SPSS v22 (IBM 2015). First descriptive statistics was used to determine the Means, SD and Cronbach's Alphas. Skewness and Kurtosis were computed to examine the normality of the data. Thereafter, Pearson correlation coefficients were conducted to assess the relationships amongst the variables (WRS, SC and JS). The effect sizes ranged from 0,3 (medium) to 0,5 (large) and statistical significance were set at  $p < 0,05$ . The effect of WRS and JS was investigated with the aid of a regression analysis. Then a pathway model was used for the moderation analysis with stepwise multiple regressions. In order to conduct this analysis, variables were centred to compensate for the potential high multicollinearity with the interaction term (comprised of GWSS and SCS). Afterwards, two Models were tested with the aid of the regression analysis. Model 1 was based on work-related stress and self-compassion as separate constructs, effecting job satisfaction. Model 2 focused on the effect of the interaction term of work-related stress and self-compassion on the level of job satisfaction. Finally, the model with more significant variance will be the better fit.

## Results

Statistical analyses were computed with the aid of SPSS, valuable outcomes and results are presented below. First, general descriptives and reliability are displayed. Second, the correlations of all three constructs are illustrated, followed by a regression analysis between work-related stress and job satisfaction. Finally, the results of the moderation analysis, as well as the corresponding graph are presented.

### *Descriptive statistics, reliability and correlations*

Prior to analyses, the data was screened and reduced to the final data set. Cronbach's alpha was computed for the investigation of the reliability of the scales within this data set (Table 2). Skewness and Kurtosis were used in order to investigate the distribution of the collected data. The data of the GWSS, SCS and also of the MSQ can be interpreted as being normally distributed, since Skewness and Kurtosis were below the value of 1. The variation of the employment status of all 130 participants was not equally distributed. 89 (68,5%) participants were occupied with a side job, while 34 (26,2%) participants had a full-time job and only 7 (5,4%) participants had a part-time job (Figure 2). Therefore, a ceiling effect is identifiable in regards to the employment status with Kurtosis being -1,04.

Table 2

*Means, Standard Deviations, Alphas and Correlations for Each Scale.*

<i>Scales</i>	$\mu$	$\sigma$	$\alpha$	<i>Skewness</i>	<i>Kurtosis</i>	<i>GWSS</i>	<i>SCS</i>	<i>MSQ</i>
GWSS	1,74	0,63	0,87	0,81	0,21	1	-	-
SCS	3,12	0,60	0,92	0,30	0,21	-0,28*	1	-
MSQ	3,64	0,57	0,89	-0,64	0,21	-0,46*	0,11	1

\*. Correlation is significant at the 0,01 level (2-tailed).

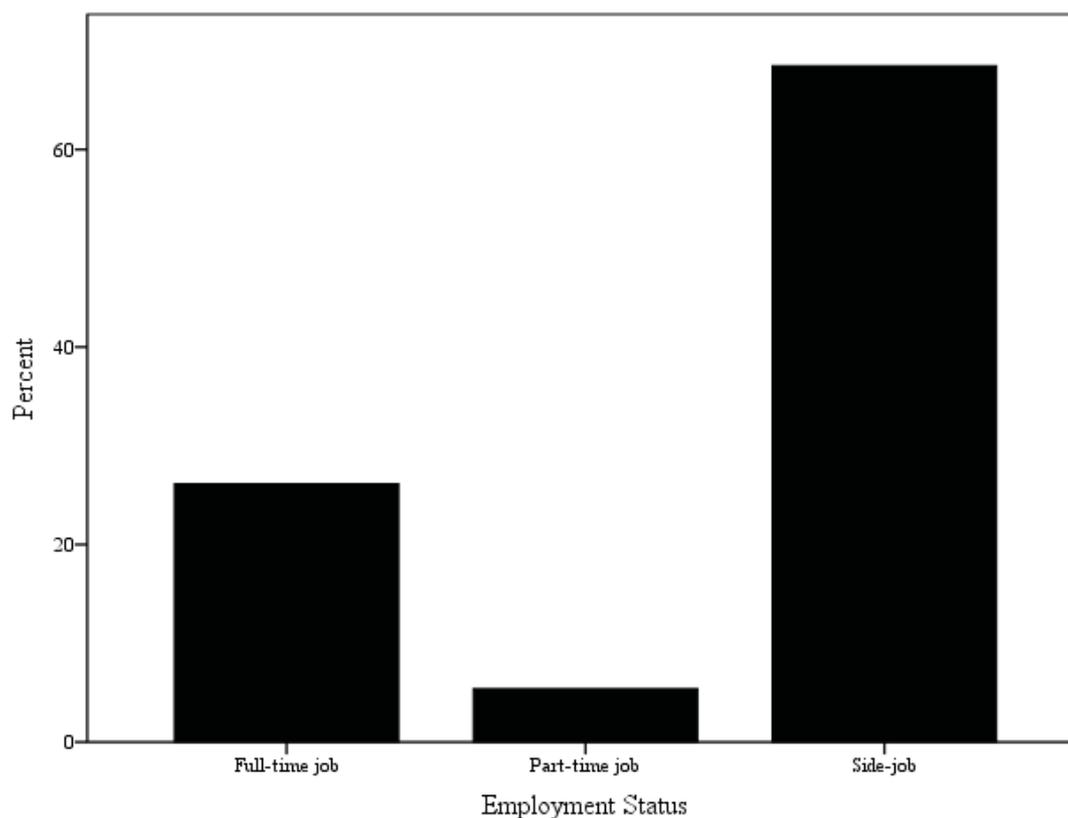


Figure 2. Histogram of the employment status of all participants ( $N = 130$ ).

The Pearson correlation was conducted in order to test hypotheses 1<sub>a</sub>, 1<sub>b</sub> and 1<sub>c</sub> (Table 2). The correlation between work-related stress and job satisfaction was found to be moderate and significantly negative ( $r = -0,46$ ;  $p = 0,00$ ). Participants that scored either high on work-related stress ( $\mu = 1,74$ ;  $\sigma = 0,63$ ) scored low on job satisfaction ( $\mu = 3,64$ ;  $\sigma = 0,57$ ) or vice versa, which supports hypothesis 1<sub>a</sub>.

Furthermore, a weak but significant negative correlation was found between work-related stress and self-compassion ( $\mu = 3,12$ ;  $\sigma = 0,60$ ) of participants ( $r = -0,28$ ;  $p = 0,00$ ). This reflects thus that participants who experience work-related stress have lower self-compassion or the other way around and it confirms hypothesis 1<sub>b</sub>.

Self-compassion did not correlate significantly with job satisfaction ( $r = 0,11$ ;  $p = 0,20$ ). This finding does support hypothesis 1<sub>c</sub> and therefore allows further analysis for a possible moderation effect of self-compassion.

### **Regression analysis**

Hypothesis 2<sub>a</sub> was aimed at examining the effect of work-related stress and job satisfaction. The regression analysis revealed that work-related stress significantly

predicted the level of job satisfaction  $\beta = 0,91$ ,  $t_{(129)} = 5,83$ ,  $p < 0,00$ . Work-related stress explained a significant proportion of variance in the scores of job satisfaction,  $R^2 = 0,21$ ,  $F_{(1,128)} = 34,02$ ,  $p < 0,00$ . Therefore, 21% of a person's job satisfaction can be accounted to one's work-related stress. The intercept value of job-satisfaction equals 87,04 (Table 3).

Table 3

*Regression Analysis of Work-Related Stress and Job Satisfaction*

Model	Unstandardized		Standardized		t	Sig.	F	R	R <sup>2</sup>
	Coefficients	Std. Error	Beta	Coefficients					
1 (Constant)	87,04	2,59			33,58	0,00	34,02	0,46	0,21
GWSS	-0,91	0,16	-0,46		-5,83	0,00			

a. Dependent Variable: MSQ

***Moderation analysis***

Self-compassion was examined to be a moderator of the relation between work-related stress (independent variable) and job satisfaction (dependent variable), as stated in hypothesis 3<sub>a</sub>. All variables were centred to compensate for potential high multicollinearity with the interaction term. Firstly, work-related stress and self-compassion were entered in the regression analysis as Model 1. This model was found to be significant in explaining variance in job satisfaction ( $R^2 = 0,21$ ,  $F_{(2,127)} = 16,92$ ,  $p < 0,00$ ). Secondly an interaction term was created with work-related stress and self-compassion (Model 2). This interaction term explained a significant decrease in variance in job satisfaction ( $R^2 = 0,23$ ,  $F_{(3,126)} = 12,78$ ,  $p = 0,00$ ).

Model 2 with the interaction term did not account for significantly more variance than work-related stress and self-compassion did by themselves (Model 1),  $R^2$  change = 0,02,  $p = 0,05$ , due to  $p > 0,05$ . Therefore, self-compassion cannot be treated as moderator between work-related stress and job satisfaction of an employee. Figure 3 illustrates the graph of the interaction effect.

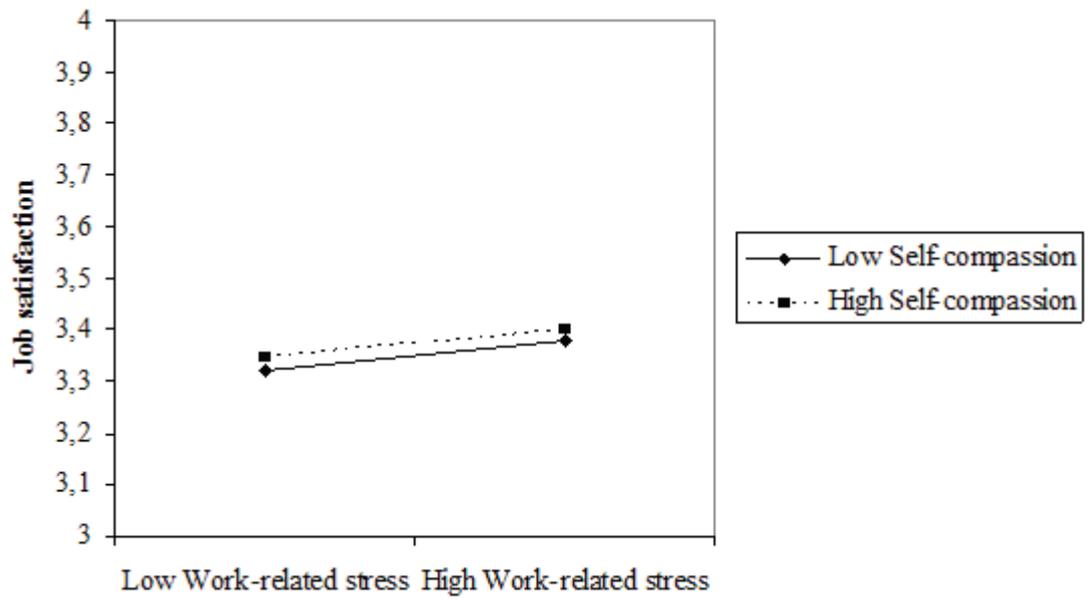


Figure 3. Interaction Plot of Model 2 ( $N = 130$ ).

## Discussion

The purpose of this study was to determine the relationship between work-related stress, self-compassion and job satisfaction. Specifically, the aim was to determine whether self-compassion could act as a moderator between work-related stress and job satisfaction. The results showed a moderate statistically significant negative relationship between work-stress and job satisfaction as well as a between work-stress and self-compassion (small effect). In contrast, no relationship could be found between self-compassion and job satisfaction. Finally, the results showed that self-compassion does not moderate the relationship between work-related stress and job satisfaction.

This study indicates that one's work-related stress has the tendency to decrease one's job satisfaction or vice versa, as a negative correlation could be identified ( $H_{1a}$ ). This finding is consistent with the findings of Collie et al. (2012) and the moderate correlation supports Ahsan, Abdullah, Fie and Alam's (2009) statement of an existing interrelation between those two constructs. Moreover, this present study revealed that work-related stress explains job satisfaction to an extent of 21% ( $H_{2a}$ ). This causal relationship was to be expected based on several studies that had already revealed an effect of work-related stress on job satisfaction (Ahsan et al., 2009; Landsbergis, 1988). Additionally, the direction of the effect was not surprising, since work-related stress was found to trigger frustration and unhappiness in employees (Ahsan et al., 2009).

A weak negative correlation was found between work-related stress and self-compassion, which is in line with the results of earlier studies. Thus, people's level of self-compassion appears to be slightly related to the experience of work-stress ( $H_{1b}$ ). It might therefore be possible that either self-compassionate individuals are more capable to handle work-stress than individuals with low levels of self-compassion or that high work-related stress possibly hinders people from being self-compassionate. That finding gets support by Neff (2003a) and Lutz et al. (2008), who stated that someone's stress level can be decreased by increasing and training self-compassion.

Additionally, no significant relationship between self-compassion and job satisfaction was found ( $H_{1c}$ ), just as it was expected from literature and hoped due to the basic assumptions of a moderation analysis. Therefore, it can be concluded that someone's sense of job satisfaction seems to be in no relation with the level of self-compassion that person has. In line with that there were no results of other studies that lead to the assumption of self-compassion having a direct relationship with job satisfaction as those constructs were not examined in combination yet. The last analysis of moderation was essential to investigate if self-compassion does influence job satisfaction indirectly as moderator. It could be computed as the possible moderator seemed to have no relation with the dependent variable.

The most fundamental analysis to answer the overarching research question was the moderation analysis with an interaction term between work-related stress and self-compassion. According to the results, there is no moderation effect of self-compassion on the relationship between work-related stress and job satisfaction ( $H_{3a}$ ). Therefore, it can be concluded that self-compassion cannot be understood as buffer on that relationship, which does not confirm the overarching research question of this study. Those findings are thus in contrast with what was being expected due to literature review. This might be explained by the existing relationship between work-related stress and self-compassion, as one assumption of the moderation analysis is that this relation should not be too high when conducting a moderation analysis as this might lead to estimation problems. However, this existing correlation points towards the fact that self-compassion should not completely be eliminated when considering work-related stress. This research understood self-compassion as personal resource as it is defined by the JD-R model and placed it as moderator on the relationship of work-related stress and job satisfaction. This was done differently to what the JD-R model suggests, as this usually places personal resources in front of work-related stress (Figure 4). This decision was based on the fact that most research concentrates on buffers of the relationship of job demands and work-related stress rather than on the relationship between work-related stress and job satisfaction. Literature does not provide significant information about possible variables that influence the latter relationship to the knowledge of the researcher yet, although this relationship got confirmed by several studies, including this one (Collie et al., 2012; Mossholder et al., 1981). Additionally, earlier research led to the assumption that work-related stress and

self-compassion are related with each other and also that work-related stress directly influences employee's job satisfaction. Therefore, it seemed plausible to test if self-compassion might function as buffer on that relationship. However, this assumption could not be confirmed by this research. This inconsistency might be resolved through going back to the original JD-R model and treat self-compassion as personal resource in the way the model suggests. The existing correlation between work-related stress and self-compassion might be the base for further research in order to investigate if self-compassion moderates the relationship of job demands and work-related stress. Research revealed that employees with high levels of personal resources are able to cope more efficiently with high demands and are less likely to experience exhaustion or high levels of work-related stress (Xanthopoulou et al., 2007; Bakker et al., 2005). Hackman and Oldham stated that job resources trigger job commitment and the motivation to meet and master one's own job goals (mastery-goal orientation) (as cited in Xanthopoulou et al., 2007). This statement implies that self-compassion might be seen as personal resource which could buffer against the experiences of job demands and work-related stress (and not job satisfaction). Therefore, it seems valuable to investigate the role of self-compassion on the relationship between job demands and work-stress in more detail.

Another possible explanation for this inconsistency could be the sample that mainly consists of participants having a side-job. Studies concerning work-related stress or job satisfaction usually focus on samples with employees working exclusively full-time, therefore the used sample was not representative and might therefore not lead to the expected results. Moreover, Neff (2003b) stated that the level of self-compassion is likely to reach its anticlimax in the period of adolescence as social comparison, academic pressure and body image issues often play an important role during that time of life. Most participants could be categorized as being in late adolescence (18-24 years of age), which might explain that the self-compassion level was not found to have a significant impact on the relationship between work-related stress and job satisfaction.

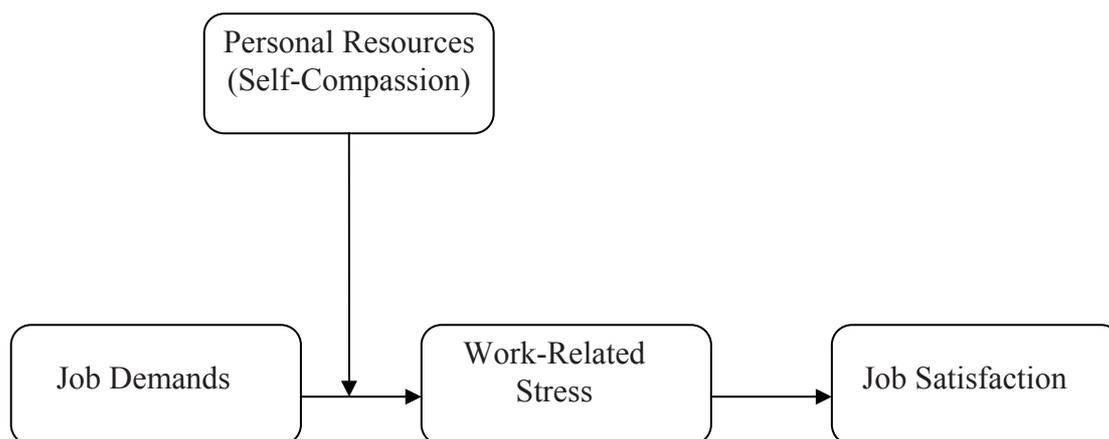


Figure 4. The JD-R model illustrating Self-Compassion as possible personal resource.

### ***Limitations and strengths of the study***

This study also comprises some aspects of limitation regarding the data collection and the sample. First of all, it has to be mentioned that convenience sampling was used due to a lack of time. The used sample was therefore not normally distributed in terms of age and gender. Most importantly, the sample was not representative in terms of the employment status of the participants to answer the research question as it was aimed at work-related stress and job satisfaction. 68,5% of the participants had a side-job next to their studies, while only 26,2% of the participants had a full-time occupation. Studies focusing on constructs such as work-related stress and job satisfaction are usually carried out with a sample of exclusively full-time employees. Therefore, all conclusions need to be treated with caution.

Moreover, it was not specified what kind of job the participants are occupied with, which makes the interpretation of the results more difficult. According to research teachers, policy makers and school administrators suffer namely the highest work-related stress levels (as cited in Collie et al., 2012). Therefore, the possible difference between stress levels among different job types was not taken into account within this study. All this provides no ideal situation to draw generalizable conclusions based on the results.

Furthermore, the research was cross-sectional based, which might imply difficulties in making causal inferences, since the data was only collected at one point of time (Levin, 2006). The found causal relationship between work-related stress and job satisfaction therefore needs to be treated with caution. However, this direction of

effect got already confirmed by several other studies (Johnson et al., 2005; Collie et al., 2012).

However, this study has its strengths as well. Since data was collected quantitatively, this study provides advantages in easy documentation and repetition with a more representative sample. Moreover, the study was aimed at a gap in literature as no significant moderators are identified yet between work-related stress and job satisfaction. This study therefore provides the result that self-compassion probably can be seen as moderator on this relationship, but might still play an active role in influencing work-related stress.

Finally, this research revealed findings to a recent topic as the globalization and the ever-changing working environments raise issues for employees in terms of being stressed and experiencing less job satisfaction. Those findings provide new starting points for further research.

#### ***Practical implications and directions for further research***

This study provides insight in work-related stress causing a decrease in job satisfaction among employees and revealed that self-compassion does correlate with work-related stress, but however does not moderate the earlier mentioned relationship.

Due to the correlation between work-related stress and self-compassion, further research could dive into self-compassion being a possible personal resource on job stressors just as the JD-R model suggests. This might benefit the experience of work-related stress among employees that is found to be triggered by job demands (Bakker et al, 2004). Self-compassion does seem to be relevant when considering work-related stress, however this study did not show that it influences the effect of work-related stress on job satisfaction.

Additional investigation would be valuable in order to discover if self-compassion generally has no impact on the overall level of job satisfaction or if it only impacts certain factors of the MSQ. For example, some of the MSQ items are aimed at ‘achievement’ or ‘ability utilization’ within one’s work setting, while self-compassion is also found to be connected to a mastery goal orientation (Neff et al., 2005). Self-compassion can be trained and if job satisfaction is partially influenced by it, one could possibly increase job satisfaction by working on one’s own attitude and character.

As this study used a sample consisting of people having a side-job, as well a part-time or full-time job it might be valuable to investigate if there is a significant difference between those groups regarding the levels of job satisfaction or work-related stress. Most studies focus mainly on full-time employees, whereas it might be interesting to compare the different groups of employees in terms of their experience of stress and satisfaction in job settings. Booth and van Ours (2008) stated already that increasing working hours correspond with a decreasing job satisfaction within employees.

Finally, it is suggested to replicate this study with a more representative sample consisting only of full-time employees. Additionally, it would be valuable to draw a sample of participants all being occupied by the same organization or at least having the same specialization, such as a sample consisting purely out of nurses or purely teachers. With doing this, the limitation of the representativeness of the sample regarding the different stress levels in different jobs and the employment status would be resolved.

## References

- Ahsan, N., Abdullah, Z., Fie, D. G., & Alam, S. S. (2009). A study of job stress on job satisfaction among university staff in Malaysia: Empirical study. *European journal of social sciences*, 8(1), 121-131.
- Allen, A. B., & Leary, M. R. (2010). Self - Compassion, stress, and coping. *Social and Personality Psychology Compass*, 4(2), 107-118.  
Doi:10.1111/j.17519004.2009.00246.x
- Bakker, A. B., Demerouti, E., & Euwema, M. C. (2005). Job resources buffer the impact of job demands on burnout. *Journal of occupational health psychology*, 10(2), 170. Doi: 10.1037/1076-8998.10.2.170
- Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the job demands - resources model to predict burnout and performance. *Human resource management*, 43(1), 83-104.
- Bateman, T. S., & Organ, D. W. (1983). Job satisfaction and the good soldier: The relationship between affect and employee "citizenship". *Academy of management Journal*, 26(4), 587-595.
- Booth, A. L., & Van Ours, J. C. (2008). Job satisfaction and family happiness: the part - time work puzzle. *The Economic Journal*, 118(526), F77-F99.
- Collie, R. J., Shapka, J. D., & Perry, N. E. (2012). School climate and social emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy. *Journal of Educational Psychology*, 104(4), 1189. Doi: 10.1037/a0029356
- Cooper, C. L., Rout, U., & Faragher, B. (1989). Mental health, job satisfaction, and job stress among general practitioners. *Bmj*, 298(6670), 366-370.

- De Bruin, G. P., & Taylor, N. (2005). Development of the sources of work stress inventory. *South African Journal of Psychology*, 35(4), 748-765.
- De Bruin, G. P. (2006). The dimensionality of the general work stress scale: A hierarchical exploratory factor analysis. *SA Journal of Industrial Psychology*, 32(4), 68-75.
- Evans, L. (1997). Understanding teacher morale and job satisfaction. *Teaching and Teacher Education*, 13, 831–845. doi:10.1016/S0742-051X(97)00027-9
- Gilbert, P. (Ed.). (2005). *Compassion: Conceptualisations, research and use in psychotherapy*. Routledge.
- Gilbert, P. (2009). Introducing compassion-focused therapy. *Advances in psychiatric treatment*, 15(3), 199-208. Doi: 10.1192/apt.bp.107.005264
- Gilbert, P., Baldwin, M., Irons, C., Baccus, J., & Clark, M. (2006). Self-criticism and self warmth: An imagery study exploring their relation to depression. *Journal of Cognitive Psychotherapy*, 20, 183–200.
- Gilbert, P., McEwan, K., Matos, M., & Ravis, A. (2011). Fears of compassion: Development of three self - report measures. *Psychology and Psychotherapy: Theory, Research and Practice*, 84(3), 239-255. Doi: 10.1348/147608310X526511
- Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self - criticism: Overview and pilot study of a group therapy approach. *Clinical Psychology & Psychotherapy*, 13(6), 353-379. Doi: 10.1002/cpp.507
- Green, F., & Tsitsianis, N. (2005). An investigation of national trends in job satisfaction in Britain and Germany. *British Journal of Industrial Relations*, 43(3), 401-429.

- Health and Safety Executive (2001), *Tackling Work-related Stress*, HSE Books, London.
- Health and Safety Executive (2004), "Work related stress", available at: [www.hse.gov.uk/stress/index.htm](http://www.hse.gov.uk/stress/index.htm) (accessed 15 March 2017)
- Hobfoll, S. E., Johnson, R. J., Ennis, N., & Jackson, A. P. (2003). Resource loss, resource gain, and emotional outcomes among inner city women. *Journal of Personality and Social Psychology*, *84*, 632–643. Doi: 10.1037/0022-3514.84.3.632
- Johnson, S., Cooper, C., Cartwright, S., Donald, I., Taylor, P., & Millet, C. (2005). The experience of work-related stress across occupations. *Journal of managerial psychology*, *20*(2), 178-187. Doi: 10.1108/02683940510579803
- Landsbergis, P.A. 1988. "Occupational stress among health care workers: A test of the jobdemands- control model", *Journal of Organizational Behavior*, *9*, pp.217-239. Doi: 10.1002/job.4030090303
- Levin, K. A. (2006). Study design III: Cross-sectional studies. *Evidence-based dentistry*, *7*(1), 24-25.
- Locke, E. (1969). What is job satisfaction? *Organizational Behavior & Human Performance*, *4*, 309–336. Doi:10.1016/0030-5073(69)90013-0
- Lutz, A., Brefczynski-Lewis, J., Johnstone, T., & Davidson, R. J. (2008). Regulation of the neural circuitry of emotion by compassion meditation: Effects of meditative expertise. *Public Library of Science*, *3*, 1–5. Doi:10.1371/journal.pone.0001897
- Macdonald, S., & MacIntyre, P. (1997). The generic job satisfaction scale: Scale development and its correlates. *Employee Assistance Quarterly*, *13*(2), 1-16.

- McKay, M., & Fanning, P. (1992). *Self-esteem: A proven program of cognitive techniques for assessing, improving, and maintaining your self-esteem* (2<sup>nd</sup> ed.). Oakland, CA: New Harbinger.
- Mossholder, K. W., Bedeian, A. G., & Armenakis, A. A. (1981). Role perceptions, satisfaction, and performance: Moderating effects of self-esteem and organizational level. *Organizational behavior and human performance*, 28(2), 224-234.
- Muris, P., Meesters, C., Pierik, A., & de Kock, B. (2016). Good for the self: Self compassion and other self-related constructs in relation to symptoms of anxiety and depression in non-clinical youths. *Journal of child and family studies*, 25(2), 607-617. Doi: 10.1007/s10826-015-0235-2
- Neff, K. (2003a). The development and validation of a scale to measure self compassion. *Self and Identity*, 2, 223–250. Doi: 10.1080/15298860309027
- Neff, K. (2003b). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and identity*, 2(2), 85-101. Doi:10.1080/15298860309032
- Neff, K. D., Hsieh, Y. P., & Dejitterat, K. (2005). Self-compassion, achievement goals, and coping with academic failure. *Self and identity*, 4(3), 263-287. Doi: 10.1080/13576500444000317
- Radey, M., & Figley, C. R. (2007). The social psychology of compassion. *Clinical Social Work Journal*, 35(3), 207-214. Doi: 10.1007/s10615-007-0087-3
- Raes, F., Pommier, E., Neff, K. D., & Van Gucht, D. (2011). Construction and factorial validation of a short form of the self - compassion scale. *Clinical psychology & psychotherapy*, 18(3), 250-255. Doi: 10.1002/cpp.702
- Russell, D. W., Altmaier, E., & Van Velzen, D. (1987). Job-related stress, social

support, and burnout among classroom teachers. *Journal of applied psychology*, 72(2), 269.

University of Minnesota. (1967). *Manual for the Minnesota Satisfaction Questionnaire: User manual*. Retrieved from: [http://vpr.psych.umn.edu/sites/g/files/pua2236/f/monograph\\_xxii\\_manual\\_for\\_the\\_mn\\_satisfaction\\_questionnaire.pdf](http://vpr.psych.umn.edu/sites/g/files/pua2236/f/monograph_xxii_manual_for_the_mn_satisfaction_questionnaire.pdf)

Van der Klink, J. J., Blonk, R. W., Schene, A. H., & Van Dijk, F. J. (2001). The benefits of interventions for work-related stress. *American journal of public health*, 91(2), 270.

“WHO | Stress At The Workplace”. *Who int*. N.p., 2017. Web. 1 May 2017

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International journal of stress management*, 14(2), 121. Doi: 10.1037/1072-5245.14.2.121