

Down and Working in the Dumps:
The Effects of Job Satisfaction and Work Stress on Depression

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ABSTRACT

The World Health Organization (WHO) defines depression as an individual who experiences sadness, irritability, feeling of emptiness, and loss of pleasure in life. Individuals with depression have cognitive, behavior, or neurovegetative symptoms which inhibit the ability to function. Previous literature suggests a relationship between one's work life and the development and severity of depression. These studies, however, are outdated and have yielded mixed results. This research examines the effects of job satisfaction and work stress on depression to clarify the relationship. The data for this research were obtained from the 2016 wave of the General Social Survey (GSS) conducted by the National Opinion Research Center (NORC) at the University of Chicago. The sample size consisted of 468 respondents. The majority of respondents were not depressed and satisfied with their job. Weak, statistically significant bivariate correlations were found. This research updates the literature on the relationship between work life and depression.

Depression is being featured more frequently in film and television programming through the storylines of beloved characters. For example, shows such as *This is Us*, *House*, *Mr. Robot*, *A Million Little Things*, and even cartoons, like *Inside Out* and *BoJack Horseman* all place depression in the spotlight. When creating the storyline for *Inside Out*, director Pete Docter realized sadness and depression are necessary emotions to portray in order to complement happier emotions (Barnes 2015). The inclusion of mental illness in film and television shows serve as a gateway for the discussion and reflection on depression.

Despite the increasing amount of discussion and inclusion of depression within the mass media, the depiction of depression in television and film still remains flawed. Anna Borges (2017), a reporter for *BuzzFeed News*, asked members and visitors of the website to comment on the depiction of depression in mass media. Participant responses via comments revealed that BuzzFeed News community members and readers still believe depression is still misunderstood, romanticized, stigmatized, or simply inaccurate (Borges 2017).

Many respondents pointed out that when depression is shown on television or in film, the only symptom shown is sadness. Issues with sleep, low energy, or loss of interest, and enjoyment in daily activities are often not included (Borges 2017). Moreover, depression usually functions as a plot device and is sparked by an emotional event. One commenter explained that while depression can be triggered by an unpleasant emotional event, most individuals are depressed for no logical reason (Borges 2017). Often, there is no catalyst to spark an individual's depression rather it is just a state of being (WHO 2018b). However, the inclusion of depression in popular culture has helped to normalize the discussion of depression and mental illnesses in everyday life. Featuring depression on television and in film provides individuals the opportunity to talk

about these stigmatized illnesses openly. Since depression is still wrongfully portrayed in popular culture, it is important to accurately define and understand it.

Though depression is frequently researched and reported on, its disabling symptoms and effects are still misunderstood as a “benign” illness (Young 2018). Rising suicide and individual diagnosis rates demonstrate that depression remains a serious psychological disorder (CDC 2017). Despite the significant decrease in the percentage of individuals who associate depression with emotional weakness, 82 percent of individuals still believed there was a stigma attached to depression and other mental illnesses (ROPER Center for Public Opinion Research 2013). In order to openly discuss depression, the stigma around depression must lessen which requires both professional and interpersonal support and normalization for treatment. Otherwise, depression’s stigma will continue to silence those who suffer (Parcesepe and Cabassa 2014).

The Substance Abuse and Mental Health Services Administration found that in 2016 alone, 16.2 million individuals experienced one major depressive episode. Likewise, the National Institute of Mental Health (NIMH 2017) reported that depression is diagnosed in roughly 6.7 percent of all U.S. adults 18 years of age or older. Whether it is through post-partum depression, major depressive disorder, persistent depressive disorder, manic depressive disorder, or bipolar depression, 15 percent of the U.S. adult population will at some point experience feelings of worthlessness, hopelessness, emptiness, and low energy (Recovery Brands LLC 2017). The WHO (2018a) reports that 300 million individuals suffer from depression, crowning it as the top cause of disability. Though the appearance of depression in medical reports and popular culture has raised awareness, there remains a flawed and often stigmatized understanding of the true nature, appearance, and depiction of depression (Parcesepe and Cabassa 2014).

LITERATURE REVIEW

The standard definition of depression along with a listing of all its symptoms can be found in the *WHO International Classification of Diseases, 11th Revision* (2018b). WHO (2018b), defines depression as an individual with, “a depressive mood (e.g. sad irritable, empty) or loss of pleasure accompanied by other cognitive, behavioral, or neurovegetative symptoms that significantly affect the individual’s ability to function” (2018:1). The NIMH (2018), states that depression functions as an umbrella term for the many subtypes and nuanced diagnoses which exist today such as persistent depressive disorder and psychotic depression.

While each individual’s experience with depression is unique, for all with depression, a negative shift in thinking and behavior occurs (Parekh 2017). Those with depression live with a sad and irritable mood accompanied by physical symptoms such as fatigue and diminished abilities to concentrate (WHO 2018b). Unlike sadness, which is triggered by an experience or event in life, the DSM-5 (2013) clarifies that depression causes a diminished ability to experience joy and pleasure in activities that once brought joyful or pleasurable feelings. General symptoms affect both physical and mental health including, but not limited to, feelings of sadness, worthlessness, guilt, decreased energy or motivation, a loss of interest in what used to be enjoyable activities, along with other physical symptoms such as a change in sleeping and appetite patterns (Parekh 2017). The presence of these symptoms in addition to a negative change in diet, exercise, and sleep; for two weeks or more, differentiates depression from the occasional feelings of sadness (WHO 2018a).

There has also been an increase in burnout among employees (Gallup 2018; Ginger 2019). According to Gallup (2018) burnout affects two-thirds out of 7,500 full time employees and burnout status is expected, “just part of the job.” Ginger (2019) found that 81 percent of

respondents' stress had a negative impact on their work. This stress was evident through fatigue, anxiety symptoms, physical illness, and attendance (Ginger 2019). Gallup (2018) reports that the employees bear debilitating workloads. Workplace stress also influenced the morale and attendance of employees (Ginger 2019). According to Gallup (2018) burnout employees are 63 percent more likely to take a sick day and lack confidence in their performance by 13 percent .

Depression is an important area of study due to the substantial increase in diagnoses. Depression diagnosis has risen 18 percent from 2005 to 2015 (WHO 2017). The NIMH (2017) reports that 37 percent of individuals with major depression did not receive any treatment. Research by the Pew Foundation (2017) found that 72 percent of the public viewed mental illness as either an extremely or very serious public health problem. Ebert et al. (2017), found that patients with depressive symptoms also experienced increase strain on personal relationships, stress, and feelings of failure. Examining factors affecting depression is important due to its debilitating effect and increasing frequency within the U.S. population (WHO 2017).

Job Satisfaction and Depression

Job satisfaction is defined by Oshagbemi (1999) as the positive emotional reactions and attitudes that an individual believes about their job. Bjarke et al. (2017) argued an individual's job is a major aspect of life and thus has potential to spill over into their personal, emotional, or psychological wellbeing. Previous research has found a correlation between negative emotions and job satisfaction (Watson and Clark 1984; Brief et al. 1988; Spector 1997). Faragher et al. (2005) found a moderate positive correlation between job satisfaction and depression. Estryn-Behar et al. (1990) found the prolonged presence of fatigue and dissatisfaction can catalyze a singular major depressive disorder. Furthermore, individuals who do not derive high satisfaction from their job can be at an increased risk of experiencing mental illness (Faragher et al. 2005).

Negative affectivity (NA) reflects an individual's susceptibility to experience negative emotions such as depression and anxiety among various situations (Spector 1997). Watson and Clark (1984:465) state an individual with high NA is "distressed" and has low self-esteem. Individuals with high NA are more likely to experience and report distress, or sad, or anxious feelings (Watson and Clark 1984). Individuals with higher levels of NA tended to score low in job satisfaction (Spector 1997). Brief et al. (1988:196) believe NA "contaminates" job satisfaction because it was able to predict future job satisfaction. Thus, Parkes (1990) concluded that environment can cause a reaction of distress in individuals with high NA.

Saari and Judge (2004) examined the causal relationship between job and life satisfaction and found that literature supported the relationship. Likewise, Judge and Wantanbe (1994) found that 68 percent of U.S. workers experienced a spillover between their job satisfaction and life satisfaction. Moreover, both work and family conflict were significantly correlated with depression (Thomas and Ganster 1995). This association supports the growing support of the influence of job satisfaction on depression (Thomas and Ganster 1995).

Work Stress and Depression

Estryn-Behar et al. (1990) results on stress and work among health care employees revealed that when levels and factors of stress were high, mental health wellbeing decreased. Estryn-Behar et al. (1990) tested the mental health indicators fatigue or sleep impairment, use of antidepressants, sleeping pills and other sedatives, and diagnosis of psychiatric morbidity at the clinical level. Estryn-Behar et al. (1990) found a significant worsening of the five mental health indicators with increased work stress. Likewise, in a study on stress in work and home environments, job insecurity was correlated with elevated levels of depression and anxiety symptoms in men and women regardless of ethnicity (Fan et al. 2015). When job support was

present, a there was a decrease in symptoms of depression and anxiety (Fan et al. 2015). In their results Fan et al. (2015) and Estryn-Behar et al. (1990) concluded that work stress was significantly predictive of greater depression symptomology.

Job strain offers another explanation of the relationship between work stress and depression (Dorsch-Mausner and Easton 2000; Fan et al. 2015; Karasek and Theorell 1990; Stansfeld and Candy 2006). Job strain occurs when an individual at work experiences high psychological demands and lacks decision-making authority (Stansfeld and Candy 2006). Fan et al. (2015) found that individuals under high job demand experienced more severe symptoms of both depression and anxiety. Karasek and Theorell's (1990) research review found (2015), an association between high job strain and poor mental health, such as depression and anxiety. In a meta-analysis published in 2006, Stansfeld and Candy (2006) found this same phenomenon.

When an employee experiences high demands and low decision authority, a higher prevalence of psychiatric morbidity at clinical levels is present (Stansfeld and Candy 2006). These results were the basis for causal association between job strain and medium-grade mental disorders such as depression (Stansfeld and Candy 2006). Stansfeld and Candy (2006) argued this association was present due to the stress component of a high strain workload. In comparison to "passive" or "low-strain" individuals, high job strain doubled the likelihood of decreased mental health well-being putting individuals at risk for depression (Lerner et al. 1994:1582). Dorsch-Mausner and Eaton (2000) expand on this idea and found that when individuals experienced high levels of psychological job strain, major depressive disorder and depression rose in frequency. An overall relationship was found between psychologic job strain and the presence of major depressive episode, depressive syndrome, and dysphoria (Dorsch-Mausner and

Eaton 2000). High psychologic job strain was deemed to be the most important variable regarding the three outcomes of depression (Dorsch-Mausner and Eaton 2000).

The increase in job strain and work stress also has connections to burnout. Spector (1997) found that burnout affected the severity of depression. Burnout is the result of “chronic workplace stress” and is described as an “occupational phenomenon” conceptualized by three experiences (WHO 2019). First, an individual lacks energy and is exhausted. Second, there is an “increased mental distance” consisting of negative and “cynical” thoughts about work. Finally, an employee has a reduced professional efficacy. Burnout is not an illness but has a negative impact on health (WHO 2019). Burnout can have risks to mental health including a sense of low control over an individual’s area of work, low social support, psychological harassment (bullying and mobbing), substance use, and detriments family and social interactions (WHO 2019).

According to Niku (2004), studies suggest burnout and depression are co-morbid. Niku (2004) explains that because burnout is due to emotional exhaustion, decreased psychosocial functional follows and can be a potential trigger for a depressive episode. Individuals who suffer from depression likely have a decreased level of psychosocial functioning because symptoms of depression directly inhibit one’s ability to function on a daily basis (Mehta et al. 2014). These symptoms include fatigue, loss of energy, and a loss of interest in activities (Mehta et al. 2014). This reasoning is supported by Shanafelt et al. (2002) whose results show that 90 percent of participants who had burnout also were diagnosed with depression using the Primary Care Evaluation of Mental Disorders (PRIME-MD).

Control Variables

Females suffer more frequently from depression in comparison to males (Aneshensel et al. 1981; Weissman and Klerman 1977; Brown and Harris 1978). Weissman and Klerman (1977)

found that women were twice as likely as men to develop clinically moderate and severe forms of depression. Aneshensel et al. (1981) found that 23.5 percent of women had depression while only 12.9 percent of males did, this translates to a ratio of 1.8:1. Furthermore, females had higher scores of depression on the CES-D, 6.35, and statistically significant in comparison to males whose average score was 4.74 (Brody et al 2018). According to the National Health and Nutrition Examination Survey, in all age categories more females had depression than males (Brody et al. 2018). Overall, more women have, are diagnosed with, and experience more intense forms of depression compared to males (Aneshensel et al. 1981; Brody et al. 2018; Brown and Harris 1978; Weissman and Klerman 1977).

Additions to the Literature

This research adds to the previous literature by reassessing and updating the relationship on the effect of job satisfaction and work stress on depression. This research utilizes data from the 2016 of the General Social Survey (GSS) which is a nationally representative and large-scale survey. Previous literature found mixed results regarding whether job satisfaction, work stress, and work hours effect depression symptomology and the onset of depression.

HYPOTHESES

H1: Individuals with lower job satisfaction will report higher levels and frequency of depression.

H2: Individuals with greater amounts of work stress will report higher levels and frequency of depression.

DATA AND VARIABLES

The data for this research were obtained from the most recent publicly available cross-sectional 2016 wave of the General Social Survey (GSS). The GSS is a longitudinal survey which is conducted by the National Opinion Research Center (NORC) at the University of

Chicago. The GSS began in 1972 with the most recent data available from 2018. Unfortunately, detailed depression questions were not included in the 2018 wave and thus the most recent data cannot be used. All respondents of the GSS are 18 years of age, non-institutionalized, United States citizens, and speak either English or Spanish.

Dependent Variable

The dependent variable for this research was depression. This variable was operationalized using two occasional and rotating questions from the 2016 GSS. “I will now read out a list of the ways you might have felt or behaved during the past week. Using this card, please tell me how much of the time during the past week you felt depressed? (CESD1).” Answer options were none or almost none of the time, some of the time, most of the time, or all or almost all of the time. The second question was “Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good? (MNTLHLTH).” Answer options ranged from zero to six days, seven to 14 days, 15 to 21 days, or 22 to 30 days. A depression index using the variables “CESD1” and “MNTLHLTH” was created. This index was constructed by giving each response a numerical score. The scores ranged from 2 to 8, with 2 being not depressed and 8 being very depressed. The mean for the depression index was 2.59 with a standard deviation of 1.16, and a Cronbach’s alpha of .684. Suggesting the sample was not depressed and the index had a high reliability.

Independent Variables

The first independent variable for this research was job satisfaction which was operationalized using the following rotating question from the GSS “How satisfied are you in your job? (JOBSAT)” with answer options completely satisfied, very satisfied, fairly satisfied,

neither, fairly dissatisfied, very dissatisfied, or completely dissatisfied. The second independent variable for this research was work stress which was operationalized using the following rotating question from the 2016 wave of the GSS “How often do you find your work stressful? (STRESS)” answer options were always, often, sometimes, hardly ever, or never.

Control Variable

The control variable for this research is sex. Sex was operationalized using the following permanent question from the 2016 wave of the GSS “Respondent’s sex (SEX)” answer options were male or female.

ANALYSIS

After removing missing cases using listwise deletion, the total sample size was 468 respondents. The majority of respondents (72.9 percent) reported no time feeling depressed within the past week. The remaining 27.1 percent reported feeling depressed either some, most, or all of the last week. These results are not surprising as depression only affects approximately 6.7 percent of all U.S. adults above the age of 18 (NIMH 2017). An overwhelming majority of respondents (85.9 percent) reported they experienced zero to six days, or fewer than one week, of poor mental health. The median score for days of poor mental health within the past thirty days was one, meaning respondents experienced zero or less than one week of bad mental health days. Of the 85.9 percent, 57.3 percent of respondents reported zero days of bad mental health. In comparison, 6.6 percent of respondents had more than one week of poor mental health, 3.9 percent more than two weeks, and 3.6 percent more than three weeks. These percentages reflect the presence of clinically defined depression, with two or more weeks of depressed mood (WHO 2018b). Sample results reflect similar data from the NIMH (2017) on frequency of depression among adults, thus the sample is relatively representative of the U.S. population.

An overwhelming majority of respondents (86.8 percent) were somewhat, very, or completely satisfied with their job. The median response was very satisfied. This sample is inconsistent with the Pew Research Center (2016) report in which 49 percent of respondents were very satisfied, and 30 percent were somewhat satisfied. A majority of respondents (52.2 percent) reported and work stress sometimes. These results are consistent with the APA (2017) report that 61 percent of United States citizens experience stress due to work. A majority of respondents (54.5 percent) were female and 45.5 percent of respondents were male. This sample is consistent with the CIA's World Factbook (2018) which reported that 50.76 percent of the U.S. population were women and 49.24 percent were male.

Table 1.				
Correlation Matrix of Depression, Job Satisfaction, Work Stress, and Sex, N=468				
	(1)	(2)	(3)	(4)
(1) Depression Index _a	1.00	.163***	.230***	-.146**
(2) Job Satisfaction _b		1.00	.054	-.082
(3) Work Stress _c			1.00	.011
(4) Sex _d				1.00

Note: * = $p < .05$; ** = $p < .01$; *** = $p < .001$

_a Depression Index is coded as 2 = Not Depressed, 8 = Very Depressed

_b Job Satisfaction is coded as 1 = Completely Satisfied, 7 = Completely Dissatisfied

_c Work Stress is coded as 1 = Always, 5 = Never

_d Sex is coded as 0 = Female, 1 = Male

Table 1 illustrates the bivariate correlations for depression, job satisfaction, work stress, and sex. There was a weak, positive, statistically significant correlation between depression and job satisfaction ($r = .163$, $p = .000$) indicating that those who have lower job satisfaction are more depressed. This finding supports the hypothesis that individuals with lower job satisfaction will report higher levels and frequency of depression. There was a weak, negative, statistically significant correlation between depression and work stress ($r = .230$; $p = .000$) suggesting those with less work stress were less depressed. This finding supports the hypothesis that individuals with greater amounts of work stress will report higher levels and frequency of depression. As

expected, there was a weak, negative, statically significant correlation between depression and sex ($r = -.146$; $p = .001$), indicating that males experience fewer days of depression than females.

Table 2.1.
Depression by Job Satisfaction, N=468

Time Felt Depressed	Job Satisfaction (Percent)		
	Satisfied (n = 405)	Neutral (n = 26)	Dissatisfied (n = 37)
None of the Time	73.8	73.1	62.2
Some of the Time	23.2	19.2	18.9
Most of the Time	2.0	3.8	8.1
All of the Time	1.0	3.8	10.8
Note: $\chi^2 = 23.741$; $p = .001$			
Days of Poor Mental Health			
LT One Week	87.4	76.9	75.7
MT One Week	6.4	11.5	5.4
MT Two Weeks	3.0	11.5	8.1
MT Three Weeks	3.2	0.0	10.8
Note: $\chi^2 = 14.819$; $p = .022$			

Table 2.1 shows the bivariate relationship between time felt depressed in the past week, days of poor mental health, and job satisfaction. Those who were depressed all of the time had a 9.8 percent difference between job satisfaction and dissatisfaction. This difference was statistically significant ($p = .001$) and suggests respondents who were depressed all of the time were more dissatisfied with their job. Among those with more than three weeks of poor mental health, there was a 7.6 percent difference between those who were satisfied with their job and those who were dissatisfied ($p = .016$). Together, this suggests that those with low job satisfaction are more depressed. These results support the hypothesis that individuals with lower job satisfaction will report higher levels and frequency of depression.

Table 2.2.
Depression by Work Stress, N=464=8

	Work Stress (Percent)		
	Low Stress (n = 72)	Medium Stress (n = 243)	High Stress (n = 153)
Time Felt Depressed			
None of the Time	77.8	76.5	64.7
Some of the Time	18.1	20.6	28.1
Most of the Time	2.8	2.1	3.3
All of the Time	1.4	0.8	3.9
Note: $\chi^2 = 10.595$; $p = .102$			
Days of Poor Mental Health			
LT One Week	95.8	92.2	71.2
MT One Week	2.8	5.3	10.5
MT Two Weeks	0.0	1.2	9.8
MT Three Weeks	1.4	1.2	8.5
Note: $\chi^2 = 47.3778$; $p = .000$			

Table 2.2 shows the bivariate relationship between time felt depressed in the past week, days of poor mental health, and work stress. Among those who were depressed none of the time, there was a 13.1 percent difference between those with high and low work stress. This means that those with low work stress are less depressed. This difference was not statistically significant and thus does not support the hypothesis that individuals with greater work stress will experience high levels and frequency of depression ($p = .102$). Among those who experienced more than three weeks of poor mental health, there was a 7.1 percent difference between those with high work stress and those with low work stress. Those with higher work stress experience more days of poor mental health. This difference was statistically significant ($p = .000$). These results support the hypothesis that individuals with greater amounts of work stress will report higher levels and frequency of depression.

Table 3 shows the regression results of job satisfaction, work stress, and sex on depression. Consistent with bivariate results from Table 1 it appears from Model 2 ($R^2 = .053$) that work stress is a better predictor of depression than job satisfaction, with 5.3 percent of the variance in depression being explained by work stress. The coefficient for job satisfaction and

Table 3.
Regression Results of Depression on Job Satisfaction and Work Stress
N= 464

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Job Satisfaction	.329*** (.092)			.305** (.090)	.282* (.090)
Work Stress		.395*** (.077)		.381*** (.077)	-.318* (.102)
Sex			-.338** (.106)		.385*** (.076)
R ²	.027	.053	.021	.076	.095

Note: Unstandardized regression coefficients

Standard Error shown in parentheses

* Relationship is significant at the .05 level

** Relationship is significant at the .01 level

*** Relationship is significant at the .001 level

work stress was statistically significant. Consistent with bivariate results in Table 1 job

satisfaction and work stress are statistically significant and contribute to depression. Overall, the

full model is the best predictor of depression. Consistent with bivariate results from Table 1, 2.1.

and 2.2, Model 5 ($R^2 = .095$) demonstrates job satisfaction, work stress, and sex are the best

predictors of depression accounting for 9.5 percent of the variance in depression.

SUMMARY AND IMPLICATIONS

This research examined the effects of job satisfaction and work stress on depression using sex as a control variable. Both hypotheses were supported. The first hypothesis stated that individuals with lower levels of job satisfaction will experience higher frequency and severity of depression was supported. The second hypothesis stated that individuals with greater amounts of work stress will report higher levels and frequency of depression.

A major contribution of this research is that it updates the literature on the effects of work on depression and is solidified by previous research who have found similar results. The results of this research are important to those concerned with depression and employers who desire a healthy work force. This research adds to the current climate of mental health awareness and

efforts to destigmatize mental health. Future research should explore what factors amplify work stress and job dissatisfaction and how they translate into clinical depression. Since depression and work life are influenced by one another and difficult to untangle, future research should also focus on teasing out this relationship. This research helps to inform employers of the influence of job satisfaction and work stress on depression and overall mental wellbeing. Employers can be cognizant of the need for wellness program, workplace satisfaction assessment, stress levels, and the mental health of their employees. It may also help employees to find balance between work stress and job satisfaction to combat and prevent depression. By understanding the impact that work stress and job dissatisfaction has on depression, steps can be taken to address depression in the workplace. This in turn can foster healthy conversations on how to improve job satisfaction and alleviate work stress to combat depression.

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