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DOWN AND WORKING IN THE DUMPS: THE EFFECTS OF JOB SATISFACTION, WORK STRESS, AND WORK HOURS ON DEPRESSION

Rachel Bickelman

ABSTRACT

The World Health Organization (WHO) defines depression as an individual who experiences a depressive mood characterized by sadness, irritability, or feelings of emptiness accompanied by a loss of pleasure in daily life. These symptoms inhibit an individual's ability to function. Work influences life satisfaction and depression via a spillover effect. Previous literature suggests a relationship between work life and depression development and severity. These studies, however, are outdated and have yielded mixed results. This research examines the effects of job satisfaction, work stress, and work hours on depression to clarify whether an association exists. The data were obtained from the 2016 wave of the General Social Survey (GSS). After deleting missing cases, the sample size consisted of 464 individuals. The majority of respondents (72.6 percent) were not depressed and satisfied with their job. Results from bivariate and multivariate analysis show work stress impacts depression. The results of this study update work life and depression literature. This research informs employers of the relationship among job satisfaction, work stress, and work hours and depression.

Depression is featured more frequently in movies and television programming through the storylines of beloved character. Television shows such as This is Us, House, Mr. Robot, and cartoons, Inside Out and BoJack Horseman, place depression in the spotlight. Pete Docter, director of Inside Out, realized sadness and depression are necessary emotions to express and complement happier emotions humans feel (Barnes 2015). Inside Out prompts the audience to consider their own emotional states of joy and sadness (Barnes 2015). The inclusion of depression and mental illness in television shows and movies can generate discussion and reflection.

Despite the increase of depression within mass media, its depiction remains flawed. Borges (2017), a reporter for BuzzFeed News, asked website members and visitors to comment on the depiction of depression in film, television programming, and literature. Participant responses via comments revealed a belief that depression in mass media is still largely

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misunderstood, romanticized, stigmatized, or simply inaccurate (Borges 2017). Respondents noted when depression is shown on television or in film, the only symptom shown is sadness but challenges concerning sleep, low energy, loss of interest and enjoyment for daily activities are not included. Additionally, character's depressive episodes are typically sparked by an emotional event. One commenter explained 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). Despite its flawed portrayal in mass media, the inclusion of depression in popular culture has contributed to normalizing the discussion of depression and other mental illnesses in everyday life. Featuring depression and other mental illnesses on television and in film creates opportunities for individuals to discuss these stigmatized illnesses openly. Since depression is still wrongfully portrayed in popular culture, it is important to accurately define and understand this mental illness.

LITERATURE REVIEW

Young (2014:n.p.) stresses depression is understood as a "benign" illness despite its potential to be disabling. Combined with inaccurate depiction in the mass media, depression remains misunderstood and overlooked (Young 2014). The psychological disorder remains a serious issue; both suicide rates and individual diagnoses are on the rise (U.S. Department of Health and Human Services 2017). While public opinion associating depression with weakness has decreased, in 2002, 82 percent of individuals still believed a significant stigma was attached to depression and other mental illnesses (ROPER Center for Public Opinion Research 2013). To openly discuss depression, stigma must lessen, normalization of mental illness must emerge, and professional and interpersonal support for treatment must become available; otherwise, stigma will continue to silence those who suffer (Parcesepe and Cabassa 2014). Understanding the wide breadth and severity of depression is necessary to understand its debilitating consequences.

In Western discourse, the World Health Organization (2018a) observed depression severity is glossed over, dubbed "the teenage blues," and painted using melodramatic clouds of blue-grey sadness; however, depression creates a variety of challenges to everyday life. Individuals suffering from depression can struggle in school, work, and in relationships with loved ones (WHO 2018a). Whether 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). Though the inclusion of depression in medical reports and popular culture has raised awareness a fogged and stigmatized understanding remains (Parcesepe and Cabassa 2014).

Formerly known as melancholy, depression now has a multitude of subtypes, symptoms, and an official clinical definition. Lawlor (2012:25,28) has documented the history of depression and identifies the term "melancholy" as the first conceptualization of depression during the late eighteenth century described as "causeless sadness," from "black bile," or an "imbalance of the humors." While both melancholia and depression have physical side effects, Lawlor (2012:28) explains depression is now defined as a mood disorder with no reference to

religion, magic, or “black bile.” Currently, a multitude of depression sub-diagnoses exist (Grob 2013).

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:1), 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 an individual’s ability to function.” Unlike sadness, triggered by an experience or event in life, the Parekh (2017) explains depression causes a diminished ability to experience pleasure in activities that previously elicited joyful or pleasurable feelings. While each individual’s experience with depression is unique, for all a negative shift in thinking and behavior occurs. Depression has physical, mental, emotional, and social consequences (Parekh 2017).

Those with depression live with a sad and irritable mood accompanied by physical symptoms such as fatigue and diminished abilities to concentrate (Ingram et al. 2011; WHO 2018b). General symptoms affect 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, as well as changes 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).

Depression’s range of symptoms demonstrate its non-uniformity and impact on daily life and quality of life. Depressive symptoms specifically inhibit cognitive function which leads to decreased functionality (Greer, Kurian, and Trivedi 2010). Cognitive function refers to attention and executive function of an individual (Veiel 1997). These symptoms affect the home, workplace, social life, friends and family relationships (Greer et al. 2010).

Depression diagnoses have substantial increased (NIMH 2017; SAMHSA 2018; WHO 2017). In 2018 SAMHSA found 16.2 million individuals experienced one major depressive episode. The National Institute of Mental Health (NIMH 2017) notes depression is diagnosed in roughly 6.7 percent of all U.S. adults 18 years of age or older. The WHO (2018a) reports 300 million individuals suffer from depression, crowning it as the top cause of disability. Not only is depression one of the top mental illnesses diagnosed, but depression diagnoses have risen over 18 percent from 2005 to 2015 (WHO 2017). Moreover, a 2017 report from the NIMH showed 37 percent of individuals living with major depression did not receive any treatment. Research by the Pew Foundation (2017) found 72 percent of respondents viewed mental illness as either an extremely or very serious public health problem. Bjarke et al. (2017) found patients who experienced symptoms of depression also experienced increase strain on personal relationships, stress, and feelings of failure. These experiences and feelings created a vicious cycle; patients who experienced the aforementioned increases experienced symptoms with greater magnitude (Bjarke et al. 2017).

Burnout among employees has also increased (Gallup 2018; Ginger 2019). According to Gallup (2018) burnout affects two-thirds out of 7,500 full time employees. Moreover, burnout status is seen as inevitable, “just part of the job” (Gallup 2018:n.p.). Ginger (2019) found 81

percent of respondents' reported stress negatively impacted their work. This stress was evident through fatigue, anxiety symptoms, physical illness, and attendance (Ginger 2019).

It is important to examine factors influencing depression in light of increased diagnoses in the U. S. and debilitating symptoms (WHO 2017). To examine how work interacts with depression, this research analyzed data from the 2016 wave of the General Social Survey on work stress, job satisfaction, number of hours worked, and depression.

Conceptualizing and Examining Depression

The understanding of depression from a neuropsychiatric illness has evolved from its labeling of a chemical imbalance. Depression is now understood to be related to neural networks and brain plasticity, which is the brain's ability to adapt and change (Maletic et al. 2007). Ingram et al. (2011) emphasizes while individuals share the same symptoms of depression, their mental illness is not uniform. Rather, complexity exists in depression's manifestation for each individual and can include other mental illnesses (Ingram et al. 2011).

Depression encompasses a wide range of severities and types; at its core depression is understood by the public as a "neuropsychiatric illness" which suggests that depression is a disease (Kanter et al. 2008:1). Kanter et al. (2008) argues when depression is viewed as a disease, its existence is thought of as a cycle where recovery and remission are the ultimate goals. Individuals only reach the remission stage when "clinically significant" depressive symptoms decrease. Recovery means the complete disappearance of symptoms including low energy, feelings of hopelessness or worthlessness, and depressed mood for a majority of the day (Ingram et al. 2011:12). Because depression is so multifaceted, meaning it affects social, physical, and emotional health and functioning, even after reaching the remission stage, residual symptoms may persist or linger (Maletic et al. 2007).

Not only is depression multifaceted in its symptoms and impact on everyday life, it also possesses a host of causes. According to Remick (2002) there is a significant genetic impact among those who suffer with depression. The likelihood of depression is up to three times more likely if it is present in a first-degree relative for example, parents, siblings and children aged 10 and older, compared to individuals who lack a first degree relative with depression (Remick 2002). Depression levels are also impacted by one's emotional state, environment, and the presence of triggers (Kanter et al. 2008). The complexity of depression leads to latent variables of individual experience which are difficult to tease out and measure. Finally, Kuehner (2003:170) recognizes "psychological, psychosocial, and macrosocial risk factors" in the forms of gender role expectations, high workloads, and variation in depression conceptualization inform depression diagnoses.

Diagnosis and Treatment

Depression is diagnosed by the frequency of symptoms an individual experiences (Ingram et al. 2011). One diagnosis tool is the Center for Epidemiological Studies Depression Scale (CESD-D); the original test was created in 1977 and tests the severity of seven depressive symptoms. The CESD was revised in 2004 and is now known as the CESD-R. Nine different symptom groupings for depression are measured by the CESD-R scale. The nine symptoms are sadness, loss of interest, appetite, sleep, thinking or concentration, guilt or worthlessness,

fatigue, agitation, and suicidal ideation (Center for Innovative Public Health Research 2013a; 2013b).

Treatments range from cognitive behavioral therapy (CBT) to drug therapy. Other types of treatment include "psychodynamic, problem-solving therapy, and interpersonal psychotherapy" (Hoffmann et al. 2012:430). CBT's main focus is towards the cognitive factors that influence psychological distress in mental disorders (Hoffmann et al. 2012). This form of psychotherapy was pioneered by Aaron Beck and Albert Ellis during the 1960s and 70s. Hoffmann et al. (2012) explains that "maladaptive cognitions," such as beliefs and schemas about oneself and the world, are changed through therapy. By changing these maladaptive cognitions, CBT hope to change the "emotional distress and problematic behaviors" of individuals (Hoffmann et al. 2012:427). In comparison to no treatment, CBT shows mixed results but generally, individuals with depression are receptive to CBT treatment (Hoffmann et al. 2012).

Theoretical Framework

Marx, a macro theorist, focused on the relationships between individuals and the capitalist system and believed that for-profit work, or "division of labor," would result in alienation on a group level. Max Weber's (1930) observed in the Protestant Ethic and the Spirit of Capitalism continually hard work under a capitalist system which relates to the unintended consequences of capitalism Marx emphasized such as the exploitation of labor (Wolff 2017). Prins et al. (2015) found support for the effects of class and capitalism and the development of depression anxiety. Their findings indicate a problem concerning broader social determinants of health stemming from the value placed on work in a capitalist system (Prins et al. 2015).

Furman and Bender (2003) describe alienation as, "estrangement and disengagement" due to the hostile conditions the worker is oppressed under (Applerouth and Des Edles 2008; Furman and Bender 2003). Furman and Bender (2003:130) clarify Marx's theory; Marx believed when an individual experiences disengagement or estrangement within their work, it means their work has become alienated only functions to meet the "economic goals of the ruling elites." This form of oppression is in stark contrast to work as "an outlet of self-expression and sense of pride" (Furman and Bender 2003:130). Furthermore, Fromm (1961:44) describes estrangement as when an individual does not feel that they are a part of reality instead the individual feels "empty, dead and depressed."

According to Furman and Bender (2003), depression is an outcome of oppression. As Marx reasoned, when an individual becomes alienated and oppressed from their work, it is possible for depression to seep in because of the shared symptoms (Furman and Bender 2003). Allport (1954) incorporates phenomenology into Marx's theoretical perspective of alienation and oppression. Allport (1954:160) claims that individuals become "intropunitive" when they, "internalize beliefs about oneself that are propagated by the dominant [or ruling] group." "Intropunitive" feelings share distinct similarities to the clinical definition of depression, "intropunitive tend to feel intensely insecure, guilty, and ashamed" (Allport 1954:160).

Alienation is a key component of depression; Seeman's (1959) five dimensions of alienation supports the claim that alienation influences depression. The five dimensions of alienation are powerlessness, self-estrangement, isolation, meaninglessness, and normlessness.

Mirowsky and Ross (1989) expand on Seeman's (1959) idea of alienation and believe that the loss of control felt by alienated individuals is intertwined with depression along with social variables such as powerlessness, structural inconsistency, alienated labor, and dependency (cited in Furman and Bender 2003). Oppression is characterized by Mirowsky and Ross (1989) as a loss of control over one's fate and an inability to control feelings. These factors can perpetuate depression due to the overlap between depressive symptomology and feelings of alienation such feeling hopelessness and worthlessness (Furman and Bender 2003; NIMH 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) argues an individual's job is a major aspect of life and thus one's work life has potential to spill over into their personal, emotional, or psychological wellbeing. According to Bjarke et al. (2017), 53 percent of participants changed their job due to cognitive symptoms of depression such as processing speed, level of attention and focus, memory, and executive functioning. Furthermore, Faragher et al. (2005) found that there is a moderate positive correlation between job satisfaction and depression and that individuals who do not derive high satisfaction from their job can be at an increased risk of experiencing mental illness.

Negative affectivity

Negative affectivity (NA) influences work stress and job satisfaction (Spector 1997). Negative affectivity reflects an individual's susceptibility to experience negative emotions such as depression and anxiety among various situations (Spector 1997). Negative affectivity operationalizes variables in an individual's personality such as "negative emotionality, self concept," and perception of negative aspects within themselves or their life (Watson and Clark 1984:465). Watson and Clark (1984:465) define an individual with high NA as "distressed" individuals who possess a low self-esteem. The primary feelings associated with NA are "nervousness, tension, and worry," however, NA can also include "anger, scorn, revulsion, guilt, self-dissatisfaction, a sense of rejection, [and] sadness" (Watson and Clark 1984:465). It is important to clarify that when individuals possess NA, it does not strictly mean the individual do not experience happiness, rather the feelings of NA are felt more often in comparison to joyfulness (Watson and Clark 1984). Additionally, Watson and Clark (1984) note individuals with negative affectivity accentuate the negativity experienced in the world. Individuals with high NA are more likely to both experience and report negative experiences of distress, or sad, or anxious feelings (Watson and Clark 1984).

Previous research supports a correlation between negative emotions and job satisfaction (Brief et al. 1988; Spector 1997; Watson and Clark 1984). Individuals who possessed a high level of NA tended to score lower in job satisfaction (Spector 1997). Since individuals experiencing NA are more prone to feelings of depression and anxiety, Parkes (1990) hypothesized that NA had the potential to influence work stress, and thus depression, as either a confounding variable of environmental stress or because NA would make individuals prone to negative feelings (Spector 1997).

Parkes (1990) found when individuals with high levels of NA were exposed to high levels of demand, their responses were characterized by high distress. Thus, Parkes (1990) concluded that environment can cause a reaction of distress in individuals with high-NA. Parkes' (1990) also found that work stress had the potential to influence affective outcomes in both positive and negative ways. Likewise, Moyle (1995), cited by Spector (1997), hypothesized increased levels of NA functioned like a domino effect; negative psychologic thoughts and feelings would spill over into work and thus affect job satisfaction too. Brief et al. (1988) found that NA was significantly correlated with both work stress and strain suggesting it has power as a psychological factor. NA was able to predict future job satisfaction (Brief et al. 1988). Brief et al. (1986:196) believed NA "contaminates" job satisfaction. However, little support explained NA as a factor of job satisfaction. Watson, Pennebaker, and Folger (1986) did not find statistically significant data on negative affectivity and workplace stress. Depression has a spillover affect where an individual suffering from depression can also experience effects on their functionality and vice versa. For example, family, work, school, and friendships are not mutually exclusive to the effects of depression (Greer et al. 2010:268).

Saari and Judge (2004) found a reciprocal relationship between negative affectivity and job satisfaction that may help to situate and explain Estryn-Behar et al. (1990) results. Work is a major aspect of life and thus, when dissatisfaction is experienced a "spill over" effect occurs where job dissatisfaction can influence, even perpetuate, life dissatisfaction in the form of depression and other forms of poor mental health (Saari and Judge 2004:399). Saari and Judge (2004) examined the causal relationship between job and life satisfaction and found that the research literature supports the relationship. The relationship between job satisfaction and life satisfaction were seen as directly related because the job itself is connected to core self-evaluation (Saari and Judge 2004). Likewise, Judge and Wantanabe (1994) found 68 percent of U.S. workers experienced a spillover of their job satisfaction into their life satisfaction. Work and family conflict had a significant correlation 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

When an individual experiences chronic stress, they are susceptible to a variety of psychiatric disorders such as depression and anxiety (Khan and Khan 2017). Estryn-Behar et al. (1990) results on stress and work among health care employees, revealed high levels and factors of stress resulted in decreased mental health wellbeing. Estryn-Behar et al. (1990) tested for five mental health indicators on the general health questionnaire (GHQ). 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). By screening for the five indicators, researchers would have a better predictor of mental health wellbeing as these mental health measures were related to depression. When tested on these five mental health indicators, individuals with higher stress levels had increased scores of poor mental health indicators. According to Estryn-Behar et al. (1990), the presence of prolonged fatigue and dissatisfaction can catalyze a singular major depressive disorder. When analyzing the results, 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 both work and home environment, job insecurity was correlated with elevated levels of depression and anxiety symptoms in both men and women regardless of ethnicity (Fan et al. 2015). When job support was present though, a decrease in symptoms associated with depression and anxiety occurred (Fan et al. 2015). In their results Fan et al. (2015) and Estryn-Behar et al. (1990) concluded work stress was a significant predictor 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; Shields 1999; 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). Psychological demands were amplified when individuals exerted a high amount of effort but were given a low reward for their work. When combined, "low decision authority, high job demand, low occupational social support, and job insecurity" were all associated with a moderate risk of mental illness (Stansfeld and Candy 2006:451). Fan et al. (2015) found individuals under high job demand experienced more severe symptoms of both depression and anxiety. Karasek and Theorell's (1990) research review supports Fan et al. (2015), an association was found 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 employee experienced high demands and low decision authority, a higher prevalence of psychiatric morbidity of clinical levels was present. Moreover, these results were a basis for causal association between job strain and medium-grade mental disorders such as depression. Stansfeld and Candy (2006) argued this association was present due to the stress component of a high strain workload. Dorsch-Mausner and Eaton (2000) expand on this idea and found when individuals experienced high levels of psychological job strain, major depressive disorder and depressive syndrome both rose in frequency. Overall, a relationship was found through psychologic job strain and increases in the presence of major depressive episode, depressive syndrome, and dysphoria (Dorsch-Mausner and Eaton 2000). High psychologic job strain was also found to be the most important variable regarding the three outcomes of depression (Dorsch-Mausner and Eaton 2000).

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). When psychological strain in the workplace is present, the future likelihood of depression increased (Netterstrøm et al. 2008). Though the study's limitations note the exact development of depression is debatable, longitudinal epidemiologic studies show an association between work-related psychological stress and depression development (Netterstrøm et al. 2008). In Wiesner et al. (2005) low skill variety also influenced depressive symptomology. Young adults who had low skill variety, wherein the individual did not engage many skills into their work, were 1.85 times more likely to report experiencing serious depressive symptoms (Wiesner et al. 2005). Likewise, individuals with high workload experienced an increase in clinically defined symptoms of depression (Wiesner et al. 2005).

Burnout

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 defined as a

distressed emotional and psychological state experienced by employees (Spector 1997). According to Thomas (2004), studies suggest burnout and depression are co-morbid, meaning they occur simultaneously. Since burnout is due to emotional exhaustion, decreased psychosocial functional follows and can be a potential trigger for a depressive episode (Thomas 2004).

The definition for psychosocial functioning is not universal, however, the general understanding is it encompasses an individual's ability to complete tasks required for daily living. 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. 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 participants who had burnout also were diagnosed with depression using the Primary Care Evaluation of Mental Disorders (PRIME-MD). This result was true for 90 percent of participants (Shanafelt et al. 2002).

Work Hours and Depression

As previously stated, an individual's work environment can spill over into their home environment and even influence their psychological state (Fan et al. 2015; Thomas and Ganster 1995). Thus, an individual's number of work hours are believed to influence different aspects of their life, including their mental health and psychological state (Fan et al. 2015; Thomas and Ganster 1995).

Psychological distress in the form of depression was significantly related to long work hours (Major et al. 2002). Participants reported a higher level of work interference with family (WIF) when working long hours; this relationship also resulted in higher levels of depression (Galambos and Walters 1992). When either wives or husbands worked longer hours, their level of depression increased. Married men who worked longer hours had elevated levels of depression severity and even experienced depressive symptoms when their wives worked longer hours (Galambos and Walters 1992). Galambos and Walters (1992) theorize this happens in married men because of the increased stress on their role balance in the home and work environment. Married men with longer work hours were found to be more depressed in comparison to married men with fewer work hours. However, according to Galambos and Walters (1992) intercorrelations existed in both spouses between stress, role strain, depression, and anxiety. Though the relationship between long work hours and depression has been debated, casual relationships have been found (Amagasa and Nakayama 2012; Sparks et al. 1997; Spugeon et al. 1997).

The support for the relationship between longer work hours and depression is not extremely significant, however, working hours did induce general mental stress such as irritation, tiredness, lack of concentration, frustration, and other depressive mood symptoms (Sparks et al. 1997). During the 1990s, the causal relationship between long work hours and depression were debated. Spurgeon et al. (1997), examined the relationship between health status and work environment and found an association between symptoms of depression and long working hours.

Recent literature shows a relationship between long working hours and depression was examined by Amagasa and Nakayama's (2012) in two working populations. Their model showed when long working hours and job demand as an "intermediate variable" were present, an increase in depression potential occurred. High demand was defined as 60 hours or more of work per week (Amagasa and Nakayama 2012). Drisen et al. (2010) observed the relationship between work shifts and hours in relation to depression and found shiftwork was related to a higher level of depressed mood. For men, shiftwork was related to depression and for females, longer work hours were associated with depression (Driesen et al. 2010).

Despite this, researchers have found lower correlations between working hours and depression. Virtanen et al. (2012) found, overtime work predicted of major depressive episodes 3.1 percent of the time. While this likelihood was small, it demonstrates a connection between longer work hours and depression. Virtanen et al. (2012), note their sample is subject to limitations due to the influence of socioeconomic status. When socioeconomic status was adjusted for, an increase in experiencing a major depressive episode followed (Virtanen et al. 2012). This result is mirrored by Ganster's et al. (2016) meta-analysis on long work hours and depression. While a variety of cross-sectional studies support the correlation between longer work hours and depression, overall, results were not significantly related or causal. Thus, Ganster et al. (2016) conclude present studies and evidence is lack luster. In a 2014 meta-analysis, however, Bannai and Tamakoshi (2014) found a majority of studies on the impact of work hours on health supported the association of long work hours resulting in depressive states (Driesen et al. 2010; Nagashima et al. 2007; Shields 1999; Virtanen et al. 2012).

Control Variables

Sex Affecting Depression

Females report suffering from depression more than males (Aneshensel et al. 1981; Weissman and Klerman 1977). Weissman and Klerman (1977) found that women were twice as likely as men to develop both clinically moderate and severe forms of depression. Aneshensel et al. (1981) found support for the claim that more females have depression than males; 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 at 6.35; these scores were statistically significant in comparison to males whose average score was 4.74. Despite the trend's documentation prior to the 1980s, it has not ceased to exist. According to the National Health and Nutrition Examination Survey, in all age categories more females had depression than males/ Approximately 10 percent of females had depression in comparison to 5.5 percent of males (Brody, Pratt, and Hughes 2018). Likewise, in a breakdown of depression diagnosis in the United States, more females were diagnosed with depression than males in every state (Statista Survey 2018). Nolen-Hoeksema (1990) notes sex differences in depression have been explained by biology. Nolen-Hoeksema (1990) recognizes the effect of hormones on females' mood during certain phases of their menstrual cycles as well as hormonal changes due to postpartum and menopause.

Current explanations for gender differences in unipolar depression include symptom recall and help-seeking behaviors, genetics, hormones, psychological, and psychosocial risks (Kuehner 2003). For females, Kuehner (2003) recognizes the impact of psychosocial gender

roles associated with domestic and work responsibilities ultimately leading to increased stress and risk of developing depression. Factors associated with increased risk are related to gender roles and cross-cultural including "poverty, lack of power, role strain and sexual abuse, interpersonal orientation, anxiety, lower self-confidence, and ruminative coping with depressed mood" (Kuehner 2003:170). Kuehner (2003:170) emphasizes risk of depression varies across cultural settings and the need for "integrative" models of depression addressing "psychological, psychosocial, and macrosocial risk factors." Importantly, Kuehner's (2003) review concludes sex difference do not explain the difference in incidence rates and sex. Overall, more women have, are diagnosed with, and experience more intense forms of depression in comparison to males (Aneshensel et al. 1981; Brody et al. 2018; Statista Survey 2018).

Race Affecting Depression

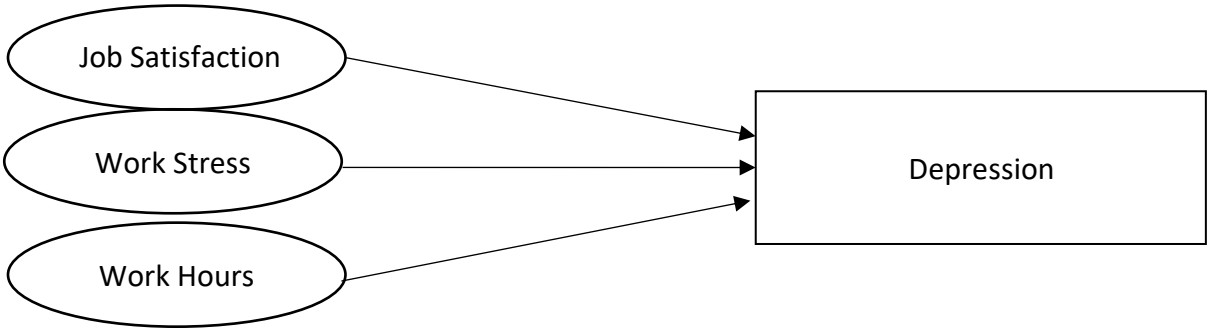
There is also an effect of race on depression; however, which race, or ethnicity, suffers more from depression has been debated (Drentea and Goldner 2006; Riolo et al. 2005). Drentea and Goldner (2006) found African American caregivers were more depressed than whites and hypothesized this difference occurred due to different socioeconomic statuses, family structures, and caregiving stressors. Drentea and Goldner (2006) believe these factors were all magnified depression for African Americans. Though there is a difference in structure and culture among African Americans and whites, these factors did not significantly affect depressive symptomatology (Drentea and Goldner 2006). On the other hand, Riolo et al. (2005) found major depressive disorder was significantly higher in whites in comparison to African American and Mexican individuals. Persistent depressive disorder though was more prevalent in African American and Mexican individuals in comparison to whites (Riolo et al. 2005). Brody et al. (2018) found that in non-Hispanic Asian individuals had lower prevalence of Hispanics, non-Hispanic Blacks, and non-Hispanic white adults.

Williams et al. (2007) found a higher percentage of African Americans experienced chronic depression, however, in comparison to Caucasian patients, less than half of African Americans sought treatment. Moreover, Shim et al. (2014) found Black men faced a cultural barrier of poor mental health association with weakness or diminished pride which deterred them from seeking treatment. Woodward et al. (2013) notes underdiagnosis and misdiagnoses occur for African American patients.

Additions to the Literature

This research adds to the previous literature by reassessing the relationship between job satisfaction, work stress, and work hours and their effect on depression. This research utilizes data from the 2016 of the General Social Survey (GSS) a nationally representative and large-scale survey. The GSS updates outdated literature on the effect of job satisfaction, work stress, and work hours on depression severity and frequency. Researchers have found mixed results regarding the effect of job satisfaction, work stress, and work hours on the onset and symptomology of depression. The control variables used are sex and race as each of these variables have been shown to significantly impact depression severity and manifestation (Aneshensel et al. 1981; Drentea and Goldner 2006; Riolo et al. 2005; Weissman and Klerman 1977).

RESEARCH MODEL



HYPOTHESES

H_1: Individuals with lower job satisfaction will report higher levels and frequency of depression.
Rationale: According to Faragher et al. (2005), individuals who experience low levels of satisfaction regarding their job are exposed to potential adverse effects on their well-being namely, their mental health. Additionally, Moyle (1995) found that individuals who are predisposed to negative emotions may experience a spillover of negative emotions regarding their job satisfaction creating a vicious cycle of depression and dissatisfaction in life.

H_2: Individuals with greater amounts of work stress will report higher levels and frequency of depression.

Rationale: According to Stansfeld and Candy (2006), there are strong associations between high job strain and depression. Likewise, and Estryn-Behar et al. (1990) found that specific and acute stress related to work can contribute to depression. Acute stressors were found to be part of a continual stress factors (Estryn-Behar et al. 1990). When stress factors were high, depression indicators significantly increased (Estryn-Behar et al. 1990). Fan et al. (2015) found that individuals experiencing high job demand and stress had a greater number of symptoms of depression and anxiety.

H_3: Individuals with longer work hours will report higher levels and frequency of depression.
Rationale: According to recent research (Amagasa and Nakayama 2012; Virtanen et al. 2012) a positive correlation between depression and long work hours existed when job demand was coded as an intermediate variable rather than a confounding factor. Long working hours were found to increase the risk of depression among the participants in this study because of its connection to higher job demand (Amagasa and Nakayama 2012).

DATA AND VARIABLES

The data for this research were obtained from the 2016 wave of the GSS which was most recent and publicly available concerning the presence of all variables. The GSS is a longitudinal survey conducted by the National Opinion Research Center (NORC) at the University of Chicago. The GSS began in 1972 and is currently distributed every other year, on even number years. All respondents of the GSS are 18 years of age or older and complete the survey through a 90-minute face-to-face interview. As of 2002, computer assisted personal software interviewing (CAPI) was commenced. Individuals must be a non-institutional United States citizen and speak either English or Spanish to participate. The GSS utilizes a multistage sampling design comprised of stratified, cluster, and probability proportionate to size to obtain a representative sample of the U. S. population. The most recent wave (2018) was released to the public in March 2018. Unfortunately, detailed depression questions were not included in the 2018 wave and thus the data cannot be used. This research uses the 2016 cross-sectional sample consisting of 2,867 respondents from across the United States (Smith et al. 2018). Unfortunately, much of the sample was lost after listwise deletion because detailed depression questions were only included on one ballot of the survey. The final sample consisted of 464 respondents (Smith et al. 2018).

Dependent variable

The dependent variable for this research is depression. Depression is a discrete ordinal level variable that was operationalized using the following occasional and rotating questions from the 2016 GSS. The variable asking respondents how many days of poor mental health they experienced in the past thirty days, was recoded into less than one week of bad mental health days, one week, two weeks, and three weeks. The variable was recoded into intervals of weeks because the WHO (2018b) diagnoses individuals with major depression after they have experienced a low or depressed mood for two weeks. Likewise, the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (2013) lists depressed mood for two weeks or more as a symptom of depression supporting the re-categorization of the GSS question. An index using the variables "CESD1" and "MNTLHLTH" was created. This index was constructed by giving each response a numerical score. The scores ranged from two to eight, with two being not depressed and eight being very depressed. The depression index yielded a Cronbach's Alpha of .684 meaning these variables were good indicators measuring depression.

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)

- None or almost none of the time
- Some of the time
- Most of the time
- All or almost all of the time

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)

- 0-6 Days
- 7-14 Days

- 15-21 Days
- 22-30 Days

Independent variables

The first independent variable for this research is job satisfaction. It is a discrete ordinal level variable which is operationalized using the following rotating question from the GSS: How satisfied are you in your job? (jobsat)

- Completely satisfied
- Very satisfied
- Fairly satisfied
- Neither
- Fairly dissatisfied
- Very dissatisfied
- Completely dissatisfied

The second independent variable for this research is work stress. This variable was recoded into three categories satisfied, neutral, and dissatisfied for the purposes of some statistical analyses. It is a discrete ordinal level variable which is operationalized using the following rotating question from the 2016 wave of the GSS: How often do you find your work stressful? (stress)

- Always
- Often
- Sometimes
- Hardly ever
- Never

The third independent variable for this research is the number of hours usually worked in one week. This variable was recoded into three categories of respondents who worked part time, full time, and overtime using guidelines from the U.S. Department of Labor's Bureau of Labor Statistics (2008; 2019). It is a discrete ordinal level variable which is operationalized using the following permanent question from the 2016 wave of the GSS: How many hours a week did you work last week, at all jobs? (hrs1)

- 0-34 Part Time
- 35-39 Full Time
- 40-89+ Overtime

Control Variables

The first control variable for this research is sex. Sex is a discrete nominal level variable which is operationalized using the following permanent question from the 2016 wave of the GSS: Respondent's sex (sex)

- Male
- Female

The second control variable for this research is race. Race is a discrete nominal level variable which is operationalized using the following permanent question from the 2016 wave of the GSS:

What race do you consider yourself? (race)

- White

- Black
- Other

ANALYSIS

Tables 1.1, 1.2, and 1.3 illustrate the descriptive characteristics for the entire sample. After removing missing cases using listwise deletion, the total sample size was 464 respondents. Descriptive statistics for the dependent variable, questions how much time the respondent felt depressed last week and the days of poor mental health in the past 30 days, are shown in Table 1.1. A majority of respondents (72.6 percent) reported no time feeling depressed within the past week; however, nearly 30 percent (27.4 percent) reported feeling depressed either some, most, or all of the last week.

Table 1.1.
Descriptive Statistics of Respondent Characteristics, N=464
Dependent Variable

Variables	n	Percent
Time Depressed Last Week		
None	337	72.6
Some	106	22.8
Most	12	2.7
All	9	1.9
Days Poor Mental Health		
0-6 Days	398	85.9
7-14 Days	31	6.6
15-21 Days	18	3.9
22-30 Days	17	3.6

The sample mode was one, meaning most respondents had not felt depressed within the past week. These results, a majority of individuals not experiencing depressed mood, are not surprising as depression only effects approximately 6.7 percent of all U.S. adults above the age of 18 (NIMH 2017). The nearly 30 percent of individuals who responded feeling some level of depressed mood reflects the fact that 15 percent of the U.S. adult population will experience depressed mood once in their lifetime (Recovery Brands LLC 2017).

Regarding days of poor mental health experienced by respondents, an overwhelming majority of respondents (85.9 percent) reported experiencing 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, 56.9 of respondents reported zero days of bad mental health. Similarly, a small portion of the sample experienced poor mental health in the past 30 days. In comparison, 6.6 percent of respondents experienced 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 a depressed mood or poor mental health for more than two weeks as a symptom of depression (WHO 2018b). Since sample results reflect similar data from the NIMH on depression frequency among adults, the sample is relatively representative of the U.S. population. An index was created for depression. The depression index scores ranged from two (being not depressed) and eight (being very depressed). The range for the depression index was 6.00. The mean for the depression index was 2.59 with a standard deviation of 1.16, and a Cronbach's alpha of .684. This suggests the sample was not depressed and the index had a moderate to high reliability.

Table 1.2.
Descriptive Statistics of Respondent Characteristics, N=464
Independent Variables

Variables	N	Percent
Job Satisfaction		
Completely Satisfied	85	18.3
Very Satisfied	175	37.7
Somewhat Satisfied	143	30.8
Neither	25	5.4
Somewhat Dissatisfied	23	5.0
Very Dissatisfied	10	2.2
Completely Dissatisfied	3	0.6
Work Stress		
Always	52	11.2
Often	100	21.6
Sometimes	242	52.2
Hardly Ever	61	13.1
Never	9	1.9
Work Hours		
0-34 Part Time	128	27.6
35-40 Full Time	172	37.1
41-89 Overtime	164	35.3

Table 1.2 shows descriptive statistics for the independent variables job satisfaction, work stress, and number of hours worked. An overwhelming majority of respondents (86.8 percent) were somewhat, very, or completely satisfied with their job. Satisfied was reported by 37.7 percent. In comparison, 7.8 percent reported somewhat, very, or completely dissatisfied. Those who felt neither satisfied nor dissatisfied comprised 5.4 percent of the total sample. The median response for job satisfaction was very satisfied. This sample is inconsistent with the Pew Research Center's Social and Demographic division's (2016) report 49 percent were very

satisfied, 30 percent are somewhat satisfied, 9 percent dissatisfied, and 6 percent very dissatisfied.

As for work stress, a majority of respondents (52.2 percent) reported feeling work stress sometimes followed by 21.6 percent reporting often, and 11.2 percent always. In total, nearly all (85 percent) of respondents experienced work stress sometimes, often, or always. A lower percentage of respondents hardly ever experienced work stress (13.1 percent) and 1.9 percent reported never. The median response regarding how often the respondent found work stressful was sometimes. These results are consistent with the American Psychological Association (APA) (2017) report 61 percent of United States citizens experience stress due to work. Likewise, these results are consistent with a 2014 report by the American Psychological Association wherein job pressure in the forms of co-worker tension, bosses, and work overload were the top cause of stress.

More than one third of respondents (37.1 percent) worked full time between 35 and 40 hours per week. Followed by 35.3 percent of respondents who worked overtime between 41 and 89 hours a week. The mean hours worked by respondents was 38.91 hours. The remaining 27.6 percent of respondents worked part time from zero to 34 hours per week. This is surprising in comparison with the Bureau of Labor Statistics (2019) who reported the average number of hours worked per week in the U.S. was 34.5 hours. Over one third of the sample (35.3 percent) worked overtime, more than 40 hours, which exceeds the average number of hours reported by the U.S. Bureau of Labor Statistics.

Table 1.3.
Descriptive Statistics of Respondent Characteristics, N=464
Control Variables

Variables	N	Percent
Sex		
Male	211	45.5
Female	253	54.5
Race		
White	359	77.4
Black	71	15.3
Other	34	7.3

Table 1.3 shows the descriptive statistics for the control variables sex and race. 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) on the United States' population; 50.76 percent women and 49.24 percent were male. Females are slightly overrepresented in this sample; however, the CIA World Factbook (2018) also reported a higher percentage of females than males in the United States. In both samples, a majority were female. As for race, a majority of respondents (77.4 percent) were white and 15.3 percent were Black. This is consistent with the U.S. Census Bureau's American Community Survey finding that

66 percent of the U.S. population are white, and 12 percent are Black (United States Census Bureau American Community Survey 2017).

Table 2.
Correlation Matrix of Depression, Job Satisfaction, Work Stress, Work Hours, Sex, and Race, N=464

	(1)	(2)	(3)	(4)	(5)	(6)
(1) Depression Index[a]	1.00	.180***	-.242***	.025	-.142**	.019
(2) Job Satisfaction[b]		1.00	-.135**	-.122**	-.075	.007
(3) Work Stress[c]			1.00	-.224***	-.015	-.082
(4) Work Hours				1.00	.206***	.047
(5) Sex[d]					1.00	.028
(6) Race[e]						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
[e] Race is coded as 0 = Nonwhite, 1 = White

Table 2 illustrates the bivariate correlations for depression, job satisfaction, work stress, work hours, sex, and race. There was a weak, positive, statistically significant correlation between depression and job satisfaction (r = .180; p = .000). This suggests a relationship between those with lower job satisfaction and depression. This finding supports the hypothesis that individuals with lower job satisfaction will report higher levels and frequency of depression. Findings are consistent with previous research by Faragher et al. (2005) who found individuals with lower job satisfaction had an increased risk of experiencing mental illness. This finding updates research by Watson and Clark (1984) and Spector (1997) who found correlations between job satisfaction, negative affectivity, and feelings of depression and anxiety (Spector 1997). The finding is not surprising as previous literature found a reciprocal relationship between job satisfaction, negative affectivity and emotion (Estryn-Behar et al. 1990; Saari and Judge 2004). Saari and Judge (2004) and Estryn-Behar et al. (1990) found work spills over into life and low job satisfaction is correlated with low life satisfaction.

There was a weak, negative, statistically significant correlation between depression and work stress (r = -.242; p = .000). In other words, there was a relationship between those with less work stress and less depression. This finding supports the hypothesis that individuals with greater amounts of work stress will report higher levels and frequency of depression. This finding is consistent with Estryn-Behar et al. (1990) who found when stress was high, depressive symptomology significantly increased. It is also consistent with Khan and Khan (2017) who explains that individuals experiencing chronic stress are at an increased risk for depression and anxiety. When more stress is experienced at work, individuals experience more depressive symptomology especially in work environments where employees have high demands and low decision autonomy (Stansfeld and Candy 2006).

Interestingly, there was no statistically significant relationship between depression severity and typical hours worked in one week. This finding does not support the hypothesis that individuals who work longer hours will have increased levels and severity of depression. This is inconsistent with findings from previous literature which found individuals who worked longer hours had increased levels of depression severity (Amagasa and Nakayamas 2012; Bannai and Tamakoshi 2014; Galambos and Walters 1992; Major et al. 2002; Virtanen et al. 2012). Interestingly, there was a weak, positive, statistically significant relationship (r = .206; p = .000) between work hours and sex which a relationship indicating found males work more hours than females.

Not surprisingly, there was a weak, negative, statically significant correlation between depression and sex (r = -.142; p = .002), indicating a relationship between males and experiencing fewer days of depression than females. In other words, females are more depressed than males. This finding supports previous research by Aneshensel et al. (1981), Brody et al. (2018), and Kuehner (2003) who found females suffer from depression more frequently than males. Kuehner (2003) concluded psychosocial and gender roles resulted in greater prevalence and incidents of depression for females. There was no relationship between depression and race (p = .685). This is inconsistent with findings by Riolo et al. (2005) who found white individuals were diagnosed with major depressive disorder significantly more than African American and Mexican individuals. A possible explanation is how depression is conceptualized differently by various races (Shim et al. 2012; Williams et al. 2007; Woodward et al. 2013). The cultural associations of depression in Black culture may explain the finding of no relationship between race and depression within this sample (Williams et al. 2007; Woodward et al. 2013).

Table 3.1 shows the bivariate relationship between time felt depressed in the past week, days of poor mental health, and job satisfaction. Among those who were depressed none of the time, there was a 12.6 percent difference between those who were satisfied with their job and dissatisfied. These differences were statistically significant (p = .000). For those who were depressed all of the time, there was a 10.1 percent difference between being satisfied with their job and dissatisfied. Among those with more than three weeks of poor mental health, there was a 7.9 percent difference between those who were satisfied with their job and dissatisfied (p = .016). This means those who have low job satisfaction reported greater levels of depression. These results are consistent with previous research by Estryn-Behar et al. (1990), Faragher et al. (2005), George et al. (1988), Spector (1997), Saari and Judge (2004), and Watson

and Clark (1984) who found relationships between depression and job satisfaction. These results support the hypothesis individuals with lower job satisfaction will report higher levels and frequency of depression.

Table 3.1. Depression by Job Satisfaction, N=464

	Job Satisfaction (Percent)		
Time Felt Depressed	Satisfied (n=403)	Neutral (n=25)	Dissatisfied (n=36)
None of the Time	73.7	72.0	61.1
Some of the Time	23.3	20.0	19.4
Most of the Time	2.0	4.0	8.3
All of the Time	1.0	4.0	11.1
Note: χ^2 = 24.410; p = .000			
Days of Poor Mental Health			
LT One Week	87.3	76.0	75.0
MT One Week	6.5	12.0	5.6
MT Two Weeks	3.0	12.0	8.3
MT Three Weeks	3.2	0.0	11.1
Note: χ^2 = 15.552; p = .016			

Table 3.2 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 12.6 percent difference between those with high work stress and those with low work stress. This means those who reported lower work stress also reported less depressed. This difference is not statistically significant and does not support the hypothesis that individuals with greater work stress will experience high levels and frequency of depression (p = .106). Among those who experienced more than three weeks of poor mental health, there was a 7.2 percent difference between those with high work stress and those with low work stress. Again, this demonstrates those who report higher work stress also report experiencing more days of poor mental health. This difference was statistically significant (p = .000). These results are consistent with previous research by Khan and Khan (2017), Estryn-Behar et al. (1990), and Stansfeld and Candy (2006) who found when work stress was high, depressive symptomology significantly increased. These results support the hypothesis that individuals with greater amounts of work stress will report higher levels and frequency of depression.

Table 3.3. Depression by Work Hours, N=464

	Work Hours (Percent)		
Time Felt Depressed	Satisfied (n=128)	Neutral (n=172)	Dissatisfied (n=164)
None of the Time	71.9	74.4	71.3
Some of the Time	20.3	23.8	23.8
Most of the Time	4.7	0.6	3.0
All of the Time	3.1	1.2	1.8
Note: χ^2 =7.086; p = .313			
Days of Poor Mental Health			
LT One Week	87.5	89.0	81.1
MT One Week	5.5	5.2	9.1
MT Two Weeks	3.1	2.9	5.5
MT Three Weeks	3.9	2.9	4.3
Note: χ^2 = 5.133; p = .527			

Table 3.3 shows the bivariate relationship between time felt depressed in the past week, days of poor mental health, and work hours. There is no substantive or significant difference between work hours and depression. Additionally, there was no substantive or significant difference between work hours and poor mental health within the past 30 days. These results are inconsistent with previous findings by Galambos and Walters (1992), Amagasa and Nakayamas (2012), Virtanen et al. (2012), and Bannai and Tamakoshi (2014) which found individuals who worked longer hours had increased levels of depression severity. Similar to the findings from bivariate correlations, these results do not support the hypothesis that individuals who work longer hours will have increased levels and severity of depression.

Table 4. Regression Results of Depression on Job Satisfaction, Work Stress, and Work Hours
N= 464

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Job Satisfaction	.950***			.738**	.695**
	(.263)			(.259)	(.256)
Work Stress		-2.365***		-2.210***	-2.179***
		(.337)		(.346)	(.343)
Work Hours			.020	.006	.016
			(.017)	(.017)	(.017)
Sex					2.022**
					(.606)
Race					-.305
					(.498)
R^2	.027	.096	.003	.112	.134

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

Table 4 shows the regression results of job satisfaction, work stress, work hours, sex, and race on depression. Consistent with bivariate results from Tables 2 and 3.1, it appears from Model 1 (R^2 = .027) that job satisfaction is a predictor of depression. The coefficient for job satisfaction was moderate and statically significant. As shown in Model 2 (R^2 = .096) work stress is a better predictor of depression than job satisfaction, with 9.5 percent of the variance in depression being explained by work stress. Consistent with bivariate results in Tables 2 and 3.2, work stress is statistically significant and contributes to depression. Consistent with bivariate results from Tables 2 and 3.3, Model 3 shows that work hours are a worse predictor of depression than job satisfaction and work stress (R^2 = .003). Consistent with bivariate results in Tables 2, 3.1, 3.2, and 3.3, Model 4 shows that job satisfaction and work stress are better predictors of depression than work hours or work stress alone (R^2 = .112). Adding the control variables of sex and race does not change the effect of job satisfaction, work stress, and work hours on depression making Model 5 a better predictor of depression than Model 1 (R^2 = .027)

and Model 2 (r^2 = .095). Overall, the full model is the best predictor of depression, explaining 13.4 percent of the variance in depression.

SUMMARY AND IMPLICATIONS

This research examined the effects of job satisfaction, work stress, and work hours on depression. Previous research found an individual's level of depression is influenced by their emotional state, environment, and any triggers present (Kanter et al. 2008). Bjarke et al. (2017) explains an individual's job significantly impacts their emotional, personal, and psychological wellbeing. Two out of three research hypotheses were supported. The first hypothesis stated individuals with lower levels of job satisfaction will experience higher frequency and severity of depression. Previous research shows individuals with lower levels of job satisfaction are more depressed and that job satisfaction influences the onset of depression (Estryn-Behar et al. 1990; Faragher et al. 2005; George et al. 1988; Saari and Judge 2004; Spector 1997; Watson and Clark 1984).

The second hypothesis stated individuals with greater amounts of work stress will report higher levels and frequency of depression. Previous research found individuals under great stress have an increased frequency of depression indicators (Estryn-Behar et al. 1990). Previous research found individuals experiencing high job demand and stress have greater depression and anxiety symptoms (Fan et al. 2015).

The third hypothesis was not supported and stated that individuals with longer working hours will report higher levels and frequencies of depression. This is not consistent with previous research which found working long hours increases depression risk (Amagasa and Nakayama 2012; Bannai and Tamakoshi 2014). While significant causal results have not been found between work hours and depression, research has found a correlation between work hours and depression (Ganster et al. 2016).

There was a weak relationship between depression and job satisfaction in the analyses suggesting lower job satisfaction is associated with higher levels of depression. I also found a weak correlational relationship between depression and work stress. This indicates individuals who report experiencing lower amounts of work stress report lower levels and frequency of depression. There was no relationship between depression and work stress. It is possible there was no observed relationship due to the small percentage of depressed respondents within the sample size. Alternatively, individuals' level and frequency of depression may have been affected more by job satisfaction and work stress than work hours. Though 35.3 percent of individuals were working overtime, it is possible that these work hours were not towards the extreme value of 60 to 89 hours a week but rather, closer to full time requirements. Thus, work hours may not have had an impact on depression severity and frequency or precipitated as much work stress.

One contribution of this research is that it updates the literature regarding the association between work and depression. Results are solidified by previous researchers who found similar results. The research results are important to those working in unsatisfying jobs and employers who desire a healthy work force. This research has great importance to the current climate of mental health awareness and efforts toward destigmatizing depression. Future research should explore what factors create work stress and job dissatisfaction and how

they translate into full fledge depression. Causality of depression and work life can go either direction, both are intertwined and influenced by one another and thus difficult to separately understand. A weakness of this study is it is correlational and not causal. It is important to recognize the associative and correlational nature of this study and thus the limits of generalizability. While causality cannot be established the data, analyses indicate a weak but statistically significant relationship between work and depression. Future research should utilize panel data with more detailed mental health and employment data such as the Panel Study of Income Dynamics or the National Longitudinal Survey of Youth 97. By understanding this tangled and nuanced relationship, future research should focus on teasing out the relationship between depression and work life.

This research used GSS questions to measure the dependent, independent, and control variables. A limitation is that detailed questions on depression were not asked in the most current wave of the GSS (2018) thus the most recent data could not be used. One strength of using these questions is that the GSS uses a multi-stage, stratified, cluster, and probability proportionate to size full probability process that consists of a nationally representative sample. This sample design provides a reliable source of data that examines the U. S. population and some aspects of the severity and frequency of depression. Overall, the results update and clarify the influence of job satisfaction, work stress, and work hours on depression and overall mental wellbeing.

This research is of interest and concern to employers, employees, human resources, and insurance companies. These personnel must be cognizant of the importance of mental health programs, assessments of workplace satisfaction, and work stress levels. 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 in regard to depression and mental health. Hopefully the results of this research will help lessen the stigma attached to mental health treatment and recognize the importance of work in relation to depression.

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BIOGRAPHY

Rachel Bickelman is a current senior Sociology and Psychology major at Elizabethtown College. Currently she is researching sense of belonging among college students during the COVID-19 pandemic. Ms. Bickelman is a teaching assistant for research methods and statistical analysis and the student liaison for the college's IRB committee. She also works as an undergraduate editorial assistant for Teaching Sociology. Ms. Bickelman plans to work in applied sociology to achieve social and environmental justice.