An Examination of the Correlation between Socioeconomic Status and Mental Illness

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Abstract

The purpose of this study was to examine the correlation between socioeconomic status and one's propensity towards mental illness. The hypothesis was that these two variables would be negatively correlated. One hundred students at a Midwestern university participated in this study by completing a 50-item survey. The materials consisted of the Depression Anxiety and Stress Scales (Lovibond & Lovibond, 1995), and self-report measures of socioeconomic status including household income, parental education level and occupation, type of family structure, and perceived social status. This research is important to field of psychological research because as the poverty rate steadily increases, it becomes crucial to understand what impact one's environment has on his or her psychological development.

The Correlation between Socioeconomic Status and Mental Illness

Pulitzer Prize winner Frank McCourt once stated (1996), "You might be poor, your shoes might be broken, but your mind is a palace" (p. 208), and with this quote, he unknowingly summarized a theoretical question that has been the subject of much research: does one's income determine his or her propensity towards mental illness, or can the mind be conditioned to overcome adverse economic circumstances? According to the National Center for Law and Economic Justice (2013), 46.5 million people in the United States are living in poverty. This figure accounts for 15% of the country's population and poses interesting concerns (National

Center for Law and Economic Justice, 2013). With such a high prevalence of disadvantaged socioeconomic statuses (SES), it is important to consider not only the factors that may contribute to financial deprivation, but also the consequences it may have on the affected population. Although income is an important aspect of SES, other factors such as education level, the number of children living in the household, and occupation also play a vital role in determining one's psychological health (Dzator, 2013). Much research has found negative correlations between SES and mental disorders (Adler, Epel, Castellazo, & Ickovics, 2000; APA, 2007; Dzator, 2013), but the causation relationship continues to be investigated. Understanding the effects of correlates on psychopathology would contribute not only to the field of preventative psychological research, but to the entire field of Mental Health; in order to preclude psychological maladaptation, however, clinicians and other professionals need to first understand the underlying correlations of SES and mental illness.

**Psychological Manifestations**

The American Psychological Association (2007) reported that impoverished families tend to have higher vulnerabilities towards mental disorders. One possible explanation for this phenomenon is that perhaps individuals with a low SES constantly feel the threat of danger, which could cause them to develop negative cognitions such as pessimism or a perceived lack of control (Adler et al., 2000). Although the correlations between SES and various mental disorders have been extensively tested (Adler et al., 2000), it seems as though the highest rates are generally of depression and anxiety. Much literature on the subject refers to studies conducted in the United States (Adler et al., 2000; APA, 2007; Dzator, 2013; Miech, Caspi, Moffitt, Wright &

Silva, 2010), but similar results have also been found throughout the world. A meta-analysis spanning several different countries found that depression levels were consistently more often present in individuals from the lowest SES in varying cultures (Lorant, Deliege, Robert, Philippot & Annsseau, 2003). Depression has also been found to be persistent across longitudinal studies in individuals from a disadvantaged socioeconomic background (Melchior et al., 2013). Such symptoms can have negative consequences for individuals that may exacerbate their current conditions. For instance, employees with low SES tend to miss more days of work due to a depressive episode than those from any other group (Ervasti et al., 2013). Also, it should be noted that although there have not been significant variances reported between men and women in relation to propensity towards mental disorders, it seems as if they react differently to stress. Men tend to express their feelings externally, which can cause them to move more towards impulse control disorders, such as substance abuse, while women seem to internalize their feelings, leading to higher instances of depressive symptoms (Dzator, 2013).

Depression seems to be most prevalent in adult populations with low SES, but it appears as though children and adolescents suffer from higher rates of anxiety (Miech et al., 2010). This finding could, in part, be due to the idea that young adults have simply not experienced as many risk factors for depression, such as traumatic life events or the feeling of being trapped in a career (Miech, Caspi, Moffitt, Wright & Silva, 2010). It has been reported that children from families with low SES also tend to display more physical symptoms of anxiety (Vine et al., 2012). Interestingly, results of testing children for anxiety are not always consistent; the highest rates were found in families in which the parents had not completed at least a high school level of education (McLaughlin, Costello, Leblan, Sampson & Kessler, 2012). These findings support

the notion that factors outside of the conventional measures of household income should be taken into consideration when calculating SES.

**Extraneous Mediators of SES and Psychopathology**

While income does clearly have an impact on the development of mental disorders, it seems as if other factors, such as parental influences, society, and perceived status, play equally important roles. One twin study reported that the absence of the father had a stronger correlation with anxiety than did SES itself (Cronk, Slutske, Madden, Bucholz & Heath, 2004). It should, however, be considered as to whether the absence of one parent perhaps decreased the household income and was therefore only as significant as it contributed to conventional measures of SES. Previous research has indicated similar meditations between SES and parental influence in the development of psychological health. Mothers who suffer from higher levels of depression tended to also be mostly white, had less education, achieved lower levels of employment, had higher instances of substance abuse, and were more likely to rely on government aid (Luciano, Nicholson & Meara, 2014).

Societal standards are additionally important in the examination of SES in relation to psychopathology. The Social Selection Theory postulates that individuals with higher propensities towards mental illness tend to not function well in society and therefor end up with a low SES. Other studies have found that having low SES caused stress which exacerbated symptoms of mental disorders, and impoverished individuals do not have adequate access to health care (Wadsworth & Achenbach, 2005).  Different research has conversely found that a strong sense of mastery or general control over one's environment helps to reduce the severity of negative effects of stress (Dzator, 2013). One example of this theory had to do with job

satisfaction; those who work generally report less overall symptoms of mental disorders than those who do not, but one's position is also important (Eaton, Muntaner, Bovasso & Smith, 2001). For instance, one study reported that higher level managers, who had authority over others and whose actions influence the cooperation, had a lower risk of depressive behavior. Higher levels of depression were found in lower management positions because they were faced with the challenges of handling working problems, but they were also forced to answer to higher authority, and their actions did not significantly influence the company (Muntaner, Eaton, Miech & O'Camp, 2004). The most severe levels of depression tended to be found within workers who felt a high demand in their job, yet received inadequate compensation (Eaton, Muntaner, Bovasso & Smith, 2010).

In addition, abrupt changes in economic circumstances, such as job loss or inflation, can challenge one's integrity, self-esteem or livelihood, and these negative effects are particularly prevalent within the impoverished population (Dzator, 2013). It has also been found that immigrants, who decreased their social status after relocating, tended to screen for higher levels of depression symptoms (Das-Munshi, Leavey, Stansfel & Prince, 2012). This evidence indicated that the environment to which people are exposed had an effect on their psychological health and it is not as evident that mental illness in itself necessarily causes a "downward drift" in society (Wadsworth & Achenbach, 2005).

Race is another crucial component to consider in that minority groups tend to experience higher rates of poverty, yet lower levels of mental disorders than minority group members (Costello, Farmer, Angold, Burns & Erkanli, 1997; Costell, Keeler & Angold, 2001). It has also been found, however, that when an individual from a minority group is affected by psychological symptoms, they tend to be more debilitating, and the person does not benefit from treatment as

considerably as people in the racial majority (Salami & Walker, 2014). One possibility is that those from a minority ethnic group tend to have better familial and social networks which help to offset the effects of low SES (Costello, Farmer, Angold, Burns & Erkanli, 1997). In fact, children that even reside in neighborhoods mostly consisting of low SES families tend to experience less negative psychopathological effects (Vine et al., 2012). In a study with a sample consisting entirely of African American college students, it was asserted that the presence of their symptoms may have been at least partially attributed to the fact that they were attending a predominantly Caucasian institution which led them to experience feelings of social incongruence and loneliness (Salami & Walker, 2014)

It seems as though individuals' perceived social statuses may have a more significant impact on their propensity towards mental disorder, due to inequalities that result from their societal standing (Adler, Epel, Castellazzo & Ickovics, 2000). In a Norwegian prison study, those with a low SES did have more overall vulnerability towards mental illness, but the highest instances of disorders were found in inmates with the lowest subjective status (Friestad 2010). Another mediator between SES and mental disorder appears to be the hope with which one views his or her circumstances. One study found that levels of hopelessness had a higher correlation with psychopathology than SES alone (Salami & Walker, 2014). Other research has reported similar conclusions and they have indicated other factors that affect one's outlook. Among the most important are level of education and the ability to maintain employment; those who had completed more schooling and were currently employed had a tendency to be more optimistic and reported lower levels of depression symptoms (Dzator, 2013).

**Hypothesis**

The hypothesis of this study was that SES and mental disorder are negatively correlated and mediated by perceived social status. SES was measured through a variety of questions including parental occupation and education level, household size, family type and family income; monetary categories were defined by the U.S. Census brackets (2010). These items were either open ended or multiple choice. Participants were also asked to self-report which socioeconomic class to which they believe their family belonged; these choices were limited to upper, middle, and lower. Propensity towards psychopathology was measured with the Depression Anxiety and Stress Scale (DASS); this particular assessment has been found especially useful when utilized as a means of measuring categorical dimensions of the disorders as opposed to simply diagnosing test-takers (Crawford & Henry, 2003). It consists of a set of three self-report scales designed to measure the negative emotional states of depression, anxiety, and stress (Lovibond & Lovibond, 1995). Each of these three scales contains 14 items and are divided into subscales of 2-5 items with similar content (Lovibond & Lovibond, 1995). The items are rated on a 5-point frequency scale describing how often the behaviors had occurred within the past week (Lovibond & Lovibond, 1995). Participants were also asked to report their gender and ethnicity.

## Method

### Participants

Participants ($N$= 95; 61% female, 39% male) consisted of a convenience sample of McKendree University undergraduate students (78% Caucasian, 13% African American, 1% Asian American, 2% Latino/a, and 6% other). The researcher recruited them on a voluntary basis and asked them to complete the survey in the beginning of their class time. Five surveys were discarded because they had not been entirely completed.

**Materials**

To measure propensity towards mental disorders, I used the Depression Anxiety Stress Scales (DASS). This survey consists of 42 items rated on a 5-point Likert scale from 1 (*never)* to 5 (*always*); it is divided into three 14-item subscales that independently measures symptoms of depression, anxiety, and stress. I reverse scored a total of eight items at random and included question from all three subscales. The DASS is particularly unique in that it is well suited to report dimensional symptoms of disorders as opposed to categorical diagnoses (Crawford & Henry, 2003). One study administered the DASS in concordance with other measure of the same constructs and proved its convergent and discriminant validity (Crawford & Henry, 2003). Cronbach's alpha also confirmed the scale's reliability (Crawford & Henry, 2003).

To measure SES I used categories from the U.S. Census bureau including parental education level and occupation, total income, the number people living in the home, and their type of family structure (single-parent, blended, nuclear). The number of residents was open-ended, while the other questions were all multiple choice. I also asked participants to identify the socioeconomic class (lower, middle, upper) to which they believed they belonged. The survey additionally asked participants to indicate their gender and race/ethnicity, which were open-ended and multiple choice respectively.

**Procedure**

The researcher administered the survey on a voluntary basis to students at the beginning of their class periods. They were provided with a brief handout explaining the purpose of the research along with the informed consent. The students were aware that they had the option to not participate or to discontinue at any point. The surveys were not distributed until the participant had read and signed his or her informed consent. When all participants had completed

the survey, the research verbally delivered the debriefing, announced the hypothesis, and gave the opportunity to ask questions or make comments. Participants were provided with the researcher's and sponsoring professor's contact information in the event of future questions, as well as instructions for correspondence with the school counselor if the survey evoked any emotional discomfort.

## Results

Analyses focused on the correlation between participants' SES and their propensities towards mental disorders. All SES items were coded so that higher scores indicated higher statuses; the sums of these numbers were found to make a SES total score. DASS items were totaled in accordance with the subscales, which rendered three scores: depression, anxiety, and stress.

Pearson correlations were used to analyze the difference between participants' total SES and their propensities towards mental disorders. Although all of the relationships were negative, the correlations were not significant with anxiety ($r = -.125$, $N = 95$, $p = .229$), depression ($r = -.114$, $N = 95$, $p = .273$), or stress ($r = -.112$, $N = 95$, $p = .278$). The researcher then ran correlations between the independent measures of propensity towards mental disorder scales with the individual factors of SES and found some significance. The self-report measure of household income was correlated with depression ($r = -.321$, $N = 95$, $p = .002$) and stress ($r = -.305$, $N = 95$, $p = .003$). Perceived social status was additionally significantly correlated with depression ($r = -.245$, $N = 95$, $p = .017$), stress ($r = -.250$, $N = 95$, $p = .025$), and anxiety ($r = -.230$, $N = 95$, $p = .025$), in the expected direction.

**Perceived Social Status**

|  |  | anxiety | depression | stress | ses_6 |
|---|---|---|---|---|---|
| anxiety | Pearson Correlation | 1 | .718** | .726** | -.230* |
|  | Sig. (2-tailed) |  | .000 | .000 | .025 |
|  | N | 95 | 95 | 95 | 95 |
| depression | Pearson Correlation | .718** | 1 | .806** | -.245* |
|  | Sig. (2-tailed) | .000 |  | .000 | .017 |
|  | N | 95 | 95 | 95 | 95 |
| stress | Pearson Correlation | .726** | .806** | 1 | -.250* |
|  | Sig. (2-tailed) | .000 | .000 |  | .014 |
|  | N | 95 | 95 | 95 | 95 |
| ses_6 | Pearson Correlation | -.230* | -.245* | -.250* | 1 |
|  | Sig. (2-tailed) | .025 | .017 | .014 |  |
|  | N | 95 | 95 | 95 | 95 |

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

**Income**

|  |  | anxiety | depression | stress | ses_1 |
|---|---|---|---|---|---|
| anxiety | Pearson Correlation | 1 | .718** | .726** | -.198 |
|  | Sig. (2-tailed) |  | .000 | .000 | .055 |
|  | N | 95 | 95 | 95 | 95 |
| depression | Pearson Correlation | .718** | 1 | .806** | -.321** |
|  | Sig. (2-tailed) | .000 |  | .000 | .002 |
|  | N | 95 | 95 | 95 | 95 |
| stress | Pearson Correlation | .726** | .806** | 1 | -.305** |
|  | Sig. (2-tailed) | .000 | .000 |  | .003 |
|  | N | 95 | 95 | 95 | 95 |
| ses_1 | Pearson Correlation | -.198 | -.321** | -.305** | 1 |
|  | Sig. (2-tailed) | .055 | .002 | .003 |  |
|  | N | 95 | 95 | 95 | 95 |

**. Correlation is significant at the 0.01 level (2-tailed).

**Discussion**

The original hypothesis postulated that socioeconomic status and propensity towards mental illness would be negatively correlated and mediated by perceived status. The data, however, did not directly support this claim as the composite SES score was not significantly correlated with depression, stress, or anxiety. It did, however, support the claim that perceived status would also be correlated. Overall, it seems that these two constructs definitely impact each other, but in a way that is slightly different than expected.

**Implications**

These results indicated that certain factors used to measure SES do not have an important effect on one's psychological development. For instance, contrary to previous research (Luciano, Nicholson & Meara, 2014), this study did not find a relationship between the level of education achieved by the parents and the child's mental health. Type of family structure, namely the presence of one or both parents, was also found to not be as important as previously suggested (Cronk, Slutske, Madden, Bucholz & Heath, 2004). Additionally, parental education level did not produce significant results.

The self-report measure of income was one of the only factors directly related to these constructs, specifically depression and stress. This finding is unique in that young adults from a low SES tend to suffer from higher rates of anxiety (Miech et al., 2010), and the sample was mostly traditional college students. Interestingly, perceived social status was related to all three measures, which indicated that the feeling of being disadvantaged heightens anxiety. Therefore, if someone is surrounded by others of similar means, he or she experiences less risk of mental illness, regardless of the family's actual income.

The fact that the sample consisted of mostly traditional college students negates the Social Selection Theory (Wadsworth & Achenbach, 2005). Because they are young students, they seem to be functioning well in society so far, yet they reported risk factors for developing mental illness. This finding also supports the notion that stress plays a important in role in developmental psychopathology as it was significantly correlated to both factors. They also indicated high levels which supports opposing research (Wadsworth & Achenbach, 2005).

**Limitations**

Although this study produced significant results, there are some factors that should be taken into consideration. The most important issue occurred with the self-report measure of income because it seemed as though many students were not prepared to speculate on their family's earnings. For instance, a couple of participants reported that their families received a very low salary, yet indicated that their parents had achieved a high level of education, held lucrative occupations, and marked that they belonged to the middle or even upper social class. This confusion may suggest that the results associated with income alone may be slightly skewed, and perhaps perceived social status is a more reliable measure.

There were also a couple of problems with the survey itself. Some of the items were typed erroneously so there were no spaces between sequences of two or three words. While most participants seemed to understand the question anyway, the mistakes could have influenced their answers. Some of the wording additionally may have caused confusion. For instance, one participant asked for the definition of the word "trivial". Although no others expressed concerns with the meaning of words, it is possible that some of them may have been unaware of exactly what the statement indicated.

**Future Research**

For the purpose of other prospective studies on this topic, there are some concepts that could be added. Age, specifically, would give much better insight into the relation between certain mental disorders and their prevalence during different life stages. It would also be beneficial to incorporate a larger and more diversified sample. These participants were mostly female and Caucasian, and, while they reported a range of income levels, the fact that they were recruited at a private university suggests that they tend to come from more privileged backgrounds. It would also be advantageous to use an alternate measure of income to reduce instances of misreporting.

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