

Can personality traits affect mood disorders? A survey of previous personality studies on mood disorders

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### **Introduction**

The last years, 2019-2021, have seen a rise in mood disorders across the world. The elderly, persons with underlying health concerns, and first-line workers have seen an increase in disorders related to stress and anxiety (WHO, 2021). This pandemic has been detrimental to many that suffer from mood disorders due to restricted resources and an overloaded healthcare industry. Current studies are focusing on the effects of COVID-19 on mental health. Yet, personality traits can impact how a person deals with stress, anxiety, and fear. However, when you throw dealing with a global pandemic into the mix do the same personality traits impact the response and possible diagnosis of mood disorders? Is it possible to see the same personality traits across the same mood disorders? How does this apply to treatment and positive outcomes for therapy?

Neuroticism is a personality trait found to have an association with health behavior (Abderlahman, 2020). Other personality traits like agreeableness, conscientiousness, openness, and extraversion also can be seen depending on which direction one lies in these traits. Those that are low on the scale for agreeableness, extraversion, and openness, tend to stick to themselves and avoid situations like communicable diseases. One who has conscientiousness as a trait will most likely do anything to avoid exposure to a disease. These individuals are less likely to be sexually active or addicted to substances. Nevertheless, personality traits that impact responses to the pandemic can be detrimental to mood disorders. Self-isolation can lead to increased depression diagnosis since human beings tend to need some socialization to function.

An introvert may enjoy staying at home but still needs to maintain a job, do the grocery shopping, and connect with people occasionally.

Bipolar disorder, a mood disorder defined by periods of mania and depression, has been associated with patients that scored the high in openness to experience and the least on conscientiousness (Arfaie, et.al., 2019). Sleep disturbances and insomnia, a symptom associated with mood disorders, can be affected by personality traits. A study by Emert, Tutek, and Lichstein, in 2016, suggested that neuroticism, conscientiousness, internalization, anxiety, and perfectionism were traits that could be found in persons that suffered from sleep disturbances and insomnia. However, their study went on to provide evidence that neuroticism was the second strongest personality trait, while openness and extroversion were higher. Realistically, there have not been enough studies completed to date about personality traits and mood disorders. It seems to be a subject revisited every few years or so, thus the need is apparent. Personality traits, such as close-mindedness, extroversion/introversion, neuroticism, and perfectionism can be seen in mood disorders which could be addressed as a means to further treat the patient based on their personality and needs versus a standardized treatment that may not work for everyone.

## **Methodology**

Previous studies from 2000 through 2021 have utilized personality inventories such as Big Five Personality Trait inventories, Swedish Universities Scales of Personality (SSP), the Revised NEO Personality Inventory (NEO-PI-R), Temperament and Character Inventory (TCI), and the NEO Five-Factor Inventory (NEO-FFI). Participants ranged in ages from 18 to 69 years old and were identified as mood disorder sufferers either by interviews, DSM diagnosis, or emotional state questionnaires. Some studies had as few as 45 participants while others had as many as 1499 participants (Wu et al, 2012) containing both men and women. Additionally,

family case studies were considered as well. In all studies, the participants provided informed consent and were allowed to withdraw from the studies at any point and time.

Demographic data obtained from all participants were recorded in each study. Some studies utilized healthy individual participants as a means for a control group while others did not have control groups. Statistical analysis, completed on each survey, reported data about personality types and mood disorders. ANOVAs were used in some studies, SPSS Statistical Package version 16.0, SAS version 9.2, Mann-Whitney U-test, Chi-square, Student T-test, Fisher's exact test, Spearman's Correlation, Pearson Correlation, logistic regression models, Wilcoxon rank-sum test for numerical data, and other statistical tests.

## **Results**

Griens, et al. (2000) found that there were some differences in personality traits between men and women. In addition, they found a correlation between depression, neuroticism, and extraversion., which was significant. Utilizing ANOVAs, they showed a decline in the severity of depression (p-value <0.001) and a significant change in levels of neuroticism (p-value <0.001) and extraversion (p-value <0.05) over the course of their 12-week study. However, the score on the other personality traits tested remained the same.

Personality traits are also connected to health behaviors and treatment outcomes. For instance, those that have neuroticism as a personality trait tend to worry more about their health than others with a p-value < 0.001 (Abdelrahman, 2020). The correlation between neuroticism and personal hygiene also had a p-value <0.001. While gender had a significant impact on several different personality traits with a p-value <0.001, between anxious personalities and affective instability (Qiu, et al., 2016). Moreover, out of seven personality dimensions, five

personalities were found to have a significance for heritability, at the moderate level, with a range from 17% for self-transcendence to 35% for self-directedness (Greenwood, et al., 2013).

The NEO Five-Factor Inventory implied that extroversion and conscientiousness, with a p-value  $<0.01$  (Johnson, Madole, & Freeman, 2018), were significant in bipolar disorder.

Significant differences were found between healthy individuals and those with bipolar disorders in reference to neuroticism, extraversion, and conscientiousness, with facets of agreeableness and openness (Kamali, et al., 2018).

## **Discussion**

While covering previous research studies that have been completed in the last 22 years, it has been enlightening to the connection between mood disorders and personalities. Since COVID-19 became a global pandemic, those that suffer from mood disorders have had a tough time but have also found social isolation not as hard to deal with. This might be because their personality may fall into the neuroticism category which leads to being more apt to take care of their health (Abdelrahman, 2020). So, it is not hard to see how those that suffer from mood disorders would find a way to be more self-conscious as this is just part of the personality. Furthermore, self-direction and self-transcendence are significant to mood disorders and specifically to bipolar disorders (Bensaeed, et al., 2014). Yet, when standard inventories for personality and temperament quantitative measures show the correlation between personality and mood disorders. These factors can be defined by heritability and other genetic factors, such as mutations.

While some studies maintained a healthy control group many of them did not. This limitation needs to be a matter of focus in any additional studies. Likewise, comparing mood

disorders should be another factor that is utilized in future studies. Some studies concentrated either on mood disorders in general or bipolar specifically. In the studies that concentrated on bipolar disorder, they were specific to bipolar I. These studies recommended that future studies should also focus on bipolar II and possibly compare the two.

Bipolar disorder did have a correlation to neuroticism, low extraversion, and conscientiousness during the anxiety and depression phase, but while in a manic phase will have less agreeableness. However, when a person with bipolar disorder feels more vulnerable, then they have an increased odds of suicide ideation (Kamali, et al., 2018). Limitations of not testing during distinct phases of bipolar disorder need to be addressed in future studies. Current suicide ideation is high due to the pressures from COVID-19 and the changes that have taken place in society. Thus, additional studies need to be completed. Additionally, many candidates failed to finish interviews in some of the studies leading to skewed results. However, this did not impact the overall, study parameters.

Gender differences are another factor that limited or became a byproduct of the original studies. Further recommendation into the differences between genders and gender identity is needed as they were not addressed as well. Genetics may play a part in the heritability of a mood disorder but also in certain personality traits associated with those disorders. Traumas and other medical diagnoses can also play a part in personality traits, thus extending studies that would deal with chronic illness and trauma for those that have mood disorders, which could aid in better treatment outcomes. Theoretically, if the personality traits of an individual with mood disorders are known, then treatment could be geared in such a way that it would be more individualized and beneficial to that particular patient. This approach would be similar to the precision medicine approach of utilizing DNA as a means to define treatment.

## **Conclusions**

It is important to note that while there is evidence to support that mood disorders are impacted by personalities and their importance on treatment outcomes. The quality of life that an individual experience is impacted by their health and personality traits working together. However, there is still more research needed in this area.

While the previous studies had solid evidence, there have not been nearly enough studies to substantiate their findings. What happens if the person suffering from a mood disorder is a teenager or a child that is still defining themselves and their personality separate from the environment that they currently reside in? What if a person with a diagnosed mood disorder receives a medical diagnosis or trauma that could potentially impact their current personality? These are just a couple of questions that require further research to see if a personality trait potentially can change over time or is integral to the person.

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