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# PERSONALITY TRAITS AND MENTAL HEALTH; THE MODERATING ROLE OF STRESS AMONG CIVIL SERVANTS IN NASARAWA STATE, NORTH CENTRAL, NIGERIA

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## ABSTRACT

*This study examined the relationship between personality traits and mental health among civil servants, with particular emphasis on the moderating role of stress. The increasing prevalence of workplace stress and mental health challenges within public service institutions has generated growing concern regarding employees' psychological well-being and organizational productivity. The study adopted a quantitative research design using a survey method to investigate how personality dimensions influence mental health outcomes among civil servants and whether stress significantly moderates this relationship. The population of the study comprised 436 civil servants drawn from selected public sector establishments. Participants had a mean age score of 1.970 and a standard deviation of 0.5061, indicating moderate variability within the age categories represented in the sample. Data were collected using standardized instruments measuring personality traits, perceived stress, and mental health indicators. PROCESS macro analysis was employed to analyze the data and test the study hypotheses. The findings revealed that personality traits significantly influenced the mental health of civil servants. Specifically, adaptive personality characteristics were associated with better psychological well-being, while maladaptive traits showed negative associations with mental health outcomes. Furthermore, stress was found to significantly moderate the relationship between personality traits and mental health, suggesting that high levels of stress weaken positive mental health outcomes even among individuals with favorable personality dispositions. The study concluded that stress plays a critical role in shaping the interaction between personality and mental health among civil servants. It therefore recommended the implementation of stress management programs, workplace counseling services, and organizational support systems aimed at improving employees' psychological well-being and enhancing productivity within the public sector.*

**Keywords:** *Personality Traits, Mental Health, Stress, Moderation.*

## INTRODUCTION

Many Nigerians complained of the difficulties and hardship they are facing and the inability to feed their families as a result of high cost of living in the country. In the face of high cost of living, some civil servants still reported good mental health and considered such phenomenal as part of living. Living in good mental health among civil servants can improve longevity that will be of benefit to the state and the country at large. A country with good numbers of mental health civil servants can strive for development and high productive classes. Mental health covers several concepts that include emotional well-being, psychological well-being and social well-being, affecting ways individuals think, feel, and react to events around them. It is an important part of general health, influencing how people face and cope life's challenges, build relationships, and make decisions (American Psychological Association, 2023). Mental health is not just the absence of mental illness but could be about thriving and living a fulfilling life.

Evidence from the World Health Organization (American Psychological Association, 2023) suggests that nearly half of the world's population is affected by mental illness with an impact on their self-esteem, relationships and ability to function in everyday life. An individual's emotional health can impact their physical health. Poor mental health can lead to problems such as the

inability to make adequate decisions and substance use disorders. Good mental health can improve life quality whereas poor mental health can worsen it.

Mental health is a state of mental well-being that enables people to cope with the stresses of life, and to develop concrete cognition that enables them to think and solve societal problems. It is a core component of health and well-being that underpins individual and collective abilities to make decisions, build relationships and shape the world they live in. according to behavioural health, mental illnesses are common in the world. About 1 in 5 adults and adolescents have mental health disorder as a result of high cost of living (Steel et-al, 2014). Suicide, which is often associated with mental illness, is the 10th leading cause of death in the world today. Mental health may include an individual's ability to enjoy life and to create a balance between life activities and efforts to achieve psychological resilience, personal philosophy, subjective assessments, and competing professional theories all affect how one defines "mental health. Individuals with openness experience are generally very active, have a tremendous inclination towards creativity and aesthetics and listen to their heart by follow their inner feelings. Such individuals are generally open to new learning, skill sets and experiences (Poropat, 2009). The Conscientiousness personality trait listens to their conscience and act accordingly. Such individuals are extremely cautious and self-disciplined. They never perform any task in haste but think twice before acting. (Clement et-al, 2015).

Mental health is a continuum where an individual's mental health may have many different possible values (Keyes, 2002). It is viewed as a positive attribute; that includes emotional well-being, the capacity to live a full and productive life, and the flexibility to deal with life's threatening challenges (Clement et-al, 2015). There are many factors that contribute to an individual mental health and there are also factors that can reduce mental health to mental illness. One's personality traits may be a factor to be considered in people with good mental health.

Extraversion individuals show more concern towards things happening outside. Such individuals love interacting with people around and are generally talkative. They do not like spending time alone but love being the centre of attraction of parties and social gatherings. Such individuals love going out, partying, meeting people and often get bored when they are all by themselves (Ambridge, 2014). People with agreeableness is a personality trait easily get adjusted in almost all situations. They accommodate themselves to all situations and are friendly and kind hearted people. Neuroticism is a trait where individuals are prone to negative thoughts such as anxiety, anger, envy, guilt and so on. Such individuals are often in a state of depression and do not how to enjoy life. Sometimes, stress interfere with other variables to the direction of that variable. Stress is a psychological and physiological response to events that upset personal balance, (Siegel., Bradley, Gallo & Kasl. (2004). The potential causes of stress are numerous. It may be linked to the outside factors such as environment in which one lives or works or the family. It may come from one's own way of living that may be negative attitudes or feelings or unrealistic expectation (Ogden, 2010). The causes of stress depend on individual general life perception, problem solving abilities and support system. (Chao & Chu-Lien, 2012).

Physiological or biological stress is an individual's response to a stressor such as an environmental condition (McEwen, 2008). Stress is a body's method of reacting to a challenge (McEwen, 2008). According to the stressful event, the body's way to respond to stress is by sympathetic nervous system activation which results in the flight-or-fight. The body cannot keep this state for long periods of time; the parasympathetic system returns the body's physiological conditions to normal (Ogden, 2010).). In human, stress typically describes a negative condition or a positive condition that can affect a person's mental and physical well-being (Gorban, Pokidysheva, Smirnova & Tyukina, 2016).

### **Statement of the Problem**

Civil servants' mental health is important in every nation. Mental illness can affect the productivity levels of a nation if not properly monitored. Nasarawa state civil servants' mental illness can affect personal life, social life, family life and the productivity level leading to underdevelopment. Mental illness of civil servants can also lead to suicide exposing the families to poverty and death. Many civil servants have absconded from duty due to their mental illness leading to poor service delivery state. When the other co-workers are not emotionally intelligent, mental illness of a civil servant can affect other workers leading to crises in the organization or ministries. Many researchers have investigated mental health among civil servants in Nasarawa State but yet to investigate the role stress play in moderating the relationship between personality traits and mental health.

### **Aim and Objective(s) of the study**

The main aim of the study is to critically evaluate the moderating role of stress in the relationship between personality traits and mental health among civil servants in Nasarawa State North Central Nigeria. The following objectives are to:

- i. Explore the relationship between personality traits and mental health among civil servants in Nasarawa State North Central Nigeria
- ii. Ascertain the moderating role of stress on the relationship between personality traits and mental health among civil servants in Nasarawa State North Central, Nigeria

### **Research Hypotheses**

In this section, the expected results will be as follows:

- i. Personality traits will significantly predict mental health among civil servants in Nasarawa State North Central Nigeria
- ii. Stress will significantly moderating the relationship between personality traits and mental health among civil servants in Nasarawa State North Central, Nigeria

### **Significance of the Study**

The work will help to improve people's mental health and how to manage it in the face of hardship. The work will add to the existing literature in the area of mental health and will also be of importance to the populace, there will also be an increment in productivity that will enhance high GDP of the nation. The work will also help policy makers in Nasarawa State on how to improve the citizen's mental health base on the findings.

## **LITERATURE REVIEW**

### **Theoretical Framework**

#### **Diathesis-Stress Model**

Diathesis model was propounded by Meehl (1960) but expanded by Zubn and Spring (1977) and it tries to explain the link between personality traits, mental health and stress. Diathesis refers to a predisposition or vulnerability for the development of a pathological state. Diathesis-stress models argue that certain pathological states or diseases emerge from the combination of a predisposition with stressful events (Monroe & Simons, (1991). Most models specify that neither the diathesis nor stress alone is sufficient to produce the disorder (Van der Aa., Overbeek, Engels, Scholte., Meerkerk & Van den Eijnden. (2009). Instead, stress activates the

diathesis, which then leads to the disorder. More broadly, diathesis-stress models are similar to the idea of risk-factors for stress-related diseases (Kendler, Myers & Prescott, 2002).

The diathesis-stress model describes how genetic or biological factors interact with environmental stress which results in a mental illness or condition. Specifically, this theory purports that an individual's biological vulnerabilities, or predispositions, to particular psychological disorders can be triggered by stressful life events (Luo., Zhang., Cao & Roberts, 2023). If the individual is resilient or has low biological vulnerability for a particular disorder, it would take extremely high levels of stress to trigger symptoms of that mental illness. On the other hand, if the individual has high biological vulnerability to the disorder, then it would take lower levels of stress for symptoms to be exhibited. Personality traits theory posited that one's personality enhanced mental health but with diathesis-stress model, stress can influence it.

This theory also explains the link between civil servants' personality traits and mental health. According to the theory, some personality can serve as a diathesis risk factor. High neuroticism have the tendency toward emotional instability, worry and sensitive to threat. Low conscientiousness have poorer coping and self-regulation (Luo., Zhang., Cao & Roberts, 2023). High perfectionism is highly vulnerable to anxiety or depression under pressure, while someone that is high in introversion has greater sensitivity to social; isolation in some contexts. The theory also explained the moderating role of stress in the link between personality traits and mental health (Alizadeh., Feizi., Rejali, Afshar & Adibi, 2018). When civil servants are face with little stress, the connection between vulnerable personality traits and poor mental health may be weak or minimal, and when stress is high, same personality traits may strongly predict anxiety and depression. A civil servant with stable finances, strong social support with low stress experience mental health, while relationship conflict, work overload and financial stress lead to depression, anxiety and panic symptoms.

## **Empirical Review**

### **Personality traits and mental health**

Recent empirical studies have increasingly demonstrated that personality traits significantly influence mental health outcomes, particularly depression, anxiety, psychological well-being, and emotional regulation. Contemporary research has focused mainly on the Big Five personality dimensions, especially neuroticism, conscientiousness, and extraversion, as predictors of psychological adjustment and psychopathology.

A longitudinal study by Darian and colleagues (2025) investigated the mediating role of personality traits in internalizing psychopathology. The study found that neuroticism strongly predicted anxiety and depressive symptoms through maladaptive emotional processes and cognitive vulnerabilities. The researchers concluded that personality traits influence mental health indirectly by shaping emotional regulation and stress-processing mechanisms over time.

Qinghua Wang et al. (2025) conducted a multicenter cross-sectional study among Chinese medical students to examine the relationship between the Big Five personality traits and depression. The findings revealed that neuroticism was positively associated with depressive symptoms, whereas conscientiousness and emotional stability were negatively associated with depression. Additionally, self-compassion partially mediated the relationship between personality traits and depressive symptoms, indicating that positive psychological resources may buffer the adverse effects of vulnerable personality traits on mental health.

A longitudinal study conducted among Polish adults by Paulina Baran and colleagues (2025) examined protective factors against depression. The study demonstrated that adaptive personality characteristics, particularly conscientiousness and emotional stability, predicted lower depressive symptoms over time. Positive mental health and spiritual fitness also strengthened psychological resilience, suggesting that certain personality dispositions may function as protective factors against mental disorders.

Monika Olga Jańczak and Emilia Soroko (2025) explored the relationship between maladaptive personality traits and symptoms of depression and anxiety among middle-aged and older adults. Their findings indicated that pathological personality functioning significantly predicted anxiety and depressive symptoms. Individuals exhibiting maladaptive personality traits experienced poorer emotional adjustment and increased vulnerability to psychological distress.

A longitudinal adolescent study by Yuhang Yang et al. (2025) investigated anxiety as a mediator between neuroticism and depression. The study found that adolescents with high neuroticism were more likely to develop anxiety symptoms, which subsequently increased depressive symptoms over time. The authors concluded that anxiety serves as a critical pathway linking neurotic personality tendencies to depression in adolescents.

Overall, recent empirical evidence consistently shows that neuroticism is the strongest personality predictor of poor mental health outcomes, particularly depression and anxiety. In contrast, conscientiousness, emotional stability, and adaptive coping traits appear to protect psychological well-being. Furthermore, variables such as self-compassion, emotional regulation, and social support increasingly emerge as mediating mechanisms explaining how personality traits influence mental health outcomes

## **METHODOLOGY**

### **Design**

This study employs an ex-post facto design. This design was used because variables were not manipulated and the data were only collected after the experience. This is an ex post facto research design because the independent variables (personality traits) that already exist was compared with the dependent variable (mental health). This type of design is also known as "after the fact" research. Ex post facto study or after-the-fact research is a category of research design in which the investigation starts after the fact has occurred without interference from the researcher. The research approach is quantitative in nature since data were obtained from the participants.

### **Setting**

The research was conducted in Nasarawa State. Nasarawa State is located in the North Central region of Nigeria, specifically within the tropical Guinean forest–savanna mosaic ecoregion. The state is characterized by a blend of hills, undulating plains, and lowlands. It is bounded by Kaduna State to the north, the FCT (Abuja) to the west, Benue and Kogi States to the south, and Taraba and Plateau States to the east. Out of the the 36 states of Nigeria, Nasarawa is the fifteenth largest in area and second least populous with an estimated population of about 2.5 million as of 2016.

### **Sampling**

Stratified, Simple random, and Convenience sampling methods were used for the study. The stratified sampling technique was used because the state was divided into strata (zone) with the ministries and organizations since the researchers were not able to go round every locations. Simple random sampling was used because some of the participants were randomly selected within their organizations. Convenience sampling technique was used because it is only the participants that were available at the time of administration of the questionnaire that were used.

### **Instruments**

The General Health Questionnaire (GHQ-12) scale developed by Goldberg and Williams (1988) with cronbach alpha: 0.78 with difference between men (.76 standardized alpha: 0,78) women (.75 standardized alpha: 0.77). Was validated. Using local sample by the researcher with the reliability coefficient of 0.62.the new reliability of the instrument is 0.69.

Personality Traits Inventory: the big five inventory (BFI) by John and Srivastava (1999) is a 44-item instrument that assesses the big five personality factors (neuroticism, extraversion, openness, agreeableness, and conscientiousness). Items are scored using a 5- point, Likert scale that ranges from disagree strongly to agree strongly. BFI scales include 8–10 items each,

and have demonstrated moderate to high internal consistency reliability (alpha range = .79 to .88; median = .82) as well as substantial convergent/ discriminant relations with other big five instruments. BFI-10 is a short measure of personality traits. It has two items related to each of the five traits, i.e., Openness, Extraversion, Conscientiousness, Neuroticism, Agreeableness. The responses which are on a 5-point rating scale with a higher score indicates a high trait level. Standard Stress Scale (SSS) by Gross (2014) is a new scale which has been specially developed to meet the requirements of multicohort panel studies. Accordingly, the SSS is consistently applicable for different age groups from 14 years old onwards and is also suitable for a wide range of people irrespective of their stage in life and employment situation; the items are applicable for old-age pensioners, unemployed, employed and self-employed, the 11 items of the SSS show good reliability values. Within the subpopulations Cronbach's alpha ranges between 0.58 for the "others" category and 0.66 for school students. The alpha for the total sample is 0.62. Standard stress scale is an 11 items scale with each item rated on a 5-point scale ranging from always=1, often=2, sometimes = 3, often =4, never=5. Positively worded items are reverse scored, and the ratings are summed, with higher scores indicating more stress. SSS-11 scores are obtained by reversing the scores on items 2, 4, 8, 9, 10 items: For example, always=5, often=4, sometime=3, often=2, never=1 etc. and then summing across all 11 items. Items 1, 3, 5, 6, 7, and 11 are the positively stated items

### Procedures

The researchers trained some research assistants that helped in administering the instruments to the participants in all the selected areas of Nasarawa State. The research only used civil servants. The researchers and the research assistants visited the selected areas for the research in order to have physical contact with them. The researchers undertook the research inform of population census where they move from offices to offices.

### Method of Data Analysis

The statistical methods for this study were descriptive statistic, simple regressions and moderation analysis using PROCESS macro. These methods were adopted because it is quantitative study with the aim of making prediction or examine the strength and direction of the relationship and how stress moderated the effectiveness of personality on mental health. These methods will also control the entire extraneous variable that may cause a change in the mental health apart from the independent variables.

## RESULTS

### Hypotheses Testing

#### Hypotheses 1

The first hypothesis was tested using PROCESS Macro Analysis that also involves simple linear regression and the results are tabulated and interpreted as shown below.

**Table 1: PROCESS Macro Regression analysis showing the relationship between personality traits and mental health among civil servants in Nasarawa State, Nigeria**

Variables	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>β</i>	<i>t</i>	<i>Sig</i>
Mental Health	.301	.085	31.874		14.075	.000
Personality Traits				.301	5.646	.000

#### Criterion variable: Mental Health

The results presented in Table 1 showed that there was a significant positive relationship between personality traits and mental health among civil servants ( $R = .301 = R^2 = .085 = \beta = .301$ ,  $(F(1.430) = 31.874, t = 5.646, p < .01)$ ). The model explains 8.5% variance in the mental health is attributed to personality traits. This means that an increase in mental health is attributed to an increase in personality traits among civil servants. The hypothesis stated for the study is accepted.

**Table 2: Summary of PROCESS Macro analysis showing the moderating role of stress in the relationship between personality traits and mental health among civil servants in Nasarawa State, Nigeria**

DV	Predictors	$\beta$	T	p	95%CL	
					LLCI	ULCI
Mental Health	Constant	15.667	8.4678	.000	12.002	19.2921
	Personality Traits	.0396	1.3298	.1843	-.0189	.0982
	Stress	-.0924	-1.0357	.3009	-.2679	-.0830
	Interactive effect	.0027	1.8583	.0637	.0002	.0055
	R					.3010
	R <sup>2</sup>					.0850
	$\Delta R^2$					.0072
F					12.940	
$\Delta F^2$					3.4572	

**Criterion Variable: Mental Health**

As shown in table 2, the model was significant ( $R = .301$ ,  $R^2 = .085$  ( $F(1:430) = 12.940$ ,  $p < .05$ )). Stress significantly moderated the relationship between personality traits and mental health ( $\Delta R^2 = .0072$ ,  $\Delta F^2(1.430) = 3.4572$ ,  $\beta = .0027$ ,  $t = 1.8583$ ,  $p > .001$ ). This means that the interactive effect of stress is likely to reduce the effect of personality traits on mental health from 8.5% to 0.07%. The result indicated that, in the presence of stress, personality traits could not predict mental health; means the moderation effect is significant. Initially, personality traits contributed 8.5% in variation to mental health. When stress interacted with personality traits, it produces mental illness since health is in continuum; either one is mentally well or mentally ill.

**Table 3: Conditional effect of personality traits on mental health at values of stress (moderator)**

Stress	$\beta$	P	95%CL	
			LLCI	ULCI
Low	.0610	.0036	.2000	.1020
Average	.0771	.0000	.0449	.1093
High	.1145	.0000	.0724	.1565

**$p \leq .05$**

The moderation was probed further by testing the conditional effect of personality traits at three levels of stress, one at standard deviation below the mean (low), at mean (average) and at standard deviation above the average (high). As shown in table 3, a personality trait was significantly moderated at all levels of stress. Stress was low ( $\beta = .0610$ ,  $p < .01$ ), average ( $\beta = .0771$ ,  $p < .01$ ) and high ( $\beta = .1145$ ,  $p < .01$ ). This means that even low stress can change the relationship between personality trait and mental health.

**DISCUSSION OF THE FINDINGS**

The hypotheses were discussed in line with the presented result above. Hypothesis one was tested to investigate if personality traits will significantly predict mental health among civil servants in Nasarawa State; the finding revealed that personality trait is positively correlated and predicted mental health.

The result of this study agreed with the work of Qinghua Wang et al. (2025) that conducted a multicenter cross-sectional study among Chinese medical students to examine the relationship between the Big Five personality traits and depression. The findings revealed that

conscientiousness and emotional stability were negatively associated with depression. Additionally, self-compassion partially mediated the relationship between personality traits and depressive symptoms, indicating that positive psychological resources may buffer the adverse effects of vulnerable personality traits on mental health.

The study is also in line with a study done by Paulina and colleagues (2025) that examined protective factors against depression. The study demonstrated that adaptive personality characteristics, particularly conscientiousness and emotional stability, predicted lower depressive symptoms over time. Positive mental health and spiritual fitness also strengthened psychological resilience, suggesting that certain personality dispositions may function as protective factors against mental disorders.

The second hypothesis was tested and the result indicated that stress moderated the relationship between personality traits and mental health. Based on the finding, stress has the ability to reduce the effectiveness of conscientiousness and emotional stability, predicting depression. The study is in line with a study done by Darian and colleagues (2025) investigated the mediating role of stress in personality traits in internalizing psychopathology. The study found that neuroticism strongly predicted anxiety and depressive symptoms through maladaptive emotional processes and cognitive vulnerabilities caused by stressful situations. It is concluded that personality traits influence mental health indirectly by shaping emotional regulation and stress-processing mechanisms over time.

### **Implication of the Study**

The study has both theoretical significance and practical significance among civil servants and the general public. The result of the research is being generalized and to serve as an empirical study for other researchers trying to investigate the moderating role of stress in the relationship between personality traits and mental health in Nasarawa State, Nigeria. The study added to existing literature on mental health. The study also feels a gap in literature yet to be cover by other researchers in the role of stress in moderating the relationship between personality traits on mental health in Nasarawa State, Nigeria. The study will also help civil servants to improve their psychological wellbeing by reducing the rate or managing their stress. The study will also help government on how to improve societal wellbeing through stress management based on the findings of the research

### **Limitation of the Study**

The study has contributed immensely to knowledge; however, it is limited in some aspects: where there are many other factors that can as well improve mental health apart from personality traits. Personality traits contributed only 8.5% of mental health and wellbeing among civil servants. The study used only civil servants but failed to considered privates workers, which may affect the result.

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