



# State/Trait Anxiety as a Predictor of Depression among Retired Civil Servants

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## Abstract

*The study investigated state/trait anxiety as a predictor of depression among retired civil servants, Eighty (80) retired civil servants comprised 49 males and 31 females with a mean age of 70.34 and SD of 8.389 were selected using multi-stage (cluster, simple random: by balloting and purposive) sampling techniques as participants from pension department in local government secretariat Enugu State .depression Scale (SDS) and State/trait Anxiety Inventory were used for data collection, Correlational design was adopted while hierarchical multiple regression using Statistical Package for Social Sciences (SPSS) Version 25 software was used to analyse the data. Results above show that state  $St\beta = .109$  and  $t = .915$  and trait  $St\beta = .021$  and  $t = .175$  at  $p < .05$  anxiety failed to predict depression. Hence, the government should come up with plans which will keep the retirees busy to avoid them slipping into depression as both state/trait were not a variance to it.*

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## Introduction

Retired individuals have a higher risk of depression than those who are employed among older adults; this increased risk is a result of barriers to receiving mental health care as well as interacting processes in the social, biological, and psychological facets of health (Dang et al., 2022). Retirement frequently brings about significant adjustments to one's social networks and roles as well as to material possessions like income and health insurance, all of which have an impact on the risk and treatment of depression. It's difficult to recognise and treat late-life depression (Dang et al., 2022).

Depression, however, is a medical condition that is quite different from everyday moodiness. Depression exists on a continuum of severity, ranging from relatively mild, transient states of low mood to severe, long-term symptoms that have a major impact on a person's quality of life (Schimelpfening, 2023). Depression is often described as being mild, moderate, or severe. When a person's symptoms have reached the chronic end of the spectrum and require professional treatment, it's typically referred to as clinical depression. The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) distinguishes between two main types of clinical depression, even though depression can take many different forms and be classified in a variety of ways: major depressive disorder (unipolar depression) and the depressive phase of bipolar disorder (Schimelpfening, 2023). Depression affects people differently. While some people have many symptoms, others only have a few. Over time, some symptoms may improve and others may worsen. It's critical to collaborate with your mental health care team to pinpoint the specific symptoms of depression you experience and choose the most effective treatment plan. Patients with clinical depression share certain characteristics or symptoms across all subtypes and types of the disorder.

Research indicates that depression may have biological, psychological, and social components (Remes et al., 2021). Depending on how a person presents with their depressive symptoms, there are multiple types of depression. The degree of depression symptoms can differ, as can the underlying cause. For example, postpartum depression is usually associated with pregnancy and childbirth, but major depressive disorder (MDD) may have no known cause. Bipolar disorder is a disease that can also include depressed symptoms between manic episodes, which are characterised by intense excitement, and depressive episodes (National Institute of Mental Health, 2023). There are numerous research opportunities related to bipolar disorder, including its definition, causes, associated risks, symptoms, and treatment. Numerous potential causes of depression are currently poorly understood. However, the most likely cause is a combination of environmental factors and genetic susceptibility. Sikaras et al (2023) postulated that state/trait was positively related to depression.

According to the American Psychological Association (APA) (2021), anxiety is a feeling of tension, anxious thoughts, and bodily changes like elevated blood pressure. However, anxiety was described as a mental state characterised by an intense sense of tension, worry, or apprehension, relative to something adverse that might happen in the future by Saviola et al., (2020). Persons who experience anxiety do so because they anticipate a potentially dangerous situation (World Health Organisation (WHO), 2024). According to Heeren (2020), anxiety is linked to particular behaviours such as defensive behaviour, escape behaviour, and fight-or-flight reactions. It's common to experience anxiety, worry, or fear in specific circumstances. These emotions are a result of our bodies' normal "fight or flight" reaction to perceived danger or risk; however, if persistent anxiety interferes with your capacity to go about your daily activities normally, you may have an anxiety disorder (NHS, 2021). The physical reaction of the body to a real or imagined threat is anxiety. Along with mental reactions like excessive fears, worries, or obsessive thinking, it also causes physical symptoms like a racing heart, fast breathing, butterflies in the stomach, and an energy surge (healthdirect, 2021). Anxiety is a normal emotion that everyone experiences from time to time. For some people, however, these feelings become chronic, making them perceive situations as much worse than they actually are. This makes it difficult for them to focus, sleep, or perform daily tasks. Anxiety disorders may be the cause of these persistent feelings (Healthdirect, 2021).

Anxiety is divided into state anxiety and trait anxiety (Spielberger, 1983). State anxiety is a transient situational response to anxiety-provoking events and changes from moment to moment. State anxiety is low when there is no or little danger, while trait anxiety is a relatively stable tendency to respond to anxiety-provoking experiences (Hidano et al., 2000). As such, trait anxiety is a relatively stable feature, which demonstrates relatively consistent individual differences in anxiety tendency and can be considered a personality trait (Hidano et al., 2000). Trait anxiety, which is a personality characteristic, is considered to be

a risk factor for depression, and high trait anxiety influences the development of depression as well as anxiety disorders (Weger & Sandi, 2018). In addition to genetic factors, the hypothalamic-pituitary-adrenal system, mitochondrial function, neurotransmitters, and childhood experiences are thought to play a role in trait anxiety development, with stressful life events triggering anxiety and depression (Weger & Sandi, 2018; Sandi & Richter-Levin, 2009). It has been observed in the general adult population that individuals who have experienced childhood abuse tend to have heightened levels of trait anxiety. This increased trait anxiety, in turn, exacerbates depressive rumination and the perception of negative life events, thus exacerbating the likelihood and severity of depression. Therefore, trait anxiety acts as a mediating factor in the development of depressive symptoms (Uchida et al., 2018; Deguchi et al., 2021). Furthermore, anxiety disorders and depression coexist at high rates in patients, with anxiety preceding depression in many cases (Wittchen et al., 2000; Lamers et al., 2011).

Thus, various epidemiological and clinical studies have clarified a pathway by which anxiety disorders and trait anxiety precede depression and depressive states. However, the mechanism of how physical activity affects this pathway has not been clarified to date. When considering the mechanism by which physical activity exerts its effects on reducing anxiety and depression, it is essential to investigate the impact of physical activity patterns on the intricate association between trait anxiety and depressive symptoms, as previously mentioned (Weger & Sandi, 2018; Uchida et al., 2018; Deguchi et al., 2021). Although physical activity is known to be effective for reducing both trait anxiety—a relatively stable personality trait—and state anxiety, a temporary psychological symptom, knowing whether trait anxiety and state anxiety are associated with lowering depressive symptoms will elucidate the psychological mechanism by which physical activity improves depressive symptoms. These ideas indicate the possibility that either trait anxiety or state anxiety may mediate the effects of physical activity habits on depressive symptoms. If trait anxiety acts as a mediating factor, physical activity may influence personality traits, and if state anxiety acts as a mediator, physical activity may influence psychological symptom severity. However, it remains unclear as to how trait anxiety or state anxiety modulates the impact of physical activity on depressive symptoms. Additionally, there is a lack of knowledge regarding the dose-response association between physical activity and its effects on anxiety and depressive symptoms (Physical Activity Guidelines Advisory Committee, 2018). The research question and hypothesis will provide answers to the following:

### **Hypothesis**

State anxiety will significantly predict depression among retired civil servant

Trait anxiety will significantly predict depression among retired civil servant

### **Method**

#### **Participants**

Eighty (80) retired civil servants comprised of 49 males and 31 females with a mean age of 70.34 and SD of 8.389 were selected using multi-stage (cluster, simple random: by balloting and purposive) sampling techniques as participants from pension department in local government secretariat Enugu State. The pensions were clustered according to their local government, simple random: by balloting was used to pick the local government area, while purposive: a criterion selection-based sampling technique was used to select the participants from the pension department, local government secretariat which followed: sixteen from Aniri local government (16), fifteen from Agwu local government (15), eighteen from Nkanu west local government (18), seventeen from Nkanu west local government (17), twelve from Nsukka (12)

#### **Instrument**

A questionnaire comprising demographic information such as age, sex, religious affiliation, and three scales categorized into sections two sections (A, B) for easy administration and scoring were administered

The following instruments were used:

- I. Zung (1965) Self-rating Depression Scale (SDS) and
- II. State/trait Anxiety (Spielberger 1972)

#### ***Zung (1965) Self-rating Depression Scale***

Zung's (1965) Self-rating Depression Scale was developed to measure depression as a clinical disorder. It is a 20-item inventory that is designed to assess the cognitive, affective, psychomotor, somatic and social-interpersonal dimensions of depression. It is scored directly by adding together the values of the numbers shaded in all the 20 items to give you the mean score. The normative cut-off point or mean scores established by Zung (1965) in categorizing the participants where the level of depression are thus; 50 – 59 = mild depression, 60 – 69 = moderate depression, 70 – 80 = severe depression. For the Nigeria sample, the norms obtained by Obiora (1995) with a population of secondary school students for male and female are 48.77 and 47.87 respectively. A coefficient of concurrent validity of .79 was obtained by Zung (1965), a three-day interval test-retest coefficient of reliability of .93 was obtained by Obiora (1995), between SDS and Hamilton rating scale (HRS) Hamilton (1960) between SDS and the depression scale of MMPI, the coefficient of .70 was obtained.

### ***State Anxiety (Spielberger 1972)***

The State-Trait Anxiety Inventory (STAI) Spielberger (1972) STAI-Trait (Y-1 form) STAI – State (Y – 2 form) subscales of the STAI consists of 20 items Likert type response format with a total possible score between 20 – 80. This particular subscale is designed to measure a dimension of anxiety namely the state anxiety, which according to its authors defined state anxiety as a ‘transitory state or condition of an organism characterized by subjective, consciously perceived feeling of apprehension and tension, which are accompanied by or associated with activation of the autonomic nervous system (Spielberger, Gorsuch & Lushene, 1983). The subscale requires the testee to indicate options describing how they feel today or present time. It has been found to reflect changes in the stressfulness of various stimulus situations, indicating that it measures the subjective experiential component of STAI i.e. A-State.

Psychometric properties of STAI the state test were provided by Omoluabi (1987) for the Nigerian samples. The norms reported among the Nigerian populace are the mean score for male (M) and female (F) n = 100 which yielded 34.54. In this study, this norm will be adopted and serves as the cut-off point for interpreting scores obtained as higher than the norm indicates a typical manifestation of anxiety. Jegede (1979) revalidated the STAI on Nigerian subjects and found it to be cultural-free with a reliability of 0.77 and internal consistency co-efficient as high as 0.98. Awaritefe and Kadiri (1981) have also validated the instrument on the Nigerian subject. STAI has been used in various studies among Nigerian sample (Adetayo&Akinade, 2019; Ogbolu&Omidiji, 2018; Akinsulore, Owojuyigbe, Faponle&Fatoye, 2015). The researcher carried out a pilot of 30 selected retirees from Air Force secondary school in Agbani, which yielded a Cronbach alpha of .939

### **Procedures**

A letter of identification was obtained from the Head, of the Psychology Department Enugu State of Science and Technology Enugu, by the researcher to the local government of the selected local government chairman for identification and concept to use their institution for the research. The researcher adopted multi-stage (cluster, simple random (balloting), purposive) sampling techniques to draw the participants. The researchers employed the help of research assistants who are National Youth Service Corp Members serving in the selected local government to administer and retrieve the instrument. The participants who are pension were selected with the aid of purposive sampling techniques; the selected ones were asked to respond to the items by shading one of the boxes in front of the statements which best reflects to what degree they agree or disagree with the statement. One hundred and seven (107) copies of the instrument were distributed, ninety-one (91) copies were returned of which seven (7) were wrongly responded, four (4) bore multiple initials and they were discarded, which sum up the numbers well responded to be eighty (80), which were used for data analysis..

### **Design/Statistics**

Correlational design was adopted because the relationships between the predictor variables and dependent variables are being investigated. Also,, neither of the variables was either manipulated or controlled . The statistical test that was used for data analysis is hierarchical multiple regression using Statistical Package for Social Sciences (SPSS) Version 25 software.

### **Result**

**Table I: descriptive statistics of state/trait anxiety as predictors of depression**

S/N	Variables	M	S. D	1	2	3	4	5	6	7
1	Depression	46.5921	5.96026	1	.105	.000	-.029	.019	-.128	-.071
2	State anxiety	41.2763	12.08150		1	-.194	.053	-.138	.073	.097
3	Trait anxiety	41.6316	8.74962			1	-.063	-.091	-.056	-.155
4	Age	70.3421	8.38976				1	-.035	.571**	.830**
5	Gender	1.4605	.50175					1	.109	.009
6	Marital status	1.6974	.87969						1	.621
7	Length of service	28.9342	3.89302							1

At  $p < .01^{**}$ ,  $p < .05^*$

Table I above shows that state  $r = .105$  and trait  $r = .000$  anxiety did not relate to depression at  $p < .05$  among retired civil servants, Age  $r = .571^{**}$  positively related to gender at  $p < .01$ . Also, age  $r = .830^{**}$  positively related to length of service. The demographic variables of age  $r = -.029$ , gender  $r = .019$ , marital status  $r = -.128$  and length of service  $r = -.071$  also failed to correlate with depression.

**Table II: regression statistics**

Model	R	R <sup>2</sup>	St $\beta$	t	Sig.
1	.106	.011			.659
State anxiety			.109	.915	.363
Trait anxiety			.021	.175	.862
Age			.130	1.061	.293
Gender			.015	.122	.903
Marital status			.141	.654	.515
Length of service			.062	.508	.613

**Dependent variable: depression, at  $p < .05$ .  $r =$  relationship,  $r^2 =$  relationship square, St $\beta =$  standardized beta, significant**

Table II above shows that state St $\beta = .109$  and  $t = .915$  and trait St $\beta = .021$  and  $t = .175$  at  $p < .05$  anxiety failed to predict depression. They jointly were not related to depression at  $r = .108$ , the predictor variables contributed 1.1% variance to depression, state/trait anxiety jointly did not predict depression at sig. = .659 at  $p < .05$ .

Age St $\beta = .130$ ,  $t = 1.061$ , gender = St $\beta = .015$ ,  $t = .122$ , marital stress St $\beta = .141$ ,  $t = .654$  and length of service St $\beta = .062$ ,  $t = .508$

### Summary of result

State/trait anxiety failed to predict depression among retired civil service. The demographic variables of age, gender, marital status and length of service did not predict depression.

### Discussion

The hypotheses tested which stated that state/trait anxiety will significantly predict depression among retired civil servants were not confirmed, hence the hypotheses were rejected. The results of the study indicate that the presence of depression in retired individuals cannot be solely attributed to either temporary anxiety associated with immediate circumstances or inherent anxiety caused by genetic factors. Rather, the onset of depression appears to be linked to a gradual accumulation of anxiety caused by a prolonged period of inactivity and uncertainty about the future. The study suggests that retirement can be a major life transition that can generate apprehension and fear of the unknown, leading to depressive symptoms. Therefore, it is crucial for retired individuals to engage in activities that provide a sense of purpose and fulfilment, and to develop coping mechanisms that can help them manage their anxiety and prevent depression. This study's findings are not consistent with those of Sikaras et al. (2023), who concluded that state/trait anxiety is a contributing factor to the development of depression. Sikaras et al. suggested that if not managed appropriately, anxiety can lead to depression. However, this study presents a different perspective, as the results indicate that depression in retired individuals cannot be solely attributed to anxiety. It is worth noting that different participants, locations, and other factors that were not taken into account by the researchers

may have affected the outcome of this study. Therefore, it is essential to conduct additional research to further explore this issue and determine the underlying factors leading to depression in retired individuals.

According to the study's findings, depression can affect anyone, including individuals with state-trait anxiety. The results suggest that anxiety alone cannot be solely attributed to the onset of depression. Other factors, such as prolonged inactivity or uncertainty about the future, can also contribute to the development of depression. Therefore, it is important to recognize the various factors that can lead to depression and take appropriate measures to address them, regardless of whether an individual has anxiety or not.

### **Implication of the findings**

The findings indicated that state/trait anxiety is not a contributing factor to depression, this implies that retiree who experience depression are not as a result of anxiety neither state nor trait, but rather an individual choice.

The findings from this study indicated that state/trait is not a major predictor of depression. Hence, clinicians should find a way to assist retirees who are coming as clients with depression without considering state/trait anxiety, because the result obtained shows that both variables are not contributing factors to depression. The government should come up with plans which will keep the retirees busy to avoid them slipping into depression as both state/trait were not a variance to it.

### **Limitations of the study**

Many factors worked against this research work, and the major one is the indiscriminate call for sitting at home in the southeast which reduces the number of working days. The researcher would have selected more participants assuming there was no continued unnecessary call to sit at home.

Insecurity was another factor, the issue of unknown gunmen increased fear among the populace who were sceptical about the researcher's intention even after much enlightenment. More participants would have been selected assuming no insecurity-induced fear of the unknown.

The sudden increase of inflation which leads to a sharp increase in goods and services also affected this work, because it affected the researcher's budget.

### **Suggestions for further study**

The future researcher should try to sample participants from other geo-political regions where there are no indiscriminate calls for sitting at home, to give room for more participants.

The use of third parties to reach the participants should be looked at by the future researcher. To give confidence of secrecy and safety to the participants, this will increase the number of participants who will participate.

A few locations should be considered also by future researchers to accommodate the budget in case there is inflation.

### **Summary and conclusion**

The study investigated if state anxiety and trait anxiety will predict depression among retirees, the result shows that state-trait anxiety did not predict depression among retirees, and hence the government should come up with plans which will keep the retirees busy to avoid them slipping into depression as both state/trait were not a variance to it.

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