

THE RELATIONSHIPS BETWEEN TRAIT ANXIETY AND PSYCHOPHYSIOLOGICAL SYMPTOMS AMONG WORKERS

OKOLI PAUL CHIBUIKE

Corresponding Author, PhD, Department of Internal Medicine, Enugu State University of Science and Technology, Enugu.

OFOJEBE CHUKWUMA PHILIP

Department of Psychology, Nnamdi Azikiwe University Awka, Anambra State.

EZEME MARK SUNDAY

Department of Internal Medicine, Enugu State University of Science and Technology, Enugu.

AGU GRACE UCHECHUKWU

Department of Nursing Sciences, Enugu State University of Science and Technology, Enugu.

EKWO JUDE CHUKWUDI

Department of Psychology, Enugu State University of Science and Technology

OZOUGWU AUGUSTINE OBUMNEME

Department of Internal Medicine, Enugu State University of Science and Technology, Enugu.

EZE UCHENNA GERALD

Department of Internal Medicine, Enugu State University of Science and Technology, Enugu.

OKPARA TITUS CHUKWUBUZO

Department of Internal Medicine, Enugu State University of Science and Technology, Enugu.

CHIME PETER EKPUNOBI

Department of Internal Medicine, Enugu State University of Science and Technology, Enugu.

OSIGBEME DIUTO IFEOMA

Department of Occupational Therapy, Federal Neuropsychiatric Hospital, Enugu.

ANIKE RAPHAEL UGWU

Department of Psychology, Enugu State University of Science and Technology.

AGBIRIONWU OLUCHUCHUKWU MIRIAM

Department of Psychology, Nnamdi Azikiwe University Awka, Anambra State.

Abstract

The series of exchanges and adjustments among men and women and their environment over and over again results on trait anxiety and its attendant manifest of psycho-physiological symptoms. This study investigated the relationship between traits anxiety and psycho-physiological symptoms among vocational and career workers. A total of 95 workers were randomly selected from Igbo speaking States of: Anambra, Imo, Abia, Enugu and Ebonyi. Among these workers 49.5% (47) were priests and 50.5% (48) were nurses

with a mean age of 2.22 and standard deviation of .67128. Data for the study were collected using traits anxiety inventory and psycho-physiological symptoms. A cross survey method was employed. A two way ANOVA was used to test the hypotheses of the study variables. The result shows that traits anxiety was statistically significantly related to psycho-physiological symptoms among workers ($r = 0.262$; $p < 0.04$). The result also revealed that there is a significant differences between vocational workers on their manifest of psycho-physiological symptoms $t(92) = -3.268$; $p < .002$. It is suggested that further study should include clergy from other denomination and draw subjects from both small scale and multinational organization to cover a wider range of career workers. It is recommended that workers on individual bases can take action in reducing their vulnerability to trait anxiety. They can do this by occasionally engaging themselves into the exercise of deep relaxation so as to control the tensions often time unconsciously stored in the body tissues. Further, Annual leaves, holidays and sabbatical leaves for workers with the necessary packages must be ensured. Therefore, there must be a consistent program to maintain this policy in every sphere of work sector to reduce or prevent trait anxiety and psycho-physiological symptoms among workers. Finally, that future study could examine the effect of social support, positive feedback and the relationship with significant others in the work place in preventing trait anxiety and psycho-physiological symptoms among workers.

Keywords: Trait Anxiety, Psycho-physiological Symptoms, Workers.

INTRODUCTION

Background to the Study

The succession of exchanges and adjustments among men and women and their environment over and over again results on trait anxiety and its attendant manifest of psycho-physiological symptoms. Anxiety is part and parcel of life. Anxiety is a stimulus-related or general in nature. It is seen in different features like: panic attacks, phobic reactions, or worrying, obsessive and compulsive proclivities. The fields of stress and psycho-physiological symptoms have provoked a lot of interests and thus, provided a new area of extension research both in psychology and other related disciplines. In Nigeria, the previous researches in these areas have focused attention on various groups of workers such as: Teachers (Ugwu 1995), Executive (Nweze 1995), Family (Uzoka 1995), Career and vocational workers (Okoli et al, 2017). The results of these studies indicate that people in every organization experience stress in different gradations; career and vocational workers alike. This is obvious in so far as different professions exist, interact and engage in adjustments under different environmental contexts. Each as a matter of fact, must experience different forms and levels of anxiety. However, anxiety when properly experienced and managed assists individuals as a crucial signal to navigate daily challenges of life and function properly in the society. However, if poorly perceived and managed it constitutes seriously burdening conditions; thus, leading to the manifestations of different psycho-physiological symptoms. Indeed, the prevalence of anxiety disorders has been on steady increase over the past years, becoming the seventh most burdensome of condition of all diseases worldwide today (Vos, Flaxman, Nhgavi, et al, 1990).

Several studies on state-trait-anxiety model, has shown that the individual proclivity for acute (state-) anxiety reactions is in part depending on the level of trait-anxiety (Lazarus, 1991; Spielberger, 1972; Spielberger, Laux, Glanzmann, and Schaffner, 1981). This implies that there should be a certain relation between trait-anxiety and specific types of

stimulus-related state-anxiety. Trait anxiety is a construct evident in most models of personality and refers to a relatively steady disposition within the individual to judge a wide range of environmental events as potentially threatening. McCrea and Costa, (2003) conceptualized personality traits as dimensions of individual differences in tendencies to show consistent patterns of thoughts, feelings, and actions across events, developmental periods and contexts. Advances in the field of personality have put more emphasis on the interface between personality and psychopathology and psychophysiological symptoms inclusive. Thus neuroticism, extraversion, and openness to experience (NEO) dimensional model proposed by Costa and McCrae (1978); believed that there are individual differences in personality structure regarding their vulnerability or resilience to mental illness. These vulnerabilities can result in different forms of psychophysiological symptoms. Indeed, screening for anxiety disorders become imperative in the management of patients to identify comorbid mental disorders in chronic medical conditions such as coronary heart disease or diabetes mellitus (Berstain, Sockwell, Gallagher, Rosenthal and Soren, 2013). Stress is an individual, natural and automatic reaction to a challenging or threatening stimulus. Its characteristic feeling of anxiety derived from the emotional response is associated with changes in the physiological and cognitive state (Maslach, Schaufeli, and Leiter, (2001), Sánchez-Conde, Beltrán-Velasco, and Clemente-Suárez, 2019)

The mind and body remains two inseparable aspect of the human person and both aspects are known to have a bi-directional influence on each other. They do not function in isolation. The mind-body interaction or relationship, which is the subject matter of psychophysiology is one that has been studied for centuries by individuals trained in various fields such as philosophers, physicists, physicians, physiologists and more recently, psychologists Stern (2000) and the recognition, acceptance and understanding of this interface will enable healthcare professionals improve on their skills and service. According to Weiss (2015), there is a mental aspect to every physical disease. As the years have gone by, more evidence is being brought to light to prove the occurrence and nature of this relationship Brower (2006); Littrell (2008); Renoir, Hasebe and Gray (2013) and Menezes (2020).

Psychophysiology literally means the interaction between psychological and physiological factors. Consequently, a psychophysiological symptom is a pathological symptom that occurs due to the interaction of psychological and physiological factors. A symptom, unlike a sign is a subjective experience; therefore, psychophysiological symptoms can also be described as subjective medical experiences with psychological condition(s) as the underlying causative factor. Other authors have defined it as physical disorders with psychological overlays (Samsone, 2010) and physical or medical problems that can be strongly influenced by psychological factors such as stress, emotion or personality (Williamson, Barker and Veron-Guidy 1994). Psychophysiological symptoms can be said to include pain such as headache, back pain, chest pain, lump in the throat, non-organic seizure or psychogenenic seizure, muscle or joint pain and abdominal or pelvic pain; constipation, diarrhoea, bloating, nausea and irritable bowel syndrome; discomfort in the bladder or during urination; chronic fatigue syndrome; multiple chemical sensitivities;

migraine and tension headache; temporomandibular joint syndrome; lethargic sense; changes in eating and sleeping pattern.

Comer (2016), stated that biological (e.g. defects in the autonomic nervous system or particular organs), psychological and sociocultural (e.g. aversive social conditions and cultural pressures) factors combine to produce psychophysiological disorder. Our thoughts, perception, emotions, motivation, attitudes, personality style, depression, anxiety and stress are all psychological constructs that can affect physical health. There are two types of anxiety, namely; state anxiety and trait anxiety. Trait anxiety refers to the stable tendency to attend to, experience and report negative emotions such as fears, worries and anxiety across many situations. It is part of the personality dimension of neuroticism versus emotional stability and can also manifest by repeated concerns about and reporting of body symptoms (Gidron 2013). Whereas trait anxiety is an individual's characteristic that is consistent over time and across situations, state anxiety is a temporary reaction to stressful situations or in anticipation to stressful situations. The focus of this study is to examine the relationship between anxiety, specifically trait anxiety and psychophysiological symptoms among workers.

State of the problem

Recent studies have revealed that workers in general, career or vocational workers in particular express trait anxiety and as a result, manifest certain psycho-physiological symptoms. Workers experience symptoms of trait anxiety, apathy, heart attack, cardiac disorder, nervous breakdown and stroke. The result of these is not only on the individual affected but extends to the entire organizational sector and society at large, for ill health workers can always affect the individual productivity as well as the organizational sector output. When situations and events that lead to stress are not properly handled, they will continue to create more harm leading to increase in the psycho-physiological effects on the workers even to the point of impairment in both personal and occupational functioning and finally untimely death.

The purpose of the study

The general purpose of this study is to explore the relationship between Trait anxieties and manifest psycho-physiological symptoms among the career and vocational workers. Specifically, the study aims to explore significant relationship between trait anxieties and manifest psycho-physiological symptoms among workers as well as to investigate on the significant difference between career workers and vocational workers on their manifest psycho physiological symptoms.

Operational definition of terms

Trait anxiety

It is the present level of anxiety experienced by an individual who has a tendency to be more anxious, to react less appropriately to anxiety provoking stimuli. According to Willis R. (2005) trait anxiety is a learned or default route in dealing with stress, and is unhelpful. As such it is the result of responding in a predictable to stress, by constantly worrying,

living on ones' nerves, imagining all kinds of terrible situation that will affect one drastically. People who exhibit trait anxiety are chronically anxious and constantly under tension regardless of the situation. This is frequently used as a construct for personality, learning theory, and psychopathology.

Psychophysiological symptoms: These are psychological condition which is characterized by disturbances in behaviour, feelings, thoughts or judgment to such an extent that the person afflicted requires care, treatment and rehabilitation. The manifestation of these psycho physiological symptoms differs in their severity, duration and prognosis. The background and origination of the symptoms could either be mental retardation, personality disorder, anxiety, neurosis oriented or worse still psychosis related.

Vocational life

Vocation is what one seeks to do in one's life. In this study, vocational life in this context is referred to as vocational life of Catholic priests and nuns who have made a vow of lifetime commitment. A vowed life of obedience, chastity, and poverty for religious priests and nuns and a promise of obedience and celibacy are directly subjected to the authority of one's Superiors or Bishops. Their vocation is intrinsically connected to their entire identity, often their job is usually limitless and sometimes without proper definition.

Carrier workers

Career is a series of jobs, profession one wants to be in the lifetime of an individual. Carrier workers are professional workers, who engage in the series of jobs in a particular area of work, who in to providing services to others seeks to achieve personal satisfaction and earthly goals, in this study carrier workers are the nurses.

METHOD

Participants

Data were collected from 95 workers, who were randomly selected from Igbo speaking States of Anambra, Imo, Abia, Enugu, and Ebonyi. Among these workers, 49.5% (47) were priests, and 50.5% (48) were nurses.

Instrument

The instruments used for this study were:

State-Trait Anxiety Inventory (STAI) Form Y-2 developed by Spieberger CD (1983) and validated in Nigeria by Omoluabi PF (1987). It has a reliability of 0.79; in a concurrent study after two weeks test-retest Trait anxiety has an alpha reliability of 0.96 (Okoli, 2008). The instrument measures trait anxiety which is the relatively stable predisposition of an individual to be being anxious.

Psychophysiological Symptoms Checklist (PCS). Produced and standardized by Omoluabi (1993). It has alpha reliability of 0.88; Okoli (2008) Psychophysiological symptom has alpha reliability of 0.96. The instrument measure stress reaction.

Procedure

The researcher obtained an oral permission from the various authorities: the Bishops and Hospital management and all the participants signed the consent form before filling and returning the questionnaire. The questionnaire was administered to workers at different circumstances and location. Among the priests, the questionnaires were administered to the priests during their either annual retreat or seminar. Among the nurses, the questionnaires were administered to them through their various head of nursing services of various selected hospitals. Data were collected from 95 workers, who were randomly selected from Igbo speaking States of Anambra, Imo, Abia, Enugu, and Ebonyi. Among these workers, 49.5% (47) were priests, and 50.5% (48) were nurses. Their ages ranges from 13.7% (13) for young worker, 50.5% (48) for middle age worker, and 35.8% (34) for aged adult worker. It has the mean age of 2.22 and Standard deviation of .67

Design and statistics

This is a survey study that employed both Pearson Correlation and 2 way ANOVA for data analysis.

RESULTS

Correlation between trait anxiety and manifest physiological disorder

Psychoph	Pearson Correlation	Psychoph.	Stresmen
		1	.262*
	Sig. (2 – tailed)	.	.011
	N	94	94
Stresmen	Pearson Correlation	.262*	1
	Sig. (2 – tailed)	.011	.
	N	94	95

* Correlation is significant at 0.05 levels.

From the table 1 above, the result indicates that trait anxiety is statistically significantly related to psycho-physiological disorder among workers ($r = 0.26^*$, $P < 0.05$). Hypothesis one (H1) was confirmed.

H2: There will be a statistically significant difference between a career and vocational workers on psycho-physiological symptoms.

Table of Mean

					Std. Error
	Worker Category	N	Mean	Std. Deviation	Mean
PSYCHTOT	Priest	46	33.4130	25.65894	3.78320
	Teacher	48	55.5000	38.34113	5.53407

Table 2b: t – test comprise of worker category on psycho-physiological disorder

		Levene's Test for Equality of variance T-test Equality of Means								
		F	Sig.	T	Df	Sig. (2- tailed)	Mean Difference	Std. Error difference	95% confidence interval of the difference Lower Upper	
Psychtot	Equal variances assumed	4.895	0.29	-3.268	92	.002	-22.0870	6.75882	-35.51057	-8.66335
	Equal variances not assumed			-3.295	82.399	.001	-22.0870	6.70362	-35.42163	-8.75229

t (92) = -3.268, p < .002.

From the table 2 above, the result shows that there was a significant difference between vocational workers and career workers on their manifest of psycho-physiological symptoms t (92) = -3.268; p < .002. The hypothesis two was confirmed. It suggests that priests will show significant difference in tending to trait anxiety and manifest psycho-physiological disorder than the nurses.

DISCUSSION

From the table 1 above, the result indicates that trait anxiety is statistically significantly related to psycho-physiological disorder among workers ($r = 0.26^*$, $P < 0.05$). The finding of this study is in line with previous studies in this area. Trait anxiety accounts for a large number of psychophysical illness. It affects the way the body functions, releasing levels of hormones like epinephrine, blood sugar and fats. Rahe, Romo, Benneth and Siltaman (1974) in a retrospective study conducted with heart attack victims by asking surviving relatives of people with fatal infarction and by interviewing those who survived their attacks, observed that the people who died of sudden myocardial infarction had experienced more stressful events in the six months preceding the attack than those who survived. Friedman, Rosenman and Carrol (1958), Kiecolt, Glaser and her colleagues (1984) on the studies on the relationship between stress and psycho physiological disorder confirmed the above hypothesis. Ovuga (2005) and Ross and Moller (1998), Anumonye (1980) and Peltzer (2002) reported a correlation between high levels of stress and somatic behaviours like: headache symptoms, body pains and fatigue. Similarly, Peltzer (2004), Ovuga (2005), Ross and Moller (1998) writing on the negative outcome of stress on students includes subjective effects like: anxiety, aggression, depression, frustration, suicides, guilt, moodiness, and muscle tension. Behavioural effects includes: eating disorders, alcohol abuse, smoking, restlessness, and use of drugs and physiological effects like: high blood pressure, high heart rate, dry mouth, sweating, and warm and cold body responses. Cognitive effects includes: irrational decisions and thoughts, self-blaming, hypersensitiveness towards criticism, low level of concentration, Brain fag and memory; and health effects includes: chest and lower pains, peptic ulcer, sleeplessness, headaches, heart disease, and low libido. (Kavanagh and Shepherd 1973) study located risk factors of heart attack to the specific stresses of bereavement, loss of prestige and loss of employment. This explains also why most workers today live with much psycho-physiological disorder following their experience of trait anxiety. Similarly,

(Friedman, Rosenman and Carrol 1958) established from their studies that increase of stress leads to increase of cholesterol. Meanwhile, workers who are living with anxiety will show much of the psycho-physiological symptoms. (Ivancevich and Matteson, 1980) are of the view that the tensions and strain in one's system can cause him/her to be easily vulnerable to some disease. Biologically, stress affects the internal mechanism of the body especially when an individual is in constant touch with danger (stress) causing the adrenals to manufacture two chemicals important in reacting to stress – epinephrine and cortisone which when not controlled results in hormonal system imbalance causing often times, acid stomach, indigestion, heartburn, in the case of chronic stress peptic ulcers. Stress brings about important physiological changes which as mentioned above may cause alternations in the organic processes of the body. For instance, increase in the flow of epinephrine and increase in the sugar content of the blood may result in diabetes for an individual with such predisposition.

The findings of this study however, do not agree with other researchers who maintain that relationship does not exist between trait anxiety and psycho-physiological disorder. However, some researchers have hold that not all that experience stress develop psycho-physiological disorder, and that the association between trait anxiety and psycho-physiological disorder could be as a result of a third variables. (Weiten and Lloyd 1997) referred to some aspect of personality, some type of physiological predisposition as a third variable that can account for psycho-physiological disorder in workers other than trait anxiety. There is a statistically differences between vocational and career workers on psycho-physiological symptoms. The finding of this study indicated that there is a statistical significant relationship between vocational and career workers on trait anxiety and psycho-physiological disorder. The result of this study is in line with some studies in this area, (Freuman, M. Rosenman, R.H, Carrol,V 1958) in their study reports that, executives (career works) often strive more diligently towards achievement; and unable to relax; put forth more effort and commitment to job or profession and are more active and energetic than non-executives. Commenting on this, (Jenkins, 2002) observed that this behaviour pattern are related as an enduring trait amongst most executives as the type A as being a style of behaviour which involves intense striving for achievement, competitiveness, easily provoked, impatience, time urgency, abruptness of gesture and speech, over commitment to vocation and excessive drive and hospitality. These characteristics identified are related to psycho-physiological disorder in some sense.

Stressors related to the priestly vocation may include:

- Tiresome parishioners.
- Demand from relations
- Emotional and spiritual demand of priestly vocation
- Understanding between the authorities and the priestly demand of the community.
- Unrealistic expectation and loss of faith.

- Financial insecurity can militate as a single variable or combined as trait anxiety to cause priests to experience high incidence of psycho-physiological disorders. This is because following growth in science and technology, religion is losing its grips on man, and the mystery behind the priesthood and religions are given its way to the modern atheism, creating not only more challenges on the priest but making his position and security porous.

Environment as a stressor

- Poor housing
- Noise
- Pollution
- Pressure at work
- Social culture
- Demand from peers

Priest today combine a lot of activities and work in order to not only survive economic insecurity but more to meet up with the dynamism of the contemporary society. For instance, most have to combine pastoral work with academic work, managing the pressure from both ends. And in most cases, many priests work in the community who are not only economically disadvantaged but also living under serious social/cultural conflicts. And the priest will be there mediating and witnessing his calling amidst the tensions and anxieties. However, amidst all the experiences, the priests considers their vocation as a divine calling which in itself is a gratuitous gift of God and their services as witnessing to the gift they have received, so when badly managed their trait anxiety, they end up with psycho-physiological disorder.

On the contrary, the career workers represented in this study by the nurses shows psycho-physiological disorder as a result of burnout following work environment and work demands, such as meeting the demands of health supervisors, seniors, medical doctors/directors and patients and patients relatives dealing with the conflicting demands of health management teams and meeting the needs of patients and patients relative expectations as well as their own family needs, considering the socio-economic situation of such a worker. In the past, patients were passive recipients in the health system and most of them were unaware of their rights, Today, the reverse is the case, there is much internet awareness, shortage of staff as a result of oversee trip and poor-salaries and poor work environment, all these factors joined together, accounts for why nurses shows psycho-physiological disorder following their experience of burnout in the face of these conditions more than priests.

RECOMMENDATIONS FOR THE WORKERS

The researcher wishes to make the following recommendations:

1. Workers on individual bases can take action in reducing their vulnerability to trait anxiety. They can do this by occasionally engaging themselves into the exercise

of deep relaxation so as to control the tensions often time unconsciously stored in the body tissues.

2. Both the Government and the Church can do much to prevent the trait anxiety among workers by meeting their needs. The authorities should work how to pay workers a reasonable wage that can meaningfully sustain them, giving them a sense of personal worth, and such salaries should be paid on time.
3. The church authority should seek out ways of addressing the congregational unrealistic expectations and behaviour to the priests through organizing workshops, seminars and retreat. Parishioners should be properly educated about the roles and responsibility of priests, and theirs to the priests. In this way, they would be enlightened to understand the difference between God and Priests, always in the process of becoming.
4. Government should sanitize our educational system of cultism, constant student unrest, create conducive environment for learning through the provision of basic amenities and learning facilities, thus providing both for teachers, students and the society at large a safe haven.
5. Annual leaves, holidays and sabbatical leaves for workers with the necessary packages must be ensured. Therefore, there must be a consist program to maintain this policy in every sphere of work sector.
6. Provision should be made both in the training of workers and while work is on, on how to constructively deal with trait anxiety and avoid psycho-physiological symptoms. There should be constant sensitization workshop and seminars on the need for psychotherapy, counseling for workers in the event of need to seek professional help.
7. There should be provision for regular workshops, courses and seminars to engage the workers to stimulate their reflections and going on a refresh courses after some years of service to enhance productive and commitment and grow in experience through exposure.

Limitations of the study

The research has shown that trait anxiety is statistically significantly related to psycho-physiological disorder among workers and that there is a statistically differences between vocational and career workers on psycho-physiological symptoms. However the result should be viewed within the context of the limitations posed by the method and sample size. This study focused solely on Catholic priests, thereby excluding other priests from other denominations as well as focus was only on nurses excluding other career workers.

Recommendation for future study

It is recommended that future researchers in this field of the relationship between trait anxiety and psycho-physiological symptoms on career and vocational workers should include clergy from other denominations. And such future research should draw subjects

from both small scale and multinational organization so as to cover a wider range of career workers than in the present study. It is also suggested that future research should examine how marital status is related to psycho-physiological symptoms of stress on vocational workers in order to determine if any observable difference reflect real difference in non-married priests experience of stress as against career workers in the present study.

The future research should examine in much more details the difference in the experiences psycho-physiological disorder as a result of stress among workers. Taken into consideration in such future research the effects of social support interventions, positive feedback and relationship with significant others in the workplace in preventing stress .It is recommended that future studies should provide information concerning possible causal relation between these.

CONCLUSION

This research project was embarked upon to study the relationship between trait anxiety and psycho-physiological symptoms among the vocational and career workers. The independent variables are: tenure category, age category, worker category, genotype, blood group, village, residence, dioceses, congregations, tribe, tenure in years and age in years while psycho-physiological symptoms: stress are the dependent variable. The subjects were drawn from Catholic priests and nurses in both primary and secondary schools. The review of literature covered the areas that are relevant to the study. The self – evaluation questionnaire used was appropriate without any serious modification for it is already in use and tallies with the proposed hypothesis. It is plausible that our findings have come from a particular data set, yet the present study is a strong foundation upon which further research on construct validity may be based, for our study have clearly revealed that there is a statistically significant relationship between trait anxiety and psycho-physiological symptoms among vocational and career workers with $t(92) < -3.268$, $p .002$ variable mentioned above, stress via psycho-physiological disorder.

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Ethics Committee Approval/ Informed Consent: All the participants filled the consent form before filling and returning the questionnaire.

Authors' contributions: The conceptualization of the topic and writing original draft preparation was done by the first author; Design was done by the second author; Supervision were done by third author; Resources was provided by fourth author, Materials was provided fifth authors; Data Collection was done by sixth authors and/or Processing was done by seventh author, Analysis and/or Interpretation eighth author; Literature Search were done and ninth and tenth author; Critical Review was done by eleventh and twelfth author.

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