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## Somatic Complaints in a Sample of Nigerian Adults: Contributions of Stressful Life Events, Gender and Age.

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### Abstract

*The regular exposure to life stressors as experienced by Nigerians orchestrated by factors such as high cost of livelihood, insecurities and others has increased somatic complaints from males and females across the country. This study investigated the contributions of stressful life events and gender on somatic complaints in a sample of Nigerian adults. Two hundred and ninety-eight (298) Nigerian adults who were conveniently sampled participated in the study. They comprised one hundred and seventy-five males (175) and one hundred and twenty-three females (123). Participants' age ranged from 19 years to 53 years with a mean age of 27.13 (SD = 5.96). Two hypotheses were tested in the study. The study used Stressful life events Inventory (LEI) and Patient Health Questionnaire (PHQ-15) to collect data for the study. The design of the study was a cross-sectional design and the analysis of data was done using Hierarchical Multiple Regression. Result obtained from the test of the hypotheses indicated that stressful life ( $\beta = .32, p < .001$ ) significantly predict somatic complain while gender ( $\beta = .05, p > .05$ ) did not significantly predict somatic complain. The study concludes that conditions that threaten the capabilities of a person may lead to disturbances in the biologic system that leads them to somatization. It is recommended that stressful experience and should be managed as a stress disorder.*

**Keywords;** Adulthood, gender, somatization, stressful life events, well-being,

### Introduction

Somatic symptoms are subjective reports of physical symptoms such as headaches, stomachaches, or muscle pain (Hart, Hodgkinson, Belcher, Hyman & Cooley-Strickland, 2012). In many cases clear medical explanations can be found and adequate medical treatment can be provided. Research has demonstrated that for at least 33% of somatic complaints in primary care no sufficient medical explanation has been found (Kroenke, 2003; Steinbrecher, Koerber, Frieser, & Hiller, 2011).

Somatic symptoms constitute the presenting complaints in personality disorders in the form of crawling sensations, heat in the head or other parts of the body, cramps, nausea, and hot/cold spells, in the absence of organic pathology (Mayou & Farmer, 2002). Some researchers see somatization as a symbolic representation of relational problems (Ebigbo, 1986). In the clinical literature, these symptoms are referred to as functional somatic symptoms (FSS) or medically

unexplained symptoms (MUS) (Vulić-Prtorić, 2016). It is estimated that about 50% of all patient visits to physicians are due to these symptoms (Garber, 1998).

Functional somatic complaints or somatization, the presence of somatic symptoms without demonstrable biological cause, come under the broad name of somatoform disorders, which include somatization, conversion, and pain disorders (American Psychiatric Association, APA, 1994). They also include hypochondriasis and body dysmorphic disorders, and the "Not otherwise" specified category. These disorders may be transient or run a chronic course (Gelder, Harrison, & Cowen, 2006). A diagnosis of somatization disorder is made following a history of multiple physical complaints that begin before age 30 years and extend over several years, resulting in social and occupational debility (APA, 1994). Very often the first symptoms appear during childhood and adolescence. As many as 55% of adults diagnosed with somatization disorder report the appearance of the first symptoms before the age of 15 (Garber, 1998). Adolescents who reported somatic symptoms were six to nine times more likely to report somatic symptoms in adulthood (Dhossche, Ferdinand, van der Ende & Verhulst, 2001).

Somatic complaints highly impact an individual's quality of life. Therefore, it is important to look at other, non-medical factors, in order to find targets for assessment, referral, and intervention. There are multiple socio-emotional factors associated with reports of somatic symptoms among adults (Garralda, 2010), including stress, reduced coping abilities (Walker, Smith, Garber & Claar, 2007) and traumata (Afari, Ahumada, Wright, Mostoufi, Golnari, Reis & Gundy Cuneo, 2014; Brown, 2004, 2006). This has been confirmed by a number of reviewed studies, which show that people with somatic complaints report higher traumatic event rates than controls (Roelofs & Spinhoven, 2007), that having a post-traumatic stress disorder (PTSD) is associated with a range of somatic complaints (Gupta, 2013), and that people exposed to traumatic events are 2.7 times more likely to have one or more somatic syndromes (Afari, Ahumada, Wright, Mostoufi, Golnari, Reis & Gundy Cuneo, 2014).

When you have an upset stomach or bad headache when an important assignment is due, you probably recognize that there is a connection between what is happening in your emotions and what is happening in your body (Halgin & Whitbourne, 2000). Health Professionals who study the "Mind-body" relationship attempt to determine why some people develop physiological or health problems when their lives become too busy, complicated, or filled with worrisome life events. It is true that the nervous system needs some amount of stress to function properly (Lacey, 1967), but stress that is persistent and too intense can have destructive physiological and psychological effects resulting to psychosomatic disorders (Ewhrudjakpor, 2009). In psychosomatic disorders, the usual reversible autonomic and hormonal response to stressors can cause irreversible tissue damage which results to psychosomatic illness (Ewhrudjakpor, 2009). Psychosomatic illness presents itself in several somatoform such as prurits (itching), Bronchial asthma, Hiccups, Tachycardia (heart racing), hypertension, migraine Headaches, Peptic ulcers, Constipation, Heartburns, Painful sexual intercourse, impotence (difficulty obtaining or maintaining an erection, or both), Backaches, Muscle cramps, and Tension headaches (Ewhrudjakpor, 2009).

According to Selye (1974) stress is the non-specific response of the body to any demand made upon it, while stressors are strains from social malaises in the environment in or out of formal work places. Such as loss of job, loss of parents' jobs, facing a disciplinary panel, working under unmotivated conditions, high cost of living that are incongruous with income paid to public servants, and pressures from family relatives displaced by conflict, consequently resulting to low standard of living, high wave of armed robbery, ever increasing rate of

University graduates unemployment in the midst of wealth reactive depression (Majoroh&Ewhrudjakpor, 2004).

Somatisation can be thought of as one of the physiological corollary of stress. Selye (1950) demonstrated the general effect of stress on the sympathetic nervous system, endocrine system and lymphatic system, Cannon (1953) later showed that acute emotions, physical exertion, cold and pain could also trigger the stress response. Adverse life events, experienced by adults, may alter the regulation of the hypothalamic pituitary adrenal (HPA) axis through epigenetic processes (Francis, 2009). Alteration in the function of the HPA axis may lead to increased vulnerability to, and disparities in, mental and physical health disorders (Francis, 2009).

The use of the term stress has been extended and employed in the fields of biology, medicine and psychology to apply to human organisms. In both its biological/medical and psychological uses, the term stress refers to physical strain and psychological strain respectively, and was applied to humans to mean an outside force acting on the body or mental powers (Mason, 1975). Most psychologists define stress as the physiological and psychological response to a condition that threatens or challenges an individual and requires some form of adaptation or adjustment (Wood, Wood & Boyd, 2008).

Simply put, stress is both a physiological and psychological reaction to situations that demand adaptation (Raulin, 2003). It is a load or burden under which we survive or crack, as it takes a heavy toll on our physical and mental health by imposing wear and tear on our body systems. According to Brehm, Kassin and Fein (2002), stress is an unpleasant state of arousal that arises when we perceive that the demands of a situation threaten our ability to cope effectively. The emotional reaction to stress triggers heightened physiological arousal due to increased reactivity of the sympathetic nervous system (Halgin& Whitbourne, 2003; Ifeagwazi, Chukwuorji& Kalu, 2013).

In addition to a better understanding of the nature of one's life style and goals in an effort to reduce its stresses and strains, it is important to realize that the amount of changes that is taking place in one's life may be causing one some discomfort (Adomakoh, 1975; Onyeizugbo, 2008). These can stem from factors beyond one's control, such as the death of a close relative, or detention in jail or indeed material poverty; crises, war, loss of properties. Holmes and Rahe (1967) define life events as changes in a person's day to day life which impose varying degrees of stress.

Stressful life events have been conceptualized as those life experiences which require change, adaptation or coping on the part of the individual (Matias, 1978). They stimulate the individual to make adaptive efforts. It is perhaps this demand for adaptation that is the aspect of stressful life events that has led to their classifications as stressful (Holmes & Rahe, 1967). Exposure to stressful life events can contribute or predispose to psychiatric illness episode, particularly depression, in certain vulnerable individuals (Ifeagwazi, 2011). Stressful life events can diminish our capacity for adjustment or adaptation. They can breakdown the body and set the stage for disease.

The idea that there is a connection between the degree of life stress and illness episode originated from the pioneering works of Holmes and Rahe (1967). These eminent stress researchers studied life events clusters at disease onset of more than 5,000 patients and found that events that led to major readjustments were accompanied by disease onsets, with series of somatic complaints. The stress of bereavement, academic pressures, sleep deprivation, and

poor marital relationship have been linked to lowered immune response and illness episodes. Bereavement can be a particularly difficult experience for widows and widowers. Studies comparing widows with comparable married women (non-widows) (e.g., Ifeagwazi, 2002; 1998; Parkes & Brown, 1972) demonstrate that widows reported significantly many more stress symptoms than the non-widows, including fatigue, sleep disturbance, fast heart beats, difficulty in concentrating, depression and fear of “going crazy.”

Recently, it has been assumed that certain somatic complaints may be produced and maintained by a combination of re-activation of traumatic memories (including sensory motor experiences) and maladaptive cognitive strategies, like rumination and catastrophizing (Brown, 2004, 2006, 2007). Some preliminary evidence has been found by Garner (2016) who showed that rumination moderated the relationship between stressors and somatic symptoms in a sample of university students.

As reported by Ifeagwazi (2008b), examination can be perceived as a unique kind of stressor for students, and generally, students, irrespective of gender, age and level of study, feel more relaxed on campus when examinations or class tests are not in sight, but react with panic, tension, fear, anxiety and other illness symptoms once examination period approaches. Ezeilo (1982) reported that examination period is a period of psychological stress for students, a period marked by an increased number of undergraduate students seeking medical attention at the University Medical Centre. The stress of examination has been linked to lowered immunity or impaired functioning of the immune system as well as increase in infectious illnesses. Some empirical studies (e.g., Glaser, et al., 1987; as cited in Nevid, Rathus & Greene, 1994) have shown that medical students exhibit poorer immune functioning during examination period than they do a month before examination, when their lives are relatively less stressful.

Stressors are also associated with increase in illness behaviours. As explained by Herbert and Cohen (1994), an illness behaviour is any activity undertaken by a person who feels ill, in order to define his or her state of health. Many of the effects of stress on individuals are manifested in clinical symptoms, such as fatigue, dizziness, dry mouth, palpitations, shortness of breath, anger, tension, sleep disturbance, shortness of breath, poor memory, and anxiety (Ifeagwazi, 2002). When the terms “illness” and “disease” are used in clinical terms, they refer to a variety of clinical conditions, such as psychophysiological disorders and other medical conditions (Herbert & Cohen, 1994).

Lazarus introduced a cognitive dimension to stress theory by emphasizing that psychological stress refers to a relationship with the environment that the person appraises as significant for his or her well-being and in which the demands tax or exceed available coping resources of the person (Lazarus & Folkman, 1986). Acute stress activates the stress biochemical axes that enable the individual deal with the situation. These biochemical and physiological regulators may tend to malfunction with persistence of the stressor, resulting in dysfunctions of varying manifestations (Selye, 1950).

Communication difficulties and suppressed emotions have also been identified by psychologists as important in health (Isichei & Zamani, 2000). Most somatising patients are known to have difficulties verbalising their emotions (McDougal, 1989) and have been described as operational thinkers (Marty & M'Uzan, 1963; Van der Kolk, 1994). Lifetime prevalence rates of 1-2 percent have been reported for somatization disorder (Simon, 2000) and is said to occur more in women than in men (Martin & Yutzy, 1999). Prevalence rates for women have been reported at 0.2-2; and less than 0.2 for men has been found (APA, 1994),

depending on the method of assessment and professional background of the person doing the assessment.

There is ample evidence for gender differences in response to somatic complaints. For example, Karanci, Alkan, Balta, Sucuoglu, and Aksit (1999) found greater levels of distress and more negative life-events for women than for men after the 1995 earthquake in Dinal, Turkey. Ben-Zur and Zeidner (1991) found women reporting more anxiety and bodily symptoms than men, as well as higher tension, fear and depression during the Gulf war. Bar-Tal, Lurie, and Glick (1994) reported a similar result when they investigated the effects of stress on men and women Israeli soldiers. Women's situational stress assessment as well as stress experiences were higher than those of the men. Although, women in fact often report more distress and bodily symptoms than men, it cannot be concluded that women generally lack appropriate coping skills. For example, in response to the death of their spouse, women seem to be better capable than men of overcoming the loss (Hart, Hodgkinson, Belcher, Haymen, & Cooley-Strickland, 2012). According to Hart et al. (2012), since the vast majority of research relies on self-report scales, we presuppose that women have a greater tendency to admit symptoms such as pain, depression or negative mood. In Western societies, men are commonly expected to be psychologically and physiologically more resilient than women. Admitting pain or depression would be contradictory to the desired male picture.

Findings on the causes of death among bereaved men appear in a different light: risk behavior that either includes or leads to an unhealthy diet or lifestyle (e.g., smoking, drinking, fast driving) is again more acceptable for men than for women. Perception, availability and activation of social support is a major factor in successfully dealing with stress. Women tend to have larger and tighter networks that enable them to seek support from many sources, whereas men often solely rely on their spouses as support provider (Greenglass, 1982; Hobfoll, 1986; Simon, 1995).

Second, as Hobfoll (1998) argues, men and women are assumed to have different experience with social support. Whereas men are supposed to be more independent and self-reliant, women are expected to seek and provide support for others. Research on gender differences in dealing with life-threatening diseases has contributed considerably to the discussion. Again, differences between men and women are primarily mediated by the social support they seek and receive. According to theories of successful development, resources available for coping with stressful situations diminish with age. Since resources are the key to successful coping with life events, elderly people are presumably worse off than younger ones (Hart, et al., 2012).

In a study on Chernobyl victims, younger adults displayed greater fears of health risks than older individuals (Muthny, Gramus, Dutton, & Stegie, 1987). In the same context, Hüppe and Janke (1994) found women and younger people (18-39 years old) to be more concerned than men and older individuals (40-59 years), respectively. In terms of depression, it was found that older (31-55 years old) individuals who were exposed to an earthquake scoring higher on depression scales than younger people (17-30 years) (Toukmanian, Jadaa & Lawless, 2000).

Ben-Zur and Zeidner (1991) investigated psychological distress and health complaints under the threat of missile attacks during the Gulf war. Here, younger adults reported more anxiety, bodily symptoms, anxiety, fear and depression compared to older adults. This finding is consistent with other results, as Milgram (1994) reports in a summary about Gulf-war-related studies. Explanations of these age differences refer to the greater experience that older Israeli

citizens have with war-related stressors. Moreover, older individuals' coping efforts have been proven effective in other situations.

### **Statement of the Problem**

Nigerian society today is ridiculed with very hard conditions/situations (Afolabi, 2022). The global credit crunch has introduced many vulnerability and insecurities. Many people are suffering from various stressors either within their work places or outside the formal work environment (Weich& Lewis, 1998). These can result in illnesses either physical such as Malaria or psychological such as inferiority complex leading to reactive depression or psychosomatic illness like hypertension, ulcer, migraine headaches, impotence, heart burn, painful sexual intercourse, heart racing, constipation, itching and others (Halgin& Whitbourne, 2000). Given the numerous effects that somatic problems could have on a young person's quality of everyday life, it is very important to improve our understanding of somatic variations and patterns in the adult population. Therefore, it is important to look at other, non-medical factors, in order to find targets for assessment, referral, and intervention. This research was aimed at determining the influence of stressful life events, age and gender on somatic complaints among a sample of Nigerian adults. Therefore the following questions are formulated to guide the study:

- \*Will stressful life events significantly influence somatic complaints among Nigerian adults?
- \*Will gender significantly influence somatic complaints among Nigerian adults?
- \*Will age significantly influence somatic complaints among Nigerian adults?

### **Purpose of the Study**

The purpose of this study is to examine whether:

- \*Stressful life events will influence somatic complaints among Nigerian adults.
- \*Gender will influence somatic complaints among Nigerian adults.
- \*Age will influence somatic complaints among Nigerian adults.

### **Review of Related Literature**

#### **Allostasis and Allostatic Load Theory**

The work of McEwen (1998, 2000), Sterling and Eyer (1988), and McEwen and Wingfield (2003) laid the foundation for the allostasis and allostatic load theory. They proposed that homeostasis is the regulation of the body to a balance, by single-point tuning such as blood oxygen level, blood glucose, or blood pH. On the other hand, allostasis proposes maintenance of stability outside of the normal homeostatic range where an organism must vary all the parameters of its physiological systems to match them appropriately to chronic demands (i.e., reset the system parameters to a new set point). The main hormonal mediators of the stress response in this situation are cortisol and epinephrine (adrenaline). They have both protective and damaging effects on the body.

Allostasis implies that physiological functions are mobilized or suppressed as reflected in a cascade of brain–organism interactions overriding local regulation. In the short run, they are essential for adaptation, maintenance of homeostasis, and survival allostasis. Yet, over longer time intervals, when called upon frequently, they exact a cost (i.e., an allostatic load) that can accelerate disease processes (Mason, 1971).

Allostatic load can be measured in the physiological systems as chemical imbalances in the autonomic nervous system, central nervous system, and neuroendocrine and immune system activity as well as perturbations in the diurnal rhythms, and, in some cases, plasticity changes

to the brain structures. McEwen (2000) identifies a number of physiological indicators for determining allostatic load. These include systolic and diastolic blood pressures, high-density lipoproteins (HDL) and total cholesterol, glycosylated hemoglobin (HbA1c) levels of glucose metabolism over time, serum dihydroepiandrosterone (DHEA-S), 17-Hydroxycorticosteroids or 24-hour urinary cortisol excretion, and overnight urinary noradrenaline and adrenalin excretions. Cortisol, noradrenalin, adrenalin, and DHEA are identified as the four primary mediators.

### **Lazarus Stress Theory**

Since its first presentation as a comprehensive theory (Lazarus 1966), the Lazarus stress theory has undergone several essential revisions (Lazarus 1991, Lazarus and Folkman 1984, Lazarus and Launier 1978). In the latest version (Lazarus 1991), stress is regarded as a relational concept, i.e., stress is not defined as a specific kind of external stimulation nor a specific pattern of physiological, behavioral, or subjective reactions. Instead, stress is viewed as a relationship ('transaction') between individuals and their environment. 'Psychological stress refers to a relationship with the environment that the person appraises as significant for his or her well being and in which the demands tax or exceed available coping resources' (Lazarus and Folkman 1986). This definition points to two processes as central mediators within the person–environment transaction: cognitive appraisal and coping.

The concept of appraisal, introduced into emotion research by Arnold (1960) and elaborated with respect to stress processes by Lazarus (1966, Lazarus and Launier 1978), is a key factor for understanding stress-relevant transactions. This concept is based on the idea that emotional processes (including stress) are dependent on actual expectancies that persons manifest with regard to the significance and outcome of a specific encounter. This concept is necessary to explain individual differences in quality, intensity, and duration of an elicited emotion in environments that are objectively equal for different individuals. It is generally assumed that the resulting state is generated, maintained, and eventually altered by a specific pattern of appraisals. These appraisals, in turn, are determined by a number of personal and situational factors. The most important factors on the personal side are motivational dispositions, goals, values, and generalized expectancies. Relevant situational parameters are predictability, controllability, and imminence of a potentially stressful event.

In his monograph on emotion and adaptation, Lazarus (1991) developed a comprehensive emotion theory that also includes a stress theory (Lazarus 1993). This theory distinguishes two basic forms of appraisal, primary and secondary appraisal (Lazarus, 1966). These forms rely on different sources of information. Primary appraisal concerns whether something of relevance to the individual's well being occurs, whereas secondary appraisal concerns coping options.

Within primary appraisal, three components are distinguished: goal relevance describes the extent to which an encounter refers to issues about which the person cares. Goal congruence defines the extent to which an episode proceeds in accordance with personal goals. Type of ego- involvement designates aspects of personal commitment such as self- esteem, moral values, ego-ideal, or ego-identity. Likewise, three secondary appraisal components are distinguished: blame or credit results from an individual's appraisal of who is responsible for a certain event. By coping potential Lazarus means a person's evaluation of the prospects for generating certain behavioral or cognitive operations that will positively influence a personally relevant encounter. Future expectations refer to the appraisal of the further course of an encounter with respect to goal congruence or incongruence (Lazarus, 1993).



Specific patterns of primary and secondary appraisal lead to different kinds of stress. Three types are distinguished: harm, threat, and challenge (Lazarus and Folkman 1984). Harm refers to the (psychological) damage or loss that has already happened. Threat is the anticipation of harm that may be imminent. Challenge results from demands that a person feels confident about mastering. These different kinds of psychological stress are embedded in specific types of emotional reactions, thus illustrating the close conjunction of the fields of stress and emotions.

Lazarus (1991) distinguishes 15 basic emotions. Nine of these are negative (anger, fright, anxiety, guilt, shame, sadness, envy, jealousy, and disgust), whereas four are positive (happiness, pride, relief, and love). (Two more emotions, hope and compassion, have a mixed valence.) At a molecular level of analysis, the anxiety reaction, for example, is based on the following pattern of primary and secondary appraisals: there must be some goal relevance to the encounter. Furthermore, goal incongruence is high, i.e., personal goals are thwarted. Finally, ego- involvement concentrates on the protection of personal meaning or ego- identity against existential threats. At a more molar level, specific appraisal patterns related to stress or distinct emotional reactions are described as core relational themes. The theme of anxiety, for example, is the confrontation with uncertainty and existential threat. The core relational theme of relief, however, is 'a distressing goal-incongruent condition that has changed for the better or gone away' (Lazarus 1991).

Coping is intimately related to the concept of cognitive appraisal and, hence, to the stress-relevant person-environment transactions. Most approaches in coping research follow Folkman and Lazarus (1980), who define coping as 'the cognitive and behavioral efforts made to master, tolerate, or reduce external and internal demands and conflicts among them.'

This definition contains the following implications. (a) Coping actions are not classified according to their effects (e.g., as reality-distorting), but according to certain characteristics of the coping process. (b) This process encompasses behavioral as well as cognitive reactions in the individual. (c) In most cases, coping consists of different single acts and is organized sequentially, forming a coping episode. In this sense, coping is often characterized by the simultaneous occurrence of different action sequences and, hence, an interconnection of coping episodes. (d) Coping actions can be distinguished by their focus on different elements of a stressful encounter (Lazarus and Folkman 1984). They can attempt to change the person-environment realities behind negative emotions or stress (problem-focused coping). They can also relate to internal elements and try to reduce a negative emotional state, or change the appraisal of the demanding situation (emotion-focused coping).

### **Hypotheses**

Following the review of literature, the following hypotheses were tested in this study.

\*Stressful life events will not play a significant role in somatic complaints among Nigerian adults.

\*Age will not play a significant role in somatic complaints among Nigerian adults.

\*Gender will not play a significant role in somatic complaints among Nigerian adults.

## **Method**

### **Participants**

Two hundred and ninety-eight (298) Nigerian adults who were conveniently sampled participated in the study. They comprised one hundred and seventy-five males (175) and one hundred and twenty-three females (123). Participants' age ranged from 19 years to 53 years with a mean age of 27.13 (SD = 5.96). Information about participants demographics such as gender, age and ethnic group were gotten using the questionnaires. 40 (13.4%) of the participants were SSCE holders, 84 (28.2%) were ND/NCE holders, 162 (54.4%) were HND/B.sc holders, while 12 (4.0%) had Masters/PHD. The ethnic groups involved were 14 Hausas (4.7%), 13 Yorubas (4.4%), 267 Ibos (89.6%) and others 4 (1.3%). Also, 195 (65.4%) of the participants were single, 92 (30.9%) were married, 8 (2.7%) were divorced, while 3 (1.0%) were divorced. 183 (61.4) of the participants were from urban areas, while 115 (31.6) were from urban areas.

### **Instruments**

Two instruments were used in the study. They are Stressful life events Inventory (LEI) and Patient Health Questionnaire (PHQ-15).

#### **Life Events Inventory (LEI)**

The Stressful Life Events Inventory (LEI) consisting of 28 items scored on a 5-point Likert type scale was completed by each participant. The LEI was originally developed by Holmes and Rahe (1967) as a 43-item checklist (the Social Readjustment Scale) to measure a person's total amount of recent life stress in life change units (LCU). The scale was adapted for local use in Nigeria by Nweze (1985). Each participant was given the following instructions: Below are 25 life events that have been found to produce stress in students' lives. In other words, if these events happen in a person's life, then that individual is likely to experience tension / strain / pressure / stress. Please rate each life event on a scale from 1 (very low stress) to 100 (extremely high stress). Please use the following guide for your ratings: 1 = very low stress, 25 = somewhat stressful, 50 = moderately stressful, 75 = relatively high level of stress, and 100 = extremely stressful. Please feel free to use any numbers along the scale from 1 to 100—in other words, if you feel that the level of stress you would feel for a particular event was somewhere between “somewhat stressful” and “moderately stressful,” then you might rate that event a 37. The first item listed (i.e., “Death of a close family member”) has already been assigned a value of 100. Each item describes an event that often occurs in course of one's day to day activities. In a study of 1172 undergraduates, Nweze (1985) obtained a Cronbach alpha of 0.89

#### **Patient Health Questionnaire (PHQ-15).**

The Patient Health Questionnaire (PHQ-15) was developed by the American Psychological Association (APA), (2014). The PHQ-15 includes 15 symptoms that account for more than 90% of symptoms seen in primary care (exclusive of upper respiratory symptoms such as cough, nasal symptoms, sore throat, ear ache, etc.). (Kroenke, Spitzer & Williams, 2002). The PHQ-15 asks patients to rate how much they have been bothered by each symptom during the past month on a 0 (“not at all”) to 2 (“bothered a lot”) scale. Thus, the total score ranges from 0 to 30, with cutpoints of 5, 10 and 15 representing thresholds for mild, moderate and severe somatic symptom severity, respectively. In the original study, the majority (88%) of patients who endorsed  $\geq 3$  medically unexplained symptoms at the level of “bothered a lot” and who had at least a several year history of poorly explained symptoms had a somatoform diagnosis. In a study of 172 primary care patients with at least moderate somatization enrolled in a clinical trial, Cronbach's alpha was 0.79

## **Procedure**

The researchers got a letter of identification from the Ethical board of Department of Psychology, Ebonyi State University. The letter helped the researcher in facilitating the cooperation of heads of organizations that participated in the research. Afterwards, the researchers created rapport with the participants before administering the questionnaires. Participants were made up of staff of both private and public organizations. Researchers explain the requirements of the exercise to all the participants. Consent forms were provided to all participants outlining the complete anonymity of the questionnaires and the right of every participant to withdraw at any time while completing the questionnaires. The questionnaire was administered to three hundred and twenty (320) participants. Out of the three hundred and twenty (320) questionnaires distributed to the participants, three hundred and ten (310) were returned and 12 were discarded due to improper filling leaving a total of two hundred and ninety-eight (298) that was used for data analysis. The sampling technique employed was convenient sampling. The researchers and research assistant administered the questionnaire to the participants in their various place of work and asked them to fill it during their free time. The questionnaires were collected two days later. All data were safely stored in a password-protected computer. The study questionnaires were kept in a locked cabinet.

## **Design/statistics**

The design is cross-sectional design. Analysis of data was done using Hierarchical Multiple Regression. Statistical Package for Social Sciences (SPSS) version 20 was employed for the data analysis.

## **Result**

The data obtained from respondents were analyzed by computing the means, standard deviations, and correlations among the study variables. Before analyses were performed, data were crosschecked for abnormalities. Specifically, data were checked for outliers and errors in coding. No error was found. Afterwards, data were analyzed with the Statistical Packages for the Social Sciences Version 20. To test the hypotheses Step Wise Multiple Regression was conducted in which somatic complaints was the dependent variable.

**Table 1: Means, standard deviations, and correlations for demographic variables, stressful life event, gender and age on somatic complain**

S/N	Variables	M	SD	1	2	3	4	5	6	7	8	9
1	Marital Status	1.39	.59									
2	Ethnicity	1.18	.57	.11*								
3	Religion	1.18	.52	.25***	.28***							
4	Locality	1.39	.49	-.11*	.06	.19***						
5	Educational Qualification	2.49	.78	.24***	-.02	.01	-.02					
6	Stressful Life	1334.70	448.07	-.05	-.06	-.01	.31***	-.05				
7	Gender	1.41	.49	.34***	.09	.04	-.11*	-.15**	-.05			
8	Age	27.13	5.96	.54***	.01	.05	-.01	.45***	.07	-.11*		
9	Somatic_Compl	9.88	4.65	-.06	-.08	-.10*	.07	-.08	.31***	.06	-.12**	-

\*= P < .05; \*\*p < .01 (significant) Gender= 1-male, 2-female

Result of correlation table show that somatic complain was significantly related to religion ( $r = -.10, p < .05$ ); stressful life ( $r = .31, p < .001$ ) and age ( $r = -.12, p < .01$ ); But non-significantly related gender, ethnic, marital status, locality and educational qualification. Stressful life was only significantly related to locality ( $r = .31, p < .001$ ). Gender was significantly related to locality ( $r = -.11, p < .05$ ); and educational level ( $r = .15, p < .01$ ). Age was significantly related to marital status ( $r = .54, p < .001$ ), educational qualification ( $r = .45, p < .001$ ), and gender ( $r = -.11, p < .05$ ). Educational qualification was significantly related to marital status ( $r = .24, p < .001$ ). Locality was significantly related to marital status ( $r = -.11, p < .05$ ), and religion ( $r = .19, p < .001$ ). Religion was significantly related to marital status ( $r = .25, p < .001$ ), and ethnicity ( $r = .28, p < .001$ ). Ethnicity was significantly related to religion ( $r = .11, p < .05$ )

**Table 2: Coefficient table of Regression of demographic variables, stressful life event, gender and age on somatic complain**

Variables	Model 1	Model 2	Model 3	Model 4
Marital Status	.000	-.005	-.038	.059
Ethnicity	-.054	-.035	-.040	-.040
Religion	-.101	-.083	-.077	-.092
Locality	.094	-.006	-.002	.001
Educational Qualification	-.074	-.060	-.039	.009
Stressful Life		.305	.307	.324***
Gender			.088	.048
Age				-.170*
R	.16	.33***	.34	.36*
R <sup>2</sup>	.03	.11***	.12	.13*
R <sup>2</sup> change	.03	.08***	.01	.02*
F value	F(3, 225)=2.88	F(1,224)=15.58	F(2, 222)=.35	

Note: \*\*=p < .01, \*\*\*=p < .001 (significant). Gender= 1-male, 2-female

Regression result in table 2 above indicated that none of the control variables significantly predicted somatic complaints. Stressful life ( $\beta = .32, p < .001$ ) entered in model two of the equation significantly predict somatic complain. Thus increase in stressful life increases somatic complain. It accounted for 1% significant variance as a predictor of somatic complain ( $R^2\Delta = .08, p < .001$ ). Gender entered in ( $\beta = .05, p > .05$ ) entered in model three of the equation did not significantly predict somatic complain. But age ( $\beta = -.17, p < .05$ ) entered in model four significantly predict somatic complain. It accounted for less than 1% significant variance as a predictor of somatic complain ( $R^2\Delta = .02, p < .05$ ).

## Discussion

The study examined stressful life events, gender and age as determinants of somatic complaints among Nigerian adults. The results of the study revealed that stressful life events significantly predicted somatic complaints among Nigerian adults. This finding implies that the more stressful life events an individual encounters, the higher the individuals somatic complaints. The first hypothesis that stressful life events will not play a significant role in somatic complaints among Nigerian adults was not confirmed by this result. This result has been confirmed by a number of reviewed studies, which show that people with somatic complaints report higher traumatic event rates than controls (Roelofs&Spinhoven, 2007), that having a post-traumatic stress disorder (PTSD) is associated with a range of somatic complaints (Gupta, 2013), and that people exposed to traumatic events are 2.7 times more likely to have one or more somatic syndromes (Afari, Ahumada, Wright, Mostoufi, Golnari, Reis & Gundy Cuneo,2014). This finding is also supported by the stress-response theory (Selye, 1974) which viewed stress as the common denominator of all adaptive reactions in the body and complete freedom from stress as death. Following stressful circumstances, individuals have an increasingly depleted resource pool to combat further stress. This depletion impairs individuals' capability of coping with further stress, thus resulting in somatic complaints (Hobfoll, 1989).

The result also showed that gender did not significantly predict somatic complaints among Nigerian youths. This finding implies that both male and females do not differ significantly in their manifestation of somatic complaints. The second hypothesis which predicted that gender will not play a significant role in somatic complaints among Nigerian adults was confirmed by this result, so the null hypothesis was accepted. The finding contrasts the findings of previous research which stated that prevalence rates of somatic complaints for women have been reported at 0.2-2; and less than 0.2 for men (APA, 1994). Karanci, Alkan, Balta, Sucuoglu, and Aksit (1999) found greater levels of distress and more negative life-events for women than for men after the 1995 earthquake in Dinal, Turkey. Ben-Zur and Zeidner (1991) found women reporting more anxiety and bodily symptoms than men, as well as higher tension, fear and depression during the Gulf war. Bar-Tal, Lurie, and Glick (1994) reported a similar result when they investigated the effects of stress on men and women Israeli soldiers. Women's situational stress assessment as well as stress experiences were higher than those of the men.

The results also showed that age significantly predicted somatic complaints among Nigerian adults. This result did not confirm the hypothesis which stated that age will not play a significant role in somatic complaints among Nigerian adults; therefore, the null hypothesis was rejected. According to theories of successful development, resources available for coping with stressful situations diminish with age. Since resources are the key to successful coping with life events, elderly people are presumably worse off than younger ones (Hart, et al., 2012). In a study on Chernobyl victims, younger adults displayed greater fears of health risks than older individuals (Muthny, Gramus, Dutton, &Stegie, 1987). In the same context, Hüppe and Janke (1994) found women and younger people (18-39 years old) to be more concerned than

men and older individuals (40-59 years), respectively. Ben-Zur and Zeidner (1991) investigated psychological distress and health complaints under the threat of missile attacks during the Gulf war. Here, younger adults reported more anxiety, bodily symptoms, anxiety, fear and depression compared to older adults.

### **Implications of the Study**

These findings are important for conceptualization, diagnosis, and management of functional somatic complaints. Somatisation may, in the absence of organ pathology, be understood to represent some psychophysiological reactions to stress. Thus the clinician should among other things evaluate client's presenting with somatic complaints for stress; efforts should be made to identify the certain stressful conditions in the life of the client/patient from which the somatising arises. Often times the sense of the symptoms and their associated conflicts are elucidated. In the experience of the present researcher, general approaches that prove effective in stress management such as cognitive re-labelling and relaxation therapy are effective in the management of psychogenic somatic complaints.

The relatively small sample size should be considered, and the fact that the sample is made up of Nigerian adults who are employed. This highlights the fact that this sample has particular characteristics, so the considerations implied by these results must be limited to the population that is represented by the analyzed sample.

Further, because our data are cross sectional, it is not possible to draw true causal inferences from the results of the path analysis. Due to the cross-sectional nature of our data, caution must be exercised about inferring causal relationships.

### **Conclusion**

Various attempts have been made to explain the phenomenon of psychogenic somatic complaints. Result of the present study tends to suggest a strong association between stressful life experience and somatic complaints in adults. Conditions that threaten the capabilities of a person may lead to disturbances in the biologic system that then produces the symptoms of somatisation. Moreover, men and women with similar life experiences are likely to experience somatisation, irrespective of gender. The results of the study also showed that age significantly predicted somatic complaints among adults. Somatisation may be viewed as the body's reaction to protracted stressful experience and should be managed as a stress disorder.

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### Indexing

