SOCIO-DEMOGRAPHICS, LIFE EVENT STRESSORS AND PSYCHOSOMATIC DISORDERS AMONG PUBLIC SERVANTS IN THE NIGER DELTA REGION OF NIGERIA

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Abstract

This study aimed at relating socio-demographics of people and their life event stressors to psychosomatic disorders or symptoms they have experienced or suffered during their day-to-day living. The respondents were 1,631 public servants systematically sampled in Nigeria's oil-rich Niger-Delta region consisting of nine out of the thirty-six states in Nigeria. Their socio-demographics included sex, age, residence, marital status, educational and economic status. Two measuring psychometric tools used were Holmes and Rahe's Life Event Inventory (modified) and Omoluabi's Psychophysiological symptoms checklist. The data generated were statistically analyzed using the Statistical Package for Social Sciences version 11. The result show that stressors do cause somatic symptoms (males, $r = 0.61$ $P < 0.05$: Females, $r = 0.81$ $P < 0.05$: Age = $R^2 = 0.76$, $P < 0.05$; Residence = $t = 13.64$, $P < 0.05$; Marital status = $R^2 = 0.67$, $P < 0.05$; and Economic status, $R^2 = 0.69$, $P < 0.05$). It was concluded that therapeutic

measures should be anchored on socio-demographics in order to alleviate or eliminate psychosomatic disorders.

Introduction

> *When you have an upset stomach or bad headache during 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 and WhitBourne, 2000: 219).

Although the connection between mind and body as stated above seems simple on the surface, it is more complex than we might think. 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, but stress that is persistent and too intense can have destructive physiological and psychological effects, resulting to psychosomatic disorders.

In psychosomatic disorders, the usual reversible autonomic and hormonal response to stressors can cause irreversible tissue damage, which results to psychosomatic illness. Psychosomatic illness present in several somatoform, such as pruritis (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.

Psychosomatic disorders are real diseases involving damage to the human body (Agoha and Ilobi, 2008). The fact that because these forms of disorders are sometimes caused or

accelerated by social and psychological problems does not make the disorders imaginary as generally perceived by the naive public. People do die from socially or emotionally induced high blood pressure or commit suicide by a psychologically produced impotence, as from other diseases produced by infection, like tuberculosis or physical injury damage to the brain from an automobile accident. In contemporary times, physical diseases could be produced in laboratory animals, which were exposed to severe stress. The diseases, like ulcer and hypertension, have been studied and known to correlate positively with stress (Holmes and Rahe, 1967; Cobb, 1974).

Statement of the Problem

In Nigerian society today, times are very hard (Afolabi, 2005) particularly due to the global credit crunch. Many people are suffering from various stressors either within their work places or outside the formal work environment (Weich and Lewis, 1998). These can result to 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.

In Nigeria, as in most African cultures, these psychosomatic illnesses are usually perceived as physical illness due to their link to etiological factors of supernatural and preternatural beliefs. However, in the Niger Delta region of Nigeria, no study has been conducted into this topic, especially socio-demographic differences in reactions to stressors, like loss of job, poverty, loss of a loved one, displacement due to ethnic conflicts or insecurity, or traffic jams.

This study is aimed at finding out the differences in reaction to stressors among Nigerians with varied socio-demographics. Upon this objective, it is believed that knowledge

of these differences in symptoms and illnesses will put individuals in good position to manage their health cum lifestyles. Secondly, it will enhance the formulation of policies for successful therapeutic processes by health care providers in health institutions in Nigeria.

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, such as in or out of formal work places, loss of job, facing a disciplinary panel, or working under unmotivated conditions, or working under a dictatorial or authoritarian boss, or high cost of living that are incongruous with income paid public servants, consequently resulting to low standard of living, high wave of armed robbery, ever increasing rate of graduate unemployment in the midst of wealth from the crude oil exports *paripasu* the political class economic loot and spend spree on ostentatious goods and services (Udonwa *et al*, 2004; Majoroh and Ewhrudjakpor, 2008b; Ewhrudjakpor, 2008e)

Holmes and Rahe (1967) defined Life events as changes in a person's day-to-day life, which impose varying degrees of stress. 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 taking place in one's life may be causing some impairable harm (Adomakoh, 1975; Onyeizugbo, 2008). These can stem from factors beyond one's control, such as the death of a close relative, detention in jail or indeed material poverty.

For instance, depression, rather than aggression, is the female response to disappointment or loss of a loved one (Chester, 1994). Prostitution, rather than sorrow, is the female responses to communal conflict (Ewhrudjakpor, 1996b; Majoroh and Ewhrudjakpor, 2004; Ewhrudjakpor, and Ogege, 2008). It has been observed that males are psychologically disturbed as females, but their reactions differ. Chester (1994: 38) argued thus:

> *There is no greater magnitude of social stress impinging on one or the other sex. Rather (each sex) tends to live a different style with which it reacts to whatever fact has produced the psychosomatic disorder.*

In fact (Chester, 1994; Rose, 1996; Okpowo, 2002) observed that women become 'depressed' long before menopausal chemistry becomes the explanation for the disease. Psychosomatic disorders are reactions of the body in which socio-psychological factors play a causative role. Lazarus (1966), whose views are much determined by psychoanalyses, defined psychosomatic disorders as a bodily disorder whose nature can be appreciated only when emotional disturbances (life events) are investigated, in addition to physical disturbances (Physiological or somatic strains).

This study is, therefore, aimed at verifying the stated objective that there is no significant difference amongst Nigerians' socio-demographics perceived life event stressors and psychosomatic disorders.

Study Area

The Niger Delta region of Nigeria is densely populated. It was the British Oil Rivers Protectorate from 1885 until 1893, when it was expanded and became the Niger coast protectorate.

The Niger Delta region, as now defined officially by the Nigerian Government covers about 70,000 km^2 and makes up 7.5% of Nigeria's land mass. Historically and cartographically, it consists of present day Bayelsa, Delta and Rivers states. In the year 2000, however, it was extended to include Abia, Akwa Ibom, Cross River, Edo, Imo and Ondo States. These states have a census figure of 27,304,367 out of Nigeria's total census figure of 140,003,542 (*Daily Champion*, 2007).

The Niger Delta region of Nigeria is Africa's biggest producer of petroleum. Some 2 million barrels are daily extracted, accounting for about 85% of the nation's revenue. This "blessing" has become a "curse" for the people of this region. They suffer environmental devastation, economic poverty, and constant conflict, resulting to both physical diseases and psychosomatic illnesses. To make matters even worse, political considerations and greed on the part of a corrupt government have kept many of the earnings from these vast reserves from returning to the Niger Delta to help restore normal health and economic conditions (Ewhrudjakpor and Ogege, 2008)

Specific-Reaction Theory

Health researchers have argued that there are differences, probably genetically determined, in the ways people of varied demographics respond to stress. People have been found to have their own particular patterns of autonomic response to stress. The heart rate of one individual may increase, whereas another person may react with increased respiration rate but no change in frequency of heartbeats (Lacey, 1967). Thus, individuals respond to stress in their own idiosyncratic manner, and the physiological system that is the most responsive may be a likely 'actor' for the locus of a subsequent psychosomatic activity (Kobasa and Puccetti, 1983). An individual reacting to stress with considerable secretion of stomach acid may be more vulnerable to ulcers, if underfed, than someone that is well fed. Also, someone reacting to stress with blood pressure elevation may be more susceptible to hypertension, if he is rich, than someone living under the poverty line. This theory shall serve as 'anchor' in the discussion of findings after statistical analysis of data in this study.

Sample and Sampling technique

Representatives of public service based surveys of staff aged 20 to 75 years were systematically drawn from State Ministries and parastatals to conduct this study between 2007 and 2008 in the Niger Delta region of Nigeria. 1,800 respondents were sampled using the multi-stage sampling technique. They originally include equal number of males (900) and females (900), with varied other socio-demographic characteristics. But, after distribution and retrieval of the filled out instruments, only 1,631 (90.61%) were clean and completely filled out for analysis.

Instruments

Two psychometric instruments used to gather data from respondents were Life Events Inventory (LEI) originally developed by Holmes and Rahe (1967), and Psychophysiological symptoms checklist (PSC) originally developed by Omoluabi (1982).

Validity and Reliability of Instruments

Life Events Inventory (LEI): This inventory consists of 43 items. Each item describes an event that often occurs in cause of one's day-to-day activities. Before its use here, the items were modified in a number of ways to make it suitable for the Nigerian culture and people. For instance, items or words were simplified. Thus, "fired from job" was changed to "loss of work." "Mortgage over $10,000" and "foreclosure of mortgage or loan" were deleted entirely. "Death of spouse" was changed to "death of wife/husband." Also, items peculiar to Nigeria were added to the list. Example is "trapped in traffic jam." This inventory constituted life events evaluation and recent life events**.**

Psychophysiological symptoms checklist (PSC): It contains 56 items. The items are common health complaints. This checklist

was modified by including ratings for each item. The items were rated from, "did not have it" to "very severe", scaled as (0-5).

A separate pilot test of the instruments, LEI and PSC, provided test–retest reliability. The higher a subject scores, the more stressful he perceived the life events. A construct validation yielded a modest validity scores of LEI ($t = 6.09$; $df\ 48\ p < .01$) and PSC ($t = 5.96$; $df\ 48$, $p < .01$). Kappa reliabilities in items ranged from 0.69 to 0.76 because the instruments did not yield a total score.

Procedure

The research instruments, LEI and PSC, were administered on 1,631 people, representing 90.61% of the originally distributed sampled 1,800 both males and females. The two instruments were given to each of the 1,631 sampled civil servants through research assistants who reside in these nine states in the Niger Delta region of Nigeria. The research assistants were briefed on instrument administration and ethical issues in health research. They administered and retrieved the filled out materials, which were collated for data analysis.

LEI was rated from 'very seriously' to 'No effect' with a least score of O for no effect and maximum score of 5 for 'very seriously'. The scores circled in all the items were summed up to constitute a total score for the life events inventory (LEI**).** The scoring of PSC is similar to that of the LEI. However, in this case, there was a least score of zero (0) indicating 'did not have it' and a highest score of '5' to indicate 'very severely affected'. The circled numbers in each of all the complaints were added up to constitute the individuals total score for psychophysiological symptoms. The higher a person scores, the more seriously he was affected by psychosomatic disorders.

Data from the survey were coded and entered into a computer using the SPSS version 11 software. Simple percentages,

Multiple Regression, Pearson product-moment correlation analyses and T-test were computed to establish relationship among socio-demographics. Relationships between relevant socio-demographic and psychosomatic symptoms or diseases were assessed. The relationships were reported, if they were statistically significant at $P < 0.05$, due to the vagaries of human nature and generally accepted in the social science research.

Results

Table 7.1*: Public servants, Socio-demographics impact on Life Event stressors as determinant of Psychosomatic symptoms/ disorders (N = 1631).*

Characteristics	**N**	**%**	**LEI**	**PSC**	**Sig.**
p<0.05					
Sex					
Male	908	55.67	1816	4540	r = 0.61
Female	723	44.33	2892	36.5	r = 0.81
Age					
25<35	623	38.2	1246	1557.5	
35<45	435	26.73	872	1308	R^2 = 0.65
45<55	322	19.74	966	3864	P<0.05
55<65	148	9.07	592	444	
65<75	102	6.25	204	255	
Residence					
Rural	323	19.8	1292		t = 13.62
Urban	1308	80.2	1962		P<0.05
Marital status					
Never married	815	49.97	1222.5	815	
Married	605	37.1	2420	3025	R^2 = 0.63
Divorced	139	8.52	417	347.5	P<0.05
Widowed	72	4.41	360	288	
Educational status					
Primary	947	58.06	1894	1420.5	
Post-primary	446	27.34	1115	1338	R^2 = 0.67
Tertiary	238	14.6	714	952	P<0.05
Monthly income					
N5,000<N25,000	725	44.45	1087.5	1450	
N25,000<N45,000	432	26.48	864	648	
N45,000<N65,000	215	13.18	537.5	537.5	R^2 = 0.69
N65,000<N85,000	106	6.5	318	371	P<0.05
N85,000<N105,000	86	5.27	344	387	
≥N105,000	67	4.12	268	301.5	

Source: Fieldwork, 2007/2008

Discussion

Stress refers to the unpleasant psychological reaction a person has when he or she perceives an event to be threatening. This psychological reaction may include heightened physiological arousal due to increased reactivity of the sympathetic nervous system. This is measured here by the Psychophysiological symptoms checklist, PSC (Omoluabi's, 1982). The stressor is the event itself, which is measured here by life event inventory (Holmes and Rahe 1967). When a person experiences stress, he or she will likely try to reduce this unpleasant emotion. Making an effort to reduce stress is called coping. It is when coping is unsuccessful, and the stress does not subside, that the individual may seek clinical attention for medical or psychological problems that have developed as a consequence of the constant physiological arousal caused by chronically persistent stressors.

Stressful life events clearly play a role in illness (Selye, 1974; Omoluabi, 1982; Majoroh and Ewhrudjakpor, 2004; Agoha and Ilobi; 2008). But, they do so in interaction with socio-demographic characteristics of the individual (pre-existing susceptibilities toward certain disorders). Table 7.1 shows the impact of socio-demographics on life event stressors as they determine psychosomatic symptoms or diseases.

The effect of gender, using the Parson's product-moment correlation, is that males modestly reacts to life event stressors with PSC weighted score of 4,540 resulting to correlation value of ($r = 0.61$, $P < 0.05$, unlike females with PSC weighted score of 3,615 but a high correlation value of ($r = 0.81$, $P < 0.05$). This result corroborates earlier studies (Chester, 1994; Rose, 1996; Onyeizugbo, 2008). Females are physiologically more susceptible than males in reacting to psychological stressors, such as death of a loved one, collapse of courtship and several other stressful events. However, this does not mean that every single item in the Holmes and Rahe LEI have females reacting more than males. For some

items, such as loss of job, males physiologically react more than females. This result can also be situated in the Specific-Reaction theory, which argues that differences exist genetically in the ways sexes respond to life event stressors. Thus, for (Lacey, 1967), males respond differently from females to stressors in their own idiosyncratic way. This theory is supported by the concept of Hardiness, which states:

> *As a constellation of three clinical personality characteristics - commitment, control, and challenge ….. persons high in hardiness easily commit themselves to what they are doing (rather than feeling alienated), generally believe that they can at least partially control events (rather than feeling powerless), and regard change to be a normal challenge or impact to development (rather than a threat)* (Kobasa and Puccetti, 1983: 840).

This clearly reminds one of the biological masculinity and femininity of males and females respectively in the physiological attributes to withstand and relatively sustain stressors as they occur in daily life. Being female is reported to be a risk factor for common psychosomatic disorders (Chester, 1994 Majoroh and Ewhrudjakpor, 2004).

Also, the Multiple Regression analysis conducted on the data based on chronological age distribution and responses to the LEI and PSC show that age positively impacts on LEI to produce PSC (R^2=0.65, P<0.05), where the strongest effect is from age bracket (35<55 years) with partial correlation of (R=0.76, P<0.05). This result supports the fact that youths in this region are reckless and careless with life events, hence they engage in risky ventures, like hostage taking, cultism, prostitution and brigandage (Okpowo, 2002; Afolabi, 2005; Ewhrudjakpor and Ogege, 2008). In contrast,

the elderly people above 65 years have gone through their own LEI and PSC, have literally seen life with its ups and downs, and so are hardly perturbed by the vicissitudes of daily activities. This, of course, is not true of ages 35 and less than 55, the prime of life, building career and family, planning retirements. Stressors during this period ignite somatic symptoms, and, if not properly handled, results to psychosomatic disorders.

The place of residence, that is, whether one lives in a rural settlement or urban town, does facilitate the impact of stressors on somatic symptoms. Rural slums or urban overcrowding has been said to be stressors on residents and do result to reactions, such as depression (Majoroh and Ewhrudjakpor, 2004). This present study corroborates that fact with its T-test result of $t = 13.64$, $P<0.05$. This shows that urbanization impacts stressors on people who subsequently experience negative somatic symptoms.

Marital status of people does impact on their mental and physical health. Sometimes, when it persists, it results to psychosomatic disorders. This, according to previous studies (Adomakoh, 1975; Onyeizugbo, 2008), is expected due to differential rate of daily pressures and role conflicts, for example, working wives or husbands and people who are single. Again, widow or widower does bear alone earlier shared responsibilities, which subsequently stress them, and, if not managed carefully, results to psychosomatic disorder. The result in this present study supports this fact ($R^2=0.63$; $P<0.05$). This modest Multiple Regression coefficient indicates that other extraneous variables contained in the concept of hardiness do moderate the impact of marital status as stressors leading to psychosomatic disorders.

Education is learning throughout life better ways of doing things or living. Therefore, the educational status of people does facilitate or defacilitate their coping with stressors in order to avoid discomfort. The more educated a person is, the better he or she will manage living. This present study reveals this hunch through the

Multiple Regression analysis (R^2=0.67; P<0.05), that is to say, respondents (238 or 14.60%) of the study sample had LEI weight score of 714 and a positively correlated weighted score for PSC as 952, which is significant against LEI and PSC weighted scores from respondents with primary or post primary educational status. Finally education prevents access to most professional jobs, increases vulnerability and contributes to a prevalence of mental disorders. This confirmed earlier studies (Adomakoh, 1975; Afolabi, 2005; Ewhrudjakpor, 1996b). .

Furthermore, the economic status of people has huge impact on mental, physical and social aspects of their life. Studies (Omoluabi, 1982; Cobb, 1974; Majoroh and Ewhudjakpor 2004; Ewhudjakpor, 2008e; Weich and Lewis, 1998) discovered that poverty, economic poverty brings along with it a lack of opportunity, reduced availability and accessibility to resources and a greater likelihood of experiencing difficult events. The resultant distress may manifest in a variety of presentations, including emotional status, such as low mood and sadness, frustration and regrets, and, if not properly managed, can lead to psychosomatic disorders because many individuals may have physical symptoms for which there is no identifiable organic cause. Poverty, acting through economic stressors, such as unemployment, is more likely to precede mental illnesses, such as depression, thus, making it a significant risk factor.

This present study findings support this economic link to correlate positively with psychosomatic disorder, that is, poverty does impact negatively on people to produce somatic symptoms (R^2=0.69; P<0.05). This finding, corroborated by earlier studies (Lazarus, 1966; Omoluabi, 1982; Weich and Lewis, 1998). Unemployed persons and those who fail to gain employment have more depressive symptoms than people who find a job. Further, employed persons who have lost their jobs are twice as likely to be depressed as persons who retain their jobs. Also, high economic

status people, who lost their jobs are twice as likely to be depressed than low economic status people. This also can be situated in the Specific Reaction model, where loss of job or poverty subsequently leads to depression, and, if not cared for, results to severe psychosomatic disorder.

Conclusion

The relationship between stressors and psychosomatic disorders is complicated by the vagaries of human nature and difficulties in the measurement of psychosomatic symptoms. However, past studies have attempted to find this link between 'Mind and Body'. The present study looked at Socio-demographics differential impacts and stressors to bring about psychosomatic disorders, if the stressor and somatic symptoms persist. The finding in this study that socio-demographic characteristics (sex, age, residence, marital status, educational and economic status) do significantly pose as effective facilitators for stressors to bring somatic systems on individuals corroborates previous studies. Against this background therapeutic measures should be anchored on socio-demographics in order to alleviate or eliminate sufferers' pain from psychosomatic disorders.

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