ANALYSIS OF OCCUPATIONAL STRESS AS RELATED TO SOME PSYCHOSOCIAL AND CAREER VARIABLES OF NIGERIAN UNIVERSITY TEACHERS.

BY

ERNEST IFEANYI ACHALU

B.Sc. (Hons) Zoology, (Alabama A & M University),

M.Sc. Medical Physiology, (Southern Illinois University).

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ABSTRACT

This study investigated occupational stress as related to psychosocial variables of job satisfaction and psychological well-being of teachers in the first generation Nigerian Universities. Also the study assessed the differences in occupational stress experienced by the teachers with respect to career variables such job status and years of teaching experience as well as biographical characteristics namely, age and sex. The research method was a cross-sectional survey design. Cluster sampling technique was used to select teachers in the first generation Nigerian universities. A total of 300 university teachers responded to the Teacher Stress and Job Satisfaction Questionnaire as well as the General Health Questionnaire. Descriptive statistics were used to summarise the data. Multiple regression, chi-square, t-test and Analysis of Variance (ANOVA) were used to test the hypotheses at .05 level of significance. Scheffe post-hoc test was used to detect differences among groups where ANOVA was found significant.

The results show that an overwhelming majority of the teachers (67.0%) were experiencing moderate levels of occupational stress while 15.0% and 18.0% were experiencing low and high levels of stress respectively. Despite this, 97.0% of the teachers reported moderate to high levels of job satisfaction with only 3.0% reporting low job satisfaction. Also a majority of the teachers (94.0%) reported

moderate to high levels of psychological well-being. The reason for the findings are not clear, but it could be that the teachers have learnt to cope with the stressors encountered in the course of their work. Possibly, it could that the reported high levels of job satisfaction may have helped to moderate or reduce the impact of stress on the teachers' health.

Regression analysis revealed a positive and significant relationship between occupational stress and job dissatisfaction ($r = .43$; $P < .001$); between occupational stress and psychological symptoms ($r = .35$; $P < .001$); and between job dissatisfaction and psychological symptoms ($r = .45$; $P < .001$). These findings are consistent with previous studies on teacher stress. Furthermore, there were no significant differences in total occupational stress levels with respect to age, sex and years of teaching experience. However, there was a significant difference in stress levels experienced by the teachers with respect to job status. Professors and Readers reported the lowest levels of stress followed by Senior Lecturers with junior lecturers experiencing the most stress.

The study identified the major sources of occupational stress among the Nigerian university teachers. Shortage of teaching materials, poor working conditions, heavy workload, time pressure, overcrowded classrooms, low salary and unfavourable conditions of service ranked accordingly as the most significant causes of stress.

Finally, the present study indicated that occupational stress, job satisfaction and psychological health are closely related and that greater stress leads to low job satisfaction and some degree of psychological dysfunction. Thus occupational stress has negative effects on teachers' health and well-being. Moreover the results support the view in literature that teaching is a satisfying but a demanding and stressful occupation.

Based on the findings of this study recommendations were made on how to reduce occupational stress and improve the health and quality of life of university teachers.

DEDICATION

TO

My brothers, Dr. O.E. Achalu

Mr. Simon C. Achalu and Nelly E. Achalu.

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CERTIFICATION

I certify that this project was carried out by Mr. **Ernest Ifeanyi ACHALU** in the Department of Physical and Health Education, University of Ibadan under my supervision.

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Supervisor
Professor C. O. Udoh,
Ph.D. (Ohio State),
M.A., B.S. (West Michigan),
D.L.C. (Loughborough),
SCPE, CPE (Nottingham).

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CHAPTER ONE

INTRODUCTION

Although much is known about stress there is no consensus or agreement as to the definition of the term "stress" among scientists. According to Gatley (1981) "stress is easy enough to recognize but it is very difficult to define satisfactorily". Researchers and theorists do not agree on a definition of stress, perhaps for a good reason; stress seems to be a highly subjective construct (Barnwell, Hoffman and Koch, 1982). The term "stress" has been defined differently by different people because of the complex nature of stress itself. The pioneering work of Hans Selye on various species of experimental animals in 1936 led to understanding of the link between stress and illness. Selye described stress as the "wear and tear of the body" and later as "the nonspecific response of the body to any demand" (Selye, 1982).

Ohaeri and Odejide (1991) defined stress as "the biological response to events that threaten to overwhelm the individual's capacity to cope satisfactorily in the environment". Moreover, psychosocial stress has been defined as:

> a particular relationship between a person and the environment that is exceeding his or her resources and endangering his or her well-being. (Green, Duthie, Young and Peters, 1990 p. 1154).

A similar definition given by Lazarus (1966) considered stress as a psychological process; an internal state of the individual who perceives threats to his or her physical or psychological well-being (cited in Krantz and Raisen, 1988).

The basic feature of these definitions is that the perception of a threat is the key to whether a person experiences stress or not. However, the perception of stress varies considerably from person to person and that is why what is considered stressful by an individual may not be stressful to another - "one man's meat is another man's poison".

Stress is an unavoidable aspect of human existence. Stressors are omnipotent in human existence (Antonovsky, 1979). Stressors are found everywhere including home, work and social environments. Stress affects everyone regardless of age, sex, race or social status. Stressors are events, people, thoughts, things or any stimulus that causes stress. Negative life events are common causes of stress.

However, it is important to note that not all stressors are bad. Stress can have both positive and negative effects. As a matter of fact, some amount of stress is essential for human survival, adaptation, growth and development. For example, mild or moderate amount of stress can be stimulating or motivating while too little or too much stress can lead to tension, anxiety, strains and health problems.

Gatley (1981) stated that stress is not in itself inherently harmful and may even be beneficial and only when it becomes excessive for a particular individual is strain caused.

The link between the mind and body is well known as well as the link between emotional stress and health (Achalu, 1993a). The role of psychosocial and physical stress in the etiology of a variety of illnesses such as cancer, allergy, arthritis and infectious diseases has been emphasized (Dubey, Staunton, Yunis, 1982). According to Friedman and Booth-Kewley, (1987), regardless of the direction of causality, there is a strong evidence of a reliable association between illness and psychological distress. An example of this is the immediate bodily responses such as fainting or nausea in response to the sight of blood or mutilation. There is no question that emotional states such as fear or joy can elicit a physical reaction while physical events can elicit emotional responses in humans. The evidence is quite strong that in a large number of diseases, stressors appear as statistically significant risk factors (Antonovsky, 1979).

The preceding discussion was intended to introduce the concept of stress and to clarify the nature of general stressors and their role in health and diseases. The present study focuses on the problem of occupational stress and its relationship to job satisfaction, psychological well-being and selected biographical characteristics of Nigerian University teachers. Occupational stress is a serious hazard

that can have adverse consequences for the workers health and well-being.

There is evidence of the role of work stress in causing overt disturbances such as psychophysiological symptoms and heightened susceptibility to physical illness (World Health Organization [WHO], 1980). Also Levi (1990), stated that there is a little but increasing evidence of a causal relationship between work-related psychosocial stressors and the incidence and prevalence of occupational morbidity and mortality. The dearth of information on occupational stress among workers in the developing countries suggests the need for research in this area (Achalu, 1993a).

Like general stress, there is no consensus as to the definition of occupational stress. However, occupational stress can be defined here as the physiological or psychological response to negative psychosocial or environmental factors at work that is perceived as taxing, disturbing or threatening to an individual's health or well-being. Occupational stressors refer to potentially disturbing or threatening psychosocial or environmental factors at work.

The major sources of occupational stress are well documented (Cooper, 1987; Davidson and Cooper, 1981; Cooper and Marshall, 1978). Some of these include factors intrinsic to the job such as poor working conditions, shift work, work overload or underload and physical danger. Other stressors are related to unclear and conflicting

job demands (role ambiguity and role conflict), low salaries and wages, problems of under-promotion or over-promotion, relationships with coworkers, and organisational structure and climate. These occupational stressors have been linked to physical problems such as headaches, exhaustion, pains and sleeplessness; psychological problems such as job dissatisfaction, anxiety, depression and behavioural responses such as smoking, alcohol use and drug abuse.

Occupational stress, job satisfaction and mental health (psychological well-being) are closely related. A number of studies have indicated a negative relationship between occupational stress and job satisfaction, and between stress and mental health (Kasl, 1978). Job satisfaction is the degree of satisfaction or happiness derived from one's job or work. The major dimensions of job satisfaction have been identified in the literature (Cross, 1973; Kasl, 1978). These included employees attitude towards the company or organization, and its policies, pay and salary, opportunities for promotion and fairness of the promotional system, relationship with work-mates and immediate superior and of course the job itself.

Similarly, mental or psychological health is related to conditions at work. There is empirical evidence suggesting link from various aspects of the work environment to mental health (Kasl, 1978). Poor mental health is related to unpleasant work conditions, lack of use of skills and abilities, perception of job as uninteresting,

poor wages and salaries, unclear conflicting job demands among others. From the discussion so far it is clear that occupational stress, job satisfaction and mental or psychological well-being are closely related to each other.

The main purpose of the present study is to investigate occupational stress and its relationship to job satisfaction, psychological well-being as well as career and biographical variables of Nigerian University teachers. Teaching has been documented as one of a number of high stress occupations. The major sources of teacher stress and job dissatisfaction have been identified (Rudd and Wiseman, 1962; Kyriacou and Sutcliffe, 1977; Needle, Griffin, Svendsen and Berney, 1980). These include, heavy work load, time pressures, low salaries, large classes, poor working conditions, problem with students, staff conflicts, inadequate buildings and facilities.

Psychosocial stress is an occupational health hazard with adverse consequences for the teachers' health and career (Needle, Griffin, Svendsen and Berney, 1980). A number of studies have investigated the relationship between stress, job satisfaction and health status of teachers at various levels of education in advanced countries (Mark, Pierce, and Molloy, 1990; Needle, Griffin and Svendsen, 1981; Kyriacou and Sutcliffe, 1979). Teachers experiencing greater stress were found to have more somatic symptoms, poorer

physical health, high anxiety and psychological difficulties, low job satisfaction and psychological well-being. These studies clearly indicate that teachers' health and well-being as well as job satisfaction are adversely affected by stress. Thus teacher stress can have negative effects on the attainment of educational goal and objectives.

The problem however, is that while a great deal of research have been conducted in the area of occupational stress and its relationship to physical and mental health in the advanced countries, there is a dearth of research in this important area among African workers, Nigeria inclusive. There is no doubt that occupational stress is a major health hazard facing teachers all over the world. Nigeria may not be an exception. Nigerian universities have been faced with many problems ranging from low salaries to lack of adequate facilities and poor working conditions that have resulted in trade disputes, frequent strikes and university closures. These factors are potential causes of stress and could lead to job dissatisfaction and consequently influence the teacher's health and well-being.

Ajayi (1981) in a survey of Nigerian University teachers reported a low job satisfaction and commitment among the teachers. Also Mbachu (1986) identified work-related stress as the most important source of stress among teachers at the University of Ibadan compared with other categories of stressors. Thus the low job satisfaction and

commitment reported among Nigerian University teachers by Ajayi (1981) may be related to occupational stress.

Therefore the main purpose of the present study is to investigate occupational stress and its relationship to psychosocial variables of job satisfaction and psychological well-being as well as biographical characteristics such as age, sex and career variables of job status and years of teaching experience of teachers in the first generation universities. Also the relationship between occupational stress, career and biographical characteristics of the teachers were examined in the present study because an individual's experiential background, knowledge, sex, age and status affect the perception of stress and moderate one's response to stress. There is no doubt that extensive research is needed in the area of teacher stress which has so far received only a limited attention. According to Achalu (1993a) certainly more research is needed to identify the potential causes and consequences of occupational stress among Nigerian workers.

Statement of the Problem

The major problem of the study was to investigate occupational stress and its relationship to job satisfaction and psychological well-being of teachers in the first generation Nigerian universities and also to determine whether there would be differences in total occupational stress experienced by the teachers with respect to biographical

characteristics such as age, sex, and career variables of job status and years of teaching experience.

Sub-problems:

This study attempted to provide answers to the following questions:-

1. Would there be a difference in the levels of occupational stress experienced by university teachers?
2. Would there be a difference in the levels of job satisfaction experienced by the university teachers?
3. Would there be a difference in the levels of psychological well-being experienced by the university teachers?
4. Would there be a relationship between levels of occupational stress and job satisfaction among the university teachers?
5. Would there be a relationship between levels of occupational stress and psychological well-being experienced by the university teachers?
6. Would there be a relationship between levels of job satisfaction and psychological well-being experienced by the university teachers?
7. Would there be a difference in the total level of occupational stress experienced by the male and female university teachers?

8. Would there be a difference in the total level of occupational stress experienced by the younger and older university teachers?
9. Would there be a difference in the total level of occupational stress experienced by the university teachers with respect to the years of teaching experience?.
10. Would there be a difference in the total level of occupational stress with respect to position or job status?

Hypothesis

The main hypothesis of this study is that there would be no significant relationships between levels of occupational stress, job satisfaction and psychological well-being among Nigerian university teachers and also there would be no significant difference in the total occupational stress levels experienced by the university teachers with respect to biographical characteristics namely sex, age, and career variables of job status and the years of teaching experience.

Sub-hypotheses

The following specific sub-hypothesis were tested at .05 level of significant:-

1. There would be no significant difference in the levels of occupational stress experienced by the university teachers.

2. There would be no significant difference in the levels of job satisfaction experienced by the university teachers.
3. There would be no significant difference in the levels of psychological well-being experienced by the university teachers.
4. There would be no significant relationship between levels of occupational stress and job satisfaction experienced by the university teachers.
5. There would be no significant relationship between the levels of occupational stress and psychological well-being experienced by the university teachers.
6. There would be no significant relationship between the levels of job satisfaction and psychological well-being experienced by the university teachers.
7. There would be no significant difference in the total occupational stress levels experienced by the male and female university teachers.
8. There would be no significant difference in the total occupational stress levels experienced by the younger and older university teachers.
9. There would be no significant difference in the total occupational stress levels experienced by the university teachers with respect to the years of teaching experience.

10. There would be no significant difference in the total occupational stress levels experienced by the university teachers with respect to job status.

Delimitations of the study

This study was delimited to the following:-

1. The teaching staff of the randomly selected faculties in the first generation Nigerian universities.
2. The use of self-administered questionnaire as the instrument for data collection.
3. Occupational stress, job satisfaction, psychological health measures and selected biographical and career variables (age, sex, job status and years of teaching experience)
4. The use of Statistical Package for the Social Sciences (SPSS). The statistical analysis involved descriptive statistical measures such as means, and standard deviation, frequencies and percentage. Chi-square statistics were used for categorical data analysis, while *t*-test and Analysis of Variance (ANOVA) were used to test difference between means of different groups. Multiple regression was used to test associations among the study variables.
5. The analysis involving biographical and career variables were based on the overall or total stress scores only.

Limitations of the study

This study was limited by the following factors:

1. Response bias which is a major limitation inherent in any survey involving questionnaires. Subjects may not have given true or honest response and this can affect the validity of the study. However, subjects were instructed to complete the questionnaire anonymously in order to minimise response bias.
2. Secondly the results of the study were dependent on self-reported data which is essentially the teachers perception about themselves, and the work environment. However, the study is primarily descriptive and does not imply any cause and effect relationship.
3. Lastly, the extent to which other forms of stress influence the respondents perception of occupational stress cannot be accounted for. The researcher recognises the presumed interaction among various stressors in life. This is why the research instrument has been specifically designed to measure work-related psychosocial stress.

Significance of the Study

The study is significant because there is a limited research in occupational stress as a field of scientific inquiry among Nigerian scholars. Few of the available studies focus on sources of stress, job satisfaction and commitment among university teachers (Mbachu, 1986; Ajayi, 1981). The reported low job satisfaction and commitment among Nigerian university teachers may be related in fact to occupational stress.

Unfortunately, there appears to be a limited study on the relationship between occupational stress and employee health among Nigerian workers including teachers. According to the World Health Organisation (1980), there is limited data on occupational health problems particularly in less developed countries. It is this gap in literature that the study intends to fill. It would add to the limited literature on occupational stress and teacher stress in particular.

In addition this study would contribute to improved awareness and understanding of the adverse effects of occupational stress and provide empirical evidence of its relationship to job satisfaction and well-being. Also the study identified the major sources of occupational stress and job dissatisfaction among Nigerian university teachers with a view to profering solution. Based on the findings of the study, suggestions and recommendation would made on how to

prevent or alleviate occupation stress and improve job satisfaction as well as health and well-being of Nigerian university teachers.

The data collection instrument (JSJSQ) developed in this study has adequate reliability and validity and can be adopted to study occupational stress among other categories of workers. Finally it is hoped that this study will provoke exciting research on the causes, consequences, prevention and management of occupational stress by other researchers.

Definition of Terms

For the purpose of this study the following terms are defined:

1. ***Biographical characteristics*** refers to personal information such as age, sex.
2. ***Career varailables*** refer to job status and years of teaching experience.
3. ***First-generation universities*** refer to the first set of universities established in Nigeria between 1948 and 1962.
4. ***Job Satisfaction*** refers to the individuals perceived satisfaction from one's job.
5. ***Occupational stress*** is used synonymously with job stress or work stress. They refer to a physiological or psychological response to negative psychological or environmental factors at

work perceived as taxing or disturbing and threatening to an individual's health or well-being.

6. ***Occupational stressor*** refers to potentially disturbing psychological or environmental factor at work perceived by the individual as stressful or threatening to his or her well-being.

7. ***Psychological well-being (health)*** status refers to the presence or absence of symptoms or psychological distress as measured by the General Health Questionnaire developed by Goldberg (1972). The term is used synonymously with psychological well-being or mental health.

8. ***Psychosocial variables*** refer to factors related to job satisfaction and psychological well-being.

9. ***Job Status*** refers to classification of the university teachers according to position or rank in the university.

10. ***Teacher stress*** refers to a response of negative affect by a teacher usually accompanied by potentially pathogenic and biochemical changes resulting from aspects of the teacher's job and mediated by the perception that the demands made upon the teacher constitutes a threat to himself or well-being. (Kyriacou and Sutcliffe, 1978).

11. ***Total Occupational stress*** refers to the overall occupational stress measure or score from both the Teacher Stress Inventory (TSI) and the Job Satisfaction Questionnaire (JSQ).

CHAPTER TWO

REVIEW OF LITERATURE

The main purpose of this study was to investigate occupational stress and its relationship to job satisfaction and psychological well-being of teachers in first generation Nigerian Universities. This chapter provides a review of the concept of stress, the theoretical frame work and the basis for understanding the stress-illness relationship and the role of occupational stress in the development of employee ill health. The major topics of the review are organized and highlighted as follows:

1. The concept of stress.
2. The mechanism of stress
3. The General Adaptation Syndrome (GAS)
4. Stress-illness Relationship
5. The Concept of psychosomatic Diseases
6. Occupational Stress
7. Sources of Occupational Stress
8. Work stress and Health
9. Manifestations of stress
10. Prevention and Stress Management Strategies
11. Teacher stress

12. Sources of Teacher Stress
13. Consequence of Teacher Stress
14. Teacher stress and Job Satisfaction
15. Stress, job satisfaction and Biographical Characteristics

THE CONCEPT OF STRESS

Although stress is easy to recognize it is very difficult to define. According to Rogers (1982), the term "stress" is widely used but unfortunately with variable meanings. Some have used it to mean a noxious and threatening stimulus, others such as Selye, have used it to mean response of organism to such a stimulus, either physiologically, psychologically or both. Although stress has become some sort of key word for professionals and laymen alike, it is a poorly defined phenomenon (Lolas, 1982).

The medical concept of stress has been borrowed from physics and engineering, that is applying a deforming force to a material and creating a state of tension within it (Gatley, 1981), According to him, stress is not in itself harmful to the material in question but it may cause the development of strains which are harmful. Gatley (1981), further stated that stress is universal and often beneficial and only when it becomes excessive for a particular individual is strain caused

and that what is excessive stress vary considerably from person to person.

Stress has been conceptualized and defined differently by different authors. According to Jackson and Maslach (1982), throughout the psychological literature, the term stress has been used to refer to many things, including external stimuli, perceptions of situational demands, psychological stress, and psychological reactions.

Thus discussions on stress can lead to problems of terminology (Cherry, 1978). Other researchers agree that stress is difficult to define satisfactorily (Gatley, 1981; Payne, Jick and Burke, 1982; Beehr, 1987). In fact it is safe to say that there are as many definitions of stress as there are researchers. Recent reviews of the concept of social psychosocial stress have found it virtually impossible to define what is meant by stress in any but most general terms (Levine and Scotch, 1970) cited in House, (1974). Stress is used broadly and this has been partly responsible for many terminological confusions and much criticism (Lolas, 1982).

In everyday English, the word Stress is used to describe an emotional state in which an individual is subjected to mental tension and strain while in a scientific context, stress does not pertain to emotional state, but is used to describe the bodily response to stimuli that alter the existing equilibrium (Selye, 1956) cited in Berger (1982).

The work of Selye provided the frame work for the understanding of the role of stress in pathogenesis or disease. Haw (1982) defined stress in terms of an imbalance between the perceived demand and the person's perception of his of her ability to meet that demand. Stress has also been defined as an alteration of psychological homeostasis (Lolas, 1982).

Despite the controversy and lack of consensus on the exact definition of stress there is agreement among researchers that excessive stress can have adverse effects on health. Stress has been implicated in a variety of physical, mental and behavioural disorders. There is a unanimous agreement in the literature that stress results when a situation or event is perceived as threatening by the individual.

The general stress model developed by Payne, Jick and Burke (1980) proposes that environmental stressors impinge upon a person and the factors within the person affect whether or not the stressor is perceived as threatening and that if the person sees the event as threatening, they typically cause psychological perhaps physiological strain and that if the strain continues over time it will eventually result in either physical, mental disease or both.

The House Paradigm of stress research (1974) identified five classes of variables for a comprehensive paradigm of stress research such as:-

1. Objective social conditions conducive to stress;
2. Individual perceptions of stress;
3. Individual responses (psychological, affective and behavioural) to perceived stress;
4. More enduring outcomes of perceived stress and responses and finally;
5. Individual and situational conditioning variables that specify the relationships among the four set of factors.

At this juncture, it is important to point out that the stressor effects are assumed to occur only when the situation is appraised as threatening or otherwise demanding and insufficient resources are available to cope with the situation (Cohen, Kamarck and Mermelstein, 1983).

THE MECHANISM OF STRESS

Hans Selye, the renowned Canadian physician and pioneer of stress research introduced the concept of physiological stress in the 1930s. He defined stress as the "wear and tear of the body". In the course of his experimentation with laboratory animals, he described the chains of physiological changes in the body in response to stress. Selye developed the model of General Adaptation Syndrome (GAS), which refers to somatic response to harmful stimuli. Selye later

defined stress as "the non-specific response of the body to any demand".

The General Adaptation Syndrome (GAS)

The GAS has been a useful model for realizing the physiological process involved in the relationship between stress and acute illness and can serve as a useful paradigm for the understanding of the symptomatic expression and progression of chronic physical illness (Leidy, 1989). The GAS provides the framework for the understanding of the process of stress and its role in the development of physical and mental disorders. The GAS involves triphasic process of adaptation and resistance consisting of acute alarm reaction followed by a state of resistance and ending with exhaustion.

Selye (1982) suggested that depending upon the length and severity of stress, an animal passes through the following phases:

1. Alarm - when the organism is not capable of resisting the stress. This phase involves the initial and immediate reaction to the noxious agent and the mobilization of the body defensive phase with increased secretion of corticoid hormones.
2. Resistance - when the body returns to normal functioning. This involves the resistance and the adaptation to the stress and disappearance of symptoms. Prolonged resistance leads to depletion of adaptive energy and exhaustions.

3. Exhaustion - when the resistance is lost, due to severe and prolonged stress. In this phase symptoms reappear and if stress continues, leads to death.

According to Hoffman and Parsons (1988), the three phases represent the sum of non-specific reaction of the body resulting from long exposure to chronic stress. These reactions may include, histological, morphological, biochemical and functional alterations.

STRESS - ILLNESS RELATIONSHIP

The Concept of Psychosomatic Disease.

As already mentioned, the mind-body relationship is well known. The notion that certain mental states bring about certain diseases is not new (Angell, 1985). The view that stress and unpleasant emotional experiences may cause physical diseases is now widely accepted inspite of the fact that most of the available evidence supporting it is either indirect or conjectural (Berger, 1982) The relation between stress and illness does not appear to be a simple causal correlation (Barnwell, Hoffman and Koch, 1982).

The concept of psychosomatic disease is based on the fact that the mind plays an important role in the genesis of many diseases. The two major types of psychosomatic diseases are psychogenic psychosomatic and somatogenic psychosomatic. Psychogenic disorder

psychosomatic refers to physical diseases caused by emotional stress while somatogenic psychosomatic disorder refer to emotional disturbances such as anxiety, anger, fear, frustration that increase the body's susceptibility to organic disease (Girdano and Everly, 1979).

However, the new concept of psychosomatic disease has been broadened to include psychological disturbances created indirectly by physical illness (Wright,1977). Almost any organic disease may have a somatogenic component depending on the individual psychological make-up (Girdano and Everly, 1979). According to Friedman and Booth-Kewley (1987), there is no doubt that many illnesses have a significant psychological component, whether it is impotence resulting from fear after heart attack, functional paralysis resulting from psychological trauma, or anorexia from depression. There is no doubt that psychosomatic disease effects the structure and function of the body (Achalu, 1993b).

In psychosomatic diseases, emotion or stress can function as a trigger to aggravate the condition and bring about an acute attack such as bronchial asthma Berger (1982). Some of the disorders grouped as psychosomatic diseases included hypertension, peptic ulcer, asthma, rheumatoid arthritis, ulcerative colitis, migraine and various dermatoses. Berger,1982 stated that there is no complete proof that psychic factors are the cause of any of these disease

entities. He however, pointed out that it has been well substantiated that psychogenic factors can aggravate or ameliorate psychosomatic diseases to a greater extent than is the case with other diseases.

OCCUPATIONAL STRESS

Occupational stress has been defined as negative environmental factor or stressor associated with a particular job. Work stress is one of the most intense kinds of stress. People spend a significant fraction of the adult life at work. Workers in various occupations perceive their job as stressful. A wide range of factors has been identified as major sources of occupational stress. These include the following:-

1. Factors intrinsic to the job.
2. Role in the organization.
3. Career development problems.
4. Relationship at work.
5. Organizational structure and climate.
6. Home-work interface. (Extra-organisational sources of stress)

Job stress results when there is a lack of harmony between the worker and the environment. Stressors are aspects of the work environment that causes strains and strains are aversive employee responses caused by stressors (Beehr, 1987). According to Beehr, job stressors are psychosocial characteristics of jobs that cause strains,

which are employee's aversive reactions while "strain" characteristically refers to ill health.

Psychosocial stress at work occurs as a result of either a potential or actual conflict between an employee and some aspect of the organization (Zaccaro and Riley, 1987). One of the most widely accepted definition was given by McGrath (1970) cited in Kasl (1978). He defined stress which is applicable to work situation as: "a *perceived* substantial imbalance between demand and response *capability*, under conditions where failure to meet demand has important perceived consequences."

The emphasis here is on perceived demands, perceived capability and perceived consequences if demands are not met (Kasl, 1978). According to Kranz and Raisen (1988) if situations are not viewed or interpreted as harmful, threatening or noxious, they can produce smaller or even opposite physiological responses.

SOURCES OF OCCUPATIONAL STRESS

The specific sources of occupational stress have been extensively documented (Webb, Schilling, Jacobson and Babb, 1987; Davidson and Cooper, 1981; Marshall and Cooper, 1979; Cooper and Marshall, 1978). These include factors intrinsic to the job itself, role in the organisation, career development, relationships at work,

organisational structure and climate and extra-organisational sources of stress.

Factors Intrinsic to the Job

The sources of stress intrinsic to the job across a variety of occupations include the following:

1. Poor working conditions;
2. Shift work;
3. Work underload;
4. Work overload;
5. Physical danger, and
6. Person - environment fit (P - E) and job dissatisfaction.

Poor Working Conditions: There is no doubt that poor physical working condition can enhance stress at work. They include poorly designed work place, pollution in the work place, too much noise, overcrowding, poor working conditions due to heat and so on.

Shift Work: A number of occupational studies have shown that shift work is a common cause of occupational stress (Davidson and Cooper, 1981). Shift work has been shown to affect biological rhythms such as blood temperature, metabolic rate, blood sugar levels as well as

mental efficiency and motivation which intimately result in stress-related illnesses.

Work Overload: Work overload can be either quantitative or qualitative. Qualitative overload is when the work is too difficult while quantitative overload is when the work is too much. Work overload has been associated with physical, mental and behavioural problems. Occupational settings characterized by high demand and low level of control over the job are associated with increased coronary risk (Krantz and Raisen, 1988).

Work Underload: It is interesting to note that having too little work to do can lead to stress. Work underload involves repetitive, routine, boring and under-stimulating work environment.

Physical Danger: Some occupations by nature involve high risks in terms of physical danger. Some of these include police personnel, soldiers, miners and fire fighters.

Person-Environment Fit (P-E) and Job Satisfaction: The P-E fit theory has been applied to occupational health. McMichael (1978) defined P-E theory as an interaction between an individual's psychosocial characteristics and objective work conditions (cited in

Davidson and Cooper, 1981). Simply put the P-E theory states that stress can occur or result in psychological problems such as anxiety, depression, job dissatisfaction and physiological disorders if there is a P-E misfit. For example, one type of P-E fit is the fit between an employee's needs and the job supplies or resources for meeting those needs. For instance, stress results when the supplies/demand of the environment (E) do not match the needs or abilities of the Person (P). The most stressful occupational environment are those that have high demands combined with low ability to control the situation (Payne, Rick, Smith and Cooper, 1984). There are two type of P-E fit. The need-supplies fit is fit between an employee's need and the job supplies or resources for meeting those needs. The Demands-abilities fit is fit between the job demands and the person's abilities (Beehr, 1987).

Role in the Organization

The role that a person is supposed to play at work can be a source of occupational stress. Such roles can result in stress if they are not clear or ambiguous or when they conflict. Role ambiguity is when there is lack of clarity about one's job while role conflict is when there is a conflicting job demands (Cooper, 1987; Davidson and Cooper, 1981). Role ambiguity and conflict have been associated with stress-related diseases.

Career development

The stressors related to career development include the impact of over-promotion, under-promotion, status incongruence, lack of job security and thwarted ambitions. Lack of job security relates to fear of dismissal, job loss early retirement against one's will and so on. Status incongruence such as when one is under-promoted or over-promoted. Under-promotion can result in frustration, while over-promotion may lead to overworking and stress which results in stress.

Relationship at Work

The relationship at work with one's colleagues, bosses and subordinates has been related to job stress. According to French and Caplan (1972) poor relationships with other members of an organization may be precipitated by role ambiguity in the organization which in turn may produce psychological strain in the form of job dissatisfaction (cited in Davidson and Cooper, 1981). Conversely good relationship with coworkers and social support can reduce stress at work. Social support has been shown to ameliorate the impact of occupational stress on job-related strain (LaRocco, House and French, 1980).

Organization Structure and Climate

The potential sources of occupational stress is related to the organizational climate and structure such as office politics, lack of effective consultation, lack of participation in decision-making process and restriction on behaviour. French and Caplan reported that greater participation by workers was related to high productivity improved performance, lower staff turnover, lower levels of physical and mental illness and lower stress-related behaviours such as escapist drinking and heavy smoking (cited in Cooper, 1987).

Home-Work Interface (Extra-organisational sources of stress).

Work pressures can also affect the families of the workers. The above mentioned sources of occupational stress such as work overload, over-promotion/under-promotion, fear of job loss, or other problems workers bring with them into the family affect the children, wife and the home environment. Also the problems related to family demands can be a major source of job stress.

Other potential sources of work stress include lack of interesting or stimulating work, little or no chance of using or developing new skills, time pressures, repetitive or monotonous work, and negative physical environment, such as overcrowding and social isolation.

OCCUPATIONAL STRESS AND HEALTH

There is a strong evidence of a reliable association between illness and psychological distress (Friedman and Booth-Kewley, 1987). With respect to occupational health, Levi (1990) indicated that there is a little but increasing direct evidence of a causal relationship between work-related psychological stressors and the incidence and prevalence of occupational morbidity and mortality.

According to Levi (1990), if a mismatch exists between the worker and the job, if the worker is (or feels) unable to control his or her work conditions, or if he or she copes ineffectively or lacks social support, then potential pathogenic reactions may occur and these reactions can be emotional, cognitive, behavioural or physiological which under certain conditions might lead to physical, mental diseases or both. The model of occupational stress shows the relationship between the employee and the workplace which may result in stress and in turn be effectively or ineffectively coped with.

Successful coping with stress provides opportunity for new solutions or growth while strain, the outcome of unsuccessful coping results in detrimental effects for the employee and the organization (Zaccaro and Riley, 1987). There are optimal stress at work as there are in life. The issue is not one of presence or absence of stress but

rather the nature, intensity and duration and the resources available to respond or cope with it.

The negative effects of stress are not easily seen because they take longer to develop and are moderated by so many factors. As a result the link between stress, poor health, organizational withdrawal, poor performance are less directly apparent (Zaccaro and Riley, 1987). Moreover, it is difficult to establish connection between stress and specific diseases (Webb, Schilling, Jacobson and Babb, 1983).

In addition, it is even more difficult to determine which health problem is due to occupational or nonoccupational stress. However, what is clear is that psychological stress is a serious occupational hazard with adverse consequences for the worker's health and well-being.

MANIFESTATIONS OF WORK STRESS

A number of studies have investigated the association, between stress and health. The Table 1 shows some of the physiological, mental, emotional, behavioural and social responses to stress. It is important to note that many of these responses can be due to factors other than stress. However, these responses are regarded as indicators of stress (Webb, Schilling, Jacobson and Babb, 1988).

It is true that work can be a factor in health promotion but according to EL Batawi, (1984) when it produces excess risks, it may affect health in one or more of the following ways:

1. It may cause occupational disease from specific physical, chemical and biological exposure;
2. It may lead to aggravation of existing disease of non-occupational origin; and
3. It may be a factor in a number of diseases with multiple etiology.

Adverse psychosocial factors at work have been blamed for a variety of psychosomatic and behaviour disorders such as smoking and alcoholism (EL Batawi, 1984). Also in an extensive review of relationship between occupational stress and health by Davidson and Cooper (1981), workers experiencing high job stress drank more than those in occupations experiencing less job stress. It was also reported that smoking and drug abuse were more common in stressful occupations.

Psychosocial stress in whatever form, overt or covert may play a part in many organic and psychological disorders. Health problems said to be aggravated by psychosocial job stress include, coronary heart disease (CHD), hypertension, obesity, asthma, arthritis, migraine, indigestion, ulcer, diabetes, mental disorder including suicide (EL Batawi, 1984, Davidson and Cooper, 1981). The

association between occupational stress, coronary heart disease and mental health have been investigated. The role of psychosocial stress in the development of CHD is well documented (Dorian and Taylor, 1984).

Lam, Ong, Wong, Lee and Kleevens (1985) found strong association between mental ill-health and work stress among office workers in Hong Kong. Besides, there is evidence that psychological stress can result in decreased immune function (Friedman and Booth-Kewley, 1987).

Stress whether occupational or not has been shown to decrease physical stamina, mental alertness and reaction time (Davidson and Cooper, 1981). At the organizational level, work stress may produce such symptoms as job dissatisfaction, increased absenteeism, accidents, poor working relationship and decreased productivity.

TABLE 2.1

Individual and Organizational Responses to Stress.

A. Short-Term response physiological	**Mental, emotional behavioural and social**
Migraine headache	Job dissatisfaction
Backaches	Anxiety
Eye and vision problems	Depression
Allergic skin reaction	Irritability
Sleep disturbances	Frustration
Digestive disorders	Breakdown of relationships at home
Raised heart rate	and work
Raised blood cholesterol	Alcohol and Drug misuse
	smoking
	Inability to relax
B. Long-term responses individual health	**Organizational health**
Gastric/Peptic ulcers	**Absenteeism**
Asthma	***Poor time keeping***
Diabetes	**High labour turnover**
Arthritis	**High sickness rates**
Stroke	**Low productivity**
High blood pressure	**Industrial unrest**
Coronary heart disease	
Mental ill health	

Source: *Webb, Schilling, Jacobson and Babb, (1988)* ***Health at Work****. London: Health Education Authority.*

PREVENTION AND STRESS MANAGEMENT STRATEGIES.

As well known, stress is caused by many situations and psychosocial factors in our environment and therefore cannot be controlled or reduced by any single technique (Achalu, 1993b). This section highlights the various approaches and strategies to the prevention and management of individual and organisational stress. Primary prevention involves changing the potentially stressful situation before it occurs while secondary prevention involves controlling the meaning of the stressful experience once they occur. Lastly tertiary prevention deals with managing of the effects of the stress response or outcome.

Zaccaro and Riley (1987) categorised the approaches to solving the problem of both individual and organisational stress and they include:

1. attempts to directly change the situations (prevention)
2. attempts to manage the meaning of stress (management)
3. attempts to cope with the effects of stress (damage control).

According to Zaccaro and Riley (1987), individuals and organisations have two purposes in coping with stress and these are:

1. to effectively overcome the threat or meet the challenge; and
2. to prevent strains.

Individually Focused Stress Management Strategies

These are personal stress management or coping strategies for preventing the occurrence of stressors by managing personal perception or meaning of the demanding situations and managing the effects of unavoidable stress to reduce the development of strains (Zaccaro and Riley, 1987). Primary prevention involves managing personal perception of stress such as recognising the inevitable and disputing cognitive distortion; lifestyle management such as prioritizing one's goal, maintaining a balanced diet, regular exercise, moderate use of drugs and alcohol, use of leisure time and sabbaticals; and finally managing the personal work environment such as planning ahead, time management, avoidance of work overload, changing task or job if possible.

Unlike the primary prevention which is stressor-directed, secondary prevention is response-directed. These include relaxation training such as progressive and momentary relaxation, meditation, hypnosis, autogenic training and bio-feedback.

Lastly at the tertiary prevention level, it is symptom-directed with an attempt to cope with the impacts or effects of stress (damage control). This involves counselling and psychotherapy such as symptom-specific programmes, individual psychotherapy, behaviour therapy, group therapy and career counselling. Others include

medical care such as medications, surgery and physical therapy depending on the extent of symptom or damage.

Organisational Approaches to Managing Work Stress

The organisational-level methods of preventing stress include those that address or relate to the task and physical demands of the workplace and those that target relationships between employees at all levels. The interventions at the organisational level are primarily concerned with modifying the formal organisation in order to alter the demands it places on the individual (Zaccaro and Riley, 1987). These may include task redesign, participative management, flexible work schedule, career development and design of physical settings. Table 2.2 shows the group and organisational-level methods for preventing work stress.

WORK-PLACE STRESS MANAGEMENT

Many people continue to be uninformed about the relationship between lifestyle, stress and health (Zaccaro and Riley, 1987). The aim of stress education at work site is to help individuals manage their own health, ultimately reducing their health risk (Rosen and Lee, 1987). According to them, approaches to work site stress

management and education can be directed at changing the individual and/or changing the organization.

They suggested that individual change programmes are by far the most popular. These include instruction in stress management techniques such as physical, cognitive and emotional strategies for managing psychological and physiological

TABLE 2.2

Group and Organisational-Level Methods for Preventing Work Stress.

Role and Interpersonal Demands	
Clarify role expectations	***Social support***
* Define job requirements clearly	* Encourage constructive relationships
* Make resources accessible	* Provide group or unit goal and rewards
* Make rewards contingent on performance	* Encourage accessibility of supervisors
* Eliminate conflicting expectations	* Provide accessible counselling
* Provide frequent feedback on performance	
Goal setting	***Team building***
* Establish reasonable performance goals	* Provide opportunity to address and resolve conflicts
* Define area of responsibility	* Provide methods for integrating new employees
* Provide frequent feedback on goal-related performance	

TABLE 2.2 CONTD.

Task and Physical Demands

Task redesign	***Flexible work schedules***
* Assessment of task demands	* Employee manages time to fit needs
* Restructures to provide more satisfying, less stressful work	* Enhances fit between work and home responsibilities
Participative Management	***Career development***
* Reduces authoritarianism	* Involves self-and organizational assessment
* Increases employee control and responsibility	* Requires clarification of career paths
* Increases co-worker support	
Design of physical settings	
* Involves assessment and reduction of stressful environments	
* Facilitates task accomplishment	

Source: Zaccaro, S. and Riley, A.N. (1987). *Occupational Stress and Organizational Effect*, New York: Praeger.

reactions to stress. Rosen and Lee categorized stress reduction programmes into two types:

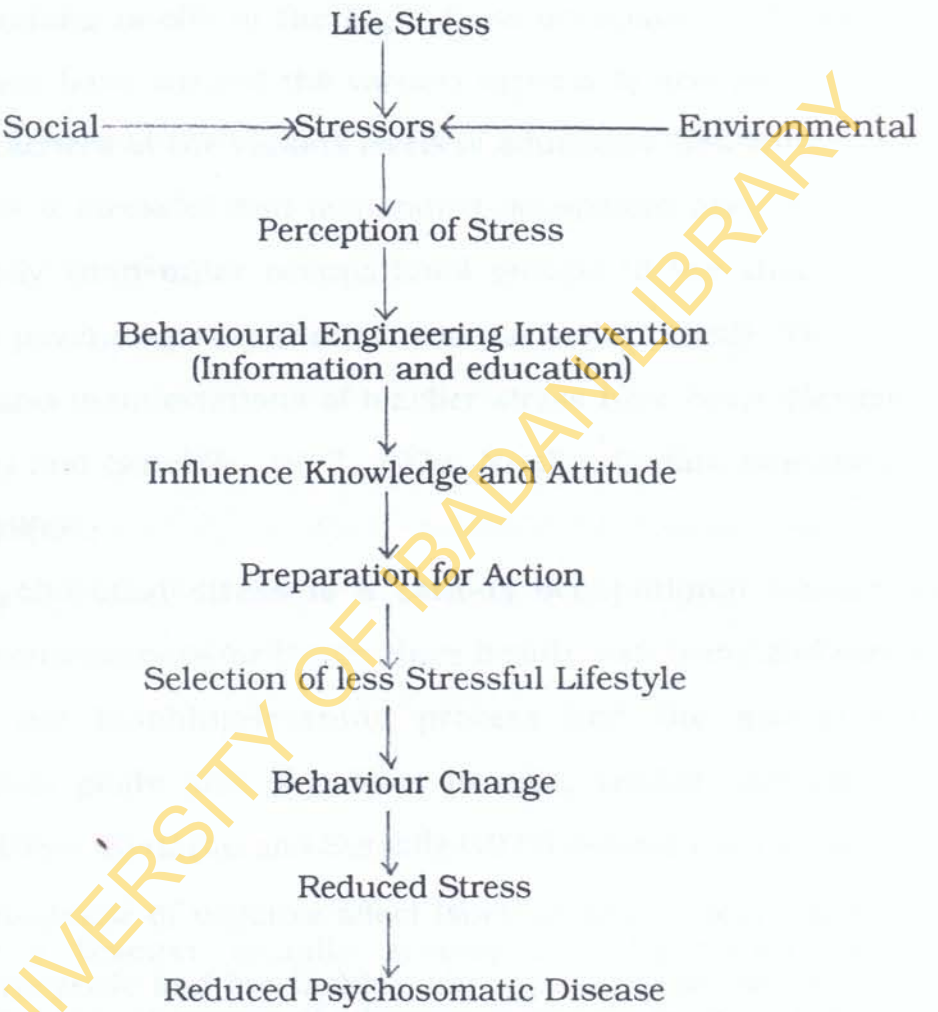
1. Preventive programmes which teach skills to help educate employees about the negative effects of stress and the techniques to prevent more serious physical and psychological problems or breakdowns.
2. Intervention programmes which focus on people with particular stress-related symptoms, teaching them self-management of stress as a way to overcome or reduce existing pains and the risk of further health problems.

Achalu (1993b) proposed the behavioural engineering model as a holistic approach to stress management. Basically this involves identifying the cause of stress and making intentional and conscious alteration of lifestyle to reduce or avoid exposure to the stress. The behavioural engineering strategy attempts to influence knowledge, attitude and behaviour through information and education.

The behavioural engineering model of stress reduction shown in Figure 2.1 stresses the importance of lifestyle behaviour management in the control of stress; encouraging behaviours that promote health while discouraging stress-promoting activities. Achalu (1993b) indicated that one of the most effective techniques of managing stress is to identify the sources of stress and then develop a lifestyle aimed at controlling the social and environmental stressors.

Needle, Griffin and Svendsen (1981) identified four psychological coping strategies that is in line with the behavioural engineering model of stress management. First is the positive comparison which is a device intended to control the meaning of the problem. Second is optimistic action which involves searching for positive aspects of the situation. The third one is the substitution of rewards which deals with maximizing the positive while minimizing the negative aspects of the situation. The fourth strategy involves selectively ignoring problems and focusing on a more gratifying aspect of the job or situation.

FIGURE 2.1 Behavioural Engineering Model of Stress Management



Source: Achalu, E.I. (1993b). Psychosocial stress management: A behavioural engineering model. *Sports Science Medicine 3*, p. 52.

THE CONCEPT OF TEACHER STRESS

Teaching is one of the high-stress occupations. A number of researchers have studied the various aspects of occupational stress among teachers at the various levels of education. Teaching is widely held to be a stressful and demanding occupation and teachers are more likely than other occupational groups to see their work as stressful psychologically (Herloff and Jarvholm, 1989). The various sources and manifestations of teacher stress have been documented (Kyriacou and Sutcliffe, 1977, 1978; Needle, Griffin, Svendsen and Berney, 1980).

Psychosocial stress is a serious occupational hazard with adverse consequences for the teachers health, well-being and career as well as the teaching-learning process and the attainment of educational goals and objectives (Needle, Griffin, Svendsen and Berney, 1980). Kyriacou and Sutcliffe (1978) defined teacher stress as:

> a response of negative affect (such as anger, depression) by a teacher usually accompanied by potentially pathogenic and biochemical changes (such as increased heart rate or release of adrenocorticotropic hormones into the blood stream) resulting from aspects of the teacher job and mediated by the perception that the demands made upon the teacher constitutes a threat to his self-esteem or well-being and by coping mechanisms activated to reduce the perceived threat. p.2.

According to Kyriacou and Sutcliffe (1977) the extent to which the demands made upon a teacher results in teacher stress depends on many factors such as the following:

1. The degree of role conflict or role ambiguity involved;
2. The degree to which the teacher perceives that he is unable to meet the demands made upon him or her;
3. The degree to which the teacher's ability to meet the demand is impaired by poor working conditions;
4. The degree to which the demands are new or unfamiliar;
5. The degree to which the teacher is already experiencing stress resulting from sources outside his or her role as a teacher.

Literature on stress indicate that there are many approaches to stress research. Some focus on the environmental factors, others on individual differences in perception of stress while others concentrate on the individual's responses to stress. In a study investigating the teacher stress and satisfaction, Kyriacou and Sutcliffe (1979b) found that 23.4% of the teachers rated being a teacher as either stressful or extremely stressful.

However, they reported that a large proportion of the teachers were either very satisfied or fairly satisfied with teaching. The teachers who experienced greater level of stress were more likely to experience lower job satisfaction (Kyriacou and Sutcliffe, 1979b). Also there was

a positive association between self-reported teacher stress and the frequency of absences, as well as intention to leave teaching. In other words, teachers having higher stress level are more likely to be less satisfied with their job, more likely to be frequently absent and more likely to leave teaching.

Model of Teacher Stress

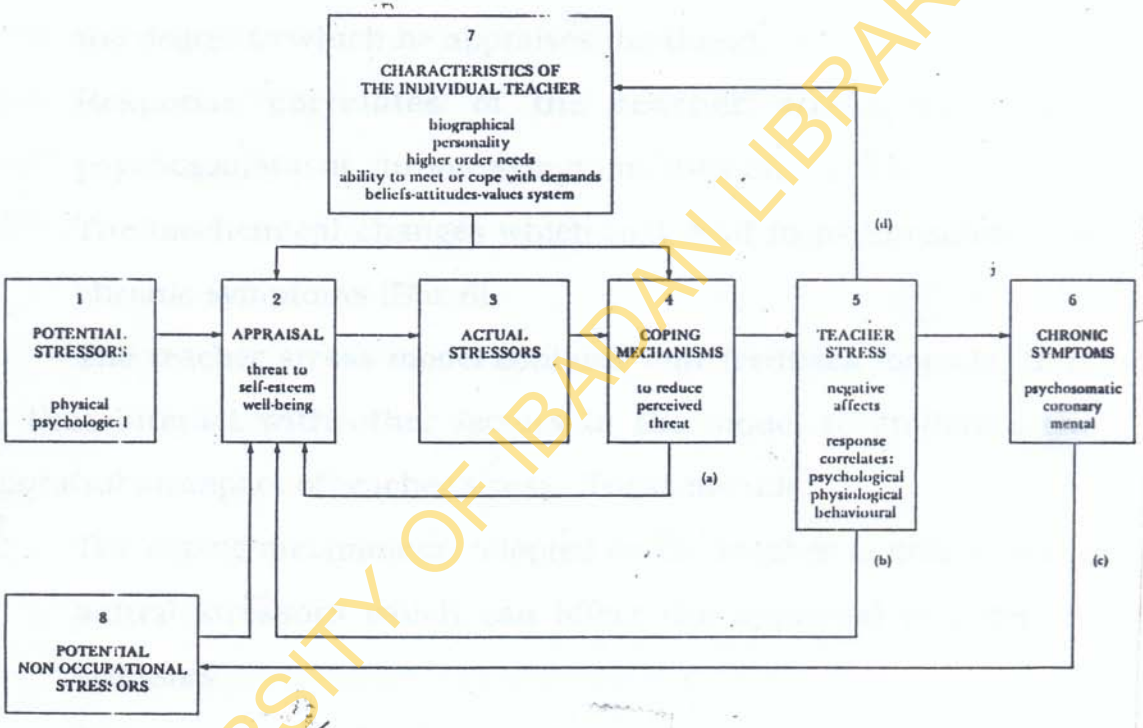
The discussion of the concept of teacher stress would be incomplete without the description of a model of teacher stress. The model of teacher stress proposed by Kyriacou and Sutcliffe (1978) presents a comprehensive paradigm of teacher stress. The model essentially conceptualises teacher stress as a response syndrome mediated by an appraisal of threat to the teacher's self-esteem or well-being and by coping mechanisms activated to reduce the perceived threat (Kyriacou and Sutcliffe, 1978).

The model of teacher stress shown in Figure 2.2 identifies important aspects of teacher stress as follows:

1. Potential stressors which are either physical or psychological (Box 1);
2. The appraisal of threat to the teacher's well-being (Box 2);
3. Actual stressors which are a subset of potential stressors that actually constitute a threat (Box 3);

FIGURE 2.2

Model of Teachers Stress



Source: *Kyriacou and Sutcliffe (1978). A Model of Teacher Stress.* ***Educational studies,*** *4 (1) p.3.*

4. The coping mechanisms used to deal with the actual stressors (Box 4) which are determined by the teachers individual or biographical characteristics (Box 7) and the degree to which the coping mechanisms are unable to deal with the stressors and the degree to which he appraises the threat;
5. Response correlates of the teacher stress which are psychosomatic or chronic symptoms (Box 5);
6. The biochemical changes which may lead to psychosomatic or chronic symptoms (Box 6).

The teacher stress model contains four feedback loops (a, b, c, d) that interact with other factors in the model to moderate the appraisal or impact of teacher stress. These include:

1. The coping mechanisms adopted by the teacher to deal with the actual stressors which can affect the appraisal of potential stressors.
2 If the coping mechanism used is successful the actual stressor will be reduced to potential stressor in loop (a).
3 Also the teacher stress may affect appraisal directly in loop (b) or indirectly by causing ill health, loop (c).
4 Lastly failure to meet or cope with the demands in the past may affect the individuals future appraisal of his ability to meet or cope with new demands as shown in loop (d).

SOURCES OF TEACHER STRESS

The various sources of occupational stress among teachers have been documented (Kyriacou and Sutcliffe, 1977, 1978; Needle, Griffin, Svendsen and Berney, 1980; Mark, Pierce and Molloy, 1990). The various stressors where identified usually by asking teachers to identify factors that they consider hindrances in performing their duties as a teacher. Some of the major sources of teacher stress:

1. teacher salaries;
2. poor human relations among staff;
3. inadequacies in school buildings and equipment;
4. teacher training;
5. teaching load;
6. large classes;
7. feelings of inadequacies as a teacher;
8. status of teachers in the society (Rudd and Wiseman 1962).

It should also be noted that what causes job dissatisfaction can be a source of stress. Although the stressors outlined already are unique to teachers, teachers may experience other stressors shared with other occupations as already described. Lastly, the employers may contribute to burnout or stress through poor communication and implementation of decisions which affect teachers. These include inflexible policies on staffing and leave, inadequate teacher welfare

and lack of general support system. The effects of burnout at the school level may be reflected in staff turnover, absenteeism, job dissatisfaction and consequent loss of trained and experienced teachers to other professions.

CONSEQUENCES OF TEACHER STRESS

Job Stress and Health Status

Generally stressors, whether occupational or not can result in physiological, behavioural, psychological and somatic disorders. A number of studies have investigated the relationship between stress and health status of teachers. According to Needle, Griffin and Svendsen (1981) depending on individual psychological and coping resources, social support and other conditions outside of work, psychological stressors can result in stress responses of psychological, somatic and behavioural nature which, as risk factors and precursors of disease, affect the health and well-being of teachers.

The association between occupational stressors and a number of health problems among teachers have been reported. These include somatic problems such as headaches, dizziness, abdominal pain, sleeplessness, fatigue and exhaustion, high blood pressure, peptic ulcers, coronary heart disease; psychological problems (such as anxiety, tension, irritability, depression, job dissatisfaction);

behavioural responses (such as use of drug and alcohol, smoking, loss of appetite, absenteeism).

In a study of physical and general well-being of teachers, Needle and Associates (1981) found that 45% of all teachers in the survey of Minnesota Public Schools (U.S.A.) reported one or more chronic health problems. Ninety six percent (96.0%) of the respondents reported one or more symptoms. They also noted that teachers with greatest stress were more likely to report significantly high levels of almost all symptoms. In their study of the health problems of teachers, the respondents were asked to indicate how frequently they have experienced a particular symptom or physical condition in the previous year. A section of the questionnaire contained the general well-being scale which measures teachers' psychological states of depression and anxiety. The result showed that a great majority of the teachers in the study were in good spirit (72%), while only 26.0% reported being in low spirits.

Some of the teachers were reported to be experiencing much distress and anxiety. The teachers reporting higher stress report lower general well-being ($r = -0.37$) and more symptoms ($r = 0.32$). Somatic symptoms correlated highly with general well-being ($r = -0.67$) with those reporting higher levels of general well-being reporting lower levels of symptoms. The data indicated that perceived job stressors are substantially related to psychological, somatic and health-related

problems and that the health of teacher is greatly affected by stress (Needle, Griffin and Svendsen, 1981). Also it was noted that stressors vary and affect teachers differently; consequently some teachers are at high risk for health problems than others. This observation confirms the fact that individuals respond differently to same stress because of individual differences in perception of stress.

In a similar study by Cichon, et. al. (1978) cited in Needle, Griffin, and Svendsen (1981) it was found that more than a half of the teachers reported experiencing physical illness they believed was related to work stress. In a more recent study, Mark, Pierce and Molloy (1990) compared secondary school teachers experiencing high level of stress (burnout) with those experiencing low level of stress and observed that high levels of stress were associated with poorer physical health, higher rates of absenteeism, lower self-confidence and more frequent use of regressive or bad coping strategies.

In summary, a number of studies have shown that teachers with greater stress have more physical or somatic symptoms, higher levels of anxiety and psychological difficulties. In addition, teachers with greater stress are more likely to report lower job satisfaction and more likely to leave the teaching profession (Kyriacou and Sutcliffe, 1977, 1979b; Mark, Pierce and Molloy, 1990). At this juncture it is important to point out that poorer health can result in more stress.

Events perceived to be desirable and therefore, presenting opportunities for gain or mastery were not stressful while events that were neither mastery, desirable nor within control resulted to distress and ill health (McFarlane, Norman, Streiner and Roy, 1983). In a previous study of the relationship of psychosocial environment to health status, McFarlane, Norman, Streiner, Roy and Scott (1980), stated that the extent to which individuals are successful in coping with changes in their lives will be reflected in the degree to which they report distress or strain and that it is cost of coping struggle that results in the increased likelihood of health problems.

TEACHER STRESS AND JOB SATISFACTION

The relationship between stress and job satisfaction has been widely investigated. Stress in the case of teaching results when the demands of teaching exceeds the ability of the teacher to cope. Teachers with greater stress report low job satisfaction and low occupational self-esteem (Needle, Griffin and Svendsen, 1981). Kyriacou and Sutcliffe (1979b) studied the relationship between self-reported teacher stress and job satisfaction among a sample of comprehensive schools in England. They used a single-item self reported measure of overall job satisfaction also known as the global measure of job satisfaction. The results indicated that self-reported

teacher stress was negatively associated with job satisfaction (r = -.27; P < .01) and positively associated with intention to leave teaching (r =.18; P < .01).

In a similar study comparing secondary school teachers experiencing high levels of occupational stress versus those experiencing low levels of stress, Mark, Pierce and Molloy (1990) noted that teachers experiencing high levels of stress were less satisfied with their career, and had less career commitment. Kyriacou and Sutcliffe (1979) found a significant negative association between job satisfaction and self-reported teacher stress and a significant positive correlation between self-reported stress and intention to leave teaching (r = .18; P < .01). However, there was a positive association between teacher stress and frequency of absences, although not significant (rho = .09; P > .10).

It was concluded that teachers experiencing greater stress are also likely to have lower job satisfaction, to be absent more frequently and to be more likely to leave teaching. Similarly a comparison of teachers in the high versus low stress groups indicate that teachers having high level of stress were more frequently absent than those with less stress and less satisfied with their job (Mark, Pierce and Molloy, 1990). Finally, the effects of stress may include high resignation rates with consequent loss of experienced teachers.

STRESS, JOB SATISFACTION, BIOGRAPHICAL AND CAREER CHARACTERISTICS

Mark, Pierce and Molloy (1990) investigated the psychological as well as biographical differences between secondary school teachers experiencing high and low levels of burnout or stress. They examined whether the composition of the high and low stress group differed with respect to school type, sex, marital status, age, teaching experience, position in school, level of education among others. They found that the composition of the high and low stress group did not differ with respect to sex, marital status, age or level of education.

However, they found significant differences between the high and low stress group with respect to years of teaching experience and position in school. Teachers in the low stress group tended to have overall teaching experience than those in the high stress group. It was also reported that more teachers involved mainly in classroom teaching duties were in the high stress group (65.0%) compared with teachers the low stress group (41.5%). Furthermore, more teachers with additional responsibilities were in the low stress group (46.8%) compared with the teachers in high stress group (25.9%).

In a similar study Kyriacou and Sutcliffe (1979a) studied the relationship between self-reported teacher stress and biographical characteristics such as age, sex, length of teaching experience and

position held in school. They found a significant interaction for sex and position held in school. They also noted that male head of departments and female teachers reported greater stress than their colleagues.

Generally, studies have consistently found that women have more depressive disorders and psychological distress than men and are more likely to view themselves as having emotional problems (Cleary and Mechanic, 1983). Gadzella, Ginther, Tomcala and Bryant (1990) investigated differences in stress by sex, levels, age, and job classification as perceived by professionals in a survey. They found that women reported more stress than men. This was explained by the fact that women undertake more responsibilities in caring for the family in addition to their professional career.

Also individuals in the younger age groups reported higher stress scores than the older groups. They suggested that it could mean that individuals in the older age group have learnt to cope with stressful situations. They also found in job classification, that the staff and middle level managers reported greater stress than the executives. According to them these differences among jobs may be due to executives delegating the tasks to be done and the mid-level managers carrying them out.

OCCUPATIONAL STRESS AND RELATED STUDIES AMONG NIGERIAN TEACHERS

In a study of stress among lecturers at the University of Ibadan, Mbachu (1986) reported that male and female lecturers experience the same degree of stress. Similarly the young and older lecturers as well as the senior and junior lecturers experience the same degree of stress. In other words, there were no significant differences in the degree of stress experienced by the lecturers with respect to sex, age, and status.

Ajayi (1981) in a study of job satisfaction and commitment among Nigeria university teachers, noted that job satisfaction and commitment among the teachers was low. He reported high job satisfaction for younger lecturers (30 years and below) and low job satisfaction for older teacher (30 - 40 years) and rising for those 40 years and above. With respect to status or position held, he noted that job satisfaction and commitment tend to increase with status with the exception of Readers who were less satisfied than Senior lecturers and Lecturers I and II. Also interestingly, male teachers were less satisfied with their job but more committed than the female counterparts while female teachers were more satisfied but less committed than the male teachers.

Finally, Ajayi (1981) suggested that the low job satisfaction and commitment was related to repeated complaints of lack of fund and facilities, with the unprecedented state of individual action and trade disputes among the university teachers. This trend is not any different today than it was ten years ago when the study was conducted.

According to Ajayi (1981) the Nigeria university teachers are loosing their sense of attachment to the university and do not believe that the university is fulfilling its goal and are neither too willing to appreciate the problems of the university nor willing to share the blames for the university shortcomings. He believes that the teachers loyalty is waning and that some of teachers would gladly leave for openings elsewhere and may not be totally committed to spending the rest of their career in their present universities. There is no doubt that stressed or dissatisfied teachers are more likely to leave their job than satisfied ones.

From Ajayi's study, it was clear that job satisfaction is significantly correlated with job commitment. Naturally satisfied workers are more committed to their job while dissatisfied workers are less committed and more likely to leave his job than satisfied workers. It is not clear why female teachers were more satisfied but less committed than male teachers in Ajayi's study. Ajayi (1981) suggested that the greatest means by which the Nigerian universities can secure

the commitment of its teachers is by satisfying of their job-related needs.

Also there have been some occupational studies among teachers in other educational levels in Nigeria. Ehiametalor and Nwaobasi (1987) studied the effects of stress on secondary school principals in former Bendel State of Nigeria. They found that reported stress has an effect on the performance and that effective principals seemed to have stress. They also noted that the situation in which the principal worked and his responsibilities were potent stressors.

Ogunsanya (1981) investigated the relationship between job satisfaction, productivity, and academic goal achievement of teachers in former Oyo State secondary schools. He found a positive relationship among teacher job satisfaction, productivity and academic goal achievement of secondary schools of Oyo State. In a similar study, Akanbi (1986) reported teacher job satisfaction as a correlate of institutional task performance in Kwara State Teacher Colleges. Teacher job satisfaction was positively related to task performance.

Finally, the relationship between indicators of job satisfaction and commitment of physical education teachers in former Bendel State secondary schools was investigated by Ikhioya (1989). The results revealed a significant and positive relationships between the

various indicators of job satisfaction and commitment of the teachers surveyed.

As already indicated in the previous sections, there is still a limited research in the area of occupational stress in the developing countries. Similarly research in occupational stress among Nigerian workers is still in its infancy. The available occupational studies focused only on sources of stress, teacher job satisfaction, commitment and productivity. So far there appear to be little or no data on the relationship between occupational stress and health status of Nigerian university teachers. There is no doubt that occupational stress is a major health hazard facing Nigerian University teachers.

In the recent years, Nigerian universities have been faced with many problems ranging from low salaries to lack of adequate facilities and poor working conditions that have resulted in trade disputes, frequent strikes and university closures. These factors are potential causes of stress and could lead to job dissatisfaction and consequently influence the teacher's health and well-being.

Ajayi (1981) in a survey of Nigerian University teachers reported a low job satisfaction and commitment among the teachers. Also Mbachu (1986) identified work-related stress as the most important source of stress among teachers at the University of Ibadan compared with other categories of stressors. Thus the low job satisfaction and

commitment reported among Nigerian University teachers by Ajayi (1981) may be related to occupational stress.

Therefore the main purpose of the present study is to investigate occupational stress and its relationship to job satisfaction, psychological well-being, selected biographical and career characteristics such as age, sex, job status and years of teaching experience of teachers in the first generation universities. The relationship between occupational stress, biographical and career characteristics of the teachers were examined in the present study because an individual's experiential background, knowledge, sex, age, and job status affects the perception of stress and moderate one's response to stress. There is no doubt that extensive research is needed in the area of teacher stress which has so far received only a limited attention. Certainly more research is needed to identify the potential causes and consequences of occupational stress among Nigerian workers (Achalu, 1993a).

CHAPTER THREE

METHODS AND PROCEDURES

Introduction

The main purpose of this study was to investigate occupational stress and its relation to satisfaction and psychological well-being of teachers in the first generation Nigerian Universities and also to assess differences in the levels of overall occupational stress experienced by the teachers with respect to biographical characteristics namely age, sex and career variables of job status and years of teaching experience.

This chapter describes the methods and procedures applied in the study under the following subsections:-

1. Research Design
2. Population
3. Sample and Sampling Technique
4. Development of Teacher Stress and Job Satisfaction Questionnaire (JSJSQ).
5. Validation of the Teacher Stress and Job Satisfaction Questionnaire
   a. Face and Content Validity
   b. Reliability and Internal Consistency

6. The General Health Questionnaire
7. Administration of the survey instrument and data collection
8. Procedure for Data Analysis.

Research Design

The research method employed in the study was a cross-sectional survey design. According to Babbie (1973) in a cross-sectional survey, data are collected at one point in time from a sample selected to describe some larger population at that time and can be used not only for purposes of description but also for the determination of relationships between variables at the time of study. This assertion is consistent with the objectives of this study which sought to investigate occupational stress and its relationship to job satisfaction, psychological well-being and biographical characteristics of a sample of Nigerian University teachers.

The survey design used allows for the study of the complex subject of stress and its correlates since it does not lend itself to experimental manipulation in human subjects. Occupational stress was assigned the dependent (criterion) variable while job satisfaction, and psychological well-being were regarded as the independent (predictor) variables for the purpose of prediction. This study is a post-facto research rather than experimental. According to Sprinthall (1987) when the independent variable is manipulated the research is

experimental and when the independent variable is assigned the research is post-facto. Also the biographical characteristics of age, sex, job status and years of teaching experience were the independent (predictor) variables while the overall occupational stress was the dependent variable.

Population

The study population consisted of only the teaching (academic) staff in the first generation Nigerian Universities, which included, University of Ibadan, Ibadan, University of Nigeria, Nsukka, University of Lagos, Lagos, Obafemi Awolowo University, Ile-Ife, and Ahmadu Bello University, Zaria. The subjects were limited to teaching staff which included Professors, Readers (Associate Professors), Senior Lecturers and Lecturers I and II as well as Assistant Lecturers in the selected faculties.

Sample and Sampling Technique

The sampling technique used in the study was cluster sampling. According to Raj (1972) this technique involves selecting the sample in clusters or groups rather than take individual units. In cluster sampling, the population is broken down into groups of cases called clusters, and a sample of clusters is selected at random (Singleton, Straits, Straits and McAllister, 1988). However, in this study a

multistage or multiphase cluster sampling was employed. The first stage involved the random selection of three out of the five first generation Nigerian Universities followed by the second stage in which three faculties were randomly selected from each of the sampled Universities.

The names of all the first generation Universities were each written in a piece of paper and dropped in container. The researcher randomly picked three Universities by means of balloting with replacement. When a University was picked twice it was placed into the container until a different one was picked.

The same procedure was used to select faculties from the selected universities. Three faculties were randomly selected from the University of Ibadan and University of Nigeria while four faculties were selected from Ahmadu Bello University (ABU). An additional faculty was included for ABU because the researcher did not reach a majority of the teachers in the faculty of law at the time of the survey. Lastly, the academic staff from all the departments within the selected faculties were surveyed. A total of 300 university teachers responded to the survey questionnaire.

DEVELOPMENT OF THE TEACHER STRESS AND JOB SATISFACTION QUESTIONNAIRE (TSJSQ)

The research instrument was a structured questionnaire which was developed and validated by the researcher. This instrument referred to as "Teacher Stress and Job Satisfaction Questionnaire (TSJSQ)" was designed to measure occupational stress and job satisfaction among the university teachers. The TSJSQ consisted of three sections. The first section requested biographical information on age, sex, job status and years of experience. The second section was the "Teacher Stress Inventory (TSI)" which was designed to measure the levels of occupational stress experienced by the teachers, while the last section referred to as "Job Satisfaction Questionnaire (JSQ) was designed to measure the levels of job satisfaction or dissatisfaction among the teachers.

The TSJSQ has been developed by the researcher following extensive review of related literature on teacher stress and job satisfaction. The TSI contains a list of stressors that have been identified in previous studies as potential causes of stress among teachers (Needle, Griffin, Svendsen, and Berney 1980; Kyriacou and Sutcliffe, 1979a; Rudd and Wiseman, 1962).

In this present study subject were asked to rate the degree of stress caused to them by each of the potential stressors at work on a

four - point Likert scale labelled, "severe stress" (4 points), "moderate stress" (3 points), "Mild stress" (2 points), and "No stress" (1 point). High score on the instrument indicated higher levels of occupational stress. The last section of the TSJSQ is the Job Satisfaction Questionnaire (JSQ) which requested subjects to rate how satisfied or dissatisfied they are with the various psychological factors related to their job on a four point Likert scale.

The responses ranged from "Very Dissatisfied" (4 points), Dissatisfied (3 points), "Moderately satisfied" (2 points) to very satisfied" (1 point). High scores in the JSQ indicated high levels of job dissatisfaction or low levels of job satisfaction. A sample of the Teacher Stress and Job Satisfaction Questionnaire is shown in Appendix C. The JSQ contains eight questions. The scores of 25 - 32, 17 - 24, and 8 - 16 on the JSQ subscale indicate low, moderate and high levels of job satisfaction respectively. The total score range from a minimum of 8 to a maximum of 32. For the TSI subscale, scores of 65-84, 43-64 and 21-42 indicate high, moderate and low stress respectively.

The scores for the 30 items on the TSI and JSQ subscales were summed up to derive the overall or total stress scores of the TSJSQ. The overall stress scores ranged from a minimum of 30 to a maximum of 120. The scores of 91 -120, 61 - 90 and 30 - 60 indicated high, moderate and low levels of overall occupational stress respectively.

The scores of 25-36, 13-24 and 0-12 indicate high, moderate and low levels of psychological symptoms. The respondents score to each item on the TSJSQ was added together and divided by the number of items to get the mean scores plus the standard deviation. The overall mean was derived by adding all the item means and dividing it by the total number of items in the Questionnaire.

Validation of the Teacher Stress and Job Satisfaction Questionnaire (TSJSQ)

Face and Content Validation

Content validation concerns the extent to which a measure adequately represents all facets of a concept (Singleton, Straits, Straits and McAllister, 1988). Also according to Cronbach (1970) content validation involves the adequacy of the contents important for the test instrument. The face, content and construct validity of the TSJSQ was assessed by experts in the areas of health education and allied fields. The instrument was found adequate for the study with respect to content and construct validity by project supervisor and other experts at the University of Ibadan and University of Nigeria, Nsukka. The final instrument was revised and produced after incorporating suggestions and recommendations from the experts.

Reliability and Internal Consistency

A pilot study was carried out among a sample of 20 University teachers in the faculty of education at the University of Ibadan. The pilot study was used to identify possible problem with the questionnaire and to determine the reliability of the TSJSQ. The TSJSQ was administered to the same subjects after two weeks interval from the initial time.

Reliability is concerned with questions of stability and consistency of the measuring instrument. Reliability refers to the accuracy (consistency) and stability of measurement by a test (Isaac and Michael, 1971; Campbell and Stanley, 1959). Test-retest reliability method was used to determine the coefficient of stability. Finally, the computational formula for Pearson Product Moment correlation was used to determine the test-retest reliability which is indicative of the relationship between the two sets of measurements. The test-retest reliability coefficients for the Teacher Stress Inventory and Job Satisfaction Questionnaire subscales were 0.89 and 0.85 respectively.

The reliability coefficient for the combined subscales (i.e. Teachers Stress and Job Satisfaction Questionnaire was 0.96. The pilot study indicated that the TSJSQ is valid and adequate for this study as shown by its high test-retest reliability (r = 0.96) and internal consistency.

The internal consistency estimates of reliability of each subscale of the TSJSQ were determine using Cronbach's coefficient alpha. The alpha coefficient of internal reliability for the TSI subscale was 0.875 with a corrected item - total correlation ranging from 0.36 to 0.53, while that of JSQ subscale was 0.73 with a corrected item - total correlation ranging from 0.31 to 0.53. The Cronbach coefficient alpha for the entire instrument (i.e. the TSI and JSQ subscales combined) was 0.88 with a corrected item - correction ranging from 0.21 to 0.57. The two subscales were also found to be highly correlated ($r = 0.43$; $P < .001$).

Furthermore, the global measure of occupational stress, global measure of job dissatisfaction, total job dissatisfaction (JSQ score) total occupational stress scores (TSI score) and psychological distress (GHQ score) correlated positively with each other ($P<.001$). The summary of the inter-correlations between occupational stress, job disatisfaction and psychological symptoms are shown in Table 4.16.

The General Health Questionnaire

The General Health Questionnaire (GHQ) developed by Goldberg (1972) was used to measure the level of psychological well-being or psychological distress of the University teachers. The GHQ consists of questions asking whether a respondent has recently experienced a particular symptom or item of behaviour over the past few weeks.

There are several versions of the GHQ but the 12 item version was used in the present study. Each item was scored on a response scale ranging from 0 to 3 with high score indicating greater psychological distress (or low psychological well-being).

The GHQ is a self-administered screening test devised to identify or detect non-psychotic minor psychiatric disorder among respondents (Goldberg, 1972). Generally there is evidence indicating that self-ratings of health are significantly related to measures of objective health status (Ferraro, 1980). The validity of the GHQ is well established and has been used extensively in both community and occupational setting (Gureje and Obikoya, 1990, Ullah & Brotherson 1989; Lam, Ong, Wong, Lee, and Kleevens, 1985; Banks, Clegg, Jackson, Stafford and Wall, 1980).

The GHQ has been shown to have high internal consistency and good test-retest reliability over a period of 6 months (Banks *et al*, 1980). In the present study, the GHQ was found to have a test-retest reliability r = .94 over two weeks period. Also the Cranbach coefficient of internal consistency was 0.87 with corrected item-total correlation ranging from 0.34 to 0.69.

Procedure for data collection

The researcher travelled to the randomly selected Universities to administer the questionnaire. A letter of introduction from the

researcher's Head of Department was submitted to the Dean of the selected faculties. After obtaining the permission to conduct the survey, copies of the questionnaire were distributed to all teachers in the faculty with the help of research assistants and department secretaries.

The questionnaire contained an introductory section explaining the purpose of the study and the need for the teachers to participate in the survey. Most of the teachers were able to complete and return the questionnaire within the deadline.

Procedure for Data Analysis

Several statistical procedures were used to analyse the data. All hypotheses were tested at .05 significance level. Descriptive statistics of means and standard deviation, frequencies and percentages were computed for the various study variables. Appropriate univariate and multivariate statistics were used to test the various hypotheses.

Chi-square statistics was used to test for differences among variables or data at nominal levels. The studentized t-test and Analysis of Variance (ANOVA) were employed to test differences between or among variables at interval or ratio scale. Multiple regression analysis was used to test relationships among variables at interval or ratio scale and to determine the influence of the independent variables on the dependent variable. According to

Singleton *et al* (1988) multiple regression is a better technique for analysing the simultaneous effects of several independent variables on a dependent variable. In addition Scheffe' post-hoc test was used to detect differences among groups where ANOVA was found significant. The Statistical Package for Social Sciences (SPSS) was used for the data analysis. The analysis was done at the African Regional Center for Information Science (ARCIS), University of Ibadan, Ibadan.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

The study investigated occupational stress and its relationship to job satisfaction and psychological well-being as well as career and biographical characteristics of teachers in the first generation Nigerian Universities. This chapter presents the results and analysis of the data collected. The results are described and discussed with respect to hypotheses being tested.

Table 4.1 shows the frequency and percentage of respondents according to their universities. A total of 300 respondents responded to the survey from the three universities. Ahmadu Bello University, Zaria accounted for 35% followed by 34.7% from the University of Ibadan, Ibadan and 30.3% from University of Nigeria, Nsukka.

TABLE 4.1

Distribution of Randomly Selected Universities and Faculties

Universities	Numbers	Percentage
Ahmadu Bello University, Zaria	105	35.0%
Faculty of Education		
Faculty of Engineering		
Faculty of Law		
Faculty of Veterinary Medicine		
University of Ibadan, Ibadan	104	34.7%
Faculty of Clinical Medical Sciences		
Faculty of Agriculture and Forestry		
Faculty of Social Sciences.		
University of Nigeria, Nsukka	91	30.3%
Faculty of Arts		
Faculty of Pharmaceutical Sciences		
Faculty of Physical Sciences.		
Total No. of Respondents	300	(100.0%)

TABLE 4.2

Distribution of Respondents by Sex

Sex	Frequency	Percentage
Male	253	84.3%
Female	47	15.7%
Total	300	100.0%

Table 4.2 shows the frequency and percentage of respondents by sex. Males accounted for (253) (84.3%) while female accounted for only (47) (15.7%) of the study sample of 300 respondents.

TABLE 4.3

Distribution of Respondents by Age

Age	Frequency	Percentage
Under 40 years	136	45.3%
Over 40 years	164	54.7%
Total	300	100.0%

Table 4.3 shows the distribution of respondents by age. Out of a total 300 respondents, 136 (45.33%) were under 40 years old while 164 (54.66%) were over 40 years old.

TABLE 4.4

Distribution of Respondents by Years of Teaching Experience

Experience	Frequency	Percentage
1 - 4 Years	77	25.7%
5 - 10 Years	62	20.7%
Over 10 Years	161	53.7%
Total	300	100.0%

Table 4.4 shows the frequency distribution of respondents by years of teaching experience. Most of the teachers had over 10 years experience (53.7%) followed by those with 1 - 4 years experience (25%) and lastly those with between 5 to 10 years experience (20.7%).

TABLE 4.5

Distribution of Respondents by Job Status

Job Status	Frequency	Percentage
Professors/Readers	46	15.3%
Senior Lecturers	84	28.0%
Lecturers I & II	170	56.7%
Total	300	100.0%

Table 4.5 shows the distribution of respondents by their job status, professors and readers (15.3%), senior lecturers (28%), and lecturers I and II (56.66%).

PREVALENCE OF OCCUPATIONAL STRESS AMONG UNIVERSITY TEACHERS

Hypotheses I: There will be no significant difference in the levels of occupational stress experienced by the University teachers.

TABLE 4.6

Analysis of Occupational Stress Among University Teachers

	Levels of Occupational Stress				
	Low	Moderate	High	X^2 value	P. value
Frequency	45	200	53	153.35***	0.001
Percentage	15.1	67.1	17.8		

* significant at P<.05.

TABLE 4.7

Responses to the Teacher Stress Inventory (TSI)

Sources of Teacher Stress	Levels of Occupational stress			
	Severe Stress	Moderate Stress	Mild Stress	No Stress
1. Heavy work load	123 (40.8%)	113 (37.8%)	50 (16.7%)	14 (4.7%)
2. Time Pressure	120	110	56	14
3. Salaries too low	124 (41.3%)	79 (26.3%)	68 (22.7%)	29 (9.7%)
4. Teaching too difficult	22 (7.3%)	35 (11.7%)	84	159 (28%)
5. Shortage of staff members	97 (32.3%)	98 (32.7%)	73 (24.3%)	32 (10.7%)
6. Shortage of teaching materials	179 (59.7%)	82 (27.3%)	29 (9.7%)	10 (3.3%)
7. Overcrowded classrooms	138 (46%)	66 (22%)	63 (21%)	33 (11%)
8. Poor working condition	155 (51.7%)	96 (32%)	32 (10.7%)	17 (5.7%)
9. Lack of equity in handling promotion	83 (27.7%)	74 (24.7%)	77 (25.7%)	22 (22%)
10. Lack of cooperation among staff	28 (9.3%)	71 (23.7%)	101 (33.7%)	100 (33.3%)

TABLE 4.7 CONTD.

Sources of Teacher Stress	Levels of Occupational stress			
	Severe Stress	Moderate Stress	Mild Stress	No Stress
11. Lack of renumeration for extra duties	100 (33.3%)	78 (24%)	72 (24%)	50 (16 7%)
12. Too many students to supervise	79 (26.3%)	88 (29.3%)	80 (26.7%)	53 (17.7%)
13. Unfavourable sabbatical policy	40 (13.3%)	84 (28%)	78 (26%)	98 (3 .7%)
14. Demands of high expectation from colleague	18 (6%)	71 (23.7%)	91 (30.3%)	120 (40%)
15. Problems of ethnic groupings in department	23 (7.7%)	40 (13.3%)	63 (21%)	174 (58%)
16. Negative community attitude towards the teaching profession	52 (17.4%)	64 (21.4%)	73 (24.4%)	110 (36.8%)
17. Lack of job security	29 (9.7%)	51 (17%)	55 (18.3%)	165 (55%)
18. Problem with students	22 (7.3%)	50 (16.7%)	104 (34.7%)	124 (41.3%)
19. Publish or perish syndrome	74 (24.7%)	80 (26.7%)	61 (20.3%)	85 (28.3%)

TABLE 4.7 CONTD.

Sources of Teacher Stress		Levels of Occupational stress			
		Severe Stress	Moderate Stress	Mild Stress	No Stress
20.	Lack of University autonomy	61 (20.3%)	86 (28.7%)	85 (28.3%)	68 (22.7%)
21.	Unfavourable condition of service	106 (35.3%)	100 (33.3%)	59 (19.7%)	35 (11.7%)
22.	Teaching as a stressful profession	51 (17%)	114 (38%)	88 (29.3%)	47 (15.7%)

Table 4.6 shows that the total number of teachers reporting moderate levels of occupational stress (67.1%) is significantly higher than those reporting low levels of stress (15.1%), and high levels of stress (17.8%). Also 54.0% of the teachers rated being a teacher as either very stressful or moderately stressful. Only 15.7% of rated being a teacher as not stressful at all while 17.0% rated teaching as very stressful.

This hypothesis was tested by comparing the number of respondents reporting various levels of occupational stress as measured by the Teacher Stress Inventory (TSI) subscale of the Teacher Stress and Job Satisfaction Questionnaire (TSJSQ).

Chi-square test revealed a significant difference in the levels of occupational stress experienced by the University teachers ($P<.001$). Thus the hypothesis that there will be no significant difference in the levels of occupational stress experienced by the University teachers was rejected.

Respondents were requested to rate the extent of stress caused by each of the potential stressors related to their job. Table 4.7 shows the frequencies and percentages of teachers reporting specific stressors in the TSI subscale of the questionnaire. The response of the teachers

TABLE 4.8

Rank Order of Occupational Stressors in the Teachers Stress Inventory (TSI) Subscale

	Sources of Teacher Stress	Mean ± SD
1.	Shortage of Teaching materials	3.43±0.80
2.	Poor working condition	3.30±0.87
3.	Heavy work load	3.15±0.86
4.	Time pressure	3.12±0.87
5.	Overcrowded class rooms	3.03±1.11
6.	Salary too low	2.99±1.01
7.	Unfavourable condition of service	2.92±1.01
8.	Shortage of staff members	2.87±0.99
9.	Lack of renumeration for extra duties	2.76±1.09
10.	Too many students to supervise	2.74±1.06
11.	Lack of equity in handling Promotion	2.58±1.11
12.	Teaching as a stressful occupation	2.56±0.95
13.	Publish or perish syndrome	2.48±1.15
14.	Lack of university autonomy	2.47±1.05
15.	Unfavourable sabbatical policy	2.22±1.05
16.	Negative community attitude towards teaching profession	2.19±1.12
17.	Lack of cooperation among staff	2.09±0.97
18.	Demands of high expectation from colleagues	1.96±0.94
19.	Problem with students	1.90±0.93
20.	Lack of job security	1.81±1.04
21.	Teaching too difficult	1.73±0.93
22.	Problems of ethnic groupings	1.71±0.97

to the question "In general, how stressful do you find being a teacher?" indicated that 38% rated being a teacher as moderately stressful followed by 29.3% rating being a teacher as mildly stressful. About 17% rated being a teacher as very stressful while 15.7% rated teaching as not stressful at all.

Table 4.8 shows the mean scores and rank order of the specific causes of stress. The higher the mean scores the higher the level of stress caused by the specific stressors. The major sources of stress among others included; the shortage of teaching materials, poor working conditions, heavy work lead, time pressure, overcrowded class rooms, salaries too low, unfavourable condition of services, shortage of staff members, lack of renumeration for extra duties and too many students to supervise.

Conversely, the least stressful areas are: problems of ethnic groups in the departments, teaching too difficult, lack of job security, problem with students, demands of high expectation from colleagues, lack of cooperation among staff, negative community attitude towards the teaching profession and unfavourable sabbatical policy.

The result indicates that teachers differ in ways that they perceive stressors related to their job and that what causes stress to an individual may not cause stress to another. The perception of stress is very much subjective and the experience of stress is mostly dependent on individual and situational factors.

This finding suggests that teaching is a stressful occupation as widely reported in the literature (Kyriacou and Sutcliffe, 1979a 1979b, 1978, 1977; Pratt, 1978). In this study, 17% of the university teachers rated being a teacher as very stressful. This is lower than the 23.4% reported among school teachers in England by Kyriacou and Sutcliffe (1979). The lower stress levels perceived by the university teachers compared to that of secondary school teachers may be related to differences in working condition, wages and the age of students taught.

The data indicated that a great majority of Nigeria university teachers are experiencing high levels of occupational stress related to their job as teachers. The major sources of stress among the teachers are as a result of factors intrinsic to teaching as well as those related to poor working condition and inadequate funding and facilities. These included shortage of teaching materials, poor working conditions, heavy work load, time pressure, overcrowded classrooms, salary too low, unfavourable condition of services, shortage of staff members, lack of renumeration for extra duties and too many students to supervise.

These observation are not surprising because Nigeria universities are reportedly underfunded, grossly understaffed, coupled with lack of adequate teaching and research facilities and buildings. The classes are mostly overcrowded and in some cases a lecturer might

be assigned as many as five to six courses per semesters (ten to fifteen hours per week). There is no doubt that Nigeria university teachers are under tremendous pressure and stress compared with their counterparts in the developed countries.

On the other hand, the University teachers seemed not to be bothered by those stressors related to problems of ethnic groups in the departments, teaching being too difficult, lack of job security, problem with students, lack of cooperation among staff or by demands of high expectation from colleagues (Table 4.8 presents the means and rank order of the specific occupational stressors).

It is interesting to note that the major occupational stressors among the university teacher as identified in the present study are part of the trade disputes between the Academic Staff Union of Universities (ASUU) and the Nigerian Government. This has led to a series of strikes and university closures in the recent years. Nigeria university teachers have been complaining of low salaries, poor working conditions and lack of facilities. This study provides the first empirical evidence highlighting the specific sources of stress and dissatisfaction among Nigeria university teachers. However, it is important to point out that although the inadequate funding by the Nigerian Government is the basic problem; the university administrators in some cases contribute to the problem by not

adequately utilizing the fund to provide the needed facilities due to mismanagement of such fund.

University teachers have persistently complained of low salaries compared with other professionals. Thus, it was expected that low salary would be the most significant cause of stress among the university teachers but the salary was found to rank sixth among the major sources of stress (Table 4.8). This may be related to the recent increase in the salaries and wages of the university teachers by the Nigerian Government. It is fair to say that low salaries would have ranked as the most significant cause of stress to the lecturers if the salaries had not been increased at the time when the present study was conducted.

Finally, the data revealed that although a large proportion of the teachers rated being a teacher (53.4%) as moderately or very stressful, 67.0% indicated that it is fairly likely or very likely that they would choose teaching again as a career. This suggests that teachers are mostly satisfied with their job despite the stressful nature of teaching. This does not mean that most of the teachers would not leave if they can find a better alternative elsewhere. After all many of the teachers have sought employment overseas because of the low salaries and depressed Nigerian economy.

JOB SATISFACTION AMONG THE UNIVERSITY TEACHERS

Hypothesis 2: There will be no significant difference in the levels of job satisfaction experienced by the university teachers.

TABLE 4.9

Analysis of Levels of Job Satisfaction Among University Teachers

	Levels of Job Satisfaction				
	Low	Moderate	High	X^2 value	P. value
Frequency	10	145	145	123.72***	.001
Percentage	3	48.5	48.5		

* Significant at P < .05.

Table 4.9. shows that the total number of teachers reporting moderate to high levels of job satisfaction (97%) were significantly higher than those reporting low level of job satisfaction (3%). The hypothesis that there will be no significant difference in the levels of job satisfaction among the university teachers was tested by comparing the number of respondents reporting various levels of job satisfaction as measured by the Job Satisfaction Questionnaire (JSQ) subscale of the Teacher Stress and Job Satisfaction Questionnaire (TSJSQ). Chi-square test revealed a significant difference in the levels of job satisfaction among the university teachers ($P < .001$).

TABLE 4.10

Responses to the Job Satisfaction Questionnaire (JSQ) Sub-scale

Job satisfaction factors	Levels of job satisfaction/dissatisfaction			
	Very Dissatisfied	Dissatisfied	Moderately satisfied	Very satisfied
How are you satisfied:				
1. With teaching as a job?	25 (8.3%)	40 (13.3%)	129 43.0%)	106 (33.5%)
2. With your physical working condition?	60 (20%)	109 (36.3%)	104 (34.7%)	27 (9.0%)
3. With your pay considering duties?	111 (37.1%)	99 (33.1%)	76 (25.4%)	13 (4.3%)
4. With the extent to which teaching makes use of your skills and another?	43 (14.3%)	65 (21.7%)	136 (45.3%)	56 (18.7%)
5. With the extent to which your colleagues cooperate with one another?	24 (8.0%)	46 (15.3%)	68 (56.0%)	62 (20.7%)
6. With the level of average time demand of teaching job?	22 (7.3%)	63 (21.0%)	181 (60.3%)	34 (11.3%)
7. With academic programmes?	25 (8.3%)	70 (23.3%)	168 (56.0%)	37 (12.3%)

TABLE 4.10 CONTD

Responses to the Job Satisfaction Questionnaire (JSQ) Sub-scale

	Levels of job satisfaction/dissatisfaction			
Job satisfaction factors	Very Dissatisfied	Dissatisfied	Moderately satisfied	Very satisfied
8. If you have the opportunity to choose your career again, how likely is it that you would choose teaching?				
A: *Very unlikely* - 43 (14.3%)				
B: *Fairly unlikely* - 53 (17.3%)				
C: *Fairly likely* - 109 (36.3%)				
D: *Very likely* - 95 (31.7%).				

Respondents were requested to rate how satisfied or dissatisfied they are with certain aspects of their job. Table 4.10 shows the frequencies and percentages of responses to each question in the JSQ subscale.

TABLE 4.11

Rank Order of the Sources of Job Dissatisfaction in the Job Satisfaction Questionnaire (JSQ) Subscale

	Sources of Job satisfaction	Mean±SD	Rank
1.	Teaching as a job?	1.95±0.91	8
2.	Physical working condition?	2.67±0.90	2
3.	Pay considering your duties?	3.03±0.90	1
4.	Teaching makes full use of your skills and abilities?	2.35±0.94	3
5.	Colleagues cooperate with one another?	2.11±0.82	7
6.	Average time demand of teaching job?	2.24±0.75	5
7.	Academic programmes?	2.28±0.78	4
8.	Choice of teaching as a career	2.15±1.02	6

Table 4.11 shows the means scores and standard deviations of the various items in the Job Satisfaction Questionnaire Subscale as well as their rank orders. Higher mean scores indicate high levels of job dissatisfaction.

The analysis of the responses of the teachers to global measure of job satisfaction, "In general, how are you satisfied with teaching as a job?", revealed that 8.3% of the respondents were dissatisfied. However, a great majority of the respondents 43% and 35.3% were moderately or very satisfied with teaching respectively. Also responses to the question, "If you have the opportunity to choose your career again, how likely is it that you would choose teaching?", was related to the responses to that of the global measure of job satisfaction. About 14.3% and 17.3% of the respondents indicated that it was very unlikely and fairly unlikely that they would choose teaching as a career again respectively. In contrast, a larger majority of the respondents, 31.7% and 36.3% indicated that it was very likely and fairly likely that they would choose teaching again as a career if they had the opportunity.

The present study did not agree with the finding by Ajayi (1981) that job satisfaction and commitment is low among Nigerian university teachers. The high job satisfaction obsrved in the present study among the university teachers is consistent with previous studies conducted overseas (Rudd and Wiseman, 1962). Rudd and

Wiseman investigated degrees of job satisfaction among teachers in College of Education in Manchester England and noted that 91.7% of the respondents were fully or fairly satisfied with teaching.

The finding in the present study is similar to that reported by Kyriacou and Sutcliffe (1979). In a study of secondary school teacher in England, they found that 21% and 51.4% of the respondents were very satisfied and moderately satisfied with their jobs as teachers respectively.

The differences in the levels of job satisfaction among the Nigerian University teachers is not surprising because different people experience different levels of satisfaction under similar situation. What causes dissatisfaction or stress to a worker may be a source of happiness to another. For example, Cross (1973) stated that a worker may be highly satisfied with wages he receives, moderately satisfied with his work-mates but dissatisfied with his immediate superior. In other words the reported high levels of satisfaction experienced by the university teachers may be related to many factors not considered in the present study.

Low job satisfaction is related to various aspects of the work itself, such as unpleasant working condition, lack of use of skills and abilities, the work group (lack of understanding among co-workers, lack of recognition for good performance, discrimination in hiring and

promotion, lack of promotional opportunities, and of course low salaries and wages.

The main sources of dissatisfaction among the university teachers were, low salary, poor working conditions, the extent to which teaching makes use of their skills and abilities and some aspects of the academic programmes. The teachers were not satisfied with their pay considering their duties. They seemed to be satisfied with teaching as a career, and the extent to which teacher cooperate with one another.

Finally the interesting finding was that despite the fact that teachers were experiencing high levels of stress, an overwhelming majority were satisfied with their job as teachers. As a matter of fact 68% of the teachers indicated that it is very likely or fairly likely, that they would choose teaching again if given the opportunity. This observation may be due to the love for the teaching profession which they have chosen as their career. Afterall people do the things that they enjoy to do. The reason for this may be that the teachers have learnt to cope successfully with stressful situations encountered in their job.

The result agrees with the assertion that teaching is a very satisfying but somewhat a high pressure occupation (Fletcher and Payne, 1982). Also the effect of stress can be moderated by social support leading to the experience of less stress and greater job

satisfaction. For example, the teachers were satisfied with the extent to which colleagues cooperate with one another. In the same light, problems of ethnic groups in the department was an insignificant source of stress to the university teachers.

The relationship between immediate superior and attitude of workers towards co-workers is an important factor determining job satisfaction beside work itself and work condition. There appears to be high level of social support among the university teachers and this may be one of the reasons for the reported high level of job satisfaction.

The results indicated that some teachers are satisfied with some aspect of their job and dissatisfied with others and that an overwhelming majority of the university teachers are highly or moderately satisfied with their job.

PSYCHOLOGICAL WELL-BEING AMONG UNIVERSITY TEACHERS

Hypothesis 3: There will be no significant difference in the levels of psychological well-being experienced by the university teachers.

TABLE 4.12

Analysis of Pychological Well-being of Respondents

	Level of psychological well-being				
	Low	Moderate	High	X^2 value	P. value
Frequency	17	101	180	133.78***	.001
Percentage	5.9	33.9	60.4		

* Significant at P < .05.

Table 4.12 shows that majority of the respondents (60.4%) reported high level of psychological well-being followed by 33.9% with moderate levels of psychological well-being (indicating low psychological distress) and only 5.7% reporting low levels of psychological well-being (indicating high psychological distress).

Chi-square analysis of the responses to the GHQ in Table 4.12 shows a significant difference ($P < 0.001$) in the levels of psychological well-being experienced by the university teachers. Based on the findings stated above, the hypothesis that there will be no significant differences in the levels of psychological well-being experienced by the university teachers was rejected.

Table 4.13 shows the frequency and percentage of responses to the Goldberg's 12 - item General Health Questionnaire.

Respondents were required to indicate how their health has been in general, over the past few weeks on a Likert Scale ranging from 0 to 3 points. The responses were A = 0, B = 1, C = 2, D = 3). The score of zero in each item indicate the absence of psychological distress or complaints while high scores indicate greater frequency of psychological distress (that is, low psychological well-being).

TABLE 4.13

Responses to Goldberg's 12 - item General Health Questionnaire (GHQ)

1. Have you been able to concentrate on what you are doing?

(a) Better than usual (15.3%)
(b) Same as usual (41.7%)
(c) Less useful than usual (13.3%)
(d) Much less than usual (12.3%)

2. Have you recently lost much sleep over worry?

(a) Not at all (33.7%)
(b) No more than usual (38.38)
(c) Rather more than usual (19.9%)
(d) Much more than usual (9.0%)

3. **Have you recently felt that you are playing a useful part in things?**

(a) More so than usual (29.3%)
(b) Same as usual (50.2%)
(c) Less useful than usual (13.4%)
(d) Much less useful (7%)

4. Have you recently felt capable of making decision about things?

(a) More so than usual (33.7%)
(b) Same as usual (54%)
(c) Less so than usual (8.7%)
(d) Much less capable (3.7%)

5. Have you recently felt constantly under strain?

(a) Not at all (16%)
(b) No more than usual (40.7%)
(c) Rather more than usual (30%)
(d) Much more than usual (13.3%)

6. Have you recently felt you couldn't overcome your difficulties?

(a) Not at all (45.5%)
(b) No more than usual (36.8%)
(c) Rather more than usual (10.7%)
(d) Much more than usual (7%)

7. Have you recently been able to enjoy your normal day-to-day activities?

(a) More so than usual (10%)
(b) Same as usual (48.7%)
(c) Less than usual (27%)
(d) Much less than usual (14.3%)

8. Have you recently been able to face up to your problems?

(a) More so than usual (21.3%)
(b) Same as usual (55.3%)
(c) Less so than usual (16%)
(d) Much less than usual (7.3%)

9. Have you recently been feeling unhappy and depressed?

(a) Not at all (36.7%)
(b) No more than usual (34.3%)
(c) Rather more than usual (19%)
(d) Much more than usual (10%)

10. Have you recently been losing confidence in yourself?

(a) Not at all (83.5%)
(b) No more than usual (19%)
(c) Rather more than usual (5.7%)
(d) Much more than usual (2.7%)

11. Have you recently been thinking of yourself as a worthless person?

(a) Not at all (83.5%)
(b) No more than usual (12.0%)
(c) Rather more than usual (2.0%)

(d) Much more than usual (2.7%)

12. Have you recently been feeling reasonably happy all things considered?

(a) Much so than usual (20.3%)
(b) About same as usual (55%)
(c) Less so than usual (14.7%)
(d) Much less than usual (10%)

The GHQ contains six positive statements (items 1, 3, 4, 7, 8, 12) and six negative statements (items 2, 5, 6, 9, 10, 11). For the positive statements (e.g. item responses such as "less than usual" or "much less than usual" indicate that problem has been experienced in that area. Conversely, for the negative statements (e.g. item 2), responses such as "Rather more than usual" or much more than usual" indicate problem in that area. This means the more the frequency of symptoms reported the lower the respondent's well-being and this invariably implies more psychological distress. By the same token, the lesser the frequency of responses in the positive statements or behaviours the lower the psychological well-being (indicating higher psychological distress).

Generally there were fewer respondents that have problems in the negative statements. For instance, in item 10, 72.7% of the respondents answered "Not at all" to the question, "Have you recently been losing confidence in yourself?"

Also in question 11, 83.5% of the respondents answered "not at all" to the question "Have you recently been thinking of yourself as a worthless person"?

Similarly, in item 2, only 25.3% of the respondents reported that they "have lost much sleep over worry" compared with 74.7% who did not. Also in item 5, 43.5% of the respondents have "felt constantly under strain" compared with 56.7% who did not. Another example in

item 9 shows that only 29% have "been feeling unhappy and depressed" while 71% of the respondents did not. On the other hand, in item 12, a large majority of the respondents (75.3%) indicated that they have been feeling reasonably happy all things considered" compared with 24.7% who did not. Lastly these observations point to the fact that a large majority of the teachers experienced high levels of psychological well-being.

The result showed that most of the teachers were experiencing significantly high level of psychological well-being and less psychological distress. Thus the teachers were mostly happy all things considered, able to enjoy normal day-to-day activities, able to make decision and able to concentrate in what they are doing. Only a few teachers indicated negative responses such as losing much sleep over worry, feeling unhappy and depressed, feeling constantly under strain, loosing confidence and thinking oneself as worthless and feeling they couldn't overcome their difficulties.

The data also showed that an overwhelming majority of the teachers were happy and in good spirits. For example, 75.3% of the respondents have been feeling reasonably happy compared with 24.7% who did not. Only 29% of the respondent felt unhappy and depressed while a large majority of them (71%) did not. These findings are consistent with previous study on health problem and general well-being of public school teachers in United States (Needle, Griffin and

Svendsen, 1981). They found that 72% of the teachers were in good, very good or excellent spirits with only 21% feeling up and down in spirits. Only 5% reported low or very low spirits among the sampled teachers.

RELATIONSHIP BETWEEN OCCUPATIONAL STRESS AND JOB SATISFACTION

Hypothesis 4: There will be no significant relationship between levels of occupational stress and job dissatisfaction experienced by the university teachers.

TABLE 4.14

Stepwise Multiple Regression Analysis of Occupational Stress with Job Satisfaction and Psychological Symptoms

Independent Variable	Multiple R	R^2	Simple r	B	SEB	F-value	P. value
Job Dissatisfaction	.428	.184	.428	1.055	.179	65.8***	.001
Psychological Symptoms.	.464	.215	.349	.334	.098	39.9***	
Constant		31.542					

* Significant at P < .05.

Table 4.14 shows stepwise multiple regression analysis of occupational stress (dependent variable) and the independent variables (job dissatisfaction and psychological distress). Job dissatisfaction is significantly correlated with occupational stress ($r = .428$; $P < .001$). Therefore the hypothesis that there will be no significant relationships between occupational stress and job dissatisfaction was rejected.

To investigate the relationship between occupational stress, job dissatisfaction and psychological symptoms of the university teachers, stepwise multiple regression analysis was performed with occupational stress as the dependent variable. Job dissatisfaction and psychological symptoms served as the first and second independent variable respectively. The first analysis tested the relationship between occupational stress and job dissatisfaction. This involved correlating the respondents scores in the Teacher Stress Inventory (TSI) subscale with the Job Satisfaction Questionnaire (JSQ) subscale of the Teacher Stress and Job Satisfaction Questionnaire (TSJSQ).

However, combining both independent variables (i.e. Job dissatisfaction and psychological distress) yielded a multiple correlation of (Multiple $R = .464$) with the multiple R^2 of .2148. This means that approximately 21% of occupational stress variance is accounted for by job dissatisfaction and psychological distress. Lastly,

the resultant equation for predicting occupational stress (Y) from job dissatisfaction and psychological distress is given below:

$$Y = a + b_1X_1 + b_2X_2 + e$$

Occupational Stress = 31.542 + 1.055 (Job dissatisfaction)
+ 0.334 (Psychological symptoms)

The results show that teachers experiencing high levels of occupational stress also experienced high levels of job dissatisfaction (or low levels of job satisfaction). This is consistent with other studies on occupational stress and job satisfaction among teachers overseas (Mark, Pierce and Molloy, 1990; Needle, Griffin and Svendsen, 1981; Kyriacou and Sutcliffe, 1979b).

The correlation between occupational stress and job satisfaction (r=.-428, P <.001) reported in the present study is higher than the correlation of (r = -.27; P <.01) reported among school teachers in England by Kyriacou and Sutcliffe (1979b). However, Dolan (1987), reported a high negative correlation (r = -.68; P <.001) between occupational stress (burnout) and work satisfaction among nurses in the United States. The present study support the view that the experience of teacher stress leads to the experience of higher job dissatisfaction or conversely lower job satisfaction. The teachers

experiencing greater levels of occupational stress were found to experience lower job satisfaction.

However, it is interesting to note that although a significant majority of the teachers were experiencing high levels of occupational stress, they were mostly satisfied with their job. Teaching is widely regarded in the literature as a high stress occupation, yet teachers are mostly satisfied with their job as teachers.

The high levels of job satisfaction noted among the university teachers may be related to social support and coping mechanism of the teachers. Firstly, it may be that the teachers have learnt to cope with the stressful situations intrinsic to their jobs as teachers. According to Payne and Fletcher (1982) cited in Fletcher and Payne (1982) job stress is the outcome of the balance between job demands, supports and constraints. They stated that whilst teachers may be under high levels of demand, they may also have high levels of support and low levels of constraints, which reduces the overall level of stress and thus the strain experienced from it.

In this study there is evidence that the teachers are satisfied with the extent to which colleagues cooperate with one another. This kind of social support may have helped to moderate, buffer or lessen the impact of stress and hence the experience of high job satisfaction. Also the university teachers like other teachers tend to have job discretion over what they do with their time and less constraints on

what they do compared with other occupations. These explanations are in line with the view that teaching is a very satisfying but somewhat high pressure occupation (Fletcher and Payne, 1982).

RELATIONSHIP BETWEEN OCCUPATIONAL STRESS AND PSYCHOLOGICAL WELL-BEING

Hypothesis 5: There will be no significant relationship between the levels of occupational stress and psychological well-being experienced by the university teachers.

Similarly Table 4.14 also shows that psychological distress is significantly correlated with occupational stress ($r = .349$; $P < .001$). The multiple R value of .1835 indicates that approximately 18% of variance in occupational stress is explained or predicted by job dissatisfaction.

The analysis to investigate the relationship between occupational stress and psychological well-being involved the correlating the occupational stress measures (TSI Score) and the psychological well-being measures (General Health Questionnaire (GHQ)). Occupational stress served as the dependent variable while psychological well-being served as the independent variable.

The second stepwise regression analysis (Table 4.15) revealed a significant and positive association between occupational stress and psychological symptoms or distress ($r = .349$; $P < .001$). This means that teachers experiencing high levels of occupational stress also experience high levels of psychological distress or complaints (indicating low psychological well-being). Based on this finding, the hypothesis that there will be no significant relationship between occupational stress and psychological well-being was rejected.

The results show that the teachers experiencing high levels of occupational stress reported more psychological symptoms or distress in the GHQ. For example, those with high stress scores reported being under strain, losing sleep over worry, felt unhappy and depressed than those experiencing low level of occupational stress.

In contrast, the teacher experiencing low levels of occupational stress reported being reasonably happy, being able to concentrate with what they are doing, enjoying their day-to-day activities and being able to face up to their problems in comparison to those experiencing high levels of occupational stress.

The results is consistent with previous studies indicating a negative relationship between stress and mental or psychological well-being. For example, in England Pratt (1978) reported that poorer mental health was associated with high levels of perceived stress among school teachers as measured by the General Health

Questionnaire (r = .41; P <.001). This compares with the correlation (r =.349; P <.001) obtained between occupational stress and psychological symptom or distress in this study.

Also Needle, Griffin and Svendsen (1981) found that teachers reporting higher levels of stress report lower general well-being (r = .37) and more somatic symptoms (r = .32). Furthermore, Lam *et al.* (1985) found a stronger association between mental illness (psychological distress) and work stress among office workers in Hong Kong as measured by the General Health Questionnaire (r = .63).

Surprisingly, in the present study, although a significant majority of the teachers (67.1%) were experiencing moderate to high levels of occupational stress, 93.3% of all teachers experienced moderate to high levels of psychological well-being. This observation may be related to the fact that the teachers were mostly satisfied with their job. This implies that job satisfaction can in some way moderate or buffer the effect of stress on psychological health of teachers. This is a plausible explanation because job satisfaction was found to correlate positively with psychological well-being among the university teachers.

Also Fletcher and Payne (1982) suggested one of the reasons why a job which appears inherently stressful may not have maladaptive effects on the mental and psychological health of workers. In the case of the teaching profession, teachers may be under

stress and yet satisfied with their jobs due to high levels of social support among the staff and job discretion over what they do. Previous studies have provided substantial evidence that social support does reduce job stress and job-related strain and improve health (LaRocco, House and French, 1980).

RELATIONSHIP BETWEEN JOB SATISFACTION AND PSYCHOLOGICAL WELL-BEING.

Hypothesis 6: There will be no relationship between the levels of Job Satisfaction and psychological well-being experienced by the university teachers.

TABLE 4.15

Analysis of Relationship Between Job Dissatisfaction and Psychological Symptoms

Independent Variable	Multiple R	R^2	Simple r	B	SEB	F-value	P. value
Job Dissatisfaction	.446	.195	.445	0.815	.096	72.2***	.001
Constant	-1.906						

* Significant at $P < .05$.

Table 4.15 shows the relationship between Job dissatisfaction and psychological symptoms with Job dissatisfaction as the independent or predictor variable. The analysis shows a significant and positive relationship between the two variables ($r = .445$; $P < .001$). The coefficient of determination (R-square) shows that approximately 19% of the variance in psychological distress is explained or predicted by job dissatisfaction.

To analyse the relationship between the Job dissatisfaction and psychological well-being, job dissatisfaction was regarded as the independent variable while psychological stress was regarded as the dependent variable. However, the results show that the juxtapositioning of the variables as dependent or independent did not affect the multiple R value.

Regression analysis revealed a significant and positive relationship between job dissatisfaction and psychological distress or symptoms ($r = .445$; $P < .001$). In other words teachers experiencing high levels of job dissatisfaction also experienced high levels of psychological distress or symptoms (indicating low psychological well-being). Table 4.16 presents the summary of the inter-correlations among occupational stress, job satisfaction and psychological well-being.

TABLE 4.16

Summary of Inter-correlations Between Occupational Stress, Job Dissatisfaction and Psychological Symptoms

Independent Variables	Occupational Stress	Job Dissatisfaction	Psychological Symptoms	P. value
Occupational stress	1.0	r = 428 ***	r = .349 ***	.001
Job Dissatisfaction		1.0	r = .445 ***	
Psychological distress			1.0	

* Significant at P < .05

The results indicate that teachers experiencing high levels of job dissatisfaction (low job satisfaction) also experienced greater psychological distress (low psychological well-being). This finding concurs with previous study indicating positive association between job satisfaction and well-being among teachers. Needle, Griffin and Svendsen (1981) indicated that specific problems confronted in teaching is also related to health and well-being outcomes. For instance, overall well-being, somatic symptoms as well as job dissatisfaction are affected by stress.

Stress, job satisfaction and mental health are closely associated. For example teachers with greater stress report low job satisfaction and lower occupational self-esteem (Needle, Griffin and Svendsen, 1981). Literature suggests links from various aspects of work environment to mental health and well-being (Kasl, 1978). However Kasl indicated that the association between mental ill health (psychological distress) and job satisfaction were usually quite low. In the present study, the correlation between job dissatisfaction and psychological symptoms was quite strong (r = .45).

In the present study, teachers experiencing high levels of job satisfaction also report high level of psychological well-being. This study supports the view that satisfied workers are more likely to experience high mental health and general well-being. Teachers experiencing high levels of job satisfaction reported being happy, and

enjoying their day-to-day activities as well as being able to face up to their problems compared with those experiencing low levels of job satisfaction. On the other hand, teachers experiencing low job satisfaction reported more psychological symptoms such as losing sleep over worry, being constantly under strain and feeling unhappy and depressed. These findings clearly indicate that job satisfaction is positively associated with better psychological well-being. Thus it is probable that job satisfaction mitigates or moderates the experiencing of stress thereby resulting in the experience of high psychological health. This explanation is consistent with the buffering hypothesis that social support ameliorate the impact of occupational stress on job-related strain and health (LaRocco, House and French, 1980).

OCCUPATIONAL STRESS AND BIOGRAPHICAL AND CAREER CHARACTERISTICS OF UNIVERSITY TEACHERS

Occupational Stress and Sex

Hypothesis 7: There will be no significant difference in the total occupational stress level experienced by the male and female university teachers.

TABLE 4.17

Analysis of Total Occupational Stress by Sex

Gender	N	Mean Score	S.D	*t* - value
Male	250	69.884	12.81	-.70
Female	47	71.319	13.69	(NS)

NS = Not significant (P > .05).

Table 4.17 shows the mean stress scores and standard deviation for the female and male teachers which were 71.319 _ 13.69 and 69.884 _ 12.81 respectively. However these differences were not statistically significant and accordingly the null hypothesis was upheld.

The Student's *t*-test was used to analyse the differences in the mean occupational stress scores between the male and female university teacher. No significant difference was found in the levels of total occupational stresses experienced by both male and female teachers (t = -.70; P >.05). However, female teachers experienced greater occupational stress than male teachers.

In order to assess any biographical differences in occupational stress among the respondents, the scores of the Teacher Stress Inventory (TSI) and that of Job Satisfaction Questionnaire subscale (JSQ) were summed to obtain the total occupational stress levels. Thus the testing of differences between occupational stress levels and selected biographical characteristics of the university teachers were based on total occupational stress measures (i.e. the overall scores in the Teacher Stress and Job Satisfaction Questionnaire (TSJSQ).

Occupational Stress and Age

Hypothesis 8: There will be no significant difference in the total occupational stress levels experienced by the younger and older university teachers.

TABLE 4.18

Analysis of Total Occupational Stress by Age

Age	N	Mean Score	S.D.	*t*-value
Under 40 Years	134	71.7985	11.759	1.92 NS
Over 40 Years	161	68.6721	11.930	

NS = Not significant (P > .05).

The mean scores, standard deviation and *t*-values of the total occupational stress scores are summarised in Table 4.18. The *t*-test analysis of the mean occupational stress scores of teachers under the age of forty and those above forty years showed no significant difference between the two groups. Younger teachers reported higher levels of stress than older teachers, but failed to reach significant level ($t = 1.92$; $P > .05$). Hence the null hypothesis was accepted.

Occupational Stress and Teaching Experience

Hypothesis 9: There will be no significant differences in total occupational stress levels experienced by the university teachers with respect to years of teaching experience.

TABLE 4.19

Analysis of Total Occupational Stress by Years of Teaching Experience.

Experience	N	Mean score	SD	F - value
1 - 4 Years	76	71.7368	11.7591	1.0009 NS
5 - 10 Years	61	68.6721	11.9397	
Over 10 Years	160	69.8875	13.8055	

NS = Not significant (P > .05).

Table 4.19 shows that teachers with 1 - 4 years experience had the highest mean stress scores (71.737±11.76) followed by those with more than 10 years experience (69.886±13.806). Surprisingly, those teachers with 5 - 10 years teaching experience recorded the lowest stress score (68.672±11.94).

For this hypothesis Analysis of Variance (ANOVA) was employed to assess whether there were differences in total occupational stress levels experienced by the teachers respect to years of teaching experience. The results showed no significant differences among the three groups (F-value = 1.0009; $P > .05$). Based on the results, the null hypothesis was accepted since there were no significant difference among groups. The results of this study contradicts the finding of Mark, Pierce and Molley (1990) and Kyriacou and Sutcliffe (1979a). They found significance differences in levels of stress experienced by secondary school teachers with respect to years of teaching experience. Teachers with more teaching experience reported less stress than those with less experience. This suggests that the more experienced teachers must have learnt to cope with work stress over the years.

Occupational Stress and Job Status

Hypothesis 10: There will be no significant differences in the total occupational stress levels experienced by the university teachers with respect to job status.

TABLE 4.20

Analysis of Occupational Stress by Job Status.

Job Status	N	Mean Score	SD	F - value
Professors/Readers	45	65.2444	14.4382	4.38*
Senior Lecturers	82	70.3902	11.6986	
Lecturers I and II	167	71.5805	12.7668	

* Significant at P > .05.

The means, standard deviation and F ratio for the total occupational stress scores by job status are summarized in Table 4.20. The ANOVA indicated significant differences among the groups. Scheffe' post-hoc test was applied to determine which groups differed from the other. Significant difference was found in occupational stress scores between Professor/Associate Professor group and the Lecturers I and II group.

Professors and Readers reported significantly lower stress score (65.24 _ 14.44) than Lecturers I and II (71.58 _ 1.70) ($F = 4.38$; $P < .05$). Senior Lecturers had lower stress score (70.39 _ 11.70) than lecturers I and II although not statistically significant. Simply stated, there was an inverse relationship between occupational stress and job status of the teachers, showing that the higher the job status the lower the stress reported.

The results indicated a difference in the levels of total occupational stress experienced by the university teachers with respect to job status hence the rejection of the null hypothesis.

The analysis of biographical and career characteristics showed no significant differences in total occupational levels with regards to sex, age, and years of teaching experience. This concurs with that of Mbachu (1986) who reported that male and female university lecturers experience the same degree of stress and that older and younger lecturers experience the same degree of stress.

However, the results of the present study contradicts the finding of Mark Pierce, and Molloy (1990); Kyriacou and Sutcliffe (1979a). They found significant differences between teachers experiencing low and high levels of stress by age, sex and years of teaching experience.

Equally, it is important to point out that female lecturers had higher mean score than male teachers. Also younger teachers (under 40 years old) had greater mean stress scores than those above 40 years. Furthermore teachers with lesser teaching experience (1-4 years) had greater stress. But these differences in means scores failed to reach significant levels.

The only biographical differences in occupational stress levels found to be significant in the present study was on job status. Professors and Associate Professors (Reader) reported the lowest occupational stress levels, followed by senior lecturers and lecturers I and II reporting the highest stress. This observation may be related to the fact that professors have reached the peak of their careers. Professor do not have to worry any more about publishing for promotion or from the so called "publish or perish syndrome". Also professors are mostly in management position and with lesser course load compared with other cadres of lecturers.

The low occupational stress reported by the senior university teachers is not surprising because they have access to better research and teaching facilities compared with other cadres of teachers. Also

studies of job satisfaction among teachers have indicated that job satisfaction tended to be higher for older and more experienced teachers (DiCaprio, 1974; Start and Laundy, 1973) cited in Kyriacou and Sutcliffe (1979b). Thus the lower occupational stress level among the professor may be related to the experience of high levels of job satisfaction and also to the fact that senior and more experienced teacher have learnt to cope or deal with the occupational stressors encountered in their job over the years. Also job satisfaction and commitment have been shown to increase with status (Ajayi, 1981).

Finally it must be pointed out that there are many other career and personal variables that can influence or mediate the impact of stress beside those considered in the present study. For example, a person's psychological and physiological attributes can influence his or her response to stress. Some of these can be acquired or inherited and they include, coping style, social support system, personality pattern (type A or type B behaviour) and other factors that may influence the perception of stressors in the environment.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

This study investigated occupational stress as related to job satisfaction, psychological well-being, some career and biographical characteristics of teachers in the first generation Nigerian universities.

Chapter one presented an overview of the concept of stress, the purpose and rationale for the study, high-lighting the statement of the problem, hypotheses, delimitations and limitation of the study, the significance of the study and ending with the operational definition of terms.

Chapter two dealt with an extensive review of literature on the concept and mechanism of stress, sources and consequences of occupational stress, psychosomatic diseases and stress - illness relationship. Also the concept of teacher stress model including its sources and consequences was extensively discussed. The relationship of teacher stress to job satisfaction, health, and biographical characteristics were reviewed. The last section of this chapter presented local studies on stress and its correlates among Nigerian teachers at various educational levels.

Chapter three described how the study was conducted. This included research design, population, sample and sampling technique, construction and validation of the research instruments, administration of the survey instruments and lastly the procedure for data analysis.

Chapter four summarized the results and analysis of data using descriptive and inferential statistics. The analysis of results was followed by the discussion of the findings and their implications in relation to the original hypotheses proposed in the study and the previous studies in the field of occupational stress.

Chapter five presented the summary, conclusions, recommendations and suggestions for further research on occupational stress among teachers and other occupational groups.

Conclusions

This investigation revealed some interesting results. The data provided an empirical evidence for the relationships between occupational stress, job satisfaction and psychological health. Occupational stress among the university teachers was found to be positively and significantly related to job dissatisfaction and psychological symptoms. Also there was a positive and significant association between job dissatisfaction and psychological symptoms. These findings are consistent with previous studies on teacher stress.

Thus the results indicated that university teachers experiencing higher levels of occupational stress reported lower job satisfaction and more psychological symptoms (that is low psychological well-being) than those experiencing lower levels of occupational stress. The data suggested that job satisfaction and psychological health of teachers is adversely affected by occupational stress and that greater stress leads to low job satisfaction and some degree of psychological dysfunction.

The results showed that an overwhelming majority of the Nigerian university teachers were experiencing moderate to high levels of occupational stress and despite this, most of the teachers were satisfied with their job. Also a significant majority of the teachers reported high levels of psychological well-being despite the prevalence of high levels occupational stress. The reasons for the findings are not quite clear, but it could be that they love teaching as a chosen career or that the teachers have learnt to cope effectively with the stressors encountered in their job. Possibly it could be related to social support and co-operation among the staff which has been found to moderate the impact of stress on health. Lastly, the university teachers unlike some other categories of teachers may tend to have high levels of job control and job discretion with little or no constraints or interference in the performance of their duty. High levels of job control over one's job may be particularly important in reducing the impact of job-related stress.

In addition the teachers were found to differ in their responses to the various stressful situations in their job, with some experiencing more stress than others. Thus the perception of stress is a subjective phenomenon. Stress results when the demands of teaching exceed the resources and the ability of the teacher to cope satisfactorily. The finding that a majority of the teachers were mostly satisfied with their job suggest that teaching is a satisfying but a demanding and stressful occupation

The analysis of the career and biographical characteristics of the university teachers revealed no significant differences in the occupational stress levels experienced by the university teachers with respect to age, sex and years of teaching experience. Male and female teachers, young and old as well as the less experienced and more experienced teachers reported the same level of occupational stress.

However, there was a statistical significant difference in the levels of occupational stress experienced by the teachers with respect to job status. Professors and Readers reported the lowest stress followed by Senior Lecturers with the junior lecturers reporting the highest stress. The results indicated that job status is a more significant predictor of stress among the teachers than age, sex and years of teaching experience. Biographical and career characteristics appear to moderate the experience of stress among teachers. Also the difference in the levels of job satisfaction and psychological well-being

experienced by the university teachers may be related to the individual differences in both perception of stress and reaction to stress.

Also the study identified the major sources of occupational stress among Nigerian university teachers. The major stressors are related to factors intrinsic to teaching and those related to inadequate funding and facilities. Shortage of teaching materials, poor working conditions, heavy workload, time pressure, overcrowded classrooms, low salary and unfavourable conditions of service ranked accordingly as the most significant causes of stress among the university teachers. This indicates that some stressors are more stressful to some teachers than others.

Finally, results of the present study have implications for governments and university policy makers as well as the Academic Staff Union of Universities (ASUU) to take appropriate actions to reduce occupational stress and improve the health and well-being of university teachers. The results clearly demonstrated that occupational stress is a hazard with adverse effects on job satisfaction and psychological well-being of university teachers. Consequently, occupational stress reduce teacher's performance and commitment which affects the achievement of our national educational goals and objectives.

Clearly, there is the need to improve the working condition and welfare of the university teachers in order to improve their job

satisfaction and retain them in the profession. Without adequate funding and improved conditions of service, the Nigerian university systems will eventually collapse as a result of "brain drain" with experienced teachers leaving teaching for other professions or countries where the condition of service is more rewarding.

It is hoped this study will provoke more research into occupational stress aimed at identifying its sources, consequences and how to alleviate occupational stress.

Recommendations

Based on the findings of this study, the following recommendations are made to reduce occupational stress and to improve the health and quality of life of university teachers.

1. The government should provide adequate funding for the universities. This will help to improve the teaching and research facilities which are grossly inadequate at this time.
2. The government should improve the conditions of service and upgrade the salary and allowances of university teachers to reduce the problem of "brain drain" facing the nation today.
3. The university authorities should make good use of the allotted funds to provide the needed teaching and research facilities as well as other infrastructures. This will improve the learning, working and living conditions on campuses.

4. The university authorities should employ adequate staff in order to reduce the stress of work overload.
5. Also the university authorities should take appropriate actions to reduce organisational stressors such as work overload, poor working condition, lack of participation in decision making and so on.
6. The Academic Staff Union of Universities (ASUU) should consider organising periodic in-service workshops to educate or enlighten teachers on the sources and consequences of teacher stress, as well as the practical strategies to cope and manage occupational stress.
7. Lastly, there are specific strategies that can help individual to prevent and reduce stress at work. These include planning and good time management, avoidance of work overload and maintenance of good interpersonal relation with work mates or colleagues. Others involve lifestyle management such as having balanced diets, regular exercise, sabbaticals, use of leisure time and recreation; relaxation training such as progressive and momentary relaxation, meditation, hypnosis and bio-feedback.

Suggestions for Further Studies

There is a limited data on occupational health in the developing countries, Nigeria inclusive. There is a paucity of local literature in

the area of occupational stress especially among Nigerian university teachers. Although the finding of the present study can be generalized to other Nigerian universities, there is the need for more extensive studies to fully understand the causes and consequences of teacher stress.

1. There is the need to carry out the study among teachers in the new Nigerian universities and other educational levels (secondary schools, colleges of education and polytechnic).
2. There is also the need for research to develop appropriate stress intervention programme to help teachers cope with the demands in their job.
3. More studies are needed to fully understand the role of occupational stress on the physical and mental well-being of workers in other occupational groups.
4. Also there is the need to study the role of social support in moderating and buffering the impact of stress on job satisfaction and health status of workers.

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APPENDIX A

TEACHER STRESS AND JOB SATISFACTION QUESTIONNAIRE

TEACHER STRESS AND JOB SATISFACTION QUESTIONNAIRE

Dear Sir/Madam,

This survey is designed to study occupational stress and job satisfaction among teachers in Nigerian Universities. This study will hlep improve the awareness of the adverse effects of job-related stress and how to alleviate stress among teachers. Your participation in this study is important and will be greatly appreciated. I will be pleased to send you an abstract of the results if you desire. The questionnaire will only take a few minutes to complete.

INSTRUCTION *Please read and complete the questionnaire. Your name is not required. Try to be as honest and frank as you can in your responses. Your responses will be used* ***only*** *for research purpose. Thank you for your cooperation.*

SECTION A: Biographical Information

In this section, we would like to know just a little about you so that we can see how different groups of people respond to the issue of occupational stress. Please tick the appropriate box as it applies to you.

1. **Sex:** ☐ Male ☐ Female

2. **Age:** ☐ Under 40 years ☐ 40 years and above

3. **length of teaching experience**
   - A. 1 to 4 years ☐
   - B. 5 to 10 years ☐
   - C. over 10 years. ☐

4 **Status**
   - A. Professor or Reader ☐
   - B. Senior Lecturer ☐
   - C. Lecturer ☐

SECTION B. Teacher Stress Inventory

This section contains potential causes of occupatonal stress among teachers. Please indicate the extent of stress caused to you by each of the following factors. Please tick the appropriate box as it applies to you.

		Severe Stress	Moderate Stress	Mild Stress	No Stress
1.	Heavy workload	4	3	2	1
2.	Time pressure				
3.	Salaries too low				
4.	Teaching too difficult				
5.	Shortage of staff members				
6.	Shortage of teaching materials				
7.	Overcrowded classrooms *(Large classes)*				
8.	Poor working condition				
9.	Lack of equity in handling promotion				
10.	Lack of cooperation among staff				

		Severe Stress	Moderate Stress	Mild Stress	No Stress
11.	Lack of remuneration for extra duties	4	3	2	1
12.	Too many students to supervise				
13.	Unfavorable sabbatical policy				
14.	Demands of high expectation from my colleagues				
15.	Problems of ethnic groupings in the department				
16.	Negative community attitude towards the teaching profession				
17.	Lack of job security				
18.	Problem with students				
19.	Publish or perish syndrome				
20.	Lack of university autonomy				
21.	Unfavorable condition of services				

Tick the appropriate box as it applies to you.

22. **In general, how stressful do you find being a teacher?**

A. Very stressful ☐

B. Moderately stressful ☐

C. Mildly stressful ☐

D. Not at all stressful ☐

SECTION C: Job Satisfaction Questionnaire

This section deals with various aspects of job satisfaction with respect to the teaching profession. Indicate how you feel about each of the following by ticking the appropriate box as it applies to you.

		Very Dissatisfied	Dissatisfied	Moderately Satisfied	Very Satisfied
23.	In general, how are you satisfied with teaching as a job?	4	3	2	1
24.	How are you satisfied with your physical working condition?				
25.	How are you satisfied with your pay considering your duties?				
26.	How satisfied are you with the extent to which your job (teaching) makes full use of your skills and abilities?				
27.	How satisfied are you with the extent to which your colleagues cooperate well with one another?				
28.	How satisfied are you with the level of average time demands of teaching jobs?				
29.	How are you satisfied with the academic programmes?				

Please tick the appropriate box as it applies to you

30. **If you have the opportunity to choose your carrer again, how likely is it that you would choose teaching?**

A. Very likely ☐

B. Fairly likely ☐

C. Fairly unlikely ☐

D. Very unlikely ☐

APPENDIX B

THE GENERAL HEALTH QUESTIONNAIRE

Appendix B General Health Questionnaire

Please read this carefully:

We would like to know if you have any complaints, and how your health has been in general, ***over the past few weeks***. Please answer **all** the questions simply by ticking ( ) the answer which you think most nearly applies to you. Remember that we want to know about present and recent complaints not those that you had in the past. It is important that you answer all the questions.

1. **Have you recently been able to concentrate on what you are doing?**
   (a) Better than usual ☐ (b) Same as usual ☐
   (c) Less than usual ☐ (d) Much less than usual. ☐

2. **Have you recently lost much sleep over worry?**
   (a) Not at all ☐ (b) No more than usual ☐
   (c) Rather more than usual ☐ (d) Much more than usual ☐

3. **Have you recently felt that you are playing a useful part in things?**
   (a) More so than usual ☐ (b) Same as usual ☐
   (c) Less useful than usual ☐ (d) Much less useful ☐

4. **Have you recently felt capable of making decision about things?**
   (a) More so than usual ☐ (b) Same as usual ☐
   (c) Less so than usual ☐ (d) Much less capable. ☐

5. **Have you recently felt constantly under strain?**
   (a) Not at all ☐ (b) No more than usual ☐
   (c) Rather more than usual ☐ (d) Much more than usual. ☐

6. **Have you recently felt you couldn't overcome your difficulties?**
   (a) Not at all ☐ (b) No more than usual ☐
   (c) Rather more than usual ☐ (d) Much more than usual. ☐

7. **Have you recently been able to enjoy your normal day-to-day activities?**
   (a) More so than usual ☐ (b) Same as usual ☐
   (c) Less so than usual ☐ (d) Much less than usual. ☐

8. **Have you recently been able to face up to your problems?**
   (a) More so than usual ☐ (b) Same as usual ☐
   (c) Less so than usual ☐ (d) Much less than usual. ☐

9. **Have you recently been feeling unhappy and depressed?**
   (a) Not at all ☐ (b) No more than usual
   (b) Rather more than usual ☐ (d) Much more than usual.

10. **Have you recently been losing confidence in yourself?**
    (a) Not at all ☐ (b) No more than usual ☐
    (c) Rather more than usual ☐ (d) Much more than usual. ☐

11. **Have you recently been thinking of yourself as a worthless person?**
    (a) Not at all ☐ (b) No more than usual ☐
    (c) Rather more than usual ☐ (d) Much more than usual. ☐

12. **Have you recently been feeling reasonably happy all things considered?**
    (a) More so than usual ☐ (b) About same as usual ☐
    (c) Less so than usual ☐ (d) Much less than usual. ☐

APPENDIX C

LETTER OF INTRODUCTION AND PERMISSION

The Dean,
Faculty of Agric & Forestry,
University of Ibadan, Ibadan.

Dear Sir,

Ernest I. Achalu, Ph.D. Student

Mr. Achalu is conducting a doctoral research survey under the Department of Physical and Health Education, University of Ibadan. This survey is designed to study occupational stress and job satisfaction among Nigerian university teachers. It is hoped the study will help improve awareness of the adverse effects of job-related stress and the need to improve the work conditions of university teachers.

Your faculty is among the Nigerian universities sampled to participate in this important study. We intend to sample all the teaching staff in the various departments within your faculty in order to collect the necessary data.

I am therefore requesting for your co-operation to enable Mr. Achalu conduct the survey in your faculty. A sample copy of the questionnaire is enclosed. Mr. Achalu will personally administer the questionnaire when he visits your faculty.

Thanks for your co-operation.

Yours faithfully,

Prof. C. O. Udoh,
Head,
Department of Physical & Health Education
And Supervisor.

HODs (Faculty of Agric & Forestry)

Please give Mr. Achalu all the necessary co-operation. Thanks

21/3/94

18th March, 1994.

The Dean,
Faculty of Clinical Medical Sciences,
University of Ibadan,
Ibadan.

Dear Sir,

Ernest I. Achalu, Ph.D. Student

Mr. Achalu is conducting a doctoral research survey under the Department of Physical and Health Education, University of Ibadan. This survey is designed to study occupational stress and job satisfaction among Nigerian university teachers. It is hoped the study will help improve awareness of the adverse effects of job related stress and the need to improve the work conditions of university teachers.

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Thanks for your co-operation.

Yours faithfully,

Prof. C. O. Udoh,
Head,
Department of Physical And Health Education
And Supervisor.

To HODs
Please give the bearer, Mr. Achalu conducting a doctoral survey the necessary assistance.
Thank you.
E.B. Famous
22/3/94

FACULTY OF ENGINEERING
AHMADU BELLO UNIVERSITY
ZARIA, NIGERIA
OFFICE OF THE DEAN

Telephone: ZARIA 51
Telegrams: UNIBEL

Your Ref:

Our Ref:

Date 27th June, 1994

All Members of Academic Staff,
Faculty of Engineering,
Ahmadu Bello University,
Z A R I A.

Mr. Ernest Achalu - Doctoral Student

The above-named is a doctoral student of the University of Ibadan who is conducting a survey on stress and job satisfaction among Nigerian University teachers. The ABU Department of Physical and Health Education has an exchange programme with the University of Ibadan in this regard. They have therefore, requested us to assist in completion of questionnaires.

2. Please give all necessary assistance to the candidate as he may require of you.

(MAJID A. ADEIZA)
for Dean of Engineering

24th June, 1994.

The Dean/Faculty Officer,
Faculty of Law,
Ahmadu Bello University,
Zaria.

Dear Sir,

Ernest I. Achalu, Ph.D. Student

Mr. Achalu is conducting a doctoral research survey under the Department of Physical and Health Education, University of Ibadan. This survey is designed to study occupational stress and job satisfaction among Nigerian university teachers. It is hoped the study will help improve awareness of the adverse effects of job related stress and the need to improve the work conditions of university teachers.

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Thanks for your co-operation.

Yours faithfully,

Prof. C. O. Udoh,
Head,
Department of Physical And Health Education
And Supervisor.

All Teaching staff
faculty of law / CILS
The Ph.D. student has
some questionnaires for you to
fill for him. pls, give him
the necessary assistant.
Iwambale
Asst. Dean (U.G)
28/6/94

18th March, 1994.

The Dean,
Faculty of Sciences,
University of Nigeria,
Nsukka.

Dear Sir,

Ernest I. Achalu, Ph.D. Student

Mr. Achalu is conducting a doctoral research survey under the Department of Physical and Health Education, University of Ibadan. This survey is designed to study occupational stress and job satisfaction among Nigerian university teachers. It is hoped the study will help improve awareness of the adverse effects of job related stress and the need to improve the work conditions of university teachers.

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Thanks for your co-operation.

Yours faithfully,

Prof. C. O. Udoh,
Head,
Department of Physical And Health Education
And Supervisor.

Sec,
Please endorse this memo to all academic staff within the faculty for their maximum co-operation.

See HODs and Secty should cooperate the bearer.

18/4

18th March, 1991.

The Dean,
Faculty of Arts,
University of Nigeria,
Nsukka.

Dear Sir,

Ernest I. Achalu, Ph.D. Student

Mr. Achalu is conducting a doctoral research survey under the Department of Physical and Health Education, University of Ibadan. This survey is designed to study occupational stress and job satisfaction among Nigerian university teachers. It is hoped the study will help improve awareness of the adverse effects of job related stress and the need to improve the work conditions of university teachers.

Your faculty is among the Nigerian universities sampled to participate in this important study. We intend to sample all the teaching staff in the various departments within your faculty in order to collect the necessary data.

I am therefore requesting for your co-operation to enable Mr. Achalu conduct the survey in your faculty. A sample copy of the questionnaire is enclosed. Mr. Achalu will personally administer the questionnaire when he visits your faculty.

Thanks for your co-operation.

Yours faithfully,

Prof. C. O. Udoh,
Head,
Department of Physical And Health Education
And Supervisor.

Staff Members Concerned

Mr. Achalu has the support of the Faculty. HOD's and secretarys to co-operate.

Associate Dean
16/4/94