UNIVERSITY OF CAPE COAST

STRESS AND COPING STRATEGIES OF EXPECTANT AND LACTATING STUDENT-MOTHERS AT THE COLLEGE OF DISTANCE EDUCATION, UNIVERSITY OF CA.PE COAST

SAMUEL KWAME KUKUIAH

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BY

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Thesis submitted to the Department of Guidance and Counselling of the Faculty of Educational Foundations, College of Education Studies, University of Cape Coast, in partial fulfilment of the requirements for award of Master of Philosophy Degree in Guidance and Counselling

APRIL 2021

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature..... Date.....

Name:

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature..... Date: .....

Name:

Co-Supervisor's Signature..... Date: .....

Name:

ABSTRACT

The study investigated into the stress and coping strategies among expectant (pregnant) and lactating (nursing) mothers at the College of Distance Education, University of Cape Coast. The methodology used in this study was the descriptive design. Convenience sampling technique was employed to select five hundred (500) respondents for the study. Three research questions were formulated and answered using frequency distributions, means and standard deviations. Similarly, two hypotheses were also tested using two independent samples t-test. A questionnaire was used in collecting responses from the participants. The study revealed that the most prevalent type of stress among expectant and lactating mothers at the College of Distance Education was Financial Stress and the commonest stressor among expectant and lactating mothers was respectively "Antenatal attendance" and "Postnatal attendance". The finding showed that when expectant and lactating mothers are under stress, the first and foremost coping strategy they adopt is Passive Problem Coping. The study further revealed that there is a significant difference in the stress levels between expectant and lactating mothers as well as in the coping strategies adopted by them. It was recommended that the University counsellors should provide counselling, seminars and talks on stress and its coping strategies for expectant and lactating mothers. Similarly, stress sensitization seminars should be organized for their husbands and other family members. The University Management should also come up with clear policies regarding the welfare of expectant and lactating student-mothers on distance education programmes in the area of finances and time bound academic activities such as examinations.

KEYWORDS

Coping Strategy

Distance Education

Lactating Mothers

Pregnancy

Stress

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DEDICATION

To Victoria Korkor Kukuiah, my cherished wife.

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CHAPTER ONE

INTRODUCTION

Background to the Study

The dawn of the 21st century is characterized by a global shift in the demand for higher education. Higher education is considered as the key to the development of every nation and as such the demand for it has increased tremendously over the years. This demand is driven by the desire of employees in various organizations to upgrade their knowledge to facilitate a rise in their income. Many students believe that distance education enable them to boost their professional prospects while still maintaining and upholding their other responsibilities.

Report from Walton-Radford and Weko (2011) indicated that in the United States of America, the percentage of undergraduate students who enrolled in at least one distance education classes increased from 8% to 20% within a period of 8 years (2000-2008). United States of America, Department of Education, National Centre for Education Statistics, (2012) accounted the rise in distance education to be the rapid use and availability of internet. In the United States, nearly 76% of all households in 2011 reported having a computer, in comparison to only 8.2% in 1984 (Fil & Ryan, 2014).

In 2005, the University of South Africa made a commitment to open distance education especially online higher education to provide access to quality education and training through the use of information communication technology (UNISA, 2013). Consequently, higher institutions are under

pressure to train skilled manpower to meet the demand of both local and global organizations (Kwaah & Essilfie, 2017). However, most universities lack the needed financial and infrastructural resources to accommodate the ever increasing numbers of students who graduate from senior high schools every year and the high demand of organizations for their workers to upgrade themselves to meet the current demand of development (Kwaah & Essilfie, 2017).

In Ghana, in order for higher institutions to increase accessibility, the Distance Education (DE) delivery system is employed by most institutions (Atuahene & Owusu-Ansah, 2013; Kumi-Yeboah, 2010). The presence of Distance Education mechanisms has greatly challenged the traditional higher education delivery system (Soliman, 2014). Distance Education has proved to be the most convenient and flexible method of reaching the adult learner because of the competing priorities of work, home, and school. Consequently, adult learners desire a high degree of flexibility (Owusu-Mensah & Amoah, 2015).

According to Soliman, the structure of Distance Education gives adults the greatest possible control over the time, place and pace of education. In the view of Panchabekesan (2011), study materials are rich in content since they are mostly authored by experts. The Distance Education delivery system is designed in a way to suit the comfortability of students. Distance Education allows individuals the flexibility to take classes they would otherwise not be able to due to family, work commitments, or geographical constraints (Gyambrah, Sesay & Amponsah, 2017).

However, studies have suggested that most Distance Education students have challenges in the course of their programme (Rourke, Hammond, Flynn, & Boylan, 2010; Kwaah & Essilfie, 2017). According to Kwaah and Essilfie (2017) most students in Distance Education have stress related problems since such students are expected to combine full time work and family demands with studies. In actual fact, Distance Education students have numerous challenges such as increased responsibilities emanating from both nuclear and extended families and other social responsibilities. These responsibilities come with their associated pressure of work, fatigue and financial constraint which may result into stress induced behaviours among these students (Kwaah & Essilfie, 2017).

According to Nor and Saharudin (2011), combining both studying and work is a challenge and can create difficulty for students as they face demands from multifunctional roles: work, family and study, these can cause frustration and stressful situation to them. These students have to deal with the difficulty of stress to the point of defeat, which is generally derived from the related factors such as work stress, family stress and high self-efficacy. Other burdens that produce stress among distance learning students are examinations, project work, project paper, thesis, fear of academic failure, or any other related factors such as conflict with faculty, conflict with lecturers and communication failure with the administration (Rafidah, Azizah & Noraini, 2009; Kumar & Jejurkar, 2005). Research has shown that college students, including non-traditional graduate and distance learning students, are prone to stress (D'Zurilla & Sheedy, 1992; Ramos & Borte, 2012).

Since many distance education students are adults, there are a lot of responsibilities to meet while meeting the academic demands of their learning institutions. One typical characteristic feature of most of these students lies in the fact that they are matured and mostly married. Consequently, most of the female students may be pregnant and or nursing mothers who have to combine their enormous biological, psychological and social challenges with packed academic work (Boakye-Yiadom, Shittu, Dutt, Dapare & Alhassan, 2015; Panchabakesan, 2011; Torto, 2009).

Students' perception of high stress levels can lead to poor academic performance, depression, attrition and serious health problems. Methods to reduce student stress often include effective time management, social support, positive reappraisal, and engagement in leisure pursuits (Day & Livingstone, 2003). Therefore, studying students' stress and the methods students use to deal with it can have important implications for higher education administrators. Although students cannot avoid these stressors, their ability to adjust to the demands and cope with these stressors is important in achieving success in the college, academic and social environments (Cooley & Toray, 1998).

The period of pregnancy is a special stage in life that is filled with joy and memories. It is a time for great responsibilities and emotional attachment for the pregnant women. This period is marked by enormous biological, psychological and social challenges (Boakye-Yiadom et. al., 2015). The expectant mother experiences significant life changes which at times turn to be a disturbance to her as such changes induce stress. Motherhood status carried

along with its duties sometime put the mothers at a conflicting end, hence stress comes in.

The word stress was derived from a Latin word 'stringere' meaning to draw tight. The term stress has received much attention from researchers from different disciplines of study. From the perspective of biologists, inadequate food supply, cold weather and insufficient supply of air could be sources of stress to organisms. Social scientists focus on individuals' interactions with environmental situations that result in emotional disturbances and leading to stress (Krishnan, 2014). From the view point of physical science, stress is evident in all materials when they are subjected to "force, pressure, strain or strong-front". Every material; steel, rock, or wood has its own limit which it can withstand stress without being damaged. The concept of stress is a common event that happens every day as Nairne (2009) define stress as people's physical and psychological reaction to demanding situations. Affum-Osei, Asante and Forkuoh (2014) also define stress as an unpleasant state of emotional and physiological arousal that when experienced, it threatens the well-being of the individual. To Lazarus (1991), he perceived stress as a state of psychological arousal that results when external demands tax or exceed a person's adaptive abilities.

According to Kassymova, Tokar, Tashcheva, Slepukhina, Gridneva, Bazhenova, and Arpentieva (2019), stress is an inevitable part of life and though people cannot control the stressors in their world, individuals can alter their reactions to them. In spite of the increased use of the terminology "Stress" synonymously referred to as strain, conflict, burnout, depression and pressure in our daily conversation, it is often not clear what stress really is all

about (Bandhu, 2006). Lazarus and Folkman (as cited in Gyambrah, Sesay & Amponsah, 2017) indicated that each individual's cognitive appraisal, perception and interpretation give meaning to events and determine whether events are viewed as threatening or positive. Personality traits also influence the stress equation because what may be overtaxing to one person may be exhilarating to another (Folkman, 1984). Stress is an all-pervading modern phenomenon that takes a heavy toll on human life. Different situations and circumstances in our personal lives and in our occupations produce stress. These can be divided into factors related to the institutions and factors related to the person, which includes his experience and personality trait. Occupation related factors are academic overload, time pressure, poor lighting in schools and inadequate institution facilities for academic work.

The concept of "demand" postulated by Lazarus (1991) explains the duties of nursing or lactating mothers, who are taking multiple roles of motherhood, wifehood and worker. The expectation to satisfy all sections of the various units becomes tasking and hence anxiety comes in, thus stress comes knocking.

Stressors are the factors or stimulators that cause psychological or physical stress. Simply put, a stressor is anything that causes stress. Some scientists classify these stressors according to their frequency or duration (Hussien & Hussien, 2006). Stressors can be either positive or negative based on how a person reacts to it. For instance, a person may view stressor to be a motivator whilst another person may see the same stressor to be a constraint. Stress can be positive or negative. Positive stress is known as eustress and negative stress as distress. Eustress triggers the body and mind to perform

creatively. Distress has a negative stress which affects the mental composure of a person. Some of these problems are insomnia, eating disorders, heart problems, and suicidal tendencies.

When life is devoid of stress, a person becomes sluggish and boring. Positive stress encourages a person to achieve better. However, if this stress exceeds or goes beyond the required level it causes distress. The perception of stress varies among individuals and they have their own stress endurance as some tend to work better under pressure, while the others cannot bear stress (Krishnan, 2014).

Studies suggest that antenatal period is a time of increased liability to mental disorders (Boakye-Yiadom, et al, 2015). Pregnancy anxiety is a potent predictor of adverse birth and infant outcomes **(**Heidi, Christine, Laura, Calvin, & Curt, 2014**)**. Pregnancy is associated with physical and psychological changes in pregnant women. Psychological stress and distress, typically in the late second trimester and third trimester has been linked with low birth weight (Rondo, Ferreira, Nogueria, Riberio & Lobert, 2003). Prominent sources of stress during pregnancy include changing roles, life change, and relationship difficulties. The psychological consequences of such stress may be amplified by hormonal changes that occur during the course of pregnancy. Stress during pregnancy influences the growth and development of the baby. According to Andersson, Sundström-Poromaa, Wulff, Aström and Bixo (2004), about 10% out of 1,465 pregnant women met the criteria for anxiety disorders in northen Sweden. Pregnant women feel anxious given their concerns about the status of the foetus, fear of childbirth, reduced daily

activities, prenatal care, and apparent physical changes (Dareshouri, Bosaknejad & Sarvghad, 2012).

Prevalence of stress during pregnancy has been found to range from 6% to as high as 52.9% in developing countries (Shakya, Situala & Shyangwa, 2008). Stress during pregnancy is more among the teenagers, low educational status and discriminated group of population or with low socioeconomic status **(**Kohrt, 2009). Stress and anxiety disorders during pregnancy do not only have negative impacts on the course of the pregnancy, it can also affect its outcome, the development of a child and maternal well-being. High anxiety during pregnancy has been linked to lower birth weight, shorter birth length, shorter gestations (Hosseini, Biglan, Larkby, Brooks, Gorin & Day, 2009). Other negative effects of maternal stress during pregnancy include premature birth, foetal weight loss, increased foetal birth defects and infant mortality (Goland, Jozak, Warren, Conwell, Stark, Tropper (1993). Stress in pregnancy causes side effects such as depression and mood disorders after childbirth, chronic increase in blood pressure, episiotomy infections, increase the likelihood of unplanned caesarean delivery.

The interest to breastfeed new-born babies is not the mind-set of many women. Prior to the advent of feeding bottles and feeding formula for babies, some rich women employ the services of poor women to breastfeed their babies for a fee. This contract is known as wet-nursing (Thacher, 2006). The World Health Organization (2009) recommends exclusive breastfeeding (no other liquid, solid food, or plain water) for the first 6 months postpartum and the use of breast milk as a supplementary form of feeding for up to 2 years in order to confer optimal health benefits to the mother and child. Despite these

guidelines, estimates are that while 76.9% of mothers initiate breastfeeding after the birth of their child, only 36% of infants in the United States are exclusively breastfed for 6 months (Mulready-Ward and Hackett, 2014). According to the 2005 Ethiopian Demographic and Health Survey, 49.0% of infants less than 6 months were exclusively breastfed (Alemayehu, Haidar, & Habte, 2009).

The case was not different in Ghana, the exclusive breastfeeding rate declined from 63% in 2008 to 46% in 2012 (Ghana News Agency, 2012). Many mothers say their efforts to breastfeed are hindered by several factors, such as lack of support at home and at work, as well as lack of breastfeeding instruction from health care professionals (Li, Fein, & Grummer-Strawn, 2010). Exclusive breastfeeding is beneficial to the neonate as well as the lactating mother. For the baby, breast milk contains nutrients for his/her growth as well as the antibodies which make the immune system very strong to fight off diseases and infections and for the lactating mother, breastfeeding serves as a natural birth control for the first few months after delivery because it pauses ovulation and menstruation (Van der Wijden, Brown & Kleijnen, 2003). The strong bond that is fostered between mothers and infants during the breastfeeding process cannot be overemphasized (Yokoyama, Wada, Sugimoto, Katayama, & Sono, 2006). For mothers to perform their breastfeeding role effectively, they need to be physically and psychologically fit. However, some females experience difficulties such as sore nipple, engorgement, fatigue, feeling tired, difficult latching on, fussy baby, and insufficient supply of breast milk during the lactating period and in the end exposes them to stress (Mehrparvar & Varzandeh, 2011).

Currently, the economic situation in Africa, especially Ghana, propels most women to take up paid employments in order to support their families than it used to be. For one to get a good paid job one needs to further his or her education and for this reason the enrolment of females in the universities has increased dramatically. According to the Ghana Statistical Service (as cited in Ghana Health Service, 2009), the percentage of women in the labour force constitutes 53.4%. Looking at the substantial presence of women in the workforce in Ghana, there is a strong need for them especially pregnant and lactating mothers to get support from family members and other professionals in order to balance their academic, work and family lives effectively.

The life of an adult is naturally characterized by increased stress as a result of competing demands. Managing stress therefore becomes a life coping skill which every adult is expected to acquire in order to lead a successful life. According to Bee and Bjorklund (2004), life is stressful for adulthood journey and that stress in life can be both healthy and unhealthy. Further, they argue that while stress triggers emotional instability, it can also lead to the development of resilience and how to face adversities in life especially pursuing academic goals. It is against this background that this study seeks to find out stress levels and coping strategies among expectant and nursing mothers of the College of Distance Education, University of Cape Coast.

Statement of the Problem

It is often said that the dream of most women is to get married, have their own families and carry their own babies for the men that would be their husbands (Alenkhe & Akaba, 2013). When the "bundle of joy" finally arrives, parents and societies celebrate for the long awaited child that needs to be

catered for. The period of pregnancy and the nurturing of a child are times for great responsibilities and emotional attachment for most women. This period is marked by enormous biological, psychological and social challenges (Boakye-Yiadom et al., 2015). The mother experiences significant life changes which at times turn to be a disturbance to her. When such biological, psychological and social challenges go beyond the control of the individual, then it is perceived as stress. Prominent sources of stress during pregnancy include changing roles, life changes, and relationship difficulties.

When such pregnancy related stress is being coupled with academic work load it makes life difficult to bear for most pregnant women who happen to be students (Esia-Donkoh, Esia-Donkoh & Asare, 2014).

Typical of adult students, Distance Education students are faced with numerous challenges such as increased responsibilities emanating from both nuclear and extended families and other social responsibilities. These responsibilities come with their associated pressure of work, fatigue and financial constraints which may result into stress induced behaviours among these students (Kwaah & Essilfie, 2017). Most of these students may be pregnant and or nursing mothers who are engaged in other activities that can be stressful towards achieving academic excellence. The problem of stress is daunting and can affect the academic performance of the students if not properly managed.

Many researchers have indicated that stress linked with academic activities has been simultaneously related to various negative outcomes such as poor health, depression, and poor academic performance (Pietromonaco, Manis & Frohardt-Lane, 1986; Vaez & Laflamme, 2008). It is also learnt that

too much stress leads to the consequences of physical and mental problems (Shirom, 1986). Various studies found association between stress levels and psychological conditions of students (Nor & Saharudin, 2011).

High level of stress is therefore believed to affect students' health and academic performance. Stress in student nursing-mothers comes from many sources especially academic aspect which is highly stressful for students and may lead to drop out of study programme. Dallan (1998) also observes that such stress may results in psychological distress, physical complaints, behavioural problems and poor academic performances among the student nursing mothers.

Adofo (2013) concluded that nursing mothers in tertiary education situated in Greater Accra face challenges in their academic, economic and childcare activities and to that effect some of the respondents even regretted combining tertiary education with child nurturing. Her study did not consider pregnant women as this current study seeks to focus on both pregnant and nursing mothers.

Also, Kwaah and Essilfie (2017) made an assertion that some of the final year distance education students in University of Cape Coast used multiple strategies, mainly praying/meditating, self-distracting activities such as watching TV and listening to music to cope with stress. This, according to their finding was in contrast to some perception in the Ghanaian society that some students use tobacco, alcohol and other unprescribed drugs to address stressful situations. Their study did not however look at the stress and coping strategies of pregnant and nursing mothers.

Furthermore, the study by Boakye-Yiadom et al. (2015), revealed that the prevalence rate of stress among 154 pregnant women who visited the Tamale West Hospital for antenatal care, from March to May, 2015 was 28.6%. Although the stress rate is not alarming, further analysis needs to be done on pregnant and nursing mothers who are combining tertiary education with other roles.

In spite of the tremendous effect that stress can have on the achievements of students (due to its negative impact on concentration, learning, listening, memory and problem-solving) coupled with the negative impact it has on the students' health which often manifest in health conditions such as anxiety, depression, insomnia, and other mental or psychological effects which interferes with both their daily lives and school performance (Thabethe, 2017), the problem of stress and how it is managed by pregnant and nursing mothers of the College of Distance Education is yet to be fully investigated. It is this knowledge gap that this study seeks to fill.

Purpose of the Study

The general objective of this study was to find out stress levels and coping strategies among expectant (pregnant) and lactating (nursing) mothers at the College of Distance Education.

Specifically, this study sought to find out the:

1. stress levels among expectant and lactating mothers at the College of Distance Education.
2. common stressors among expectant mothers at the College of Distance Education.
3. common stressors among lactating mothers at the College of Distance

Education.

4. coping strategies adopted by expectant and lactating mothers at the College of Distance Education in combating stress.

Research Questions

This study was guided by the following research questions:

1. What is the prevalence rate of stress among expectant and lactating mothers at the College of Distance Education?
2. What are the common stressors among expectant and lactating mothers at the College of Distance Education?
3. What are the common coping strategies that expectant and lactating mothers employ when they encounter stress?

Research Hypotheses

The following hypotheses were tested for this study:

1. H_0: There is no significant difference in the stress levels between expectant and lactating mothers.

H_1: There is a significant difference in the stress levels between expectant and lactating mothers.

2. H_0: There is no significant difference in coping strategies adopted by expectant and lactating mothers.

H1: There is significant difference in the coping strategies adopted by expectant and lactating mothers.

Significance of the Study

The upsurge in the use of Distance Education in Ghana makes it vital for educators to recognize the significant impact stress has on expectant and lactating mothers. This will produce a concomitant effect of working to create

a supportive and calm educational environment for them. Esia-Donkoh et al. (2014) posited that most universities in Ghana do not have explicit institutional arrangements that take into account issues that bother on student-pregnancy and parenthood.

The findings and recommendations of this study will therefore inform Distance Education administrators and managers to know what to do in terms of strategies for helping Distance Education students in Ghana to minimise stress.

The findings from this study will provide rich information to educational administrators, lecturers and decision makers on the source of stress experienced by expectant and lactating mothers as they pursue their academic aspirations through the Distance Education mode.

Furthermore, the findings from this study will educate pregnant and nursing mothers on the appropriate coping strategies they can use for a short period of time before seeking professional assistance so that stress will not overwhelm them.

Additionally, the findings from this study will assist counsellors, health professionals, physical education instructors and recreational facilities managers to develop effective stress management strategies to assist pregnant and lactating distance education students to control their stress levels. Lastly, findings of this study will enlighten the public on the specific stressors that pregnant and nursing mothers face on the Distance Education programme so that prospective applicants could prepare themselves physically and psychologically well before enrolment on the programme.

Last but not the least, the findings from this study will help the spouses and other family members of the expectant and lactating mothers (who are on distance programmes) to appreciate the enormity of stress they are exposed to and the devastating effects it has on them. This will elicit the necessary sympathy and compassion needed from them in order to provide maximum social support to alleviate the plight of these expectant and lactating mothers.

Delimitation of the Study

This study was delimited only to the various stressors and coping strategies adopted by expectant and lactating mothers enrolled as distance education students at the University of Cape Coast. Expectant and lactating mothers reading academic programmes that were offered at either the regular or sandwich programmes was not the focus of this study.

Limitations

The major limitation of the study was the unenthusiastic attitude of distance students toward research work and especially completing of questionnaires. This threatened to yield a low return rate of the questionnaires. In order to minimise this weakness, I encouraged participating pregnant and lactating mothers who were to respond to the questionnaire to do that in a truthful and honest manner.

Secondly, the non-availability of the data on the number of expectant and lactating mothers at the College of Distance Education placed a limitation on the flexibility of the choice of sampling technique and the determination of the sample size for the study.

It is a common knowledge that the levels of stress experienced by expectant mothers vary with the specific stages of pregnancy and whether the

individual involved is a first timer or not. This study however generalized the stress associated with pregnancy without recourse to the specific stages of pregnancy.

Definition of Terms

Stress: a state of mental or emotional strain or tension resulting from adverse or demanding circumstances.

Coping strategy: this refers to the thoughts and actions students adopt to manage a threatening or stressful situation.

Expectant mother: a woman who is pregnant

Lactating mother: a woman who is breastfeeding a child

Organization of the Study

The study was organized into five chapters. Chapter One entails the introductory part of the study, background to the study, statement of the problem and the significance of the study. It also covers the purpose of the study and the consequent research questions that were answered and hypotheses tested. It includes the delimitation of the study as well as the limitations of the research.

Chapter Two reviews related literature from three perspectives, namely the conceptual, theoretical and empirical dimensions. The Chapter Three covers the methodologies in terms of research design, population, sample and sampling procedure, instrument and procedure for data collection and data analysis procedure. The Chapter Four covers the results and discussion. Chapter Five comprises the summary, conclusion and recommendations.

CHAPTER TWO

LITERATURE REVIEW

This chapter presents a review of related literature on stress, coping and management strategies among expectant and lactating mothers. The chapter is organised into three main parts; conceptual and empirical reviews and theoretical framework.

Conceptual Review

Meaning of Stress

Mundia (2010) explained stress as a non-specific physiological reaction to internal and external demands made on the body. According to Sarafino (2012), stress arises when individuals perceive a discrepancy between the physical or psychological demands of a situation and the resources of his or her biological, psychological or social systems. This definition implies that whenever a person encounters any situation in life, he or she makes an assessment to determine whether or not he/she has the needed resources to handle the situation. If the resources are enough to handle the situation it will not be labelled as stress but if the resources are not enough then the situation becomes stressful. Stress can also be defined as an adaptive reaction towards a life threatening event (Książek, Grabska, Trojanowska, Slowinska, Dreher, Scirka & Dreher, 2015).

Stress expressed in a simple term refers to a feeling of emotional or physical tension. It can come from any event or thought that makes a person feel frustrated, angry, or nervous. Stress is a person's body's reaction to a

challenge or demand. In short bursts, stress can be positive, such as when it helps you avoid danger or meet a deadline.

Types of Stressors

According to Cohen and Hoberman (1983), stress is not only about negative situations or events that occur in human lives but also positive events can lead to stress. There are two types of stressors which is the positive stressors which is known as eustress and negative stressors which is also known as distress.

Eustress simply refers to positive stress that occurs in human lives. Eustress are considered to be positive because they are within the resources of a person. Eustress has characteristics such as; it is a short-term event, it feels very exciting, it improves one's attitude and performance and it motivates people. Examples of eustress are starting and completing school, preparing for wedding, having a baby, going for vacation and attending job interview.

Distress is the negative aspect of stress. According to Dictionary.com (2016), distress is a moment of great pain or sorrow, acute physical and mental suffering; affliction, trouble. Distress is regarded as the negative aspect of stress because people perceive the situation to be out of their control or the situation tends to drain much of their resources. Distress has the following characteristics; it is short term but can have long term implications, it decreases a person's productivity, it feels unpleasant and disturbing. Examples of distress include death of a close relative, unemployment, terminal illness and impending divorce.

Academic Stressors

Academic stress is defined as the body's response to academic related demands that exceed adaptive capabilities of students (Wilks, 2008). Bisht (as cited in Krishnan, 2014) defined academic stress as a demand related to academics that tax or exceed the available resources (internal or external) as cognitively appraised by the student involved. Students face different kinds of academic stressors in their quest to pursue their academic careers. Many situations such as academic workload (the number of credit hours per semester), too many assignments, oral presentations, writing quizzes and examinations, competition with other students, failures, lack of pocket money, poor relationships with other students or lecturers, family or problems at home may pose academic stress to students (Fairbrother & Warn, 2003).

Financial Stressors

Education has become one of the expensive commodities in the world especially in African countries. Research findings consistently suggest that finance is a significant factor that impacts student stress levels (Jones & Johnston, 1997; Timmins & Kaliszer, 2002).

Davis and Mantler (2004) described financial stress as the subjective, unpleasant feeling that one is unable to meet financial demands, afford the necessities of life, and have sufficient funds to make ends meet. The majority of expectant and lactating student-mothers are financially insecure and sometimes the partners of such students become irresponsible when it comes to taking care of the pregnancy and infant babies and further worsening their financial plight (Sekgobela, 2008). This often causes students to discontinue their studies due to financial difficulties (Van den berg & Manhute, 2013).

According to Waldman (2008), financial pressures have the tendency of amplifying stress during pregnancy, and also heighten the incident of depressive symptoms. From the perspective of Davidson, Robertson, Anderson and Ward (2011) financial stress is heavily correlated with poor money management skills, with a very direct relationship between the degree of financial stress someone faces and their ability to manage their expenses, control their debt, and pay their bills on time.

Due to advancement in technology, some distance education systems have adopted new applications to improve teacher-learner interaction where by an already prepared learning materials are sent to students via electronic platforms for them to read. As a result of this technological advancement, some distance learners are billed with tablets to facilitate teaching and learning process via electronic platforms and this has increased the financial burden of some of the students. For example, social media such as whatsApp messenger, YouTube allow course instructors to upload both audios and videos of information they want learners to grasp without necessarily meeting at the lecture theatre. Although, almost all distance learners meet in their various centres every two weeks for tutorials, the cost involved in transportation as a result of increments in fuel prices contribute to students' financial stress. Also, students need to purchase internet bundle to enable them download and read learning materials that are sent to them on social media. The high tuition fee which distance learners need to bear in the course of their academic pursuit cannot be left untouched when one is talking about financial stress.

In response to the outcry of the general citizens of Ghana on the amount of fees one need to pay at the university, the Ministry of Education (as

cited in Yusif, 2018) issued a directive that all public universities in Ghana should not increase the tuition fees of university students until their requests are processed and approved by Parliament. Distance education students pay higher tuition fees as compared to the fees of traditional or regular students and what could have accounted for these high fees is that distance learners are given copies of the books they are supposed to study for the semester and this is compulsory for all distance education students unlike the traditional students where they have to make their own lecture notes during lecture time.

Adofo (2013) found out that some women either take their children with them, use paid domestic workers, leave children with neighbours, relatives, older siblings, paid child minders or take them to day care centres. This child care related expenses often worsen the financial plight of lactating mothers resulting in financial stress. A research conducted by Andres and Finlay (2004) revealed that in an effort to reduce the cost of babysitting, some lactating student-mothers traded babysitting time with colleagues.

Interpersonal Stressors

Interpersonal relationship refers to the connections that exist among people. Some social scientists regard human beings as social animals or gregarious animals which mean that no human can exist alone. We need each other for our survival but at times the relationship can become burdensome or unbearable for some people. Kato (2013) defined interpersonal stressors as ‘‘stressful episodes between two or more people that involve quarrels, arguments, negative attitudes or behaviour, an uncomfortable atmosphere during a conversation or activity, and concern about hurting others’ feelings’’ (p. 100). Interpersonal stress is bound to occur among students, lecturers,

demonstrators, friends and even family members because they come from diverse backgrounds, they have different opinions about issues and may be having different goals. For instance, a husband may tell the wife not to enrol herself in the distance education but should invest the money into their building project. This misunderstanding may lead to interpersonal stress due to the disharmony in the family.

Environmental Stressors

Stress occurs in an environment when the environment is felt to be making demands on people that exceed their ability to cope. Stress originates in adverse environmental conditions interfering with normal human functioning and is considered a threat at present and even in the future. Rishi and Khuntia (2012) stated that environmental stressors are typically aversive/unpleasant, primarily uncontrollable and of variable duration and periodicity and require low to moderate adjustments. Another cause of stress for university students is the new university environment itself. Environmental stressors can create an unpleasant atmosphere, poor performance, absenteeism and possibly even physical injuries (Adomaitis, 2011). Environmental stressors may be minor irritations and frustrations of everyday life that we all experience such as getting things done quickly, overcrowding, noise, lack of enough space and inadequate resources to perform academic work (Ongori, 2007; Awino & Agolla, 2008). The environment is always seen as leading to the damage of mental and physical health by contributing to stress (Donnerstag, 2012).

The new university environment can be intimidating and anxiety provoking for students for a number of other reasons including taking first

examinations and completing required papers, public speaking and encountering thousands of other university students (Rodgers & Tennison, 2009).

Pregnancy Related Stressors

Though pregnancy can be a wonderful experience in a woman's life, it can also be stressful (Guardino & Schetter, 2014). Pursuing an academic goal while pregnant is an uphill struggle. Stress during pregnancy is the result of physical and psychological changes that come along with pregnancy and the new role of being a mother which is about to unfold (Sarani, Azhari, Mazlom & Sherbaf, 2015).

Pregnancy comes along with extra demands that tax the physical and psychological resources of most women. The causes of stress during pregnancy tend to be different among women partly due to personality trait, social support and the environment in which one finds herself. Despite these differences, there are some common causes of stress during the period of pregnancy and some of these are; oedema of the extremities, nausea, vomiting, bleeding, dizziness, tiredness, cephalopelvic disproportions, pre-eclamptic toxaemia etc (Dlamini, cited by Sekgobela, 2008). Besides, mood swings, constipation, having backache, worries about possible miscarriage and outcome of labour could contribute to the stress level of pregnant women who are combining pregnancy with academics via distance education. Pregnant-students face varied challenges which include hormonal (biological), human, stigma, physical, and socio-economic challenges and play multiple (occupational, 'pre-natal' maternal, domestic, etc) roles within these constraints. Combining these roles with academic activities in such a

challenging context places diverse stresses on pregnant students (Esia-Donkoh et al (2014). Etuah, Gbagbo and Nkrumah (2018) posited that carrying a pregnancy in an academic environment negatively affects student's studies and academic performance with physical discomforts and inadequate finances being the major challenges accounting for stress.

According to Mamhute (2011), students who become pregnant in school are expected to devise coping mechanisms towards the challenges of pregnancy and academic work. From the perspective of Thabethe (2017), pregnant students encounter countless experiences, such as maternal stress and anxiety, inability to cope, poor concentration, low self-esteem, absenteeism and poor performance. In addition, pregnant students rely on the social support they received from friends, family and partners to cope.

Lactating Related Stressors

The demands of parenthood and studentship are not only conflicting but stressful thereby posing great challenges to the adult learner (Mamhute, 2011). The task of combining motherhood with the demands of an academic life particularly for lactating students is difficult for most women. Breastfeeding new born babies may pose stress to many women especially first-time mothers. That is why the recommendation by the World Health Organisation for women to breastfeed their babies exclusively appears to be a challenge for many women who are playing multiple roles such as wife, mother, employee and student. Right after child birth, mothers need to endure pain for a period of time and in extreme cases some doctors prescribe pain relievers for mothers. Some of the situations which may appear stressful for breastfeeding mothers include; sore nipple, breast engorgement, difficulty in

carrying new born babies, disturbed sleep as a result of babies waking up late in the night to breastfeed. Some women are much concerned about their privacy and feel embarrassed to breastfeed their child in public especially first-time mothers because they feel that men might be looking at their exposed breasts as they breastfeed their babies.

One major challenge that affects College of Distance Education student-mothers is the compacted time table for lectures, tutorials and other academic programmes predominantly scheduled over weekends. According to Dallan (1998) undergraduate studies, especially, are time structured and inflexible, such that a lactating student would have to attend classes when they are offered and not when they fit into her day. Besides, they have to study before examinations, read and prepare for assignments. These, undoubtedly expose them to high stress levels.

In order to ensure maximum concentration during lectures, most lactating students leave their infant babies with baby seaters at home. The thought of their babies crying for want of breast milk and affection often affect the emotions of these mothers while at school. This generates anxiety in mothers resulting in stress. Jarvis (1995) found out that adults who were over-stimulated or anxious do not learn as well as those who are stimulated to respond to their learning situation in a normal way. Perkin (as cited in Adofo, 2013) observed that only few mothers are immune from guilt feelings about what might happen when one has an infant baby in the care of others.

According to Adofo (2013), juggling the stresses of schooling with the responsibilities of home leave lactating students overworked, overstrained and always wake up from bed already tired. From the perspective of Egenti and

Omoruyi (2011), the stress or trauma which student mothers have to go through makes them feel psychologically ill-disposed towards the academic programmes. The challenges faced by most student nursing mothers at the College of Distance Education are quite worrisome. According to Hordzi (2008), how to get peace of mind from infant babies in order to concentrate and write examinations is the major challenge facing some of the lactating students on distance education programmes. This is because most lactating students find it difficult to concentrate during examination as a result of disturbances from their babies. At the College of Distance Education, the situation at times becomes so frustrating for the mothers such that it is not uncommon to see a mother and an infant baby struggling over a pen or pencil in an examination hall. This most of the time impacts negatively on their output during an examination. Adofo (2013) posited that one cause of emotional turmoil and stress for student- mothers is their children's illness resulting in mothers absenting themselves from lectures and even examinations. Illness of infant babies often robs their mothers of the valuable time they need as students to attend lectures and prepare for quizzes and examinations. According to Esia-Donkoh et al. (2014), almost all student-mothers entertain the fear of losing a child to illness. Consequently, they stayed with their ill children all the time until they got well, even if it prevented them from attending to academic tasks.

Zaitawi (1999) identified lack of social support as a serious source of stress that female (expectant and lactating) students experience. Social support is a social process which affect health and mental wellbeing leading to

increased self-efficacy and the reduction of stress (Emadpour, Gholami Lavasani, & Shahcheraghi, 2016; Hamdan-Mansour & Dawani, 2008).

Brown and Watson (2010), stated that the striking of a balance between domestic and academic life is a significant source of stress. The feeling of stress in academic situations causes psychological problems in students and may negatively impact their well-being and personal learning (Hjeltnes, Binder, Moltu, & Dundas, 2015). According to Roxburgh, Stephens, Toltzis and Adkins (2001), the mismatch between what is expected in parenthood and the actual reality of parenthood combined with studentship can cause stress as the new parent tries to adjust.

Coping Strategies

Lazarus and Folkman (1984) defined coping as ‘‘constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person’’ (p. 141). Since there is no single way of dealing with stress, different proponents from different orientations have their own way of categorising the various ways of dealing with stress. Kato (2013) gave three categories of coping strategies and they are reassessing coping, distancing coping, and constructive coping.

Reassessing coping refers to efforts to wait patiently for an appropriate opportunity to act or for a change or improvement in the situation. This type of coping is an active strategy that involves exercising self-control, avoiding premature action, and waiting until an appropriate opportunity arises.

Distancing coping reflects strategies that attempt to actively damage, disrupt, and dissolve a stressful relationship (e.g. avoiding contact with the

person and ignoring the person); that is, distancing in this coping style means intentionally breaking off relationship with another individual involved in creating the stressful situation. Expectant student-mothers avoid stressful events to avoid being overwhelmed with their challenges (Allen & Leary, 2010).

Constructive coping involves efforts that actively seek to improve, maintain or sustain a relationship without aggravating others (e.g. reflecting on one's own conduct and trying to understand the other person's feelings) and emphasizes respecting and living in harmony with others.

The research results of Scheier, Weintraub and Carver (1986) on the main stress coping strategies however include: denial/aloofness; centre of the problem; self-accusation; acceptance/abandonment; active re-interpretation; evasion through delusions; and social support.

Pearlin and Schooler (1978) posited that the function of coping entails: changes that cause nervous situations, restraining things from becoming stressful based on individual experiences and managing stress after the occurrence of events. Nonetheless, Price (1985), talking on the effectiveness of coping strategies suggested that not all coping behaviours are useful. According to him, unlike inappropriate coping behaviours that increase individual problems by heightening individual's stress, good coping behaviours decrease the negative effect of stress. Inappropriate coping behaviours such as smoking and alcoholic coping methods have an unfavourable influence on the mind and body. This includes direct damage to the body as well as psychological problems. Other bad coping strategies including avoidance coping methods causes individuals to have depression,

animosity and even suicidal tendencies. Inappropriate stress and coping strategies can therefore lead to physiological and psychological illnesses.

Simultaneously being a student and a mother is challenging, yet manageable, requiring planning in various fields (Zahra et al. 2017). In order to be able to cope with the stress that results from combining academic demands and parenting, a careful planning of these activities becomes crucial (Moreau & Kerner, 2013).

For easier adjustment to stressful situations that confront expectant mothers during pregnancy, support from people within their social circles is critical if they are going to cope. It is however unfortunate that pregnant students do not receive enough support from their close associates like spouses and family members. According to Saleh, Bahei, El-Hadidy and Zayed (2013), inadequate support during pregnancy can elicit depressive conditions.

Adofo (2013) suggested that the use of measures such as recruiting and hiring workers to do housework and childcare or leaving children at a kindergarten or with grandparents are helpful in dealing with the stress that student-mothers encounter as they combine parenting with schooling. This view is supported by Crous, Roets, Dicker and Sonnekus (2000) who posited that for the nursing student to adapt to her new pattern of life, she needs support and guidance.

Abadi (2012) alluded that expectant student-mothers adopt positive reappraisal coping strategy for handling their challenges by transforming their negative experiences to positive ones. Some expectant student-mothers simply view pregnancy as a good contribution to their lives in order to cope with pregnancy-related challenges (Guardino & Schetter 2014).

According to Johnson, Gooding, Wood and Tarrier (2010), a positive reappraisal is employed by expectant student-mothers because it ensures the reduction of stress and depression. Apraricio, Pecukonis and O"Neale (2015), maintained that cultivating a positive attitude during pregnancy or in any stressful situation can help mitigate the negative impact associated with stress. From the view point of Watts, Liamputtong and Mcmichael (2015), challenges during pregnancy should be seen as preparation for motherhood; and also psyche up expectant student-mothers to cope and be motivated to work harder, so as to provide for their children (Bowman, 2013).

According to Thabethe (2017), some expectant student-mothers find prayer very helpful for coping with the challenges they encounter during pregnancy. Expectant student-mothers use prayer for coping because prayer is effective when going through challenges (Esperandio & Ladd (2015)). This is because prayer gives hope and positive expectation towards surmounting of a challenge. Prayer enhances the well-being of an individual (Simao, Caldeira & Carvalho, 2016) and also reduces stress and anxiety (Bhatia, 2009).

Thabethe (2017) reported that some expectant student-mothers use escape-avoidance as a way of coping with stressful events they encounter during pregnancy. Escape-avoidance is about disengaging oneself from a stressful event and its emotional consequences by refusing to believe that it is real (Basol, Carneiro, Guimaraes, Okabayashi, Carvalho, Da Silva, Cortes, Rohdel, & Eizirik, 2015). Abadi (2012) however posited that using escape-avoidance as a coping strategy is associated with lower psychological well-being, depressed symptoms and anxiety during pregnancy. Despite the detrimental effect of substance abuse on both the mother and the foetus, some

expectant student-mothers rely on smoking and drinking alcohol as a stress coping strategy during pregnancy (Ugoji, 2013, Guardino & Schetter, 2014).

Effect of Stress

There are numerous effects that can be attributed to stress and the effect normally depends on the intensity and frequency of stress. For instance, the negative effect an individual will experience when he/she is exposed to consistent high level of stress will be different from when a person is exposed to mild level of stress for a brief period of time.

Psychosocial, cultural and environmental stressors experienced by women during gestation can be detrimental to pregnancy, maternal and foetal health. Therefore, the effect of stress in this context can be organized into three sub areas namely; the developing child, the expectant mother and the lactating mother. These would however be preceded by the general effect of stress on university students.

Effect of Stress on University Students

The rigorous demands of academic life make stress part and parcel of students' lives. This assertion is based on the fact that stressful activities typify the nature of tasks associated with the demands of academic work (Agolla & Ongori, 2009). According to Smith, Johal, Wadsworth, Smith, and Peters (2000), in the situation where the demand placed on students is driven by deadlines and pressure for excelling in tests or examinations, students become predisposed to stress.

The studies of Dwyer and Cummings (2001) revealed that stress was the most common factor among all health factors which impact negatively on the academic performance of students, as stress has a detrimental effect on

their physical and psychological wellbeing. University students encounter different kinds of academic stressors during the period of their studies. Challenging academic demands and inadequate time to attend to personal-social issues can add to the normal stress of life and begin to have a negative effect on students (Marwan, 2013).

Stress in academic institutions can have both positive and negative effects if not well managed (Rees & Redfern, 2000). Stress among university students can have diverse effects on the students be it physical, psychological, emotional or social. Dusselier, Dunn, Wang, Shelley and Whalen (2005), identified a strong relationship between stressful life events and declining academic performance among college students. Williamson, Birmaher, Ryan and Dahl (2005), reported that in anxious and depressed youths, stressful life events are considerably elevated which in turn lead to low performance in academics. According to the American College Health Association in the 2006 survey on college students, academic stress is one of the greatest health conditions that negatively affect the academic performance of students. Out of the 97,357 college students used for the survey, 31,154 (32%) reported that they obtained lower grades, had incomplete results and even some dropped courses as a result of stress they encountered during their study periods. This claim is supported by Basol et al. (2015) who reported that exposure to severe stress leads to poor performance.

A number of research findings uniformly revealed that symptoms such as lack of energy, high blood pressure, feeling depressed, increase in appetite, trouble concentrating, restlessness, tensions and anxiety among others suggest the presence of stress (Malach-Pines and Keinan, 2007;

Ongori, 2007; Ongori and Agolla, 2008; Agolla, 2009). Jaramillo et al. (2005), however suggest that the degree to which stress takes its toll on an individual is a function of his/her personality characteristics and cognitive appraisal of the stressful situation. An individual's resilience, appraisal, perception and interpretation of a stressful situation therefore become key determinants in the experience of the negative consequences of stress. This explains why the negative effects of stress on a student may vary considerably from one student to another.

Effect of Stress on the Foetus or Developing Child

There is a small but growing literature indicating that there is a relationship between pregnant women's psychological distress and their children's behavioural outcomes. Sjostrom, Valentin, Thelin and Marsal (1997) reported that maternal anxiety is associated with reduced blood flow to the foetus, and foetal levels of stress hormones reflect those of their mothers (Gitau, Cameron, Fisk, & Glover, 1998). According to DiPietro (2004), there are both short-term and longer-term adaptive responses to stress by the foetus, depending on the intensity and repetitiveness of the stimulation. Prenatal stress can indirectly affect infant health and development by increasing the risk of the occurrence of adverse birth outcomes which are, in turn, associated with substantial developmental and health consequences (Weinstock et al., 1988).

An estimated 15 % of children are born low birth weight and 11 % are born preterm globally. Complications from preterm births are estimated to be responsible for 35 % of the world's 3.1 million neonatal deaths and a leading cause of under 5 year's mortality worldwide. Risk factors for smaller size at birth or shortened duration of gestation include poor nutrition during

pregnancy, infections, and maternal stress (Stewart, Oaks, Laugero, Ashorn, Harjunmaa, Kumwenda & Dewey, 2015).

Studies conducted by Coe and Lubach (2000); Ruiz and Avant (2005) demonstrated that infants born to mothers who experienced high level of stress have poorer immune function and are more likely to contract childhood illnesses. Davis, Glynn, Waffarn and Sandman (as cited in Coussons-Read, 2013) studies suggested, for example, that exposure to glucocorticoids in utero either through maternal stress or exogenous administration, can affect the development of the stress response in the foetus, which can have long lasting effects on behaviour and physiology. From the perspectives of Miller, Chen and Parker (2011), prenatal stressful events such as intimate partner abuse, poverty, and food insecurity have enduring effects on the stress physiology of offspring, and that prenatal and early childhood stress can set the stage for lasting psychological and health challenges. This view is supported by Weinstock (2005) whose earlier studies have shown that stress during pregnancy can have long lasting effects on the neurodevelopment of the offspring.

Excessive stress during the course of pregnancy can reduce the possibility of carrying the pregnancy to full term, increasing the chances of a miscarriage (Peoples, Thrower & Danawi, 2014). Long-term developmental outcomes of unborn babies are negatively affected resulting in poor functioning of the hypothalamus and pituitary gland, increasing levels of stress hormones, causing a delay in walking and speaking. Excessive stress during pregnancy also contributes to learning and memory challenges as well as emotional or behavioural problems on the unborn baby (Sarani, Azhari,

Mazlon & Shebaf, 2015). Glover (2011), also posited that if an expectant mother is stressed, anxious or depressed, the unborn child stand a high risk of having a range of problems, including emotional problems, Attention Deficit Hyperactivity Disorder (ADHD), conduct disorders and impaired cognitive development. Concerning the effect of maternal stress on cognitive development of an unborn child, Buss et al. (2010) and Mennes, Van den, Bergh, Lagae and Stiers (2009), found an association between maternal stress and altered brain structure and function. In a study conducted by Huizink, Robles de Medina, Mulder, Visser, & Buitelaar, (2002), the ability of 8-month-old infants to pay attention during a developmental assessment was negatively correlated with the amount of anxiety their mothers reported about their pregnancy. DiPietro, Novak, Costigan, Atella and Reusing (2006), however suggested that a lesser degree of stress is actually beneficial for motor and cognitive development of the child.

Glover (2011) established that, within a normal population, the children of the most anxious expectant mothers during pregnancy (top 15%), had double the risk of emotional or behavioural challenges in comparison with the children of the less anxious mothers. According to DiPietro et al. (2006), extreme stress in the first trimester of pregnancy causes increased vulnerability to schizophrenia. The risk for other outcomes, such as Attention Deficit Hyperactivity Disorder (ADHD), however has been found to be related to stress later in pregnancy (O'Connor, Heron, Golding, Beveridge & Glover, 2002).

Effect of Stress on the Expectant Mother

Pregnancy is a life experience that comes with much uncertainty about the future (Thabethe, 2017). According to Esia-Donkoh et al. (2014), the hormonal (biological) changes associated with pregnancies make expectant mothers feel uncomfortable. Consequently, their first trimester experiences are usually characterized by dizziness, vomiting, tiredness and frequent illness resulting in irregular attendance to lectures, tutorials, group discussions, and sometimes examinations. Excessive stress during pregnancy can jeopardize the chances of carrying the pregnancy to full term with the possibility of inducing a miscarriage (Peoples, Thrower & Danawi, 2014).

Rogers and Velten (2011) maintained that stressed expectant mothers are more susceptible to infection and illness during pregnancy as a result of the suppressive effects of stress on the ability of the immune system to respond to challenges. Stress can affect the sleeping pattern of the pregnant woman, causes reduced appetite leading to nutritional deficiency, difficulty concentrating on a particular event and memory problems etc. Pregnancy in itself causes undue tiredness, and as noted by Sekgobela (2008), limits the student's concentration span. This explains the rationale behind the general recommendation for pregnant women to get sufficient rest. Sekgobela (2008) also reported the confirmation by expectant student-mothers that the physical, social and academic challenges they faced made it difficult for them to study. According to Harries (as cited in Netshikwet, 1999), some pregnant students acknowledged experiencing physical discomfort which emanates from the protracted sitting postures during lectures and tutorial sections. Physical demands placed upon the students can cause stress which also has a

detrimental effect on their studies (Adams, 1999). According to Guardino and Schetter (2014), pregnant students experience anxiety due to excessive worry about the ability to take care of the unborn baby. This emotional disposition impacts negatively on pregnant students' academic progress. This view is also supported by the findings of Basol et al. (2015), which showed that exposure to severe stress leads to poor academic performance.

Mamhute (2011); Nordin, Wahab and Yunus (2012), also posited that pregnancy amongst students can have debilitating impact on the expectant mothers' mental well-being, often resulting in poor concentration. According to Zungu and Manyisa (2009), one major academic-related challenge that pregnant students often experience is failure to write examinations due to giving birth during the examination period.

Esia-Donkoh et al. (2014) reported that expectant mothers' views are often ignored by both students and lecturers when expressed at group discussions and lectures especially when meeting and lecture timetables are unfavourable to them. They also mentioned that pregnancy-unfriendly architectural designs of most traditional lecture theatres which are only accessible using manual staircases pose a lot of challenges to expectant mothers. These prevailing adverse conditions further worsen the negative impact of stress on expectant mothers.

Effect of Stress on the Lactating or Nursing Mother

Exposure to stress and inflammatory mediators have also been implicated in the aetiology of depression; studies suggested that perinatal mood disorders are more common in women who report high levels of life events stress during pregnancy (Dunkel-Schetter & Tanner, 2012). This is a

critical finding as maternal mood disorders have been reliably linked to poorer postnatal care including reduced duration of breastfeeding, impaired mother–infant interactions, and delays in infant behavioural development.

Thorpe and Elliot (1998) indicated that the arrival of a new baby poses new emotional difficulties which are potentially stressful and capable of impacting on the mothers' emotional well-being. With the birth of a child, therefore, new demands, sometimes unpredictable are made on the mother. These demands are not neutral, they have either negative or positive effects on the mother. The traditional role of a nursing mother entails finding out the source of any discomfort of their babies and dealing with it to ensure a congenial atmosphere necessary for growth and development of their babies. This often creates a sleep deficit as the nursing mother endeavours to respond to the demands of the new born child during the day and at night. Consequently, the mother gets exhausted due to insufficient rest and sleep (Lynch, 2008). This view is supported by Thorpe and Elliot (1998) who posited that a baby's sleeping and crying behaviour impacts their mothers' physical and emotional health. This coupled with intensive academic demands on the nursing mother result in maternal burnouts. Woollett and Nicolson (1998) stated that women's (nursing students') competency and confidence as an affectionate caregiver declines as a result of anxiety caused tiredness or exhaustion among other factors.

Explanation of the Conceptual Framework

For the conceptual review of the study, academic, financial, environmental and interpersonal stressors serve as stressors which are common to both expectant and lactating mothers. Pregnancy related stressors

are the stressors which are peculiar to only expectant mothers whilst lactating related stressors are those stressors which are specific to only lactating mothers who are students as well. Pregnancy and lactating stressors may exacerbate the stress level of students. Once the students encounter stress, they are likely to employ or adopt certain ways or strategies to cope with their stress and the kind of coping strategy or combination of strategies one will use will determine the kind of effect one will experience in both the short and long term. This includes the alleviation of the negative after-effects of the stressful encounter by returning the individual's mood, arousal, and energy to baseline levels (Repetti, 1992) with significant decreases in the incidences of burnouts. The relationship among these variables is presented in Figure 1.

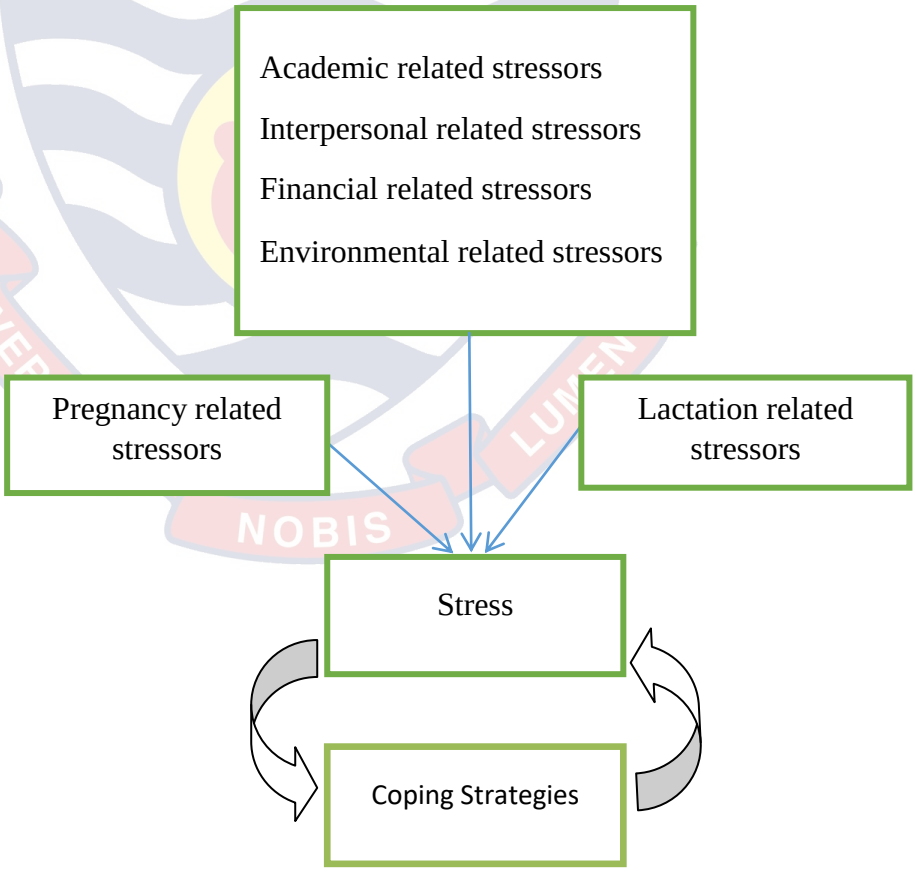

Figure 1: Conceptual Framework

Theoretical Framework

Many theorists have propounded theories to explain how they believe stress occur in an organism specifically human being. I examined three that underline stress namely; the biological perspective, cognitive perspective and the biopsychosocial perspective of stress.

Biological Model of Stress

According to Neylan (1998), Biologist Hans Selye (1907-1982) introduced the General Adaptation Syndrome model in 1936 as a way of defining the body's attempt to defend itself against a stressor showing in three phases what the alleged effects of stress has on the body. In his work, Selye, 'the father of stress research', developed the theory that stress is a major cause of disease because chronic stress causes long-term chemical changes. He observed that the body would respond to any external biological source of stress with a predictable biological pattern in an attempt to restore the body's internal homeostasis. This initial hormonal reaction is one's fight or flight stress response and its purpose is for handling stress very quickly. The process of the body's struggle to maintain balance is what Selye termed, the General Adaptation Syndrome (GAS).

Assumptions for the general adaptation syndrome theory;

1. Any demand, positive or negative, can provoke the stress response
2. The stress response is characterized by the same chain of events and pattern of physiological correlates regardless of the stressor or stimulus that provoked it;
3. What occurs systematically in the GAS is evident to a much lesser degree in the Local Adaptation Syndrome (LAS);

4. The occurrence of the LAS or GAS or both defines the occurrence of stress;
5. The theory presumes adaptive resources are genetically determined and finite.

Pressures, tensions, and other stressors can greatly influence human normal metabolism. Selye determined that there is a limited supply of adaptive energy to deal with stress. That amount declines with continuous exposure. Going through a series of steps, the human body consistently works to regain stability. With the general adaptation syndrome, a human's adaptive response to stress has three distinct phases:

1. **Alarm Stage**: one's first reaction to stress recognizes that there's a danger and prepares to deal with the threat, a.k.a. the fight or flight response. Walter, (1929), in an earlier study posited that this response mobilises the organism to respond quickly to danger but the state of higher arousal can be harmful to health if it is prolonged. Activation of the Hypothalamic–Pituitary–Adrenal (HPA) axis, the Sympathetic Nervous System (SNS) and the adrenal glands take place. During this phase the main stress hormones; cortisol, adrenaline, and noradrenaline, is released to provide instant energy. If this energy is repeatedly not used for physical activity, it can become harmful. Too much adrenaline results in a surge of blood pressure that can damage blood vessels of the heart and brain – a risk factor in heart attack and stroke.
2. **Resistance Stage**: The body shifts into this second phase with the source of stress being possibly resolved. Homeostasis begins restoring

balance and a period of recovery for repair and renewal takes place. Stress hormone levels may return to normal but one may have a reduced defence and adaptive energy left. If a stressful condition persists, one's body adapts by a continued effort in resistance and remains in a state of arousal. Problems begin to manifest when one finds oneself repeating this process too often with little or no recovery. Ultimately this moves an individual into the final stage.

3. **Exhaustion Stage**: At this phase, the stress has continued for some time. An individual's body's ability to resist is lost because its adaptation energy supply is gone. Often referred to as overload, burnout, adrenal fatigue, maladaptation or dysfunction – Here is where stress levels go up and stay up. The adaptation process is over and not surprisingly, this stage of the general adaptation syndrome is the most hazardous to one's health.

This model of stress focuses on how the human body respond biologically to stressful situation and its long term product in the form of disease or illness. This model posited that naturally humans have the defence (resource) to accommodate stress but if the stressful situation continues for a relatively long period of time then this defence is broken down. For instance, chronic stress can damage nerve cells in tissues and organs. Particularly vulnerable is the hippocampus section of the brain. Thinking and memory are likely to become impaired, with tendency toward anxiety and depression. The model also makes it clear that nobody is immune to stress and people should pay serious attention to the kind of stressful situations they endure in life. For individuals to have a healthy life, it is imperative for them to take time off

their busy schedules to relax the body and mind or they should have leisure time and also engage in moderate exercise so that the body can resort to the normal state. World Health Organisation (1948) defined health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. As Selye has made it clear that stress tend to affect human brain and body. People should not think that once they face stress and it does not manifest in physical illness, it means they are healthy.

Despite the significant contribution of Selye's model on stress research, it has received some criticisms. First, it downplayed the importance of psychological factors in the determination of stress but it's now scientifically proven that the psychological appraisal of events is equally imperative in the determination of stress (Lazarus & Folkman, 1984).

Secondly, Selye's assumed that responses to stress are uniform (Hobfoll, 1989). This undermines the fact that people's personalities, perceptions, and biological constitutions determine their response to stress. Kemeny (2003), posited that all stressors do not produce the same endocrinological responses.

Thirdly, Selye's claim that stress is only evident when the general adaptation syndrome has run its course and thus referring to stress as an outcome has been criticised. This is because, people experience many of the negative consequences of stress during the course of a stressful event and even in anticipation of its occurrence. It is worth mentioning that irrespective of the above criticisms, Selye's model still remains a foundational model in stress research.

Hans' biological model of stress is very relevant to the current study in the following ways:

Firstly, decrease in the immunity that occurs in expectant and lactating mothers as a result of exposure to stress. For instance, when an individual is exposed to stress, he/she produces cortisol and high level of cortisol tends to cause damage to lymphocyte which is known to be part of the white blood cells that fight against diseases and infections. In the case of pregnant women, high level of cortisol will impair their immune system and vertical transmission is bound to occur. Consequently, diseases such as rubella (German measles) can be passed on to the developing foetus leading to deformities in the foetus. Stress related disorders and diseases from cortisol include cardiovascular conditions, stroke, gastric ulcers, and high blood sugar levels. Many experts in the area of stress normally refer to stress as the silent killer (Cohen & Cammarata, 2000). In Ghana, a report made by doctors at Korle Bu Teaching Hospital in 2007 indicated that hypertension affects nearly one out of every five Ghanaian adults, almost 70 percent of all deaths at the hospital are caused by hypertensive conditions and went on further to say that hypertension is the number one killer disease in Ghana (Quansah, 2007).

Also, in the case of lactating mothers, this theory explains why some of them experience low breast milk production. Stress tends to negatively affect the activity of the hormone prolactin leading to the suppression of breast milk production. Prolactin is the primary hormone responsible for milk production (Hahn-Holbrook, Schetter, Haselton & Glynn, 2013). Again, the theory stresses on the importance of Antenatal care for pregnant mothers and post-natal care for lactating mothers. During antenatal care, pregnant women are

educated on the need to eat balance diet and the need for regular moderate exercise in order to ensure the well-being of both the expectant mother and the unborn baby. Lactating mothers, on the other hand, are educated on the need for exclusive breastfeeding for the first six months, the need to have a nap especially when babies are asleep, and the need for balance diet. This is to ensure proper hormonal levels in order to promote healthy living.

Cognitive Appraisal Model

Lazarus and Folkman (1984) proposed a model that emphasizes the transactional nature of stress. Stress is a two-way process; the environment produces stressors and the individual finds ways to deal with these stressors.

Cognitive appraisal is a mental process by which people assess two factors:

1. Whether a demand threatens their well being
2. Whether a person considers that he/she has the resources to meet the demand of the stressor

There are two types of appraisal and these are primary appraisal and secondary appraisal.

Primary Appraisal

During the primary appraisal stage, a person will be seeking answers as to the meaning of the situation with regard to their well-being. One of these three types of appraisals could be made:

1. It is irrelevant
2. It is good (benign-positive)
3. It is stressful.

Further appraisal is made with regard to 3 implications:

Harm-loss refers to the amount of damage that has already occurred. There may have been an injury. The seriousness of this injury could be exaggerated producing a lot of stress.

Threat is the expectation of future harm, for example the fear of losing one's job and income. Much stress depends on appraisals that involve harm-loss and threat.

Challenge is a way of viewing the stress in a positive way. The stress of a higher-level job could be seen as an opportunity to expand skills, demonstrate ability, and make more money.

Secondary Appraisal

Secondary appraisals occur at the same time as primary appraisals. A secondary appraisal can actually cause a primary appraisal. Secondary appraisals include feelings of not being able to deal with the problem such as:

I can't do it - I know I'll fail

I will try, but my chances are slim

I can do it if I get help

I can do it if I work hard.

No problem - I can do it.

Stress can occur without appraisal such as when ones' car is involved in an accident and one hasn't had time to think about what happened. Accidents can often cause a person to be in shock. It is difficult for people to make appraisals whilst in shock as their cognitive functioning is impaired.

The main idea for using this theory in this study is that the cognitive theory of stress explains the interplay between human cognition and events. Thus, whether events will be perceived as stressful or not solely depends on the interpretation expectant and lactating women will assign to a particular

event. For instance, a pregnant student who experiences frequent spitting or morning sickness during lecture hours may interpret such a situation as very stressful for her. Also, a lactating student who needs to frequently go out of the lecture theatre to breastfeed her baby may interpret combining academics with breastfeeding as very stressful. All these may explain why some pregnant and lactating students absent themselves from lectures.

Biopsychosocial Model of Stress

Bernard and Krupat (1994), the proponents of the Biopsychosocial Model of Stress, state that stress involves three components: an external component, an internal component, and the interaction between the external and internal components.

The external component of the Biopsychosocial Model of stress involves environmental events that precede the recognition of stress and can elicit a stress response. Cannon (as cited in Brannon & Feist, 1992) asserted that stress reaction is elicited by a wide variety of psychosocial stimuli that are either physiologically or emotionally threatening and disrupt the body's homeostasis. We are usually aware of stressors when we feel conflicted, frustrated, or pressured. Most of the common stressors fall within four broad categories: personal, social/familial, work, and the environment. These stressful events have been linked to a variety of psychological and physical complaints. For example, bereavement is a particularly difficult stressor and has provided some of the first systematic evidence of a link between stress and immune functioning. Bereavement research generally supports a relationship between a sense of loss and lowered immune system functioning. Health problems and increased accidents are also associated with stressful work

demands, job insecurity and changes in job responsibilities (Bernard & Krupat, 1994).

Stressors also differ in their duration. Acute stressors are stressors of relatively short duration and are generally not considered to be a health risk because they are limited by time. Chronic stressors are of relatively longer duration and can pose a serious health risk due to their prolonged activation of the body's stress response.

The internal component of stress involves a set of neurological and physiological reactions to stress. Selye (1956) defined stress as "nonspecific" in that the stress response can result from a variety of different kinds of stressors and he thus focused on the internal aspects of stress. Selye noted that a person who is subjected to prolonged stress goes through three phases: The Alarm, Resistance and Exhaustion stages. He termed these set of responses as the General Adaptation Syndrome (GAS). These general reactions to stress are viewed as a set of reactions that mobilize the organism's resources to deal with an impending threat. The Alarm stage or reaction is equivalent to the fight-or-flight response and includes the various neurological and physiological responses when confronted with a stressor. When a threat is perceived, the hypothalamus signals both the sympathetic nervous system and the pituitary gland. The sympathetic nervous system stimulates the adrenal glands. The adrenal glands release corticosteroids to increase metabolism which provides immediate energy. The pituitary gland releases adrenocorticotrophic hormone (ACTH) which also affects the adrenal glands. The adrenal glands then release epinephrine and norepinephrine which prolongs the fight-or-flight response. The Stage of Resistance is a continued state of arousal. If the stressful

situation is prolonged, the high level of hormones during the resistance phase may upset homeostasis and harm internal organs leaving the organism vulnerable to diseases. There is evidence from animal research that the adrenal glands actually increase in size during the resistance stage which may reflect the prolonged activity. The Exhaustion stage occurs after prolonged resistance. During this stage, the body's energy reserves are finally exhausted and breakdown occurs. Selye has noted that, in humans, many of the diseases precipitated or caused by stress occur in the resistance stage and he refers to these as "diseases of adaptation." These diseases of adaptation include headaches, insomnia, high blood pressure, and cardiovascular and kidney diseases. In general, the central nervous system and hormonal responses aid adaptation. However, it can sometimes lead to disease especially when the state of stress is prolonged or intense.

The third component of the biopsychosocial model of stress is the interaction between the external and internal components, involving the individual's cognitive processes. Lazarus and Folkman (1984) have proposed a cognitive theory of stress which addresses this interaction. They refer to this interaction as a transaction, taking into account the on-going relationship between the individual and the environment. Their theory places an emphasis on the meaning that an event has for the individual and not on the physiological responses. Lazarus and Folkman (1984), believe that one's view of a situation determines whether an event is experienced as stressful or not, making stress the consequence of appraisal and not the antecedent of stress. According to this theory, the way an individual appraises an event plays a fundamental role in determining, not only the magnitude of the stress

response, but also the kind of coping strategies that the individual may employ in efforts to deal with the stress.

The biopsychosocial model of stress is relevant to this current study in the sense that it gives a broader look at stress as compared to the other theories of stress. This model helps us to better understand stress by taking a deeper look at interplay among biological, social and psychological factors of stress. According to Bernard and Krupat (1994), a single factor is not enough to explain stress so it is imperative to consider these three key variables (i.e biological, social and psychological).

The biopsychosocial model is very relevant to this study in the sense that pregnancy and lactating may explain the biological aspect of stress. This is because during the period of pregnancy and lactation, females undergo several changes such as hormonal, tissues, cells, muscles etc. within the bodies which may predispose them to the experience of stress. The social aspect of the model also accounts for the relationship that exist among expectant and lactating students and their environment. For instance, if pregnant and lactating students get social support from friends and other family members, they may experience little stress but if they do not get support they may experience high level of stress

Empirical Review

Stress Levels among University Students

A study conducted by Gyambrah, Sesay and Amponsah (2017) on 100 students from distance education of University of Applied Management in the Greater Accra Region revealed that the stress level was high among majority (50.7%) of the students. A similar study was conducted by Taylor and Owusu-

Banahene (2010) focusing on stress among part-time business students in Ghana. A total sample size of 300 was used for the study and the findings indicated that part-time programme of study is very stressful. Attending higher education through distance learning can be potentially very stressful (Ramos & Borte, 2012; Capdeferro & Romero, 2012).

Thawabieh and Qaisy (2012), investigated the stress level among 473 university students in Tafila Technical University, 35 items questionnaire was used to gather data from the respondents and the findings indicated that the stress level of the students was moderate.

According to Ross, Neibling and Heckert (as cited in Bataineh, 2013), there are several explanations for increased stress levels in college students. First, students have to make significant adjustments to college life. Second, because of the pressure of studies, there is strain placed on interpersonal relationships. Third, housing arrangements and changes in lifestyle contribute to stress experienced by college students. Furthermore, students in college experience stress related to academic requirements, support systems, and ineffective coping skills.

Sources of Stress among Students

According to Rogala Miller, Graff, Rawsthorne, Clara, Walker and Bernstein (2008), sources of stress refers to every circumstance or event that threatens to disrupt people's daily functioning and causes them to make adjustments.

A study conducted by Yumba (2010) on the causes of stress among undergraduate students, using a sample size of 100 students from the Linkoping university revealed that out of the four categories (personal,

academic, relations and environmental) of potential stressors to students, academic stressors was the most stressful for all students as a result of course overloads and the procedures involved in academic evaluations. Also, Owusu-Mensah and Amoah (2015) reported that the main sources of stress among 105 distance education students of the University of Education in the Accra centre who were selected through stratified and simple random sampling techniques were; travelling over long distance for lectures, multiple responsibilities, financial difficulties and lack of effective study skills. Another Ghanaian study by Taylor and Owusu-Banahene (2010) to identify the sources and level of stress among part-time business students in a Ghanaian University (University of Education, Kumasi Campus) brought to light that the three most common stressors were; "change in sleeping habits", "change in eating habits" and "combining job and schooling." The study sample was made up of 300 part-time business students and they used the “Student Stress Survey Scale” and the “Overload Assessment Test” as their research instruments. The findings from the study by Snyder and Tate (2010) purported that common stressors among non-traditional students are time constraints, financial problems, employment demands, academic workload, and family obligations.

The main factors that increase the stress of students can be classified as follow: the academic stress on the basis of literature, organizing time, financial issues, interactions with teachers, individual aims, social performance, adjustment to the school climate and poor social networking (Wilks, 2008). Accorging to Richlin-Klonsky and Hoe (2003), the two main stressful issues faced by female students are academic and financial problems.

Researchers have identified stressors as too many assignments, competition with other students, failures, lack of pocket money, poor relationships with other students or lecturers and family (or problems at home). Institutional (university) level stressors are overcrowded lecture halls, semester system, and inadequate resources to perform academic work (Bataineh, 2013).

Pregnancy and Stress

Pregnancy is a special and joyful period of life for the expectant mother as well as her family members. This is because they anticipate that all other things being equal, after a period of nine months a new member will be added unto the existing family size. It is a time for great responsibilities and emotional attachment for the pregnant woman. During the period of pregnancy, women undergo biological, psychological and social changes and these changes tend to be challenging for the mothers to be and their partners. It can however be a time of emotional and psychological disturbances when dealing with new demands such as academic work load.

A study conducted by Bödecs, Horváth, Szilágyi, Gonda, Rihmer and Sándor (2011) indicated that the stress and anxiety disorders were the most common psychiatric disorders which pregnant women in Hungary suffer from. Most women become anxious during this period because they do not know whether they can carry the pregnancy successfully for nine months or not, whether they will go through the normal delivery or caesarean section. Mothers with multiple pregnancies are also considered to be at high risk of stress, complications and mortality and hence are more likely to be delivered via caesarean section (Boseley, 2009).

A Ghanaian study conducted by Boakye-Yiadom, Shittu, Dutt, Dapare and Alhassan (2015) revealed that 31 out of the 154 consented pregnant women (20.1%) had mild stress and 13 out of the 154 consented pregnant women (8.4%) had high level of stress.

Abate (2017) investigated the common stressors among pregnant women in Lusaka, Zambia. Out of the 175 women he studied, 163(95.9%) indicated that their major stressor was antennal attendance. They revealed waiting for long hours at the antenatal clinic for their turns, make them sick. They indicated that the long waiting time at these health care facilities increases their stress levels and they leave the hospital rather weak than they attended. This stance is also supported by a related study conducted by Bergman (2017) in Lulea, Sweden. Bergman found out that pregnant women have a lack of interest in attending antenatal sessions as they consider it most stressful for them. The results of her study revealed that 119 (88.1%) out of 135 pregnant women had antenatal attendance as commonest stressor.

In a related study, Nilsen (2018) found in Trondheim, Norway that student expectant mothers revealed that academic stress was the most prevalent. He carried a study on 200 student expectant mothers to ascertain their most prevalent stress. The uttermost prevalent stress was academic stress (M=3.68, SD=1.01).

Adeyemi (2016) investigated the prevalent stress among lactating mothers in the Owerri Polytechnic using the students stress scale by Lin and Chin in Owerri, Nigeria. In his study, ninety-seven (97) percent out of the 245 students who were lactating mothers revealed that the most prevalent stress was financial stress. This position is further supported by Ndlovu (2017) in

Kwazulu-Natal, South Africa who found financial stress as the most prevailing stress among pregnant school women. Out of the 210 pregnant students of the KwaZulu-Natal University that he studied, 179(85.24%) of them had attested to this fact. His study further revealed that, there was a significant difference between younger and older pregnant students with respect to their stress levels. In a related study, Odhiambo (2016) found in Nairobi, Kenya that there was a strong correlation between financial and students' stress levels. He conducted the study on 320 postgraduate students of the Kenyatta University and found a strong statistically significant direct relationship between stress levels of postgraduate students and financial demands. Thus, as financial demands of postgraduate students increase, their stress levels heighten.

Lactating Mothers and Stress

Being a new mother is rewarding but it is not devoid of some amount of stress particularly for women who have given birth the first time. The vigilance required to be a good parent is also a stressor for new mothers (Hahn-Holbrook, Holbrook, & Haselton, 2011). Given all the stressful demands and challenges parenthood brings, it is perhaps unsurprising that approximately one in five women self-report depressive symptoms within the first year after birth (Gavin, Gaynes, Lohr, Meltzer-Brody, Gartlehner and Swinson, 2005).

Some studies have reported that breastfed infants wake more often to eat than formula fed infants (Lee, 2000) and that breastfeeding was strongly related to an increased demand for feedings at night (Sievers, Oldigs, Santer, & Schaub, 2002). In contrast, some studies have reported no difference in maternal sleep quality or duration by feeding method and that any type of

infant feeding interferes with maternal sleep (Lee, & Gay, 2004; Montgomery-Downs, Clawges, & Santy, 2010). Some investigators have reported that mothers who exclusively breastfed slept more than mothers who used formula at 1 and 3 months postpartum (Doan, Gardiner, Gay, & Lee, 2007; Doan, Gay, Kennedy, Newman, & Lee, 2014). Others have compared breastfeeding mothers to mixed or formula feeding mothers; the data showed that breastfeeding mothers had more hours of sleep, better physical health, more energy, and lower rates of depression (Kendall, Tackett, Cong, & Hale, 2011).

De-Luca (2016) in Ferrara, Italy conducted a study on 110 lactating mothers to ascertain stressors among lactating mothers. His study revealed that postnatal attendance was the aspect lactating mothers found most stressful. This is also in tandem with the finding of Dourado (2017) in Arusha, Tanzania that lactating mothers found postnatal attendance as the most stressful. Out of the 320 lactating mothers he investigated, 251(78.4%) revealed that attending hospitals for postnatal care was the major stressor for them. They revealed that at-times they did all they could to ensure they had taken good care of themselves and their babies. This, not withstanding, they had some health personnel attacking in all forms when these health professionals found something wrong with their babies. Postnatal attendance was a major stressor for them. These findings are however inconsistent with the finding of Schneider (2015) who studied stressors among lactating mothers and found a weak correlation between postnatal attendance and stress levels among lactating mothers. Additionally, it was found that a strong correlation existed

between family relationship and affection and stress levels among lactating mothers.

Comparison of Stress Levels of Expectant and Lactating Mothers

Mpofu (2017) found in Kwekwe in Zimbabwe that pregnant women differ significantly from lactating mothers when it comes to stress levels. His study revealed that pregnant women had higher levels of stress than lactating mothers. This finding however contradicts the position held by Kwakye (2009) in a position paper he published on the title "women and stress; A case of women in the Tachiman Municipality". He made a very contestable call, that expectant mothers have higher levels of stress than their counterpart, who are lactating mothers. He argued that expectant mothers go through series of fear including not being sure of the sex of the child to be born, their husbands may find them not attractive, whether she is going to go through delivery successfully or not among others. Chedha (2018) in Ahmedabad, India however found out that there was no statistically significant difference among the categories of women (expectant, lactating and women experiencing child lost) and their stress levels. Even though he found differences among expectant women, lactating and women experiencing child lost, the differences were not significant. The marginal differences in their stress levels may come as a result of their individual differences.

Stress and Coping Strategies

Individuals are continually trying to manage and cope with the stress in their lives. Coping strategies can generally be classified into two different categories: problem focused coping and emotion focused coping (Brannon, Feist & Updegraff, 2014; Kausar & Munir, 2004).

Problem focused coping: This involves solving the problem one is faced with (Brannon et al., 2014). This encompasses trying to decrease the stress by solving the problem one is faced with. Problem focused coping includes seeking information, taking whatever action is necessary to resolve the issue, and/or changing one's behaviour (Plotnik & Kouyoumdjian, 2014).

Pine and Aroson (1988) grouped coping strategies into direct and indirect strategies, and classified the concepts into action and non-action. The two are communally combined to form four categories: direct/action, direct/non-action, indirect/action, and indirect/non-action. Their research findings suggest direct/action as the most active strategy beneficial for individual growth with emphasis on facing stressful situations with courage. However, the most passive strategy detrimental to physical and mental health is direct/non-action, referring to the adoption of harmful alcohol or drug abuse as a means of fleeing from reality, which may cause irrecoverable harm.

Stoneman, Gavidia-Payne and Floyd (2006) examined associations between stress, problem focused coping, and marital adjustment in 67 families with a young child with disabilities and found out that fathers who utilized more problem focused coping were more positive about their marriages. Wives reported high marital adjustment when their husbands utilized more problem focused coping strategies (Stoneman et al., 2006).

Essex, Seltzer, and Krauss (1999) examined stress and coping strategies among 133 married fathers and mothers of adults with mental retardation in a longitudinal study. Although it was found that there were no significant differences between fathers and mothers with regards to the utilization of emotion focused coping, it was also found that mothers used

more problem focused coping when compared to their husbands. For mothers, a higher frequent use of problem focused coping strategies and lesser utilization of emotion focused coping aided to buffer the impact of care giving stress (Essex, Seltzer, & Krauss, 1999). Problem focused coping can help individuals reduce their stress by solving the problem that they are faced with through activities such as support from friends, analysis of challenges and being involved in activities to address problems. It is also referred to as action-based or positive coping strategy.

Gagnon (2016) in a study found in Calgary, Canada that 87% out of the 215 resettled lactating mothers he investigated adopted passive problem coping strategies in managing their stress. The respondents revealed to him that in their countries of origin, they mostly used active problem coping strategies in managing their stress levels. This agrees with the finding of Meier and Asiedu (2016) who found in Bern, Switzerland, and Koforidua, Ghana in a cross-cultural study that sought the stressors of lactating mothers. They found that out of the 120 lactating mothers studied in Ghana, 98 representing 81.6% of them adopted passive problem coping in managing stress. On the contrary, 6 (5%) out of an equal number of 120 adopted same strategy in Switzerland. This could be premised on the fact that environmental conditions are different as well as standards of living and life chance. Kruger (2017) in Rustenburg, South Africa also found in his study that expectant mothers adopted passive problem coping as their number one strategy in managing their stress levels. He believed, that gave the respondents opportunity to combine other activities effectively with their pregnancies.

Ali (2017) in Tanta, Egypt investigated how pregnant women cope with their stress. Out of 370 respondents, 362(97.8%) indicated that they adopted passive problem coping strategies in managing stress levels when confronted with stress.

Emotion focused coping encompasses managing the distress that is associated with the stress an individual is faced with (Brannon et al., 2014). Attempting to reduce emotional responses to a stressful event without actually altering the situation one is faced with is emotion focused coping (Gallagher, Nelson & Weiner, 2003). Emotion focused coping are designed to alter reactions to the stressor rather than change or control the stressor. This strategy therefore aims at moderating the hurt or difficulties brought on by problems, including the physical and emotional perspective.

Emotion-based coping strategies are also regarded as negative coping strategies because they are characterised with activities such as withdrawal, depression, drinking, and being passive.

When individuals face stressful events that can be controlled by them, they mostly respond with problem-focused strategies. In contrast, when they face stressful events that they cannot control, they mostly respond with emotional-focused strategies (Lazarus & Folkman, 1984).

Carver and Scheier (1994), investigated "situational coping and coping dispositions in a stressful transaction" with the focus on university students and found out that when examinations were the source of stress, this stress was estimated as threatening and harmful stress. Their results also show that more problem-focused coping, search for social support and positive appraisals were often used by students.

Al-Sowygh, (2013), conducted a study focusing on academic distress, perceived stress and coping strategies among dental students in Saudi Arabia, a total sample size of 425 students was used for the study. The Perceived Stress Scale (PSS) and the Brief Coping Scale (BCS) were the instruments for the study and the findings revealed that active coping, planning, religion, and acceptance were the predominant coping strategies used by the students whilst denial, humour and venting out were least used coping strategies.

Kwaah and Essilfie (2017) investigated stress and coping strategies among distance education students at the university of Cape Coast. The simple random sampling procedure was used to select 322 students from two study centres. The Brief COPE instrument was adapted to measure the coping strategies of the students and the findings brought to bear that majority of the study sample use positive stress coping strategies such as praying/meditation; self-distracting such as watching TV, listening to music, seeking emotional and instrumental support.

Thoits (1995) research findings revealed that people often tend to use the problem-focused coping strategies method with initiative when they continuously have higher self-esteem and control power. In the contrary, people who have lower self-esteem or lack self control tend to passively use the emotion-focused coping strategies method.

Kim and Seidlitz (2002) investigated 113 university students and studied the psychological and physiological aspects of adjustment. The findings showed that stress coping strategies were categorised into: problem solving; search for support; rejection; sense of humour; and physiological situations.

Comparison of Coping Strategies Adopted by Expectant and Lactating Mothers

Gaye (2015) found in Brikama, Gambia that there were significant differences between expectant and lactating mothers regarding their coping strategies to stress. He explained the finding by indicating that the two groups have different levels of stress as well as stressors hence it is expected that they have different coping strategies to manage their stressor. In a related study, Knight (2017) also found very significant difference between expectant and lactating mothers with respect to their coping strategies in managing stress. Knight investigated the usefulness of emotional coping stress strategies and found that there was a positive relationship between emotional coping strategies and the stress levels of expectant and lactating mothers. His study revealed that a significant difference existed between expectant and lactating mothers with respect to how they use emotional coping strategies.

Luhya (2016) on the contrary found in Nakuru, Kenya that there was no significant difference between expectant and lactating mothers with respect to their coping strategies of stress. Her study was on stress and the role of women in organizational development. She realized that there was no significant difference between expectant and lactating mothers in their coping strategies of stress. She however found that stress among women was inimical to positive organizational development.

Stress linked with academic activities has been simultaneously related to various negative outcomes such as poor health, depression, and poor academic performance (Vaez & Laflamme, 2008; Nor & Saharudin, 2011). The problem of stress and how expectant and lactating mothers on distance education

programmes cope with it is yet to be fully investigated. It was this knowledge gap that this study sought to fill.

Summary of Literature Review

The present study was undertaken to investigate the problem of stress and how expectant and lactating mothers on distance education programmes cope with it. Stress expressed in a simple term refers to a feeling of emotional or physical tension and can be positive (eustress) or negative (distress). Different types of stressors that affect expectant and lactating student-mothers include: academic, financial, interpersonal, environmental and pregnancy or lactating related stressors. Stress combined with academic activities is responsible for numerous negative effects such as poor health, depression and poor academic performance. The extent of effect caused by stress however depends on the intensity and frequency of specific stressors. Individuals under stress often employ problem focused coping and emotion focused coping in managing their stressful situations. Theoretical models that underpinned the current study were Biological Model of Stress, Cognitive Appraisal Model and Biopsychosocial Model of Stress.

Biological Model of Stress is very relevant to the current study because it explains the decrease in the immunity that occurs in expectant and lactating mothers as a result of exposure to stress. In the case of lactating mothers, this theory explains how excessive stress contributes to low breast milk production. The cognitive appraisal model of stress on the other hand explains the interplay between human cognition and events.

The biopsychosocial model of stress is relevant to this current study in the sense that it gives a broader look at stress as compared to the other theories

of stress. This model helps us to better understand stress by taking a deeper look at the interplay among biological, social and psychological factors of stress.

CHAPTER THREE

RESEARCH METHODS

This chapter includes the design of the research, the population, sampling technique, research instrument, validity and reliability of the instrument, data collection procedures and data analysis procedures.

Research Design

The thrust of a research design is the specification of how data relating to a given problem should be collected and analysed. It itemises the systematic approach to the conduct of any scientific investigation. Gay (1992) posited that a research design indicates the structure of the study, the nature of the hypothesis and the variables involved in the study. The appropriateness and inappropriateness of a design depends on a number of factors. These factors include; research objectives, nature of the research topic and resources (Gay, 1987).

The study employed descriptive survey design because it produces a good number of responses from numerous people at a time, provides a meaningful picture of events and seeks to explain people's perception and behaviour on the basis of information obtained at a point in time. It also describes the existing variables in a given situation and, sometimes, the relationship that exists among those variables, and can be used with greater confidence with regard to particular questions which are of special interest and value to researchers (Johnson & Christensen, 2004; Fraenkel & Wallen, 2009). Descriptive design was deemed appropriate for this study because the purpose

of this study was to solicit opinions from expectant and lactating mothers regarding the level of stress they experience and the various coping strategies they are adopting at the College of Distance Education, University of Cape Coast without influencing them cognitively or in any other ways.

Study Institution and Area

The study institution selected for this study was the College of Distance Education (CoDE), University of Cape Coast (UCC). The study area covered all the study centres in the entire country (Ghana).

The College of Distance Education, University of Cape Coast which was formerly known as Centre for Continuing Education (CCE), was established in 1997 following the directive by the Government of Ghana that all public universities in Ghana, including UCC, were to embark on distance education programmes with the primary aim of increasing accessibility to tertiary education in the Country. In response to this directive, University of Cape Coast, under the leadership of Professor S.K Adjapong, established a unit for distance education under the then Faculty of Education, now College of Education Studies, UCC (CoDE, UCC, 2017b).The Unit was subsequently upgraded to Centre for Continuing Education which was afterward upgraded to a college status on the 1st of August, 2014 with four departments, namely: Department of Education, Department of Business Studies, Department of Quality Assurance and Enhancement, and Department of Mathematics and Science Education.

With an initial enrolment of 750 students in 2001, the College currently has an enrolment of 55,456 distance learners consisting of 52,029 undergraduate students in 90 study centres across the ten regions of Ghana and 2,427 postgraduate students in five regional centres (CoDE, UCC, 2017a). The

College runs programmes in education and business leading to the award of Diploma, Bachelor and Masters degrees. In all, the College currently runs 27 programmes (UCC, 2016).

CoDE has a vision of becoming a reference point for the delivery of quality distance education in Ghana and beyond (UCC, 2014; 2016). This is consistent with the vision of the University to be "a university strongly positioned with a worldwide acclaim". Its mission statement seeks to pursue excellence in the delivery of innovative, demand-driven, customer-oriented and cost-effective distance education programmes aimed at assisting individuals in overcoming geographical, economic, social and cultural barriers to learning. The College is made up of the Board, the office of the Provost, office of the College Registrar, office of the College Finance Officer, heads of academic departments, coordinators of administrative units, Zonal Coordinators, Regional Coordinators (Regional Resident Tutors), and Study Centre Coordinators (UCC, 2014).

The College operates from its main building situated at the Newsite of UCC, Cape Coast. In order to be able to offer the necessary assistance and support to its valued students, the College has offices in all the ten regions of Ghana which are being headed by the various Regional Coordinators of the College.

The study area covered all the study centres in the entire country, Ghana which has been categorized into three zones, namely Southern Zone (Central, Greater Accra, Western and Volta Regions), Middle Zone (Eastern, Ashanti and Brong-Ahafo regions) and the Northern Zone (Northern, Upper East and Upper West regions). The study was carried out across the study

centres to ensure that every part of the country is fairly represented in the study since all the lactating and expectant student-mothers nationwide have similar characteristics.

Population

Gray (2004) defines the study population as the total number of possible units or elements that can be included in the study. The target population for this study was all pregnant and nursing mothers who were students at the College of Distance Education at University of Cape Coast pursuing various academic programmes in 2019. It was impossible to quantify the population of this study because the College of Distance Education does not have records on students who are pregnant and those who are nursing mothers. The accessible population was all pregnant and nursing mothers who were available at the time of data collection.

Sample and Sampling Procedure

A sample is the proportion of individuals selected from a larger population. Sampling is the process of selecting the sample. Convenience sampling technique (a non-probability sampling technique) was employed to select five hundred (500) expectant and lactating mothers for the study. The sample was made up of 250 expectant and 250 lactating mothers who were students at the College of Distance Education, University of Cape Coast. It involved choosing the nearest individuals (expectant and lactating mothers) to serve as respondents and continuing that process until the required sample size was obtained (Cohen, Manion, Morrison & Morrison, 2007).

The convenience sampling technique was used because it appeared there was no documentation available regarding the number of expectant and

lactating mothers at the College of Distance Education. Consequently, expectant and lactating mothers who were conveniently accessible in terms of proximity to the researcher were identified and enrolled from the various study centres in the College of Distance Education for the study.

Data Collection Instruments

The researcher adapted the University Students' Stress and Coping Strategies Inventory (USSCSI) by Stallman (2008) and Stress coping style inventory by Lin and Chen (2010) for the study.

University Students' Stress

The researcher adapted the component of the University Students' Stress and Coping Strategies Inventory which borders on students' stress. The researcher did not use the stress coping strategies component of the instrument since it appears not to be very suitable for adult learners.

University Students' Stress and Coping Strategies Inventory by Stallman (2008) is an inventory that is used to assess university students' stress level and the coping strategies used to overcome the stress. The information provided by respondents is used by professional counsellor(s) to obtain essential information in order to determine possible interventions needed for combating stress. The various items for which responses are sought are categorized into three parts namely; demographic information (including age, gender, religion, school, programme, level of study and date), stressors (including academic, financial and environmental stressors) and stress coping strategies. Apart from the demographics, a total of fifteen (15) and twenty (20) items are included under stressors and stress coping strategies respectively. Likert's four-point scale involving 1 (Not stressful), 2(Mildly

stressful), 3(Moderately stressful) and 4 (Severely stressful) was used as responses for stressors. The instrument has a total Cronbach alpha value of .80 for stressors. The reliability coefficients for subscales under stressors (including academic, financial and environmental stressors) are respectively .78, .83 and .79.

Stress Coping Style Inventory (SCSI)

The stress coping style inventory (SCSI) of university and college of technology students by Lin and Chen (2010) is categorized into four factors namely: active emotional coping (Factor A), passive emotional coping (Factor B), active problem coping (Factor C) and passive problem coping (Factor D) with a total of 28 items. Likert's five-point scale was used, ranging from 5 completely agree to 1 completely disagree. The higher the points scored in each factor represented, the higher the rate of this coping style used. On the other hand, the lower the points represented, the lower the type of coping style employed. The Cronbach alpha value of the overall stress coping style inventory is .83.

According to Best and Khan (1989), the Likert scale type enables respondents to indicate the degree of their beliefs or feelings about a given statement or object. This procedure is also emphasized by Borg and Gall (1989) as the simplest and most efficient approach. With this approach, the respondents are required to say whether they strongly agree, agree, disagree or strongly disagree or are undecided with each statement as an indication of their perception towards the object of inquiry. The responses were weighed as follows; Strongly Agree as 4, Agree as 3, Disagree as 2, and Strongly Disagree as 1.

Apart from the demographic items, the adapted questionnaire had a total item of 60 and was in three sections. Section A, made up of 20 items collected data pertaining to stressors in the areas of academic, financial, interpersonal and environmental factors. Section B comprised of 20 items; 10 each on expectant and lactating-mother specific stressors. Section C, made up of 20 items collected data on the coping strategies used by pregnant and lactating mothers to overcome stressful situations in their lives.

Validity and Reliability of the Instrument: In order to ascertain the content validity, the instrument was reviewed and authenticated by my Supervisors and its reliability established by pre-testing it on 30 pregnant and lactating mothers from the College of Distance Education. Those who participated in the pre-test were not allowed to be part of the actual study. The Cronbach alpha value of the instrument was computed to determine its suitability for the study. This instrument was used because its Cronbach alpha value of 0.841 is greater than the minimum reliability coefficient of 0.70 as opined by Kline (1999). The Cronbach reliability coefficients test results for the various subsections are as follows: General Stressors (Section A) showed 0.832, Expectant and Lactating Mother specific Stressors (Section B) showed 0.800 and Coping Strategies (Section C) showed 0.765.

Under the prevalence of stress (categorized under Section A), the maximum score a respondent could obtain was 80 and a minimum score of 20. With regard to pregnancy or lactating specific stressors (categorized under Section B), the maximum score a respondent could obtain was 40 and a minimum score of 10. Under the coping strategies (categorized under Section B), the maximum score a respondent could obtain was 80 and a minimum

score of 20. The weights were equated to a maximum of 4 and a minimum of 1 to reflect the averages, using the number of items as a denominator. To interpret the score a person obtains on the inventory, score bands were used as shown below. The greater the score the more stressful a person is. Thus for

Not Stressful	1.00 – 1.74
Mildly Stressful	1.75 – 2.49
Moderately Stressful	2.50 – 3.24
Severely Stressful	3.50 – 4.00

Data Collection Procedure

The researcher obtained a letter of introduction from the Department of Guidance and Counselling to aid the data collection process. The researcher employed the services of trained data collection assistants who helped in the data collection process. Getting the Data Collection Assistants trained entailed explaining the purpose of the research to them and taking them through the questionnaire to ensure their full comprehension of all the specific items on the questionnaire. To ensure a 100% return rate, the researcher and his team made sure administered questionnaires were completed and picked up the same day. Data gathering was done within a period of two months.

Data Analysis Techniques

The data gathered was first grouped to ensure completeness and subsequently coded using numerical values for the data view of the Statistical Product for Service Solution (SPSS) version 16. Background characteristics of participants were analysed using frequencies and percentages.

Research questions 1, 2 and 3 were answered using descriptive statistics (mean and standard deviation). Research hypotheses 1 and 2 were tested using

independent samples-*t* test which is essentially a parametric test at an alpha level of 0.05.

Ethical Considerations

Prior to the data collection period, an ethical approval letter was obtained from the Institutional Review Board of the University of Cape Coast. Consent of the coordinators at the various study centres that were used for the study was also sought. Students' participation in the study was solely voluntary. Consents of participating students were sought after explaining the aim of the study to them.

The anonymity of the students who responded to the questionnaires was ensured and information that the students gave in response to the questionnaire was used solely for the purpose of the study.

Summary of Research Methods

A descriptive survey design was employed for the study and a questionnaire adapted from the University Stress Scale by Stallman (2008) and stress coping strategies inventory by Lin and Chen (2010) was used to elicit responses from the respondents. A sample of 500 students (250 each of expectant and lactating student-mothers) were conveniently drawn to provide quantitative data for the study. Descriptive statistics were used to analyse three research questions on stress levels and adopted coping strategies. Two hypotheses were tested using two independent samples t-test. Protocol for Institutional Review Board was followed and the data collection exercise spanned a period of two months.

CHAPTER FOUR

RESULTS AND DISCUSSION

The study aimed at finding out stress levels and coping strategies among expectant (pregnant) and lactating (nursing) mothers at the College of Distance Education. Specifically, the study sought to find out stress levels among expectant and lactating mothers, the common stressors among expectant and lactating mothers and the coping strategies adopted by expectant and lactating mothers at the College of Distance Education in combating stress.

The methodology used in this study was the descriptive design. The instrument chosen for the data collection was the questionnaire (adapted from the University Stress Scale by Stallman (2008) and stress coping strategies inventory by Lin and Chen (2010)). The statistical tools used for the analysis included frequency distributions, means, standard deviations and independent samples t-test at a significance level of 0.05.

Socio-demographic Characteristics of Participants

The study was carried out at the College of Distance Education in the University of Cape Coast, with a sample size of 250 expectant women and 250 lactating mothers making a total of 500 participants. Table 1 presents the socio-demographic characteristics of participants involved in the study.

Table 1: Socio-demographic Characteristics of Participants

Variables	Frequency	Percent (%)
Women		
Expectant women	250	50.0
Lactating mothers	250	50.0
Age		
25-35	481	96.2
36-46	19	3.8
Employment		
Employed	421	84.2
Unemployed	79	15.8
Level of study		
100	83	16.6
200	68	13.6
300	123	24.6
400	109	21.8
500	117	23.4
Regions		
Ashanti	64	12.8
Brong Ahafo	55	11.0
Central	61	12.2
Eastern	23	4.6
Greater Accra	61	12.2
Northern	48	9.6
Upper East	39	7.8
Upper West	42	8.4
Volta	48	9.6
Western	59	11.8

Source: Field Survey, (2019)

The results from Table 1 showed that 50.0% of the participants were expectant women and50.0% were lactating mothers. It was observed that 96.2% were between 25 to 35 years whilst 3.8% were between 36 to 46 years. The results revealed that 15.8% were unemployed and 84.2% were employed. This implies that greater proportion of the study participants were in active job. It was found that 16.6% were in level 100, 13.6% were in level 200, 24.6% were in level 300, 21.8% were in level 400 whilst 23.4% were in level

500. The respondents were sampled from all the 10 regions of Ghana. It was revealed that 12.8% were from the Ashanti, 11% from Brong Ahafo, 12.2% each from Central and Greater Accra while 4.6% from Eastern. The others were 7.8% from Upper East, 8.4% from Upper West, 11.8% from Western while 9.6% each were from Northern and Volta regions.

Main Data

Research Question One

What is the prevalence of stress among expectant and lactating mothers at the College of Distance Education?

The objective of research question one was to determine the prevalence rate of stress among expectant and lactating mothers at the College of Distance Education. Participants were requested to respond to twenty (20) items. A four-point Likert-type scale, 'severely stressful' (4), 'moderately stressful' (3), 'mildly stressful' (2) and 'not stressful' (1) was associated with the prevalence rate of stress outlined on the questionnaire.

To obtain the overall stress level of the respondents, the scoring was based on the four point Likert type scale of measurement of severely stressful' (SS), moderately stressful (MS), mildly stressful (MLD S) and not stressful' (NS). The options of the items were weighted using Likert format with SS = 4, MS = 3, MLDS = 2 and NS = 1.

A maximum score a respondent could obtain was 80 and a minimum score of 20. The weights were equated to a maximum of 4 and a minimum of 1 to reflect the averages, using the number of items as a denominator. The criterion was calculated by dividing the range (3) by the number of categories (4), giving 0.75. Then the criterions are 1.00-1.74 = not stressful; 1.75-2.49 =

mildly stressful, 2.50-3.24 = moderately stressful, and 3.25-4.00 = severely stressful.

This formed the basis for the derivation of the score band below to assist in the interpretation of scores obtained by respondents on the inventory:

Not Stressful	1.00 – 1.74
Mildly Stressful	1.75 – 2.49
Moderately Stressful	2.50 – 3.24
Severely Stressful	3.50 – 4.00

Five hundred participants provided responses and the results are presented in Table 2.

Table 2: Analysis of Results of Prevalence of Stress (N=500)

Type of Stress	N	Mean(M)	Std. Deviation(SD)	Rank
Academic	500	2.83	.28	2nd
Financial	500	3.14	.49	1st
Environmental	500	2.79	.56	3rd
Relationship	500	2.63	.46	4th
Mean of Means	**500**	**2.85**	**.45**	

Source: Field Survey, (2019)

From Table 2, the mean for all the respondents' level of stress is 2.85. This lies in the score band of 2.50 – 3.24 which implies that there is prevalence of stress among expectant and lactating mothers at moderate level. Further analysis of results of prevalence of stress revealed that the most prevalent type of stress among expectant and lactating mothers at the College of Distance Education was Financial Stress (M= 3.14, SD= .49). This was followed by Academic Stress (M= 2.83, SD= .28) then Environmental Stress (M= 2.79, SD= .56). The least was Relationship Stress (M= 2.63, SD= .46).

Research Question Two

What are the common stressors among expectant and lactating mothers at the College of Distance Education?

The focus of research question two was to identify the common stressors among expectant and lactating mothers at the College of Distance Education. Participants were requested to respond to twenty (20) items. A four-point Likert-type scale, 'severe stressor' (4), 'moderate stressor' (3), 'mild stressor' (2) and 'not stressor' (1) was associated with the common stressors outlined on the questionnaire. The criterion in Table 3 was calculated by dividing the range (3) by the number of categories (4), giving 0.75. Then the criterions are 1.00-1.74 = not stressor; 1.75-2.49 = mild stressor, 2.50-3.24 = moderate stressor, and 3.25-4.00 = severe stressor.

Five hundred participants provided responses and the results are presented in Table 3.

Table 3: Analysis of Results of Stressors (Expectant Mothers)

Items	M	SD	Rank
1. Experiencing nausea	1.32	.48	9th
2. Frequent constipation	2.26	.70	5th
3. Feeling tired all the time	2.29	.46	3rd
4. Severe back pain	1.82	.79	7th
5. Frequent changes in mood	1.30	.47	10th
6. Responding to husband's sexual demands	1.38	.62	8th
7. Antenatal attendance	2.60	.49	1st
8. Sitting for long hours during lectures and tutorials sessions	2.28	.61	4th
9. Stigmatization by course mates e.g. unwillingness to accept you as a study group member	2.57	.50	2nd
10. Frequent urination during lectures	2.21	.59	6th

Source: Field Survey, (2019) M=Mean SD=Standard Deviation

The results of the study revealed that, the commonest stressors among expectant mothers at the College of Distance Education was "Antenatal attendance" (M= 2.60, SD= .49). Another factor that really stressed the expectant mothers was "Stigmatization by course mates e.g. unwillingness to accept you as a study group member" (M= 2.57, SD= .50). This was followed by "Feeling tired all the time" (M= 2.29, SD= .46). What the expectant mothers considered as the least stressor was "Frequent changes in mood" (M= 1.30, SD= .47).

Table 4: Analysis of Results of Stressors (Lactating Mothers)

Items	M	SD	Interpretation
1. Changes in sleeping pattern	1.48	1.06	7th
2. Breast engorgement	1.35	.48	9th
3. Experiencing of sore nipple	1.33	.69	10th
4. The need to breastfeed in public	1.57	.64	6th
5. Practicing of exclusive breastfeeding for first-six months	1.36	.63	8th
6. Responding to husband's sexual demands	2.00	.97	5th
7. Postnatal attendance	2.67	.62	1st
8. Leaving baby in the care of other people to attend face to face sessions	2.14	.82	4th
9. Intermittent sicknesses and visits to the hospital	2.52	.50	2nd
10.Stigmatization by course mates e.g unwillingness to accept you as a study group member	2.42	.49	3rd

Source: Field Survey, (2019) M=Mean SD=Standard Deviation

On the part of the lactating mothers it was found that their highest stressor was "Postnatal attendance" (M= 2.67, SD= .62). This was followed by "Intermittent sicknesses and visits to the hospital" (M= 2.52, SD= .50).

Another stressor they considered most was "Stigmatization by course mates e.g unwillingness to accept you as a study group member" (M= 2.42, SD= .49). Their least stressor was "Experiencing of sore nipple" (M= 1.33, SD= .69).

Research Question Three

What are the common coping strategies that expectant and lactating mothers employ when they encounter stress?

The purpose of research question three was to find out the common coping strategies that expectant and lactating mothers employed when they encounter stress. Respondents were requested to respond to twenty (20) items. A four-point Likert- type scale, 'strongly agree' (4), 'agree' (3) 'disagree' (2) and 'strongly disagree' (1) was associated with the common coping strategies items outlined on the questionnaire. The responses were categorized into two main divisions: ''Agree'' and ''Disagree''.

Two hundred and fifty (250) expectant mothers provided responses and the results are presented in Table 5.

Table 5: Distribution of Results of Common Coping Strategies of Expectant Mothers (n =250)

Coping Strategy	Mean	Std. Deviation	Rank
Active Emotional Coping	1.50	.20	4th
Passive Emotional Coping	1.87	.29	2nd
Active Problem Coping	1.68	.30	3rd
Passive Problem Coping	2.15	.33	1st

Source: Field Survey, (2019)

The result revealed that when expectant mothers are under stress, the first and foremost strategy they adopt is Passive Problem Coping (M= 2.15, SD= .33). Apart from that, they employ the Passive Emotional Coping (M= 1.87, SD= .29). This is then followed by Active Problem Coping (M= 1.68, SD= .30) and Active Emotional Coping (M= 1.50, SD= .20)

A similar analysis was conducted for lactating mothers and the result is presented in Table 6.

Table 6: Distribution of Results of Common Coping Strategies of Lactating Mothers (n =250)

Type of Coping	Mean	Std. Deviation	Rank
Active Emotional Coping	1.77	.59	4th
Passive Emotional Coping	1.80	.28	3rd
Active Problem Coping	1.89	.72	2nd
Passive Problem Coping	2.13	.61	1st

Source: Field Survey, (2019)

The result revealed that when lactating mothers are under stress, the first and foremost strategy they adopt is Passive Problem Coping (M= 2.13, SD= .61). Apart from that, they employ the Active Problem Coping (M= 1.89, SD= .72). This is followed by Passive Emotional Coping (M= 1.80, SD= .28) and Active Emotional Coping (M= 1.77, SD= .59)

A comparison of the two groups revealed that when they are both faced with stress they employed passive problem coping strategies as their number one option in managing their stress level. The results however revealed that while expectant mothers chose passive emotional coping as their second option in terms of the coping strategies to stress, the lactating mothers chose

active problem coping as their second option. The groups eventually chose active emotional coping as the last coping strategies among the four.

Hypothesis One

H_0: There is no significant difference in the stress levels between expectant and lactating mothers.

H_1: There is a significant difference in the stress levels between expectant and lactating mothers.

Hypothesis one sought to find out the difference between expectant and lactating mothers with regard to stress levels. Two independent samples t-test was conducted at 0.05 level of significance and the result is presented in Table 7.

The data was tested for two primary assumptions; Normality and Equality of variances assumptions. First, in checking the normality assumption, the normal Q-Q plot was inspected. The output of the graph shows that, the normality assumption was not violated since the plots were either on or closer to the diagonal line. Secondly, the data was also checked for "equality of variance" assumption. This was done by inspecting the Levene's test for equality of variances. This actually tests whether the variation of scores for the two groups (Expectant and Lactating mothers) is the same. After thorough inspection, the significance level of Levene's test was (p=.014). This shows that equality of variances assumption was not violated.

Table 7: Independent Samples t-Test of Stress Level

Variable	N	M	SD	T	df	p-value
Expectant women	250	54.53	8.21	-7.95	498	.000
Lactating mother	250	60.76	9.31			

Source: Field Survey, (2019) Significant at p<0.05

The results showed that lactating mothers (M= 60.76, SD= 9.31) were different from expectant women (M= 54.53, SD=8.21) in terms of stress levels. The difference is significant at $t(498.00) = -7.95$, p= .000. Therefore, we reject the null hypothesis. This implies that there is a significant difference in the stress levels between expectant and lactating mothers.

Hypothesis Two

H_0: There is no significant difference in coping strategies adopted by expectant and lactating mothers.

H1: There is significant difference in the coping strategies adopted by expectant and lactating mothers.

Hypothesis two similarly determined the difference between expectant and lactating mothers in terms of coping strategies. An independent sample t-test was performed at 0.05 level of significance and the result is presented in Table 8.

The data was tested for two primary assumptions; Normality and Equality of variances assumptions. First, in checking the normality assumption, the normal Q-Q plot was inspected. The output of the graph shows that, the normality assumption was not violated since the plots were either on or closer to the diagonal line. Secondly, the data was also checked for "equality of variance" assumption. This was done by inspecting the Levene's test for equality of variances. This actually tests whether the variation of scores for the two groups (Expectant and Lactating mothers) is the same. After thorough inspection, the significance level of Levene's test was (p=.000). This shows that equality of variances assumption was not violated.

Table 8: Independent Samples t-Test of Coping Strategies

Variable	N	M	SD	T	df	p-value
Expectant women	250	36.04	3.31	-4.54	498	.000
Nursing mothers	250	38.51	7.63			

Source: Field Survey, (2019) Significant at p<0.05

It was shown that nursing mothers (M= 38.51, SD= 7.63) were different from expectant mothers (M= 36.04, SD=3.31) in terms of coping strategies. The results showed that there is a significant difference in the coping strategies at, *t*(498) = -4.54, p= .000. The decision is that the null hypothesis is rejected hence there is significant difference in the coping strategies adopted by expectant and lactating mothers.

Discussion

Prevalence of Stress among Expectant and Lactating Mothers at the College of Distance Education

The prevalence of stress among expectant and lactating student-mothers at the College of Distance Education as revealed by the study confirms the statement of Brown and Watson (2010), who posited that the striking of a balance between domestic and academic life is a significant source of stress. This finding is further supported by Roxburgh et al. (2001), who stated that the mismatch between what is expected in parenthood and the actual reality of parenthood combined with studentship can cause stress as the new parent tries to adjust. Considering the competing priorities of work, home, and school that concurrently demand the attention of expectant and lactating student-mothers as adult learners, stress is actually inevitable.

The finding of the study in specific terms revealed that the most prevalent type of stress among expectant and lactating mothers at the College of Distance Education was Financial Stress. The finding is consistent with the finding of Ndlovu (2017) who found in Kwazulu-Natal, South Africa that the most prevailing stress among pregnant school women was financial stress. Out of the 210 pregnant students of the KwaZulu-Natal University that he studied, 179(85.24%) of them had affirmed this position. He revealed further that, there was a significant difference between younger and older pregnant students with respect to their stress levels.

The finding of this study is also supported by Adeyemi (2016) in a study he carried among lactating mothers in Owerri, Nigeria. His study sought to investigate the most prevalent stress among lactating mothers in the Owerri Polytechnic using the students stress scale by Lin and Chin. Ninety-seven (97) percent out of the 245 students who were lactating mothers revealed that the most prevalent stress was financial stress.

The finding of the study is in line with the finding of Odhiambo (2016) who found in Nairobi, Kenya that there is a strong correlation between finances and students' stress levels ($r = 0.814$; $n = 320$; $p > 0.01$). He made this known in a study he conducted on 320 postgraduate students of the Kenyatta University. This is to say that there was a strong statistically significant direct relationship between stress levels of postgraduate students and financial demands. Thus, as financial demands of postgraduate students increase, their stress levels increase.

Research findings consistently suggest that finance is a significant factor that impacts student stress levels (Jones & Johnston, 1997; Timmins &

Kaliszer, 2002). Financial demands pose significant source of stress to expectant student-mothers because in pregnancy one needs to eat well, take the necessary medication, buy clothing for the coming baby and prepare to pay a hospital bill for the delivery. All these can be stressful for the expectant mother. The finding therefore lends credence to the assertion of Waldman (2008) that financial pressures have the tendency of amplifying stress during pregnancy, and also heighten the incident of depressive symptoms.

In the case of the lactating mother, she needs to take care of her child/children, her husband, her business and may have to attend to work. Some of these women are bread winners of their families. In these modern economies where cost of living is high, the financial demands on the women will be stressful for them. It even becomes more stressful when these women have to add the financial burden of their education. These may include cost of feeding and accommodation, cost of books and photocopies. Besides, almost all distance learners meet in their various centres every two weeks for tutorials, the cost involved in transportation as a result of increments in fuel prices contribute to students' financial stress. Also, students need to purchase internet bundle to enable them download and read learning materials that are sent to them via electronic media. The high tuition fee which distance learners need to bear in the course of their academic pursuit cannot be left untouched when one is talking about financial stress.

In another breath, Nilsen (2018) found in Trondheim, Norway that student expectant mothers revealed academic stress was the most prevalent. This was made known in a study he carried on 200 student expectant mothers to ascertain their most prevalent stress. The uttermost prevalent stress was

academic stress. This aggregated mean was above the cut-off mean of 2.5 out of a total of 4. This meant that they strongly agreed that their most prevalent stress was academic stress.

Pregnancy is a life experience that comes with much uncertainty about the future. The hormonal (biological) changes associated with pregnancies make expectant mothers feel naturally uncomfortable. This often results in experiences usually characterized by dizziness, vomiting, tiredness and frequent illness. These often have a debilitating impact on the expectant mothers' mental well-being, often resulting in poor concentration. These pregnancy induced experiences also cause their irregular attendance to lectures, tutorials, group discussions, and sometimes examinations. Some even fail to write examinations due to giving birth during the examination period.

Similarly, the arrival of a new baby poses new emotional difficulties which are potentially stressful and capable of impacting on the mothers' emotional well-being. With the birth of a child, comes new demands, sometimes unpredictable are made on the mother. This often creates a sleep deficit as the nursing mother endeavours to respond to the demands of the new born child during the day and at night. Consequently, the mother gets exhausted due to insufficient rest and sleep. This coupled with intensive academic demands on the nursing mother result in maternal burnouts.

Common Stressors among Expectant and Lactating Mothers at the College of Distance Education

The finding of the commonest stressor among expectant mothers at the College of Distance Education being "Antenatal attendance" and that of the lactating mothers being "Postnatal attendance" is consistent with the finding of

Abate (2017). Abate investigated the common stressors among pregnant women in Lusaka, Zambia. Out of the 175 women he studied, 163(95.9%) indicated that their major stressor was antennal attendance. They revealed waiting for long hours at the antenatal clinic for their turns, make them sick. It increases their stress levels and they leave the hospital rather weak than when they attended. This confirms the assertion of Esia-Donkoh et al. (2014) that combining occupational, 'pre-natal' maternal and domestic roles with academic activities places diverse stresses on pregnant students.

The finding is supported by the finding of Bergman (2017). Bergman conducted her study in Lulea, Sweden and found out that pregnant women have a lack of interest in attending antenatal sessions as they consider it most stressful for them. This is also consistent with the finding of De-Luca (2016) who found in Ferrara, Italy that postnatal attendance was the aspect lactating mothers found most stressful. This was in a study he conducted on 110 lactating mothers to ascertain stressors among lactating mothers.

The finding of the current study is also in tandem with the finding of Dourado (2017) in Arusha, Tanzania that lactating mothers found postnatal attendance as the most stressful. Out of the 320 lactating mothers he investigated, 251(78.4%) revealed that attending hospitals for postnatal care was the major stressor for them. They revealed that at-times they did all they could to ensure they had taken good care of themselves and their babies. This notwithstanding they still had some health personnel attacking them in all forms when these health professionals found something wrong with their babies. Postnatal attendance was a major stressor for them. In actual fact, children's illness often causes emotional turmoil and stress for student-

mothers resulting in mothers absenting themselves from lectures and even examinations. Illness of infant babies often robs their mothers of the valuable time they need as students to attend lectures and prepare for quizzes and examinations. According to Esia-Donkoh et al., 2014, almost all student-mothers entertain the fear of losing a child to illness. Consequently, they visit hospital to hospital with their ill children all the time until they got well, even if it prevented them from attending to academic tasks.

In our part of the world where we have limited health facilities, most health facilities have a day assigned to expectant mothers and a day for lactating mothers. Owing to this, there is several swelling up at the hospitals for antenatal and postnatal care.

This finding of the study is however incongruous to the finding of Schneider (2015) who studied stressor among lactating mothers. Her study was conducted in Cologne, Germany. The study revealed that there was a strong correlation between family relationship and affection and stress levels among lactating mothers. There was however a weak correlation between postnatal attendance and stress levels among lactating mothers.

Common Coping Strategies that Expectant and Lactating Mothers Employ When They Encounter Stress

The finding of the study showed that when expectant mothers and lactating mothers are under stress, the first and foremost strategy they adopt is Passive Problem Coping. Gagnon (2016) was right when he found in Calgary, Canada that 87% out of the 215 resettled lactating mothers he studied adopted passive problem coping strategies in managing their stress. The respondents

revealed to him that in their countries of origin, they mostly used active problem coping strategies in managing their stress levels.

The finding is in line with the finding of Meier and Asiedu (2016) who found in Bern, Switzerland, and Koforidua, Ghana in a cross-cultural study that sought the stressors of lactating mothers. They found that out of the 120 lactating mothers studied in Ghana, 98 representing 81.6% of them adopted passive problem coping in managing stress. On the contrary, 6 (5%) out of an equal number of 120 adopted same strategy in Switzerland. It is obvious that environmental conditions are different as well as standards of living and life chance. I am not therefore surprised by the finding of their study.

This finding is buttressed by Kruger (2017) in Rustenburg, South Africa. Kruger found in his study that expectant mothers adopted passive problem coping as their number one strategy in managing their stress levels. He believed that gave the respondents opportunity to combine other activities effectively with their pregnancies. This agrees with the statement of Lazarus and Folkman (1984), who pointed out that when individuals face stressful events that can be controlled, by them, they mostly respond with problem-focused strategies.

Ali (2017) found in Tanta, Egypt that when pregnant mothers are confronted with stress, they adopted passive problem coping strategies in managing stress. This position was made known when he investigated how pregnant women cope with their stress. Out of 370 respondents, 362(97.8%) expressed this opinion.

H_0: There is no significant difference in the stress levels between expectant and lactating mothers.

The finding that there is a significant difference in the stress levels between expectant and lactating mothers is supported by the finding of Mpofu (2017) who found in Kwekwe in Zimbabwe that pregnant women (M= 3.8, SD= 1.028) differ significantly from lactating mothers (M=2.1, SD= 0.846) with (df = 293, t = 1.429, p =.03). His study revealed that pregnant women had higher levels of stress than lactating mothers.

In an earlier study by Kwakye (2009) he made a very contestable call, that expectant mothers have higher levels of stress than their counterpart who are lactating mothers. He argued that expectant mothers go through series of fear including not sure of the sex of the child to be born, their husbands may find them not attractive, whether she is going to go through delivery successfully or not among others. This was made known in a position paper he published on the title "women and stress; A case of women in the Tachiman Municipality".

The finding of the study is at variance with Chedha (2018) in Ahmedabad, India where he found that there was no statistically significant difference among the categories of women (expectant, lactating and a woman experiencing child lost) and their stress levels [F(43, 516)=2.691, p=.247]. Even though he found differences among expectant women, lactating and a woman experiencing child lost, the differences were not significant. The marginal differences in their stress levels may come as a result of their individual differences.

H_0: There is no significant difference in coping strategies adopted by expectant and lactating mothers.

The finding of Gaye (2015) supports the finding of the current study that there is significant difference in the coping strategies adopted by expectant and lactating mothers. Gaye (2015) found in Brikama, Gambia that there were significant differences between expectant and lactating mothers regarding their coping strategies to stress (df = 278, t = 1.392, p = 0.013). He explained the finding by indicating that the two groups have different levels of stress as well as stressors hence it is expected that they have different coping strategies to manage their stressor.

The finding of the study is also supported by the finding of Knight (2017) who found very significant difference between expectant and lactating mothers with respect to their coping strategies in managing stress. In a study conducted in Manchester, England on the usefulness of emotional coping stress strategies he found that there was a positive relationship between emotional coping strategies and the stress levels of expectant and lactating mothers. It was however instructive that a significant difference existed between expectant and lactating mothers with respect to how they use emotional coping strategies (df = 298, t = -1.173, p = 0.021).

Luhya (2016) found in Nakuru, Kenya that there was no significant difference between expectant and lactating mothers with respect to their coping strategies of stress (df = 223, t = 2.361, p = 0.712). Her study was on stress and the role of women in organizational development. She realized that there was no significant difference between expectant and lactating mothers in

their coping strategies of stress. She, however, found that stress among women was inimical to positive organizational development.

Summary of Results

Based on the research questions guiding the study, the findings were as follows:

1. The study revealed that there is a significant difference in the stress levels between expectant and lactating mothers.
2. The finding of the study showed that there is significant difference in the coping strategies adopted by expectant and lactating mothers.
3. The finding of the study revealed that the most prevalent type of stress among expectant and lactating mothers at the College of Distance Education was Financial Stress.
4. Study revealed that, commonest stressor among expectant mothers at the College of Distance Education was “Antenatal attendance”.
5. Study revealed that, commonest stressor among lactating mothers at the College of Distance Education was “Postnatal attendance”.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

In this chapter, a summary of the findings of the study is presented. Conclusions drawn, and recommendations made are all presented under this section.

Summary

The study investigated stress and coping strategies of expectant and lactating student-mothers at the College of Distance Education in the University of Cape Coast.

A descriptive survey was employed for the study and a questionnaire adapted from the University Stress Scale by Stallman (2008) and stress coping strategies inventory by Lin and Chen (2010) was used to elicit responses from the respondents. A sample of 500 students (250 each of expectant and lactating student-mothers) were conveniently drawn to provide quantitative data for the study. Descriptive statistics were used to analyse three research questions on stress levels and adopted coping strategies. Two hypotheses were tested using two independent samples t-test.

Key Findings

Based on the research questions formulated for the study, the findings were as follows:

6. The finding of the study revealed that the most prevalent type of stress among expectant and lactating mothers at the College of Distance Education was Financial Stress.

7. Study revealed that, commonest stressor among expectant mothers at the College of Distance Education was “Antenatal attendance”.
8. Study revealed that, commonest stressor among lactating mothers at the College of Distance Education was “Postnatal attendance”.
9. The finding of the study showed that when expectant mothers and lactating mothers are under stress, the first and foremost strategy they adopt is Passive Problem Coping.
10. The study revealed that there is a significant difference in the stress levels between expectant and lactating mothers.
11. The finding of the study showed that there is significant difference in the coping strategies adopted by expectant and lactating mothers.

Conclusion

Expectant and lactating student-mothers at the College of Distance Education in the University of Cape Coast go through stress. The finding of the study revealed that the most prevalent type of stress among expectant and lactating mothers at the College of Distance Education was Financial Stress. The commonest stressors among expectant and lactating mothers at the College of Distance Education were found to be “Antenatal attendance” and “Postnatal attendance” respectively. The findings of the study further showed that when expectant mothers and lactating mothers are under stress, the first and foremost strategy they adopt is passive problem coping. Additionally, the study revealed that significant differences existed between expectant and lactating mothers with regards to stress levels and coping strategies employed when stress is encountered by both groups.

It can be concluded from the study that formal education and womanhood complementary roles contribute to the stress levels of these women. It is however important to adopt appropriate coping strategies to confront stress as education and roles of womanhood (child birth and up bringing) are inevitable so long as a woman has not decided to go through voluntary childlessness.

Recommendations

Based on the findings from the study and the conclusion, the following recommendations were made:

1. The University Management should come up with clear policies regarding the welfare of expectant and lactating student-mothers on distance education programmes. For instance, the policy could make provision for expectant and lactating mothers being given few more minutes than their counterparts to compensate for the time lost as a result of distractions from pregnancy and breast-feeding babies during examination sessions. Similarly, more flexible fees payment terms and other stimulus packages could be arranged to help ease-off their financial plight.
2. The Ghana Health Service and various hospital managements should explore ways that may make antenatal and postnatal attendance less stressful for expectant and lactating mothers respectively. For example, the hospitals can share the number of days within the week among the expectant and lactating mothers to ease the long queues and tiredness.
3. University management and counselling centre should expose expectant and lactating student-mothers to the four coping strategies of

stress and how to apply them appropriately. Specifically, they should be exposed to active problem coping, active emotional coping, passive problem coping and passive emotional coping. This can be done through seminars and talk shows, among others.

4. As part of fresh students' orientation program, university counsellors must provide different levels of training to expectant and lactating student-mothers regarding how to deal with their stress levels since the study revealed that they differ in their stress levels as well as their coping strategies.
5. University Management through the counselling centre should organize seminars for the spouses and other family members of the expectant and lactating student-mothers (who are on distance programmes) to help them appreciate the enormity of stress these women are exposed to and the devastating effects it has on them. This will elicit the necessary sympathy and compassion needed from them in order to provide maximum social support to alleviate the plight of these expectant and lactating mothers.

Suggestions for Further Research

1. The study was conducted in only one college of the University. It is suggested that future researchers should consider a university wide study.
2. The study was conducted using quantitative approach. Future studies should consider qualitative or mixed method approaches.

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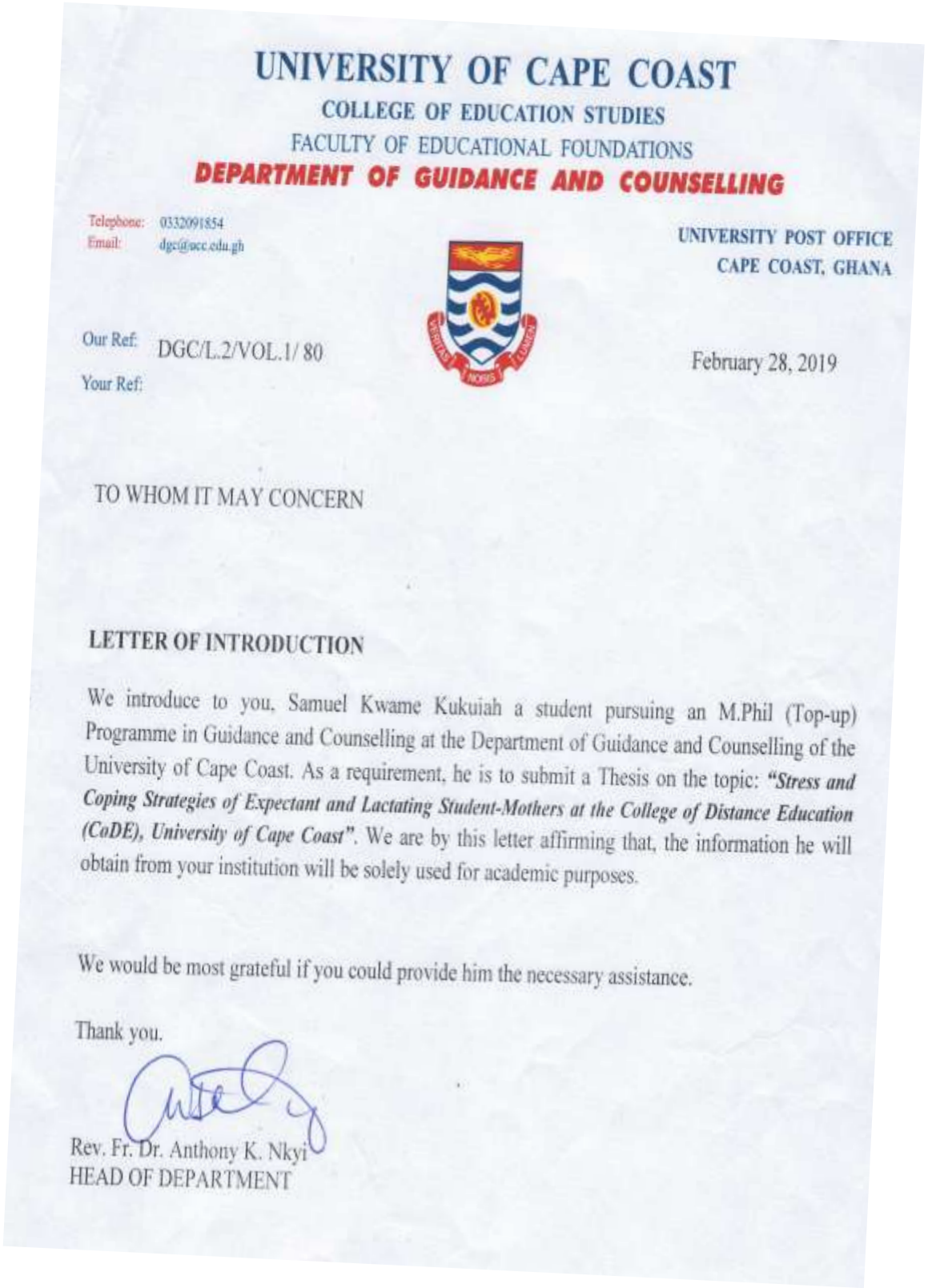
APPENDICES

APPENDIX A

LETTER OF INTRODUCTION



UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
FACULTY OF EDUCATIONAL FOUNDATIONS
DEPARTMENT OF GUIDANCE AND COUNSELLING

Telephone: 0332091854
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UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref: DGC/L.2/VOL.1/ 80
Your Ref:

February 28, 2019

TO WHOM IT MAY CONCERN

LETTER OF INTRODUCTION

We introduce to you, Samuel Kwame Kukuiah a student pursuing an M.Phil (Top-up) Programme in Guidance and Counselling at the Department of Guidance and Counselling of the University of Cape Coast. As a requirement, he is to submit a Thesis on the topic: ***"Stress and Coping Strategies of Expectant and Lactating Student-Mothers at the College of Distance Education (CoDE), University of Cape Coast"***. We are by this letter affirming that, the information he will obtain from your institution will be solely used for academic purposes.

We would be most grateful if you could provide him the necessary assistance.

Thank you.

Rev. Fr. Dr. Anthony K. Nkyi
HEAD OF DEPARTMENT

APPENDIX B

ETHICAL CLEARANCE FOR RESEARCH STUDY

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
ETHICAL REVIEW BOARD

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref: CES-ERB/ucc.edu/V3/19-07

Date: March 4, 2019

Your Ref: .....

Dear Sir/Madam,

ETHICAL REQUIREMENTS CLEARANCE FOR RESEARCH STUDY

The bearer Samuel Kusame Kukuiah Reg. No EF/GC/18/0013 is an M.Phil. / ~~Ph.D.~~ student in the Department of Guidance and Counselling in the College of Education Studies, University of Cape Coast, Cape Coast, Ghana. He / ~~She~~ wishes to undertake a research study on the topic:

Stress and coping strategies of expectant and lactating student-mothers at the College of Distant Education, Univ. of Cape Coast

The Ethical Review Board (ERB) of the College of Education Studies (CES) has assessed his/~~her~~ proposal and confirm that the proposal satisfies the College's ethical requirements for the conduct of the study.

In view of the above, the researcher has been cleared and given approval to commence his/~~her~~ study. The ERB would be grateful if you would give him/~~her~~ the necessary assistance to facilitate the conduct of the said research.

Thank you.
Yours faithfully,

Prof. Linda Dzama Forde
(Secretary, CES-ERB)

Chairman, CES-ERB
Prof. J. A. Omotosho
jomotosho@ucc.edu.gh
0243784739

Vice-Chairman, CES-ERB
Prof. K. Edjah
kedjah@ucc.edu.gh
0244742357

Secretary, CES-ERB
Prof. Linda Dzama Forde
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APPENDIX C

QUESTIONNAIRE FOR RESPONDENTS

The purpose of this study is to provide insight on stress levels and coping strategies used by pregnant and lactating mothers. Please you are encouraged to respond to all questions honestly. The information you will provide will be kept confidential. Thank you.

Please tick [√] where appropriate.

DEMOGRAPHIC DATA

1. Status: Pregnant [ ] Nursing mother [ ]
2. Age 25-35[ ] 36-46[ ]
3: Employment Status: Employed [ ] Unemployed [ ]
4. Level of Study.....
5. Study centre: ……
6 Region: ……

Section A: Stressors

Instruction: Please respond to these items if you are a pregnant or nursing mother.

Statement	Not stressful	Mildly stressful	Moderately stressful	Severely stressful
1) Inability to understand reading materials				
2) Attending face-to-face sessions				
3) Studying for quizzes and examinations				
4) Handling academic workload (heavy credit hours per semester)				

Statement	Not stressful	Mildly stressful	Moderately stressful	Severely stressful
5) Group assignment				
6) Supporting myself financially				
7) Paying tuition fees				
8) The need to pay loans within required time period				
9) Not having enough money to cover unexpected expenses				
10) Managing my weekly budget				
11) Inadequate infrastructure				
12) Transportation issues				
13) Lack of communication from the university				
14) Lack of recreational activities				
15) Getting access to computer and internet				
16) Family issues e.g. attending to your husband & children, house chores etc.				
17) Relationship with in-laws				
18) Lecturer-student relationship				
19) Finding support groups sensitive to my needs				
20) Getting along with fellow students				

Section B

Instruction: Please respond to these items if you are a pregnant/expectant mother. If not kindly skip

Statement	**Not stressor**	**Mild stressor**	**Moderate stressor**	**Severe stressor**
1) Experiencing nausea				
2) Frequent constipation				
3) Feeling tired all the time				
4) Severe back pain				
5) Frequent changes in mood				
6) Responding to husband's sexual demands				
7) Antenatal attendance				
8) Sitting for long hours during lectures and tutorial sessions				
9) Stigmatization by course mates.eg unwillingness to accept you as a study group member				
10) Frequent urination during lectures				

Instruction: Please respond to these items if you are a nursing mother. If not kindly skip

Statement	**Not stressor**	**Mild stressor**	**Moderate stressor**	**Severe stressor**
10) Changes in sleeping pattern				
11) Breast engorgement				
12) Experiencing of sore nipple				
13) The need to breastfeed in public				
14) Practicing of exclusive breastfeeding for first 6 months				
15) Responding to husband's sexual demands				
16) Postnatal attendance				
17) Leaving baby in the care of other people to attend face-to-face sessions				
18) Intermittent sicknesses and visits to the hospital				
19) Stigmatization by course mates.eg unwillingness to accept you as a study group member				

Section C: Coping Strategies

Statement	Strongly agree	Agree	Disagree	Strongly disagree
1) I consider stress to be a type of self-challenge.				
2) I seek emotional support from people				
3) I try to do or think of some things that will make me feel happier				
4) I usually do things such as watching TV, reading comics, listening to music				
5) I tell myself to persevere				
6) I give up and blame God for being unfair when I face stress.				
7) I make my friends uncomfortable when they provoke me when I am feeling down.				
8) I generalise that I have bad luck when I face stress				
9) I blame myself away when I face stress.				
10) I put my anger or negative emotions on others.				

Statement	Strongly agree	Agree	Disagree	Strongly disagree
11) I use a calm and optimistic attitude to think about how to cope with the problem.				
12) I search for related data from the internet to solve my problem.				
13) I discuss issues with my husband, family members, and friends to ask for their opinions.				
14) I independently plan for how to overcome the problem.				
15) I look for something good in what is happening				
16) I pray and look for religious hope or comfort for my soul				
17) I passively let nature take its course.				
18) I leave the problem aside for some time				
19) I make joke about the problem				
20) I refuse to believe that the problem is happening				

Thank you for your time