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# Perceived Stress Levels of Fresh University Students in Ghana: A Case Study

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Case Study

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## ABSTRACT

Over the last two decades, the number of higher education students in Ghanaian universities has steadily increased. The rapid changes in the lives of fresh university students, some of which are adolescents and particular challenges associated with education at this level may expose them to stress. There is however limited information on stress perceived by fresh undergraduate students in Ghanaian universities. The aim of this study was to therefore investigate stress levels of fresh undergraduate students at the University of Cape Coast, Ghana. The case study design was adopted and information was on perceived stress levels among newly admitted educational psychology students and the extent to which these could be linked to such background characteristics as age, gender and work experience or time spent awaiting university admission after graduation from high school. The Perceived Stress Scale (PSS) was administered on 398 respondents and data were analysed with the frequency distribution and t-Test statistics. Findings indicated that 70% of the students had moderate level of perceived stress whilst 3.5% demonstrated high level of stress. Results also indicated that female fresh undergraduates had significantly higher perceived stress levels than their male counterparts. There was a significant difference between the mean perceived stress of fresh undergraduate students admitted within two years of their graduation from senior high school and those who waited longer before they were admitted. Employment statuses before admission and age have no significant influence on perceived stress levels. Implications of the findings for future research, lecturers, school administrators, counsellors and health workers were discussed and recommendations were made.

*Keywords: Perceived stress; positive stress and hardiness; fresh university students; general adaptation syndrome; stress assessment;*

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## **1. INTRODUCTION**

Stress is a term that can be linked to so many life situations that people are confronted with due to rapidly changing values, life styles, career patterns and family role expectations. These life situations have the potential to increase the level of stress people experience. Urbanization and job demands in industry, public service as well as vocational activities in the private sector are part of the changing environmental circumstances affecting family roles and expectations in Africa. The transition from senior high school to university level is a significant contributor to changing values and lifestyles among the young people especially among those just gaining admission. Stress is a common element in the lives of every individual, regardless of race or cultural background (Garrett, 2001).

In as much as specific environmental conditions create fertile grounds for the experience of stress, so have researchers gone beyond that phenomenon to include other factors. Prominent among them is Asteria (1985) who indicated that any stimuli which an organism perceives as a threat may be physical, psychological, or psychosocial in nature. A physical stressor may include such conditions as environmental pollutants or other such pressures as extreme change in temperature or electrical shock. Physiological stressors may include a decrease in oxygen supply, prolonged exercise, hypoglycemia, injuries and other traumas to the body. Psychological stress results from reactivity within oneself to one's own thoughts or feelings about perceived threats, real or imagined. Psychosocial stress may come from intense social interactions or their lack, or other variables associated with relationships.

The causes of stress include life changes, chronic pressures and hassles which, according to Lazarus and Folkman are daily interactions with the environment that were essentially negative as cited by Seaward (1994). How we perceive stress is crucial to our well-being since much of the stress we experience has to do with how we perceive the stimulus that surrounds us and the degree to which we perceive it can be significantly threatening. Once we live in an environment with diverse activities, it is important to indicate how our life is tied to them. The relationship between the person and the environment can be appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being. This treatise suggests that the stressor, the person's perception of it and ability to adapt to the stressor are significant in the perception of stress.

### **1.1 Positive Stress and Hardiness**

Stress has been construed as negative in general perspectives. The question of whether stress is always negative was summarized by Kobasa (1979), who emphasized positive aspects of stress and hardiness. She studied business executives, lawyers, bus drivers, telephone company employees and other groups of people who lead high-stress lives. In every group, she found some people who were much healthier than others experiencing the same amount of stress. Her research led her to believe that perhaps the healthier people had some personality characteristics in common that might be protecting them from the negative effects of high levels of stress. The hardier individual, she found, tended to get sick less often regardless of the environment.

Kobasa suggested that stress hardy individuals show high levels of three psychological characteristics: control, commitment, and challenge. People who are high in control have a strong belief that they can exert an influence on their surroundings that they can make things happen. They believe that they can influence events instead of becoming a victim. This is the

opposite of feelings of helplessness. Control is a belief that one has at one's disposal and a response that can influence the aversiveness of an event (Thompson, 1981). Kobasa has generally provided us with the background consideration that when potentially stressful experiences happen in the lives of people with the hardy psychological pattern, they are physically more resistant to disease and illness (Hannah, 1988).

From the foregoing, a prudent distinction of actual and perceived stress could be beneficial. Actual stress, being largely unavoidable, includes extreme temperature, dangerous pollutants such as air, water and noise. Avoidable stressors include smoking, excessive intake of alcohol, eating of junk-foods, fast-foods, high-sugar, nutritionally deficient diet and lack of sleep. Perceived stress is not actual stress but has to do with what we tell ourselves we are experiencing. If one tells herself she will fail an exam before the exam and becomes upset after, it is likely to influence the chemistry of the victim. It is very likely that when we perceive our worries as more threatening than challenging, or our capacity to cope as more hopeless than promising, the physiological changes that result may lead to illness (Justice, 1987).

## **1.2 Perceived Stress and Adaptation**

Lazarus (1966) emphasized the importance of individual perceptions or appraisal of the environment. The meaning we give events and the satisfaction we find profoundly influence the stressful effects of changes we make in our lives. The exam scenario can be linked to the flight or flee mechanism in which the body needs high levels of adrenaline. When we chronically invoke reactions that produce these chemical responses, the excesses can turn against us (Justice, 1987). Hence the perception and interpretation of a situation determine the physiological reactions related to how much of a threat we perceive and how much control we believe we have over the situation. The above can be linked to the General Adaptation Syndrome (GAS) which Selye (1983) described as a process the body goes through when a stressor is perceived. Selye provided three stages of GAS;

- (i) Alarm reaction, which is the first stage, has the body immediately responding to the stress with various physiological changes that occur which enable the body to combat the stress. A change that occurs almost immediately during the alarm reaction is depression of the immune system; normal resistance is lowered, and the victim becomes more susceptible to infection and disease. If the stress is brief, the body's response is limited to that of the alarm reaction. When the stress ends, so does the reaction.
- (ii) Resistance is the second stage where the body makes physiological changes that enable it to adapt to long-term stress. Coping with the stressor becomes the specific job of the particular systems best suited to the task. During this second stage, resistance to the stressor is usually high, but because resources are diverted away from other areas, general resistance to disease may be low.
- (iii) Exhaustion is the third and final stage when the body eventually loses the ability to keep up with the demands that stress puts on it, and it enters the third stage, exhaustion. The organ systems or processes handling the stressor becomes worn out and breaks down. The above process functions to optimize the body's ability to resist stressors. However after the exhaustion phase has occurred in one area, the burden may be shifted to another system equally capable of dealing with the situation (Pelletier, 1992a) which has the potential to create rippling effects within the systems of the body.

### **1.3 Stress and Higher Education**

Whilst stress can be common globally and all of us experience it on a regular basis, stress on college campuses may be high, as reports suggest that the university environments are different from other settings, yet levels of stress are no less serious (Burks & Martin, 1983). Again, research indicates that college students are no strangers to varying degrees of stress (Kohn et al., 1991). Studies by Pierceall and Keim (2007) have reported that 75% to 80% of college students are moderately stressed and 10% to 12% are severely stressed while Hudd et al. (2000) established that during a typical semester, high levels of stress have been reported for 52% of college students. Stress is part of a college student's existence and has a profound impact on their ability to cope with college life (Dusselier et al., 2005). In addition, college students have been shown to possess a unique set of stressors which can affect their daily experiences (Garrett, 2001).

Environmental changes, perceived obstacles to goal achievement, life challenges and periods of significant transition are common stress triggers for college students. Though stress is actually positive serving to motivate us, however, like most things in excess, too much stress is negative. Due partially to stress, a surprisingly high percentage of college freshmen don't go on to graduate. What accounts for this stress is unknown but generally the workload of college may be significantly more involved than the high school and comes with less hand-holding from parents and teachers. Challenging classes, difficult tests and other academic obstacles, including the more independent nature of the college learning structure, many new students can perceive themselves in confused environment. Many students stay up late to study, get up early for classes and most new students deal with missing home and more seasoned students may wonder if they're in the right major. Most students struggle with who they are and where they want to be.

Again finding a room and living with a roommate, balancing friends with school work and dealing with the dynamics of young adult relationships can all be difficult, and these challenges can lead to significant stress. Some obvious social challenges that college freshmen may face usually involve leaving one's entire support structure behind, creating a new social network, dealing with being away from home for the first time and finding less parental support.

Dealing with stress in a unique way, college students experience a range of consequences from mild to severe stress. A common consequence of college stress is a feeling of being overwhelmed. While trying to find a balance of how hard to work (and play), many college students struggle with unhealthy habits like heavy drinking. In line with the above, Prendergast (1994) reported that college students are more likely to drink and to drink at higher levels than are young adults who are not in college. This means of relaxing may be temporarily effective for reducing stress levels, but there are consequences associated with regular drinking that are not always desirable. Ramsey, Greenberg and Hale (1989) summarized that; the college experience may be the most stressful years in one's life. College students have a unique cluster of stressful experiences or stressors (Garrett, 2001). According to Ross, Neibling and Heckert (1999), 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. In addition, students in college experience stress related to academic requirements, support systems, and ineffective coping

skills. Cohen and Williamson (1988) have indicated that, perception of high level stress may require attention.

College is supposed to be enjoyed, not endured and therefore it is important to keep college stress under control. On the contrary stress on college campuses keeps increasing at an alarming rate with serious consequences. Statistics available indicate that one of the most frightening consequences of college student stress is suicide because of depression (National College Health Assessment, 2005). The second leading cause of death among college students is suicide in America. In 2003, a survey conducted at Penn State University (PSU) found that 42 percent of their students felt depressed at least once in the past year and 10 percent seriously considered suicide. According to the 2005 National Survey of Counselling Centre Directors, 154 students committed suicide in America.

While stress varies among college students' individual situations, the main causes may be summarized as pressure from family or the student's interior motivation, the desire to do the best and get perfect grades amount of schoolwork, social acceptance, away from home and homesickness and peer pressure involving wanting to fit in by drinking, partying, skipping class, or doing drugs which can be detrimental to the student's success in college.

The results of a postgraduate student's postal survey at the University of Leicester (2001) indicated that the issues causing the greatest number of research students to be stressed and distracted were those relating to their studies, careers, finances, housing and self-esteem. In comparison to the second year undergraduate students, research students expressed higher levels of concern about communicating with their department and the administration; their choice of course subject; and their general anxiety level. Research students reported a similar impact on their ability to attend lectures, meetings and appointments as undergraduate students due to personal, psychological or financial problems, but also reported a lower impact due to physical illness than undergraduate students. Research students perceived that they were receiving lower grades in their studies due to personal and psychological problems to a much greater extent than undergraduate students and reported similar levels due to physical illness and financial problems. Dill and Henley (1998) reported that attending social events could induce more stress on college students rather than reduce their stress.

They suggested that significant differences exist between how traditional and nontraditional students perceive stressors. They gathered matched pairs and then proceeded to perform a descriptive study and found that nontraditional students experienced more family related stress due to their numerous roles as being older students. On the other hand, traditional students attributed most of their stress to peer and social activities related to college.

#### **1.4 Age and Gender Influences on Stress**

Cohen and Williamson (1988) found sex differences in perceived stress and Brody and Hall (1993) suggested that, self-report measures of emotional experience yielded fairly consistent sex differences in internally focused negative emotions. They have reported that age was significantly inversely correlated with perceived stress level (-0.18), suggesting that perceptions of stress tend to decline as age increases. Results of a study conducted by Aldwin, Sutton, Chiara, & Spiro (1996) indicated controversies concerning the influence of age on the stress and coping process, in part due to differences in methods across studies. They examined age differences in stress, appraisal, and coping, using both semi structured interview questions and a coping checklist in middle-aged, young-old, and old-old men.

Despite extensive probing, nearly a quarter of the old-old reported having had no problems and they expended less coping effort even when they did have problems. The types of problems reported varied systematically with age. Middle-aged men were more likely to appraise their problems both as challenges and as annoyances than the older men. There were no age differences in perceived stressfulness of the problem, appraisals of harm/loss, or helpless appraisals, number of emotions reported, or coping efficacy. An interpretation of these results is that the nature of stress changes with age, from episodic to chronic, which in turn affects appraisal and coping processes.

A recent study of perceived stress by Sitz and Poche (2006) hypothesized that women would display more optimism than men and would report lower levels of perceived stress was supported by the results of their study. Taylor (2000) found that men are more susceptible to the health effects of stress. It has been proposed that women are more likely to be negatively affected by interpersonal events than men—a tentative factor underlying the emergence of gender differences in depression (Cyranowski Frank, Young and Shear 2000). Nolen-Hoeksema (1990) reported further that, women face a number of chronic burdens in everyday life as a result of their social status and roles relative to men, and these strains could contribute to their higher rates of depressive anxiety. Pearlin (1982) suggests that society, its value systems, the stratified ordering of its populations, the organization of its institutions, and the rapidity and extent of changes in these elements can be sources of stress. For example, Merton (1957) suggests that society can elicit stress by promoting values that conflict with the structures in which they are acted upon.

Research indicates that greater sympathoadrenal responsiveness in males may be reasonably associated with aggression and immune suppression (Seegerstrom and Miller, 2004; Lundberg, 2005). In women, the phase of menstrual cycle and pregnancy were found to have marked effects on physiological stress responses. In particular, oestrogen has been shown to buffer the sympathetic and hypothalamic-pituitary-adrenal (HPA) arousal (Goldstein, Jerram and Poldrack, 2005; Kajantie and Phillips, 2006). However, it has been reported that there is either no gender difference in stress reactivity or greater cortisol elevation in females than males, when a social rejection task was adopted as the stressor instead of achievement tasks (Stroud Salovey and Epel; Dickerson and Kemeny, 2004). Frazier and Schauben (1994) used the Psychological Distress Inventory to obtain information regarding stress experienced by a group of female college students. The researchers found that female college students experienced stress related to financial problems, test pressure, failing a test, rejection from someone, dissolution of relationships, depression and feelings of low self-esteem. On the contrary, Ross, Neibling and Heckert (1999) conducted a study on college students and found a set of stressors that were common among all college students. The experiences associated with stress included change in eating and sleeping habits, new responsibilities, heavier workloads and breaks.

### **1.5 Returning to School**

Returning to school is an increasingly common transition that should be understood against the backdrop of linked individual, family and career pathways, reflecting past decisions, future goals, and current motivations, resources and constraints (Elder, 1999; Gorard, Rees, Fevre, & Furlong, 1998, 2001; West, 1995; Woodley, 1987). This transition occurs in particular socio-historical contexts, including expectations and opportunities related to age, gender, race/ethnicity, class, etc. (e.g., Riley & Riley, 1999). Both the decision to return to school, and the short- and long-term impact of reenrolment on work and family life, are shaped by this complex interweaving of socio-cultural and individual-developmental factors.

## **1.6 Rationale for the Study**

There is limited information on perceived stress among university students and existing research does not provide information specific to Africa and in particular fresh Ghanaian University students' stress perception. Some activities point to the tendency that university students, particularly those just gaining admission, experience some level of stress. For example, in 2010, University of Cape Coast, Ghana expelled or suspended over 130 students due to poor academic performance. This may suggest that some students come under pressure they find difficult to cope with. This study was therefore designed to investigate the perceived stress levels by fresh undergraduate students with a view to identifying their difficult diverse stress related psychological problems. This is expected to help in developing relevant services for those that may be experiencing high levels of perceived stress.

The purpose of this investigation was to provide empirical data on the perceived stress of freshmen in the University of Cape Coast (UCC), Ghana, that would help university lecturers, health educators, counselors, and personnel involved in student wellness to target specific need areas more effectively on campuses across the country. In order to address the issues above, the main research questions considered were:

- (i) What are the background characteristics of the sampled fresh undergraduate students of UCC?
- (ii) What are the levels of perceived stress among fresh undergraduate UCC students?
- (iii) Are there gender differences in the perceived stress by undergraduate fresh students?
- (iv) Is there any significant difference in the stress perceived by undergraduate fresh students who worked before securing admission and those who never worked?
- (v) Is there any significant difference between perceived stress by undergraduate fresh students who were admitted to the university within two years of their graduation from senior high school and those that had a longer wait?
- (vi) Does age significantly affect the perceived stress of undergraduate fresh students?

## **2. METHODOLOGY**

### **2.1 Research Design**

The case study design was employed in this study as it was considered the most suitable for achieving the objectives of describing the stress levels experienced by newly admitted students of a university. The design utilizes a combination of both idiographic and nomothetic approaches with the University of Cape Coast in Ghana as the unit of analysis while data were collected on stress levels experienced by newly admitted students into the first degree programme in educational psychology (Gravetta and Forzano, 2006). The group of students specializing in educational psychology was considered to be typical of other first degree programmes offered by the university and since these newly admitted ones were drawn from the common pool of applicants for admission in Ghana and exposed to similar registration, accommodation and academic experiences, the case study design was considered appropriate. This descriptive study was designed to typically ascertain respondents' perceived stress levels as newly admitted students in predetermined structured manner.

### **2.1.1 Population sample and sampling procedure**

University of Cape Coast is one of the six publicly owned universities in Ghana and it is located in the Central Region. The group of students specializing in educational psychology at the University of Cape Coast constituted the subject for the study. There were 4,000 newly admitted undergraduate students during the 2010/2011 when this study was carried out and Krejcie and Morgan's (1970) recommended a sample size of three hundred and seventy-five (375) for ensuring the representativeness of the typical group selected for the study. The sample size recommended by Krejcie and Morgan for surveys was used to judge whether the number of students in this programme is adequate in addition to considering the group as possessing characteristics that are typical of other newly admitted students in the university. A sample of 398 fresh undergraduate students from the faculty of education offering educational psychology as a professional course in the University of Cape Coast was thus selected. This also represents about 10 % of the population of fresh students in the entire university. The subject of this study informed the deliberate choice of students just coming into the university as the focus because their admission and adjustment into higher institution with the demands associated all have the tendency of occasioning stress in them.

#### *2.1.1.1 Measures and procedures*

The Perceived Stress Scale (PSS) developed by Cohen (1985) was used. It was designed to measure the degree to which respondents found their lives "unpredictable, uncontrollable, and overloading" (Cohen and Williamson, 1988). The psychometric properties of the PSS indicated that initial reliability coefficients ranged from 0.84 to 0.86. Cronbach's alpha coefficient for the PSS 10 was 0.78. In this study, the PSS 10 was considered appropriate for use in data collection because of the foregoing psychometric properties. PSS10 scores are obtained by reversing the scores on the four positive items (e.g., 0=4, 1=3, 2=2, 3=1, 4=0), and then summing across all items. The positive items are 4, 5, 7, and 8. PSS individual scores range from 0 to 40 with higher scores indicating higher perceived stress. Scores ranging from 0-13 would be considered low-stress. Scores ranging from 14-26 would be considered moderate stress. Scores ranging from 27-40 would be considered high perceived stress levels.

## **3. RESULTS**

The data for answering the research questions and testing the hypotheses stated above are presented below as results and each of them are discussed in this section.

- (i) What are the background characteristics of the sampled fresh undergraduate students?

The gender, age, marital status and year of graduation from senior high school of the undergraduate fresh students sampled for this study are presented on tables 1 to 4 below.

The male-female ratio of sampled students as shown on Table 1 is roughly 3:2 with 247(62.1%) males and 146(36.7%) females. This distribution is fairly representative of the student population in the University of Cape Coast and particularly of the subset of undergraduate fresh students from which the sample was drawn. There were however 5(1.3%) non-response cases to this items.



**Table 1: Gender of sampled students**

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	247	62.1	62.8	62.8
Female	146	36.7	37.2	100.0
Total	393	98.7	100.0	
Non response	5	1.3		
Total	398	100.0		

Table 2 reveals that majority 256(64.3%) of the respondents are 19-20 years old and they are closely followed by those 56(14.1%) falling within the 21-22 years age bracket. This implies that close to 80% of the fresh respondents fall within the age range of 19-22. Whereas only 32(8%) are 17-18 years old, the remaining 47(11.8%) are 23 years and above. There were however 7(1.8%) non-responses.

**Table 2: Age distribution of respondents**

Age	Frequency	Percent	Valid Percent	Cumulative Percent
17-18	32	8.0	8.2	8.2
19-20	256	64.3	65.5	73.7
21-22	56	14.1	14.3	88.0
23-24	20	5.0	5.1	93.1
25-26	8	2.0	2.0	95.1
above 26	19	4.8	4.9	100.0
Total	391	98.2	100.0	
Non Response	7	1.8		
Total	398	100.0		

As shown on Table 3, only 11(2.8%) of the respondents have ever been married and 2(0.5%) are separated. The remaining 383(96.2%) are unmarried. This pattern reflects the age, social status and aspiration of young ones to get married after schooling. Only 4(1%) of the respondents did not indicate their marital status. A further probe into the family life background of the respondents revealed that only one of the 383 who are unmarried indicated having children while the 11 that are married have between 1 and 3 children.

**Table 3: Respondents' Marital Status**

	Frequency	Percent	Valid Percent	Cumulative Percent
Unmarried	383	96.2	97.2	97.2
Married	9	2.3	2.3	99.5
Separated	2	.5	.5	100.0
Total	394	99.0	100.0	
Non Response	4	1.0		
Total	398	100.0		

**Table 4: Respondents' Year of completion of Senior High School**

<b>Year of graduation</b>	<b>Frequency</b>	<b>Percent</b>
2010	2	.5
2009	226	56.8
2008	67	16.8
2007	16	4.0
2006	6	1.5
2004	7	1.8
2003	1	.3
2002	6	1.5
2001	2	.5
1996	1	.3
1994	1	.3
1999	1	.3
1998	1	.3
1997	1	.3
Total	338	84.9
Non response	60	15.1
Total	398	100.0

As shown on Table 4, as many as 295(74.1%) of the respondents were admitted within two years of their completion of senior high school education, 43(11.1%) waited longer before securing admission while there were 15% non response. In effect, most of the respondents secured admission within two years of their graduation from senior high school.

- (ii) What are the levels of perceived stress among these fresh undergraduate UCC students?

The score range for perceived stress was 0-40 and this was categorized into three levels. The low perceived level of stress comprised respondents with scores from 0-13, moderate level comprised of those with 14-26 while those within the 27-40 range were categorized as demonstrating high level of perceived stress. The summary of responses is on table 5 below:

**Table 5: Perceive stress Level of respondents**

<b>Perceived Stress Level</b>	<b>Frequency</b>	<b>Percentage</b>
Low	101	25.4
Moderate	280	70.4
High	14	3.5
Non response	3	0.8
Total	398	100.0

Table 5 reveals that only 101(25.4%) respondents had low perceived stress level,

280(70.4%) had moderate perceived stress while 14(3.5%) demonstrated high perceived stress level.

(iii) Are there Gender differences in the perceived stress by undergraduate university fresh students?

H<sub>0</sub>: There is no significant difference between the perceived stress of sampled male and female undergraduate fresh students.

H<sub>1</sub>: There is a significant difference between the perceived stress of sampled male and female undergraduate fresh students.

To test for differences in gender mean perceived stress scores for male and female respondents were subjected to a t-test. Results are shown in Table 6 below:

**Table 6: Summary of t-test of Perceived stress by female and male respondents**

Gender	N	Mean	SD	T	Significance
Male	246	16.67	5.7	-2.46	.014
Female	146	18.11	5.5		

As shown in Table 6 above, a significant difference exists between the perceived stress by sampled male and female undergraduate fresh students in the University of Cape Coast. Male students had lower mean perceived stress of 16.67 as compared with their female counterparts with 18.11. The mean perceived stress for both male and female undergraduates fall within the moderate level.

(iv) Is there any significant difference in the stress perceived by undergraduate fresh students who worked before securing admission and those who never worked?

H<sub>0</sub>: There is a significant difference between the perceived stress of fresh undergraduate students who engaged in paid employment before securing university admission and those who did not.

H<sub>1</sub>: There is a significant difference between the perceived stress of fresh undergraduate students who engaged in paid employment before securing university admission and those who did not.

The Student's t-Test was used to determine whether a significant difference exist between the mean perceived stress of fresh undergraduate students who had engaged in paid employment before their university admission and those who had never worked. The results are summarized on table 7 below:

**Table 7: Summary of t-test of perceived stress of fresh undergraduate students**

Status before University Admission	N	Mean	SD	t	Significance
Employed	170	17.42	5.78	0.77	0.44
Never Employed	223	16.98	5.56		

No significant difference was found between the mean perceived stress of fresh undergraduates that worked before gaining admission to the university and those that never

worked. In absolute terms however, the mean stress of those who had working exposure before gaining admission was found to be 17.42 which is higher than 16.98 for those who were never employed.

(v) Is there any significant difference between perceived stress by undergraduate fresh students who were admitted to the university within two years of their graduation from senior high school and those that had a longer wait?

H<sub>0</sub>: There is no significant difference between the perceived stress of undergraduate fresh students admitted within two years of their graduation from senior high school and those who had a longer wait.

H<sub>1</sub>: There is a significant difference between the perceived stress of undergraduate fresh students admitted within two years of their graduation from senior high school and those who had a longer wait.

The mean perceived stress of fresh undergraduate students who secured admission within two years of their graduation from high school and those who had a longer wait before admission were subjected to the t-test and the results are presented on Table 8 below:

**Table 8: Summary t-test of perceived stress of students admitted within 2 years of SHS**

Status before University Admission	N	Mean	SD	t	Significance
Those admitted within 2 years	228	17.36	5.03	1.22	0.00
Those admitted later than 2 years	109	16.56	6.81		

Results on Table 8 shows that a significant difference exists between the mean perceived stress of fresh undergraduate students admitted within two years of their graduation from senior high school and those who waited longer before they were admitted. The younger ones tend to manifest a higher mean stress level with 17.36 as compared with those who had graduated more than two years before they were admitted with 16.56. It seems the longer prospective students waited for admission, the older they tend to become and the lower their stress levels tend to be upon admission into the university. Age and maturity may thus contribute to handling stressors in tertiary educational institutions.

(vi) Does age significantly affect the perceived stress of undergraduate fresh students?

H<sub>0</sub>: Age of the fresh undergraduate students will not significantly affect their perceived stress.

H<sub>1</sub>: Age of the fresh undergraduate students will significantly affect their perceived stress.

The sampled students were categorized into three age-groups: 17-20, 21-24 and 25 and above. Analysis of variance statistics was used to answer this research question and the summary is presented on table 9 below.

Results on table 9 shows an F-ratio of 0.501 which is not significant at 0.05 level. Thus the hypothesis that age will significantly affect undergraduate fresh students' perceived stress is rejected. Age of the sampled undergraduates does not therefore significantly affect their perceived stress.

**Table 9: ANOVA Summary for effect of age on perceived stress**

Source	Sum of Squares	df	Mean Square	F	Significance
Age	31.734	2	15.867	0.501	.606
Error	12261.302	387	31.683		
Total	12293.036	389			

#### 4. DISCUSSION

Results of the data analyses in this study were used to develop a profile of fresh undergraduates with respect to their perceived stress levels. In this discussion, it is only the significant results which will be emphasized. The gender, age, marital status and year of graduation from senior high school of the undergraduate fresh students sampled for this study are presented on tables 1 to 4. The foregoing characteristics give a vivid impression of the fresh university students' age profile in Ghana. The expected age range for admission is 19-21 and if allowance is given for one year delay due to admission problems, the upper limit of the range extends to age 22. The proportion of fresher students within this range is 79.8% and it shows that the remaining 19.8 falling outside this bracket are either younger or more mature. Age at entry into university for most undergraduates who had 9 years of basic education followed by three years of secondary education is 18. In Ghana, students sampled for this study had 3 years of secondary education and this accounts for the lower limit of the age range at 19 years.

Moreover, Dill and Henley (1998) suggested that significant differences exist between how traditional and nontraditional students perceive stressors. They found that nontraditional students experienced more family related stress due to their numerous roles as being older students. On the other hand, traditional students attributed most of their stress to peer and social activities related to college. The huge number of traditional students is cause for concern as peer pressure is likely to destabilize them to an extent that their academic success can be jeopardized. The freedom outside home for the first time and dependence on colleagues for advice could be detrimental at times.

Majority (70%) of the students had moderate level of perceived stress whilst 3.5% demonstrated high level of stress. This indeed emphasizes reports that 75% to 80% of college students are moderately stressed and 10% to 12% are severely stressed (Pierceall and Keim2007) and could be linked to reports of college students not being strangers to varying degrees of stress (Kohn et. al, 1991). The foregoing is underscored by Garrett (2001) that college students have been shown to possess a unique set of stressors which can affect their daily experiences. It has also been given credence by Ramsey et al (1989) that the college experience may be the most stressful years in one's life. Even though only 3.5% of the fresh students perceived high stress levels, this figure when considered alongside as high as 70% having moderate perceived stress level should mean that there is cause for concern. Cohen and Williamson (1988) have indicated that, perception of high level stress may require attention that will involve counselling and medical remedy. This assertion corroborates Ross et al. (1999) explanations for increased stress levels in college students which also affects their existence and has a profound impact on the student's ability to cope with college life (Dusselier et al., 2005). First, students have to make significant adjustments to college life. Second, because of the pressure of studies, there is strain placed on interpersonal relationships. Thirdly, housing arrangements and changes in lifestyle affect fresh undergraduate students. Hence the need to provide the necessary assistance required on campus for these fresh students to succeed academically. Again 25.4% reported

low level stress and this may give credence to Kobasa's (1979) suggestion that hardy individuals may not be affected by regardless of the environment.

There were as many as 63% males and 37% female participants. Results indicated that female fresh under graduates had higher perceived stress than their male counterparts. This is in line with Nolen-Hoeksema (1990) report that women face a number of chronic burdens in everyday life as a result of their social status and roles relative to men and these strains could contribute to their higher rates of anxiety. Hence culture and society may shape what events are perceived as stressful, what coping strategies are acceptable to use in a particular society. This assertion corroborates Merton (1957) suggestion that, society can elicit stress by promoting values that conflict with the structures in which they are acted upon.

It however correlates negatively with a recent study of perceived stress by Sitz and Poche (2006), which hypothesized that women would display more optimism than men and would report lower levels of perceived stress. Whilst no clear reasons were assigned to the differences in perception of stress among males and females, it is possible that the sympathoadrenal responsiveness in males which may be reasonably associated with immune suppression (Segerstrom and Miller, 2004; Lundberg, 2005). Phase of menstrual cycle in women was also found to have marked effects on physiological stress responses and in particular, oestrogen (Goldstein et al., 2005; Kajantie and Phillips, 2006) could be factors that may be directly or indirectly responsible for significant differences between perceived stress levels of male and female respondents.

There was no significant difference between those who worked before returning to school and those who did not. This, in part, could be attributed to the transition which occurs in particular socio-historical contexts, including expectations and opportunities related to age, gender, race/ethnicity, class (Riley & Riley, 1999). As they pointed out, both the decision to return to school and the short- and long-term impacts of re-enrolment on work and family life may be shaped by these complex interweaving socio-cultural and individual-developmental factors.

On the contrary there was significant difference between the mean perceived stress of fresh undergraduate students admitted within two years of their graduation from senior high school and those who waited longer before they were admitted. The younger ones tended to manifest a higher mean stress level with 17.36 as compared with those who had graduated more than two years before they were admitted with 16.56. It seems the longer prospective students waited for admission, the older they became and the lower their stress levels tended to be upon admission into the university. Hence age and maturity combined with the relief of obtaining admission thus fulfilling their aspirations may thus contribute to handling stressors in tertiary educational institutions. The impression created suggests a relationship Brody and Hall (1993) provided concerning self-report measures of emotional experience which indicated that age was significantly inversely correlated with perceived stress level (-0.18), suggesting that perceptions of stress tend to decline as age increases.

## **6. RECOMMENDATIONS**

In this study, the purpose was to basically seek understanding of perception of stress among fresh undergraduate students. The results provided us with evidence of moderate level of perceived stress and therefore there could be substantial improvements in the quality of life experienced by fresh undergraduate students if they developed friendships or social

networks with their colleagues perhaps by drawing on the resources of the Students Services Centre. Participating in friendship programs can also provide a sense of belonging, which helps with adjustment and create and support self-identity. There are counselling services available on campus and interaction with a counsellor is completely confidential. Students who are experiencing stress should draw on these services.

In addition to the measures that the university already takes to support students, university support staff should provide stress management programmes or seminars and training for students to enable them manage their time and everyday life demands. The content of such programmes could be informed by an online survey of fresh undergraduate students. It may be appropriate for new students to complete an online "needs assessment form" to ascertain their potential problems so as to deal with them as quickly as possible, particularly for female students whose perceived stress levels were significantly higher than males. This should help them to learn how to manage their stress at a much earlier stage.

Further research could be carried out that would shed further light on stress levels perceived by fresh undergraduate students. In particular it is possible that stress levels will vary during the academic year and therefore further research could explore the impact on these areas of particular events, e.g. examinations, arriving on campus for the first time. It would be interesting to carry out a study with a sample of students who not report high perceived stress levels to tease out the factors that enable such students to manage well at the university. Such factors might relate to personality types (hardiness, assertiveness, locus of control and self-efficacy), teaching and learning environment and their standard of English and number of courses of study.

## **7. CONCLUSION**

Overall, the results yielded a number of significant findings and the general impression indicated that fresh undergraduate students experience a degree of stress that requires intervention to minimize or remove. Therefore, success in overcoming all the potential difficulties that fresh students might face in the university implies that they need to have good degrees of resilience.

## **COMPETING INTERESTS**

Authors have declared that no competing interests exist.

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