Research Article

Academic stress and emotional intelligence among undergraduate students in selected universities in Ghana

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Abstract
This study's objectives were to look at the relationship between emotional intelligence (EI) and perception of stress (PS) among Ghanaian undergraduate university students, as well as the gender differences in EI and PS scores. The present study included a sample of 460 undergraduate university students from three universities in universities in Ghana (Ashesi University, University of Ghana and University of Cape Coast). The Assessing Emotional Scale (AES) and the Perceived Stress Scale (PSS) were utilized as part of a set of questionnaires to measure the variables under study. The link between EI and PS was investigated using Pearson correlations. The difference in genders' EI and PS scores was investigated using an independent samples t-test. The results revealed a strong positive correlation between the undergraduate university students' perception of emotion (PE) and psychological score (r=.146), management of own emotion (MOE) and PS (r=.296), management of others' emotion (MOTE) and PS (r=.197), and utilization of emotion (UE) and PS (r=.207). There was no statistically significant difference in the EI and PS scores according to the Independent Sample T-Test used to evaluate gender differences. This study aids in evaluating the connection between students' stress levels and emotional intelligence (EI). As a result, it will assist in comprehending and disseminating knowledge about the emotional intelligence and perceived stress of university students during their undergraduate years.

Keywords: attrition, coping strategy, emotional intelligence, psychological stress, undergraduate students

1. Introduction

Undergraduate students, who are often young adults between the ages of 18 and 24, Roy et al. (2021), admitted into a recognized tertiary institution, are required to live independently, make their own decisions, and manage their own affairs in addition to their academic work. Since most of these young adults are on campuses away from home, the issue of emotional separation from parents emerges at this time. For a long time, it was assumed that students were the least affected by stress or difficulties. Studying was the only task students were requested to execute, and studying was never seen as onerous. However, the expectations of relatives complimented with the desires of the students to make good grades and not be viewed as a waste of resources turned to pose so much stress on them. There is also a significant influence of stress due to fierce rivalry among students in every sector, regardless of each student's distinct nature in terms of capabilities, attitudes, personality traits, and interests.

According to Masih and Gulrez (2006) and corroborated by Banerjee and Chatterjee (2016), stress is increasingly recognized now as a lifestyle problem that affects anybody, regardless of their developmental level. It is, therefore, significant for the student to work on and possess a high degree of emotional intelligence to manage or deal with the academic stress and other activities that comes with stress as a result of being in school. Serrat (2017) notes that "Emotional intelligence describes the ability, capacity, skill, or self-perceived ability to identify, assess, and manage the emotions of one's self, of others, and of groups". People who possess a high degree of emotional intelligence know themselves very well and are also able to sense the emotions of others. They are affable, resilient, and optimistic.

The definition of stress is the demands made on the body's general response to upsetting occurrences in the surroundings (Radeef, Faisal, Ali & Ismail, 2014). The sensations or ideas that a person has about how much stress they are experiencing at a certain time or during a specific length of time are known as the perception of stress (PE) (Phillips, 2013). Poorly managed stress can result in major issues that can harm someone's health. Therefore, Wang and Saudino (2011) recommended that it is crucial for a person to manage stress by controlling emotions sensibly in order to prevent any negative issues in life.

Emotional intelligence abilities, according to Low and Nelson (2006), will help a person manage the difficult and challenging college experience. Mayer and Salovey carried out the initial investigation into EI in 1990. Goleman asserted in his 1995 book "Emotional Intelligence: Why It Can Matter More Than IQ" that just 20% of a person's achievement was attributable to IQ. In addition, this assumption encourages many academics and researchers to investigate and find additional characteristics that account for 80% of a person's success (Mohzan, Hassan & Halil, 2013).

EI helps students maintain a balance between their mental health, interpersonal relationships, academic success, and psychological well-being (Shaheen & Shaheen, 2016). Emotional intelligence (EI) enables people to communicate and express their feelings in the right ways, regardless of whether they have positive or negative consequences (Koubova & Buchko, 2013). A person with low EI may experience a variety of unpleasant effects. Students with low EI will have negative repercussions on their health because they engage in dangerous behaviors such as substance misuse, behavioral issues, and aggression (Rivers, Brackett, Omori, Sickler, Bertoli & Salovey, 2013). A recent study by Fix and Fix (2015) found that students who struggled to comprehend their emotions and manage their stress indicated high trait psychopathy. EI is critical for stress management. Students with high EI reportedly have reduced PS because they are better able to manage their emotions (Ruiz-Aranda, Extremera, & Pineda-Galán, 2014). However, Mumina, Wafa, and Teong's (2016) investigation of EI and PS revealed that UE was not caused by stress but rather by a lack of socializing exposure.

Even though Saddki et al. (2017) discovered that females scored greater EI and PS levels than males, a local report published in The Star Online (2009) claimed that males scored higher suicide rates. This demonstrated that such cases may have occurred as a result of inadequate emotion regulation as well as stress from work and studies. Additionally, a lot of suicide cases have been documented in internet news due to depressive disorders, stress, and the intense strain that comes with studying and working. The goal of this study was to determine how EI and PS interacted among undergraduate university students whose ages ranged from 18 to 25. Investigating stress levels and monitoring how they relate to EI may therefore help to comprehend, recognize, and stop any significant issues from occurring.

2. Literature Review
Emotional Intelligence
Studies on emotional intelligence exist (EI). Different scholars have created a variety of EI models. The focus of BarOn's (2006) model is on the link between emotional intelligence, cognitive intelligence, and general intelligence (Bar-On, 2006). The ability-based model of EI was developed by Salovey and Mayer in 1997. Ability-based models portray EI as intelligence and are more objective. Emotional intelligence (EI) enables someone to reason accurately based on emotion. Additionally, awareness of and knowledge of EI enhance mental processes. Goleman (1995) explained EI using a mixed-method paradigm that included both an appraisal instrument and a competency assessment tool. EI is believed not to be a "mental ability" that can be quantified. Emotional intelligence (EI) is an evaluation of emotions that is not objective (Petrides, 2009). The subjectivity of emotional impressions pertaining to well-being, self-control, emotionality, and sociability is acknowledged by trait-based theories of emotional intelligence (Petrides, 2009; Mikolajczak, Olivier, Leroy, & Roy, 2007). Using self-perception as its foundation, Petride and Furnham's (2006) study focused on personality. Application of trait EI may make it possible to predict and explain emotional self-efficacy in a variety of situations.

Stress
There is a wealth of research on coping with stress. The body's ability to regulate itself and preserve physiological balance is known as homeostasis. According to Cannon, when faced with dangers from the outside, human bodies undergo internal change. By keeping balance, a person's body is able to avoid sickness. This strategy for dealing with stress was mostly physiological in nature (Cannon, 1914, 1928). Richard Lazarus felt various people react to situations in different ways resulting in varied outcomes, and explored the relationship between the stressor and individual reaction to the stressor. Psychologists began to explore stress and coping based on perceptions and the subjective way individuals interpret personal circumstances. Lazarus and others believed knowing cognitive mediation was the core of comprehending psychological stress. Lazarus thinks the term perception is limited and decides to use the term assessment instead. Without a universal concept, stress is very difficult to define. Physical stress is the body's reaction to stressors or stimuli from the outside world (heat, cold, isolation, etc.). Psychological stress is a mental reaction or creation through the perception that affects one's thoughts and perceived reality and causes a change in the human body—either physical or mental. College is related to academic stress.

Emotional Intelligence (EI) and Academics
There is a lot of academic study on emotional intelligence. Despite the idea's prominence in a psychological study, little research has been done on the potential connection between emotional

intelligence and attrition. Although recent studies (Garg et al. 2016) looked at the relationship between people's emotional intelligence levels and their impact on post-secondary academic achievement, these studies only looked at the role of emotional intelligence in keeping students in school and neglected to look at the concept's effect in discouraging students from completing secondary education.

Emotional intelligence and academic success are not closely associated, according to Garg et al. (2016) .'s research (pg. 4). However, transition to college was directly correlated with emotional intelligence, which in turn was correlated with first-year grade point average (GPA). Two hundred and ninety-nine first-year students at Laurentian University were polled for this study. Students from various majors who were enrolled in a first-year psychology course received the surveys (Garg et al. 2016, pg. 4). The Bar-On Emotional Quotient Inventory (EQ-i) and the Student Adaptation to College Questionnaire were two of the questionnaires provided (SACQ). Overall, the results showed that academic success was strongly impacted by emotional intelligence when it came to adjusting to university life (Garg et al. 2016, pg. 5).

Buvoltz, Solan, and Longbotham (2008, p. 2) looked at the relationship between attrition and a number of psychological traits, including emotional intelligence, in contrast to Garg et al. (2016) .'s single-variable study. In this study, retention in an accelerated undergraduate degree completion program was investigated in relation to EI, learner autonomy, and retention. One hundred twenty-nine students from a small, private liberal arts college made up the sample for this study. The email was used to reach out to the student sample, and various surveys were used to collect data on the variables. EI and retention did not correlate in the study, but when EI and learner autonomy was taken into account at the same time, a partial correlation was discovered.

The literature supports the idea that emotional intelligence increases with age and through training initiatives (Buvoltz et al. 2008, pg. 2). Many first-year college students encounter unfamiliar situations and make decisions (Buvoltz et al. 2008, pg. 1). Emotional intelligence is measured by one's capacity to deal with various social situations and come to the best decisions possible in them. First-year students are uniquely exposed to more challenges that call for the use of EI in a shorter amount of time, and they also have the highest attrition rates of any university's student body, so research into the link between EI and attrition was necessary (DeBerard, Spielmans, & Julka, 2004, pg. 3) Yarrish and Law undertook such an investigation (2009). The study's goal was to identify the variations in EI among various majors at a small liberal arts college. Sixty-six first-year business students taking an introductory business course made up the study's sample. A self-reporting survey that was given out in class served as the testing tool. The study's findings revealed that all disciplines needed to improve in some areas of emotional intelligence.

Stress and Academics

Stress affects college students (Bhujade, 2017, p. 750). There aren't many studies that assess stress levels or their consequences on college students. Towbes and Cohen performed landmark research on the connection between stress and college students (1996). They identified two categories of chronic stress and evaluated the impact of chronic stress on college students. The first kind of chronic stress is brought on by a single incident that causes problems later on. One instance is failing a test and attempting to improve your GPA for the remaining weeks of the semester. The second sort of chronic stress is brought on by an ongoing uncomfortable situation, such as chronic pain. In the study, both forms of stress are taken into account. The stress levels of first-year students were greater, and they were worried about picking a major, missing home, and missing far-off friends.

Instead of stress perception, the identified stressor was the main emphasis of this article.

Dusselier et al. carried out another study that focused on stress in college students (2005). The goal of this study was to identify the stressors that college students who live in resident halls experience. Stress was found to be substantially predicted by depression, anxiety, chronic disease, and sleep problems. Stress is perceived differently by students in various academic years; sophomores in college feel higher levels of stress than in previous years.

If stress is severe and sustained enough, it can also lead to many illnesses. Stress was shown to be college students' top concern in a cross-institutional survey, closely followed by body image, AIDS, physical fitness, and cancer. Depression is a condition that is frequently brought on by ongoing stress (Bhujade, 2017, p. 750). According to the report, college students frequently experience stress. Students said that 43% of them felt very unhappy, and 16% said that life was worthless and not worth living (Bhujade, 2017, p. 750). Another study looked at the life experiences, stresses, and coping mechanisms of stressed and unstressed college students. The participants included 451 students who completed the General Health Questionnaire (GHQ), which classified them as troubled or not, as well as life events and life strain inventories. The findings showed that 21.36 percent of the pupils were in trouble. Unfavorable life events increased significantly for the disturbed pupils (Zeena, Rao, Rao, Subbakrishna & Prabhu, 1990).

3. Methodology
Research Design
Cross-sectional research was used as a quantitative approach in the current study. Data about a population are gathered using a cross-sectional design at one point in time (Mahmud, 2011). Emotional intelligence (EI) was the independent variable in the current study, while perceived stress (PS) was the dependent variable. The objective of the current study was to quantify the psychological components of EI and PS; hence the researchers chose a quantitative survey approach (questionnaire) to do so (studied variables). The researchers may choose to use a qualitative technique in their future research based on the current findings.

Sampling
This research focused on undergraduate university students. The sample size of three hundred and eighty-four (n=384) was generated based on Krejcie and Morgan (1970). A total of 460 (n=460) questionnaires were delivered, comprising the twenty percent (20 percent) dropout rate. A proportional sampling approach was employed in generating the sample size for each university.

Instrumentations
The Assessing Emotions Scale (AES), which was developed by Schutte, Malouff, Hall, Haggerty, Cooper, Golden, and Dornheim in 1998 to measure emotional intelligence, and the Perceived Stress Scale (PSS), which measures perceived stress, were used to collect the data (developed by Cohen, Kamarck, and Mermelstein in 1983). A 5-point Likert scale with 1 being strongly disagree, 2 being moderately disagree, 3 being neither agree nor disagree, 4 being somewhat agree, and 5 being strongly agree was used by AES (r=.70). The 5-point Likert scale used by PSS (r=.90) ranged from 0 to 4 (0 being never, 1 almost never, 2 Sometimes, 3 fairly often, and 4 being very often).

Procedure
The respondents were requested to fill in the individual information sheet and were advised that the participation is free and they can withdraw at any moment. The responders were promised that

the details were confidential and solely used for research reasons. The respondents answered the questionnaires, which included demographics profile, AES, and PSS questionnaires, in 15 minutes, and researchers gathered all the questionnaires upon completion.

Data Analysis

Version 22.0 of the Statistical Package for Social Sciences (SPSS) was used to analyze the data that had been gathered. Mean (M) and standard deviation (SD), frequencies, and percentages were used to show descriptive data. Among Ghanaian students attending public universities, the Pearson correlation coefficient was also employed to determine the link between EI and PS. While the Independent Sample T-Test was employed to investigate the variation in EI and PS between the sexes.

4. Results and Findings

This study looked at the correlation between EI and PS among college students and the disparities in EI and PS scores between male and female students. This study included 460 (n=460) undergraduate university students in total. The present study's EI and PS means are shown in Table 1. The average and standard deviation for EI were 3.79 and 0.40, respectively. When it comes to the EI dimensions, the mean scores for PE were 3.60 (SD =.44), MOE was 3.91 (SD =.50), MOTE was 3.80 (SD =.49), and UE was 3.91 (SD =.51). While the reported mean for PS was 2.05 (SD=.39).

Table 1: Mean and standard deviation for EI and PS

Variables	M	SD
Emotional Intelligence (EI)	3.79	.40
Perception of Emotion (PE)	3.60	.44
Managing Own Emotion (MOE)	3.91	.50
Managing Others' Emotion (MOTE)	3.80	.49
Utilization of Emotion (UE)	3.91	.51
Perception of Stress (PS)	2.05	.39

Dimensions of Emotional Intelligence and Perception of Stress

The Pearson Correlation test was used to determine the relationship between each dimension of EI and PS among university students. Pallant (2013) specified that the weak correlation is ranged from r =.10 to r =.29; the medium relationship is ranged from r =.30 to r =.49; and the strong relationship is ranged from r =.50 to r = 1.0 in order to determine the relationship between EI and PS. As shown in Table 1, there was generally little correlation between EI and PS. With a value of r=.21, n = 460, and p.05. Table 2 demonstrated a substantial positive link between EI and PS among university students. University students had a substantial positive link between PE and PS, with a value of r=.146, n = 460, and p.05. With a value of r=.296, n = 460, and p.05. there was a significant positive connection between MOE and PS. Additionally, MOTE and PS showed a weak but significant positive connection (r=.197, n = 460, p.05). Last but not least, university students showed a substantial positive link between UE and PS, with a value of r=.207, n = 460, and p.05.

Table 2: Relationship between EI and PS.

EI	PS (r)	p-value
EI	.21	.001
PE	.146	.002
MOE	.296	.000
MOTE	.197	.000
UE	.207	.000

Emotional Intelligence and Perception of Stress between Genders

The difference in EI across genders, as shown by the results of the AES and PSS tests, was investigated using an Independent Sample T-Test. According to Table 3, there was no discernible difference in EI between male and female students (M=3.77, SD=.41, and M=3.82, SD=.3) (p=.18). Contrarily, Table 4 demonstrated that there was no difference in PSS between students who were male (M=2.07, SD=.38) and female (M=2.03, SD=.41) that was statistically significant (p=.33).

Table 3: EI between genders

Gender	n	M	SD	Sig. (2-tailed)
Male	229	3.77	.41	.18
Female	231	3.82	.39	

*Significant level set at p<.05

Table 4: PS between genders

Gender	n	M	SD	Sig. (2-tailed)
Male	229	2.07	.38	.33
Female	231	2.03	.41	

*Significant level p<.05

Discussion

The current study's objectives were to look into the relationship between EI and PS among college students and to compare the EI and PS scores of male and female undergraduate students. The research found a positive relationship between EI and PS. The current study demonstrated a positive correlation between PS and all of the EI dimensions. However, there was no discernible gender difference in either the EI or PS scores. According to the results of the current study, PE and PS have a very strong positive relationship with undergraduate university students. This shows that students' levels of stress increase in direct proportion to the PE they reported. This showed that even though the students have the capacity to perceive their own and other people's emotions, they are still under a lot of stress. This result contrasted with a previous study by Mumina et al. (2016) that found a significant negative relationship between the capacity for emotion perception and stress, demonstrating that the capacity for emotion perception (PE) in the EI dimensions was the most important in lowering stress. According to Mumina et al. (2016), among the other dimensions of EI, PE and PS had the highest correlation (r= - 0.464).

A substantial positive link between MOE and PS was also found among university students, according to the current study. This showed that even if the students are able to express themselves honestly and have self-control, they are nevertheless under a lot of stress. This result is in contrast to Mumina et al. (2016)'s study, which found that among university students, the association between MOE and PS was significant (r= -0.216). Students at universities are better able to manage their stress

levels and find solutions when they can recognize, identify, and comprehend their own emotions. In a prior study, MOE was shown to be a significant (p =.001, r = -0.321) factor in university students' perceptions of stress.

Moreover, the current study indicated that there was a considerable positive link between MOTE and PS among university students. This study revealed that even if the students have the ability to grasp others' emotions, worry, and exhibit empathy for others but they still feel excessive stress. This conclusion is not compatible with the study of Mumina et al. (2016), which claimed that there was a significant association (r = -0.302) between MOTE and PS among university students. According to the results of the current study, UE and PS have a meaningfully good association with college students. This study found that even while students are better at controlling their emotions and coping with problems in their personal and environmental contexts, they still experience significant levels of stress. In contrast to Mumina et al. (2016) study, which found a slight link between UE and PS among university students (r = -0.02), this study's findings showed no such relationship.

According to the current research, there is a strong positive association between EI (i.e., PE, MOE, MOTE, and UE) and PS among college students. According to Gohm, Corser, and Dalsky (2005), some people may benefit from EI while others may not. Gohm et al. (2005) discovered that among the overwhelmed, there was no correlation between EI and stress. This kind of focused, perplexed, and the anxious individual would appear to benefit greatly from EI. Because they lack trust in their emotional intelligence (EI) skills, the more emotionally intelligent among them did not report experiencing less stress. They lack confidence in the truth of their information or the propriety of their emotional responses. This is in contrast to a study by Saklofske, Austin, Mastoras, Beaton, and Osborne (2012), which discovered that people with high EI have greater abilities to understand the emotional involvement of others and are able to effectively reduce stress by seeking social support, sharing emotions, and talking about personal problems to others. Furthermore, a 2011 research by Forushani and Besharat found that those with a moderate degree of EI were more conscious of their emotions and knowledgeable about how to employ appropriate coping mechanisms. The results of the current study may be attributable to the fact that undergraduate university students are adopting other accessible alternative coping mechanisms, such as cognitive strategy, rather than depending solely on their EI to manage their stress levels. Another factor that may have contributed to the positive link is daily life stress. According to Wong (2019), Kumasi had the worst work-life balance among 40 cities, which may help to explain how the undergraduate students felt stressed.

The result of the present study also found that there was no significant difference in EI between genders. Both male and female students are exposed to the same challenges in university that may contribute to no significant difference in terms of their EI. However, based on the mean of the results, female students were found to attain higher EI mean scores as compared to male students. This finding was parallel to a previous study conducted by Nasir and Masrur (2010), which claimed that there was no significant difference in EI between male and female university students. Although there was no significant difference in EI between both genders, the study identified that female students scored higher EI mean scores as compared to male students. Chaudhry, Jan, Sajjad, and Ali (2013) stated that the EI scores of the female students were significantly higher as compared to male students due to the ability of female students to manage their impressions and display desirable behaviors. This is probably because female students were more sensitive to their emotions and expressed emotions more frequently. Naghavi and Redzuan (2011) also stated that parents talk to their daughters about emotions, giving them more information about feelings as well that

females learn more quickly than males. In addition, Gross and John (1998) also revealed that males tend to show less emotion than females.

The conclusion of the current investigation also indicated that there was no significant difference in PS between male and female university students. However, male students were shown to have higher mean scores of PS than female students. This conclusion was comparable with earlier work by Ranasinghe et al. (2017), which also demonstrated that there was no difference in PS across genders, and indicated that both genders might boost their EI in lowering the stress levels to attain academic achievement. Mumina et al. (2016) also reported that there was no significant difference in PS between males and females. Both genders are able to control and manage their own and others' emotions in order to deal with stress. Both males and girls have comparable perceptions of stress since they are exposed to the same workload and studying in a similar university atmosphere. Men students observed greater levels of tension, perhaps because males tend to display less emotion as well as not being effective at communicating their own feelings. Brody, Hall, and Stokes (2016) also argued that males more commonly show negative emotions such as hostility, rage, and impatience. While females preferred to employ social support and aid-seeking conduct from others to address stress (Anbumalar, Dorathy Agines, Jaswanti, Priya, and Reniangelin, 2017). (Anbumalar, Dorathy Agines, Jaswanti, Priya, and Reniangelin, 2017).

5. Conclusions

In conclusion, the major findings of the present study showed a significant positive relationship between EI and PS among undergraduate university students. In addition, no significant difference in both EI and PS scores was found between the genders (male and female undergraduate university students). These findings may help us in understanding how emotional intelligence was associated with the perceived stress of the male and female undergraduate students. Therefore, more studies need to be done in the future to examine this relationship between EI and PS among university students. Based on the main findings, we may suggest that the undergraduate students might consider other coping strategies instead of relying on emotional intelligence in dealing with their stress. For instance, the students may use physical activity, religious intervention, music, and arts as their coping strategies in dealing with stress. This is supported by Shaikh et al. (2018), who found that people use different types of coping strategies to deal with stress, such as exercising, meditating, and listening to music. Moreover, students who consider using other coping strategies may benefit from their coping strategies in terms of it helps in controlling their negative emotions, thoughts, and behaviors. Hence, this, in turn, may help to reduce their stress.

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