UNIVERSITY OF CAPE COAST

IMPACT OF EMOTIONAL INTELLIGENCE, PSYCHOLOGICAL WELL-BEING AND ACADEMIC SELF-EFFICACY ON ACADEMIC ACHIEVEMENT OF CLINICAL MEDICAL STUDENTS IN PUBLIC UNIVERSITIES IN GHANA

FRANCIS NYAMEKYE

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BY

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

JULY, 2019

DECLARATION

CANDIDATE'S DECLARATION

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

Candidate's Signature…… Date ……

Name ……

SUPERVISOR'S DECLARATION

We hereby declare that the preparation and presentation of the project work was supervised in accordance with the guidelines on supervision of project work laid down by the University of Cape Coast, Cape Coast.

Principal Supervisor's Signature…… Date ……

Name**:** ……

Co-Supervisor's Signature…… Date ……

Name**:** ……

ABSTRACT

Factors which influence academic achievement of students have been explored throughout the world. Some of the studies looked at Emotional Intelligence (EI), Academic Self-Efficacy and Psychological Wellbeing (PWB) as against academic Achievement (AA) but as separate entities. Thus, using the quantitative paradigm a cross sectional descriptive survey, this study set out to investigate the impact Emotional Intelligence, Psychological Wellbeing and Academic Self-Efficacy have on Academic Achievement of clinical medical students of public Universities in Ghana. Using a multistage sampling approach, a sample of 297 respondents were used. The study pointed out that there is no statistically significant difference found between the moderate and high levels of Emotional Intelligence. The study also found that there is a statistically significant difference between high and low levels of Psychological Well-being in terms of academic achievement of students. In reference to this, it is recommended that stakeholders of medical education in Ghana should strongly consider implementing Emotional Intelligence development and coaching programs for current medical and future medical school students. Again, the study recommends to stakeholders that implementation of psychological assessment test by each student at least twice in a semester could be helpful.

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DEDICATION

To my family, Yaa Boakye, Kofi Ofori, Kwaku Mateo, Maame Esi, and Kegya Roseline

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CHAPTHER ONE

INTRODCTION

Background of the Study

Education is as essential as the very existence of human society. It serves as the medium through which transference of knowledge and symbolic evidence of what a society stands for as well as its expectations for the future. This calls for systematic, well planned and execution of the set of skills, capabilities and knowledge needed for the survival and continuity of the said society. Thus, there is the need to clearly define what needs to be achieved by the individual being taught. A system of establishing the depth to which the individual has acquired the knowledge and capabilities expected of a learner is assessed at the end of duration.

One of the most important issue in education is performance. The Ghanaian educational system is no exception, for instance, academic achievement is needed especially in the transitional stage from Senior High School to tertiary. An individual is admitted into the tertiary level especially in the university only after demonstrating relatively high academic achievement in West Africa Senior School Certificate Examination (WASSCE). Thus, the means of selecting applicants for medical school admission is generally grouped in two folds which are cognitive and non-cognitive. The cognitive methods look at applicants' academic achievement in the former level of study, whereas non-cognitive methods focus on skills using measurement methods such as psychometric assessments and interviews (Yusoff, Esa, Pa,

Mey, Aziz, Rahim, 2013). The selection process is based on previous academic merit. Thus, the cumulative grade point average (CGPA) and this appears to be simple as applicants with the highest marks are selected to enter medical school.

In reality, it is expected that they will demonstrate the same or better level of academic achievement but the issue seems quite more complicated in the sense that high marks do not warrant a good doctor in the future (Tutton & Price, 2002; Norman, 2004). Most medical schools prefer to select their medical students based on the previous academic merit because it has been found to be a better predictor of medical student success in medical schools (Tutton & Price, 2002; Cohen-Schotanus, Arno, Reinders, Jessica, Van Rossum & Vander, 2006; Kulatunga-Moruzi, 2002). Even so, the predictive values of previous academic achievement fade with progression through the course during the semester (Tutton & Price, 2002). Also, in Ghana, there have been media reports on students over poor academic achievement (Essel, 2014 cited in Duncan-Williams, 2015). Yet, these media reports have not been paralleled with empirical studies to ascertain the veracity and severity of the situation in Ghanaian universities especially the medical schools hence the study. Thus, this study attempts to investigate the possible relationships that might exist between emotional intelligence, psychological well-being and academic self-efficacy of medical students in Ghanaian universities. Moreover, available research indicates that academic achievement is associated with levels of emotional intelligence, psychological well-being and academic self-efficacy of the students (Sparkman, 2008; Kamal & Bener, 2009; Needham, Crosnoe & Muller, 2004; Sanders & Sander, 2007). Students'

academic achievement have received considerable attention in previous research (Mushtaq & Khan, 2012; Aithal, Kumar, Gunasegeran, Sundaram, Rong, & Prabhu, 2016). It is deemed to be a challenging aspect of academic literature as it is affected by emotional, social, psychological, economic, environmental and personal factors.

Emotional Intelligence is defined as the ability to perceive, express, understand, motivate, control and regulate emotion (Goleman, 1995; Mayer & Salovey, 1997). There is considerable evidence showing that emotional intelligence influences success in a variety of settings including the academic achievement (Goleman, 1995; Yusoff et. al., 2013). Although evidence varies widely in their quality, there are a number of well-done and convincing reports that demonstrate the favourable relationships between emotional intelligence and several important areas, which include social relationships, workplace performance, psychological well-being and physical health (Mayer, Roberts & Barsade, 2008). A recent review revealed that high emotional intelligence was reported to positively influence doctor–patient relationships and interpersonal skills, empathy, teamwork and communication skills, stress management and organizational commitment abilities, as well as clinical and examination performance on specific areas such as clinical diagnostic and prognostic ability (Arora, Ashrafi, Davis, Athanasiou, Darzi & Sevdalis, 2010). These empirical facts suggest that, emotional intelligence plays significant roles in several areas related to the competencies of future medical doctors. Despite the encouraging outcomes, to the authors' knowledge, the situation in Ghana has not been considered. Niu and Tienda (2009) found in their study that Senior High school grades are better in predicting college performance than

standardized test scores. Other studies have shown that entry grades are poor predictors of academic achievement at a university. Obioma and Salau (2007) also asserted that even though grades of students from Senior High schools were statistically significant, they were not of much practical importance in predicting the achievements of university students. However, this is an indication that academic success is not only predicted by examinations but other factors play important roles. Hence, the need to assess the association between EI, ASE, PWB and academic achievement.

On the other hand, self-efficacy is defined as a self-evaluation of one's competence to successfully execute a course of action necessary to reach desired outcomes (Bandura, 1977, 1982, 1986). Choi (2005) citing Bandura (1997) postulated a high sense of academic self-efficacy has been defined as fostering a high level of motivation, academic accomplishments, and developing intrinsic interest in academic subject matter. The self-regulatory capability of the individual helps accounts for skills that students should encompass such as: "planning, organizing, and managing instructional activities; enlisting resources; regulating one's own motivation; and applying metacognitive skills to evaluate the adequacy of one's knowledge and strategies" (p. 175). It is a multidimensional construct that varies according to the domain of demands (Zimmerman, 2000). Thus, in academic settings, one should measure academic self-efficacy rather than generalized self-efficacy, where academic self-efficacy refers to students' confidence in their ability to carry out such academic tasks as preparing for exams, regular attendance of lectures and writing term papers. A large meta-analysis of studies of self-efficacy in academic environments concluded that the most specific academic

self-efficacy indices had the strongest effect on academic outcomes, while the more generalized measures were less closely associated (Multon, Brown, & Lent, 1991). Björkenstam, Weitoft, Hjern, Nordström, Hallqvist, and Ljung, (2010) opined that students who are unable to regulate their emotions stand a higher risk of losing confidence in their academics (academic self-efficacy). Consequently, there is the need to investigate the situation among the medical students as there is the need for empirical evident in this regard, this necessitates the current study.

Furthermore, Psychological well-being (PWB) has received an increasing attention in the scientific community and among practitioners (Springer, Pudrovska & Hauser, 2011; Lavasani, Mirhosseini, Hejazi & Davoodi, 2011; Burns & Machin, 2009, 2010; Fernandes, Vasconcelos-Raposo, & Teixeira 2010; Sirigatti Penzo & Iani et. al., 2009; Dierendonck, Dı´az, Rodrı´guez-Carvajal, Blanco & Moreno-Jime´nez, 2008). The theoretical roots of PWB research stretch back to the World Health Organization's conception of health (1946) which described as not merely the absence of disease and sickness, but a state of complete physical, mental and social well-being. Psychological well-being refers to positive mental health (Edwards, 2005). Research has shown that psychological well-being is a diverse multidimensional concept (MacLeod & Moore, 2000; Ryff, 1989b; Wissing & Van Eeden, 2002), which develops through a combination of emotional regulation, personality characteristics, identity and life experience (Helson & Srivastava, 2001). Psychological well-being can increase with age, education, extraversion and consciousness and decreases with neuroticism (Keyes, Shmotkin & Ryff, 2002). It has been established to have relationship

with student's performance (Soet & Sevig, 2006 cited in Kilgo, Mollet & Pascarella, 2016) hence the need for the study.

Again, healthcare reform is changing the roles of the health occupation employee (Brown, 1997). In the mid. 1990s, healthcare in the United States and other parts of the world such as Africa began a move from acute care toward disease prevention and health promotion. These reform efforts have added the role of educator to allied health professionals' traditional role of patient care (Kelley, Justice, Waller & Johnson, 2013). However, few schools in Ghana provide an interdisciplinary experience that prepares healthcare occupation employees for the holistic care of patients. Most educational experiences focus on a single disease or patient group, rather than on the complexity of a patient's condition and demands of his or her life in its entirety (American Association of Colleges of Nursing [AACN], 1996 in Kelley, Justice, Waller & Johnson, 2013). This could be that the healthcare professionals lack the necessary skills to enable them provide the wholesome care we require from them.

These factors strongly influence the student performance, though they vary from person to person and country to country in studies assessing the factors which influence academic achievement. In summary, a range of evidence has consistently supported the favourable relationships between emotional intelligence, academic self-efficacy, and psychological well-being with various areas of individual performance, which include job performance, mental health, academic success, career success, positive personal qualities and wellbeing either in the medical context or outside the medical context.

Nevertheless, very limited data are reported on Africa and the Ghanaian medical schools and this warrants the study.

Statement of the Problem

Academic achievement is affected by many factors and other sections of the educational industry. Some of these factors have been examined in previous studies which mostly focused on Senior High School students and not university students (Ewumi, 2012; Ebenuwa-Okoh, 2010). These works did not consider emotional intelligence, psychological well-being and academic self-efficacy of clinical medical students to be specific hence the need for the current study (Casey, Thomas, Hocking & Kemp-Casey, 2016; Chinipardaz, Boroujerdni, Pasalar, Khozany, & Keshavarz, 2011). These psychological factors have been found to be associated with decrease in academic achievement (Nguyen, Dedding, Pham & Bunders, 2013). This could be as a result of individuals' inability to regulate their emotions, eventually lack of concentration sets in which then affect academic achievement.

Björkenstam et. al., (2010) asserted that students who are unable to regulate their emotions stand a higher risk of losing confidence in their academics (academic self-esteem) even when other variables such as family psychiatric illness, family educational level, receipt of social welfare, being adopted or living with a parent were adjusted. Chinipardaz et. al., (2011) concluded that there is the need for medical educators to plan more on increasing emotional intelligence for better academic achievement and efficiency during their internship in Iran. The Ghanaian version in relation to medical student's is actually unknown as at the time of the study therefore

there is the need for an empirical research to ascertain the Ghanaian context hence the study.

Empirical evidence shows that self-efficacy affects achievement (Chemers, Hu & Garcia; 2001; Lane & Lane, 2001; McKenzie & Schweitzer, 2001; Zimmerman, Bandura & Martinez-Pons, 1992). Sanders and Sander (2007) citing Multon, Brown and Lent (1991) concluded that there is a "positive and statistically significant relationships between self-efficacy beliefs and academic performance and persistence outcomes" (p 30). This conclusion was arrived at after conducting a meta-analysis of 39 different studies, comprising 41 different data sets. Consequently, there is the need to assess the Ghanaian context due to differences in culture and expectations. Akpan, Ojinnaka, and Ekanem (2010) assessed academic performance on antisocial behaviour and behavioural disorders. These reports refused to consider positive affect (psychological well-being) which this study intends to cover. Also, Akinsola and Nwajei (2013) conducted a study focusing on the negative affect (anxiety and depression) but did not look at the positive affect (self-acceptance, autonomy, environmental mastery, purpose in life and personal growth) which this current student intends to cover.

In Ghana, Adatsi (2013) conducted a study on academic performance of students' biopsychological problems and their academic performance, this study admitted that the maintenance of physical, mental health, emotional and nervous stability, is essential in the performance but did not cover psychological well-being, emotional intelligence and academic self-efficacy relating to academic achievement. Affum-Osei, Asante and Forkuoh (2014) researched on factors influencing academic performance looked at stress

(negative affect) and consider not psychological well-being (positive affect). Duncan-Williams (2015) did a study on academic stress, academic performance and psychological well-being among SHS students in Ghana but her study did not cover emotional intelligence in relation to academic performance. Therefore, there is the need to assess to investigate EI, PWB and ASE and AA of University students especially the medical schools.

As such studies involving academic achievement should consider emotional intelligence (Yusoff, et. al., 2013; Villarreal, Furgerson, Garza, Bain, & Slate, 2017), psychological well-being (McLeod, Uemura, & Rohrman, 2012) and academic self-efficacy (Yazache, 2013) among students. It is also important to study these psychological constructs as it has the ability to hinder academic achievement and consequently affects the primary goal of education positively or negatively. This important association between academic performances necessitates the need to study emotional intelligence, academic self-efficacy and psychological well-being of students in order to provide a holistic support to meet the ever-increasing demands of the educational environment. A number of the studies in the literature did not specify the age range but categorized them into either young adult, middle and older adults while others only dwell on the level of study hence there is the need to examine specific age range in relation to their level of study and their psychological well-being hence this study (Newsome, Day, & Catano, 2000; Archer & Lamnin, 1985).

It appears there is a lack of literature in relation to the subject of interest among Ghanaian medical students. As at the time of the study there was no literature in the same vain. Practically, there was no study found in

relation to emotional intelligence, academic self-efficacy and psychological well-being as far as medical students in public universities in Ghana are concern. Therefore, there is the need to study the medical students in public universities in Ghana to empirically substantiate findings of previous studies in other parts of the world.

The study seeks to establish the levels of emotional intelligence and psychological well-being and how they affect the academic performance of clinical medical school students embarking on their clinical at two teaching hospitals in the southern part of Ghana and one in the northern part. Furthermore, it sought to establish how demographics such as gender, level of study and age of students influence emotional intelligence, psychological well-being and academic self-efficacy among respondents.

Purpose of the Study

The main purpose of the study is to investigate emotional intelligence and psychological well-being, academic self-efficacy and its influence on academic performance of clinical medical students in Ghanaian medical schools. The specific research objectives are to:

1. Determine the emotional intelligence levels and academic performance of medical students in Ghana.
2. Establish the levels of psychological well-being and academic performance of medical students.
3. Ascertain the relationship between emotional intelligence, academic self-efficacy, psychological well-being and academic performance of medical students.

4. Investigate whether emotional intelligence is influenced by gender of medical students.
5. Explore gender differences of medical students in relation to academic self-efficacy.
6. Examine the relationship among age, level of study and psychological well-being of medical students.

Research Questions

The following research questions were posed to guide the study:

1. What are the levels of emotional intelligence of medical students in Public Universities in Ghana?
2. What are the levels of psychological well-being of medical students in Public Universities in Ghana?

Statement of Hypotheses

H1-H_0: There will be no statistically significant difference between the levels of emotional intelligence in terms of academic achievement of clinical medical students.

H_A: There will be a statistically significant difference between the levels of emotional intelligence in terms of academic achievement of clinical medical students.

H2-H_0: There will be no statistically significant difference between high and low levels of psychological well-being concerning academic achievement of clinical medical students.

H_A: There will be a statistically significant difference between high and low levels of psychological well-being concerning academic achievement of clinical medical students.

H3-H_0: There is no statistically significant relationship among emotional intelligence, academic self-efficacy, psychological well-being and academic achievement of clinical medical students.

H_A: There is a statistically significant relationship among emotional intelligence, academic self-efficacy, psychological well-being and achievement of clinical medical students.

H4-H_0: There is no statistically significant difference between male and female clinical medical students in terms of their emotional intelligence.

H_A: There is a statistically significant difference between male and female clinical medical students in terms of their emotional intelligence.

H5-H_0: There is no statistically significant difference in academic self-efficacy when respondents are classified according to gender.

H_A: There is a statistically significant difference in academic self-efficacy when respondents are classified according to gender.

H6-H_0: There is no statistically significant difference in age, level of study and psychological well-being, interaction effect of level of study, age and psychological wellbeing of clinical medical students in public universities in Ghana.

H_A: There is a statistically significant difference in age, level of study and psychological well-being, interaction effect of level of study, age and psychological wellbeing of clinical medical students in public universities in Ghana.

Significance of the Study

Stakeholders of the medical profession may have been considering the need to look at and probably add emotional intelligence education to the

training process and the psychological well-being of medical officers in the country. It will bring to limelight the essence for an individual to recognize and regulate his/ her emotions especially in the health care profession.

Also, policy makers will be informed as to the need to inculcate the emotional and psychological well-being and efficacy training of the medical officer in the formulation of policies based on the findings of the study. They will also be enlightened on the fact that it could be the solution to Medical negligence. The findings of the study may pave way for emotional intelligence to be recognised as a necessity and an integral part of the training of the medical officers as recognised in the United States Air force recruitment (General Accounting Office report, 1998).

Finally, the study will provide literature base, conceptual framework and procedures of analysis which may serve as point of reference to the researchers, Ghana Medical Association and other professional bodies who wish to conduct research and formulate policies on the total well-being of the medical practionner.

Delimitation of the Study

The focus of the study was on emotional intelligence, psychological well-being, academic self-efficacy and academic achievement of medical students in Ghana. It focused on medical students from University of Ghana, University of Cape Coast and University for Development Studies. Again, the study was delimited to the levels of emotional intelligence as well as the levels of psychological well-being of students and their academic achievement. The study further looked at age, level of study and psychological well-being of students only not their tutors or supervisors. Therefore, the findings of the

study cannot be generalized to the tutors and supervisors of clinical medical students in Ghana.

Limitations of the Study

Looking at the nature of the medical profession and the phenomenon under investigation, respondents may not be willing to participate in the study which intrinsically limits the study. The emotional intelligence scale adopted for the study was not originally validated by those who proposed it and it was used for coaching purposes. Therefore, it should be noted that this is the first time this instrument is being used for a study like this hence in itself may affect the study. Again, the psychological well-being scale used in the study yielded a low reliability estimate hence that could limit the findings of the study.

Assumptions of the study

The study was conducted based on the following assumptions that:

1. The emotional intelligence, psychological well-being and academic self-efficacy of medical students are measurable.
2. Legitimately, the scores obtained from the responses of respondents are true measures of their emotional, psychological well-being and academic self-efficacy in relation to the instruments that will be administered.
3. Data gathered through the instrument administered are honestly the true reflection of the true levels of emotional intelligence, psychological well-being and academic self-efficacy of respondents.

Definitions of Terms

Academic Self-Efficacy: The ability of an individual to demonstrate confidence in succeeding in an academic environment.

Academic achievement: The term used to refer to a measure of student achievement by cumulative grade point average. For the purposes of literature, academic performance is also used in the study.

Emotional intelligence: An individual's ability to recognize, regulate, adapt and understand emotions be it intra or inter.

Clinical Medical students: Students embarking on their clinical studies in the hospitals affiliated to the various Universities of studies.

Level 400/500: First year clinical students

Level 500/600: Second year clinical students

Level 600/700: Third year clinical students

Psychological well-being: How sound an individual is cognitively, socially and the ability to function as expected of him/her.

Positive affect: psychological well-being variables such as self-acceptance, autonomy, environmental mastery, purpose in life and personal growth

Negative affect: psychological variables such as stress, anxiety and depression.

Organization of the Rest of the Study

The study was organized into five (5) chapters. With the exception of Chapter one, Chapter two (2) discussed both empirical and theoretical literature. Chapter three (3) explained the rationale behind the choice of research design. Chapter four (4) discussed the data collection and analysis and chapter five (5) which is the last chapter focused on summary, conclusions and recommendation that was made from this study.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The study sought to explore the influence of emotional intelligence, psychological well-being and academic self-efficacy of clinical year medical students in relation to their academic achievement. Therefore, this chapter seeks to review related literature in accordance with the key variables of the study theoretically and empirically. It should be noted that the review may not have in its contents studies conducted on all the variables in connection with the target population in Ghana hence majority of the content was taken from outside the Ghanaian context and few from the African continent. Again, most of the studies were carried out in relation to academic performance hence it worthy to note that the use academic performance was a lot due to purposes of literature. Academic performance is used because it is a form of academic outcome. This is attributed to the fact that as at the time of the study majority of literature found on the target population and related population which were in accordance with the variables were outside Ghana with the exception of a study by Boakye (2017) the association between Emotional Intelligence and Socioeconomic Status of Ashesi University College Students, concerning emotional intelligence of nurses' leadership, employees, banking and Kportufe (2014) Akudugu (2015), psychological well-being of SHS students and academic self-efficacy and psychological well-being of remedial students

(Golaz, 2013; Dankun-Williams, 2015). This section is further divided into four sections namely:

1. The concept and dimensions of: Emotional Intelligence (EI), Psychological Well-Being (PWB) and Academic Self-Efficacy (ASE)
2. Theoretical framework of the study Emotional Intelligence, Psychological Well-Being and Academic Self-Efficacy
3. Conceptual framework of the study
4. Empirical Review

- Emotional Intelligence and Academic Achievement of students
- Psychological Well-Being and Academic Achievement of students
- Academic Self-Efficacy and Academic Achievement of students
- Emotional intelligence and gender of students
- Academic Self-Efficacy and gender of students
- Psychological well-being, age and level of study of students

Theoretical review

The study is underpinned by four theories relating to the three main construct of the research. The theories encompass Goleman (1995) model of emotional intelligence (EI), Albert Bandura (1977) theory of self-efficacy (ASE), Ryff (1989) theory of psychological well-being (PWB) and Self-determination theory (SDT) by Ryan and Deci, (2001).

The three models of Emotional Intelligence

Three main models of emotional intelligence exist. The first model by Peter Salovey and John Mayer perceives E.I. as a form of pure intelligence, that is, emotional intelligence is a cognitive ability. A second model by Reuven Bar-On regards E.I. as a traits intelligence, consisting of personality

aspects. This model emphasizes how personality factors influence general well-being. The third model, introduced by Daniel Goleman, also perceives E.I. as a mixed intelligence involving cognitive ability and personality aspects. However, unlike the model proposed by Reuven Bar-On, Goleman's model focuses on how cognitive and personality factors determine success. This study is mainly guided by Goleman's model.

Goleman's Mixed Model

Daniel Goleman, a psychologist and science writer who has previously written on brain and behavior research for the New York Times, discovered the work of Salovey and Mayer in the 1990's. Inspired by their findings, he began to conduct his own research in the area and eventually wrote Emotional Intelligence in 1995, the landmark book which familiarized both the public and private sectors with the idea of emotional intelligence. Goleman's model outlined five main emotional intelligence constructs. The first, self-awareness, is the ability to read one's emotions and recognize their impact while using gut feelings to guide decisions. Self-management, the second construct, involves controlling one's emotions and impulses and adapting to changing circumstances. The third construct, social awareness, includes the ability to sense, understand, and react to other's emotions while comprehending social networks. The fourth construct is motivation that is the individuals' ability to persist in the midst of challenges. Finally, relationship management, the fifth construct, entails the ability to inspire, influence, and develop others while managing conflict (Goleman, 1998).

Goleman includes a set of emotional competencies within each construct of emotional intelligence. Emotional competencies are not innate

talents, but rather learned capabilities that must be worked on and developed to achieve outstanding performance. Goleman posited that individuals are born with a general emotional intelligence that determines their potential for learning emotional competencies. The organization of the competencies under the various constructs is not random; they appear in synergistic clusters or groupings that support and facilitate each other (Boyatzis, Goleman, & Rhee, 1999).

Albert Bandura (1977) theory of Self-Efficacy

Self-Efficacy is based on Albert Bandura's (1997) extensive research and social cognitive theory. It can be defined as 'one's belief about his or her ability to mobilize the cognitive resources, motivation and courses of action necessary to execute a specific action within a given context' (Stajkovic & Luthans, 1998b, p. 66 as cited in Youssef-Morgan & Luthans, 2015). Research strongly supports a positive relationship between efficacy and performance (Stajkovic & Luthans, 1998a; Bandura, 2012). Well-established efficacy development approaches include mastery experiences, vicarious learning/modeling, social persuasion, and physiological and psychological arousal (Bandura, 1997). These components help individuals determine if they believe they have the capability to accomplish specific tasks. There is the notion that "individuals with high levels of self-efficacy approach difficult tasks as challenges to master rather than as threats to be avoided" (Williams & Williams, 2010, p. 455).

Self-efficacy beliefs are an important aspect of human motivation and behaviour as well as influence the actions that can affect one's life. Regarding self-efficacy, Bandura (1995) explained that it "refers to beliefs in one's

capabilities to organize and execute the courses of action required to manage prospective situations" (p. 2). More simply, self-efficacy is what an individual believes he or she can accomplish using his or her skills under certain circumstances (Snyder & Lopez, 2007). Self-efficacy has been thought to be a task-specific version of self-esteem (Lunenburg, 2011). The basic principle behind Self-Efficacy Theory is that individuals are more likely to engage in activities for which they have high self-efficacy and less likely to engage in those they do not (Van der Bijl & Shortridge-Baggett, 2002). According to Gecas (2004), people behave in the way that executes their initial beliefs; thus, self-efficacy functions as a self-fulfilling prophecy. Self-efficacy has influence over people's ability to learn, their motivation and their performance, as people will often attempt to learn and perform only those tasks for which they believe they will be successful (Lunenburg, 2011).

Self-efficacy theory states that the combination between the four factors of developing self-efficacy and three assessment processes used to interpret self-efficacy will determine the level of self-efficacy which directly affects the performance outcomes of an individual. The three assessment processes for self-efficacy are the analysis of task requirements, attributional analysis of experience, and assessment of personal and situational resources/constraints (Gist & Mitchell, 1992). These are evident in educational settings as students consider these things day in and day out in the course of their educational journey. As stated in the first two paragraph, the four factors are directly linked to academic success and these are things students consider which eventually affect their education. The relationship between academic confidence and self-efficacy is discussed extensively by Sander and Sanders

(2006) and it has been suggested that it stems from the same four sources proposed for self-efficacy: mastery experience, vicarious experience, verbal persuasion and physiological states (Bandura, 1977, 1986, 1993). It is likely to be subject to change as experience impinges upon expectation (Sander & Sanders, 2006a). Consequently, Sander and Sanders (2003) developed a scale in measuring academic confidence with four dimensions Grades, Verbalising, Studying and Attendance which this study seeks to investigate among the target population.

Ryff Psychological Well-being Theory

According to Ryff (1995), an individual's life experiences and their interpretations of these experiences influence their well-being. Her construct was made of six components namely, Autonomy, Environmental Mastery, Positive Relations with Others, Purpose in life, Personal Growth, and Self-Acceptance which have been explained in the dimensions of PWB.

This theory demonstrates the influence societal expectations can have on an individual. This is key to this study as academic achievement is considered as an important element in the educational industry which is dear to stakeholders. The existing literature which aimed at defining positive psychological functioning includes such perspectives as Maslow's (1968) conception of self-actualization, Rogers's (1961) view of the fully functioning person, (Jung, 1933; Von Franz, 1964) formulation of individuation, and Allport's (1961) conception of maturity as acknowledged by Ryff (1989). A further domain of theory for defining psychological well-being follows from life span developmental perspectives, which emphasize the differing challenges confronted at a given phase of the life cycle. Included here are

psychosocial stage model, Buhler's basic life tendencies that work toward the fulfilment of life descriptions of personality change in adulthood and old age as well as positive criteria of mental health, generated to replace definitions of well-being as the absence of illness, also offer extensive descriptions of what it means to be in good psychological health (Ryff, 1989 citing Erikson's, 1959; Buhler, 1935; Buhler & Massarik, 1968; Neugarten's, 1968, 1973; Jahoda's, 1958).

These perspectives have had meagre empirical impact (Ryff, 1982, 1985). One obvious reason is that few of them have been accompanied by credible assessment procedures. Researchers attracted to such formulations have been immobilized by the absence of valid measures. A second major stumbling block is that the criteria of well-being generated are diverse and extensive (Ryff, 1985). It is difficult to determine which among the many descriptions what should serve as the essential features of positive psychological functioning. A third objection by Ryff has been the claim that this literature is hopelessly value laden in its pronouncements about how people should function. Ryff (l989a) has argued that the preceding perspectives, despite their loose conceptualizations, can be integrated into a more parsimonious summary. That is, when one reviews the characteristics of well-being described in these various formulations, it becomes apparent that many theorists have written about similar features of positive psychological functioning. These points of convergence in the prior theories constitute the core dimensions of the alternative formulation of psychological well-being (positive affect) pursued in this research. A major aim of the present study was to examine the psychological well-being as postulated by Ryff (1989).

Self-determination theory (SDT) (Ryan & Deci, 2001)

A conceptual model of wellness facility characteristics that enhance well-being was proposed based on SDT. SDT, an organismic theory of human motivation, is thrived on a person's inherent propensity for personal growth and development, responsibility towards the self and high-level functioning in line with positive psychology and current definitions of the concept of well-being (Thal & Hudson, 2017; Bertsch & Ostermann, 2011; Miller & Foster, 2010). Since the 1970s the continuous development of SDT has consistently depicts an empirical support for key tenets (Vansteenkiste, Niemiec, & Soenens, 2010; Thal & Hudson, 2017). SDT postulates three fundamental and universal human needs, the satisfaction of which supports the integration of external values, personal growth, and ultimately well-being (Deci & Ryan, 2000). The three basic needs are (1) autonomy, (2) competence, and (3) relatedness (Deci & Ryan, 2000). Autonomy is defined as personal volition or following the prescriptions of an authentic self; competence on the other hand is described as a tendency to be effective in one's environment and obtain valued outcomes within it.

Meanwhile, relatedness can be referred to the human desire to have a sense of belonging to and interact with others (Deci & Ryan, 2000). SDT further postulates that the more internal or intrinsic an individual's goals, drives, and motivations, the more self-determined the individual is considered to be; and within a domain-specific context, the more a task or activity is inherently enjoyable, the more it contributes to well-being (Deci & Ryan, 2000). Although the medical profession is engulfed with extra demands especially in Ghana where patients to doctor ratio is around 1 to 10, 450

patients Owusu (2017), the education and training of medical doctors could be more stressful and demanding as compared to the well-developed countries like the US.

Despite these challenges SDT asserts that an individual is capable of being healthy psychologically and much is bestowed on the person to excel. Thus, the individual has the ability to determine wellness status. Considering autonomy, individuals with this trait could decide for themselves what is good for them and what to refrain from to aid their wellness. For competence and relatedness, the aforementioned stipulates the innate tenacity of the individual to work towards and achieve anything desired while the later depicts the social forces which in itself exert the need to achieve wellness not for the individuals benefit but for significant others in the individuals' life. This influences the choice of this theory underpinning this study.

The concept of Emotional Intelligence

As is the case with all constructs (i.e. intelligence or personality), several schools of thought exist which aim to most accurately describe and measure the notion of emotional intelligence. At the most general level, emotional intelligence (E.I.) refers to the ability to recognize and regulate emotions in ourselves and others (Goleman, 2001). Peter Salovey and John Mayer (1990), who originally used the term "emotional intelligence" in published writing, initially defined emotional intelligence as: *A form of intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions (*Salovey & Mayer, 1990 cited in Stys & Brown, 2004).

Later, these authors revised their definition of emotional intelligence, the current characterization now being the most widely accepted. Emotional intelligence is thus defined as: *The ability to perceive emotion, integrate emotion to facilitate thought, understand emotions, and to regulate emotions to promote personal growth* (Mayer & Salovey, 1997 cited in Stys & Brown, 2004).

Another prominent researcher of the emotional intelligence construct is Reuven Bar-On, the originator of the term "emotion quotient". Possessing a slightly different outlook, he defined emotional intelligence as being concerned with understanding oneself and others, relating to people, and adapting to and coping with the immediate surroundings to be more successful in dealing with environmental demands (Bar-On, 1997). Regardless of the discrepancies between definitions of emotional intelligence, it is clear that what is being referred to is distinct from standard intelligence, or I.Q.

An influential psychologist in the areas of learning, education, and intelligence, E.L. Thorndike proposed that humans possess several types of intelligence, one form being called social intelligence, or the ability to understand and manage men and women, boys and girls, and to act wisely in human relations (Thorndike, 1920). Even David Wechsler, the originator of the Wechsler Adult Intelligence Scale (WAIS) intelligence tests, referred to both non-intellective and intellective elements of intelligence. The non-intellective elements, which included affective, personal, and social factors, he later hypothesized were essential for predicting one's ability to succeed in life (Wechsler, 1940). Later in the century, Gardner (1983) again raised the

notion of multiple intelligences. A Harvard-educated developmental psychologist, Gardner proposed a theory of multiple intelligences which dictated that individuals possess aptitudes in several areas, including verbal, mathematical, musical, spatial, movement oriented, environmental, intrapersonal (the examination and knowledge of one's own feelings) and interpersonal (the ability to read the moods, intentions, and desires of others) spheres (Myers, 1998). These intelligences were thought by Gardner to be as important as the type of intelligence typically measured by I.Q. tests (Gardner, 1983).

Dimensions of EI by Goleman (1995)

Daniel Goleman introduced the term 'emotional intelligence' in 1995. Goleman (1995) defined the term as including abilities such as being able to motivate oneself and persist in the face of frustration, to control impulses and delay gratification; to regulate one's moods and keep distress from swapping the ability to think; to emphasize and to hope. He sees emotional intelligence as an idea or theme that emerges from a large set of research findings on the role of the emotions in human life. Goleman (1995) identified five domains of emotional intelligence as knowing one's emotion, managing emotion, motivating oneself, recognizing emotions in others, and handling relationships. According to him, a person with higher emotional intelligence should become happier, more optimistic, motivated and outgoing which directly increases efficiency and work out put. The dimensions as first postulated by Goleman (1995) are as follows;

Self-Awareness/Emotional Self Awareness

The first component of emotional intelligence is *Self-Awareness*, knowing what one feels. Mayer and Stevens (1994) uses the term *meta-mood*, the affective analogue of *meta-cognition*, for key aspects of Self-Awareness. The neural substrates of Emotional Self-Awareness have yet to be determined with precision. But Antonio Damasio (1994), on the basis of neuropsychological studies of patients with brain lesions, proposes that the ability to sense, articulate, and reflect on one's emotional states hinges on the neural circuits that run between the prefrontal and verbal cortex, the amygdala, and the viscera. Patients with lesions that disconnect the amygdala from the prefrontal cortex, he finds, are at a loss to give words to feelings, a hallmark of the disorder alexithymia. In some ways, alexithymia and Emotional Self-Awareness may be mirror concepts, one reflecting a deficiency in the workings of these neural substrates, the other efficiency (Taylor, Parker, & Bagby, 2001).

Self-Regulation /Managing Emotions

The second component of EI, *Emotional Self-Management*, is the ability to regulate distressing affects like anxiety and anger and to inhibit emotional impulsivity. PET (positron-emission tomography) measurements of glucose metabolism reveal that individual differences in metabolic activity in the amygdala are associated with levels of distress or dysphoria. Thus, the more activity, the greater the negative affect (Davidson, Jackson, & Kalin, 2000). In contrast, metabolic activity in the left medial prefrontal cortex is inversely related to levels of activity in the amygdala is an array of inhibitory neurons in the prefrontal area, animal studies have shown, regulate activation

of the amygdala. In humans, the greater the activity level in the left medial prefrontal cortex, the more positive the person's emotional state. Thus, a major locus of the ability to regulate negative affect appeared to be the circuit between the amygdala and the left prefrontal cortex.

Motivation

This circuitry also appears instrumental in the motivational aspect of Emotional Self-Management; it may sustain the residual affect that propels us to achieve our goals. McClelland (1975) has defined motivation as "an affectively toned associative network arranged in a hierarchy of strength and importance in the individual," which determines what goals we seek (p. 81). Davidson proposes that the left medial prefrontal cortex is the site of "affective working memory." Damage to this region is associated with a loss of the ability to sustain goal-directed behaviour. Thus, loss of the capacity to anticipate affective outcomes from accomplishing goals diminishes the ability to guide behaviour adaptively (Davidson, Jackson, & Kalin, 2000). In other words, Davidson proposes that the prefrontal cortex allows us to hold in mind or reminds ourselves of the positive feelings that will come when we attain our goals and at the same time allows us to inhibit the negative feelings that would discourage us from continuing to strive toward those goals.

Empathy/Recognizing emotions/Social Emotional Awareness

The third EI component, which encompasses the competency of empathy, also involves the amygdala. Studies of patients with discrete lesions to the amygdala show impairment of their ability to read nonverbal cues for negative emotions, particularly anger and fear, and to judge the

trustworthiness of other people (Davidson, Jackson, & Kalin, 2000). Animal studies suggest a key role in recognizing emotions for circuitry running from the amygdala to the visual cortex. Stys and Brown (2004) reviewing both neurological findings and comparative studies with primates, cite data showing that certain neurons in the visual cortex respond only to specific emotional cues, such as a threat. These emotion-recognition cortical neurons have strong connections to the amygdala individual in determining how the person will act towards another.

Social Skills/Managing relationships/Relationship Management

The fourth EI component, poses a more complex picture. In a fundamental sense, the effectiveness of our relationship skills hinges on our ability to attune ourselves to or influence the emotions of another person. That ability in turn builds on other domains of EI, particularly Self- Management and Social Awareness. If we cannot control our emotional outbursts or impulses and lack empathy, there is less chance we will be effective in our relationships.

The concept of Psychological Well-being

There have been numerous studies on psychological well-being however; there is no single definition of the construct. Some researchers have explained that the term is used to describe a number of constructs that define psychological functioning. World Health Organisation (WHO) defined mental health as a state ‘of well-being in which the individual realizes his or her abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to their community and proposed to be more than just absence of illness (WHO, 2004). Well-being has been

traditionally conceptualized as either subjective well-being defined as the frequent experience of positive affect (positive emotions and moods) and high life satisfaction, or psychological well-being that focuses on human functioning, cognition and social skills (Ryan & Deci, 2001). Ryan and Deci (2001) first proposed a composite theory that granted equal importance to subjective (transient) and psychological (eudemonic) well-being for optimal functioning in form of the 'self-determination theory model of health behavioural change'. This model linked autonomy, competence and relatedness with mental and physical health, and suggested that mental health and affect were associated with individual's satisfaction and psychological needs (Ryan & Deci, 2001). For instance, Ryff (1989) viewed psychological well-being as the optimal psychological functioning and experience. These definitions give no room for negative affect. Thus, the psychological well-being seeks to explain the current positive moods of the individual which equip the person to combat any negative affect which might hinder human functioning.

Dimensions of Psychological Well-being

Self-acceptance: It is seen as the most recurrent criterion of well-being evident in the previous perspectives is the individual's sense of self-acceptance. This is defined as a central feature of mental health as well as a characteristic of self-actualization, optimal functioning, and maturity. Life span theories also emphasize acceptance of self and of one's past life. Thus, holding positive attitudes toward oneself emerges as a central characteristic of positive psychological functioning.

Positive relations with others: Many of the preceding theories emphasize the importance of warm, trusting interpersonal relations. The ability to love is viewed as a central component of mental health. Self-actualizers are described as having strong feelings of empathy and affection for all human beings. They are capable of greater love, deeper friendship, and more complete identification with others. Warm relating to others is posed as a criterion of maturity. Adult developmental stage theories also emphasize the achievement of close unions with others (intimacy) and the guidance and direction of others (generativity). Thus, the importance of positive relations with others is repeatedly stressed in these conceptions of psychological well-being.

Autonomy: There is considerable emphasis in the prior literature on such qualities as self-determination, independence, and the regulation of behaviour from within. Self-actualizers, for example, are described as showing autonomous functioning and resistance to enculturation. The fully functioning person is also described as having an internal locus of evaluation, whereby one does not look to others for approval, but evaluates oneself by personal standards. Individuation is seen to involve a deliverance from convention, in which the person no longer clings to the collective fears, beliefs, and laws of the masses. The process of turning inward in the later years is also seen by life span developmentalists to give the person a sense of freedom from the norms governing everyday life.

Environmental mastery: The individual's ability to choose or create environments suitable to his or her psychic conditions is defined as a characteristic of mental health. Maturity is seen to require participation in a

significant sphere of activity outside of self. Life span development is also described as requiring the ability to manipulate and control complex environments. These theories emphasize one's ability to advance in the world and change it creatively through physical or mental activities. Successful aging also emphasizes the extent to which the individual takes advantage of environmental opportunities. These combined perspectives suggest that active participation in and mastery of the environment are important ingredients of an integrated framework of positive psychological functioning.

Purpose in life: Mental health is defined to include beliefs that give one the feeling there is purpose in and meaning to life. The definition of maturity also emphasizes a clear comprehension of life's purpose, a sense of directedness, and intentionality. The life span developmental theories refer to a variety of changing purposes or goals in life, such as being productive and creative or achieving emotional integration in later life. Thus, one who functions positively has goals, intentions, and a sense of direction, all of which contribute to the feeling that life is meaningful.

Personal growth: Optimal psychological functioning requires not only that one achieve the prior characteristics, but also that one continues to develop one's potential, to grow and expand as a person. The need to actualize oneself and realize one's potentialities is central to the clinical perspectives on personal growth. Openness to experience, for example, is a key characteristic of the fully functioning person. Such an individual is continually developing and becoming, rather than achieving a fixed state wherein all problems are solved. Life span theories also give explicit emphasis to continued growth and

the confronting of new challenges or tasks at different periods of life as pointed by Ryff (1989).

Eventually, these criteria appear to be separate in meaning from the dimensions that have long guided studies of psychological well-being (e.g., positive and negative affect, life satisfaction). Therefore, the need for more empirical studies to distinguish and support this dimension of well-being.

Conceptual framework

The study was guided by a conceptual structure constructed by the researcher in figure 1 which aids in the determination of the relationships among EI, psychological well-being, academic self-efficacy and academic achievement of medical students in Ghanaian universities. This framework served as the foundation on which decision regarding methodology, framing of research questions and hypothesis formulation were derived.

The academic achievement of students depends on how effectively students are aware of their emotions, how well they manage their emotions, they attune with their environment, autonomous in decision making, managing relationship with others, punctuality, the grades of the individual and participation in and outside the lecture theater.

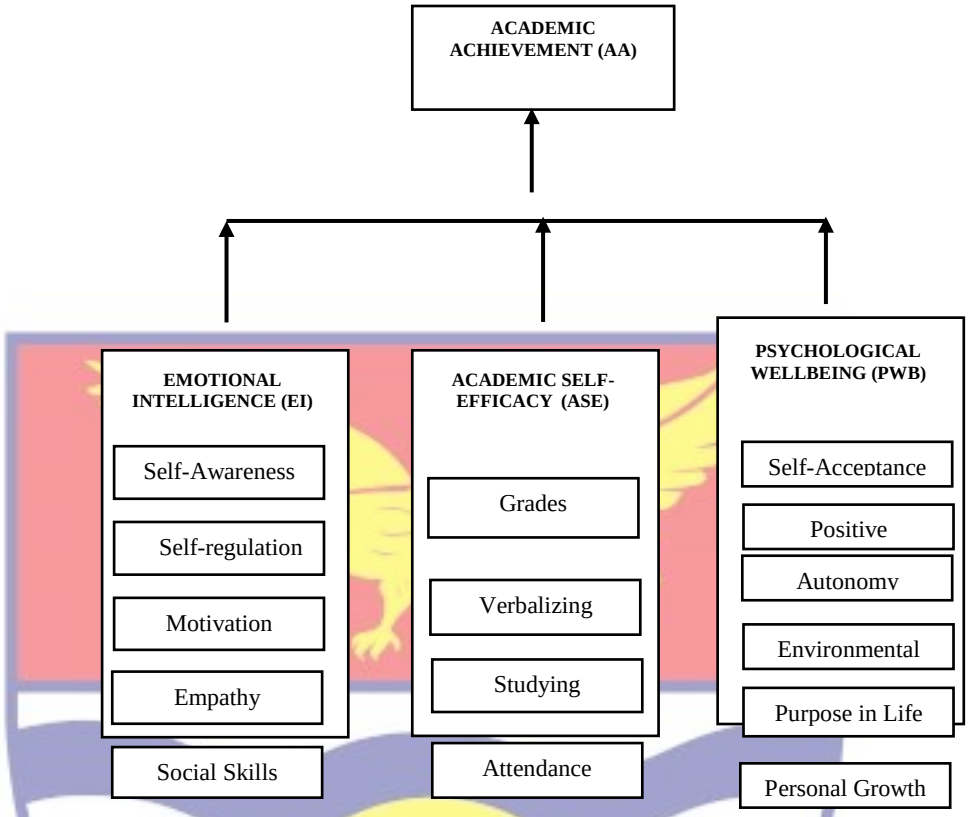


Figure 1: Conceptual Framework of the study

According to the literature reviewed, Goleman mixed model of EI has five sub-scales which influence the success of the individual in the learning activity. Psychological well-being on the other hand comprises six factors namely autonomy, environmental mastery, personal growth, positive relations, purpose in life and self-acceptance which also play important role in the academic and general well-being of the student. Academic self-efficacy consists of grade, verbalizing, studying and attendance as its factors which actually determine the behavioural confidence an individual has in being successful or not in their academic environment.

When all these personality traits and cognitive abilities are well developed partly due to the physical environment, home conditions vicarious

experience and conditionings, the individual is set to put up his/her best performance in respect to academics and any other environment of work.

Empirical Review of Related literature

Emotional Intelligence and Academic Achievement of students

Emotional intelligence has been found to be associated with academic outcome of students be it positive and negative. Cazan and Năstasă (2015) are of the view that emotional intelligence is related to better adjustment or success in academic settings. Concerning EI skills, such as self-management, motivation (achievement drive/Drive Strength) and Commitment Ethic (personal responsibility) have been found to be vital in terms of achieving academic success in any educational endeavor (Nelson & Low, 2004; Trevino, 2014). Also, Vela (2003) used the ESAP to gauge the EI of freshman college students in higher education. The study identified that those students with higher EI had also exhibited greater academic achievement than those with lower EI. His findings were based on using the ESAP self-reporting tool given to 760 freshman college students. The study measured academic achievement by correlating high GPA in relation to the ESAP competency areas. His study demonstrated a strong and significant correlation among students who exhibited greater EI and GPA. Fallahzadeh (2011) also concluded that emotional intelligence skills are significantly associated and predictive of academic achievement for the university students' population. This study used a cluster sampling which arrived at a sample size of 322 respondents from a group of health-related students (medicine, dentistry, college of nursing and the college of health services) and the study also admitted that some skills may differ according to gender and habitat of

students. Vernon, Petrides, Bratko & Schermer (2008) during extensive studies conducted on the individuals' behaviour according to the emotional intelligence models does confirm a significant effect on the students' academic progress.

A study conducted by Shah, Sanisara, Vaghela, & Mehta (2014) reported 14.67 % study population had low EI (25 – 35), 57.33% study population had slightly above average EI (36 – 45)- with room to grow and 25.33% study population had very high emotional intelligence (46 – 50) with none having an exceptional EI. Joshi, Srivastavab and Raychaudhuria (2012) assessed emotional intelligence of medical students and quantified only 21.64% falling in the below average category, whereas high EI scores were noted in 25.77% of students and 52.57% of them had average scores on EI. When the ranks based on these EI scores were correlated with academic ranks of university performance it showed positive correlation with correlation coefficient of 0.81 (sig 2 tailed at 0.037). Thus, those higher in EI scores will perform better on the average than those low in EI. James, Parker, Laura, Barbara and Bond (2005) used the short form of the Emotional Quotient Inventory (EQ-i) was completed by 1,426 first-year students attending four different universities within the first week of classes. The results revealed that academically successful students had significantly higher levels of several different emotional and social competencies than their counter parts.

Nelson, Low and Hammett (2017) citing Chao (2003) concluded that anxiety is associated with learning a foreign language and the role of EI skills identified. EI, according to the study plays an important role in learning a second language with EFL students in Taiwan. In a related study, Farnia

(2012) found significant relationships among EI skills, TOEFL scores and language proficiency. This study used students in language development programs in Iran, the study assessed EI and foreign language proficiency. Studies conducted in several parts of the world alluded to the significant prediction of academic performance and achievement by EI (Parker, Summerfeldt, Hogan & Majeski, 2004 as cited in Shah et. al. (2014); Farnia, 2012). Also, Hashemi, Khezri, Abbasi, Hemmati and Hashemi (2014) citing studies such as (Lyons & Schneider, 2005; Parker et al. 2004; Austin 2005; Song, Huang, Peng, Law, Wong, & Chen, 2010) concluded that the level of academic success in school is dependent on emotional intelligence. Consequently, EI could influence two very important characteristics needed of practitioners in the medical profession which are interpersonal communication and team-leadership skills which are indispensable to the practice hence there is the need to assess the situation in the Ghanaian context.

Despite the seemingly positive impact of EI on academic performance by the aforementioned studies, there have been other studies which reveal little and or no impact of EI on academic performance of medical and university students in general (Ranjbar, Khademi, & Areshtanab, 2017; Chew, Zain & Hassan, 2013; Bigna, Fonkoue, Tchatcho, Dongmo, Soh, Um et al. 2014; Shah et. al., 2014). Parker, Summerfeldt, Hogan and Majeski (2004) citing Wong, Day, Maxwell and Meara (1995), Sternberg, Wagner and Okagaki (1993) for instance, found academic performance to be predicted moderately by the individual's ability to understand the emotional states of others among university students, using GPA as the measure for academic success. Also, Stratton, Saunders and Elam (2008) studied emotional intelligence of a group

of students and found that there are very small and negligible impact of emotional intelligence on learning processes of students.

However, Newsome, Day and Catano (2000) found little association between academic success and emotional and social competencies when they used the 133-item Bar-On Emotional Quotient Inventory (EQ-i; Bar-On, 1997). This study comprised of 180 first-year psychology students from an eastern Canadian university with age range from 17 to 56 years. The respondents were categorized into full and part-time students together, as were students at different years of study (e.g. first-year students were grouped together with second, third and fourth-year students) (Parker et. al., 2004). Also, some studies indicated no relationship between EI and academic success of students (Johnson, 2008; Suliman, 2010). Johnson (2008) further opined that there is no statistically significant difference in EI and learning styles based on GPA of university students both traditional and non-traditional. This study adopted Gregorc style delineator and the Mayer Salovey-Caruso emotional intelligence test which was used on a convenience sample of 111 students.

The inconsistent findings from previous research on emotional and academic success in post-secondary education may result from a number of methodological issues. Most of the previous research focused on a narrow range of abilities (e.g. social perception or practical intelligence) or has assessed academic success over very slim time-lines. Although Newsome et. al. (2000) attempted to assess a broad range of emotional and social competencies, they may have compromised the interpretability of their data by combining into a common data-set of full and part-time students, young adults

and mature students, and students at different stages of the transition process (e.g. first-year students versus students about to graduate from university). Full and part-time students experience unique challenges and stresses while coping with their academic careers. Students at different stages of their post-secondary programs (e.g. first-year students vs. graduating students) also experience very different life demands.

Archer and Lamnin (1985) report that younger students are more concerned with grades, studying, and peer approval. Meanwhile, students about graduating and those approaching the level which eventually will lead them transit into the world of work face different challenges all together. These challenges range from relationship issues, choice and town of residents, selection of life partners, having to make decisions on the job with no or little supervision from senior colleagues among others, even passing the final exams for licensing is another headache for clinical students hence the need for this study. Again, these studies have contradictory findings and there is the need to assess the situation in Ghana due to difference in culture, admission procedures and conditions of the learning environment among other things.

Psychological Well-being and Academic Achievement

According to Kilgo, Mollet and Pascarella (2016) the role of student involvement in influencing psychological well-being is of considerable importance as there is evidence of it influencing academic performance. Students' psychological well-being is an important issue of growing interest in U.S. higher education and the situation is no different in Ghana (Kadison & DiGeronimo, 2004; Soet & Sevig, 2006 cited in Kilgo, Mollet & Pascarella, 2016). The National College Health Assessment (2010) revealed that there is

increasing percentages of students experiencing mental health challenges in the U.S. (e.g., depression, anxiety, self-harm behaviour). The students reporting mental health issues, 47.4% found it traumatic or very difficult to handle their academic work (National College Health Assessment, 2010). Additional research suggested that poor mental health (Eisenberg, Golberstein, & Hunt, 2009) and stress (Richardson, Abraham, & Bond, 2012) negatively influence students' academic performance. Again, Kitzrow (2003) asserted that psychological distress negatively influences student retention. Based on this research, we assert that the value of students' healthy psychological well-being is of importance to both students and institutions.

Furthermore, it has been observed that students utilized personal psychological resources in the completion of their daily tasks as well as reaching their academic goals which aid them to persevere in stressful and bad situations. These personal resources are linked to excellence in academic performance which might be influenced by cognitive-emotional evaluation processes such as academic satisfaction (Youssef-Morgan & Luthans, 2015; Bandura, 2011; Folkman, 2010). The adverse effects of stress and depression on student academic performance have been documented (Chow, 2010 citing Haines, Norris, Kashy, 1996; Hilary & Brent, 1994), consequently some researchers postulated that students who demonstrated better psychological well-being (positive affect) were found to perform better academically (Chow, 2010; Vaez & Laflamme, 2008). Again, a study by Chow (2010), maintained that students who had clear goals and sense of direction in life denotes better psychological well-being in the study of 501 undergraduate students of a Canadian university. Moreover, a study conducted by Yusoff, Esa, Pa, Mey,

Aziz and Rahim (2013) found a negatively weak relationship between negative affect (stress and depression scores) and previous academic performance of medical students in Malaysia. Thus, negative affect could influence students to perform low in their academics. Fallahzadeh (2011) also concluded in his study that students' success can be predicted by the individual's ability to manage stress. In the same vein, the study suggested a positive correlation academic achievement and academic performance.

Majority of these studies were done using negative affect and neglecting positive affect which has the potential of influencing academic performance positively. As Chow (2010) asserted students with well define goals tend to progress in academics despite the surrounding challenges of academic work especially in the medical school. Hence, there is the need to examine positive affect (psychological well-being) among medical students in Ghana as the situation is not known since there were no studies found in this regard at the time the study was being conducted.

Academic Self-Efficacy and Academic Achievement

According to Chow (2010) there is empirical evidence which suggests regular lecture attendance as a dimension of academic self-efficacy is an indicator of students' commitment and motivation to their studies which invariably influence GPA positively. Also, some studies have established an association between academic self-efficacy and academic performance of students (Al-Harthy & Was, 2013; Khan, 2013; Turner, Chandler & Heffer, 2009; Williams & Williams, 2010). Alyami, Melyani, Johani, Ullah et. al. (2017) concluded that high levels of academic self-efficacy are directly related to higher levels of academic achievement. This was a correlational cross-

sectional study of Saudi Arabia Psychology Students with a sample size of 290 although the margin was small. This study did not consider females to be part of the target population and it only looked at one dimension of academic self-efficacy. Consequently, there is the need to examine all the dimensions of academic self-efficacy as established in literature hence the present study. This study seeks to examine academic self-efficacy (grades, verbalising, studying and attendance) and how it influences the academic achievement of medical students in Ghanaian Medical Schools.

Again, Hashemi, Khezri, Abbasi, Hemmati and Hashemi (2014) found a statistically significant difference between self-efficacy and academic achievement in a study of Lamerd university students using a sample of 337 students arrived at with the use of stratified random sampling method. In a study conducted by Chow (2010) among undergraduate university students in western Canada with a sample size of 501 using convenience sampling, it was found that positive relationship existed between ASE (attendance) and the GPA of students. The results of this study may have been compromised due to the method of sample selection. With convenient sampling researcher bias cannot be escaped easily because the population from which the sample is drawn lies within the domain of the researcher hence the interpretation of results could be compromised consequently, the need for this recent study. Adelodun and Asiru (2015) also suggested positive association between academic self-efficacy and academic performance among language students.

In addition, some previous research postulates that academic self-efficacy was found to be significantly correlated with academic performance, however, the magnitude of this correlation was small (Afari, Ward, & Khine,

2012; Cayubit, 2014; Alyami et. al. 2017). Ghraibeh (2014), on the other hand, found positive correlations between self-efficacy and reading and meta-comprehension among non-native Arabic speakers in a study conducted in Saudi Arabia.

Chang and Solomon (2010) examined the relationship between stereotyping, anxiety, self-efficacy and academic performance. The results showed significant positive correlation between self-efficacy and academic performance. In the same vein, Carroll (2009) explored the relationship between self-efficacy and academic performance. His findings suggest that there is significant positive relationship between self-efficacy and academic performance. Meanwhile, there seems to be a possible existence of academic self-efficacy not influencing academic performance of students as a study by Al-Mekhlafi (2011) did not establish any association between academic self-efficacy and academic performance of students. Consequently, there is the need to empirically align the Ghanaian context in relation to medical students to that of the world and this warrants the current study.

Emotional Intelligence and Gender

There have been conflicting findings on the effect of gender on EI, whether there exist differences or not. These competing evidences exist surrounding whether or not males and females differ significantly in general levels of emotional intelligence. Researchers such as (Goleman 1998; Joseph & Newman, 2010; Patel, 2017) asserted that no gender differences in E.I. exist, even though there is acceptance that differences exist in profiles of strengths and weaknesses in different areas of EI among males and females but on the whole, their levels are equivalent. On the other end, studies by

(Mayer & Geher, 1996; Mayer, Caruso, & Salovey, 1999; Sparkman, 2008) have found that in most instances females are more likely to score higher on EI measures than their male counter parts in all settings being whether professional and personal. These two schools of thought arrived at different findings regarding EI and gender but these findings may relate more to the model adopted by the study. Goleman in his view, EI is a mixed construct of ability and personality while for Bar-On, EI is a trait of personality even though both accept it is learnable and can be thought. Similarly, studies conducted concluded that females have higher emotional intelligence than males in their respective research works (Meshkat & Nejati, 2017; Shaheen & Shaheen, 2016; Cabello, Sorrel, Fernández-Pinto, Extremera, & Fernández-Berrocal, 2016; Naghavi & Redzuan, 2011). This may be reasoned to the individual differences and expectations of the society where girls are expected to be more emotionally expressive than males especially in the Asian and African continents. Generally, a man is expected to hold his emotions together and refuse its expression no matter how difficult the situation might be. A study carried out in Tamil Nadu, India, found among medical graduates, females have higher EI than males (Chandra, Gayatri & Devi, 2017) and females had higher mean EI scores among Sri Lankan medical undergraduates (Ranasinghe, Wathurapatha, Mathangasinghe, & Ponnamperuma, 2017).

Contrary to the usual finds of females having high EI scores in other studies, a study conducted by Villarreal et. al (2017) revealed that the difference in EI scores favours the male respondents as men scored higher than women in EI there was a significant difference in intrapersonal skills of EI. It seems that male students manage their emotions and are more likely to

have positive perception of themselves regarding the accomplishment of their goals. In addition, a study in Iran conducted by Zohrevand (2010) opined that 17-year-old 11th grade school females compared with males from six different districts in Iran: Ardebil, Kordestan, Khouzestan, Golestan, Tehran, and Isfahan had lower scores in EI. Again, Olugbemi and Bolaji (2016) assert that among police officers in Ibadan, Nigeria, males scored significantly higher than female police officers on a self-report measure.

Meanwhile, other studies observed (Aquino, 2003; Brackett, Rivers, Shiffman, Lerner & Salovey, 2006; Brown & Schutte, 2006; Depape, Hakim-Larson, Voelker, Page, & Jackson, 2006 cited in Meshkat & Nejati, 2017) no difference in male students' scores and that of female students in relation to emotional management when gender was used as an independent variable. Other studies carried out in Myanmar by Myint and Aung (2016), Ahmadi and Heydari (2011) as well found no significant difference in scores of EI relating to gender of respondents. The contradiction of results can be attributed to different issues for instance Sparkman (2008), in his view suggested the discrepancy may be an issue of choice relating to the instrument based on which the measurement instrument emanated. Again, the cultural settings could be a contributing factor as in collective cultures, it is so strange and difficult for a man to express his emotions while the individualistic cultures permit some degree of emotional expression by males.

Secondly, from a biological perspective, Fernández-Berrocal et al. (2012) claimed the female biochemistry is more suitably adapted to the individual's own and other's emotions as a vital factor for survival. Meshkat & Nejati (2017) mentioned that in the female brains certain areas for

processing emotions is large as compared to the corresponding areas in males invariably, the processes of emotional activities in men and women differ in cerebral processing of emotions (Craig et al., 2009) which positively affect the differences in EI. However, when using self-report measures such as the Bar-On Emotion Quotient Inventory (EQ-i) and the Self-Report Emotional Intelligence Test (SREIT), they found no evidence for gender differences. Brackett and Mayer (2003) found that females scored higher than males on EI when measured by a performance measure (the Mayer-Salovey-Caruso Emotional Intelligence Test). Perhaps more research is necessary in the determination of whether or not gender differences do exist in emotional intelligence hence the study aids in advancing the knowledge of whether or not there is a significant difference in EI of males and females.

Academic Self-Efficacy and Gender

The consistency of findings relating to gender and academic self-efficacy is contradictory, there is evidence of difference as well as evidence of no difference hence there is the need for more studies to establish a concrete stance in this regard. Alyami et. al (2017) citing Cavallo, Potter and Rozman (2004) opined that in some content domains such as physics, research suggests a gender gap in academic self-efficacy and that it favors males over females. Sander, Putwain and Fuente (2013) studied 2429 psychology undergraduate students in Spain and the UK. The findings of the study suggested males have the higher levels of verbalizing confidence, while females showed higher confidence in studying and attendance dimensions of academic self-efficacy.

Further studies using the ABC scale show that male students studying in the UK are more confident than female students on the subscales Grades,

Verbalising and Studying, in line with previous research (Hartley, Betts, & Murray, 2007; Sanders, Sander, & Mercer, 2009). Sander (2009) showed that dyslexic students in UK higher education have lower academic confidence on the Grades, Verbalising and Studying subscales but neither female students nor dyslexic students showed significantly lower academic confidence on the Attendance subscale. Khan, Canseveret, Avsar and Acemoglu (2013) also indicated that there is a statistically significant difference between the gender groups with males having higher self-efficacy than females. The study looked at first, second and third year university students comprising of 300 on the topic Perceived Self-Efficacy and Academic Performance of Medical Students at Ataturk University in Turkey.

Meanwhile, Shaukat and Bashir (2016) found female students to have significantly higher level of academic confidence in terms of attendance, grades and verbalization as compared to male students. This study looked at University Students' Academic Confidence: Comparison between Social Sciences and Natural Science disciplines with a sample of 200 students. In the same vein, Gneezy and Niederle (2003) reported that female students were more self-disciplined so helping them to get higher grades on achievement tests. This study did not consider a sample from a different university but focused on only one institution with two different departments whose entry requirements are different from each other hence the results could depict the situation among Social and Natural Science students of postgraduate students hence the necessity for the present study.

Moreover, a study conducted by Trpcevska (2017) opined that there is no statistically significant difference in academic self-efficacy of students in a

sample of 163 university students. This study assessed predictors of psychological well-being, academic self-efficacy and resilience in university students, and their impact on academic motivation. The related literature reveals that majority of these studies did not use students reading the same programme as the current study seeks to do which could aid in a more reliable results because students will be reading almost the same curriculum, similar classroom environment among other things.

Psychological well-being, Age, and Level of study of students

It has been noted that age comes with maturity and cognitive developments. Ryff (1989) concluded that age has a significant effect on four psychological well-being dimensions (autonomy, environmental mastery, purpose in life and personal growth). In specific areas it was revealed that middle-aged scored significantly higher than older adults (purpose in life) and at times higher than young adults (autonomy). It was further revealed that both middle-aged and older adults-rated themselves higher on environmental mastery than did young adults. Regarding personal growth, young adults and middle-aged adults scored higher than older adults. Again, Ryff (1989) established that age and educational level were of weak predictive significance for the new in her study using the six dimensions of psychological well-being. Also, certain aspects of wellbeing comprising of self-acceptance and autonomy are more easily achieved by the aged, whereas other dimensions (environmental mastery) are more prominent in the self-perceptions of middle-aged individuals (Ryff, 1989 citing Buhler & Massarik, 1968; Erikson, 1959; Neugarten, 1973).

Studies have reported that dental students were more anxious than the general population and that their level of emotional exhaustion was higher than medical students (Humphris, Blinkhorn, Freeman, Gorter, HoadReddick, Murtomaa, et al. 2002; Piazza-Waggoner, Cohen, Kohli, Taylor, 2003 cited in Uraz, Tocak, Yozgatlıgil, Cetiner, & Bal, 2013). Another study found significant statistical differences between class years for depressive symptoms in Turkish university students (Bostanci, Ozdel, Oguzhanoglu, Ozdel, Ergin, Ergin, et al., 2005). Accordingly, Peker, Alkurt, Usta, and Turkbay (2009) reported higher depression scores among third-year Turkish dental students than first-year students. Uraz et. al, (2013) studying dental students in Gazi University comprising of third, fourth and fifth-year students reported more mental health problems (negative affect) than the other years. The researchers studied 277 dental students with female dominance 119 males and 158 females with a mean age of 21.5 years ranging from (17-25 years). This suggests that the higher an individual goes in the educational level among students reading medicine related programmes, the higher the mental issues.

Glozah (2013), used MANOVA in estimating the overall effect of age, class level, gender and socio-economic status on psychological well-being and the test was not significant. Glozah studied effects of academic stress and perceived social support on the psychological wellbeing of adolescents in Ghana with the main focus on Senior High School students. The study used 226 respondents comprised of 58% (131) males and 42% (95) females at SHS which was randomly selected from a list of all SHSs in Accra with age range of 13 to 22 years and a mean of 17.07. This study combined four demographics against psychological well-being. It did not include in its scope

university students nor medical students in the country hence the need for the current study.

Chapter Summary

This focused on the review of related literature. At the beginning of the chapter there is an introduction section which is summarized the areas where the review is concern with. The chapter initially looked at theoretical review in terms of the three main variables EI, ASE and PWB.

Again, the conceptual frame work of the study is discussed extensively here. The subsequent paragraphs focused on empirical works of previous research conducted by other researchers in the areas of interest such as EI, ASE, PWB and AA of medical students, EI, ASE and gender. It is established in the literature concerning EI and gender that there is a conflicting result in terms of whether there is difference in EI levels between males and females. Also, there are different schools of thoughts regarding low and high levels of PWB concerning males and females.

CHAPTER THREE

METHODOLOGY

Introduction

This chapter presents the methods that was used for the study. It addresses research design, population, sample and sampling procedure. It also describes the instruments, data collection procedure and the procedure for data analysis adopted to achieve the purpose of the study.

Research Design

The cross-sectional descriptive survey design was used for the study. This design allows the collection of data in order to test hypotheses or to answer questions concerning current status of the subjects under study as postulated by Amedahe (2002). For the purpose of generalizing from a sample to a population so that inferences can be made about some characteristics, attitudes, and behaviours of the population, this design has been recommended by Cohen, Manion & Morrison (2007). The design has the advantage of evaluating perceptions, attitudes and behaviours in their original happening without external manipulations through recording, coding, analyzing and reporting the conditions. The mental well-being, emotional awareness and regulation as well as confidence in one's self in relation to academics is best ascertained by the individuals reporting from their own perspective and understanding. This is confirmed by Best and Khan (2009) when they asserted that conditions of social phenomenon are best studied using survey.

The study further adopted the quantitative paradigm in investigating the psychological well-being, emotional intelligence and academic self-efficacy of medical students relating to academic achievement. This paradigm allows some fraction of the population that is, the sample through the data collection process of asking questions (Fraenkel & Wallen, 2003) as a sample was used and the findings generalized to the entire clinical medical students in public universities in Ghana. Taking into consideration the nature of the phenomenon, the quantitative approach from the positivists paradigm was allowed as it aids in the description of relationships, cause and effects, and social reality to any research phenomenon regardless of the researchers' perspective (Gay, Mills & Airasian, 2009). For this paradigm, the social reality could be measured through the use of questionnaire and observation which has also been met by this study. Again, it supports the use of inferential statistics for the analysis of the data collected which is evident as the variables of concern lend themselves more to inferential statistical analysis in an attempt to unveil the exiting reality of the objectives.

Population

The target population for the study was clinical medical students in Ghanaian Universities under the supervision of a given Teaching Hospital. The study targeted an estimated number of four thousand, five hundred (4500) medical students in the country. The accessible population was one thousand, one hundred and fifty-eight clinical medical students of University of Ghana, University for Development Studies and University of Cape Coast out of which the sample size was drawn for the study.

Table 1: Population distribution of respondents

Schools & Clinical Levels	Population
University of Ghana (UG)	**626**
3- level 600	203
2- clinical; level 500	204
1- clinical; level 400	219
University of Cape Coast (UCC)	**194**
3- level 600	60
2- clinical; level 500	67
1- clinical; level 400	67
University for Development Studies (UDS)	**338**
3- level 700	82
2- clinical; level 600	116
1- clinical; level 500	140
Total	**1, 158**

Source: The Department from the various schools (2018).

Sample and Sampling Procedure

The study adopted multistage sampling technique which comprised of stratified sampling, purposive sampling, proportional sampling and simple random sampling techniques in selecting the sample size for the study. This was necessary because of the different institutions and categories of students that the study sought to study. The study comprised of three different universities with three different levels of study regarding students hence the need to adopt this technique. The public universities in the country were divided into two strata's; thus, the Northern strata and the Southern strata. The

Northern strata comprised of the Ashanti Region which has Kwame Nkrumah University of Science and Technology (KNUST) Medical School, Brong Ahafo Region, Northern Region who hosts the University for Development Studies Medical School, Upper East and Upper West Regions respectively. The Southern strata on the other hand comprises of the Eastern Region, Greater Accra Region where University of Ghana Medical School is situated, Volta Region with the fresh Medical school, University of Applied Sciences, Central Region which has the University of Cape Coast Medical School and the Western Region. From the two strata one medical school was randomly selected from each. University for Development Studies was randomly selected for the Northern Strata while University of Ghana (UG) was randomly selected for the Southern Strata.

The University of Cape Coast was purposively selected to be part of the study. The University of Cape Coast was chosen because it is the only public university offering medicine on fee paying basis as at the time the study was being carried out. All the other public universities were offering medicine on the normal government subsidy basis. In a fee paying programme, it is found usually that most students if not all hail from well to do homes. These students mostly were brought up with some level of exposure, independence, more courageous in expressing themselves and some level of efficacy. These attributes usually may not be very common with students from poor homes. The possibility of a student from a poor home enrolling and reading fee paying medicine programme in UCC is very low if not impossible because the individual cannot afford on less it is a scholarship which is tough to come by. Consequently, there will be variation in the characteristics and personal

attributes demonstrated by students form these two set of homes. Hence, there was the need to include them in the study for the variation purposes.

Proportional stratified sampling technique was employed to select the total respondents for the various institutions in accordance with enrolment in the various study levels. The levels of study were regarded as stratas' and based on the population in a level, a sample size was determined proportionately. This technique was employed taking into accounts the population of the three medical schools and the sample size drawn. The study proceeded to use Yamane (1973) formula for sampling determination where "n" represents the sample size, "N" represents the population from which the sample size is being drawn and "e" for the error allowed (eg .05) as used in this study. Using this formula, a total of Two hundred and ninety-seven sample size was arrived at. Using the total sample size, the sample to represent each institution's population was drawn and the numbers have been presented in Table 2.

$$n = \frac{N}{1+N(e)^2}$$

The simple random sampling technique was again employed using the lottery method in the selection of individual participants for the required number for each level of study in a particular institution aimed. The aim was to arrive at the total sample size of 297. The lottery method was done using pieces of paper. The pieces of paper had on them numbers 1-3 and they were put in a basket. The student-respondents were made to pick and those who picked 1 and 3 were selected to be part of the study. This process was done until the total number needed for a level is arrived at. Also, an additional ten

questionnaires were given on random basis to students who were not selected originally to be part of the sample who filled the questionnaire during the initial selection procedure.

Table 2: Sample distribution of respondents

Schools & Clinical Levels	Population	Sample drawn
University of Ghana	**626**	**160**
Final year clinical; level 600	203	52
2- clinical; level 500	204	52
1- clinical; level 400	219	56
University of Cape Coast	**194**	**50**
Final year clinical; level 600	60	16
2- clinical; level 500	67	17
1- clinical; level 400	67	17
University for Development Studies	**338**	**87**
Final year clinical; level 700	82	21
2- clinical; level 600	116	30
1- clinical; level 500	140	36
Total	**1, 158**	**297**

Source: Field data, 2018.

This was done to ensure that uncompleted questionnaires could be replaced with fully completed ones as the researcher deemed it important to use only fully completed questionnaires for the final analysis.

Instrument

The instrument used for the study was questionnaire. Oliver (2010) explained that the questionnaire serves as the most appropriate and useful

data-gathering device in a research project if properly constructed and administered because it has a wider coverage and can reach respondents more easily than other methods. It does not also allow eliciting of in-depth information regarding an issue from the perspective of few participants as interview may do. Questionnaire aids in assessing the view and perception of a large sample size which guarantees generalization to the entire population of study especially if the sample could respond to items probably without mediation of third persons (Cohen, Manion & Morrison, 2007). Since the population and the sample are literate and young adults with probably few teenagers, using a questionnaire was appropriate.

Also, the items are properly constructed as they are standardized instruments adapted from Ryff (1989) and Sander and Sanders (2003) as well as a self-developed Emotional Intelligence Questionnaire based on the Quick Emotional Intelligence Self-Assessment by Mohapel (2012). The instrument consisted of sixty-nine items in four sections, A-D measured on a six-point Likert-scale ranging from Strongly Disagree (SD) -1, Moderately Disagree (MD) -2, Slightly Disagree (SD) -3, Slightly Agree (SA) -4, Moderately Agree (MD) -5 and Strongly Agree (SD) -6. Section A basically deals with the demographic variables of the respondents and it composed of sex, level of study, age and GPA.

Emotional Intelligence Questionnaire

This is a version of Mohapel (2012) Emotional Intelligence (EI) Scale. There were thirty items (1-30) which constitute Emotional Intelligence (EI) questionnaire. There are five dimensions beneath it with six items constituting each sub-scale which ranges from Self Awareness made up of items 1-6, Self-

Regulation was also made up of items 7-12, Motivation had items 13-18, Empathy was made up of items 19-24 and Social Skills was also made up of items 25-30. The scoring for emotional intelligence was based on the total score of a particular participant after summing up the individual scores for each item on the scale. Mohapel (2012) who originally developed it reported that the instrument was developed based on Goleman's model. The instrument was scored using the following detects 0-24: Area of enrichment which requires attention, 25-34 effective functioning: which the individual should consider strengthening and 35-40: Enhanced Skills, this is used as a leverage to develop other weak areas. Mohapel measured the instrument on a 5-point Likert-scale which ranges from 0-Never to 4-Always but the version used for this study is measured on six point Likert scale. Therefore, the scoring is given by 180-30/3=50. Hence given that 30-80= low level, 81-130= Moderate and 131-180= High. Thus, if an individual pick 1 throughout, it will sum up to 30 and if 6 it will sum up to 180 thus minimum and maximum. The version used in this study consists of six items for each sub-scale. The instrument was measured on a six-point Likert-scale as shown earlier in this write up because there was the need to modify the Likert rating for the comfort of the respondents which came up during the pre-testing of the instrument. A study used a version of the instrument in the study of adolescents in Tema, Ghana and established quite high internal consistency using Cronbach reliability .767 test. Although, it did not take into account the sub-scales of the instrument, this necessitated the decision to use it. Meanwhile, the study used a similar approach for the scoring of the data gathered.

Academic Self-Efficacy Scale (Sander & Sanders, 2003)

There were seventeen (31-47) items for Academic Self-Efficacy. The first version of the Academic Behavioural Confidence scale is composed of 24 items on a 5-point Likert-scale with six factors named as Studying, Understanding, Verbalizing, Clarifying, Attendance and Grades (Sander & Sanders, 2003). Even though there was proof of high internal consistency (Sander & Sanders, 2009) it was revisited and evolved into a 17-item scale with four factors in 2009 namely Grades, Verbalizing, Studying, and Attendance with a sample of UK undergraduate students. These new set of items were further confirmed by (Kirikkanat & Soyer, 2015) who used it in a collectivist culture of Turkey and confimed its high internal consistency hence the decision to adapt it by this study. Originally, the instrument is measured on a five-point Liket-scale ranging from Strongly Agree-5 to Strongly Disagree-1 but with this study it was measured on a six point Liket-scale ranging from Strongly Agree-6 to Strongly Disagree-1 and given the name Academic Self-Efficacy scale. There was the need to modify the Likert rating for the comfort of the respondents which resulted from the pre-test of the instrument. The version used in this study is the later not the former which comprises of Grades (items 32,42,47), Verbalizing (items 33,35,38,39), Studying (items 31,44,45), and Attendance (items 36,42,47). It is worthy to note that the study did not pay much attention to the levels of Academic Self-Efficacy of students hence its refusal to mention the scoring procedure even though high and low level are determined by mean scores (Shaukat & Bashir, 2016) who also established high internal consistency in their study.

Psychological Well-being scale (Ryff, 1989)

Furthermore, section D consisted of eighteen items which form Psychological Well-being scale (48-65) for the student. The scoring of the psychological well-being was done in reference with the guidelines provided by Ryff (2014) which stated that the well-being scale is scored based on the scores in a given distribution. Therefore, with the guidelines in mind the mean for the respondents' responses were computed and 1.5 was added to the mean for those in the high scores category while the lower category 1.5 was subtracted from the mean for that as well. Consequently, those that fall within the range of the figure gotten became the group "deemed it". For instance, in this study the mean score for psychological well-being was 49, so 49+1.5 = 50.5 which was run up to 51. This served as the starting point for those in the high level. The low level is given by 49-1.5 = 47.5 which was run up to 48, it also served as the end point of those that fall in the lower level. With these figures, it was realized that there were some figures that were left in between them, hence the study name that range of figures moderate level which Ryff (2014) did not mention it in the scoring and interpretation manual. Consequently, the study generated these three levels; high level "51-108", moderate level "49-50" and low level "18-48" but for the sake of the original interpretation proposed by Ryff (2014) the study focused on two levels (high level and low level).

Pre-Testing of Research Instrument

According to Amedahe (2002), pre-testing of instruments helps the researcher to identify confusing and ambiguous language and to obtain information about possible results. It was necessary to pre-test the instruments. Pre-testing of the instruments was done using medical students at the Kwame

Nkrumah University of Science and Technology (KNUST) who were not selected to be part of the study but to ascertain the reliability co-efficient of the instruments. A total of 32 students were used for pre-testing and aided in estimating the reliability coefficient as reported in the reliability section.

Validity of the Instrument

The questionnaire for respondent was taken through face, content and constructs validity procedures. First of all, the face validity of the instrument was ascertained by effecting the comments of my supervisors who are professionals in the field of psychology and educational administration. The initial instrument was given to measurement and evaluation specialist to check the structure, alignment, lay out and conformation of the research instrument in regards to the research objectives and questions. Also, the views, comments, additions and deletions raised as a result of the pre-testing were effected. Content validity, on the other hand, was ensured with assistance from the supervisor who is a specialist in the area. He examined the research instrument in relation to the research objectives and questions in determination of how well an item measures what it is intended to measure.

Reliability of the Instrument

The reliability of the questionnaire was ensured by pre-testing the questionnaire. The data was derived from 32 students who were not selected to be part of the sample used for the main data from Kwame Nkrumah University of Science and Technology (KNUST) Medical school. The pre-testing data was input into SPSS to help ascertain how consistent the instrument was. The Cronbach's Alpha procedure of reliability testing was utilized and the Alpha values were ascertained. It is established that some values are quite

satisfactory following Creswell (2014) citing Cronbach gives a range of reliability score of 0.70-0.90 as internally consistent. Consequently, the following constitute the reliability estimates for the instruments used.

Emotional Intelligence Questionnaire

The reliability analysis conducted for the 30-item emotional intelligence instrument yielded Cronbach alpha value of .72 with sub-scales Self-Management .62, Self-Awareness .72, Motivation .69, Empathy .78, and Social skills .62. This suggests, that there is adequate internal consistency as far as the instrument is concern.

Academic Self-Efficacy scale

The 17-item for Academic Self-Efficacy scale was α =.89. Also, the reliability estimates for the four sub-scales were computed. The Cronbach alpha value derived from the estimates were 79 for Grades, .75 for Verbalising, .69 for Studying and .71 for Attendance. The reliability co-efficient does not differ much from Sander and Sanders (2009) whose study with UK sample has shown the internal reliability of the four subscales of the Academic Behavioural Confidence Scale to be at least adequate, with Cronbach's alpha values of .78 for Grades, .78 for Verbalising, .72 for Studying and .74 for Attendance. A critical consideration of the validity of the ABC scale can be found in Sander (2009). Again, the Cronbach alpha values do not depict a large disparity in a study by Kirikkanat and Soyer (2015) who developed a 17-item scale from the original 24-item scale Sander and Sanders (2003) to fit the collective cultural environment of Asia specifically Turkey as well 0.78 for Grades, 0.78 for Verbalising, 0.72 for Studying and 0.74 for Attendance. These estimates were compared with that of (Kirikkanat & Soyer,

2015; Sander & Sanders, 2009) and without much difference the study proceeded to adapt the scale for this research work.

Psychological Well-being scale

Again, reliability estimate was done for 18-item scale for Psychological Well-being scale which had Cronbach alpha value of .503. This figure is not so far from the Cronbach alpha value estimates gotten by Ryff and Keyes (1995, p.1072) whose estimates for the shortest version of the instrument, the 18-item scales was the same figure.

It was realized that psychological well-being had a low score as Creswell (2014) put it. Meanwhile, the instrument was used by Ryff (2014) for a survey and this informed it's use in this study.

Data Collection Procedure

A letter of introduction was obtained from the Department of Education and Psychology of University of Cape Coast, to carry out the research work in the selected institutions. In a situation where the university was reluctant to consent, the researcher was directed to seek the consent from the Teaching Hospital in whose domain the clinical medical students received their education. All the sampled schools were visited personally and the letter of introduction was delivered to the respective heads of the institutions to seek their permission to carry out the study. The questionnaires were distributed to the respondents and collected back the same day for level 500 and 600 students while that of the 700's were received three days later for UDS students. With the exception of UCC level 600 students which took one month to retrieve the questionnaires, the 400 and 500's responded questionnaires were received the same day it was given out. Also, it took the researcher two

months and one week to complete the data collection exercise for University of Ghana medical school. The researcher's goal was to finish the data collection exercise within a two- month period which was not met but rather three months duration was used.

Data Analysis Procedure

The data from the study was examined for completeness, double responses and none-response. The double responses and uncompleted questionnaires were taken out of the data collected and only single response to items and completed questionnaires were used for the analysis. Also, response for each individual item on each scale was scored for easy entry and management purposes using Statistical Package for the Social Sciences (SPSS) version 23. The descriptive statistics, simple frequency and percentages were used to analyze the demographic variables of the respondents which constitute sex, level, age and GPA.

For research question 1, which examined emotional intelligence (EI) levels among clinical medical students in Ghana as well as their difference in academic performance, simple frequencies and percentages were used to answer it. In answering this research question, items 1-30 in section B of the questionnaire used for the study. The version used in this study consists of six items for each sub-scale measured on a six-point Likert scale. Therefore, the scoring is given by 180-30/3=50. Hence given that 30-80= low level, 81-130= Moderate and 131-180= High. Thus, if an individual pick 1 throughout, it will sum up to 30 and if 6 it will sum up to 180 thus minimum and maximum.

Concerning research question 2, it focused on assessing the levels of Psychological Well-being (PWB) of clinical medical students in Ghanaian

Universities. It was answered using simple frequencies and percentages. In answering this research question, items numbered 48-65 in section D of the questionnaire used.

Inferential statistical tools were employed to test the six hypotheses of the study. Also, it should be noted that means and standard deviations were computed prior to the use of inferential statistics for some of the hypotheses while for other hypotheses, they were presented in the analysis. For hypothesis one, Independent Sample T-test was used. This hypothesis was to examine the possible existence of statistically significant difference in EI levels and AA of students. It was formulated to complement research question 1. The results of the analysis were considered to be significant at $p<.05$

Hypothesis two was aimed at giving a concrete statistical evidence in support of research question 2. Thus, whether there is a statistically significant difference in academic performance between the levels of PWB of students. Again, Independent Sample T-test was used to ascertain the difference among the levels of PWB regarding academic performance. The results of the analysis were considered to be significant at $p<.05$.

Also, in testing hypothesis three Multiple Regression was used. The test was meant to ascertain the relationship among emotional intelligence, academic self-efficacy, psychological well-being and academic performance. Here the item 4 in section A and items 1-65 in sections B-D were computed and run against academic performance. The results of the analysis were considered to be significant at $p<.05$.

Also, in testing hypothesis four and five, Independent Sample T-test was run to ascertain whether there exists statistically significant difference in

mean scores for self-reported dimensions of emotional intelligence and the total construct of academic self-efficacy between male and female clinical medical students. Again, the two constructs were computed and run against gender and the result of the test was considered significant at a $p<.05$. Lastly, a two-way ANOVA was used for hypothesis 6. This hypothesis was aimed at examining whether there exists a statistical significant difference among level, age and psychological well-being of students. The mean scores for self-reported psychological well-being construct were tested against level of study and age of clinical medical students. It was aimed at finding out whether level of study will influence the scores of psychological well-being in relation to age.

Ethical Considerations

Ethical clearance was sought from the University of Cape Coast Institutional Review Board before the data collection exercise started. All the study subjects were taken through the purpose, objectives and potential use of the study findings in order to receive their informed consent. Given that most of the study informants were students in various institutions, the institutions were contacted first for their approval before contacts were made with respondents. Confidentiality of the study subjects was maintained as required. The study subjects were also informed of their right to disqualify themselves at any point during study.

In pursuance of ethical issues, the right to privacy, voluntary participation, no harm to participants, anonymity and confidentiality were held in high esteem. It should be emphasised that students have rights to privacy and as a result, these rights must be respected at every point in time. In this

regard, the rights of privacy of respondents in the study was respected and under no circumstances were respondents studied without their knowledge or consent. In addition, one of the key components regarding ethical issues in research has to do with respondents' voluntary participation. It takes a lot of time for questionnaires to be responded to hence the significance of the study was explained to the respondents. On this notice, respondents were allowed to exercise their voluntary right in the participation of the study.

In addition, it should be said that in research, unethical behaviour which include plagiarism is not welcomed. This normally originates when a researcher falsifies, distorts data or plagiarizes other peoples' works. In this study, I followed strictly the prescribed standard of scientific behaviour to avoid plagiarism. I therefore gathered information from the right respondents and subjected the information gathered in proper analyses before writing the research report. Notably, ideas, works and writings were duly acknowledged by way of providing appropriate references in the in-text referencing and the main referencing as adopted by the University of Cape Coast.

Chapter summary

The study was motivated by the positivist school of thought using the quantitative paradigm. A descriptive survey design was utilized. The population comprised of all medical students in Ghana with a sample of 297 respondents. Using a multistage sampling procedure, data was gathered with a structured questionnaire. The data gathered was processed with SPSS v.23 and analyzed with statistical tools deemed appropriate for a particular research question and hypotheses respectively. The results are presented in the next chapter.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

The main purpose of the study was to investigate emotional intelligence, psychological well-being, academic self-efficacy and its influence on the academic achievement of clinical medical students in Ghanaian universities. The study adopted a cross sectional survey using the quantitative approach. This chapter is divided into two main sections. Section "A" entails analysis of demographic characteristics which mainly used descriptive statistics such as frequencies and percentages. Section B encompasses analysis of the main data. This includes research questions 1 and 2 respectively which were analyzed using frequencies and percentages. Also, inferential statistics such as Independent Sample T-test was used for hypothesis 1, 2, 5, and 4, Multiple Regression was used for hypothesis 3, and Two-way ANOVA was used for hypothesis 6.

Section A: Demographic variables of respondents

Table 3 presents the gender distribution of respondents (N= 297). Table 3 denotes that out of 297 medical students who participated in the study, 158(53.2%) were males while 139(46.8%) were females. Majority of the respondents were males. This result is not surprising as it seems to confirm the patterns among students who offer pure science course in SHS which usually have a lot of males as against females.

Table 3: Gender of Students

Students	Frequency	Percentage (%)
Males	158	53.2
Females	139	46.8

Source: Field survey, 2018.

Table 4 presents demographic characteristics of respondents (N= 297) relating to Level of study, Age, and GPA of clinical medical students in this study. In relation to levels of study of respondents, in Table 3, it was realized that 109(36.7%) were in level 400, 100(33.7%) were level 500 while level 600 students constituted 88(29.6%).

Table 4: Level of study, Age and AA of Respondents

Variables	Frequency	Percentage (%)
Level of study		
400	109	36.7
500	100	33.7
600	88	29.6
Age		
18 years and below	3	1.0
19-23 years	121	40.7
24 years Above	173	58.2
GPA		
3.5 – 4.0	143	48.1
3.0 – 3.49	107	36.0
1.5 – 2.99	44	14.8
0 – 1.49	3	1.0

Source: Field survey, 2018.

From the analysis, it is clear that majority of the respondents were level 400 students. This is not surprising as it could be seen in the population

distribution of the various institutions that level 400 have larger class size than the other classes. On the other hand, level 600 students who were in their final year had class sizes lower than that of the 400 and 500 which has reflected in the results. In respect of age of respondents, majority 58.2% were 25 years and above. Forty percent (40.7%) were 19-23 years while just 1% were 18 years and below. Lastly, concerning the academic achievement (GPA) of respondents' it is revealed that majority 48.1% were within the range of 3.5-4.0, 36% were within 3.0-3.49, 14.8% were within 1.5-2.99 and just 1% were 0-1.49.

Section B: Analysis of the main data

The analysis of the main data is organized in relation to research questions and hypotheses set to guide the study. Research question 1 and 2 are presented first followed by research hypotheses 1-6 respectively.

Research Question 1

What are the levels of emotional intelligence of medical students in Public Universities in Ghana?

Research question 1 sought to find out the levels of emotional intelligence of medical students. This question was meant to achieve the objective 1 of this study and items 1-30 in section B of emotional intelligence questionnaire were used. The result was presented in Table 4.

Table 5: Levels of EI among medical students

Scores	Frequency	Percentage	Interpretation
131-180	105	42.8	High
81-130	168	56.6	Moderate
30-80	2	.7	Low

Source: Field Survey, 2018.

Presenting on the levels of self-reported emotional intelligence ability of medical students in Ghana, it is found in Table 4, that majority 56.6% of respondents were found to have moderate levels of emotional intelligence ability while those in the high level were 42.8%. The results indicate that majority of medical students undertaking their clinical studies had moderate levels of emotional intelligence ability which according to Mohapel (2012) it could aid in working effectively. Even though only 42.8% of the total population of the study had high levels of EI ability, it is not a cause to worry because it has been indicated by Mohapel (2012) that participants who are found to have moderate levels of EI ability can be effective in their working environment.

Research Question 2

What are the levels of psychological well-being of medical students in Public Universities in Ghana?

Research question two sought to find out the levels of psychological well-being of medical students. To achieve the objective 2 of this study, items 48-65 in section D of the questionnaire which constitute the psychological well-being scale were used. The study focused on high and low levels of psychological well-being because Ryff (2014) in the scoring manual failed to mention anything about moderate level although in this study it has been mentioned for the purpose of distinction.

Table 6: Levels of PWB of medical students

Scores	Frequency	Percentage	Interpretation
18-48	140	47.1	Low
49-50	30	10.1	Moderate
51-108	127	42.8	High

Source: Field Survey, 2018

Concerning the levels of psychological well-being of clinical medical students in Ghana, as found in Table 5, majority 47.1% were found to have low levels of psychological well-being while those in the high level were 42.8%. The result indicates that majority of medical students undertaking their clinical studies had not developed high levels of psychological well-being which is a course for worry. These are would-be doctors in whose hands human lives are going to be vested and if their self-reported forms of psychological well-being is not at an appreciable level then attention is needed in that regards. The study proceeded further to test the null hypothesis that there will be no statistically significant difference between high and low levels of psychological well-being concerning academic achievement of clinical medical students (*see hypothesis 2*).

Hypotheses Testing

Hypothesis One (1)

H_0: There will be no statistically significant difference between the levels of emotional intelligence in terms of academic achievement of clinical medical students.

H_A: There will be a statistically significant difference between the levels of emotional intelligence in terms of academic achievement of clinical medical students.

The aim of hypothesis one was to ascertain whether the levels of emotional intelligence will influence the academic achievement of clinical medical students in Ghana. The hypothesis was formulated to aid a better examination of the results concerning levels of EI in research question 2 but it should be noted that the study was not interested in respondents in the lower level because they were few *(see table 4)*, hence they were not included in this analysis. Independent Sample T-test was used to test this hypothesis. The result is presented in Table 6.

The T-test was used to help explain whether there is a statistically significant difference between the levels of emotional intelligence ability and academic achievement. Using, Leven's test for equality of variation, Table 6 reveals that equality of variances test was not significant ($p>.05$) therefore, the study has not violated the primary assumption which underlines the use of T-test. The result from the T-test between the levels of emotional intelligence ability as against academic achievement was not significant.

The result shows that, on the average respondents experiencing high levels of self-reported emotional intelligence ability ($M = 1.64$, $SD = .720$) had similar performance academically compared to those experiencing moderate levels of self-reported emotional intelligence ability ($M = 1.71$, $SD = .74$; $t(295) = -.660$, $p > .05$, $r = 0.04$). Consequently, the study fails to reject the null hypothesis that there is no statistically significant difference between the levels of EI in relation to their academic achievement. In effect the

variation accounted for is 0.04 which is small effect (Field, 2009). It is a course for concern that majority are not in the high-level category, although the moderate level is sufficient for success in most activities, it would have been the best if majority were within the high-level. With that, one could only focus on the few weak aspect and improve them.

Table 7: Independent Samples Test for EI and AA

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Academic Achievement	Equal variances assumed	.452	.502	-.660	295	.510	-.06071	.09204	-.24185	.12042
	Equal variances not assumed			-.675	228.453	.500	-.06071	.08998	-.23800	.11657

Source: Field survey, 2018.

Hypothesis Two (2)

H_0: There will be no statistically significant difference between high and low levels of psychological well-being concerning academic achievement of clinical medical students.

H_A: There will be a statistically significant difference between high and low levels of psychological well-being concerning academic achievement of clinical medical students.

Hypothesis 1 was formulated in reference to research question 2. This hypothesis sought to examine the difference between high and low levels of psychological well-being concerning academic achievement of clinical medical students in Ghanaian universities. Thus, to aid a precise explanation concerning whether high and low levels of psychological well-being of students have an influence on their academic achievement. Independent Sample T-test was run and the result is presented in Table 7.

Using, Leven's test for equality of variation, Table 7 reveals that the equality of variances test was not significant ($p>.05$) hence the study has not violated the primary assumption underpinning the use of T-test. The result from the T-test between high and low levels of psychological well-being as against academic achievement was significant. On the average respondents experiencing high levels of psychological well-being ($M = 1.50$, $SD = .733$) may put up a better performance academically than those experiencing Low levels of psychological well-being ($M = 1.87$, $SD = .74$; $t(265) = 3.987$, $p < .05$, $r = 0.24$). In effect 0.24 of the variation is accounted by high levels of psychological well-being. In conclusion, the academic achievement for medical students with high level of psychological well-being differed

significantly from medical students with low level of psychological well-being Consequently, the null hypothesis is rejected ($p<.05$) by the study.

Table 8: Independent Samples T-test for levels of PWB and AA

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Academic Achievement	Equal variances assumed	1.147	.285	3.987	265	.000	.36035	.09039	.18238	.53832
	Equal variances not assumed			3.989	263.021	.000	.36035	.09034	.18247	.53823

Source: Field survey, 2018

Hypothesis Three (3)

H_0: There is no statistically significant relationship among emotional intelligence, academic self-efficacy, psychological well-being and academic achievement of medical students.

H_A: There is a statistically significant relationship among emotional intelligence, academic self-efficacy, psychological well-being and academic achievement of medical students.

The main aim of hypothesis 3 was to examine the relationship among self-reported emotional intelligence, psychological well-being, academic self-efficacy and achievement of clinical medical students in Ghanaian. To achieve this objective, items 4 and 1-64 on the questionnaire were used. The results are presented in Table 8- 11.

Table 9: Correlation among the various EI, ASE, PWB and AA

Variable	AA	EI	ASE	PWB
Academic Achievement	1.000			
Emotional Intelligence	-.034	1.000		
Academic Self-Efficacy	.114	-.312	1.000	
Psychological Well-Being	.088	-.333	.505	1.000

Source: Field survey, 2018

The standard multiple linear regression analysis with the Enter method was used to find out which of the variable as reported by respondents is statistically significant in predicting the academic achievement of medical students. The Pearson's correlation was first run to determine whether the self-reported emotional intelligence, academic self-efficacy and psychological well-being were linearly related to academic achievement. The result showed

that all the variables (emotional intelligence, academic self-efficacy and psychological well-being) had relationships with academic achievement with emotional intelligence recording a negative correlation coefficient (r = -.034, p> .05). Examining, the predictors only, the results indicate the highest correlation is between academic self-efficacy and psychological well-being (r = .501, p = .001).

Notwithstanding the significance of the correlation, the coefficient is medium, hence it could be said that the predictors are measuring different things so there is no collinearity. It was again realized that academic self-efficacy correlates best among all the predictors with academic achievement and it was statistically significant (r = .114, p = .025). Consequently, it is likely that this variable may be best in predicting the outcome. The correlations are presented in Table 8.

Table 10: Model summary[b] of EI, ASE, PWB and AA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.119[a]	.014	.004	.75599

Source: Field survey, 2018 a. Predictors: (Constant), Psychological well-being, Emotional Intelligence, Academic Self-Efficacy

The model summary and ANOVA of the multiple regression analysis as shown in Tables 9 and 10 indicates that statistically, the three self-reported variables together could not significantly predict academic achievement (r = .119) and accounted for 1.42% of the variance in self-reported academic achievement of students (F(3, 293) =1.413, p = .239). This suggests that the

variables were not significant in predicting academic achievement of medical students.

Table 11: ANOVA[a] regression of EI, ASE, PWB and AA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.422	3	.807	1.413	.239[b]
	Residual	167.457	293	.572		
	Total	169.879	296			

Source: Field survey, 2018 a. Dependent Variable: Academic Performance

b. Predictors: (Constant), Psychological well-being, Emotional Intelligence, Academic Self-Efficacy

There was the need to ensure that the dimensions were not collinearly related as this could inflate the coefficients. The collinearity statistics indicate that there was no problem with multi-collinearity as all the Variance Inflation Factors (VIFs) of the variables ranged from 1.16 to 1.41. Examination of the coefficients of EI, ASE, PWB indicated that none of the variables statistically significantly predicted the academic achievement of medical students. Although, none of the variables predicted the outcome significantly, ASE (β = .095, $p > .05$) best predicts the outcome as compared to the other predictors - EI (β = .010, $p > .05$), PWB (β = .044, $p > .05$) as shown in Table 11. Therefore, the study fails to reject the null hypothesis that there is no statistically significant relationship among EI, ASE, PWB and academic achievement of medical students in Ghana.

Table 12: Regression coefficients of the various self-reported dimensions EI, ASE, PWB and AA

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.171	.682		1.716	.087					
	EI	.004	.025	.010	.156	.876	-.034	.009	.009	.861	1.161
	ASE	.109	.079	.095	1.384	.167	.114	.081	.080	.721	1.386
	PW	.075	.119	.044	.636	.525	.088	.037	.037	.711	1.407

Source: Field survey, 2018 a. Dependent Variable: Academic Achievement

Hypothesis Four (4)

H_0: There is no statistically significant difference between male and female medical students in terms of their emotional intelligence.

H_A: There is a statistically significant difference between male and female medical students in terms of their emotional intelligence.

This hypothesis sought to establish whether there exist differences in the means of self-reported forms of emotional intelligence for both male and female clinical medical students. The results are presented in Table 12 and 13. Table 12 shows the descriptive statistics of mean scores for the various forms of EI between male and female students.

Table 13: Frequency, mean and standard deviation of EI by gender

Forms of Emotional Intelligence	**Gender**	**N**	**Mean**	**Standard Deviation**
Self Awareness	Male	158	30.07	3.59
	Female	139	29.03	4.18
Self Regulation	Male	158	28.22	4.93
	Female	139	29.16	4.15
Motivation	Male	158	13.14	4.74
	Female	139	12.78	3.81
Empathy	Male	158	29.56	4.47
	Female	139	30.82	3.52
Social Skills	Male	158	25.85	4.95
	Female	139	26.42	4.44
Total Emotional Intelligence Construct	**Male**	**158**	**126.40**	**12.22**
	Female	**139**	**128.68**	**10.51**

Source: Field survey 2018.

Table 12, displays the frequencies, means and standard deviations of the self-reported forms of emotional intelligence between male and female students. From the data, male medical students (M = 30.07, SD = 3.59) reported more on self awareness than the female medical students (M = 29.03, SD = 4.18), more of motivation (M = 13.14, SD = 4.74) than their female colleagues (M = 12.78, SD = 3.81). Female medical students (M = 29.16, SD = 41.5) also reported high self regulation than the males (M = 28.22, SD = 4.93), more of empathy/ social awareness (M = 30.82, SD = 3.52) than males (M= 29.56, SD = 4.47) and more of social skills/relationship management (M = 26.42, SD = 4.44) than male (M = 25.85, SD = 4.95). The higher mean for motivation among male students could be attributed to the dominance of males in the sciences as evident in most secondary schools in Ghana. The data presented in the table depicts an existence of mean differences between self-reported forms of emotional intelligence. To test whether these differences in means are statistically significant, Independent Sample T-test was run and the results presented in Table 13.

Using Leven's test for equality of variation, Table 13 reveals equality of variances test was not significant ($p>.05$) for self awareness, self regulation and relationship management but was significant ($p<.05$) for motivation and social skills/relationship management. Hence, Independent Sample T-test was used to evaluate the difference between male and female students in relation to self-reported forms of EI.

Table 14: Self-reported forms of EI and gender of medical students

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Self-Awareness	Equal variances assumed	1.071	.302	1.461	295	.145	.12256	.08388	-.04252	.28764
	Equal variances not assumed			1.465	292.486	.144	.12256	.08369	-.04215	.28727
Self Regulation	Equal variances assumed	1.262	.262	-2.287	295	.023	-.17338	.07580	-.32256	-.02421
	Equal variances not assumed			-2.310	294.840	.022	-.17338	.07507	-.32112	-.02564
Motivation	Equal variances assumed	4.583	.033	1.788	295	.075	.15692	.08776	-.01579	.32963
	Equal variances not assumed			1.769	271.008	.078	.15692	.08873	-.01776	.33160
Empathy	Equal variances assumed	5.934	.015	-2.681	295	.008	-.21067	.07858	-.36532	-.05603
	Equal variances not assumed			-2.722	291.411	.007	-.21067	.07739	-.36299	-.05835
Social skills	Equal variances assumed	.962	.327	-1.039	295	.300	-.09501	.09148	-.27504	.08503
	Equal variances not assumed			-1.046	294.878	.297	-.09501	.09085	-.27380	.08379

Source: Field survey, 2018

As shown in Table 13, there was no gender difference in three forms of EI, self awareness (t(295) = 1.461, p = .145), motivation (t(271.008) = 1.769, p = .078) and social skills/relationship management (t(295) = -1.039, p = .300). Meanwhile, the T-test showed statistically significant difference between male and female medical students regarding self regulation (t(295) = -2.287, p < .05) and empathy/social emotional awareness (t(291.411) = -2.722, p < .05).

Table 15: T-test for total EI construct and gender of students

Variables		df	t-value	Sig.
	Male			
Total EI Scale		295	-1.039	.197
	Female			

Source: Field survey, 2018

Consequently, the study proceeded to consider the total EI construct as reported by both male and female medical students. The results of the T-test indicated that there was no statistically significant difference in EI construct as a whole between males (M = 126.40 SD =12.22) and females (M = 128.68 SD =10.51; t(295) = -1.039, p = .197), r=.06 (*see Table 14*). Hence, any difference seen in the mean scores could be attributed to chance. The effect size that the variance accounted for is small as it was not even 1% which is considered to be weak (Field, 2009, p.57). Thus, any difference which exists in the means was due to chance. Therefore, the study fails to reject the null hypothesis and proceeds to conclude that emotional intelligence between male and female students are similar in Ghanaian medical schools.

Hypothesis Five (5)

H_0: There is no statistically significant difference in academic self-efficacy when respondents are classified according to gender.

H_A: There is a statistically significant difference in academic self-efficacy when respondents are classified according to gender.

The hypothesis sought to establish whether there existed differences between male and female medical students in Ghana in terms of academic self-efficacy. The results are presented in Table 15.

Table 16: Mean difference in ASE

Variable	Sex	N	Mean	Std. Deviation	Std. Error Mean
Academic Self-Efficacy	Male	158	2.1623	.69059	.05494
	Female	139	2.0106	.60506	.05132

Source: Field survey, 2018

Table 15, displays the frequencies, means and standard deviations of the self-reported total academic self-efficacy construct between male and female students in the medical schools. The data presented in the table depicts an existence of mean differences between male and female medical students in terms of their academic self-efficacy. To test whether these differences in means are statistically significant, Independent Sample T-test was run and the results is presented in Table 16.

Using Leven's test for equality of variation, Table 16 reveals equality of variances test was not significant ($p>.05$) therefore the assumption of homogeneity of variances have been met. Hence, Independent Sample T-test was used to evaluate the mean difference between male and female students in

relation to total academic self-efficacy construct. On the average academic self-efficacy is higher among male medical students (M = 2.162, SD = .691) than females (M = 2.010, SD = .605). The difference was statistically significant $t(295) = 2.00$, $p < .05$; however, there it was a minimal effect size $r = .12$.

Table 17: Independent Samples T-test of ASE

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Academic Self-Efficacy	Equal variances assumed	1.988	.160	2.001	295	.046	.15174	.07582	.00253	.30096
	Equal variances not assumed			2.018	294.996	.044	.15174	.07518	.00378	.29970

Source: Field survey, 2018

Hypothesis six (6)

H_0: There is no statistically significant difference in age, level of study and psychological well-being, interaction effect of level of study, age and psychological wellbeing of clinical medical students in public universities in Ghana.

H_A: There is a statistically significant difference in age, level of study and psychological well-being, interaction effect of level of study, age and psychological wellbeing of clinical medical students in public universities in Ghana.

Hypothesis 6 sought to explain whether there will be statistical significant differences in psychological well-being of medical students according to age, level of study and whether given the level of study of a respondent, age will influence psychological well-being.

Table 18: Levene's test of equality of variances for PWB, level of study and age of respondents

F	df1	df2	Sig.
1.018	8	288	.422

Source: Field survey, 2018

The homogeneity of variance test was conducted. Table 17, denotes that the test was not significant ($p>.05$); therefore, the primary assumption underlying the use of the two-way ANOVA test was not violated.

A two-way between-groups ANOVA test was conducted to explore the influence of level of study and age on self-reported psychological well-being, as measured by the psychological wellbeing scale. There were three groups in terms of level of study (Group 1: Level 400; Group 2: Level 500; Group 3:

Level 600). There was a statistically significant interaction effect for level of study and age [F(4, 288) =3.32, p=.01]; however, the effect size was small (partial eta squared=.04).

Table 19: Descriptive statistics for PWB, level of study and age of respondents

Level of study	Age	Mean	Std. Deviation	N
400	18 years and below	49.00	.	1
	19-23 years	52.09	7.92	69
	24 years Above	45.87	7.09	38
	Total	49.87	8.13	108
500	18 years and below	43.00	.	1
	19-23 years	51.26	7.88	43
	24 years Above	48.57	7.50	56
	Total	49.67	7.73	100
600	18 years and below	46.00	.	1
	19-23 years	43.78	5.26	9
	24 years Above	48.71	7.97	79
	Total	48.18	7.82	89
Total	18 years and below	46.00	3.00	3
	19-23 years	51.17	7.99	121
	24 years Above	48.04	7.68	173
	Total	49.30	7.91	297

Source: Field survey, 2018

Post-hoc comparisons using the Tukey HSD test indicated that there was no statistically significant difference among the mean scores for the various levels of study as shown in Table 18. Level 400 (M=49.87, SD=8.13), 500 (M=49.67, SD=7.73) and 600 (M=48.17, SD=7.82) did not differ significantly from either of the groups (*see Table 19*). The main effect for

level of study [F (2, 288) =.281, p=.76] and the main effect for age [F (2, 288) =.758, p=.47] were not statistically significant. Hence, the study fails to reject the first two hypotheses that there is no statistically significant difference in age as well as the level of study of respondents and psychological well-being (*see table 19*).

Table 20: Multiple comparisons of Tukey HSD for level of study and PWB

					95% Confidence Interval	
(I) Level of study	**(J) Level of study**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**	**Lower Bound**	**Upper Bound**
400	500	.0111	.05923	.981	-.1284	.1507
	600	.0939	.06110	.275	-.0500	.2379
500	400	-.0111	.05923	.981	-.1507	.1284
	600	.0828	.06220	.379	-.0637	.2293
600	400	-.0939	.06110	.275	-.2379	.0500
	500	-.0828	.06220	.379	-.2293	.0637

Source: Field survey, 2018 Dependent Variable: Psychological well-being

The results of a two-way between-groups analysis of variance conducted to explore the difference in psychological well-being regarding respondents age and level of study. Table 20 indicates that indeed, students' level and age do not differ in relation to psychological well-being (p> .05) therefore, the study failed to reject the null hypothesis.

The third hypothesis which asserts that there is no statistically significant interaction effect of level of study, age and psychological well-

being of clinical medical students in public universities in Ghana was tested and the results presented in Table 20.

Table 21: Tests of between - subjects effects for PWB, level of study and age of respondents

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	4.723[a]	8	.590	3.241	.002	.083
Intercept	176.590	1	176.590	969.432	.000	.771
Level of study	.102	2	.051	.281	.755	.002
Age	.276	2	.138	.758	.469	.005
Level of study * Age	2.422	4	.605	3.324	**.011**	.044
Error	52.462	288	.182			
Total	2284.799	297				
Corrected Total	57.185	296				

Source: Field Survey, 2018. a. R Squared = .083 (Adjusted R Squared = .057)

The results indicate significant interaction between level of study and age of respondents. Consequently, the study rejects the null hypothesis. On this basis, the study proceeds to establish where the difference is emanating from and the results are indicated in tables 21 and 22 respectively.

Table 22:Pairwise Comparisons of level of study, age and PWB

Level of study	(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b] Lower Bound	Upper Bound
400	18 years and below	19-23 years	-3.087	7.738	1.000	-21.720	15.546
		24 years Above	3.132	7.783	1.000	-15.610	21.873
	19-23 years	18 years and below	3.087	7.738	1.000	-15.546	21.720
		24 years Above	6.219*	1.552	.000	2.481	9.956
	24 years Above	18 years and below	-3.132	7.783	1.000	-21.873	15.610
		19-23 years	-6.219*	1.552	.000	-9.956	-2.481
500	18 years and below	19-23 years	-8.256	7.771	.867	-26.969	10.458
		24 years Above	-5.571	7.751	1.000	-24.235	13.093
	19-23 years	18 years and below	8.256	7.771	.867	-10.458	26.969
		24 years Above	2.684	1.558	.258	-1.067	6.435
	24 years Above	18 years and below	5.571	7.751	1.000	-13.093	24.235
		19-23 years	-2.684	1.558	.258	-6.435	1.067
600	18 years and below	19-23 years	2.222	8.098	1.000	-17.278	21.723
		24 years Above	-2.709	7.731	1.000	-21.325	15.907
	19-23 years	18 years and below	-2.222	8.098	1.000	-21.723	17.278
		24 years Above	-4.931	2.703	.207	-11.439	1.577
	24 years Above	18 years and below	2.709	7.731	1.000	-15.907	21.325
		19-23 years	4.931	2.703	.207	-1.577	11.439

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Table 23: Pairwise Comparisons of age, level of study and PWB

Age	(I) Level of study	(J) Level of study	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b] Lower Bound	Upper Bound
18 years and below	400	500	6.000	10.865	1.000	-20.162	32.162
		600	3.000	10.865	1.000	-23.162	29.162
	500	400	-6.000	10.865	1.000	-32.162	20.162
		600	-3.000	10.865	1.000	-29.162	23.162
	600	400	-3.000	10.865	1.000	-29.162	23.162
		500	3.000	10.865	1.000	-23.162	29.162
19-23 years	400	500	.831	1.493	1.000	-2.763	4.425
		600	8.309*	2.723	.007	1.753	14.866
	500	400	-.831	1.493	1.000	-4.425	2.763
		600	7.478*	2.816	.025	.697	14.259
	600	400	-8.309*	2.723	.007	-14.866	-1.753
		500	-7.478*	2.816	.025	-14.259	-.697
24 years Above	400	500	-2.703	1.615	.286	-6.591	1.185
		600	-2.840	1.517	.186	-6.493	.812
	500	400	2.703	1.615	.286	-1.185	6.591
		600	-.137	1.342	1.000	-3.369	3.094
	600	400	2.840	1.517	.186	-.812	6.493
		500	.137	1.342	1.000	-3.094	3.369

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Dependent Variable: PWB

Summary of key findings

The result presented (*see table 4*) above indicates that majority (56.6%) of respondents were found not to be in the high levels of EI category. Also, there was no statistically significant difference found between the levels of EI regarding academic achievement.

Majority (47%) of respondents (*see table 5*) were found to have low levels of psychological well-being. Surprisingly, there was a statistically significant difference between high and low levels of psychological well-being in terms of academic achievement of students.

Among the three variables EI, ASE and PWB, ASE ($\beta = .095$, $p > .05$) was found to be the best predictor of AA of medical students but the prediction was not statistically significant.

On the average, male and female students demonstrate similar levels concerning the forms of EI in terms of self awareness, motivation and social skills/relationship management.

Academic self-efficacy is found to be higher among male medical students than females and was statistically significant $t(295) = 2.00$, $p < .05$.

The study found students' level of study and age do not differ in relation to their psychological well-being ($p > .05$)

Discussions

The general objective of the study was to examine the impact of Emotional Intelligence (EI) Academic Self-Efficacy (ASE) and Psychological Well-being (PWB) on the Academic Achievement (AA) of medical students in Ghanaian universities. The discussion will be focused on six areas in relation to the objectives of the study and it comprises the levels of EI of medical

students, levels of PWB of medical students, relationship among EI, ASE, PWB and AA of medical students, EI and gender, ASE and gender, PWB, age and level of study of students.

Emotional Intelligence (EI) Levels and AA of students

Largely, the respondents reported moderate levels of EI. Thus, majority of the respondents (56.6%) had moderate levels of EI whereas those in the higher level were 42.8%. The result is quite amazing because as medical students, it was expected that majority will score high on the EI measure as one needs to demonstrate higher level of AA before getting admission. The finding confirms the assertion of (Goleman, 1995; Parker et. al., 2004) that higher intelligent quotient (academic achievement) does not necessarily warrant higher EI. Despite the relatively high performance one is to put up to gain admission into the medical school, it does not imply that the individual will score high regarding EI measures. It was evident in this study as majority of respondents reported high level of academic achievement (GPA) (*see Table 3*) it did not reflect on the EI measure. On the other hand, the moderate levels of EI that were reported by 56. 6% of respondents can aid effectiveness in a working environment as suggested by Mophel (2012). This suggests that majority of the medical students are able to perceive the emotions of others, recognize their own emotions and probably use it for their benefit in a given context. Although, moderate level of EI indicates that there is still room for improvement, respondents can be successful in their educational endeavor in relation to the current field.

Again, the study found no statistically significant difference between the levels of EI and academic achievement of medical students. This finding

corroborates that of previous researches which indicated no or negligible minimal difference in the levels of EI and academic achievement (Johnson, 2008; Chew, Zain & Hassan, 2013; Bigna, Fonkoue, Tchatcho, Dongmo, Soh, Um et. al., 2014; Shah et. al., 2014). A further look at the literature reveals that most of the previous researches which found no statistically significant difference between the levels of EI and academic performance were based mostly on relatively collectivist cultures which Africa is no exemption. This could inform the results the study arrived at. It is believed that, people in collectivist cultures are able to adjust and handle their emotions in comparison to those in individualistic cultures (Kirikkanat & Soyer, 2015; Ranjbar, Khademi, Areshtanab, 2017; Suliman, 2010). Thus, in relatively collective cultures there are systems that aid in the regulation of emotions informally. This is evident as most countries in Asia and Africa are highly religious. These religious practices mostly propagate the regulation of emotions, self-control and tolerance for one another which Ghana is not exempted. It is usually believe that anything that happens is the doing of God especially good fortunes whiles bad ones are attributed to "Satan" an evil doer who does not want any good thing to happen hence things are viewed in the context of the surrounding not the individual actor. Therefore, other negative emotions such as anger aggression and in some cases, assertiveness call for straightening of the individual by the leaders of the religious group. With these beliefs people are able to claim their emotions and concentrate on their study, therefore it is not surprising that majority have higher level of AA.

The assertion that high EI is directly linked with high academic performance (Vela, 2003; Hashemi, Khezri, Abbasi, Hemmati & Hashemi,

2014; Cazan & Năstasă, 2015) is being contradicted in this study. The finding of the study that academic there is no statistically significant difference between high and low levels of EI in terms of academic performance of students is supported by (Ranjbar, Khademi, & Areshtanab, 2017; Bigna, Fonkoue, Tchatcho, Dongmo, Soh, Um et al. 2014; Chew, Zain & Hassan, 2013). This suggests that irrespective of the individuals' level of EI, academic performance does not differ. Thus, this finding of the study supports the assertion that both high and moderate levels of EI students are all likely to succeed in their academic journey. It could be seen that most of the studies which found statistically significant difference between the levels and academic performance were based in individualistic cultures (Nelson, Low & Hammett, 2017; Trevino, 2014). These cultures emphasize a lot more on the development of the individual than the whole group or team. Therefore, the results may be culture specific as it is a known fact that there is a lot of informal social support provided by significant others in a collectivist cultural set up. Consequently, this may have influence the results. These cultural practices and systems are good but they also limit the individual especially when everything is attributed to spirituality people tend to project their responsibility on others and refuse to account for their actions.

Psychological Well-Being (PWB) levels and AA of students

The study found that majority of the medical students fall within the low levels of PWB. This suggests that their PWB needs to be improved. This suggests that most medical students may not be able to regulate the antecedents of activities which could lead them to be stressed out which leads to depression. Eventually, an individual who is stressed out or depressed may

not be able to concentrate and will perform poorly in academics as suggested by Fallahzadeh (2011). It was again observed that there is a significant difference between high and low levels of PWB of students regarding AA. This finding is supported by (Eisenberg, Golberstein & Hunt, 2009; Kitzrow, 2003) who asserted that students with low level PWB will have challenges with their academics. This implies that, students with high PWB have the probability of putting up a better performance than those with low PWB. As studies have shown that negative affect (anxiety, depression and stress) do negatively influence academic performance of students (National College Health Assessment, 2014; Richardson, Abraham & Bond, 2012) therefore, low level of positive affect as well may result in poor AA of students. On the other hand, high psychological well-being (positive affect) will positively affect academic achievement. Thus, students who are found to be able to control their emotions, anxiety and manage stressful situations tend to be sound mentally, therefore, they will perform better than those who are experiencing more negative affect. This claim that students who are sound mentally tend to put up better performance than those who are not has been affirmed by previous studies (Youssef-Morgan & Luthans, 2015; Bandura, 2011; Folkman, 2010; Chow, 2010; Vaez & Laflamme, 2008). Thus, an individual who is able to demonstrate autonomy in his/her decision making without much consultation of significant others is likely to reduce stress associated with being torn between two opposing ideas and the persons own interest. Such situations are quite common in the Ghanaian context where parents and or guardians directly or indirectly imposed their desires upon their children to read certain courses. Parents normally put such pressure on their wards

because they want the status of a family to increase, continuation or probably the father/mothers dream profession which could not be realized hence it is deemed to be recognized in the younger generation. This could rather turn to have a negative influence on the students' performance.

Having positive PWB could probably lead to a positive output in life as students demonstrate high purpose in life in this study. This has been established by Chow (2010) that people who have purpose in life tend to be more active and have positive attitude towards life than others who do not have clear goals and aspirations for the future. This study postulates that a person who can master his/her environment, have a sense of direction in life, relate well with others, accept the self whether positive or negative characteristics and plan for their own growth stand a better chance of doing well than those that are unable to demonstrate these things positively.

Emotional Intelligence, Academic Self-Efficacy, PWB and AA

The investigation into the three constructs regarding medical students in the country was warranted as there is the need for empirical evident in this regard. Invariably, it was demonstrated by respondents that there is a positive relationship between EI ($\beta = .010$) and AA of students. This is evident in other studies and is attested to in other parts of the world (Cazan & Năstasă, 2015; Trevino, 2014; Vela, 2003). Although, this positive relation was not significant it attests to the possibility that academic performance of clinical medical students in Ghana is being affected by other variables which require further research. The assertion that EI plays a positive important role in the educational endeavor as found in previous researches is also evident in this study (Ranjbar, Khademi, Areshtanab, 2017; Fallahzadeh, 2011; Vernon et al.,

2008; Farnia, 2012). This finding is supported by previous research which mentioned positive relations between EI and AA although the predictiveness of EI was not established in this study as in others (Shah et. al., 2014; Hashemi, Khezri, Abbasi, Hemmati & Hashemi, 2014). Maybe the results may stem from the notion that any student who gets the opportunity to be admitted into the medical school in Ghana deems it a priority to pass out no matter what happened. This is because the profession comes with high prestige in the Ghanaian society. It is also associated with high salary and it appears that relatively rich individuals or people with a family relative in the health profession who have good standing usually get the opportunity to attend a medical school. Consequently, either the individual is there to maintain the standard set by the family, elevate the families' glory to the next level or set a new record in the family while others do get there with passion.

However, the assertion of positive relations has been challenged by other studies which suggest little or no association between EI and AA among students (Parker et. al., 2004; Johnson, 2008; Suliman, 2010). The assertion of no relationship disagrees with the findings of this study. This could indicate the intervention of certain variables which aid in the stabilization of emotions hence no relationship seen in those studies. It could be cultural specifics and formal social support services such as guidance and counselling services, psychological and psychotherapeutic assistance among others. This suggests that other variables such as locus of control, birth order, financial status and economic status of students could also account for the performance of medical students in Ghanaian universities hence there is the need for other studies to look at these.

Secondly, it was observed that ASE was not statistically significant in the prediction of academic achievement of students even though there was a positive relationship and in comparison, to the other variables it had the highest "t" value and the smallest "sig" value (t= 1.384 sig= .167). This suggests that ASE influences academic achievement than any other variable in the analysis. The influence of ASE on academic achievement has been substantiated in other studies (Afari, Ward, & Khine, 2012; Cayubit, 2014; Alyami et. al., 2017). Consequently, the efficacy beliefs of an individual could translate into the outcome of a given activity. Efficacy beliefs have the ability to influence the way an individual thinks and acts because a course of action is influenced by cognition and perception. Therefore, an individual may limit himself though he may be endowed with the ability to accomplish a task. It is usually informed by vicarious experiences which have been eluded by Albert Bandura. Therefore, a relatively good academic achievement which transited the clinical medical students from level 100 through to the clinical level could be said to be repeating itself as proposed by the study.

In other words, an increase in ASE will result in a direct increase in academic achievement. This has been affirmed in other empirical studies (Chow, 2010; Al-Harthy & Was, 2013; Alyami et. al., 2017). In the Ghanaian contexts, children are expected to usually comply with the wish of parents and guardians without much hesitation even though in some situations the decision may not be the ultimate will of the child. This is actually evident especially in the career choice of students predominantly in the transition period which begins from Junior High School (JHS). Therefore, the individual is expected to perform to his or her best capability even though the educational choice is

an imposed one hence this result. That is to say, students who aim at studying for the purpose of getting good grades to please the will of parents/guardians will continue to attend classes to help demonstrate the mastery of content through verbalizing to affirm their commitment of achieving that educational goal. This assertion is supported by (Hashemi, Khezri, Abbasi, Hemmati & Hashemi, 2014; Adelodun & Asiru, 2015) who postulated that students whose major aim is to achieve their educational goals will demonstrate high commitment to the educational enterprise by showing mastery of content, regular attendance of classes, seeking to understand what is being taught by asking questions and to get better grades.

Thirdly, psychological well-being was proved to be positively related to academic performance of students but was not statistically significant in predicting it. The ability to be autonomous in decisions concerning the life of an individual is an indication of positive attitude towards oneself. Which translates into positive behaviour and persistence even in bad circumstances which aid academic achievement as it is evident in previous studies (Youssef-Morgan & Luthans, 2015; Bandura, 2011; Folkman, 2010). It has been further established that students who have clear goals and a sense of direction (purpose in life) put up a better result academically which depicts a positive relationship between PWB and academic achievement and this is supported by (Chow, 2010; Vaez & Laflamme, 2008). With the revelation by the study that there is positive relations regarding PWB and academic achievement of students it is encouraged that institutions strengthen and empower the formal helping directorates within the institutions. Also, the use of positive psychological tests to ascertain the levels of positive affect among students

could aid in monitoring and implementing proper measures that would aid in building a conducive environment for students' utmost psychological adjustment which will intern influence their academic achievement positively. The clinical training is quite demanding coupled with tutorials, quizzes and examinations which pose a lot of stress with anxiety hence students' mental state and soundness deserves a critical attention for a better performance of the would-be doctor.

Emotional intelligence and gender of students

Demonstration of EI competencies by male and female have been an issue of concern since the inception of research into the EI construct. The study found no statistically significant difference between male and female in relation to the total EI construct though some dimensions depicted statistically significant. As anticipated the assertion that there is no difference in the total EI construct has been elucidated by the study with backings from other researchers (Goleman, 1998; Joseph & Newman, 2010; Patel, 2017). The ability model of Goleman (1998) consistently yields this result which is linked with the combination of personality traits and ability to demonstrate a particular competency. Competencies are developed overtime and with consistent training and persistence the individual will be efficient and perfect in it. Traits, on the other hand, when an individual has it, it is leverage for polishing and developing it to maximize performance but it cannot be developed when one does not have it. The study suggests that both gender groups are the same in relation to EI as men are encouraged to show more affection and females more courage. The male development of awareness of their emotional state could stem from the practice that males are not to be

emotional in the Ghanaian settings even in emotionally challenged situations. The male figure in the collectivist culture of Ghana is to demonstrate courage and bravery, swallow bitterness and endure pain without a little demonstration of the impact of the situation. Consequently, he is conscious at most times in order not to disgrace himself by showing of an emotional state even in happy moments, the jubilation has some extent. The female figure on the other hand is at liberty to depict emotions as and when there is the need without constrains hence the probability to score higher and with significant difference in two forms of EI (self-regulation and empathy/social emotional awareness). Another factor which could contribute to the no significant difference in the other three forms of EI (self-awareness, motivation and social skills) is the promotion of some form of masculinity in the females during their up-bring especially in adolescence stage where they could be abused. Most homes in this era encouraged and some actually take the girl-child through assertive training which serves as a means of boosting the confidence to say no, resist and report any issue of unfair treatment. This is usually carried out by fathers in a way of validating and ensuring the ultimate development of the girl-child.

Also, the notion raised about females demonstrating significantly higher levels of EI (empathy (Social Emotional Awareness and Emotional Awareness) in this study is supported by other studies (Meshkat & Nejati, 2017; Shaheen & Shaheen, 2016; Cabello, Sorrel, Fernández-Pinto, Extremera, & Fernández-Berrocal, 2016; Naghavi & Redzuan, 2011; Sparkman, 2008). These studies concluded that females have higher EI than males in their respective studies. With the current studies, it is concluded that the difference may emanate from individual differences and parental

nurturing. The medical schools in Ghana are filled with wards of the well-to-do in the society probably a hand full may have their origins among the average home with one out of a hundred from the poor homes. The well-to-do homes usually raised both male and female child alike and may not or just a little influence of the culture of a 'man can do everything but it is not everything that a woman can do'. Therefore, the girl-child and the boy-child are provided with the same opportunity for the individual to make the best out of it. The media cannot be left out in this regard. There are a lot of female mentors flooding in the print media, social media and other women empowerment programmes and all these contribute to the development of the female student. However, the institutions are motivated to provide a lot of female mentors in the field to encourage the young ones coming up. This is to elaborate on an observation made by the researcher which appeared to be that the numbers of females in the surgery units comparably were quite low in relation to those in anesthesia.

Academic Self-Efficacy and gender of students

Presenting on the ability of male and female students to position them in relation to being confident behaviour wise regarding academics is also looked at. It was evident that male students were more confident in terms of behaviour towards academics. The notion of gender difference has been aligned to favour males in some instances may have been confirmed as this finding of the study seems to corroborate with the assertion made by previous studies (Alyami et. al, 2017; Sander, Putwain & Fuente, 2013). These studies used the ABC scale and found similar results hence concluded that males have higher levels of academic self-efficacy than females and with the finding of

males having higher mean than females and its being significant, the findings of previous researches have been confirmed (Hartley, Betts & Murray, 2007; Sanders, Sander & Mercer, 2009). Regarding the current study, the results could stream from factors relating to teaching. The opportunity to read medicine at the university level emancipates from the very beginning of education. Thus, the ability to study and pass mathematics and integrated science exams right from the transitional stages (JHS and SHS) is essential. When the foundation of mathematics and science are good, there is the possibility that the individual may have the opportunity to read pure science at the SHS level which then transcends to the university. It is a known fact that core mathematics and general science are among courses mostly failed in the country. This could be attributed to the mode of teaching the courses. At the SHS level, pure science classes are male domineering as home economics classes are female domineering as opined that students have reported the unfavourability of certain teaching styles (Sander, 2004a).

Though the result was statistically significant, it was observed that there was a small effect size which could be negligible as established by other studies (Khan et. al., 2013; Sander, 2009) which invariably could mean that it is more personal based. Thus, it is more individualistic which on a larger note male are noted to think of themselves instead of thinking about the group first which is more feminine. Again, the Ghanaian cultural setting encourages the male to be more vocal as compared to the female which in itself could hinder the development of esteem and efficacy. Usually, females who are quite vocal are given names of all sorts which tend to have a cognitive impact which may infiltrate the perception of self-worth hence the results.

There is the need for conscious development of positive self-esteem which is directly linked with self-efficacy among female students in the medical schools. It could be done through the use of verbal persuasion aimed to defuse cognitive schemas about tasks and situations of which some were developed through the individuals past experience and through the observation of others. This is related to the claim that self-efficacy has an impact on how individuals perceive themselves (Bandura, 1995). Bandura (1982) postulated that the more successful an individual is in the completion of a task in a hierarchy of difficulty, the more efficacious the individual becomes. Therefore, conscious setting of goals, expected outcome and modeling of the expected behaviour will go a long way in the improvement of self-efficacy among female students.

Psychological well-being, age and level of study of students

Indeed, students' level of study and age were found not to be different from each other in relation to psychological well-being. That is the level of study of an individual student had no influence on the persons' PWB level. Which seem to suggests that the psychological issues faced with a first clinical year student might be the same as a student in the second and third clinical years respectively. This finding debunks the notion of previous studies which postulated statistically significant relationship between level of study and age in relation to PWB (Uraz et. al, 2013; Glozah, 2013; Peker et al. 2009). Surprisingly, it was expected that the third-year clinical students may differ in PWB especially those within the age range of 24 years and above. They actually constituted the highest number of respondents in this study and aside that they are faced with a lot of demands both at home and in the school. They

are expected to embark on their normal routine schedule of ward rounds, prepare for quizzes, attend tutorials, complete a project work and take a final exam as well aside managing other personal relationships. The notion of third year students (first-year clinical students), fourth year students (second-year clinical students) and third year students (third-year clinical students) experienced more negative affect than the other year students as opined by Uraz et. al., (2013) is not substantiated when it comes to positive affect as evident in this study. It could be deduced that respondents may have not been to the world of work as their ages (*see table 3*) reported by themselves denote that majority moved from SHS straight to the medical school which in itself could limit the level of negative experiences such as disappointments hence the results. This, thus, suggests that even though these students could be classified as young adults, majority may still be under the coaching of parents, significant others and guardians.

However, there was a statistically significant interaction effect for level of study and age of students. This could stem from age although the range differences are not that much. This finding corroborates with Ryff (1989) who concluded that maturity and cognitive development are embodiment of age. For Ryff (1989) age have a significant effect on four psychological well-being dimensions which comprises autonomy, environmental mastery, purpose in life and personal growth. Thus, with age people learn to be independent in decision making although the individual may consider the consequences in the choices they make and this is supported by (Bostanci, Ozdel, Oguzhanoglu, Ozdel, Ergin, Ergin, et. al., 2005; Ryff, 1989). The environment in which people live becomes more familiar with aging and more understandable as the

fellow interact with the environment continuously hence environmental mastery is more reliable with age and progression from one level to the other.

There is evident in support of the notion that age and educational levels were weak in predicting significantly the psychological well-being of students which have been established in this study as well though the study did not focus on the predictive ability of age and level as done by Ryff (1989).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The main purpose of the study was to investigate emotional intelligence, psychological well-being, academic self-efficacy and academic achievement of medical students in Ghanaian universities. The study was guided by two research questions and four hypotheses as indicated in chapter one. Cross sectional descriptive survey was adopted for the study with the quantitative approach which was anchored in the positivist paradigm. The study used a sample size of 297 respondents derived from multistage sampling technique.

The study used structured questionnaires with a six-point Likert-scale measure. This instrument was pre-tested using 32 students of University of Cape Coast Medical School students who were not part of the sample selected for the study. The reliability estimate for the various instruments with the pre-test have been spelt out under reliability section of this write-up. Inferential statistical tools such as Independent T-test, Multiple Regression, and two-way ANOVA were used. Also, descriptive statistics comprising of simple frequencies and percentage, mean and standard deviation were used in the study. Keenly, the focus of the study was on levels of emotional intelligence, academic self-efficacy and psychological well-being in relation to academic achievement of medical students and demographic variables such as gender, age and level of study and GPA (academic achievement).

Summary of findings

In accordance with the results presented in chapter four, the major findings of the study were identified:

The study found that none of the respondents fell in the low-level category of EI. Surprisingly, majority were found to be within the moderate level of EI. It was established that there was no statistically significant difference between the levels and academic achievement.

Majority of respondents were within the low-level of PWB category although the percentage between the high and low was not that much but a difference in frequency of about 20 is quite a lot. Again, it was revealed that there is a statistically significant difference between students of low and high PWB in terms of academic achievement.

The result showed that emotional intelligence, academic self-efficacy and psychological well-being had relationships with academic achievement. Despite the relationship between the predictors and the outcome variable, none of them significantly predicted it.

There was no statistically significant difference between male and female students in terms of the total emotional intelligence construct. It was established that there was statistically significant difference between male and female medical students regarding self regulation and empathy/social emotional awareness forms of EI.

The study found that, there was a statistically significant difference in mean scores of male and female students in relation to academic self-efficacy of students.

The study revealed that medical students do not differ according to level of study and age when it comes to psychological well-being.

Conclusions

In this study, majority of respondents had moderate level of EI while none of them was in the low-level category. Also, there was no significant relationship between the levels of emotional intelligence and academic achievement. This suggests that irrespective of the level of emotional intelligence an individual may demonstrate, they may perform at the same level academically.

Respondents in this study demonstrate high academic achievement (*see Table 3*) and as such, it was expected that majority would fall in the high-level category of PWB because there is a significant relationship between academic achievement and the level of psychological well-being of students. As the study found a statistically significant difference between high and low levels of PWB in terms of AA, it is concluded that those with high level of PWB will perform better academically than those with low PWB.

On the average, there was a relationship between emotional intelligence, academic self-efficacy and psychological well-being but none of them significantly predicted the outcome variable. As none of the variables predicted the outcome variable, the study concludes that there may be other factors which influence AA of clinical medical students in Ghana.

Based on the results revealed in chapter four, the study proceeds to say that there is no statistically significant relationship between the self-reported forms of emotional intelligence and academic achievement of medical

students. In summary, male and female may have the same level of academic achievement.

It was denoted by the study that male medical students demonstrate higher self-reported academic self-efficacy than the females.

Finally, the study concludes that level of study and age of a medical student do not influence psychological well-being of medical students.

Recommendations

In accordance with the findings and conclusions drawn in this study, the following recommendations were arrived at:

1. Universities, school boards and Ghana Medical and Dental Council should strongly consider implementing EI development and coaching programmes for potential and current medical school students because majority were found to be of moderate level of EI.
2. As the study found that majority of medical students had low PWB therefore, there may be the need to intensify guidance and counselling, psychological and therapeutic services to aid students facing one difficulty or the other in the schools. Universities, school boards and the accreditation departments of educational institutions should consider implementing the taking of psychological assessment test by each student at least twice in a semester.
3. Students should be encouraged to make time for the development of their social life which is also necessary in the world of work. Building good relationships have the tendency of helping the development of EI, PWB and confidence as its level is also influenced by vicarious experience of the individual, verbal persuasions among other things. This is important as

Sigmund Freud's development of psychoanalytical theory was informed by his patients who usually report of a sickness but they got better when he was just talking with them.

4. In order to ensure the wholesome development of the would-be medical doctor, it is important that other modes of teaching employed by the respective institutions to aid in the other dimensions of their studies not only focusing on good grades but other related needs such as positive attitude towards oneself and general well-being.
5. The Ghana Medical Association, Medical and Dental Council of Ghana, school boards and the universities may consider coaching programmes for students especially the males to aid in the development of the dimensions of EI and females with regards to PWB.

Suggestions for Further Research

Further research should be carried out assessing emotional intelligence, psychological well-being and locus of control medical officers in Ghana. This will aid in ascertaining how well the officers can handle their personal problems and how stable one may be which eventually affects their work out put. Secondly, further research should evaluate the ability to develop emotional intelligence and in doing so, evaluate the programs that could be designed to teach E.I. in the medical schools in Ghana. Again, research should evaluate the levels of ASE of medical students. Finally, future research should focus on the applicability of the emotional intelligence construct to the Health Service and its effect on output.

REFERENCES

Adatsi, P. (2013). *A study of the relationship between students' biopsychosocial problems and academic performance in Ghana*: A case study of senior high schools in Tema Metropolitan District. Methodist University College, Ghana.

Adelodun, G. A., & Asiru, A. B. (2015). Academic self-efficacy and gender as determinants of performance in English discourse writing among high achieving students in Ibadan, Oyo State. *European Scientific Journal*, *11*(28), 308–318.

Afari, E., Ward, G., & Khine, M. S. (2012). Global self-esteem and self-efficacy correlates: Relation of academic achievement and self-esteem among Emirati students. *International Education Studies*, *5*(2), 49–57.

Affum-Osei, E., Asante, E. A., & Forkuoh, K. S. (2014). Perceived stress and academic performance of senior high school students in Western Region, Ghana. European *Journal of Business and Social Sciences*, *2*(11), 88-101.

Ahmadi, A., & Heydari, S. K. (2011). What do Iranian EFL learners and teachers think of teaching impoliteness. *Journal of Research in Applied Linguistics*, *2*, 53-68

Aithal, A. P., Kumar, N., Gunasegeran, P., Sundaram, S. M., Rong, L. Z., & Prabhu, S. P. A. (2016). Survey-based study of emotional intelligence as it relates to gender and academic performance of medical students. *Educ Health*, *29*(3), 255-258. Doi: 10.4103/1357-6283.204227.

Akinsola, F., & Nwajei, A. D. (2013). Test anxiety, depression and academic performance: Assessment and management using relaxation and cognitive restructuring techniques. *Psychology*, *4*(61), 18-24.

Akpan, M. U., Ojinnaka, N. C., & Ekanem, E. E. (2010). Academic performance of school children with behaviour disorders in Uyo, Nigeria. *African Health Sciences, 10*(2), 154-158.

Akudugu, M. A. (2015). *Emotional intelligence and employees' commitment to change: The role of regulations in Ghana***.** MPhil thesis. University of Ghana. Accra, Ghana.

Al-Harthy, I. S., & Was, C. A. (2013). Knowledge monitoring, goal orientations, self-efficacy, and academic performance: A path analysis. *Journal of College Teaching & Learning*, *10*(4), 263–278.

Allport, G. W. (1961). *Pattern and growth in perso*nality. New York: Holt, Rinehart & Winston.

Al-Mekhlafi, M. A. (2011). The relationship between writing self-efficacy beliefs and final examination scores in a writing course among a group of Arab EFL trainee-teachers. *International Journal for Research in Education* (IJRE), *29*(1), 16–33.

Alyami , M., Melyani, Z., Al Johani, A., Ullah, E., Alyami , H., Sundram , F., . . . Henning, M. (2017). The impact of self-esteem, academic self-efficacy and perceived stress on academic performance: A cross-sectional study of Saudi psychology students. *European Journal of Educational Sciences, EJES, 4*, 51-63. doi:10.19044/ejes.v4no3a5.

Amedahe, F. K. (2002). *Fundamentals of educational research methods*. Cape Coast: University of Cape Coast Press.

American Association of Colleges of Nursing (AACN) (1996). Interdisciplinary education and practice. *Journal of Professional Nursing*, *12*(2), 119-122. Doi:10.1016-S8755-7223(96) 80085-5

Aquino, A. E. (2003). *Gender differences and age in a group of web browsers' emotional intelligence*. Unpublished thesis. Universidad Inca Graciliazo de la Vega, Lima, Peru.

Archer, J. & Lamnin, A. (1985). An investigation of personal and academic stressors on college campuses. *Journal of College Student Personnel*, *26*, 210-215.

Arora, S., Ashrafian, H., Davis, R., Athanasiou, T., Darzi, A., Sevdalis, N. (2010). Emotional intelligence in medicine: A systematic through the context of the ACGME competencies. *Med Educ*, *44*:749-64.

Austin, E. J. (2005). Personality, well-being and health correlates of trait emotional intelligence. *Personality and Individual Differences*. *38*(3), 547–558.

Bandura, A. (1982). Self-efficacy mechanism in human agency. American Psychologist, *37*(2), 122-147. http://dx.doi.org/10.1037/0003-0637.2.122

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioural change. *Psychology Review*, *84*(2): 191–215.

Bandura, A. (1986). Social foundations of thought and action: *A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, *28*(2), 117-148. doi:10.1207 /s1532

Bandura, A. (1995). Exercise of personal and collective efficacy in changing societies. In A. Bandura (Ed.), *Self-efficacy in changing societies* (pp. 1-45). New York: Cambridge University Press.

Bandura, A. (1997). Self-efficacy: *The exercise of control*. (p. 175). New York: Freeman.

Bandura, A. (2011). A social cognitive perspective on positive psychology. *Revista de Psicología Social*, *26*(1), 7–20. Doi:10.1174 /021347 41179407.

Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management*, *38*, 9–44.

Bar-On, R. (1997). *Bar-On emotional quotient inventory* (EQ-I): Technical manual. Toronto, Canada: Multi-Health Systems.

Bertsch, G., & Ostermann, G. (2011). The effect of wellness brand awareness on expected and perceived service quality. Tourismos. *An International Multidisciplinary Journal of Tourism*, *6*(2), 103-120.

Best, W. J., & Kahn, V. J. (2009). *Research in education* (10 ed.). New Delhi: PHI Learning Private Limited.

Bigna, J. J. R., Fonkoue, L., Tchatcho, M. F. F., Dongmo, C. N., Soh, D. M., Um, J. L. L. N., et al. (2014). Association of academic performance of premedical students to satisfaction and engagement in a short training program: A cross sectional study presenting gender differences. *BMC research notes*, *7*, 105. Doi: org/10.1186/1756-0500-7-105.

Björkenstam, C., Weitoft, G. R., Hjern, A., Nordström, P., Hallqvist, J., & Ljung, R. (2010). School grades, parental education and suicide-A national register-

based cohort study. *Journal of Epidemiological Community Health*, *1*(2), 1-8. doi:10.1136/jech.2010.117226

Boakye, M. (2017). *Investigating the association between emotional intelligence and socioeconomic status of Ashesi University College students*. Undergraduate thesis. Ashesi University College. Accra, Ghana.

Bostanci, M, Ozdel, O, Oguzhanoglu, N. K, Ozdel, L, Ergin, A., Ergin, N., et al. (2005). Depressive symptomatology among university students in Denizli, Turkey: Prevalence and sociodemographic correlates. *Croat Med J, 46*(1), 96-100.

Boyatzis, R. E., Goleman, D., & Rhee, K. (1999). Clustering competence in emotional intelligence: Insights from the Emotional Competence Inventory (ECI). In Bar-On, R. & J. D. Parker (Ed's.), *Handbook of emotional intelligence*. San Francisco: Jossey-Bass.

Brackett, M. A., & Mayer, J. D. (2003). Convergent, discriminant and incremental validity of competing measures of emotional intelligence. *Personality and Social Psychology Bulletin*, *29*, 1147-1158

Brackett, M. A., Rivers, S. E., Shiffman, S., Lerner, N., & Salovey, P. (2006). Relating emotional abilities to social functioning: A comparison of self-report and performance measures of emotional intelligence. *Journal of Personality and Social Psychology*, *91*, 780-795.

Brown, B. L. (1997). *A new focus for allied health occupations: Trends and issues alerts*. (Report No. RR-93002001). Adult, Career, and Vocational Education. (ED409443), Columbus: OH.

Brown, R. F., & Schutte, N. S. (2006). Direct and indirect relationships between emotional intelligence and subjective fatigue in university students. *Journal of Psychosomatic Research*, *60*, 585-593.

Buhler, C. (1935). The curve of life as studied in biographies. *Journal of Applied Psychology*, *19*, 405-409.

Buhler, C., & Massarik, E. (Eds.). (1968). *The course of human life*. New York: Springer.

Burns, R. A., & Machin, M. A. (2009). Investigating the structural validity of Ryff's psychological well-being scales across two samples. *Social Indicators Research*, *93*(2), 359-375.

Burns, R. A., & Machin, M. A. (2010). Identifying gender differences in the independent effects of personality and psychological well-being on two broad affect components of subjective well-being. *Personality and Individual Differences*, *48*(1), 22-27.

Cabello, R., Sorrel, M. A., Fernández-Pinto, I., Extremera, N., & Fernández-Berrocal, P. (2016). Age and gender differences in ability emotional intelligence in adults: A cross-sectional study. *Developmental Psychology*, *52*, 1486-1492. doi:10.1037/dev0000191

Carroll, A. M. (2009). Self-efficacy and academic achievement in Australian high school student: The mediating effects of academic as portions and delinquency. *Journal of Adolescences*. *32*, 797-817.

Casey, D., Thomas, S., Hocking, R. D., & Kemp-Casey, A. (2016). Graduate-entry medical students: older and wiser but not less distressed. *24*(1) 88–92. *Journal of Adolescences.* DOI: 10.1177/103985621561299.

Cavallo, A. M. L., Potter, W. H., & Rozman, M. (2004). Gender differences in learning constructs, shifts in learning constructs, and their relationship to course achievement in a structured inquiry, yearlong college physics course for Life Science majors. *School Science and Mathematics, 104*(6), 288–300. https://doi.org/10.1111/j.19498594.2004.tb18000.x

Cayubit, R. F. O. (2014). Academic self-efficacy and study hours as predictors of test anxiety among high school students. *25*(3) 88–92. *Journal of Adolescences.* DOI: 10.1177/103985621561299.

Cazan, A. M., & Năstasă, L. E. (2015). Emotional intelligence, satisfaction with life and burnout among university students. *Procedia-Social and Behavioral Sciences, 180*, 1574- 1578.

Chandra, A., Gayatri, A., & Devi, D. (2017). Assessment of emotional intelligence in first year medical graduates: A Questionnaire based study. *International Journal of Physiology, 5*, 124-126. Doi: 10.5958/2320-

Chang, B. G., & Solomon, J. (2010). Stereotype threat test anxiety and specific self-efficacy as predictors of promo thin exam performance. *Group & Organization Management*. *35*, 77-107.

Chao, C. T. (2003). *Foreign language anxiety and emotional intelligence: A study of EFL students in Taiwan*. Doctoral dissertation. Texas A & M University-Kingsville.

Chemers, M. M., Hu, L., & Garcia, B. F. (2001). Academic self-efficacy and first year college student performance and adjustment. *Journal of Educational Psychology*, *93*(1), 55- 64. Retrieved from http://mason.gmu.edu/~fhuie/

Chew, B. H., Zain, A. M., & Hassan, F. (2013). Emotional intelligence and academic performance in first and final year medical students: a cross-sectional study. *BMC medical education*. *13*,113-44. https://doi.org/10.118

Chinipardaz, Z., Boroujerdni, M. G., Pasalar, P., Khozany, S. A., & Keshavarz, A. (2011). Investigation of emotional intelligence and its relationship with academic achievement in medical students of Tehran University of medical sciences in 2008-2009. *Journal of Medical Education Development Center*, *8*(2), 167-172.

Choi, N. (2005). Self – efficacy and self – concept as predictors of college students' academic performance. *Psychology in the Schools*, *42*(2), 197 –205. doi: 10.1002/pits.20048.

Chow, H. P. (2010). Predicting academic success and psychological wellness in a sample of Canadian undergraduate students. *Electronic Journal of Research in Educational Psychology*, *8*(2), 473-496.

Cohen, L, Manion, L., & Morrison, K. (2007). *Research methods in education*. 6th Edition. London: Routledge Farmer.

Cohen-Schotanus, J., Arno M. M., Reinders, J. J., Jessica, A., Van Rossum, H. J., & Vander, V. C. P. (2006). The predictive validity of grade point average scores in a partial lottery medical school admission system. *Med Edu,c 40*,1012-1019.

Craig, A., Tran, Y., Hermens, G., Williams, L. M., Kemp, A., Morris, C., & Gordon, E. (2009). Psychological and neural correlates of emotional intelligence in a large sample of adult males and females. *Personality and Individual Differences*, *46*, 111-115.

Creswell, J. W. (2014). *Research design qualitative, quantitative and mixed methods approaches* (4th ed.). Thousand Oaks, CA Sage.

Damasio, A. R. (1994). *Descartes' error: Emotion, reason, and the human brain*. New York: Grosset/Putnam.

Davidson, R. J., Jackson, D. C., & Kalin, N. H. (2000). Emotion, plasticity, context, and regulation: Perspectives from affective neuroscience. *Psychological Bulletin, 126,* 890–909.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behaviour. *Psychological Inquiry, 11,* 227-268.

Depape, A. R., Hakim-Larson, J., Voelker, S., Page, S., & Jackson, D. L. (2006). Self-talk and emotional intelligence in university students. *Canadian Journal of Behavioural Science, 38,* 250-260.

Dierendonck, D. V., Dı´az, D., Rodrı´guez-Carvajal , R., Blanco, A., & Moreno-Jime´nez, B. (2008). Ryff's six-factor model of psychological well-being: A Spanish exploration. *Soc Indic Res, 87,* 473–479. doi:10.1007/s11205-007-9174-7.

Duncan-Williams, B. (2015). A*cademic stress, academic performance and the psychological well-being of senior high school remedial students in the Greater Accra Region of Ghana.* Thesis, Accra: University of Ghana.

Ebenuwa-Okoh, E. E. (2010). Influence of age, financial status, and gender on academic performance among undergraduates. *Journal of Psychology, 1*(2), 99-103.

Edwards, C. (2005). Research on faith and health: *New approach to old questions. Faith and health: Psychological perspectives*. New York: Guilford Press.

Eisenberg, D., Golberstein, E., & Hunt, J. B. (2009). Mental health and academic success in college. *BE Journal of Economic Analysis & Policy*, *9*(1), 40.

Erikson, E. (1959). Identity and the life cycle. *Psychological Issues. J*, 18-164.

Essel, I. (2014, Febuary 14). Level 100 student at Winneba commits suicide after failing three papers. *My joy online* Retrieved from http\\www.Myjoyonline

Ewumi, A. M. (2012). Gender and social-economic status as correlates of students' academic achievement in senior secondary schools. *European scientific Journal*, *8*(4), 23-36.

Fallahzadeh, H. (2011). The Relationship between emotional intelligence and academic achievement in medical science students in Iran. *Procedia - Social and Behavioral Sciences*, pp. 1461 – 1466.

Farnia, F. (2012). Emotional intelligence and foreign language proficiency: Relating and comparing ESAP and TOEFL performance. *The International Journal of Trans-formative Emotional Intelligence*, *1*, 51-60.

Fernandes, H. M., Vasconcelos-Raposo, J., & Teixeira, C. M. (2010). Preliminary analysis of the psychometric properties of Ryff's scales of psychological well-being in portuguese adolescents. *Spanish Journal of Psychology*, *13*(2), 1032–1043.

Fernández-Berrocal, P., Cabello, R., Castillo, R., & Extremera, N. (2012). Gender differences in emotional intelligence: The mediating effect of age. *Behavioral Psychology*, *20*, 77-89.

Field, A. (2009). *Discovering Statistics using SPSS*. London: SAGE. Ca 600. ISBN: 9781847879073.

Folkman, S. (2010). Stress, coping, and hope. *Psycho-Oncology*, *19*(9), 901–908. doi:10.1002/pon. 1836.

Fraenkel, J. R. & Wallen, N. E. (2003). *How to design and evaluate research in education*. 5TH ed. New York: McGraw-Hill.

General Accounting Office (GAO) (1998). *U.S. General Accounting Office: The role of GAO in assisting congressional oversight.* 1-11. Washington, DC.

Gardner, H. (1983). *Frames of mind*: *The theory of multiple intelligences*. New York: Basic Books.

Gay, L. R., Mills, G. E., & Airasian, P. W. (2009). *Educational research: Competencies for analysis and applications* (9th edition). Upper Saddle River, New Jersey: Prentice Hall.

Gecas, V. (2004). Self-agency and the life course. In J. T. Mortimer & M. J. Shanahan (Eds.), *Handbook of the life course* (pp. 369-390). New York: Springer Science and Business Media, LLC.

Ghraibeh, A. M. A. A. (2014). Academic self-efficacy in reading as a predictor of Meta comprehension among Arabic nonnative speakers. *International Journal of Applied Psychology*, *4*(1): 1-12. DOI: 10.5923/j.ijap.20140

Gist, M., & Mitchell, T. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *The Academy of Management Review*, *17*(2), 183-211. Retrieved from http://www.jstor.org/stable/258770

Glozah, F. N. (2013). Effects of academic stress and perceived social support on the psychological wellbeing of adolescents in Ghana. *Open Journal of Medical Psycho*logy, *2*, 143-150.

Gneezy, U., Niederle, M. & Rustichini, A. (2003). Performance in competitive environments: Gender differences. *Quarterly Journal of Economics*, *118* (2), 1049–1073.

Goleman, D. (1995). *Emotional Intelligence: Why it can matter more than I.Q*. New York: Bantam Books.

Goleman, D. (1998). What makes a leader? *Harv Bus Rev*, *76*,93-102.

Goleman, D. (2001). An EI‐based theory of performance. In: Cherniss C, Goleman D, editors. *The emotionally intelligent workplace*. San Francisco, CA, Jossey‐Bass; p. 27‐44.

Haines, M. E., Norris, M. P., & Kashy, D. A. (1996). The effects of depressed mood on academic performance in college students. *Journal of College Student Development*, *37*(5), 519-525.

Hartley, J., Betts, L., & Murray, M. (2007). Gender and assessment: Differences, similarities and implications. *Psychology Teaching Review*, *13*(1), 34-47.

Hashemi, S. A., Khezri, H., Abbasi, A., Hemmati, A., & Hashemi, Z. (2014). Relationship between emotional intelligence and self-efficacy with academic performance of students of Lamerd Islamic Azad University in the academic year 2013- 2014. *International Journal of Basic*

Sciences & Applied Research, 3, 261-265. Retrieved from www.isicenter.org

Helson, R., & Srivastava, S. (2001). Three paths of adult development: Conservers, seekers, and achievers. *Journal of Personality and Social Psychology*, *80*, 995-1010

Hilary, G., & Brent, M. (1994). Emotional, social, and academic adjustment of college students: A longitudinal study of retention. *Journal of Counselling and Development, 72*, 281-285.

Humphris, G., Blinkhorn, A., Freeman, R., Gorter, R., HoadReddick, G., Murtomaa, H., et al. (2002). Psychological stress in undergraduate dental students: Baseline results from seven European dental schools. *Eur J Dent Educ, 6*(1), 22-9.

Jahoda, M. (1958). *Current concepts of positive mental health*. New York: Basic Books.

James, D. A., Parker, J. M. D., Laura, M. W., Barbara, J. & Bond, M. J. H. (2005). Academic achievement and emotional intelligence: Predicting the successful transition from high school to university. *Journal of the First Year Experience & Students in Transition; 17*, 67-68.

Johnson, G. D. K. (2008). *Learning styles and emotional intelligence of the adult learner*. Unpublished doctoral dissertation. Auburn University, Alabama, USA. http://etd.auburn.edu/etd/handle/10415/1066?show=full.

Joseph, D. L., & Newman, D. A. (2010). Emotional intelligence: An integrative meta-analysis and cascading model. *Journal of Applied Psychology*, *95*, 54-78.

Joshi, S. V., Srivastava, K., & Raychaudhuri, A. (2012). The study of relation between emotional intelligence and students' academic achievement of high schools in Tehran city. *International Conference on Education and Educational Psychology,* (pp. 1334 – 1341). Elsevier Ltd.

Jung, C. G. (1933). *Modem man in search of a soul* (W.S. Dell & C. F. Baynes, Trans.). New York: Harcourt, Brace, & World.

Kadison, R., & DiGeronimo, T. F. (2004). *College of the overwhelmed: The campus mental health crisis and what to do about it*. San Francisco, CA: Jossey-Bass.

Kamal, M., & Bener, A. (2009). Factors contributing to school failure among school children in very fast developing Arabian Society. *Oman Medical Journal, 24*(3), 212-217. Retrieved from https://www.researchgate.

Kelley, C. S., Justice, M., Waller, L., & Johnson, G. (2013). An exploration of emotional intelligence and job performance among nurses in rural Texas. *American International Journal of Contemporary Research*, *3*(7), 1–6.

Keyes, C., Shmotkin, D., & Ryff, C. (2002). Optimizing wellbeing: The empirical counter of two traditions. *Journal of Personality and Social Psychology*, *82*, 1007-1022.

Khan, A. S., Cansever, Z., Avsar, U. Z., & Acemoglu, H. (2013). Perceived self-efficacy and academic performance of medical students at Ataturk University, Turkey. *Journal of the College of Physicians and Surgeons Pakistan, 23*(7), 495-498.

Khan, M. (2013). Academic self-efficacy, coping and academic performance in college. *International Journal of Undergraduate Research and Creative Activities, 5*, 4. DOI: http://dx.doi.org/10.7710/2168-0620.1006

Kilgo, C. A., Mollet, A. L., & Pascarella, E. T. (2016). The estimated effects of college student involvement on psychological well-being. *Journal of College Student Development, 57*,1043-1049. doi:org /10.1353 /csd.2016.0.

Kirikkanat, B., & Soyer, M. K. (2015). The academic behavioral confidence scale: The adaptation study with turkish undergraduates. *International Journal of Technical Research and Applications, 1*(30), 11-20. Retrieved from www.ijtra.com.

Kitzrow, M. A. (2003). The mental health needs of today's college students: Challenges and recommendations. *Journal of Student Affairs Research and Practice, 41*, 167-181.

Kportufe, J. (2014). *Assessing the impact of emotional intelligence on employee customer service delivery: A case study of banking sector in Ghana*. Master's thesis. Kwame Nkrumah University of Science and Technology. Kumasi, Ghana.

Kulatunga-Moruzi, C., & Norman, G. R. (2002). Validity of admissions measures in predicting performance outcomes: The contribution of cognitive and non-cognitive dimensions. *Teach Learn Med, 14*, 34-42.

Lane, J., & Lane, A. (2001). Self-efficacy and academic performance. *Social Behavior and Personality: An International Journal, 29*, 687-694. DOI: https://doi.org/10.2224/sbp.

Lavasani, M. G., Mirhosseini, F. S., Hejazi, E., & Davoodi, M. (2011). The effect of self-regulation learning strategies training on the academic motivation and self-efficacy. *Procedia - Social and Behavioral Sciences*, *29*, 627–632.

Lunenburg, F. (2011). Self-efficacy in the workplace: Implications for motivation and performance. *International Journal of Management, Business, And Administration*, *14*(1), retrieved from http://www.google.com/url?sa=&

Lyons, J. B., & Schneider, T. R. (2005). *The Influence of emotional intelligence on performance*. US: Elsevier Publications.

MacLeod, A. K., & Moore, R. (2000). Positive thinking revisited: positive cognitions, well-being and mental health. *Clinical Psychology and Psychotherapy*, *7*, 1-10.

Maslow, A. H. (1968). *Toward a psychology of being* (2nd ed.). New York: Van Nostrand.

Mayer, J. D., & Salovey, P. (1997). *What is emotional intelligence*. Emotional.

Mayer, J. D., & Stevens, A. A. (1994). An emerging understanding of the reflective (meta-) experience of mood. *Journal of Research in Personality*, 28 (3), 351 – 37.

Mayer, J. D., Caruso, D. R., & Salovey, P. (1999). Emotional intelligence meets standards for traditional intelligence. *Intelligence*, *27*, 267-298.

Mayer, J. D., & Geher, G. (1996). Emotional intelligence and the identification of emotion. Intelligence, *22*, 89-113. doi:10.1016/S0160-2896(96)90011-2

Mayer, J. D., Roberts, R. D., & Barsade, S. G. (2008). Human abilities: Emotional intelligence. *Annu Rev Psychol*, *59*,507-36.

McClelland, D. C. (1975). *Power: The inner experience*. New York: Halstead.

McKenzie, K., & Schweitzer, R. (2001). Who succeeds at university? Factors predicting academic performance in first year Australian university students, *Higher Education Research & Development*, *20*(1), 21-33, DOI: 10.1080/07924360120043621

McLeod, J. D., Uemura, R., & Rohrman, S. (2012). Adolescent mental health, behaviour problems, and academic achievement. *Journal of Health and Social Behaviour*, *53*, 482-497. doi:10.1177/0022146512462888

Meshkat, M., & Nejati, R. (2017). Does emotional intelligence depend on gender? A study on undergraduate English majors of three Iranian Universities. *Journals Sage Pub*, 1-8. doi:10.1177/2158244017725796

Miller, G. D., & Foster, L. T. (2010). Critical synthesis of wellness literature. Retrieved from http://www.geog.uvic.ca /wellness /Critical Synthesis %20

Mohapel, P. (2012). EQ Self Inventory: *The quick emotional intelligence scale*. San Diego City College MESA Program. San Diego City College.

Multon, K. D., Brown, S. D. & Lent, R. W. (1991). Relation of self-efficacy beliefs to academic outcomes: A meta-analytic investigation. *Journal of Counselling Psychology*, *38*, 30–38.

Mushtaq, I. & Khan, S. N. (2012). Factors affecting students' academic performance. *Global Journal of Management and Business Research, 12* (9), 17-22. https://globaljournals.org/GJMBR_Volume12/3-Factors-Affec

Myers, D. G. (1998). *Psychology*, 5th Ed. NY: Worth Publishers.

Myint, A. A., & Aung, A. A. (2016). The relationship between emotional intelligence and job performance of Myanmar school teachers. *Asten Journal of Teacher Education, 1,* 1-16.

Naghavi, F., & Redzuan, M. (2011). The relationship between gender and emotional intelligence. *World Applied Sciences Journal, 15*, 555-561

National College Health Assessment (2010). American College Health Association – National College Health Assessment II: Reference Group Data Report Spring. Linthicum, Md.: American College Health Association.

Needham, F. J., Crosnoe, R., & Muller, C. (2004). Academic failure in secondary school: The inter-related role of health problems and educational context. *Social Problems,* 5(4), 569-586. Retrieved from: http://www.ncbi.nlm

Nelson, D. B., & Low, G. R. (2004). Emotional intelligence: Effectively bridging the gap between high school and college. Texas Study of Secondary Education. *The Texas Association of Secondary School Principals*. *13*(2).

Nelson, D., Low, G., & Hammett, R. (2017). Twenty first century skills for achieving education. *American Journal of Educational Research Life, Work Success, 5,* 197-206. doi:10.12691/education-5-2-15.

Neugarten, B. L. (1968). The awareness of middle age. In B. L. Neugarten (Ed.), *Middle age and aging* (pp. 93-98). Chicago: University of Chicago Press.

Neugarten, B. L. (1973). Personality change in late life: A developmental perspective. In C. Eisdorfer & M. P. Lawton (Eds.), *The psychology of adult development and aging* (pp. 311-335). Washington, DC: American Psychological Association.

Newsome, S., Day, A. L., & Catano, V. M. (2000). Assessing the predictive validity of emotional intelligence. *Personality and Individual Differences*, *29*, 1005-1016.

Nguyen, D. T., Dedding, C., Pham, T. T., & Bunders, J. (2013). Perspectives of pupils, parents, and teachers on mental health problems among Vietnamese secondary school pupils. *BMC Public Health*, *13*(1). 1046. doi: 10.1186/1471-2458-13-1046

Niu, S. X., & Tienda, M. (2009). Testing, ranking and college performance: Does High School matter? 1-44.

Norman, G. R. (2004). The morality of medical school admission. *Adv Health Sci Educ*, 979-82.

Obioma, G., & Salau, M. (2007). The predictive validity of public examinations: A case study of Nigeria. *Journal of Nigerian Educational*. Research Association, 10.

Oliver, P. (2010). *The student's guide to research ethics* (2 ed.). Berkshire, England: Open University Press.

Olugbemi, O., & Bolaji, A. (2016). Psychosocial predictors of emotional intelligence among police officers in Nigeria. *International Journal of Police Science & Management*, *18*, 126-132. doi:10.1177/14613557

Owusu, O. (2017, February 21). Health sector to experience improved doctor-patient ratio-UG Vice chancellor. *Ghana Web*. hpts//www.ghanaweb.com.

Parker, J. D., Summerfeldt, L. J., Hogan, M. J., & Majeski, S. A. (2004). Emotional intelligence and academic success: Examining the transition from high school to university. *Personality and Individual Differences, 36(1)*,163–172. Retrieved from www.elsevier.com/locate/paid.

Patel, S. K. (2017). Emotional intelligence of college level students in relation to their gender. *The International Journal of Indian Psychology*, *4*, 2349-3429.

Peker, I., Alkurt, M. T., Usta, M. G., & Turkbay, T. (2009). The evaluation of perceived sources of stress and stress levels among Turkish dental students. *Int Dent J, 59*(2),103-11.

Piazza-Waggoner, C. A., Cohen, L. L., Kohli, K., & Taylor, B. K. (2003). Stress management for dental students performing their first paediatric restorative procedure. *J Dent Educ, 67*(5), 542-8.

Ranasinghe, P., Wathurapatha, W. S., Mathangasinghe, Y., & Ponnamperuma, G. (2017). Emotional intelligence, perceived stress and academic performance of Sri Lankan medical undergraduates. *BMC Medical Education*, 17(41). doi:10.1186/s12909-017-0884-5.

Ranjbar, H., Khademi, S. H., & Areshtanab, H. N. (2017). The relation between academic achievement and emotional intelligence in Iranian Students: A meta-analysis. *Acta Facultatis Medicae Naissensis*, 65-76.

Richardson, M., Abraham, C., & Bond, R. (2012). Psychological correlates of university students' academic performance: A systematic review and meta-analysis. *Psychological Bulletin*, 138, 353.

Rogers, C. R. (1961). *On becoming a person*. Boston: Houghton Mifflin.

Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology, 52*, 141-166. http://dx.doi.org/10.1146/annurev.

Ryff, C. D. (1982). Successful aging: A developmental approach. The Gerontologist, *22*, 209-214.

Ryff, C. D. (1985). Adult personality development and the motivation for personal growth. In D. Kleiber & M. Maehr (Eds.), *Advances in motivation and achievement*: 4. *Motivation J and adulthood*, Greenwich, er. J Ai Press.

Ryff, C. D. (1989). Happiness is everything, or Is It? Explorations on the meaning of psychological well-being. *Journal of Personality and social psychology* ,069-1081.

Ryff, C. D. (1989b). In the eye of the beholder: Views of psychological well-being among middle and old-aged adults. *Psychology and Aging*, *4*,195-210

Ryff, C. D. (1995). Psychological well-being in adult life. *Current Directions in Psychological Science*, *4*,99-104. Retrieved from http://dx.doi.org /11

Ryff, C. D. (2014). Psychological well-being revisited: Advances in the science and practice of eudaimonia. *Psychotherapy and Psychosomatics*, *83*(1), 10-28. doi:10.1159/000353263

Ryff, C. D. (1989a). Beyond ponce de leon and life satisfaction: New directions in quest of successful aging. *International Journal of Behavioral Development, 12*, 35-55.

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, *69*,719-727. http://dx.doi.org/10.1037/0022-3514.69.4.719

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, *9*(3), 185-211.

Sander, P., & Sanders, L. (2003). Measuring confidence in academic study: A summary report. *Electronic Journal of Research in Educational psycho logy and Psychopedagogy*, *1*(1).

Sander, P., & Sanders, L. (2006a). Understanding academic confidence. *Psychology Teaching Review*, *12*(1), 29–39.

Sander, P. (2009). Current developments in measuring academic behavioural confidence. *Psychology Teaching Review*, *1*(15).

Sander, P., & Sanders, L. (2006). Gender, psychology students and higher education. *6*(1), 33–36.

Sander, P., (2004a). *Understanding the learner for more effective university teaching*. Unpublished PhD thesis. University of Wales.

Sanders, L., & Sander, P. (2007). Academic behavioural confidence: A comparison of medical and psychology students. *Electronic Journal of research in Educational Psychology and Psychopedagogy*, *5*(3), 633–650.

Sanders, L., & Sander, P. (2009). Measuring academic behavioural confidence: The ABC scale revisited. *J Studies in Higher Education*, 19-35 Retrieve https://doi.org/10.1080/03075070802457058

Sanders, L., Sander, P., & Mercer, J. (2009). Rogue males: Perceptions and performance of male psychology students. *Psychology Teaching Review*, *15*(1), 3-17.

Sanders, P., Putwain, D., & Fuente, L. J. (2013). Relationship between undergraduate student confidence approach to learning and academic performance: the role of gender, *Revista de Psicodidactica*, *18*(2).

Shah, C. J., Sanisara, M., Vaghela, H. M., & Mehta, H. B. (2014). The relationship between emotional intelligence and academic achievement in medical undergraduate. *International Journal of Research in Medical Sciences, 2*(1), 59-61. Retrieved from www.msjonline.org

Shaheen, S., & Shaheen, H. (2016). Emotional intelligence in relation to psychological well-being among students. *The International Journal of Indian Psychology*, *3*(4), 2349-3429. Retrieved 08 13, 2017, from http://www.ijip.in DOI: 18.01.115/20160304.

Shaukat, S., & Bashir, M. (2016). University students' academic confidence: comparison between social sciences and natural science disciplines. *Journal of Elementary Education*, *25*, 113-123. Retrieved from www.researchgate.net/publication/305441976

Sirigatti, S., Penzo, I., Iani, L., Mazzeschi, A., Hatalskaja, H., Giannetti, E., & Stefanile, C. (2009). Measurement invariance of Ryff's psychological well-being scales across Italian and Belarusian students. *Social Indicators Research*, 1-14. doi:DOI:10.1007/s11205-012-0082-0

Snyder, C. R., & Lopez, S. J. (2007). *Positive psychology: The scientific and practical explorations of human strengths*. Thousand Oaks, CA: Sage.

Soet, J., & Sevig, T. (2006). Mental health issues facing a diverse sample of college students: Results from the college student mental health survey. *NASPA Journal*, *43*, 410-431.

Song, L. J., Huang, G. H., Peng, K. Z., Law, K. S., Wong, C. S., & Chen, Z. (2010). The differential effects of general mental ability and emotional intelligence on academic performance and social interactions. *Intelligence*, *38*, 137-143.

Sparkman, L. A. (2008). *Emotional intelligence as a non-traditional predictor of college student retention and graduation*. Doctor of philosophy dissertation. University of Southern Mississippi. http://aquila.usm.edu/dis

Springer, K. W. Pudrovska, T., & Hauser, R. M. (2011). Does psychological wellbeing change with age? Longitudinal tests of age variations and further exploration of the multidimensionality of Ryff's model of psychological wellbeing. Social Science Research, *40*, 392–398.

Stajkovic, A. D., & Luthans, F. (1998a). Self-efficacy and work-related performance: A meta- analysis. *Psychological Bulletin*, *124*, 240–261.

Stajkovic, A. D., & Luthans, F. (1998b). Social cognitive theory and self-efficacy: Going beyond traditional motivational and behavioural approaches. *Organizational Dynamics*, *26*, 62–74.

Sternberg, R. J., Wagner, R. K., & Okagaki, L. (1993). Practical intelligence: The nature and role of tacit knowledge in work and at school. In H. Reese & J. Puckett (Eds.), *Advances in lifespan development* (pp.205–227). Hillsdale, USA: Lawrence Erlbaum Associates.

Stratton, T. D., Saunders, J. A., Elam, C. L. (2008). Changes in medical students' emotional intelligence: An exploratory study. *Teach Learn Med*; *20*, 279–84

Stys, Y., & Brown, S. L. (2004). A review of the emotional intelligence literature and implications for corrections. *Research Branch. Correctional Service of Canada*.

Suliman, V. (2010). The relationship between learning styles, emotional social intelligence, and academic success of undergraduate nursing students. *Journal of Nursing Research*, *18*(2), 136-143.

Taylor, G. J., Parker, J. D. A., & Bagby, R. M. (2001). The relationship between alexithymia and emotional intelligence. *Personality and Individual Differences*, *30*, 107-115.

Thal, K. I., & Hudson, S. (2017). A conceptual model of wellness destination Characteristics that contribute to psychological well-being. *Journal of Hospitality & Tourism Research* , 1 –17.

Thorndike, E. L. (1920*). Intelligence and its uses*. Harper's Magazine, *140*, 227-235.

Trevino, J. O. (2014). *Emotional and social intelligence: a study of interpersonal, intrapersonal, social awareness, and social facility skills of information technology professionals in higher education.* Texas: Doctor of education Texas A & M University-Corpus Christi, Corpus Christi.

Trpcevska, L. (2017). *Predictors of psychological well-being, academic self-efficacy and resilience in university students, and their impact on academic motivation.* Doctor thesis. Victoria University.

Turner, E. A., Chandler, M., & Heffer, R. W. (2009). Influence of parenting styles, achievement motivation, and self-efficacy on academic performance in college students. *Journal of College Student Development, 50*(3), 337-346. http://dx.doi.org/10.1353/csd.0.0073

Tutton, P., Price, & M. (2002). Selection of medical student: Affirmative action goes beyond the selection process. *Br Med J, 324*, 1170-1.

Uraz, A., Tocak, Y. S., Yozgatlıgil, C., Cetiner, S., & Bal, B. (2013). Psychological well-being, health, and stress sources in Turkish dental students. *Journal of Dental Education, 77*, 1345-1355.

Vaez, M., & Laflamme, L. (2008). Experienced stress, psychological symptoms, self-rated health and academic achievement: A longitudinal study of Swedish university students. *Social Behavior and Personality, 36*(2), 183-196.

Van der Bijl, J. J., & Shortridge-Baggett, L. M. (2002). The theory and measurement of the self-efficacy construct. In E. A. Lentz & L. M. Shortridge-Baggett (Eds.), *Self-efficacy in nursing. Research and*

measurement perspectives (pp. 9-28). New York, Springer. Retrieved from http://books.google.com/books?id=J6ujWyh_4_gC

Vansteenkiste, M., Niemiec, C. P., & Soenens, B. (2010). The development of the five mini-theories of self-determination theory: An historical overview, emerging trends, and future directions. *Advances in Motivation and Achievement, 16*, 105-165.

Vela, R. H., Jr. (2003). *The role of emotional intelligence in the academic achievement of first year college students.* Doctoral dissertation. Texas A & M. University-Kingsville.

Vernon, P. A., Petrides, K. V., Bratko, D., & Schermer, J. A. (2008). A behavioural genetic study of trait emotional intelligence. Emotion, *US National Library of Medicine National Institutes of Health, 8*,635-642.

Villarreal, J. R., Furgerson, L. K., Garza, K. K., Bain, F. S., & Slate, J. (2017). A study assessing student leadership skills through emotional intelligence. *National Forum of Applied Educational Research Journal, 30*(3).

Von-Franz, M. L. (1964). *The process of individuation*. In C. G. Jung (Ed.), Man and his symbols. New York: Doubleday.

Wechsler, D. (1940). Non-intellective factors in general intelligence. *Psychological Bulletin, 37*, 444-445.

Williams, T., & Williams, K. (2010). Self-efficacy and performance in mathematics: Reciprocal determinism in 33 nations. *Journal of Educational Psychology, 102* (2), 453-466. doi:10.1037/a0017271

Wissing, M. P. & Van Eeden, C. (2002). Empirical clarification of the nature of psychological well-being. *South African Journal of Psychology, 32,* 32 –44.

Wong, C, Day, J., Maxwell, S., & Meara, N. (1995). A multitrait-multimethod study of academic and social intelligence in college students. *Journal of Educational Psychology, 87,* 117-133.

WHO. (2004). *Promoting mental health: Concepts, emerging evidence, practice.* Summary report. Geneva: World Health Organization.

World Health Organization (WHO) (1946). *Constitution of the World Health Organization* as adopted by the international health conference, New York, 19–22.

Yamane, T. (1973). *Statistics*: *An Introductory Analysis*. 3rd Edition, Harper and Row, New York.

Yazache, A., T. (2013). Relationship between self-efficacy, academic achievement and gender in analytical chemistry at Debre Markos College of Teacher Education. *American Journal of Civil Engineering, 3* (1), 3-28. Retrieved from https://scholar.google.com/scholar?q=+and

Youssef-Morgan, C. M., & Luthans. F. (2015). Psychological capital and well-being. *Stress and Health, 31*(3): 180–188. doi:10.1002/smi.2623.

Yusoff, M. S., Esa, R. A., Pa, M. N., Mey, S. C., Aziz, R. A., & Rahim, A. F. (2013). A longitudinal study of relationships between previous academic

achievement,emotional intelligence and personality traits with psychol ogical health of medical students during stressful periods. *Education for Health, 26*(1), 39-47. Retrieved from www.educationforhe

Zimmerman, B. (2000). Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology*, *25*, 82–91.

Zimmerman, B. J., Bandura, A, & Martinez-Pons, M. (1992). Self-motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. *American Educational Research Journal*, *29*(3), 663-676. http://dx.doi.org/10.2307/1163261

Zohrevand, R. (2010). A comparison of self-efficacy, emotional intelligence, gender beliefs, gender satisfaction of females and males in predicting their academic achievement. *Motalleat Ravanshenakhti*, *6*, 46-73.

APPENDIX I

Questionnaire on Psychological Well-Being, Emotional Intelligence and Academic Self-Efficacy for Medical Students

Dear Respondent,

The items on this questionnaire are geared towards examining the impact of emotional intelligence on the psychological well- being of the individual. You are kindly entreated to tick in the box provided the responses that best describe you. Please be assured that the information provided is purely for academic purposes and will be treated with utmost confidentiality. Consequently, you are entreated to respond to all items with honesty and objectivity.

SECTION A: Bio Data

1. Sex: Male [ ] Female [ ]

2. Level of study: Level 400 [ ] Level 500 [ ] Level 600 [ ]

3. Age: 18 years and below [ ] 19-23 years [ ] 24 years Above [ ]

4. GPA: 3.5 – 4.0 [ ] 3.0 – 3.49 [ ] 1.5 – 2.99 [ ] 0 – 1.49 [ ]

SECTION B: Kindly indicate the extent to which you are aware of your emotions and how you express them using the following degrees as it applies to you.

Strongly Disagree **(SD)** **1** Moderately Disagree **(MD)** **2** Slightly Disagree **(SD)** **3** Slightly Agree **(SA)** **4** Moderately Agree **(MD)** **5** Strongly Agree **(SD)** **6**

Emotional Intelligence Questionnaire

No.	Items	SD	MD	SD	SA	MA	SA
1.	I can explain my actions in respect to its expression	1	2	3	4	5	6
2.	Emotions play an important part in my life	1		3	4	5	6
3.	My moods are easily affected by external events	1	2	3	4	5	6
4.	I can describe what I am feeling at a given moment	1	2	3	4	5	6
5.	I know my moods impact the people around me both at home and the work place	1	2	3	4	5	6
6.	When I'm upset, I am aware of what's happening to me	1	2	3	4	5	6
7.	I stay calm even in difficult circumstances	1	2	3	4	5	6

No.	Items	SD	MD	SD	SA	MA	SA
8.	I am emotionally balanced person because I know when to react to a situation and when not to do so.	1	2	3	4	5	6
9.	I accept responsibilities for my reactions being good or bad	1	2	3	4	5	6
10.	I don't easily get irritated by things and other people	1	2	3	4	5	6
11.	I can restrain myself when I feel anger towards someone	1	2	3	4	5	6
12.	I direct my energy into creative works in relation to my hobbies	1	2	3	4	5	6
13.	I am able to motivate myself to accomplish difficult tasks.	1	2	3	4	5	6
14.	I am clear about my goals for the future	1	2	3	4	5	6
15.	My career is moving in the right direction as I expect	1	2	3	4	5	6
16.	I feel excited when I think of my goals as I work towards it	1	2	3	4	5	6
17.	I act consistently towards my goals in spite of obstacles	1	2	3	4	5	6
18.	I find it too hard to maintain my enthusiasm when I encounter	1	2	3	4	5	6

	problems						
19.	I can tell if the people around me are becoming annoyed	1	2	3	4	5	6
20.	I am able to understand the way other people feel	1	2	3	4	5	6
21.	People choose to be with me due to how I treat them	1	2	3	4	5	6
22.	I get on well with people being it at home or outside home	1	2	3	4	5	6
23.	I care what happens to other people because we are human	1	2	3	4	5	6
24.	During an interaction with people, I easily sense it when a person's mood changes	1	2	3	4	5	6
25.	I'm able to show affection towards a person who is in need	1	2	3	4	5	6
26.	I find it easier to share my deep feelings with others	1	2	3	4	5	6
27.	I feel uncomfortable when other people get emotional about issues and situations	1	2	3	4	5	6
28.	I am able to talk someone down when they are upset because I demonstrate maturity in my	1	2	3	4	5	6

	dealings with people						
29.	It is easier for me to make friends because I'm sociable and fun to be with.	1	2	3	4	5	6
30.	I know other people depend on me so I'm careful the way I behave in situations and circumstances	1	2	3	4	5	6

Academic Self-Efficacy Scale

SECTION C: Please indicate in the scale provided the degree as to how you perceive yourself in your academic journey.

No.	Items	SD	MD	SD	SA	MA	SA
31.	I can study effectively on my own in an independent private study	1	2	3	4	5	6
32.	I can produce my best work under examination conditions	1	2	3	4	5	6
33.	I am able to respond to questions asked by a lecturer in front of a full lecture theatre	1	2	3	4	5	6
34.	I manage my work load to meet coursework deadlines	1	2	3	4	5	6
35.	I am able to give a presentation to a small group of fellow students	1	2	3	4	5	6
36.	I do attend most taught sessions throughout the semester	1	2	3	4	5	6
37.	I do attain good grades in my work	1	2	3	4	5	6
38.	I'm able to engage in profitable academic debate with my peers	1	2	3	4	5	6
39.	I'm able to ask lecturers questions about the material they are teaching, during a lecture	1	2	3	4	5	6
40.	I am able to produce coursework at the required standard.	1	2	3	4	5	6
41.	I write in an appropriate academic style.	1	2	3	4	5	6

42.	I do my best to be on time for lectures.	1	2	3	4	5	6
43.	I always try to pass assessments at the first attempt.	1	2	3	4	5	6
44.	I plan appropriate revision schedules before exams.	1	2	3	4	5	6
45.	I usually remain adequately motivated throughout.	1	2	3	4	5	6
46.	I produce my best work in coursework assignments	1	2	3	4	5	6
47.	I am able to attend tutorials throughout the semester	1	2	3	4	5	6

Psychological Well-being Scale

SECTION D: Kindly indicate the extent to which you are aware of your mental well-being?

No.	Items	SD	MD	SD	SA	MA	SA
48.	I tend to be influenced by people with strong opinions.	1	2	3	4	5	6
49.	I have confidence in my opinions, even if they are contrary to the general consensus.	1	2	3	4	5	6
50.	I judge myself by what I think is important, not by the values of what others think is important	1	2	3	4	5	6
51.	In general, I feel I am in charge of the situation in which I live.	1	2	3	4	5	6
52.	The demands of everyday life often get me down.	1	2	3	4	5	6
53.	I am quite good at managing the many responsibilities of my daily life	1	2	3	4	5	6
54.	I think it is important to have new experiences that challenge how you think about yourself and the world.	1	2	3	4	5	6
55.	For me, life has been a continuous process of learning, changing and growth.	1	2	3	4	5	6
56.	I gave up trying to make a big improvements or changes in my life a long time ago.	1	2	3	4	5	6

57.	Maintaining close relationships has been difficult and frustrating for me.	1	2	3	4	5	6
58.	People would describe me as a giving person, willing to share my time with others.	1	2	3	4	5	6
59.	I have not experienced many warm and trusting relationships with others.	1	2	3	4	5	6
60.	I live life one day at a time and don't really think about the future.	1	2	3	4	5	6
61.	Some people wander aimlessly through life, but I am not one of them.	1	2	3	4	5	6
62.	I sometimes feel as if I've done all there is to do in life.	1	2	3	4	5	6
63.	I like most aspects of my personality despite my weakness.	1	2	3	4	5	6
64.	I have not experienced many warm and trusting relationships with others	1	2	3	4	5	6
65.	In many ways, I feel disappointed about my achievements in life.	1	2	3	4	5	6

APPENDIX II

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
ETHICAL REVIEW BOARD

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref: CES-~~ERB~~/ucc-edu/42/18-37 Date: Jan 21, 2018

Your Ref: .....

Dear Sir/Madam,

ETHICAL REQUIREMENTS CLEARANCE FOR RESEARCH STUDY

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
lforde@ucc.edu.gh
0244786680

The bearer, Francis Nyamekye,..., Reg. No. ED/PPE/16/2015 is an M.Phil. ~~/Ph.D~~. student in the Department of Education and Psychology..... in the College of Education Studies, University of Cape Coast, Cape Coast, Ghana. He ~~/She~~ wishes to undertake a research study on the topic:

Impact of emotional intelligence, academic self-efficacy, psychological well-being on academic performance of final year medical students.

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)

APPENDIX III

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

Telephone: 233-3321-32440/4 & 32480/3
Direct: 033 20 91697
Fax: 03321-30184
Telex: 2552, UCC, GH.
Telegram & Cables: University, Cape Coast
Email: edufound@ucc.edu.gh

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref:

Your Ref:

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

THESIS WORK
LETTER OF INTRODUCTION: MR. FRANCIS NYAMEKYE

We introduce to you Mr. Nyamekye, a student from the University of Cape Coast, Department of Education and Psychology. He is pursuing Master of Philosophy degree in Educational Psychology and is currently at the thesis stage.

Mr. Nyamekye is researching on the topic:

"Influence of Emotional Intelligence and Psychological well-being on Academic Self-Efficacy of Final Year Medical Students in Ghanaian Universities. ".

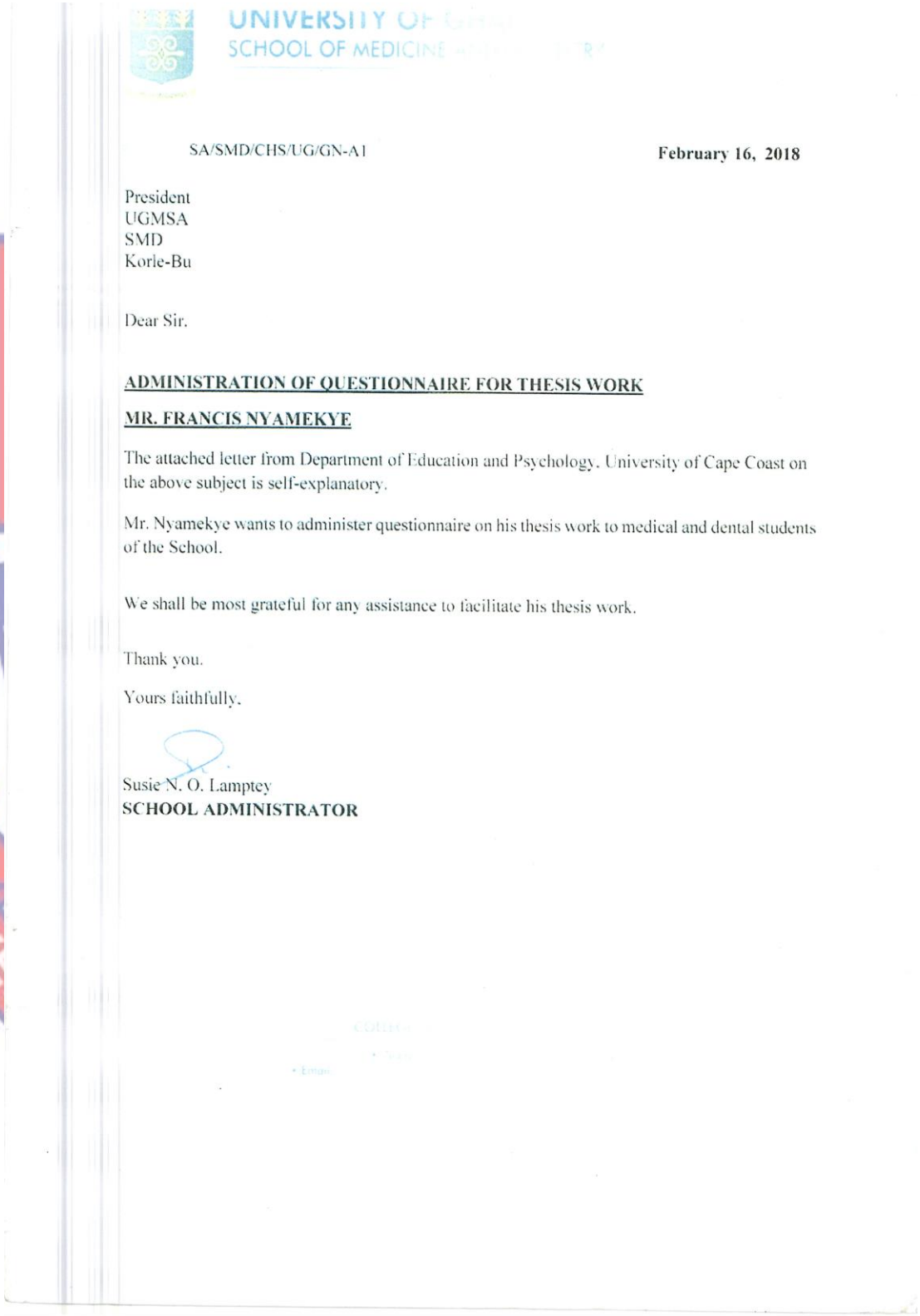
We would be grateful if he is given all the needed assistance toward this necessary academic exercise. Please, any information provided will be treated as strictly confidential.

Thank you.

Yours faithfully,

Theophilus A. Fiadzomor
Senior Administrative Assistant
For: **HEAD**

APPENDIX IV



UNIVERSITY OF GHANA
SCHOOL OF MEDICINE AND DENTISTRY

SA/SMD/CHS/UG/GN-A1 **February 16, 2018**

President
UGMSA
SMD
Korle-Bu

Dear Sir,

ADMINISTRATION OF QUESTIONNAIRE FOR THESIS WORK

MR. FRANCIS NYAMEKYE

The attached letter from Department of Education and Psychology, University of Cape Coast on the above subject is self-explanatory.

Mr. Nyamekye wants to administer questionnaire on his thesis work to medical and dental students of the School.

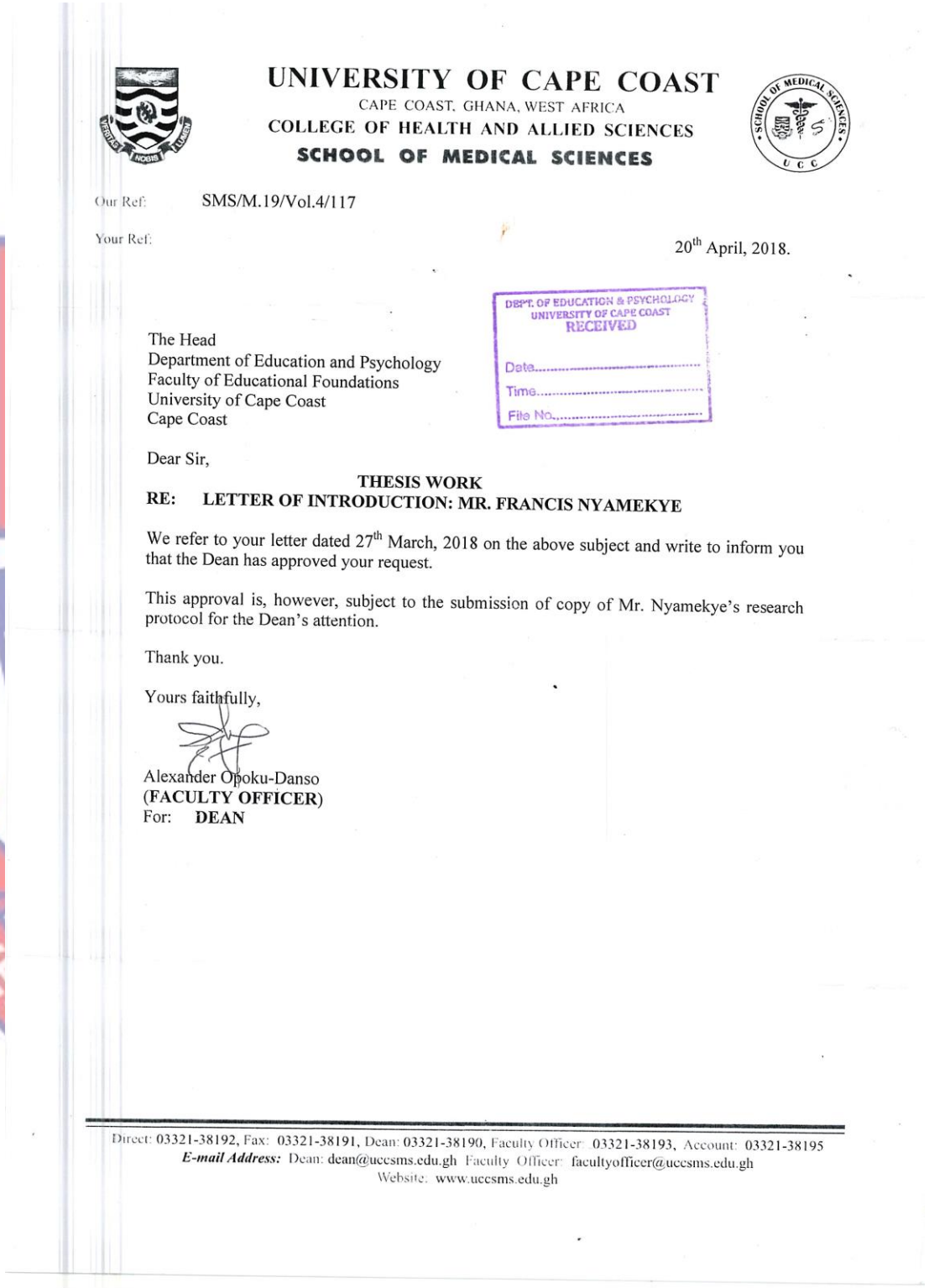
We shall be most grateful for any assistance to facilitate his thesis work.

Thank you.

Yours faithfully,

Susie N. O. Lamptey
SCHOOL ADMINISTRATOR

APPENDIX V



UNIVERSITY OF CAPE COAST
CAPE COAST, GHANA, WEST AFRICA
COLLEGE OF HEALTH AND ALLIED SCIENCES
SCHOOL OF MEDICAL SCIENCES

Our Ref: SMS/M.19/Vol.4/117

Your Ref:

20th April, 2018.

DEPT. OF EDUCATION & PSYCHOLOGY
UNIVERSITY OF CAPE COAST
RECEIVED
Date.....
Time.....
File No.....

The Head
Department of Education and Psychology
Faculty of Educational Foundations
University of Cape Coast
Cape Coast

Dear Sir,

THESIS WORK
RE: LETTER OF INTRODUCTION: MR. FRANCIS NYAMEKYE

We refer to your letter dated 27th March, 2018 on the above subject and write to inform you that the Dean has approved your request.

This approval is, however, subject to the submission of copy of Mr. Nyamekye's research protocol for the Dean's attention.

Thank you.

Yours faithfully,

Alexander Opoku-Danso
(**FACULTY OFFICER**)
For: **DEAN**

Direct: 03321-38192, Fax: 03321-38191, Dean: 03321-38190, Faculty Officer: 03321-38193, Account: 03321-38195
E-mail Address: Dean: dean@uccsms.edu.gh Faculty Officer: facultyofficer@uccsms.edu.gh
Website: www.uccsms.edu.gh

APPENDIX VI

Department of Research &Development
Tamale Teaching Hospital

TTH/R&D/SR/53
13/04/2018

TO WHOM IT MAY CONCERN

CERTIFICATE OF AUTHORIZATION TO CONDUCT RESEARCH IN TAMALE TEACHING HOSPITAL

I hereby introduce to you **Mr. Francis Nyamekye,** an MPhil in Educational Psychology student from the University of Cape Coast, Department of Education and Psychology. He has been duly authorized to conduct a study on **"Influence of Emotional Intelligence and Psychological well-being on Academic Self-Efficacy of final year Medical students in Ghanaian Universities".**

Please accord him the necessary assistance to enable him complete his study. If in doubt, kindly contact the Research Unit on the second floor of the administration block or on Telephone 0209281020. In addition, kindly report any misconduct of the Researcher to the Research Unit for necessary action.

Please note that this approval is given for a period of four months, beginning from 13th of April, 2018 to 13th of August, 2018.

Thank You.

ALHASSAN MOHAMMED SHAMUDEEN
(HEAD, RESEARCH & DEVELOPMENT)

APPENDIX VII

Reliability Estimates for main and pre-test data

Reliability estimates for main data

Case Processing Summary

		N	%
Cases	Valid	297	100.0
	Excluded[a]	0	.0
	Total	297	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.909	65

Emotional Intelligence sub-scale

Case Processing Summary

		N	%
Cases	Valid	297	100.0
	Excluded[a]	0	.0
	Total	297	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.720	30

Psychological well-being sub-scale

Case Processing Summary

		N	%
Cases	Valid	297	100.0
	Excluded[a]	0	.0
	Total	297	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.503	18

Academic Self-Efficacy Sub-scale

Case Processing Summary

		N	%
Cases	Valid	297	100.0
	Excluded[a]	0	.0
	Total	297	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.889	17

Reliability estimates for Pre-test

Case Processing Summary

		N	%
Cases	Valid	32	100.0
	Excluded[a]	0	.0
	Total	32	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.928	.942	65