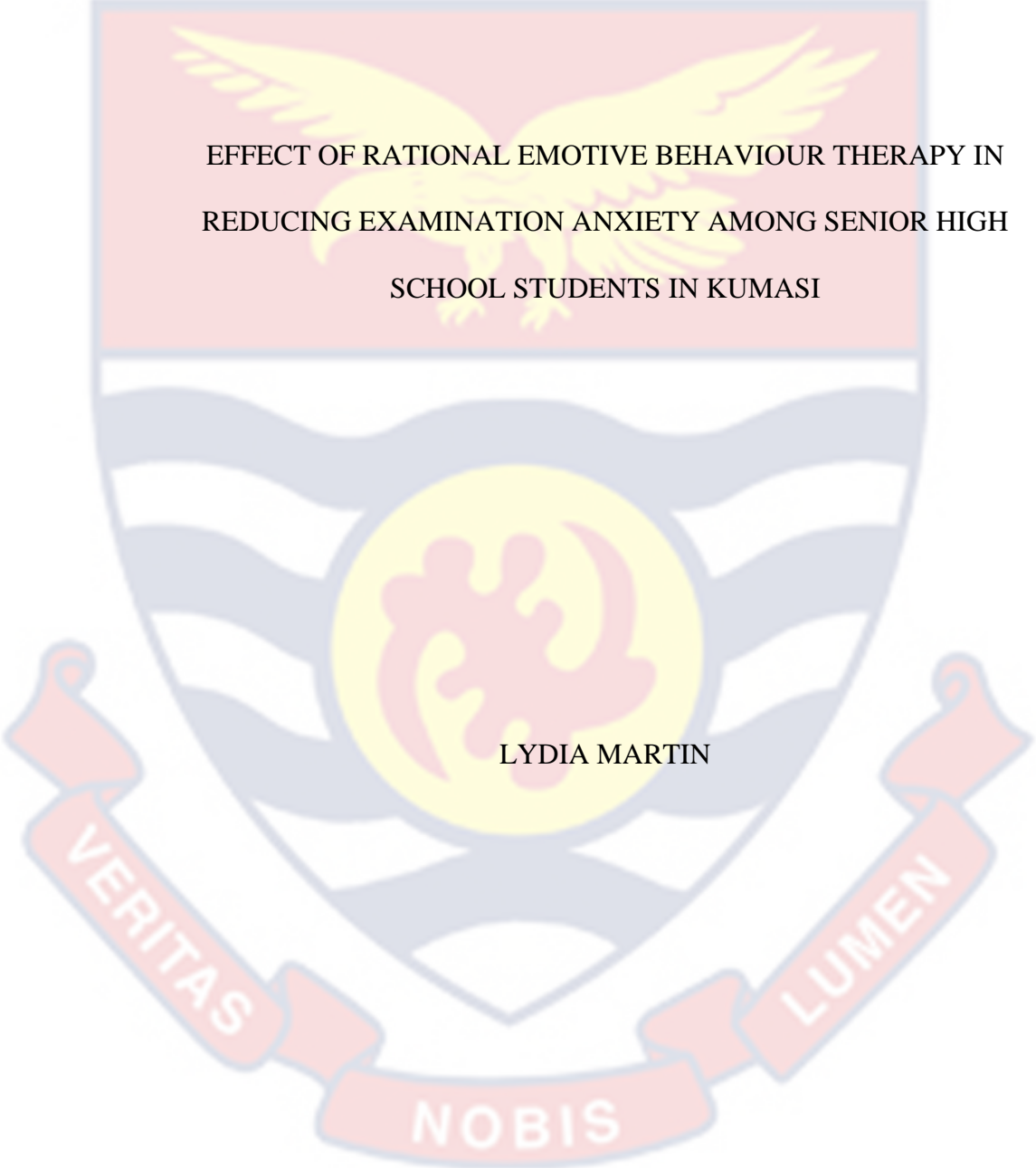


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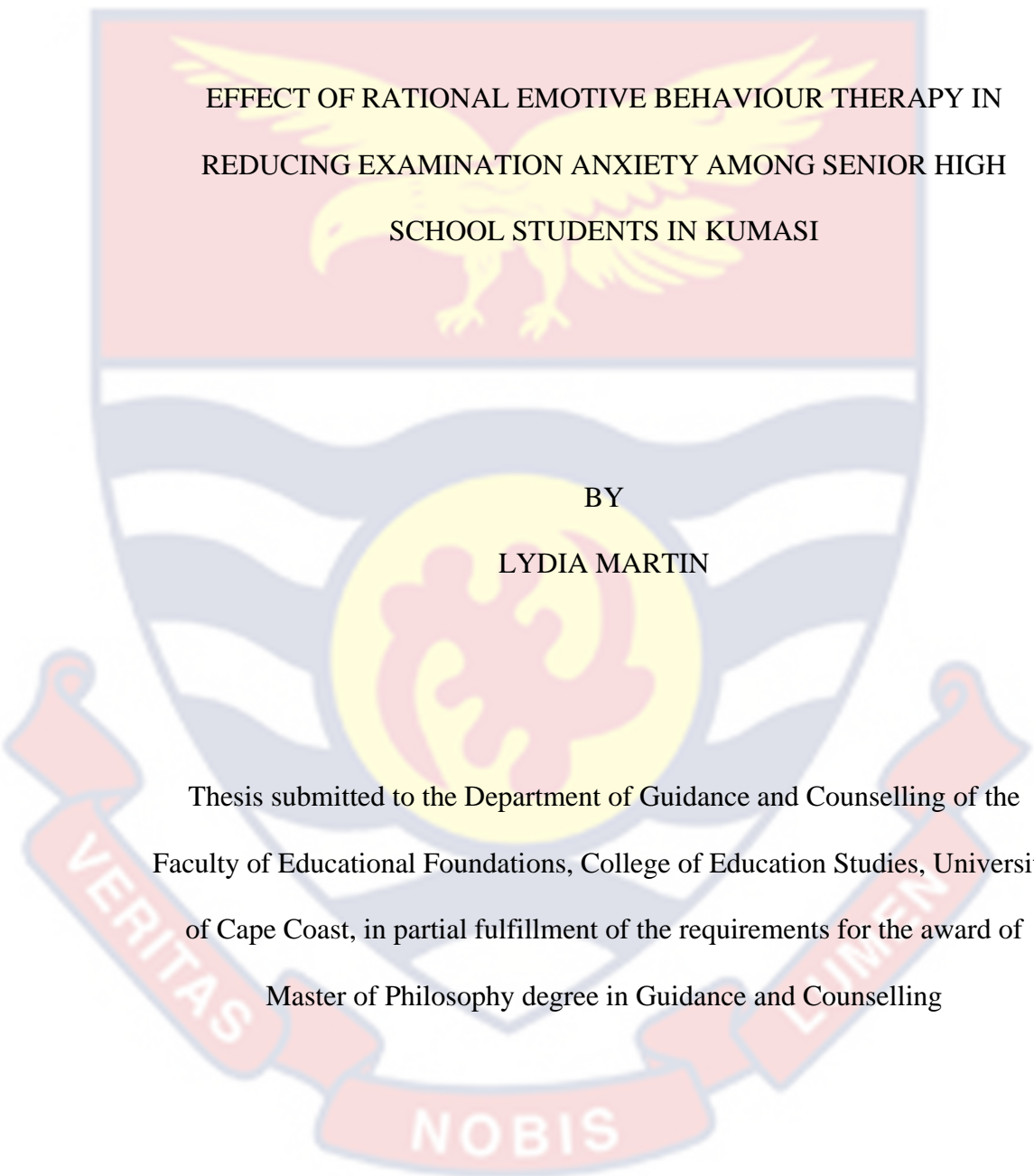


EFFECT OF RATIONAL EMOTIVE BEHAVIOUR THERAPY IN  
REDUCING EXAMINATION ANXIETY AMONG SENIOR HIGH  
SCHOOL STUDENTS IN KUMASI

LYDIA MARTIN

2023

UNIVERSITY OF CAPE COAST



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BY  
LYDIA MARTIN

This thesis submitted to the Department of Guidance and Counselling of the Faculty of Educational Foundations, College of Education Studies, University of Cape Coast, in partial fulfillment of the requirements for the award of Master of Philosophy degree in Guidance and Counselling

MAY 2023

## 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

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

Supervisor's Signature..... Date.....

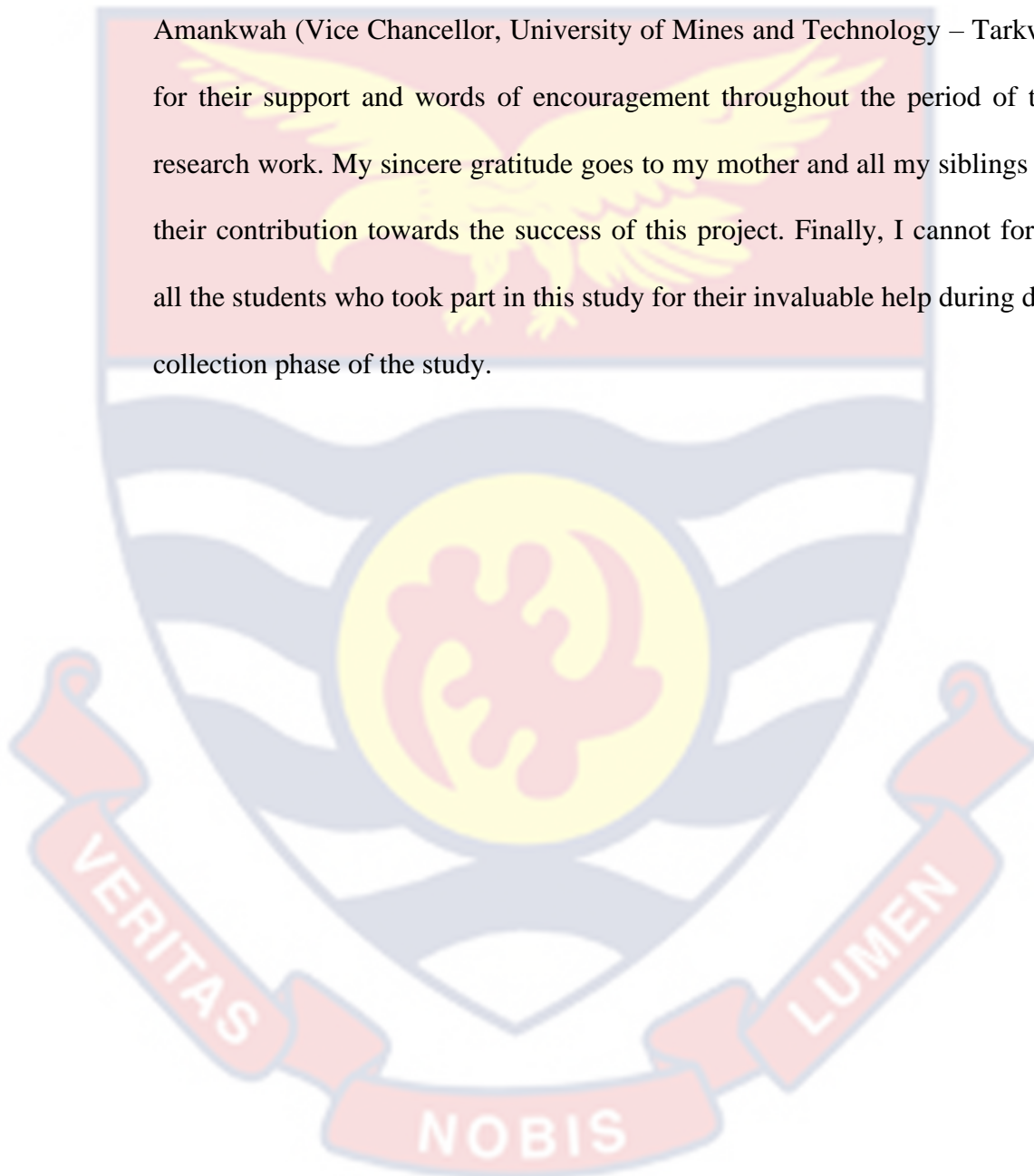
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## ABSTRACT

This study examined the effect of Rational Emotive Behaviour Therapy (REBT) in reducing examination anxiety among students in Kumasi High School. The study adopted the quantitative approach and utilized a quasi-experimental design. Twenty (20) participants each were used for treatment and the control groups. The sample size was 40. The “Students Examination Anxiety Questionnaire (SEAQ)” was used for pretest and posttest data collection. Descriptive statistics (frequencies and percentages) and Inferential statistics (Two-way mixed ANOVA, independent sample t-test and ANOVA) were used for the analysis. The study found a statistically significant difference between the experimental and control groups in their examination anxiety. The study revealed that there was a significant difference between male and female students in terms of their level of examination anxiety; female students experienced more examination anxiety than male students. Also, there was no significant difference in the examination anxiety of students on the basis of their ages. Finally, there was no significant difference in the examination anxiety of students on the basis of their programmes of study. It was recommended that school authorities should collaborate with school counsellors to screen and identify students with examination anxiety so that REBT treatment can be planned for them since the study found that REBT was effective in reducing examination anxiety.

## ACKNOWLEDGEMENTS

My profound gratitude goes to my supervisor, Dr. Stephen Doh Fia without whom this research would not have been possible. I also wish to thank my husband, Dr. Oti Amankwah and my mentor, Prof Richard Amankwah (Vice Chancellor, University of Mines and Technology – Tarkwa) for their support and words of encouragement throughout the period of this research work. My sincere gratitude goes to my mother and all my siblings for their contribution towards the success of this project. Finally, I cannot forget all the students who took part in this study for their invaluable help during data collection phase of the study.



**DEDICATION**

To my husband, Dr. Oti Amankwah and my children, Yaa Otiwaa, Akwasi

Agyemang and Kofi Duah



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## CHAPTER ONE

### INTRODUCTION

Examination anxiety has been found in the past to be negatively connected with both intellect and achievement (May, 2015). Students who experience a moderate amount of examination anxiety are more likely to concentrate and perform at their best (Abuhamdeh & Csikszentmihalyi, 2012). However, a student's academic achievement might be significantly impacted by excessive levels of examination anxiety (May, 2015). Some anxiety and arousal promote performance. However, excessive anxiety has the opposite effect (Davidson, McFarland & Glisky, 2006).

Students' academic work may be affected negatively by examination anxiety and as such examination anxiety needs to be reduced. On this basis, the current study seeks to investigate examination anxiety among students in KNUST Senior High School (SHS) and the effect of Rational Emotive Behaviour Therapy (REBT) in reducing examination anxiety.

#### **Background to the Study**

Education is a big priority for governments around the world. Education accounts for the majority of Ghana's budget (Darko & Abrokwa, 2020). Infrastructure, training and hiring of teachers; feeding a portion of kids; and the systems for evaluating their performance are all covered by this financial assistance. As a result, students are expected to display excellent academic performance in terms of examination marks. Many students are afraid to take their exams because of the pressure they are under.

Examinees face the issue of determining whether or not there is a distinct form of general anxiety different from examination anxiety (Cassady,

2010). A learned-helplessness response coupled with heightened self-awareness is what Freud (as described in Farhat, 2017) saw as the root of anxiety. In the mid-1800s, Kierkegaard (as reported in May, 2015) argued that one's freedom or potential were entangled with sensations of worry. May (2015) referenced Kierkegaard's belief that more freedom or options inevitably led to more worry. Based on Kierkegaard and May's assertions, I believe an individual feels terrified and tormented till the examination is over.

In the early 1960s, Seymour Sarason and George Mandler proposed that examination anxiety was an underlying personality feature (Sapp, 2013). Spielberger and Vagg (1995) established a transactional process model that conceptualised examination anxiety as a context-specific construct of both state and trait anxiety, based on more than two decades of study. Trait anxiety, on the other hand, is more pervasive and more persistent than state anxiety because state anxiety is typically conceived of as a one-time phenomenon (Satpute et al., 2012). In addition to the physiological response to a frightening circumstance and the autonomic response, known as the fight or flight response, state anxiety is also associated (Spielberger & Vagg, 1995). Test takers who believe a specific exam is tough may become trapped by their fear of taking it. I could not agree more with Spielberger and Vagg. This is because the moment students are given examinations, they begin to show signs of anxiety.

Aspects of the examination anxiety response which have gained attention in the literature included emotionality and worry as forms of cognitive interference (Papantoniou et al., 2017). Emotionality is depicted by the affective-physiological experience caused by heightened autonomic

arousal (Mori & Iwanaga, 2014). On the other hand, cognitive interference happens when the student becomes worried about his or her performance and the consequences of failing (Angelidis et al., 2019).

Besides, rumination and distraction which are other components of examination anxiety have attracted research. Calvo, Gutiérrez and Fernández-Martín (2012) explains rumination as the repetition of ideas that might have an adverse effect on cognitive processing and working memory capacity. Temporary manipulation and storage of information during reasoning tasks is what working memory is all about (Henry, 2011). Henry further indicated that, a person's working memory capacity is reduced when he or she ruminates. Attention can be easily diverted from a task in the psychological sphere because of its distractibility (Brooks, Alshafei, & Taylor, 2015).

Anxiety about an upcoming examination or test is referred to as "examination anxiety" in this study. It prevents children from reaching their full academic potential. It is widely accepted that people who are anxious about examinations and tests have a predisposition to react poorly to them (Keogh & French, 2001). In the view of Vitasari et al. (2010), examination anxiety is defined as an individual trait that relates to the anxiety and worry associated with examinations.

One of the most commonly used types of testing in schools is the examination. Senior high school students are required to take tests as a part of their curriculum. Examination anxiety can have a negative impact on a person's performance because of how frightening examination anxiety can be (Mashayekh & Hashemi, 2011). An issue arises when examination anxiety starts to negatively impact one's performance. In order to screen and select

students, tests are offered. Therefore, when one knows that his or her future depends on the outcomes of a test, the threat value of the test rises significantly. Students are affected by test phobia, which causes them to be anxious and fearful. As a result of anxiety and worry, students may have panic attacks, obsessive thoughts and feelings of inadequacy as well as self-loathing, irritation, and a tendency to compare themselves unfavourably to others (Wadi et al., 2022).

Students who graduate from high school should be able to think independently, collaborate with others, and show respect for their peers' points of view (Hurst et al., 2013). This means that after senior high school, students are expected to be able to work with others as well as independently to overcome challenges. The ability to do these can be helpful to the entire nation. Therefore, the training given to senior high school students can benefit both the student and the society at large. However, senior high school students will not be able to meet these educational goals if they are plagued by examination anxiety (Dortuo, 2020). In this regard, a nation's wellbeing will decline due to the result poor quality of goods and services when the students enter the job market.

Some people are so terrified of tests or other forms of assessment that their performance suffers as a result. Most senior high schools do the opposite of what is expected of them when it comes to test preparation and performance (Adamu et al., 2021). Adamu et al. argued further that the memory of certain students becomes obstructed by dread during formal tests and examinations, causing them to perform poorly. It is possible for students to see their fears as a result of some conditioning which can be unlearned later.



Common symptoms of examination anxiety include perspiring, sweaty palms, tense muscles, headaches, stomachaches, nausea, diarrhoea, difficulty breathing, a racing heart, dry mouth, difficulty concentrating, and a general lack of focus. Disruption or disorder of cognitive regulation and effective problem solving may also occur (Cassady & Johnson, 2002).

Anxiety about examinations is a key impediment to education for the vast majority of students (Mohan & Lone, 2021). When it comes to exams, some students are so terrified of failing that even the most thorough preparation is not enough to help them pass, no matter how important the exam may be. In some extreme circumstances, this can force students to let go off their goals if the goals will require the taking of a formal test in order to achieve them (Malhotra, 2015).

The majority of senior high school students are teenagers or adolescents. During the teenage or adolescence period, it is documented that there is an “episode of storm” which is marked by dramatic shifts in physical, emotional, and social development (Hashmi, 2013). This means that period of adolescence can be challenging for students to navigate. As a result, students may need care and support from professionals such as counsellors in order to deal with all the challenges they encounter during this period of their lives. Therefore, in order for students to overcome the fears and worries related to examination, the work of counsellors is important.

Examination anxiety in high schools could be reduced or eliminated by rational-emotive behaviour therapy and systematic desensitization (Ntamu, 2017). There is a greater likelihood of examination anxiety among students who lack self-esteem, self-efficacy, study abilities, and the ability and

willingness to engage in examination malpractice (Eifediyi, Ojugo & Aluede, 2018). In order for young people to feel good about themselves, possessing strong beliefs and a clear vision is essential. Individuals who have a positive outlook on life are more likely to have positive feelings or attitudes such as respect for others, care and apathy (Reasoned & Lane, 2007). According to the expectations they believe others have of them, students are more likely to act in ways that reflect their own self-perceptions and perceptions of how they are perceived by others. These influence all aspect of a student's life, from home, to school, to society as a whole. A student with a low self-esteem is more likely to perform poorly on tests and exams, whereas a student with a high self-esteem is more likely to face them head-on.

The students' self-efficacy also plays a role in anxiety. Students' anxiety levels are influenced by their efficacy views when participating in a certain activity (Roick & Ringeisen, 2017). When students approach tough activities as challenges that have to be overcome instead of as threats to be feared, they develop a strong sense of effectiveness and feel more accomplished and confident. To the contrary, a belief that things are more difficult than they actually are might lead to examination anxiety and a narrow perspective on how to tackle an issue (Pajares & Schunk, 2001).

Studying abilities are also a role. Anxiety over exams can be reduced if students have mastered the art of studying well and staying organized (Schunk, 1995). The difficulties associated with studying could be alleviated if only they could learn more efficient study methods. Learning how to study can help students succeed in school. Anxiety and poor performance might stem from a lack of preparation for a formal testing circumstance.

Students' anxiety about exams has been linked to, among other things, a lack of study time before the test. According to Obasi (1997), pupils should prepare for tests or examinations. At the beginning of a course, students begin preparing for an important exam. Students need to know the syllabus, the course outline, reading list, and other materials that will be used in class are all essential for students to have a successful learning experience. They should be aware of the examination structure, including the total number of examinations, the length of each examination, the number of questions, the types of questions offered, and the grading scheme. Students who do not do these things are more likely to have examination anxiety.

Patients in Rational-Emotive Behaviour Therapy are told (often in dramatic terms) that their thinking is distorted (Ntamu, 2017). Albert Ellis, the Therapy's originator, believes that no one should be held responsible for their own activities, but that each individual bears responsibility for both their negative and positive deeds (Eifediyi, Ojugo & Aluede, 2018). A person's state of happiness is a direct effect of his or her own actions. A great deal of agency is attributed to man because of his ability to intervene between environmental cues and emotional responses. This philosophy is similar to a teaching method and, in reality, aims to shift the client's negative behaviour to positive behaviour.

Many people develop unreasonable or incorrect beliefs about themselves and the environment that cause emotional and behavioural disorders. This, according to Adeoye (2009), is a key concept of Rational Emotive Behaviour Therapy (REBT). Positive thoughts could lead to a more productive life but substantial cognitive transformation is not likely unless the

individuals involved are ready for a shift in their behaviour. The dread of failure sets in when students believe they are not good enough and underprepared for an exam.

One of the earliest behaviourists, Wolpe (1958) provided some steps which can help a counsellor to achieve his or her goal in providing assistance to clients with cognitive and behavioural problems like anxiety. Behavioural study of anxiety-provoking items should be the first step for the counsellor or therapist. The therapist encourages the client to make a list of these anxiety-inducing stimuli, such as registering for a test, preparing for the exam, and writing the exam, and to rank them in order of increasing intensity. Stimuli are treated with one thing at a time till the point where the anxiety-provoking stimulus is no longer able to generate the worry. The hierarchy of severity, from the worst-case scenario the client can envisage all the way down to the least, is critical to keep in mind. Second, it is recommended that the individual practices deep breathing and other forms of relaxation (Keptner et al., 2020).

Counselling can help students overcome their examination anxiety. Rational-Emotive Behaviour Therapy (REBT) is a cognitive process that aims to replace unrealistic expectations with more realistic ones by identifying and challenging issues and other maladaptive assumptions (Cherry, 2021). The therapy is a comprehensive, active-directive, philosophically and empirically based psychotherapy which focuses on resolving emotional and behavioural problems and disturbances and enabling people to lead a happier and more fulfilling lives (Adeoye, 2009).

In most existing studies, REBT has been found to be effective in reducing examination anxiety (Noormohamadi et al., 2019). For instance,

Misdeni, Syahniar and Marjohan (2019) noted that group activities using the REBT approach reduced significantly the anxiety scores of students facing exams. Similarly, Eifediyi, Ojugo and Aluede (2018) revealed that in an experimental study, the REBT treatment approach was a success in reducing examination anxiety of the students.

Anxiety and mental health counselling, in particular, is necessary to reduce excessive anxiety in test-anxious pupils. Student examination anxiety can be alleviated by counselling, which helps students trust in themselves and become more focused as well as more resilient (Wood, 2017). Students are also taught how to study in an effective manner in order to help alleviate examination anxiety, which is the most common source of worry among students.

Ghanaian children must be educated and encouraged so that they can help their country grow. Students' academic performance has been negatively impacted by examination anxiety and their examination anxiety is caused by a lack of confidence in themselves (Dortuo, 2020). The consequence of such anxiety is poor overall performance observed in examinations in schools. In the past, the West African Examination Council (WAEC) has noted through their chief examiners' report that due examination anxiety and lack of self-confidence, student engage in examination misconducts (Coffie, 2022). This realization was arrived at through interactions with students during examinations. Against this background, I have chosen examination anxiety as the focus of this study along with how REBT can reduce examination anxiety.

## Statement of the Problem

Examination anxiety negatively affects the mental, emotional, and social wellbeing of students. Students' ability to perform to their full potential under examination conditions is often hindered by the anxiety they feel before taking the examination (Trifoni & Shahini, 2011). Several studies, both domestic and foreign, have examined the prevalence of examination anxiety. For example, students' beliefs about their own abilities, their gender, and their level of trait anxiety; students' preferred learning strategies, and the characteristics of their schools have been examined as to how they relate examination anxiety (Roick & Ringeisen, 2017; Ntamu, 2017). Also, the effects of two-group counselling techniques such as Rational Emotive Behaviour Therapy and Systematic Desensitization on self-concept, locus control and drinking behaviour of selected students in Ghana have been examined (Boadi, 2017; Fosu-Ayarkwah, 2020).

So why is this study being conducted if similar ones, both domestic and abroad, have already been done on the same topic? The present study is absolutely necessary. Firstly, each of the reviewed studies focused only on one or two aspects of examination anxiety. This study however examines three other variables apart from examination anxiety such as gender, age, and programme of study. Gender, age and programme of study would give insight into how background characteristics can affect examination anxiety. Secondly, only a few of studies related to this current study were experimental in nature (Boadi, 2017). This current study is however experimental in nature.

From the forgoing, it is evident that the gaps that needed filling are those caused by the research design of existing studies and the lack of a

comprehensive set of variables in existing studies. Also, this study is relevant and contributes to our understanding of the topic at hand because, unlike the previously cited studies, it not only identified the issue of examination anxiety among senior high school students but also how a counselling therapy (REBT) can be used in reducing examination anxiety.

Aside the gaps being filled by the current study, the issue of examination anxiety is a problem within senior high schools in Kumasi and more specifically in KNUST SHS. This is because according to the reports of Buachi (2014), Akuffo (2016) and Asante-Yeboah (2021) examination malpractice have become common in senior high schools in Kumasi with most of these attributed to students fearing or feeling anxious that they may fail in examinations and as such seeking all manner of ways not to fail. In KNUST SHS, Koranteng (2021) reported that the WASSCE ranking of senior high schools in the Ashanti Region put KNUST SHS at 20<sup>th</sup> with a 73% pass rate. This means that more than a quarter of students in KNUST could not pass in the WASSCE.

Failing in examination can lead to examination anxiety and can be the result of examination anxiety (Wadi et al., 2022). For instance, when a student feels anxious before examination, he or she is likely to fail and the failure may also create anxiety in any future examinations. Examination anxiety is seen as an issue in KNUST SHS and as such before any internal examinations, the counselling unit within the school organizes seminar for the students to help them deal with any fears related to the examination. If the problem of examination anxiety is not dealt with, the academic performance of students

will drop and this can affect their entire future and the future of the nation as a whole.

REBT was chosen as the therapy for the study because there is documented evidence in other parts of the world that REBT can effectively reduce examination anxiety when compared to other approaches (Edom, 2023; Noormohamadi et al., 2019; Saleh, Usman & Abbas, 2022). On this basis, testing the effects of REBT in reducing examination anxiety among students in KNUST SHS is not out of place.

### **Purpose of the Study**

The purpose of this study was to examine the effect of REBT in reducing examination anxiety among students in KNUST SHS. Specifically, the study focused on achieving the following objectives. To:

1. find out the effect of REBT in reducing examination anxiety among SHS students.
2. find out the effect of REBT in reducing examination anxiety of SHS students with regard to gender.
3. determine the effect of REBT in reducing examination anxiety of SHS students with regard to age.
4. ascertain the effect of REBT in reducing examination anxiety of SHS students with regard to programme of study.

### **Hypotheses**

The following research hypotheses guided the study:

H<sub>0</sub> 1: There is no statistically significant difference in the effect of REBT in reducing examination anxiety between experimental and control groups in KNUST SHS.



H<sub>1</sub> 1: There is a statistically significant difference in the effect of REBT in reducing examination anxiety between experimental and control groups in KNUST SHS.

H<sub>0</sub> 2: There is no statistically significant difference in the effect of REBT on examination anxiety with regard to gender in KNUST SHS.

H<sub>1</sub> 2: There is a statistically significant difference in the effect of REBT on examination anxiety with regard to gender in KNUST SHS.

H<sub>0</sub> 3: There is no statistically significant difference in the effect of REBT on examination anxiety with regard to age of respondents in KNUST SHS.

H<sub>1</sub> 3: There is a statistically significant difference in the effect of REBT on examination anxiety with regard to age of respondents in KNUST SHS.

H<sub>0</sub> 4: There is no statistically significant difference in the effect of REBT on examination anxiety with regard to academic programme of study in KNUST SHS.

H<sub>1</sub> 4: There is a statistically significant difference in the effect of REBT on examination anxiety with regard to academic programme of study in KNUST SHS.

### **Significance of the Study**

Individual students, classroom teachers and counsellors, parents, communities, and governments would all benefit greatly from the findings of this study. The study would help students to overcome the fear of examination. There will be a shift toward a more practical worldview as a result of which

students will be less likely to put their health at risk by worrying excessively about their grades and having a negative outlook on their own abilities.

Teachers and counsellors would be more effective in their roles if they get access to the research findings. The information provided in this study would be useful for counsellors who wish to conduct their own research along similar lines. There would be fewer disciplinary cases for teachers and counsellors to handle, allowing them to devote more time to students' academic progress.

Findings from this study could also help relieve the stress and disappointment felt by parents whose children struggle due to examination anxiety. It would also help parents save money by reducing the number of times their children have to retake the same classes due to examination anxiety.

Results from this study could lead to positive behavioural and attitude shifts amongst students, which would have societal benefits. They would become well-adjusted in the society. As a result, graduates would be better equipped to assume leadership roles in their communities.

The findings of this study would help the Government of Ghana to design and make policies to help students overcome examination anxiety. This would instill confidence and bravery in the country's future leaders, not just during examinations but in all aspects of life. Finally, the results of the study will add to the existing literature on examination anxiety and REBT in Ghana.

### **Delimitation**

The study was delimited to the effect of Rational Emotive Behaviour Therapy, examination anxiety, gender, age and programme of study. The study

focused on senior high school students in KNUST, Kumasi. Experimental and control groups were also considered in the study.

### **Limitations**

In a study on examination anxiety among students, it was difficult for me to have full confidence in the answers provided by respondents. Questions about examination anxiety may cause them to lie about their circumstances. Thus, it was possible that the respondents were biased in their actual situation. In response, I reassured them that their responses would not be shared with third parties or held against them in any way, shape, or form.

Additionally, since the study adopted quasi-experimental design, it can be said that the limitation of non-randomisation could affect the study. This is because non-randomisation could lead to overestimation of effect size and also difficulty with cause-and-effect estimations. This study could have been done using true experiment which could have resolved the challenge of non-randomisation.

Finally, the double-track system in senior high schools affected the research in the sense the second-year students were in and out of campus within shorter durations. This affected the selection of target group for the research and as such derailed and set the study behind regarding the time for data collection.

### **Definition of Terms**

The terms in the study are defined operationally.

**Examination:** This is used to refer to a test of students' competence after going through instructions in the course of the term using mostly standardized items.

**Anxiety:** This is used to refer to the feeling of concern or uneasiness about something or an activity that needs to be undertaken.

**Examination Anxiety:** This is used to refer to a feeling of concern or unease experienced by students before and during examinations.

**Rational Emotive Behavioural Therapy:** This is a therapy introduced by Albert Ellis and focuses on identifying irrational thinking patterns and changing such thought patterns.

### **Organisation of the Study**

The study is organized into five chapters. The first chapter which is the introduction covers background to the study, the statement of problem, purpose of the study, research hypotheses, significance of the study, delimitation, limitation of the study, and organisation of the study. The second chapter reviews related literature in three perspectives, namely, theoretical framework, conceptual framework and empirical review. Chapter Three assesses the research methods in terms of research design, area of study, population, sampling procedure, data collection instrument, data collection procedure and data processing and analysis. The fourth chapter deals with results and discussion. Chapter five deals with summary, conclusions, recommendations and suggestions for further research.

## CHAPTER TWO

### LITERATURE REVIEW

#### Introduction

The focus of this study is to ascertain the effect of Rational Emotive Behavioural Therapy in reducing examination anxiety of senior high school students. Literature was reviewed in three sections. These are the theoretical framework, the conceptual framework and empirical review. The theoretical review covered some theories related to examination anxiety. The second part explained the concepts in the study and the third section looked at some empirical studies related to the study.

#### Theoretical Framework

The theories that undergirded the study were the Transactional Process Model, Rational Emotive Behavioural Therapy (REBT) and Solution-Focus Brief Therapy.

#### Transactional Process Model

The Transactional Process Model was propounded by Spielberger and Vagg (1995). The model proposed by Spielberger and Vagg (1995) was a model of test anxiety, based on earlier work from Lazarus (1966), as well as Spielberger's (1966) previous research on the state-trait anxiety theory. Even though the model is old, it is still widely used more than twenty years later (Steinmayr et al., 2018).

Spielberger and Vagg's (1995) transactional process model is a micro-level theory that provides a moment-by-moment account of how levels of state anxiety may fluctuate during a test situation based on the perceived item difficulty, one's test taking skills, and perceived ability to answer the question.

According to Girard (2020), the model has two components: worry and emotionality. Worry refers to the cognitions that the individual has about the test and/or themselves while emotionality relates to the affective responses associated with being in a test situation, such as bodily sensations (Spielberger, & Vagg, 1995). This means that the theory conceptualizes test anxiety to include worry and emotionality about the test or examination.

Further, the theory of Spielberger and Vagg's (1995) theory infers from Lazarus and Folkman's (1984) theory of stress and coping and suggests individuals employ coping strategies to manage stress and anxiety levels related to test. Lazarus and Folkman (1984) postulated that there are two main coping styles: problem-focused coping and emotion-focused coping. A problem-focused coping style involves engaging in behaviours to overcome the problem causing distress (e.g., devising a plan to study for a stressful exam) whereas emotion-focused coping is an attempt to regulate emotions that are evoked by the stressful event. An active emotion-focused coping style is an adaptive emotion-regulation strategy, comprised of coping strategies such as positive reframing. In contrast, an avoidant emotion-focused coping style is an attempt to avoid the stressor, including denial and behavioural disengagement (Folkman, 2013; Lazarus & Folkman, 1984). In the view of Spielberger and Vagg (1995), there is no particular successful coping style when dealing with examination or test anxiety. However, some coping styles may be more helpful when managing stress.

The theory is considered relevant in the current study because it gives an indication of how examination anxiety comes about. Specifically, the theory proposes that when an individual worries about him or herself and the

examination and begins to have emotional reactions, then the person can be said to be experiencing examination anxiety. This is true in this study because before examination, a student may have concerns about perceived item difficulty, skills for taking examinations and perceived ability to answer questions. These concerns together with the kind of emotions associated with the examination can make the student experience examination anxiety.

### **Rational Emotive Behaviour Therapy**

Invented by psychologist Albert Ellis in the 1955, REBT is a widely used method in the field of psychology. REBT was considered was the first of Cognitive Behavioural Therapy, and founded on the premise that an individual's thoughts, feelings, and actions play a crucial role in the formation and maintenance of psychological well-being (David, Szentagotai, Eva, & Macavei, 2005; Dryden & Branch, 2008).

Ellis theorized that flawed ways of thinking were at the root of many emotional issues (DiGiuseppe, Doyle, Dryden & Backx, 2014). As a result, his theory suggested that adjusting fundamental convictions could lessen the severity of emotional issues. For instance, a person's irrational belief about whether or not they will succeed at a crucial task (adversity) can lead to a sequence of negative emotions (such as anxiety), actions, and thoughts that ultimately prevent them from reaching their objectives.

Corsini (1994), seeing the many behavioural strategies incorporated within REBT, urged Ellis to add the term "behavioural" in the name. Though it has its roots in both ancient and contemporary philosophical traditions, REBT also largely utilizes scientific epistemology in its attempt to explain human functioning and disorder (Ellis, 1994). Ellis contended that the scientific

method and empirical approach would be more effective for learning about oneself and others (Digiuseppe et al., 2014). As a result, REBT is founded on Popper's (1962) assertion of falsifiability, which rests on the idea that we should recognize and actively seek to falsify our hypotheses. To conclude, the epistemology of science (i.e., empirical, logical, and pragmatic) guides the grouping of beliefs as either rational or irrational and the basis underlying the work of therapists and psychologists in improving rationality of clients and individuals in general.

### **Major Techniques and Procedures of REBT**

Albert Ellis made use of a straightforward model to simplify the process of comprehending his treatment by investigating the interrelationships that existed between the four alphabets A-B-C-D, each of which stood for one of the following ideas:

“A – Activating Events (The cause)”

“B – Belief (How one views it; perception)”

“C – Consequences (Effects of one’s perception)”

“D – Disputation (Re-appraisal/Critical analysis).”

Goals (G) are what motivate people. These include things like staying alive, avoiding pain, and finding contentment. People's perspectives and assessments of reality are shaped by the goals they have set for themselves. Activating events (A) are the personal interpretations and perceptions of reality. The interpretation is done on the basis of their goals through the use of their belief systems (B). There are two forms of Beliefs that evaluate reality. These are “Rational Belief system (RB)” and “Irrational Belief (IB)” (Ellis, 1994). The kind of belief of an individual is shaped by his or her goals.



Both forms of beliefs can be found in every individual. Irrational beliefs, on the other hand, lead to emotional turmoil and dysfunctional behaviour while logical beliefs are responsible for positive outcomes. Examination anxiety and negative effects can be reduced by REBT by teaching students to recognize and question irrational ideas through Disputing (D) and replacing them with more rational ones.

Adeoye (2009) states that an additional emphasis in REBT is placed on the client's capacity to get disturbed by their own distress. When a patient is emotionally disturbed, they often have a negative self-perception and are distressed because of their distress. Consequences (C) of emotions and actions are themselves Activating Events (A). Anxiety, despair, and rage all become a source of self-reflection for the patient. Ellis (1994) categorizes this tendency of patients to distress themselves as secondary emotional disturbances.

The basic means of relieving emotional pain is known as the "D," and it consists of disputing the validity of irrational beliefs. Effective Rational Beliefs (ERB) allow patients to replace IB with new, more useful beliefs. Disputation (D) can take place in one's head by using scientific inquiry to question and challenge dogmatic and demanding convictions ("I must," "others must," or "It must be.").

Changes in emotional disturbance and processes, according to Adeoye (2009), might lead to new patterns of thought and behaviour. As a result, REBT is now practiced and theorized beyond the original ABCD model to ABCDEF.

“A - Activating Event”

“B – Belief”

“C – Disputation”

“E – Effect”

“F – Feeling”

**A: “Activating Event”**

The letter "A" stands for the external or internal stimulus that sets off a certain train of thinking or mood. In other words, it's the existence of something, like a fact or an occurrence, or the existence of someone's viewpoint, behaviour, or attitude. For example, a student can say “solving mathematics question is a challenging task particularly in relation to the topic mensuration”.

**B: “Beliefs” about ‘A’**

One's beliefs, or "B," are what define, affect, and shape one's ideas in relation to one's "A." These are most likely illogical ideas. For instance, if a form 3 student says “my Mathematics teacher is too difficult, he/she gives assignment all the time”. This is in-spite of the “instructional hours” schedule on time table.

**C: “Reaction (Consequences)”**

"C" represents the bad feelings that arise as a result of holding the belief about "A," as well as any subsequent changes in behaviour. Someone in this situation might try to utilize his or her position on campus to avoid doing an assignment given by an instructor. For example, if the student is into sports, he will use the sports as an excuse.

**D: “Disputation”**

The letter "D" represents the action of disputing or criticizing the thoughts when they are illogical or skewed. To have the beneficial effects (E)

associated with rational ideas, therapy should contest the illogical beliefs and provide support for the client. For instance, the school counsellor can dispute the thought that solving mathematics are difficult.

**E: “Positive Effect”**

The letter 'E' represents the beneficial outcome of addressing the illogical thinking, as the mind is the source of the emotions. For example, a student can now appreciate that mathematics is like the other subjects in school.

**F: “New Feelings”**

As a result of the beneficial impacts on the illogical thought, a new emotion, denoted by the letter F, would emerged. Now, the student feels he is capable of solving mathematics questions and they are not difficult as he thought.

Mind and emotion are intertwined in humans. This is why it makes sense for happy thoughts to be accompanied by happy feelings and sad thoughts to be accompanied by sad emotions. Adeoye (2009) argued that although the therapist-client relationship is crucial, it is not therapy in and of itself but rather a means to an end. The therapist expresses compassion, accepts the patient no matter what, and offers praise while remaining cautious about doing anything that could foster dependence or a heightened "need" for approval. In spite of the aggressive and directive nature of REBT, the therapist nevertheless considers the client's values. The client is not forced to adopt new ways of thinking; rather, client and counsellor or therapist work together to generate new ways of thinking.

While some may argue that psychotherapy promotes inward focus, this is not the case with the REBT due to its emphasis on numerous principles. This enlightened self-interest, for example, leads people to look out for their own interests as well as the interests of those around them. Time commitments for REBT tend to be small. In most cases, the treatment lasts anywhere from five to 30 sessions within a period of 18 months. Rapid progress is being made in therapy. It is task-oriented and places a premium on problem solving in the here and now, with less time spent learning about relevant history.

Psychotherapy based on the principles of rational emotive behavioural therapy (REBT) aims to assist patients in altering their responses to previously experienced emotional and behavioural triggers. REBT can thus be used to assist Senior High School students to overcome examination anxiety. In his research, Ellis (2003) found that emotional and behavioural self- and social defeatism are two forms of human distress that are exacerbated by unreasonable and illogical ways of thinking and behaving.

A belief which tends to disturb people, according to Ellis (2003, p. 54), is: *“I absolutely MUST, under practically all conditions and at all times, perform well or outstandingly well and win the approval or complete love of significant others. If I fail in these important and sacred-respects, that is awful and I am a bad, incompetent, unworthy person, who will probably always fall and deserves to suffer.”*

Feelings of fear, worry, depression, hopelessness, and worthlessness are common outcomes of holding this mindset. Any student holding such a belief is guaranteed to show it on any examination. Thus, it is feared that today's senior high school students are succumbing to these illogical and

dysfunctional beliefs, feelings, and behaviours, which ultimately lead them into difficulty.

Cassady and Johnson (2002) indicated that examination anxiety, like any other kind of anxiety, is impossible to feel if you are entirely at ease. Anxiety sufferers can find relief from their symptoms if they are taught relaxation techniques. The second, equally fundamental premise is that a person might experience some of the emotions of the actual scene by visualizing it clearly when at rest. That is to say, the mind does not know the difference between a real event and a vividly imagined one. In essence, if a person with exam anxiety imagines himself in the midst of taking an examination, they will experience the same nerves they would if they were actually sitting for the test. However, if an individual can train him or herself to calm down before an examination by imagining him or herself doing well, the individual will be able to do the same thing on examination day.

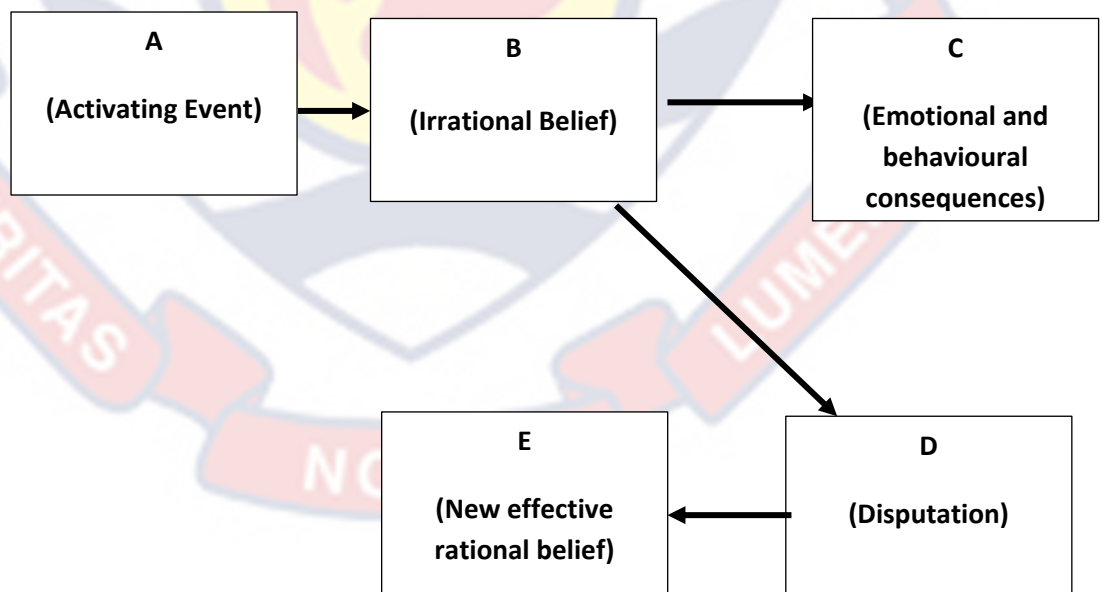


Figure 1: A schematic of the ABCDE model used within the REBT process.

Source: Jibrin (2017)

### Relevance of theory in the study

Beliefs, which are notions considered to be true according to REBT (David et al., 2010), mediate the relationship between experiences of people and the choices they make as a result of the experiences. It is proposed that these beliefs take the form of mental operations, and that they pertain to aspects of the self, other people, and the external world as well as to a wide range of topic areas (Szentagotai & Jones, 2010).

For some students, failure in examination means that the progress has come to an end. It is normally the fear of failure that makes them anxious. They think that if they fail the exams, their condition will be worse than it is currently. This explains 'awfulizing'. It gets to a point, where some students think that, they might not be able to endure the pain of failure. Hence, they will not be able to get any form of happiness. The REBT method teaches students to recognize their own and others' humanity and the complexity of the world as a whole, rather than focusing on the negative (Szentagotai & Jones, 2010).

REBT formed the basis of the study because in the context of this study, it can be said that students with examination anxiety have that experience because of their beliefs about themselves and the examination. Therefore, to help reduce examination anxiety, REBT can be used to change the beliefs held by students concerning examinations and through that ultimately reduce examination anxiety. In this current study, REBT was used as the intervention approach in reducing examination anxiety among senior high school students.

## Processing Efficiency Theory

Processing efficiency theory (PET) was propounded by Eysenck and Calvo (1992) with the focus of finding the influence of state anxiety on performance from a cognitive/motivational perspective. Put another way, the theory that has as its goal the explanation of the relationship between anxiety and performance. On this basis, the theory is most applicable to tasks that place high cognitive demands on performers (Mascarenhas & Smith, 2011).

There are two theoretical assumptions for the processing efficiency theory: (1) anxiety impairs processing efficiency more than performance effectiveness, and (2) anxiety impairs the central executive system of working memory (Eysenck & Calvo, 1992). In relation to the assumptions, PET makes an important distinction between performance effectiveness and processing efficiency. Performance effectiveness refers to the quality of performance in terms of its speed and accuracy while processing efficiency is defined as performance effectiveness divided by the processing resources invested in the task (Mascarenhas & Smith, 2011). Thus, processing efficiency declines in situations where performers maintain performance levels by investing additional resources in the task. This distinction is central to the theory, as it argues that anxiety affects processing efficiency more often than performance effectiveness.

In this theory, anxiety has two functions: 1. Anxiety increases worry which results in taking up attentional resources. 2. Worry at the same time identifies the task as important and that results in increased effort on the individual's part, thus negating the lessened attention capacity (Sam, 2013). The functions of anxiety are described because the theory places a great

emphasis on anxiety. However, while the theory places greater emphasis on the influence of state anxiety on performance, dispositional factors (i.e. trait anxiety) are also important as, along with situational threat, they interactively determine the level of state anxiety experienced (Wilson, Smith & Holmes, 2007).

Further, PET explains that cognitive activity in the form of worry has two main effects. First, worry takes up processing and storage resources in working memory and as a mental activity it ‘competes’ with task-relevant thoughts for the available resources. Secondly, worry also serves a strong ‘motivation’ function, with anxious individuals generally being motivated to avoid the adverse consequences of the threatening situation in which they find themselves (Mascarenhas & Smith, 2011). Mascarenhas and Smith added that one strategic response to such situations is to allocate more processing resources to performance by increases in effort. Increases in effort aim to maintain performance effectiveness, thus helping to avoid the potential adverse consequences of failure.

### **Relevance of the theory in the study**

The Processing Efficiency Theory is considered relevant in this study because it speaks of how anxiety and worry can interfere with the performance of a task. In this study, examination anxiety is studied and attempt made to deal with it so as to reduce it. This is important because if students are left to live with examination anxiety then it is very likely that their academic performance may be affected negatively. This is the reason why the theory is deemed relevant in the study.



Overall, the Transactional Process Model was relevant in the study because it describes the manner in which examination anxiety develops. Also, Rational Emotive Behavioural Therapy (REBT) and Processing Efficiency Theory together are considered relevant in the study because they both describe the outcomes of examination anxiety and how it can be addressed systematically.

### **Conceptual Review**

The conceptual framework covered the following areas:

1. Concept of examination anxiety
2. Causes of examination anxiety
3. Behavioural manifestation of examination anxiety and its effect on senior high school students
4. The needs of senior high school students and the problem of examination anxiety
5. Counselling as a tool for adjustment
6. Counselling techniques of remediating examination anxiety
7. Impact of Rational-Emotive Behaviour Therapy on examination anxiety

### **Concept of Examination Anxiety**

Students routinely experience anxiety in the lead-up to examinations. In spite of this, excessive worry and stress just before and during examinations can have negative health effects. When anxiety impedes an individual's ability to take an examination or perform to their best, it can bring about the person feeling nervous all the time and in extreme cases it can bring about several problems. Nearly everyone has some degree of anxiety or nervousness before

an examination. For many, this is an understandable and even expected reaction to the stress of examinations (Yeboah, 2020)

Anxiety over examinations is characterized as a normal and frequent stress reaction felt prior to, during, and in some cases after an examination (Mohan & Lone, 2021). When examination anxiety is severe, pervasive, and counterproductive to learning, then there is a problem. That is to say, feeling nervous before taking an examination is a natural reaction. It is crucial to keep in mind that some level of examination anxiety is not always a bad thing; in fact, it is often necessary to encourage people to study for, finish, and perform well on examinations.

Examination anxiety is connected with fear of the circumstances and environment of the examination as well as fear of the outcome of the examination. Examination anxiety refers to the psychological state in which an individual goes through distress prior to, during, or after examination to the point where it negatively impacts the outcome of the individual in the examination.

According to Zeidner (2007), examination anxiety is characterized by a preoccupation with negative outcomes. He cautioned that examination anxiety can develop into a major issue in someone's life if not addressed. According to Zeidner's research, persons who suffer from examination anxiety are prone to experiencing both chronic anxiety and panic attacks.

Because students' mental health might suffer greatly if anxiety dominates and disturbs their examinations in high school, it is important to monitor occurrences of examination anxiety. An individual needs counselling or other expert assistance in this situation (Antwi et al., 2022).

Examination anxiety can deter students from exhibiting their utmost performance during examinations. Also, people who go through examination anxiety can manifest social phobia and may be hindered in their social interactions as well as their careers. This is due to the fact that they are unable to participate in any profession that necessitates an entrance exam, certification, licensing, or other form of testing to enter the field.

According to Atkinson (2000), the physical and mental structures of adolescents undergo dramatic shifts throughout adolescence. It is a moment of self-discovery and planning for the future. The majority of issues, especially family strife, tend to worsen around this time. There is also an increased expectation for these adolescents to do well in school. There is therefore the need to provide assistance for students in dealing with examination anxiety.

### **Causes of Examination Anxiety**

Students who suffer from test anxiety are more likely to have low self-concepts and low self-efficacies, bad study habits, and be prone to cheat on exams, according to the available data (Peprah, 2018). These two causes are discussed as follows:

#### ***Self-Concept***

Anxiety about examination often depends on how one perceives oneself. Individual self-awareness refers to an understanding of one's own unique personality and history. It has been emphasized that a child's sense of self is heavily influenced by his or her experiences at school, both positive and negative. Purkey (1970) proposed that one's sense of self interacts continuously with test anxiety. Students' schoolwork may suffer as a result of low self-concept.

In both fields of study—psychology and education—the concept of self is crucial. One's sense of self consists of both a broad and a detailed view of themselves (Choi & Choi, 2002). A self-concept might be either descriptive (such as "I am interested in Science") or evaluative (e.g. I perform better in Science). Academic competency and the student's outlook on their own academic performance may also be emphasized.

Teachers are starting to catch on to the fact that a student's view of him or herself can have a major impact on how well they do in class, which is consistent with what psychologists have found about the importance of self-concept in individual adjustment. The expanding body of research demonstrating a favourable correlation between self-concept and examination anxiety is too strong to ignore (Nguyen, Wright, Dedding, Pham & Bunders, 2019).

According to Anakwe (2003), a student's lack of belief in their instructor can lead them to assume that their performance in class would never improve. Students may become more reserved and self-conscious as a result of this issue.

Students may have examination anxiety for a variety of reasons, including but not limited to a lack of self-assurance, a fear of failing, or other negative thought processes. Those who suffer from perfectionism and low self-esteem often set themselves unachievable goals in an effort to prove their value. The outcomes could be damaging for a student's sense of self-worth if it is related too tightly to the success or failure of a single academic endeavour. As a result, they may worry too much about the negative outcomes of failure and not spend enough time planning for success (Matthew, 2008).

Dikmeyer and Caldwell, as cited by Elaigwu (2003), suggested that a child's self-perception (self-evaluation) could serve as a decisive influence in the latter's growth and behaviour. Dikmeyer and Caldwell added that children assess themselves in relation to their peers on the basis of their ability to lead, engage in games, exhibit creativity, speak confidently and speak in front of their entire class.

Senior high school students who fail to cultivate these traits and abilities may suffer from examination anxiety. The students' improved chances of doing well on examinations are directly correlated to the increased levels of self-confidence they are equipped with.

### *Self-Efficacy*

Another cause of examination anxiety is Self-Efficacy. Students with high levels of academic self-efficacy are more likely to put up extra effort when faced with a challenge, like writing an examination. This means that those with high levels of self-efficacy are more likely to put in extra effort and keep going when others give up. Self-efficacy is the confidence in one's own ability to plan and carry out the actions necessary to handle future events (Bandura, 1997). Self-efficacy, as argued by Schwarzer (1994) and Bandura (1995), is able to influence how people perceive their own abilities and the consequences of their own actions. Anxiety and helplessness are feelings that accompany a low sense of self-efficacy. Negative beliefs about one's own abilities and potential are common among those who struggle with low self-efficacies. Contrarily, having faith in oneself might improve one's thought processes in a variety of settings, ultimately influencing one's decision-making (Grau, Salanova & Peiro, 2001).

Examination anxiety stems from apprehension of being unable to cope under pressure. A feeling of helplessness stems from doubting one's ability to deal with challenges at hand, which leads to concerns of becoming overwhelmed. There is a negative association between test anxiety and confidence, according to Jing's (2007) research. Bandura's (1997) social cognitive theory posits that human functioning is the outcome of interactions between different aspects of an individual's personality, such as their cognition and their environment.

When people believe they can accomplish a goal, they are more likely to put forth the time and effort required to complete it. Students who lack confidence were compared by Schunk (1995). According to his research, people who have confidence in their own abilities are more likely to put forth effort, stay with a task until it is completed, and show resilience in the face of adversity. Those who lack confidence in their own abilities often feel stressed out before examinations.

Comparing oneself to other students can increase examination anxiety. He or she may begin to feel hopeless about learning the material and performing well on upcoming assessments if they notice that their peers are more adept at it than they are. Once more, a level of irritation emerges, which has the potential to lead to the exact same kind of downward cycle.

### **Willingness to Engage in Examination Malpractice**

The question of why students rely on cheating during testing times may arise. One of the reasons, according to Adamu (2001), could be the emphasis on certificate qualification. Students' attitudes and decisions about the most efficient path to certificate attainment are influenced by the

prevailing notion that one should obtain certificates by whatever means necessary. Adamu argued that, academically speaking, average students will often try to measure up to very bright ones. Students who struggle in school often seek "missing" links with external support in order to complete their courses and write successful examinations. Students who believe they must do well on examinations in order to advance to the next grade often develop a distaste for school and a lack of motivation to learn.

Examination anxiety can stem from a variety of factors, all of which are externally sourced. Even if students have had negative experiences regarding examinations in the past, they have no way of knowing that will happen again. They believe that everyone else is having more trouble with the content than they are, yet this may not be the case. It is possible that some of their classmates are going through something similar.

Students may feel pressured to perform well on exams from their parents, their peer groups, and even from teachers. Students who have a hard time juggling all of their responsibilities may develop significant levels of stress and anxiety as a result. Students in this category may resort to examination malpractice (Adamu, 2001).

### **Behavioural Manifestation of Examination Anxiety and its Effects on Senior High School Students**

Exam anxiety was studied by Matthew (2008), who identified the following symptoms:

**Physical:** This can include pain in the head, stomach, or intestines; excessive perspiration; difficulty breathing; dizziness; fainting; or a racing heart; dry mouth; or a combination of these.

**Emotional:** This can include excessive apprehension, letdown, rage, despair, bouts of uncontrollable sobbing or giggling, and emotions of powerlessness.

**Behavioural:** This can include restlessness, pacing, avoiding situations, and substance misuse.

**Cognitive:** This can include inability to focus or even a complete mental blank.

Daniel (2004) discovered that most students are anxious about performing well in examinations. Aside this, Daniel discovered that students also worry about being bullied, getting sick, having a loved one get hurt, dying, and not succeeding in school. Daniel stressed that the worries of students are usually imaginary. They worry about the unknown because of their vivid imaginations about what might happen. Daniel added that adolescent emotional development issues can stem from an overabundance of fear.

Both Ndoh (1995) and Anakwe (2003) agree that a lack of confidence and examination anxiety are symptoms of maladjustment. They argued adolescents' levels of fear, shyness, curiosity, aggression, and happiness have a significant impact on their life roles and social standing. These symptoms are considered extremely concerning because they may hinder the child's physical and academic growth at school.

### **REBT as Counselling Techniques of Remediating Examination anxiety**

In this study, rational-emotive behaviour therapy is used in reducing examination anxiety among students. Noormohamadi et al. (2019) argue that in order to assist clients in changing their maladaptive behaviours, the Rational-Emotional Behaviour counsellor employs a number of methods, such



as “desensitization”, “operant conditioning strategies”, “didactic teaching”, and “homework”.

Among these strategies, homework stands out as the most crucial. Therefore, the counsellor ensures that clients, especially senior high school students, are involved in some good activities particularly as homework. Doing such activities for good span of time can help students overcome any anxieties they may have.

Albert Ellis developed rational-emotive behaviour therapy (REBT) in 1955 to help people alter their behaviours by altering their way of thinking. Ellis was very methodical and analytical in his approach to the client's issues. REBT proposes that flawed worldviews are the primary cause of emotional distress and dysfunction in individuals. Clients could be helped the most by teaching them and providing them with examples of how to dispute and conquer limiting beliefs, such as those related to test anxiety.

This research fits the rational-emotive behavioural therapy framework because it focuses on altering one's behaviour through rational thought in order to conquer examination anxiety. According to Ellis (1955), a man's mind is disturbed not by the events themselves but by his interpretation of them; if this interpretation is radically revised, the man will be more content and productive in his academic and professional endeavours. Ellis proposed several methods a counsellor can use to achieve his aims, given that man is inherently capable of both good and evil. He was confident that instructing and inducing his clients to reflect on their experiences will lead to positive changes in their irrational ways of thinking, feeling, and acting.

Rational-Emotive Behaviour Therapy is relevant to the current Ghanaian situation because of the constant examination malpractices recorded in examinations in the country, according to Adu, Boakye, Suleman and Bingab (2020). People may become irrational in their thinking if they believe that the entire world is against them. Clients with examination anxiety tend to be affected by this, since distress experienced during or after a test or other assessment leads the phobia to worsen to the point where poor performance and disruptions to normal learning occur. Such persons need to be encouraged to find appropriate alternatives and/or answers to their difficulties rather than dwell on the fear of a test, which could have a negative impact on their health and well-being.

Several methods have been proposed for coping with examination anxiety, including those proposed by Cherry (2023) and Cassady and Johnson (2001). According to them, one of the main causes of examination anxiety is the awareness that the student has not fully been prepared for the test. Counselling students to study hard for tests was proposed as a means of reducing test-related anxiety. Maintaining consistent study habits from the start of the semester to the end increases the likelihood that students will develop the high self-confidence that serves as a remedy for examination anxiety. Evidence shows that anxiousness about examinations impairs cognitive functioning.

Students should be prompted to rehearse after each period of intense study so that they can get a feel for how well they have perfected the assigned task and go over the information they still do not remember. It is highly recommended that students review previous examination papers as part of

their study for upcoming examinations. When a person has studied hard and can recite well, they gain self-assurance. It is often more beneficial for students who struggle to study independently to work together in study groups, as this allows for the exchange and development of new ideas.

Having some anxiety before a big event can help students perform better, but too much can be distracting and hinder the efficiency of the student. Having some test-day jitters is good because it motivates the student to study hard. But when anxiety builds up and is not managed by focusing on useful activities, it can slow down the mind's processing speed and make it difficult to think clearly. Therefore, it is impossible to overstate the significance of counselling techniques like operant conditioning, desensitization, and homework in this investigation.

### **Impact of Rational-Emotive Behaviour Therapy on Examination Anxiety**

If Uba (1987) is correct, the effect of Rational-Emotive Behaviour Therapy on examination anxiety is that the clients are better able to avoid or eradicate the majority of their emotional problems or unhappiness through the cultivation of more logical thought processes. They need to abandon their illogical, irrational beliefs and replace them with more reasonable ones.

If the therapy is effective, clients will learn that they can alleviate their symptoms simply by refusing to engage in illogical thought processes; that it is their current illogical thinking that is to blame for their condition, and not the lingering impact of past events. It is expected of the clients that they will be able to re-think, challenge, contradict, and re-verbalize their thoughts or internalise illogical sentences in order to improve the logic and efficiency of their internalised thoughts.

The ultimate goal of Rational-Emotive Behaviour Therapy for examination anxiety is for the client to develop a rational philosophy of life by replacing the irrational attitudes and beliefs that underlie their fears with more reasonable ones. Negative and distressing feelings, as well as self-defeating actions, are expected to vanish once these steps have been taken.

After realising that his or her illogical beliefs are to blame for his or her distress, the client actively participates in the process of rewiring their brain. The client engages in experiential exercises and are given behavioural homework to help them learn how to apply logical thought to real-world situations.

According to Berdiako (2015), clients are expected to be open and appreciate that they have held irrational thoughts about a situation. For him, that is the healing point for the client. In doing so, clients must express themselves freely and ask questions about their situation.

Gehart (2015) indicates that, the success or otherwise of REBT depends on the client. For example, the client must decide that he/she needs help. He needs to open to the counsellor. He/she must be ready to let go the irrational thoughts. He must therefore, participate fully in the intervention process. A case in point is where a student needs to share his/her about examination anxiety with counsellor. Such students must appreciate that he has held irrational beliefs. He must be ready to make a change. The change comes when his irrational beliefs are disputed and get replaced with rational beliefs.

### Conceptual Framework

The hypothesised conceptual framework of how the variables are related is presented below. It is presented in Figure 1.

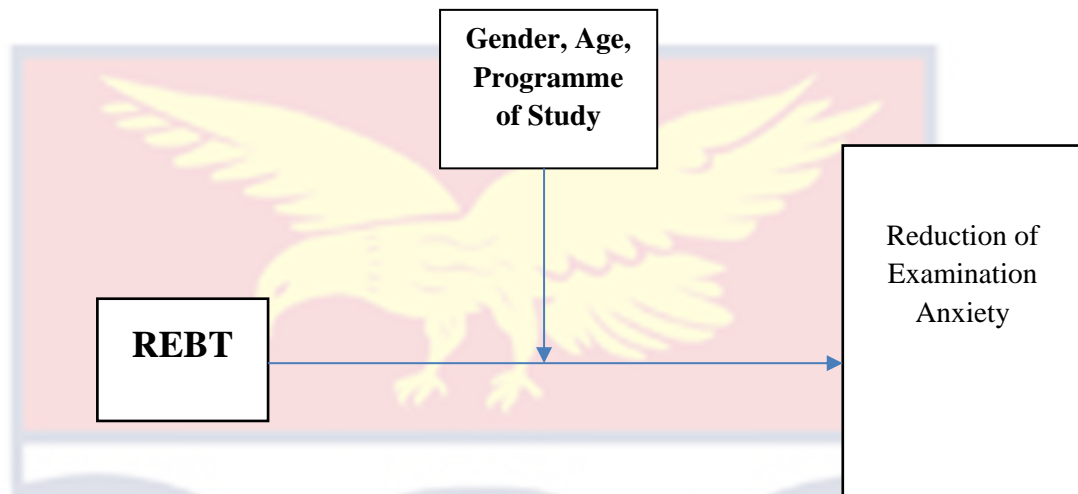


Figure 2: Conceptual Framework

Source: Author's Own Construct

Figure 1, shows the variables and how they are related in this present study. The independent variable is Rational Emotive Behavioural Therapy (REBT) while the dependent variable is the Examination anxiety of students. Aside these variables, the roles played by age, gender and programme of study are examined in the framework.

Two main groups (treatment and control) were involved in the study. These two groups were screened to see the examination anxiety levels after which those in the treatment group were provided with the intervention which through REBT. Those in the control group did not receive these treatments. A post-test was conducted to ascertain the examination anxiety levels of the participants in the two groups and their outcomes compared.

## **Empirical Review**

In this section, some studies related to the current study are reviewed under following themes:

1. Effect of REBT in reducing examination anxiety.
2. Effect of REBT in reducing examination anxiety with regard to gender.
3. Effect of REBT in reducing examination anxiety with regard to age.
4. Effect of REBT in reducing examination anxiety with regard to academic programme of study.

### **Effect of REBT in Reducing Examination Anxiety**

The effect of REBT in reducing examination anxiety has been researched in the literature. Some of the studies are discussed in this section. For instance, Misdani, Syahniar and Marjohan (2019) examined how well a group session of Rational Emotive Behaviour Therapy helped students with examination anxiety. The study was quantitative and experimental in nature. In all, 10 students with either high, moderate or low levels of anxiety were sampled. Data were gathered using an “Anxiety Questionnaire” and analysed using the “Wilcoxon Signed Rank test”. Examination-related anxiety was reduced through REBT-based group activities, as shown by the study's findings. Examination-related anxiety in particular was reduced in the post-test for those students who participated in the REBT. The study of Misdani et al. was similar to the current study since both studies were quantitative and experimental.

The study of Misdani et al. (2019) clearly showed how effective REBT was. Similarly, Counselling based on REBT was used by Iyeke and Lawrence (2022) to help young people cope with their anxiety during the COVID-19

pandemic. The study used a quasi-experimental design, with pre- and post-tests. Eighty-eight teenagers were put into REBT and control groups using a multistage sampling strategy. According to the findings, REBT was effective in alleviating anxiety. Even though the study of Iyeke and Lawrence had similarity to that of Misdani et al., there were some obvious differences. For instance, Iyeke and Lawrence focused on the COVID-19 pandemic while Misdani et al. focused on general examination anxiety.

Additionally, Obi and Nicholas (2020) looked at how REBT helped students in Rivers State, Nigeria cope with school-related stress and anxiety. The study used a quasi-experimental design with a control group that was not randomly assigned to receive either the pre- or post-test. After sampling 24 students and gathering data using questionnaire, stress and anxiety were found to be significantly affected by treatment condition. Compared to the control group, the students in the REBT condition reported significantly lower levels of stress and anxiety after undergoing treatment.

In a similar study in Nigeria, on REBT, Eifediyi, Ojugo and Aluede (2018) looked into its efficacy in reducing exam anxiety among high school students in Edo State, Nigeria. The design for the study was quasi-experimental. Data were gathered using the Nigerian version of “Spielberger’s Examination Anxiety Inventory”. Both the experimental and control groups consisted of a total of 160 students who were worried about their upcoming examinations. The participants in the control group were given instruction in Health Education, whereas those in the experimental group were given training in the REBT for a period of seven weeks. At the 0.05 level of significance, the effect of the treatment (REBT) was shown to be significant.

Both Nigerian studies (Obi & Nicholas, 2020; Eifediyi et al., 2018) were clear indications of how REBT can reduce examination anxiety. Also these studies had very close similarity to the current study since they both involved experimental methods just as the current study.

From the few studies reviewed, it has been clearly shown that examination anxiety can be treated or reduced using REBT. This provides a good evidence for using the theory as the treatment option in this study.

### **Effect of REBT in Reducing Examination Anxiety with Regard to Gender**

The place of REBT in reducing examination anxiety with regard to gender has been examined in the literature. Onyeizugbo (2010) conducted study on self-efficacy, gender, and trait anxiety as modifiers of examination anxiety at Nsukka University in Nigeria. After the treatment, there was a significant difference in the reduction of examination anxiety between male and female students. Specifically, females had lower levels of examination anxiety compared to males.

Adiome (2015) found out that, there was a statistically significant difference between male and female clients with regard to how they responded to REBT in their anxiety levels after examination. He found that female clients responded better than their male counterparts. This was revealed in a study he conducted at Ejisu in the Ashanti region of Ghana. The study of Onyeizugbo (2010) was in line with that of Adiome. They both found females to have reduced examination anxiety than males.

Some other studies have found that male students had reduced examination anxiety compared to females. For instance, according to Philips (2017), gender plays a significant role in the reduction of examination anxiety



with regard to REBT as an intervention strategy. In a sample of 12 with 6 each in treatment and control groups, over a period of 8 weeks, he found male students responded more positively to REBT than their female colleagues. This means that after REBT, examination anxiety levels were higher in females than males.

Also, Núñez-Peña, Suárez-Pellicioni and Bono (2016) investigated how male and female students differed in examination anxiety. Participants were 168 students from Barcelona, Spain. The findings showed that compared with their male counterparts, female students reported higher levels of examination anxiety. This finding was similar to what was found by Philips (2017) as indicated above.

Similarly, examination anxiety was studied by Rezazadeh and Tavakoli (2009), who looked at how factors including gender, academic achievement, and years of study affected students. They also found that female students generally experienced more examination anxiety than their male counterparts. Still along the same line, Malespina and Singh (2022) explored the relationship between self-efficacy, examination anxiety and gender differences. Using validated survey data and grade information, the researchers found that there were gender differences in examination anxiety. Specifically, females had more examination anxiety than males.

Further, Hembree (1988) conducted a meta-analysis of 562 studies on the nature, effects, and treatment of academic examination anxiety. It was revealed that conditions giving rise to examination anxiety levels include ability, gender, and class level. A variety of treatments including REBT were found to be effective in reducing examination anxiety. The study of Hembree

did not indicate specifically whether males or females had high level of anxiety.

Additionally, Matara and Pantu (2021) examined differences in examination anxiety of males and females with focus on 255 students in Indonesia. The study used examination anxiety inventory as instrument for data collection. The study found that male and female individuals experienced significantly different levels of examination anxiety. The anxiety was high among females than males.

Contrary to most of the studies above which showed gender differences in examination anxiety, some studies found no gender differences in examination anxiety. Anwar and Batool (2019) investigated the difference between male and female students' levels of examination anxiety among students attending public schools in the Quetta district. Data were obtained from 172 (102 boys,70 girls) students using “Westside Examination anxiety Scale”. The results indicated no significant difference between males and females in terms of examination anxiety.

In a study similar to that of Anwar and Batool (2019), Akurathi and Raju (2019) investigated the gender, age, and kind of school influences on the relationships between examination anxiety and academic achievement among students in high school in Orissa, India. Data were obtained by using the “Examination anxiety Inventory (TAI)”. The study indicated that no significant difference exists between boys and girls, those from private and government schools, and those in different age groups. This implies that no gender and age differences were related with examination anxiety.

Similarly, Adetayo (2015) researched the gender gap in test anxiety and academic performance among children of single parents enrolled in private secondary schools. This research was quasi experimental study. Stratified random sampling technique was used in sampling 120 students. The study found that there was no significant main effect of gender in the examination anxiety of the students. This means that there were no gender differences in level of examination anxiety. The study of Adetayo is very similar to the current study since both studies use quasi-experimental design.

Additionally, the study of Iyeke and Lawrence (2022) mentioned earlier showed that there was no statistically significant difference in outcomes based on how treatment and gender interacted. Iyeke and Lawrence more specifically showed that REBT is a helpful counselling method for lowering anxiety in adolescents enrolled in formal education programmes, regardless of gender. Eifediyi et al. (2018) also showed no significant interaction both ways between REBT therapy and gender.

It appears from the discussion that most studies found significant gender differences while some other studies found no significant gender differences in examination anxiety after treatment with REBT. Thus, in some studies, gender was influential in reducing examination anxiety in REBT while in other studies gender was not influential in reducing examination anxiety in REBT.

#### **Effect of REBT in Reducing Examination Anxiety with Regard to Age**

Some studies have been carried out on how REBT reduces examination anxiety with regard to age. In a Solomon four experimental design, Perkins (2016) found no significant difference in examination anxiety

reduction in terms of age. He found no difference among (15-18 years) and (19-22years) and (23 and above) and how they reacted to the use of REBT. He carried out his study in Kwazulu-Natal in South Africa.

The study of Perkins (2016) supported the study of Saleh, Usman, and Abbas (2022) looked at the effects of REBT for depressed high school students at the Yobe Islamic Centre in Damaturu, Yobe State, Nigeria. Quasi-experimental research design was adopted and 30 students were studied. The study's findings demonstrated that REBT was useful for anxiety and depression management and that there were significant gender but no age differences in how depression was handled.

The effects of anxiety and depression on school performance among students from Northern Iran were studied by Khesht-Masjedi et al. (2019). Six hundred sixty-six students, aged 13 to 19, from various secondary schools in Iran's northern region participated in the study. Girls reported higher levels of anxiety (21.8%) than boys (11.6%), while boys reported higher levels of depression (29.5%) than girls (17.8%). Furthermore, there was a strong inverse relationship between academic performance and both anxiety and depression. While there was no significant correlation between age and anxiety levels among teenagers, those between the ages of 18 and 19 showed significantly higher levels of depression than those in any other age group.

The study of Khesht-Masjedi et al. (2019) clearly showed no significant age difference in examination and performance anxiety levels. This finding was just like those of Perkins (2016) and Saleh et al. (2022).

Contradicting all the above studies, Markman, Balik, Braunstein-Bercovitz and Ehrenfeld (2011), in a descriptive survey among 120 students in

Lucerne, Switzerland found younger students more anxious during examination than older students. they explained that, the younger students were not experienced as compared with the old students in terms of their encounters with examinations.

Some of the studies reviewed found that age was influential in how REBT reduces anxiety among students. Other studies found that age was not influential in how REBT reduces anxiety among students. This means that more contextual studies may be needed before drawing outright conclusions.

### **Effect of REBT in Reducing Examination Anxiety with Regard to Academic Programme of Study**

There are some existing studies on how REBT reduces examination anxiety with regard to academic programme of study. A study conducted by Taylor and Houghton (2008) used data (N = 340) to test for the cause of examination anxiety over time. Respondents were sampled using simple random sampling technique. The researchers found that, though the respondents reported varying levels of causes, all programmes of study experienced a decline in examination anxiety over time. They also found that, those in the Science programme of study were more anxious than those in the Arts. In a similar study by Boadi (2017) on the predictors of examination anxiety among 215 female students in Takoradi found that the programme of study was the least predictor.

It is evident from what is reviewed that there have not been many studies on the effect of REBT in reducing examination anxiety with regard to examination anxiety. The indication is that this phenomenon is fairly new. As

a result, more studies may be required on the phenomenon in order to make conclusive statements regarding it.

### **Summary of Literature Review**

Examined literature from both overseas and in the Ghanaian setting supports the hypothesis that senior high school students experience exam anxiety. Some of the causes of examination anxiety realized were poor preparation and time management, bad study skills, worries about past results and the negative outcomes of failing. Evidence suggests that exam anxiety adversely affects test results. In conclusion, illogical ideas, low self-esteem, and poor academic outcomes are all interconnected (Ellis, 2003). It was shown that assisting students in facing their anxieties led to a shift or improvement in their perception of themselves, their belief in their own abilities, and their overall sense of self-worth. Students do well in school and in life when they learn to love and improve themselves.

Parents, educators, and mental health professionals are not the only ones who should be worried about students' test anxiety. Evidence from the literature shows that counselling intervention can be used to successfully alter student characteristics. Specifically, group therapy has been shown to be effective in altering behaviour (Elaiwu, 2003). This is due to the fact that maturing in this way fosters or promotes greater introspection and self-acceptance in the context of a supportive community of like-minded peers.

In order to change one's behaviour, the active and direct teaching methods of Rational-Emotive Behaviour therapy, which aim to challenge and reconstruct illogical beliefs and ways of thinking, have been demonstrated to be effective. The therapy's overarching objective is to help its clients become

more self-aware of their tendency to cause unnecessary emotional distress before providing them with the tools they need to overcome these negative emotions and take charge of their life. Review of the literature shows that it is effective in boosting students' confidence and reducing their levels of anxiety.



## CHAPTER THREE

### RESEARCH METHODS

#### Introduction

The purpose of this study was to examine the effect of REBT in reducing examination anxiety among SHS students in KNUST SHS. This section focuses on the following: research design; population; sampling procedure; data collection instrument; procedure for data collection and data analysis procedure.

#### Research Paradigm

This study adopted the positivist paradigm. Positivism is concerned with uncovering truth and presenting it by empirical means (Henning et al., 2004). According to Walsham (1995) the positivist position maintains that scientific knowledge consists of facts while its ontology considers reality as independent of social construction. The positivist paradigm therefore seeks to explain observations in terms of facts or quantifiable things (Fadhel, 2002). In this study, I chose the positivist paradigm because it helped to explain the phenomenon of the effect of REBT in reducing examination anxiety using facts and quantifiable terms.

Positivism also takes the view that knowledge exists outside of what's being studied. In other words, what is being studied can only be done so objectively, and it cannot include opinions or personal viewpoints. Basing on this, I objectively studied the issue under consideration. Finally, this paradigm was chosen for this study because the current study sought to examine the effect of REBT in reducing examination anxiety by observing and describing



what is observed instead of superimposing my subjective personal viewpoints on the data obtained.

### **Research Approach**

The quantitative approach was adopted in this study. Babbie (2010) opined that quantitative approaches place a strong emphasis on objective system of measuring and providing statistical, mathematical, or numerical analysis of data. Quantitative approach therefore deals with numerical data and inferring the results to entire groups of people to be able to describe and provide meaning to specific phenomena. In this study, I chose the quantitative approach because it helped me obtain numerical data from respondents using quantitative techniques on the effect of REBT in reducing examination anxiety among students.

### **Research Design**

The quasi-experimental design was employed for the study. Specifically, the Pretest-posttest control group design was used. It enabled assessment of the effect of REBT in managing examination anxiety among senior high school students in KNUST SHS. The pretest-posttest control group quasi-experimental design, (Leedy & Ormrod, 2010), involved observing the experimental group before and after an intervention implemented. At the outset and the conclusion of the trial, it was verified that the control group experienced no effects whatsoever from the intervention. In addition, the design was suitable for testing the hypothesis, as accurate inferences were made on the connection between the independent and dependent variables. In conducting the quasi-experimental studies, the control group had

characteristics as close to those of the treatment group as possible (White & Sabarwal, 2014).

Quasi-experimental research involves assessing the effect of an intervention or programme by observing its impact on a sample of people who were exposed to it. In this sense, I used the quasi-experimental design because it helped me assess the effect of REBT in reducing examination anxiety among students.

Additionally, quasi-experimental studies typically involve non-random assignment of participants to treatment and control groups, as well as pre- and post-test designs. As a result, the quasi-experimental study is a suitable method for investigating the connections between the explanatory and criterion variables. In the current study, without randomisation, the participants were put into treatment and control groups so that the connection between REBT and examination anxiety. All of these give the indication that the quasi-experimental design is appropriate for the study.

### **Population**

The target population comprised all students in KNUST Senior High School. Specifically, the population of students in the school according to the school administration is 3,415. However, the accessible population was made up of second year students in the school which was 1,207. The researcher chose second year students because they had been exposed to multiple examinations in the school compared to first year students who at the time of the data collection had not undertaken any examinations. Also, second year students were involved in the study compared to final year students because the final year students were preparing for WASSCE and as such the WASSCE

could present as an extraneous variable which could affect examination anxiety levels. On these bases, using second year students as the accessible population was considered justifiable.

### **Sampling Procedure**

In the first stage of sampling, Krejcie and Morgan's (1970) table for determining sample size was used to arrive at a sample of 292. According to them a population of 1207 corresponds to a sample of 292. This means that in arriving at 292, Krejcie and Morgan's table was checked to see the corresponding sample for the population of 1207. In this first stage, the 292 students were selected randomly from the population of 1207 second year students at KNUST SHS. I conducted a pretest for this sample. This ended the first stage of the sampling.

In the second stage, the first 40 students with high levels of examination anxiety were selected for the quasi-experimental study. I used a sample of 40, second-year students, using a purposive sampling procedure. According to White and Sarbawal (2014), sample for experimental design should be a hand full to aid effective intervention. He, therefore, recommended a sample of 10-20. This means that sample of 20 participants in a group was appropriate.

A purposive sampling procedure was employed to select the sample for the study. Researchers utilising purposive sampling select participants based on their own assessments of their likely characteristics and preferences (Cohen, Manion & Morrison, 2003). This means that in purposive sampling, participants, participants are selected based on some specific criteria set by the researcher. In essence, purposive sampling sought to identify samples that

would yield the most useful data in relation to the research questions at hand (Gall, Borg & Gall, 1996). In this study, participants who formed part of the sample were selected based on the criteria that they had examination anxiety. Purposive sampling procedure was therefore used because the study was restricted to students who had anxiety levels in taking examinations.

After this, 40 participants who had examination anxiety were selected for the study. These participants were selected based on their scores of examination anxiety. This number was divided into two groups of 20 participants each. The first group of 20 students with high exams anxiety were taken through Rational Emotive Behavioural Therapy, while the second group were in the control group which was not given any therapy.

#### **Data Collection Instrument**

Data were gathered using questionnaire. The questionnaire was adapted from the “Student Examination Anxiety Questionnaire (SEAQ)” developed by Jibrin (2017). The SEAQ was used to identify students with examination anxiety. The same instrument was used to assess their level of examination anxiety after the intervention. In adapting the instrument, some minor changes were made. For instance, a statement like “The thought of upcoming examination frightens me” was not the same in the original instrument. In the original instrument, it was stated as: “I am frightened because of a test I have to take”. The changes were made to ensure that the language and sentences were suitable, less ambiguous and appropriate for senior high school students.

The instrument had five sections, “A”, “B”, “C”, “D”, and “E”. The first section (A) dealt with the demographic data while the second section (B)

focused on the problems of examination anxiety and was made up of 10 items. The third section (C) focused on self-concept related issues and examination anxiety made up of four items. The fourth section (D) addressed four items seeking self-efficacy related issues. The final section (E) covered examination malpractice issues and had four items.

Sections “B”, “C”, “D”, and “E” were made up of a four-point Likert scale consisting of SA (Strongly Agree), A (Agree), D (Disagree), SD (Strongly Disagree) which was used to get information from the students on examination anxiety. The SEAQ was on a four-point Likert scale comprising “SA” (Strongly Agree), “A” (Agree), “D” (Disagree), “SD” (Strongly Disagree). The scoring was as follows: “Strongly Agree=4”, “Agree=3”, “Disagree=2”, and “Strongly Disagree=1”.

#### **Validity and Reliability of the Instrument**

For the purpose of this study's validation, the instrument was reviewed by specialists in the Department of Guidance and Counselling of the University of Cape Coast.

There were 22 elements included in the draft version of the instrument that was given to the experts to review. These specialists were asked to mark any content that, in their professional opinion, was superfluous and to provide any additional content that should be included but is not currently present in the instruments. Some items were reworded and added to the final version of the questionnaire after receiving feedback, and the completed questionnaire was divided into sections.

In the context of educational assessment, "reliability" means how consistently a given instrument evaluates its target construct. I employed the internal consistency procedure to establish the reliability of the instrument.

The reliability test was done after a pilot test. The pilot test was done in Asanteman Senior High School. This school was used for the pilot test because it is in Kumasi and has similar characteristics to the school been studied. In all, 50 students were sampled for the pilot test. This represented more than 10% of the sample for the study. Several researchers have confirmed that for a research work, using 10% of a sample for pilot test is appropriate (Bullen, 2022; Hertzog, 2008).

#### **Data Collection Procedure**

I obtained approval from the Institutional Review Board of the University of Cape Coast to carry out the study. Also, I was able to secure a letter of introduction from the Department of Guidance and Counselling, University of Cape Coast, prior to beginning the pre-test data collection.

In order to elicit the willing participation of the headmaster and the respondents, I described the reasoning and the other ethical considerations involved in the study. The questionnaire was then administered to the sampled respondents. Serial numbers were assigned to each questionnaire. This helped to identify which respondents would be involved in the final study group.

Respondents who scored 62 to 76 on the SEAQ were considered to have high examination anxiety. Thus, such respondents were those who were involved in the final group for the study. This means that 40 students who had the highest scores between 62 and 76 were recruited for the main study.

After the pretest data collection, the respondents were assigned into experimental and control groups. The 40 participants were purposively put into the two groups (experimental and control) based on the fact that they obtained scores within the high range. Thus, 20 participants each were in both groups. Interventions were applied to the experimental group. After the post test, the control group underwent treatment.

### **Treatment Procedure**

#### **Group One: Treatment Phase for Rational-Emotive Behaviour Group Counselling Sessions**

1<sup>st</sup> Week of REBT: Introduction of the participants and discussion of the objectives of the group.

2<sup>nd</sup> Week of REBT: Gaining insight into examination anxiety

3<sup>rd</sup> Week of REBT: Gaining insight into irrational thoughts regarding examination anxiety.

4<sup>th</sup> Week of REBT: Understanding irrational thoughts regarding poor self-concept and low self-efficacy.

5<sup>th</sup> Week of REBT: Equipping participants with skills in overcoming examination anxiety.

6<sup>th</sup> Week of REBT: Teaching and learning time management skills to help in examination anxiety.

7<sup>th</sup> Week of REBT: Building study skills and practicing some skills as homework.

8<sup>th</sup> Week of REBT: Gaining awareness for the future and how examination anxiety can ruin the future.

9<sup>th</sup> Week of REBT: Developing and encouraging positive self-statements.

10<sup>th</sup> Week of REBT: Evaluation of entire treatment sessions.

Examination anxiety can be alleviated if students can overcome the irrational beliefs, perceptions, and negative self-statements that stand in their way of developing an interest in, selecting, and excelling in their academic coursework. Examination anxiety is only one example of the kind of negative thought that REBT aims to help its clients overcome. The aim of the therapy is also to improve students' academic performance in secondary schools, with a particular focus on test-taking abilities. The therapy approach includes instructing clients on how to improve the ways in which they direct their own behaviour in response to adversity. An important tenet of the approach is that clients can be taught and prompted to reconsider past decisions and experiences.

#### **GROUP TWO: Control Group**

Twice a week, for one hour each day, I held the sessions in a classroom setting, with the following format:

1<sup>st</sup> Week of Normal Counselling: Introduction of participants.

2<sup>nd</sup> Week of Normal Counselling: Discuss challenges of school life.

3<sup>rd</sup> Week of Normal Counselling: Discuss health issues.

4<sup>th</sup> week of Normal Counselling: Discuss discipline issues.

5<sup>th</sup> Week of Normal Counselling: Discuss fairness and justice issues.

6<sup>th</sup> Week of Normal Counselling: Discuss issues of humility issues.

7<sup>th</sup> Week of Normal Counselling: Rate and discuss participants self-discipline.

8<sup>th</sup> Week of Normal Counselling: Rate and discuss participants views on justice.

9<sup>th</sup> Week of Normal Counselling: Rate and discuss participants' humility.



10<sup>th</sup> Week of Normal Counselling: Evaluation of sessions.

These participants underwent counselling which was not provided through REBT. Specifically, the counselling was not done with any theoretical approach. The guide for these counselling sessions for SHS 2 students was obtained from Campaign for Female Education (CAMFED) handbook of Counselling for SHS. This booklet was selected because it has been approved for use in SHS. The participants in the control group were tested alongside individuals who had received the REBT treatment at the conclusion of the sessions. This helped determine whether or not individuals who received the REBT treatment fared better than those who did not in terms of examination anxiety.

#### **Administration of Post-Test**

Post-test took place once the treatment sessions were over. Students filled out the SEAQ. The goal was to determine if students' test-related nerves had diminished. This happened a week after the intervention period. This was based on the assumption that the period between the intervention and post-test should not be lengthy so that the actual effects of the intervention could be determined (Cranmer, 2017; Knapp, 2016). Four classrooms, two each for the treatment and control groups, participated in the post-test programme. Each group was scheduled to meet at the same time and in the same classroom setting.

#### **Data Management Issues**

Due to the sensitive nature of the information provided by respondents, I was responsible for handling all completed surveys on my own. Once the information was acquired, it was locked away in a safe place where no one

else could get to it. After entering the information in the computer, I password-protected the data. To assist safeguard the respondents' safety, I did not have them sign the instrument, and I did not ask for their names. The responses could be tracked with the code numbers I assigned them.

I was careful to utilise correct information so that the study's findings could be double-checked and the data could be reused in the future, all in the name of protecting the reputation of the University of Cape Coast and its research. All conversations had during the intervention were also kept confidential.

### **Data Processing and Analysis**

Statistical Package for Service Solutions (SPSS) software version 25 was used to aid in the analysis. Pre-test data and post-test data were both analysed. Pre-test data were analysed statistically by getting a sum of the scores of each participant. Each questionnaire was given a serial number for identification and each item on the questionnaire was coded.

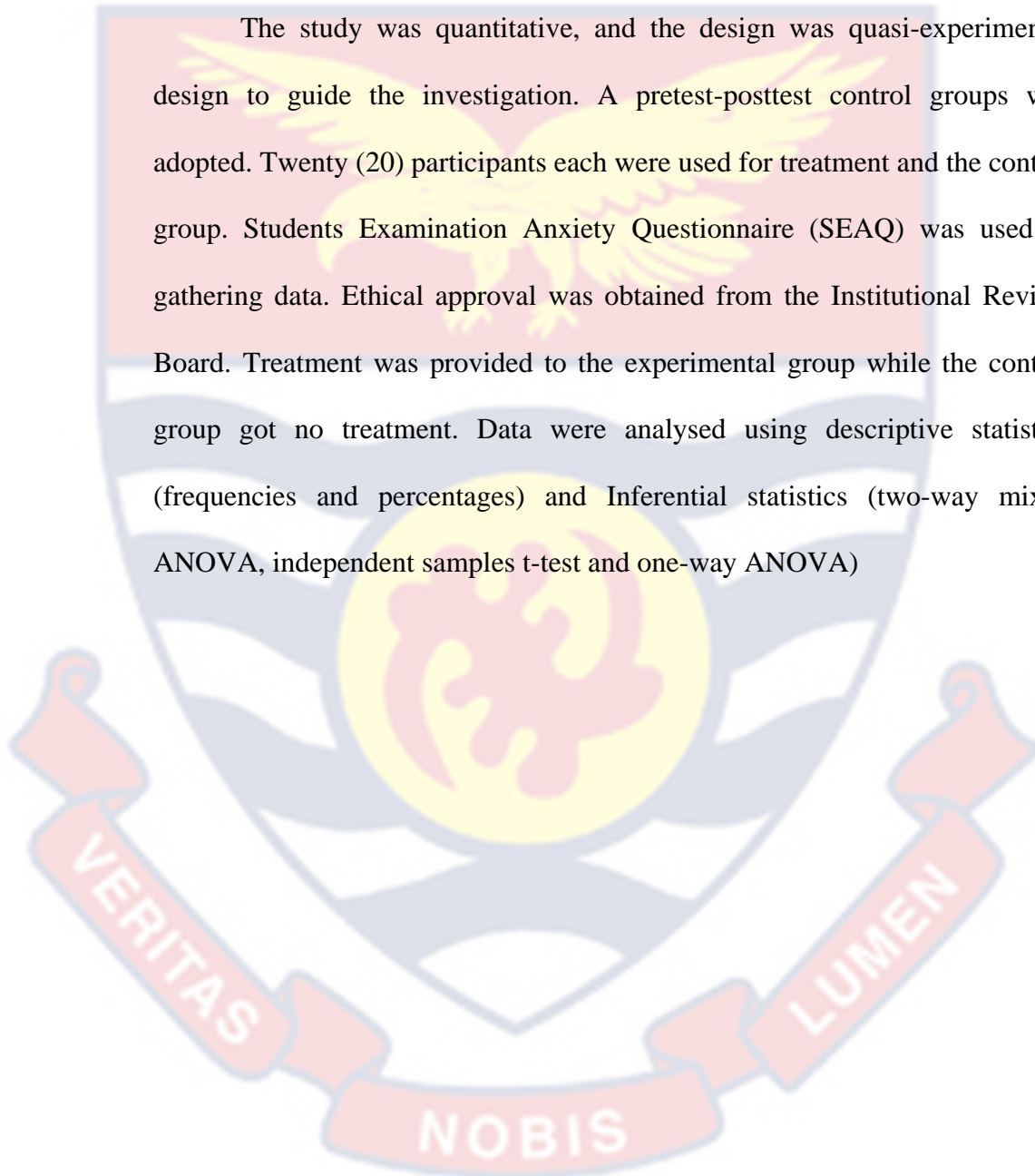
Two-way mixed analysis of variance was used to evaluate the first hypothesis. A two-way mixed ANOVA, as described by Pallant (2010), allowed for the comparison of the mean difference between groups that had been divided on two independent factors. The major goal of this analysis was to determine if the two independent variables had any effect on the dependent variable. Because I intended to calculate an approximate difference between the experimental and control groups, this method was ideal.

The independent samples t-test was utilised in testing hypothesis 2. When comparing the averages of two groups, an independent sample t-test is employed (Agyenim-Boateng, Ayebi-Arthur, Buabeng & Ntow, 2010). One-

way analysis of variance (ANOVA) was utilised in testing hypotheses 3 and 4. This tool was appropriate in finding out the significant differences existing in more than the two independent groups.

### Chapter Summary

The study was quantitative, and the design was quasi-experimental design to guide the investigation. A pretest-posttest control groups was adopted. Twenty (20) participants each were used for treatment and the control group. Students Examination Anxiety Questionnaire (SEAQ) was used in gathering data. Ethical approval was obtained from the Institutional Review Board. Treatment was provided to the experimental group while the control group got no treatment. Data were analysed using descriptive statistics (frequencies and percentages) and Inferential statistics (two-way mixed ANOVA, independent samples t-test and one-way ANOVA)



## CHAPTER FOUR

## RESULTS AND DISCUSSION

**Introduction**

The main aim of this study was to examine the effectiveness of REBT in reducing examination anxiety among SHS students in Kumasi High School. This chapter presents the results and discussion of the study. The results of the demographic characteristics are presented first before the main results.

**Demographic Characteristics**

The demographic characteristics of the respondents include their gender, age and programme of study. These are presented in Table 1.

**Table 1: Demographic Data of Respondents**

Item	Frequency (%)	Percentage (%)
<b>Gender</b>		
Male	18	45.0
Female	22	55.0
<b>Age</b>		
13-15	15	37.5
16-18	19	47.5
Above 18	6	15.0
<b>Programme of Study</b>		
Science	12	30.0
Business	14	35.0
General Arts	9	22.5
Visual Arts	5	12.5

Source: Field Survey (2022)

Table 1 shows that majority of the respondents (55%) were females while 45% were males. This means that majority of those who took part in the study were females. It is also shown in Table 1 that most of the respondents (47.5%) were between the ages of 16 and 18 years while 37.5% were between

the ages of 13 and 15 years. Finally, in terms of programme of study, it is shown that the respondents were offering Business (35%), Science (30%), General Arts (22.5%) and Visual Arts (12.5%). The demographic data presented are relevant due to the fact they may influence the anxiety levels of students.

## **Results**

### **Hypothesis One:**

H<sub>0</sub> 1: There is no statistically significant difference in the effect of REBT on examination anxiety among experimental and control groups in KNUST SHS.

H<sub>1</sub> 1: There is a statistically significant difference in the effect of REBT on examination anxiety among experimental and control groups in KNUST SHS.

This hypothesis aimed at finding out the significant difference in the effect of REBT on examination anxiety among experimental and control groups. The hypothesis was tested through the use of Two-way mixed ANOVA. Two-way mixed ANOVA, as described by Pallant (2010), allows for the comparison of group means after they have been divided on two independent factors. The tool was considered appropriate because it helped to estimate the difference between treatment and control groups.

In using two-way mixed ANOVA, the dependent variable should be measured at the continuous level. In this study, the dependent variable was examination anxiety which was measured on a continuous scale. There should also be at least two categorical independent groups which were the experimental group and the control group. The data was also normally

distributed (Appendix D). The results of the homogeneity test are shown in Table 2.

**Table 2: Levene's Test of Equality of Error Variances<sup>a</sup>**

	F	df1	df2	Sig.
Pretest	5.706	1	38	.052
Posttest	.536	1	38	.469

Source: Field Survey (2022)

It is shown in Table 2 that the significant values of both pre-test and post-test are above .05. This means that homogeneity or equality of error variances can be assumed for the data.

The results of the test of within-subjects effects are presented in Table 3.

**Table 3: Tests of Within-Subjects Effects**

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared	
Test	Sphericity Assumed	5395.613	1	5395.613	299.286	.000	.887
	Greenhouse-Geisser	5395.613	1.000	5395.613	299.286	.000	.887
	Huynh-Feldt	5395.613	1.000	5395.613	299.286	.000	.887
	Lower-bound	5395.613	1.000	5395.613	299.286	.000	.887
	Upper-bound	5395.613	1.000	5395.613	299.286	.000	.887
Test * Group	Sphericity Assumed	3577.813	1	3577.813	198.455	.000	.839
	Greenhouse-Geisser	3577.813	1.000	3577.813	198.455	.000	.839
	Huynh-Feldt	3577.813	1.000	3577.813	198.455	.000	.839
	Lower-bound	3577.813	1.000	3577.813	198.455	.000	.839
	Upper-bound	3577.813	1.000	3577.813	198.455	.000	.839
Error(test)	Sphericity Assumed	685.075	38	18.028			
	Greenhouse-Geisser	685.075	38.000	18.028			
	Huynh-Feldt	685.075	38.000	18.028			
	Lower-bound	685.075	38.000	18.028			
	Upper-bound	685.075	38.000	18.028			

Source: Field Survey (2022)

It is shown in Table 3 that there is a statistically significant difference in the pre-test and post-test scores as the main effects of test (pre-test and post-

test) were found to be significant [ $F(1, 38) = 299.286, p = .000, \eta^2 = .887$ ]. Also, it is shown in Table 3 that the interaction effect (test and groups) was significant [ $F(1, 38) = 198.455, p = .000, \eta^2 = .839$ ]. This means that the differences between experimental and control group in the tests were significant.

The results of the between-subjects effects are presented in Table 4.

**Table 4: Tests of Between-Subjects Effects**

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	250320.313	1	250320.313	17810.554	.000	.998
Group	3962.112	1	3962.112	281.908	.000	.881
Error	534.075	38	14.055			

Source: Field Survey (2022)

Table 4 shows the tests of between-subjects for participants in the experimental and control group in terms of their examination anxiety. From the results, it could be seen that there is a statistically significant difference in the examination anxiety levels of participants on the basis of their groups ( $F(1, 38) = 281.908, p = .000, \eta^2 = .881$ ). This means that there was a statistically significant difference between the experimental and control groups in their examination anxiety with a large effect size (.881).

Since significant differences have been found in the examination anxiety of participants in the experimental and control groups, the mean estimates and pairwise comparisons are presented.

The pairwise comparisons are presented in Table 5.

**Table 5: Pairwise Comparisons**

(I) Group	(J) Group	Mean		Sig. <sup>b</sup>	95% Confidence Interval for Difference <sup>b</sup>	
		Difference (I-J)	Std. Error		Lower Bound	Upper Bound
Experimental	Control	-14.075*	.838	.000	-15.772	-12.378
Control	Experimental	14.075*	.838	.000	12.378	15.772

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

b. Adjustment for multiple comparisons: Bonferroni.

Source: Field Survey (2022)

Table 5 gives evidence to support the result that the experimental and control groups differed significantly in their examination anxiety scores at post test ( $p=.000$ ). Specifically, the experimental group had a lower mean score and thus indicated that their examination anxiety reduced.

The mean estimates are presented in Table 6.

**Table 6: Mean Estimates**

Group	Test	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Experimental	1	63.800	.736	62.309	65.291
	2	34.000	1.030	31.914	36.086
Control	1	64.500	.736	63.009	65.991
	2	61.450	1.030	59.364	63.536

Source: Field Survey (2022)

From Table 6, it could be seen that the mean scores of both groups are higher in the pre-test for both experimental (63.80) and control groups (64.50) than in the post-test. This means that examination anxiety scores were higher in the pre-test. In the post-test, participants in the experimental group had mean score of 34.00 and a standard deviation of 3.728 while participants in the control group had mean score of 61.45 and a standard deviation of 5.346.

From the results, it is clear that the mean score of the experimental group reduced and was lower than the mean score of the control group. Also, the standard deviations indicate that in the post-test the experimental group



had a smaller standard deviation which meant that the scores of the participants were not far from each other. Thus, the participants had examination anxiety scores which were similar to each other.

Since the mean score was lower for the experimental group in the post-test compared to control group, it can be said that the provision of REBT in treating examination anxiety was effective. Thus, REBT reduced examination anxiety among those who received it.

### Hypothesis Two:

H<sub>0</sub> 2: There is no statistically significant difference in the effect of REBT on examination anxiety with regard to gender in KNUST SHS.

H<sub>1</sub> 2: There is a statistically significant difference in the effect of REBT on examination anxiety with regard to gender in KNUST SHS.

This hypothesis sought to find out the statistically significant difference in the effect of REBT on examination anxiety with regard to gender. The independent sample t-test was used to test hypothesis 2. The results of the independent samples t-test are shown in Table 7.

**Table 7: Results of t-test Comparing Male and Female Level of Examination Anxiety**

Gender	N	Mean	SD	Df	t-value	Sig (2-tailed)
Male	18	46.78	15.72	38	-3.182*	.000
Female	22	48.50	13.99			

Source: Field Survey (2022)

\*Significant,  $p < .05$

The results of the independent samples t-test in Table 7 show that there is a statistically significant difference between the effect of REBT in reducing examination anxiety with regard to male and female students [ $t(38) = -3.182$ ,  $p < .05$ ]. The mean score of the males was 46.78 while that of females was

48.50. Based on the results in Table 8, the null hypothesis which states that: there is no statistically significant difference in the effect of REBT on examination anxiety with regard to gender was rejected. This gives the indication that the extent to which REBT reduced examination anxiety differed between male and female students with female students experiencing more examination anxiety than male students.

### Hypothesis Three:

H<sub>0</sub> 3: There is no statistically significant difference in the effect of REBT on examination anxiety with regard to age of respondents in KNUST SHS.

H<sub>1</sub> 3: There is a statistically significant difference in the effect of REBT on examination anxiety with regard to age of respondents in KNUST SHS.

The hypothesis sought to find out if there was a statistically significant difference in the efficacy of REBT on examination anxiety with regard to age of respondents. Since there were three different age groups involved in the study, the One-Way ANOVA was used in testing the hypothesis at 0.05 level of significance.

The results of the ANOVA test are shown in Tables 8, 9 and 10.

**Table 8: Descriptive Results for Different Ages**

Age	N	Mean	Std. Dev.
13-15 years	15	46.87	3.52
16-18 years	19	47.47	3.48
Above 18 years	6	50.67	7.17
Total	40	47.73	2.31

Source: Field Survey (2022)

Table 8 shows the mean and standard deviations of the age groups. It could be seen that students within the '13 and 15 years' group had a mean score of 46.87 and standard deviation of 3.52. The students within the '16-18 years' group had a mean score of 47.47 and a standard deviation of 3.48. The last group (above 18 years) had a mean score of 50.67 and a standard deviation of 7.17. There are obviously disparities between the various age groups, as seen by the mean scores. In terms of specifics, it is clear that, students of '13 to 15 years' had lower mean which meant that their level of examination anxiety was low compared to the students in the other age groups. The outcomes of the ANOVA test to reveal the significance of the difference observed among the groups are presented in Table 9.

**Table 9: ANOVA Results Comparing Examination Anxiety on the Basis of Ages**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	64.171	2	32.086	.143	.867
Within Groups	8277.804	37	223.724		
Total	8341.975	39			

Source: Field Survey (2022)

From Table 9, it was clear that there is no statistically significant difference in the effect of REBT on examination anxiety on the basis of ages [F (2, 37) = .143,  $p > .05$ ]. The p-value (probability value) of 0.867 is greater than the .05 significant level. This means that the difference between the three age groups' mean scores was not statistically significant. Thus, the null hypothesis that there was no statistically significant difference in the effect of REBT on examination anxiety with regard to age of respondents was retained.

**Hypothesis Four:**

H<sub>0</sub>4: There is no statistically significant difference in the efficacy of REBT on examination anxiety with regard to academic programme of study in KNUST SHS.

H<sub>1</sub>4: There is a statistically significant difference in the efficacy of REBT on examination anxiety with regard to academic programme of study in KNUST SHS.

The hypothesis sought to find out if there was a statistically significant difference in the effect of REBT on examination anxiety with regard to academic programme of study. Participants involved in the study were in four different programmes of study. The One-Way ANOVA was used in testing the hypothesis at 0.05 level of significance.

The descriptive results for the different programmes of study are shown in Table 10.

**Table 10: Descriptive Results for Different Programmes of Study**

Programme	N	Mean	Std. Dev.
Science	12	49.17	15.44
Business	14	44.14	14.27
General Arts	9	49.67	15.36
Visual Arts	5	50.80	14.99
Total	40	47.73	14.63

Source: Field Survey (2022)

Table 10 shows the mean and standard deviations of the programmes of study. It could be seen that students offering Business had the lowest mean score of 44.14 and a standard deviation of 14.27. This shows that they had the lowest level of examination anxiety. Also, it is revealed that students offering Science had a mean score of 49.17 and a standard deviation of 15.44 while

students offering General Arts had a mean score of 49.67 and a standard deviation of 15.36. The participants offering Visual Arts recorded the highest mean score of 50.30 and a standard deviation of 14.99. This meant that they had the highest level of examination anxiety.

The results of the ANOVA test to reveal the significance of the difference observed among the different groups are presented in Table 11.

**Table 11: ANOVA Results Comparing Examination Anxiety on the Basis of Programme of Study**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	285.794	2	92.265	.426	.736
Within Groups	8056.181	36	223.783		
Total	8341.975	39			

Source: Field survey (2022)

From Table 11, it could be seen that there is no statistically significant difference in the effect of REBT on examination anxiety with regard to academic programme of study [ $F(2, 36) = .426, p > .05$ ]. The p-value (probability value) of .426 is higher than the significant level of .05. This means that the difference between the mean scores of the various programmes of study was not statistically significant. The null hypothesis, that there was no statistically significant difference in the effect of REBT on examination anxiety with regard to academic programme of study was retained.

## Discussion

### Effects of REBT on Examination Anxiety

It was found in the study that there was a statistically significant difference in the pre-test and post-test scores of examination anxiety. Also, it is shown in Table 4 that the interaction effect (test and groups) was significant. This means that the disparities between experimental and control group in the

tests were significant. Overall, it could be said that there was a statistically significant difference between the experimental and control groups in their examination anxiety with a large effect size. Specifically, the experimental group had a lower mean score and thus indicated that their examination anxiety reduced.

Since the mean score was lower for the experimental group in the post-test compared to control group, it can be said that the provision of REBT in treating examination anxiety was effective. Thus, REBT reduced examination anxiety among those who received it. The results confirm the findings of Misdani, Syahniar and Marjohan (2019) that in their experimental study, the group activities using the REBT approach affected the anxiety scores of students in relation to examinations. Specifically, examination anxiety reduced after REBT. Misdani et al. indicated that the reduction in examination anxiety is mainly because the perceptions of students are changed through REBT.

In a similar vein, the findings of the current study are consistent with the findings of Iyeke and Lawrence (2022) who found that REBT significantly reduced anxiety among adolescents. The implication of the findings of Iyeke and Lawrence was that adolescents who were counselled using REBT saw significant reductions in their anxiety levels.

Additionally, the findings of the current study confirm that of Obi and Nicholas (2020) that REBT significantly affected stress and anxiety levels. Specifically, the researchers indicated that REBT led to reduction in anxiety and stress levels. Even though this anxiety was general, it has relevance in the study because it depicts that, different forms of anxiety can be reduced through REBT.

The findings are also consistent with the findings of Eifediyi, Ojugo and Aluede (2018) that the effect of REBT was significant at 0.05 alpha level in the treatment of examination anxiety. The researchers concluded that REBT was successful in bringing about reduction in examination anxiety. All of the studies mentioned so far are current and they have all been supported by the findings of the current study. However, the findings confirm an older meta-analysis. Hembree (1988) conducted a meta-analysis of 562 studies and revealed among other things that a variety of treatments including REBT were found to be effective in reducing examination anxiety.

All the findings discussed in relation to the findings of the current study have shown that REBT can help in reducing examination anxiety. Ellis (2003) revealed that illogical thought patterns which lead to several misbehaviours and these can be dealt through REBT. From the results of the study and the other results discussed, it was clearly demonstrated that REBT can be effective in reducing examination anxiety.

Theoretically, REBT which was the main theory for the study has been confirmed. Ellis theorized that flawed ways of thinking were at the root of many emotional issues and struggles and as such by challenging those irrational thoughts, the emotional struggles would be overcome (DiGiuseppe, Doyle, Dryden & Backx, 2014). In this regard, REBT is effective in dealing with the negative thoughts regarding examinations. This explains why the current study found REBT to be effective in reducing examination anxiety.

Additionally, Solution Focused Brief Therapy (SFBT) which was used in the study was also confirmed. This is because the theory proposes that people are capable individuals who can manage their own affairs and change

on their own through the assistance given by counsellors or therapists (Stams, Dekovic, Buist, & de Vries, 2006). In this study, students with examination anxiety can be taught to focus on what they can do instead of being anxious over things that they have no control. Therefore, through the assistance provided by counsellors, examination anxiety can be reduced.

From the discussion so far, it is the researcher's opinion students with examination anxiety can be assisted to overcome the examination anxiety through the use of REBT. Since most studies have confirmed it, the effect of REBT in reducing examination anxiety was not in doubt.

#### **Difference in Reduction of Examination Anxiety after REBT with Regard to Gender**

It was found in this study that a significant difference existed between male and female students in terms of their level of examination anxiety after REBT intervention. The null hypothesis that there was no significant difference between males and females in their examination anxiety was rejected. This implies that male and female students differed in their level of examination anxiety with female students experiencing more examination anxiety than male students after treatment using REBT.

From the results, it was clear that REBT treatment interacted well with gender and as such gender differences existed in examination anxiety levels. The finding that male students had lower examination anxiety than female students could be because females probably have more fears about examinations than males (Núñez-Peña, Suárez-Pellicioni & Bono, 2016). The findings are in line with the findings of Onyeizugbo (2010) in Nigeria that,



there is a significant difference in the reduction of examination anxiety between male and female students.

The findings of the current study are also consistent with the findings of Philips (2017) that gender plays an effective role in the reduction of examination anxiety with regard to REBT as an intervention strategy. Philips showed a significant difference between male and female students who had undergone REBT. In a sample of 12 with 6 each in treatment and control groups, over a period of 8 weeks, he found male students responded more positively to REBT than their female colleagues. This was confirmed in the current study where examination anxiety was lower in males than in females.

Further, the findings are consistent with those of Adiome (2015) that, there was a statistically significant difference between male and female clients with regard to how they responded to REBT in the of their anxiety levels after an examination. He found out that female clients responded better than their male counterparts.

Several other studies have shown that gender differences exist in examination anxiety, specifically after treatment with REBT. For instance, the findings of the current study support the findings of Núñez-Peña, Suárez-Pellicioni and Bono (2016) that female students reported high levels of examination anxiety than males in Barcelona, Spain. The findings also confirm that of Rezazadeh and Tavakoli (2009) that female students experienced a higher level of examination anxiety in contrast to male students.

In line with the current study, Malespina and Singh (2022) found that there are gender differences in examination anxiety. Also, the findings support

that of Matara and Pantu (2021) that there was a significant difference in examination anxiety in facing exams in male and female subjects.

In spite of all these studies which have found significant differences in examination anxiety between males and females, there are some few studies which have had contradictory findings. For instance, the findings of the current study contradict those of Anwar and Batool (2019) which showed no statistically significant difference between males and females in terms of examination anxiety as well as the findings of Adetayo (2015) which showed that there was no significant main effect of gender in the examination anxiety of the students. This means that there were no gender differences in the level of examination anxiety.

Similarly, the findings of the current study are in contrast with the findings of Eifediyi, Ojugo and Aluede (2018) that there was no significant 2-way interaction between REBT therapy and gender after treatment of examination anxiety. Eifediyi et al. specifically indicated that males and females did not have different levels of examination anxiety after exposure to REBT.

From the ongoing discussion, it can be seen that most of the studies discussed in line with the current study have shown significant gender differences in examination anxiety after going through REBT. Only a few studies found no significant gender differences.

The evidence from the discussion is that in most contexts, examination anxiety levels would reduce for all people irrespective of their gender; however, comparatively, males were most impacted by REBT than females. In the view of the researcher, this difference could be probably due to females

having more inherent fear towards examination than males. Thus, even when the level of examination anxiety reduces, the level could still be high than the level in males. It can thus, be said that females may need more prolonged REBT intervention.

### **Difference in Reduction of Examination Anxiety after REBT with Regard to Age**

The study showed no significant difference in the examination anxiety of students on the basis of their ages after REBT. The p-value (probability value) of 0.867 is greater than the .05 significant level. This gives the indication that the difference between the three age groups' mean scores was not statistically significant. In essence, the null hypothesis that there was no statistically significant difference in examination anxiety with regard to age of the respondents was retained.

From the results, it can be said that regardless of the ages of students, REBT affected their levels of examination anxiety in the same or similar manner. This finding is understandable because the participants in the study are all adolescents in their teen years and as such are likely to be influenced in the same way in terms of their level of examination anxiety and treatment procedure.

The findings are in agreement with the findings of Perkins (2016) who revealed no significant difference in examination anxiety reduction in terms of age. He found no difference among (15-18 years) and (19-22years) and (23 and above) and how they reacted to the use of REBT. Similarly, the findings confirm the findings of Akurathi and Raju (2019) that non-significant difference exists between boys and girls and those in different age groups.

This implies that males and females did not differ as well as in terms of their ages regarding examination anxiety.

Further, the findings support those of Saleh, Usman and Abbas (2022) that REBT reduced depression and anxiety, but this was not a function of age.

This means that age difference was not significant in the use of REBT treatment. Similarly, the findings are in line with that of Khesht-Masjedi et al. (2019) that there was no statistically significant difference in the anxiety of adolescents on the basis of age. Khesht-Masjedi et al. indicated that it did not matter the ages of students, their anxiety levels and response to treatment were similar.

Regardless of all the studies which have been confirmed in the current study, the findings of the current study contradict those of Markman et al. (2011). Markman et al. investigated the causes of examination anxiety in Lucerne, Switzerland, and found that younger students were found to be more anxious during examination than older students. It was concluded by Markman et al. that significant differences existed between different ages in terms of examination anxiety and its treatment.

From the preceding discussion, it is clear that majority of the studies discussed along with the findings of the current study have established that age differences do not exist in examination anxiety using REBT. This means that students of different ages would have the same levels of examination anxiety even after treatment using REBT.

In connection to the theories reviewed in the study, it can be said that REBT significantly reduces examination anxiety irrespective of the age of the person suffering from the examination anxiety. This is because the foundation

of REBT is that negative thoughts underline behavioural problems, regardless of age and the only way to deal with such negative thoughts is through REBT (David, Szentagotai, Eva, & Macavei, 2005; Dryden & Branch, 2008). The researcher therefore posits that the use of REBT can be effective regardless of age of students.

### **Difference in Reduction of Examination Anxiety after REBT with Regard to Academic Programme of Study**

In response to hypothesis four, the study found that there was no significant difference in the examination anxiety of the respondents on the basis of their academic programmes of study after REBT. Thus, the difference between the mean scores of the various programmes of study was not statistically significant. In this regard, the null hypothesis that there was no statistically significant difference in examination anxiety with regard to programme of study was retained.

In senior high schools, aside from the elective subjects where students differ in the content they study and examinations they write, students study several core subjects together. This could explain why students pursuing different programmes of study had similar levels of examination anxiety after the REBT treatment. Also, the findings could be due to the fact that REBT treatment is effective in dealing with examination anxiety regardless of the programmes of study of students.

The findings of the current study support the findings of Boadi (2017) on the predictors of examination anxiety among female sex school in Takoradi and found that the programme of study of the female students was least predictor of their examination anxiety. This meant that examination anxiety

and its treatment did not vary because of programme of study. Similarly, the findings of the current study confirm the findings of Taylor (2008) that, though the respondents reported varying levels of causes, all programmes of study experienced a decline in examination anxiety over time. Thus, in the view of Taylor, when students are exposed to the same kind of treatment for examination anxiety, the examination anxiety would reduce in spite of their programmes of study.

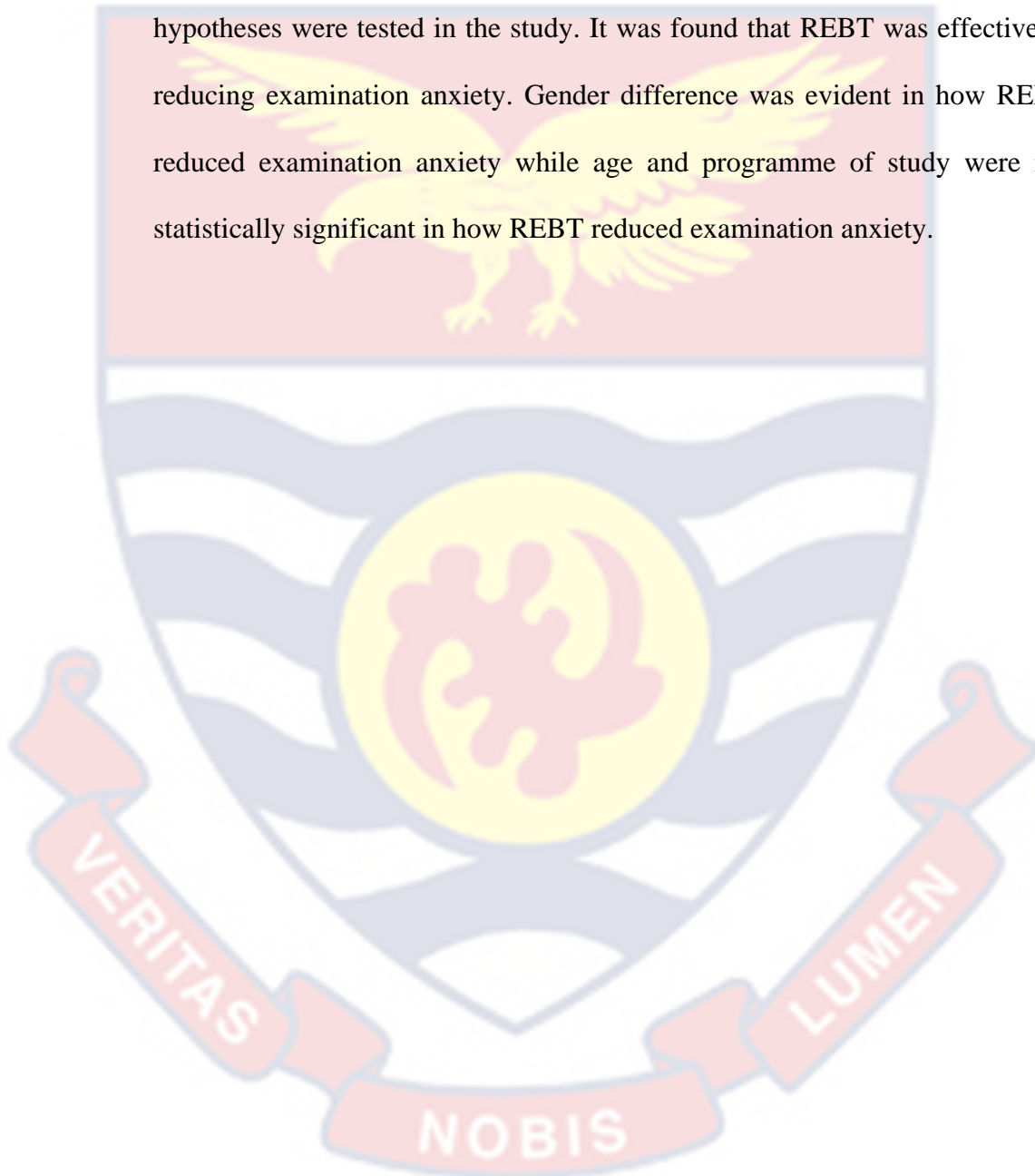
It can be discerned from the theories reviewed that regardless of the programmes of study of students, examination anxiety levels are similar, particularly after being exposed to REBT as treatment. This gives the implication that all students pursuing different programmes of study can benefit from REBT in the treatment of examination anxiety.

In connection to the theories reviewed in this study, it can be said that Spielberger and Vagg's (1995) transactional process model which highlights how examination anxiety come about, has been confirmed. In their theory, examination anxiety comes about through worry and emotionality about examination. In this sense, the theory proposes that when worries and emotionality are dealt with then the individual would have reduced examination anxiety. Worries are rooted in thinking and since REBT targets the thought patterns, it was not surprising that the respondents had reduced examination anxiety. This reduction in examination anxiety was not only for students doing a particular academic programme of study. This is because, as already realized, the source of examination anxiety is the same for all students according to Spielberger and Vagg's (1995) transactional process model,

worry and emotionality. As such, once the root causes of examination anxiety are dealt with, all the students would have reduced examination anxiety.

### Chapter Summary

This chapter presented the results and discussion of the study. Four hypotheses were tested in the study. It was found that REBT was effective in reducing examination anxiety. Gender difference was evident in how REBT reduced examination anxiety while age and programme of study were not statistically significant in how REBT reduced examination anxiety.



## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### Introduction

This chapter covers the summary, conclusions and recommendations of the study. Implications for counselling and suggestions for further research are also given in the chapter.

#### Summary of Study

This study examined the effectiveness of REBT in reducing examination anxiety among SHS students in Kumasi High School. The specific objectives were to:

1. find out the effect of REBT in reducing examination anxiety among SHS students.
2. find out the effect of REBT in reducing examination anxiety of SHS students with regard to gender.
3. determine the effect of REBT in reducing examination anxiety of SHS students with regard to age.
4. ascertain the effect of REBT in reducing examination anxiety of SHS students with regard to programme of study.

#### Hypotheses

Four hypotheses were tested in the study:

H<sub>0</sub> 1: There is no statistically significant difference in the effect of REBT in reducing examination anxiety between experimental and control groups in KNUST SHS.



H<sub>1</sub> 1: There is a statistically significant difference in the effect of REBT in reducing examination anxiety between experimental and control groups in KNUST SHS.

H<sub>0</sub> 2: There is no statistically significant difference in the effect of REBT on examination anxiety with regard to gender in KNUST SHS.

H<sub>1</sub> 2: There is a statistically significant difference in the effect of REBT on examination anxiety with regard to gender in KNUST SHS.

H<sub>0</sub> 3: There is no statistically significant difference in the effect of REBT on examination anxiety with regard to age of respondents in KNUST SHS.

H<sub>1</sub> 3: There is a statistically significant difference in the effect of REBT on examination anxiety with regard to age of respondents in KNUST SHS.

H<sub>0</sub> 4: There is no statistically significant difference in the effect of REBT on examination anxiety with regard to academic programme of study in KNUST SHS.

H<sub>1</sub> 4: There is a statistically significant difference in the effect of REBT on examination anxiety with regard to academic programme of study in KNUST SHS.

Examined literature from both overseas and in the country of this study's setting supports the hypothesis that some students from Kwame Nkrumah Senior High School experience exam anxiety. In conclusion, illogical ideas, low self-esteem, and poor academic outcomes are all interconnected (Ellis, 2003). In order to change one's behaviour, the active and direct teaching methods of Rational-Emotive Behaviour therapy, which aim to

challenge and reconstruct illogical beliefs and ways of thinking, was demonstrated to be effective in the literature.

The study adopted the quantitative approach and utilized a quasi-experimental design. Twenty (20) participants each were used for treatment and the control group. The “Students Examination Anxiety Questionnaire (SEAQ)” was used for pretest and posttest data collection. Descriptive statistics (frequencies and percentages) and Inferential statistics (Two-way mixed ANOVA, independent samples t-test and ANOVA) were used for the analysis.

### **Major Findings**

The study found that there was a statistically significant difference in the pre-test and post-test scores of examination anxiety. Also, there was a statistically significant difference between the experimental and control groups in their examination anxiety with a large effect size. Specifically, the experimental group had a lower mean score and thus indicated that their examination anxiety reduced after treatment. Thus, the provision of REBT in treating examination anxiety was effective.

The study found that there was a significant difference in the effect of REBT in reducing examination anxiety with regard to gender. This implies that male and female students differed in their level of examination anxiety with female students experiencing more examination anxiety than male students after treatment using REBT.

The study showed that there was no statistically significant difference in the effect of REBT on examination anxiety with regard to ages of respondents. The difference between the three age groups’ mean scores was

not statistically significant. The null hypothesis that there was no statistically significant difference the effect of REBT on examination anxiety with regard to age of respondents was retained.

The study's findings indicated that there was no statistically significant difference in the effect of REBT on examination anxiety of the respondents on the basis of their academic programmes of study. The difference between the mean scores of the various programmes of study was not statistically significant. The null hypothesis, that there was no statistically significant difference in the effect of REBT on examination anxiety with regard to programme of study was therefore retained.

### **Conclusions**

It can further be discerned from the findings of the study that REBT is an effective treatment approach for dealing with examination anxiety. Students with examination anxiety who are exposed to REBT would experience a reduction in their examination anxiety. This conclusion is in line with the majority of existing literature on examination anxiety and REBT.

Also, it is concluded that REBT is effective in reducing examination anxiety for male students more than female students. The indication therefore is that when both male and female students with examination anxiety are exposed to REBT, it is more likely to have reduced examination anxiety in males more than females.

Additionally, it is concluded that regarding the effect of REBT in reducing examination anxiety, age is not matter of consideration. This means that regardless of the ages of students, they can benefit from REBT intervention in reducing examination anxiety. Finally, it is concluded that

academic programmes of study do not matter. In essence, regardless of the academic programmes of study of students, REBT can effectively reduce their level of examination anxiety.

### **Recommendations**

On the basis of the findings of the study, the following recommendations are made:

1. School authorities should collaborate with school counsellors to screen and identify students with examination anxiety so that REBT treatment can be planned for them since the study found that REBT was effective in reducing examination anxiety.
2. The study found that male students had reduced examination anxiety compared to female students and as such it is recommended that school counsellors consider making REBT a priority treatment approach for all females with examination anxiety.
3. It is recommended that school counsellors provide REBT treatment for students with examination anxiety without any form of biases with regard to age. Thus, every student whether young or old should be given equal attention in the use of REBT to deal with examination.
4. School counsellors should pay attention to all students regardless of the programmes of study they are pursuing in treatment of examination anxiety. On this basis, every student in senior high schools should not be left out of treatment of examination anxiety.

### **Implications for Counselling**

The findings of this study have implications for the study and practice of counselling. In the first place, counsellors could make REBT a fundamental

part of their approach in counselling students who have examination anxiety. Even though there are different theoretical approaches that counsellors use in their work, the current study found that REBT was effective in reducing examination anxiety and as such counsellors can make REBT a focal therapy in treating examination anxiety.

Secondly, group counselling situations could be arranged for all students experiencing examination anxiety. In the group counselling situations, the counsellor could facilitate REBT approach in helping to treat the examination anxiety among the students. Students who perform poorly in examinations could also be screened to find out if they have examination anxiety before putting them in group counselling situations.

Further, the findings of the study have implications for counsellors in training. Counsellors in training could build up their training in REBT so that they could effectively use the approach when they complete their training and start practicing.

Finally, the results concerning academic programmes of study have implications for the work of school counsellors. Specifically, school counsellors can apply REBT to help address examination anxiety for students who have anxiety towards only specific subjects or programmes of study. This is because the study found that REBT was effective across all academic programmes.

### **Suggestions for Further Research**

The following suggestions are made for further research:

1. Future research can focus on finding out other counselling theories or approaches which can be useful in reducing examination anxiety

among students. This can help identify other means of treating examination anxiety.

2. Similar studies of the nature of the current study can be conducted in other schools and settings. This can help establish clearly the effect of REBT in treating examination anxiety in other areas or societies.



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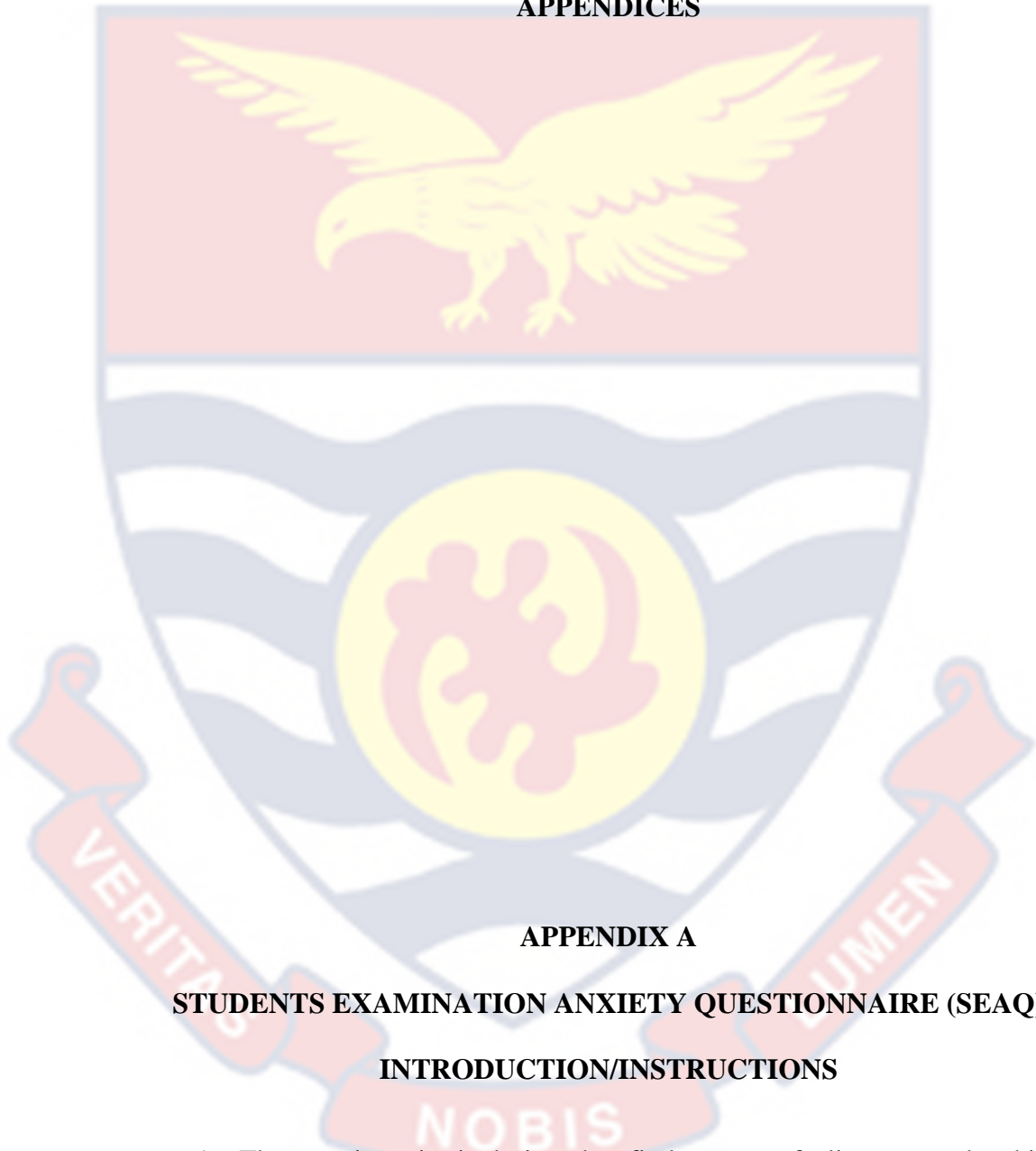
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**APPENDICES**



**APPENDIX A**

**STUDENTS EXAMINATION ANXIETY QUESTIONNAIRE (SEAQ)**

**INTRODUCTION/INSTRUCTIONS**

1. The questionnaire is designed to find out your feelings towards taking of examinations and your attitude to some issues related to taking of examinations.



2. Note that there are no wrong or right answers, so feel free to respond to the issues raised in the questionnaire as honestly as you possibly can.
3. The information you provide will be treated as confidential, and will be used for the purpose of this research work only. It will also be used to help students in senior high schools to be better informed about fear for examinations and how they can overcome it in order to be more useful to themselves and society.

**SECTION A: BACKGROUND INFORMATION**

AGE:.....

GENDER:.....

CLASS.....

PROGRAMME OF STUDY: .....

**SECTION B: EXAMINATION ANXIETY RELATED PROBLEMS**

**Instruction:** Please indicate the extent to which you agree or disagree with the items below by ticking in the box provided.

S/N	ITEM	SA	A	D	SD
		Strongly Agree	Agree	Disagree	Strongly Disagree
1	I always feel anxious, when reading test questions in an				

	examination.				
2	I always panic as the teacher starts to give instructions while handing over test booklets				
3	The thought of upcoming examination frightens me.				
4	I experience dry mouth during examination.				
5	My heart beats rapidly, when the teacher announces that the examination is one week away.				
6	I become discouraged, when examination questions are difficult.				
7	I find it difficult to organize my thoughts during examination.				
8	Most of the times, I go blank on an examination.				
9	The closer I am to an examination, the harder it is for me to concentrate on the study.				

10	I keep fidgeting with papers when I cannot answer questions on an examination.				
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### SECTION C: SELF-CONCEPT RELATED ITEMS

**Instruction:** Please indicate the extent to which you agree or disagree with the items below by ticking in the box provided.

S/N	ITEM	SA	A	D	SD
11.	I am not as good as I should be in school.				
12.	I am good in some of my school subjects.				
13.	I am good at remembering what I have learnt in school, but not always.				
14.	I am able to follow my lessons easily when I like the teacher.				

### SECTION D: SELF-EFFICACY RELATED PROBLEMS

**Instruction:** Please indicate the extent to which you agree or disagree with the items below by ticking in the box provided.

S/N	ITEM	SA	A	D	SD

15.	I may cope in most school situations.				
16.	I hardly handle whatever comes my way in school.				
17.	I always manage to solve difficult problems in school, if I try hard enough.				
18.	I can remain calm when facing difficulties in school.				

**SECTION E: EXAMINATION MALPRACTICE RELATED PROBLEMS**

**Instruction: Please indicate the extent to which you agree or disagree with the items below by ticking in the box provided.**

S/N	ITEM	SA	A	D	SD
19.	In some situations, I bring books into the examination hall.				
20.	Sometimes, I copy from other students during examination.				
21.	I sometimes engage myself in swapping question papers during examination.				
22.	I sometimes ask for help during examination.				

**ADMINISTRATION OF THE PROGRAMME****Group One: TREATMENT PHASE FOR RATIONAL-EMOTIVE  
BEHAVIOUR (COGNITIVE) GROUP COUNSELLING SESSIONS****Week One**

Session 1 (1 hour)

Topic: Introduction and preliminary activities/self-understanding

Goal:

- (i) To help members develop self-awareness and get acquainted with each other.
- (ii) To assist members to increase their understanding and enhance their self-concept.

Activities: The researcher and the research assistants initiated self-introduction to enable members know more of one another. Each member in turn introduced him/herself giving such details as name, position in the family, family background, age, academic history, impression about school, aspirations, likes and dislikes.

Session 2 (1 hour)

Warm-up exercise such as handshakes and embracing one another took place.

All these will be to foster interactions and reduce initial anxiety.

The purpose and format of the programme will be explained by the group facilitator.

The facilitator will lead members to spell out and explain the basic rules were regarded as binding on all members, which were also the essential ground rules for group counselling.

- Punctuality, confidentiality, honesty, orderliness, helpfulness, equality and action.

- Home assignment: Identification of interest and life goals will be given to members.

### **Week Two**

Sessions 1 & 2

Topic: Preliminary activities/self-understanding to examination anxiety.

Goal: The goal of these sessions is to assist members to self-understanding through increasing self-awareness in order to reduce examination anxiety.

Activities: Activities will be as those of the first week.

### **Week Three**

Sessions 1 & 2 Topic: Understanding self-evaluation, behaviour to self and examination anxiety.

Goal: To help students understand the irrationality of negative self-talks, self-evaluation and how such can affect individual's personality.

Activities: Each student will be asked to list statements they make about themselves and how they evaluate themselves. Each member will be

asked to read what had been written. Members were encouraged to assist any member in reading out his/her list to identify statements on self-evaluation/self-talk that were negative. Members will be assisted to understand the negative self-talks/self-evaluation as irrational/baseless and such statements can influence one's examination anxiety.

#### **Week Four**

Sessions 1 & 2

Topic: Understanding and relationships among negative self-talks/irrational beliefs, and examination anxiety.

Goal: The general aim of this session is to help students' understand and appreciate how negative self-talks are related to poor self-concept and examination malpractice which comes about because of examination anxiety.

Activities: Each student will be asked to present a list of negative self-talks (on self/school work) they will be assisted to understand that a person with poor self-evaluation, low self-esteem or negative self-concept has faulty or irrational beliefs/behaviours that tend to maintain their un-adaptive behaviours.

#### **Week Five**

Sessions 1 & 2

Topic: Challenging negative self-talks/irrational beliefs.

Goal: To assist members develop appropriate skills to be able to make positive self-talks and irrational statements.

Activities: Members will be assisted to understand that virtually all humans' disturbances are the result of irrational, illogical thoughts, feelings and beliefs. These can therefore be directly and forthrightly be eliminated by individuals sticking vigorously to empirical reality. Irrational thoughts and beliefs are learnt and can be unlearned by first questioning (source, how, why, when) of such thoughts and beliefs.

### Week Six

Sessions 1 & 2

Topic: Time management and making positive self-statements.

Goal: To inculcate in the students the habit of apportioning time in their daily work and to increase member's skills in making self-talks in order to improve their self-concept and to avoid examination anxiety.

Activities: Members will discuss in their groups on how to draw and use personal time table. They also reminded each other on the self-talk.

### Week Seven

Sessions 1 & 2

Topic: Study time table and making positive statement about self at home and school.



Goal: (i) To enable students form the habit of apportioning time to study while in school, so that they can do well academically and avoid examination anxiety.

(ii) To improve skill in making positive self-statements in order to improve members self-concept and to change their behaviours towards examination malpractice which comes about because of examination anxiety.

Activities: Students will be instructed on how to draw up study time table to help them study well in school. They also discussed on how each one of them would practice self-talk in their various homes concerning their school work and examinations.

### **Week Eight**

Sessions 1 & 2

Topic: Examination anxiety/career awareness

Goal: To enable members work harder in school to avoid examination anxiety in order to be responsible adults and work life after the completion of their formal education.

Activities: Discussion will focus on the importance of hard work in order to avoid examination anxiety and examination malpractice. A number of professions were identified and the group members discussed their various occupations, the benefits the occupations would accord the professionals and the importance of the occupations to the society.

### Week Nine

Sessions 1 & 2 Topic: Making positive self-statements.

Goal: To increase member's skills in making self-talks in order to improve their self-concept and develop acceptable behaviour towards testing.

Activities: There will be a concise review of the previous sessions. Members were taught how to replace this negative statement with positive ones and emphasis were also laid on having a natural look at the use of "should, ought and must" in daily discussion/interaction. Assignment was given on practicing to make positive rational statements about self at home.

### Week Ten

Sessions 1 & 2 Topic: Evaluation

Goal: Aimed at reviewing the previous sessions, receiving and giving of feedbacks.

Activities: Discussion on previous sessions. Each student shared his/her experiences with other members. Possible future improvement in running the group sessions were suggested by members. These were overall evaluation of the counselling sessions by group members.

APPENDIX B

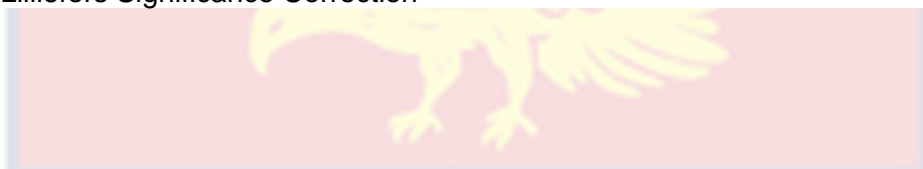
TEST OF NORMALITY

Tests of Normality

	GROUP	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
POSTTEST	EXPERIMENTAL	.090	20	.200*	.972	20	.800
	CONTROL	.173	20	.117	.932	20	.168

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction



Tests of Normality

	GROUP	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
PRETEST	EXPERIMENTAL	.182	20	.081	.933	20	.178
	CONTROL	.168	20	.143	.961	20	.555

a. Lilliefors Significance Correction

