



**NEAR EAST UNIVERSITY**  
**INSTITUTE OF GRADUATE STUDIES**  
**DEPARTMENT OF GUIDANCE AND PSYCHOLOGICAL**  
**COUNSELING**

**EFFECTIVENESS OF MINDFULNESS PROGRAM ON  
PERCEIVED STRESS REDUCTION, RESILIENCE AND SENSE  
OF WELL-BEING AMONG HIGH SCHOOL STUDENTS**

**Ph.D. THESIS**

**Rozhan Ali KHADIR**

**Nicosia**

**December, 2024**

**ROZHAN ALI KHDIR**

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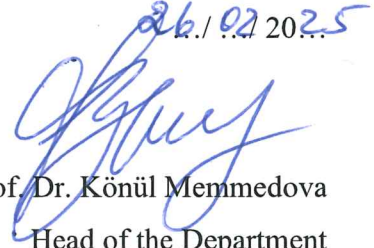
**December, 2024**

## Approval

We certify that we have read the thesis submitted by Rozhan Ali Khdir titled **“Effectiveness of Mindfulness Program on Perceived Stress Reduction, Resilience and Sense of Well-Being Among High School Students”** and that in our combined opinion it is fully adequate, in scope and in quality, as a thesis for the degree of Ph.D. of Educational Sciences.


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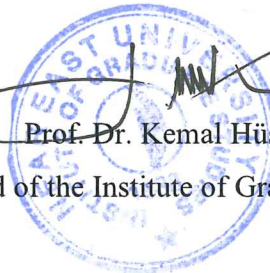
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### **Declaration of Ethical Principles**

I hereby declare that all information, documents, analysis and results in this thesis have been collected and presented according to the academic rules and ethical guidelines of Institute of Graduate Studies, Near East University. I also declare that as required by these rules and conduct, I have fully cited and referenced information and data that are not original to this study.

**Rozhan Ali Khadir**

**24/12/2024**

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I would like to thank my beloved parents for their loyalty and their great confidence to me, for giving me support, encouragement and constant love that has sustained me throughout my life. They led me to the treasures of knowledge and success.

**Rozhan Ali Khadir**

## **Abstract**

### **Effectiveness of Mindfulness Program on Perceived Stress Reduction, Resilience and Sense of Well-Being Among High School Students**

**Khadir, Rozhan Ali**

**Supervisor: Assoc. Prof. Dr. Yasemin Sorakin, Prof. Dr. Aşkın Kiraz**

**PhD, Department of Guidance and Psychological Counseling**

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Students are under constant pressure academically and from their social life. This often subjects them to stress, resilience and affects their well-being. This study is to determine the effectiveness of mindfulness training program as a tool to combat stress, resilience and promote well-being in high scholars in Northern Iraq. The study employed a quantitative approach and an experimental research design. The researcher collected data from two groups of students and subjected one group to the mindfulness training program. The training program lasted six weeks and questionnaires were used to collect data before and after the program. The study revealed a positive association between mindfulness and well-being in the study group whilst the control group experienced a decrease. Mindfulness was also found to reduce stress in both control and study group, however the changes were insignificant. The changes in the resilience were significant for both groups. The study corroborated most literature findings and there is a great implication that mindfulness makes a huge difference when it comes to the well-being and mindfulness awareness attention of students. As the study employed only a quantitative approach, the researcher recommends further studies employ mixed methods for a more comprehensive analysis.

**Key Words:** mindfulness awareness attention, mindfulness training program, perceived stress, resilience, well-being

## Özet

### **Lise Öğrencilerinde Farkındalık Programının Algılanan Stres Azaltma, Dayanıklılık ve İyi Oluş Duygusu Üzerindeki Etkinliği**

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**Doktora, Rehberlik ve Psikolojik Danışmanlık Bilim Dalı**

**Aralık 2024, 144 sayfa**

Öğrenciler hem akademik hem de sosyal yaşamlarında sürekli bir baskı altındadır. Bu durum onları sıklıkla strese ve dayanıklılığa maruz bırakmakta ve iyi oluş duygularını etkilemektedir. Bu çalışma, Kuzey Irak'ta yükseköğrenim gören öğrencilerde stres ve dayanıklılığa karşı mücadele etme ve iyi oluşu teşvik etme aracı olarak farkındalık eğitim programının etkinliğini belirlemeyi amaçlamaktadır. Çalışmada nicel bir yaklaşım ve deneysel bir araştırma deseni kullanılmıştır. Araştırmacı iki grup öğrenciden veri toplamış ve bir grubu farkındalık eğitim programına tabi tutmuştur. Eğitim programı altı hafta sürmüştür ve programdan önce ve sonra veri toplamak için ölçekler kullanılmıştır. Araştırmada, çalışma grubunda farkındalık ve iyi oluş arasında pozitif bir ilişki olduğu belirlenmiş, kontrol grubunda ise bir azalma görülmüştür. Farkındalığın ayrıca hem kontrol hem de çalışma grubunda stresi azalttığı bulunmuştur, ancak değişiklikler anlamsızdır. Dayanıklılıktaki değişiklikler her iki grup için de önemlidir. Çalışma, literatür bulgularının çoğunu doğrulamıştır ve farkındalığın öğrencilerin iyi oluş ve farkındalık düzeyinde büyük bir fark yarattığına dair önemli çıkarımlarda bulunmuştur. Araştırmada yalnızca nicel yaklaşım kullandığından, daha kapsamlı bir analiz için karma yöntemlerin kullanıldığı detaylı çalışmalar yapılması önerilmektedir.

**Anahtar kelimeler:** algılanan stres, dayanıklılık, farkındalık bilinci, farkındalık eğitim programı, iyi oluş

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## **List of Abbreviations**

<b>ABC:</b>	Activating Event, Beliefs, Consequences
<b>CBT:</b>	Cognitive Behavioral Therapy
<b>COVID-19:</b>	Coronavirus Disease 2019
<b>DBT:</b>	Dialectical Behavioural Therapy
<b>GAS:</b>	General Adaptation Syndrome
<b>MAAS:</b>	Mindful Attention Awareness Scale
<b>MBCT:</b>	Mindfulness-Based Cognitive Therapy
<b>MBSR:</b>	Mindfulness-Based Stress Reduction
<b>PERMA:</b>	Positive Emotion, Engagement, Relationships, Meaning, Accomplishment
<b>PISA:</b>	Program for International Student Assessment
<b>PSS-10:</b>	Perceived Stress Scale
<b>SPSS:</b>	Statistical Package for Social Sciences

## **CHAPTER I**

### **Introduction**

#### **Background of the Study**

According to Lampe and Muller-Hilke (2021), health is a product of mental and social well-being and if not met, stress, anxiety and depression are some of the outcomes. Stress results from one's association with different contexts when the importance placed on the situation is beyond the reach of available resources (Verde-Montenegro-Atalaya et al, 2021). If there is more pressure compared to the response and coping mechanism then the person becomes stressed (Wang et al, 2024). These conditions also lead to fatal coping mechanisms like alcohol and substance abuse.

The need for education, especially tertiary education has increased in the past few years. More and more emphasis is put on academic performance and hence students aim to improve their academic performance in high school so that they ultimately get enrolled in degree programs of their choice. In order to enroll they have to pass their final year high school examinations. Examinations often enough increase stress levels among students; more so qualifying examinations. They are constantly worried about if they have studied enough, if what they read is going to come up in the exam, the different ways in which a question may be asked and so forth. They are also anxious about if they are going to pass and make it to the next stage and pass with enough points to make them eligible to the programs of their choice. There is the constant worry about what other people, their peers, parents and teachers will say and do if they fail. Add parental pressure to that mix and the stress levels are elevated. In students these are counterproductive as they can ultimately affect their academic performance; thus, it is not ideal for them to be under a lot of stress. Some students are resilient and able to overcome this whilst others fall short and turn to unorthodox means of coping. According to Xu et al (2021), well-being in young adults is an area of concern and interest as students undergo various transformations at that particular time in their lives. They will be dealing with physiological changes.

According to Arhene et al (2016), academic stress can be a major ingredient to depression. Averson (2019) referred to stress as a motivating factor that allows us whether to flee or fight in situations. They pointed out that students in particular face an overwhelming amount of stress and its effects within the course of their study.

According to Oberle and Schonert-Reichl (2016) students spent about 15000 hours in the classroom from the time they are in kindergarten up to Grade 12. This amount of time has thus led to continued interest in stress in students and development of methods, strategies and programs that reduce it.

Pascoe et al (2020) highlighted that the period of going from high school to starting university is a very stressful time for the students. This was also echoed by Kaczmarek and Trambacz-Oleszak (2021) who pointed out that adolescents are highly prone to stress especially as they go through developmental challenges (Lau et al, 2023). According to the American College Health Association (2019) 36.5% US college students' academic performance was affected by stress. This was also elevated by the COVID 19 pandemic and many students highlighted that they were now suffering from anxiety and depression as a result of stress. Several factors have been cited for inducing stress in students and among them are lack of support, conflict situations with peers and educators, problems of time management, workload and so forth (Hill et al, 2018; Pascoe et al, 2020).

In light of this, mindfulness programs have been implemented in an attempt to reduce stress levels (Shah et al, 2023), improve resilience and well-being (Bonde et al, 2022). According to various scholars, mindfulness programs led to increase in awareness of current conditions and bodily sensations which leads to a decrease in stress and anxiety (Vibe et al, 2013; Garneau et al, 2014; Klein et al, 2016; Arhene et al, 2016; Liu et al, 2024). They also improve self-awareness, different aspects of well-being, empathy and emotional management (Taylor et al, 2016).

According to and Molek-Winiarska and Żołnierczyk-Zreda (2018), mindfulness-based stress reduction technique is an individual level intervention program. This means that it is a program that brings changes at personal level with regards to changes and attitudes. It is personal drive. Mindfulness places emphasis on a few characteristics. It enables one to observe events without being judgmental (Janseen et al. 2018). In this regard it focuses on intention that is what the person seeks to accomplish, their values and maintaining them. It improves attention to an extent that thoughtless and impulsive reactions are eliminated. The person is immersed in the now and thus are aware of everything happening in the present moment, increasing their consciousness of the present moment. It centers the person to an extent that they do not feel the need to react to every emotion they experience,

they can emote without reacting. The individual gets so used to this process through repetitive practice that it becomes a normal part of their life.

### **Statement of the Problem**

High schools include grade (10, 11, and 12), and the latter is the final year of high school in Northern Iraq. Students enroll in university upon successful completion of their final examinations. These results are then used for application into various university programs. As such, high school students are under so much pressure individually and from their families to attain high grades which would allow them to enroll in socially elevated undergraduate programs. This has become so much the norm that parents push students to attain high grades so that they can work into these socially, distinguishably perceived professions. In the end they have a lot of stress and anxiety. Mindfulness programs have been initiated to curb this problem. According to Lampe and Muller-Milke (2021), results of these programs have been unclear.

Whilst some studies have shown that mindfulness programs result in stress reduction (Kuyken et al, 2013; Maynard et al, 2017, Averson et al, 2019), they also reflect a range of different mindfulness methodologies and variables. There is therefore still a lot of room for other studies in that field. No study has been done on this in the Northern Iraq to the researcher's best knowledge. It is thus the purpose of this study to fill this gap and determine the effectiveness of the mindfulness program on stress reduction, resilience and well-being of high school students.

### **Purpose of the Study**

Students face a lot of pressure during their academic lives which affects their well-being. More focus was previously placed on achieving academic performance at the expense of well-being. However, the increased levels of stress and fatal coping mechanisms triggered research into and application of mindfulness programs as a measure. The aim of this study is to determine the effectiveness of mindfulness program on perceived stress reduction, resilience and sense of well-being among high school students.

## Research Questions

The major question of the study is to find the effectiveness of mindfulness programs on perceived stress reduction, resilience and sense of well-being among high school students. This will be broken down into three sub-questions that split the independent variables as follows:

1. What is the impact of mindfulness programs on perceived stress reduction among high school students in Northern Iraq?
2. What is the effect of mindfulness programs on resilience of high school students in Northern Iraq?
3. What is the effect of mindfulness programs on the well-being of high school students in Northern Iraq?

## Hypotheses

The statement below represents the summary of the hypotheses that guide the study:

Hypothesis	Explanation
H1	Mindfulness has a significant and positive impact on perceived stress reduction.
Null	Mindfulness has a no impact on perceived stress reduction of high school students in Northern Iraq
H2	Mindfulness results in improved resilience in students in high school students in Northern Iraq
Null	Mindfulness does not improve resilience in high school students in Northern Iraq
H3	Mindfulness results in improved well-being in high school students in Northern Iraq
Null	Mindfulness does not improve well-being in high school students in Northern Iraq

## **Significance of the Study**

This study has the potential to shed more light into a current problem in Northern Iraq. Contributions of this study can be incorporated by relevant stakeholders like non-governmental organizations that deal with the welfare of children, student bodies, the government ministries and so forth. The findings can be used to bring awareness to some problems young adults are experiencing and some potential solutions as well. There is not much literature pertaining to these studies and there was none done in Northern Iraq. Therefore, the study offers some groundbreaking foundation upon which further studies can be based. The study can also be reference material for future studies.

Well-being is of utmost importance in life as it reflects all positive things like peace, contentment, happiness and so forth; a state of everything being well. However, when that is threatened it is imperative to find solutions. The practice of putting pressure on students to attain better results for entrance into better programs in university has been going on for ages. It will probably take just as long to educate people to change their mindset on that. Young adults are the future of tomorrow and their well-being, a priority. The problem of academic stress can hinder many things among which is an increase in the probability of failure. Previous studies in other countries highlighted that mindfulness techniques helped students become more resilient, overcome stress and attain a state of well-being. As no study of this nature has ever been done in Northern Iraq, it is imperative that what has been implemented in other countries successfully be also explored in this country. The study has potential to get rid of a problem that can have continued consequences not only on the welfare of the people but also growth and success as a nation.

## **Limitations**

The researcher acknowledges a few limitations regarding the research. The study had demographic limitations in the sense that it was based only in Erbil and also focused on just high scholars. In terms of demographic characteristics used for comparison, the study only used gender and did not explore other variables. The study also only employed a quantitative approach in analysis of data. The study also did not have a follow up period after the study and as such some results may have also been in part due to other factors outside of the explored areas.



**Definition of Terms**

**Mindfulness:** A state of being aware of the current or present moment (Xu et al, 2021).

**Resilience:** Prosperity despite challenging circumstances (Agasisti et al, 2018).

**Stress:** Non-specific response of the body to any demand (Selye, 1956).

**Well-being:** Physical, mental, psychological and holistic status (Qin et al, 2021).

## CHAPTER II

### Literature Review

#### Mindfulness

Mindfulness is one of the psychology concepts that has garnered interest from researchers in the last decade. Sharkey (2015) pointed out that though it appears as a recent concept, it is one rooted in century's old philosophies. Many attempts at defining it as a concept and what it entails have been done. However, there really seems to be no concrete consensus regarding this and this is one of the reasons research into mindfulness is still an ongoing thing.

One of the popular researchers defined mindfulness as “awareness that arises through paying attention, on purpose, in the present moment, non-judgmentally” (Kabat-Zinn, 1991). According to Kabat-Zinn (1991), the pioneer of mindfulness based approaches, mindfulness refers to deliberately paying heed in a specific way to the current moment, without any judgement. The scholar pointed out that this is independent of any religious, cultural, scientific and traditional connotations.

Mindfulness is a state of being aware of the current or present moment (Xu et al, 2021). It brings one to the attention of their senses, environment, thoughts, bodily sensations (Pan et al, 2024). The scholars pointed out that normally individuals go about their life without really paying attention to these and more often than not they just suppress that which they find undesirable about themselves. Mindfulness thus makes them be aware of that which they normally overlook and be more attentive. In another article, Kabat-Zinn (2021) defined mindfulness as a way of bringing awareness to one's current experiences, internal and external through training and meditation. Bartlett et al (2021) also compounded on this definition and added that mindfulness is not only a technique but a way of life and a vital skill to possess. The scholars highlighted that mindfulness is a skill that can be adopted, natured and nurtured with the aid of training and attitude.

Sharkey (2015) however, had a different take on the concept of mindfulness. The scholar explained that mindfulness and meditation were one and the same thing, two concepts that are intertwined in such a way that you cannot have one without the other. The scholar highlighted that the only difference in the two was that meditation is done when you are in one place and mindfulness lets you meditate when you are doing other things.

Mindfulness releases these pent-up negative feelings and requires one to address them without any judgement; a task that is also difficult for most individuals (He et al, 2021). It allows an individual to address negative emotions, being aware of them when they arise, acknowledge them and find a way to deal with them in a healthy way to improve mood and lifestyle. Mindfulness prevention programs thus act as a way of channeling these negative thoughts, emotions habits so that they do not get out of control. Kabat-Zinn (2003) explained that mindfulness techniques allow an individual to pay attention to their distressing thoughts, dissecting them and recognizing that they are just thoughts, not to be believed or argued with.

Naik et al (2013) added that mindfulness has three elements to it that are acceptance, purpose and presence. They highlighted that mindfulness is a deliberate act that is targeted purposefully towards something, where the mind is channeled without wavering towards other things. It requires one to be fully immersed in the present moment; and past and present actions simply evaluated in that present moment, hence the aspect of presence (Roeser et al, 2022). Lastly, mindfulness involves acceptance and this is where an individual recognizes all elements in the present moment without any judgement. There is no good or bad though, sensation and so forth, only recognition of them until they pass.

### ***History of Mindfulness***

Mindfulness as a concept is a religious aspect having been used in the Buddhism religion since the beginning of time. Mindfulness meditation techniques were adopted by Buddhists as a way of relieving the mind of the day to day stress and reflecting inwards, letting go of everything to connect to the highest source of energy. The Buddhism term for mindfulness, ‘sati’ refers to recollection and an awareness of things in relation to other things, noting down their value, relative to other feelings. However, in the social sciences mindfulness as a concept was brought to the mainstream media by Kabat-Zinn in 1991. The scholar learnt of the mindfulness techniques through Buddhism and incorporated these in the clinic when he set up his own clinic where meditation and relaxation as s mindfulness techniques were adopted in stress reduction.

Sharkey (2015) postulated that mindfulness was born of a fusion of East and West practices intermingling. But the scholar also agrees that the practice originated from a Hindu and Buddhism backgrounds. This was then adopted by Western and

American philosophers. Shapiro and Weisbaum (2020) also pointed out that mindfulness is a concept that has been cultivated since the last twenty-five centuries. The scholars also pointed out that there were some concerns among scholars, historians and researchers concerning decontextualization of the concept of mindfulness which would make it deviate from the way it was conceptualized within its roots.

### ***Bayesian Theory***

The Bayesian theory was developed by Bayes, as the Baye's theorem. It explains how beliefs change as a result of new information, how prior information about things. These beliefs can encompass a range of things physical objects, others' intentions and so forth. These in turn make up the experiences that make up mental representations. In moments of uncertainty, probabilities are then made up. Botteman et al (2022) explained that the theory is about how the brain forms beliefs and to forecast sensory input predictions and use errors to make adjustments to the beliefs. According to Manjaly and Iglesias (2020), the brain utilizes probabilities in order to come up with meanings regarding the world and the sensory involved. The scholars explained that the brain develops and updates the perception of the world, including the body based on past experiences (Lilley et al, 2022). This is a necessity as the brain uses sensory inputs to make inference; by itself it has no direct access to the world. There is also a level of ambiguity involved in these sensory inputs therefore it is up to the brain to make sense of what is more relevant than the other.

The Bayesian brain theory posits that prior knowledge significantly influences the processing of sensory input by minimizing the element of surprise (Dutta, 2025). If the brain has a better perception of the world, then it predicts sensory inputs easily. It thus utilizes perception and action, the external inputs and internal bodily sensations to create a homeostatic effect. (Andersen, 2021). The Bayesian theory uses themes like predictive and cognitive coding and inferences (Pagnini et al, 2023) which are utilized in the mindfulness-based cognitive therapy (MBCT) program. MBCT places great emphasis on reacting cognitively and establishing a different scope of the mind (Klani and Taheri, 2023). MBCT allows sensations to develop as they are without attempt to change them or placing judgement on them (Verdonk and Trousselard, 2021). This constitutes the inference process as explained in the Bayesian brain theory.

The Bayesian brain theory recognizes that the brain depicts changes in sensory reactions based on prior knowledge. It acts based on the homeostasis principle and the there is a high belief and a higher error prediction, action will be taken in a more forceful manner. If there is a deviation from expectation, then action is taken reflexively. Similarly, MBCT notes cognitive changes and deploys action accordingly (Lubbers et al, 2024).

### **Mindfulness Training / Programs**

A few mindfulness-training programs have been implemented over-time; some having been improvements on prior techniques. According to Frostadottir and Dorjee (2019) the most popular of these are MBCT and the mindfulness based stress reduction (MBSR). The MBCT is actually a part of the MBSR but the MBSR is more varied and covers broader clinical and non-clinical aspects.

### ***Cognitive Behavioural Therapy (CBT)***

Cognitive Behavioural Therapy (CBT), is a form of therapy that places emphasis on individuals thought process and actions as a way of overcoming emotional and behavioural problems (Willson and Branch 2019). This definition is also in line with Cully and Teten (2008) who pointed out that CBT is a combination of cognitive and behavioural therapies. The therapy has mostly been used as a form of treatment for disorders, anxiety and depression. According to Denecke et al (2022) the focus of CBT is in transformation of the thought and action process to ensure that individuals do not shy away from self-correction of faulty beliefs as changing emotions is a difficult process. Individuals therefore get a balanced way of thinking (Nakao et al, 2021). The therapy allows individuals to be aware of their thoughts, behaviour, emotions and how all this affects emotions. Skills that build on this are imparted during the course of the therapy. The therapy ranges from one patient to another depending on the needs of the patient.

The cognitive behavioural therapy, commonly referred to as CBT, is a technique that was developed in the 70s and has grown in prominence over the years in psychotherapy Hertenstein et al, (2022). According to Wenzel et al (2016), CBT stemmed out from behavioural therapy and psychoanalysis. The scholars cited Bandura's behaviour theory that highlights that children learn from imitating behaviour from models, that is, those around them. Bandura's theory is useful when

incorporated in interventions for self-efficacy (Ouyang et al, 2023). They also pointed out that the psychodynamic theory played a part in the emergence of the CBT. The psychodynamic theory adapts to individual needs (McLeod, 2023). After the limitations of the psychodynamic theory, theorists recognized that people's perception of the world was far more instrumental in affecting their attitude than their response to it. Psychodynamic theory includes past unresolved conflicts (Opland and Torrico, 2024). It was then through this attempt to link behaviour, cognitive and emotional models that the interest and focus in CBT emerged. Passage of time saw clinical trials being done successfully leading to the exponential growth of CBT.

The ABC problem formulation in the CBT technique shows the interaction between events, thoughts, emotions and behaviour. Willson and Branch (2019) highlighted that events like personal experiences, history others opinions and so forth may disrupt one's thoughts leading to conditions like stress and anxiety. These trigger the thoughts which in turn lead to attitudes, rules, beliefs, meanings and so forth. These thoughts result in emotions and behaviours which can be positive and constructive or negative and destructive (Bieling et al, 2022). It can also be noted that feelings can also affect the way one thinks or behaves which in turn leads to changes in how an individual perceives the events. A notable example is that of a depressed person, they will view themselves or the world differently and mostly in a negative light. The ABC form is used to help the patient differentiate between their thoughts, emotions and behaviours.

The CBT process is done in eight sessions. The first and second session focuses on familiarizing the patient with the process itself, how it works, expected outcomes and addressing any concerns the patient might have (Informed Health, 2022). These sessions are thus for orientation. The second session can also end with the beginning of the intervention techniques and this continues on into the third session. This focuses on the thoughts, behaviour and action as well as problem solving techniques (Chand et al, 2023). The intervention techniques are continued into the fourth session and assessment of the treatment plan is done. This continues into subsequent sessions with some modifications done to the treatment plan where necessary. The last sessions focus on the end of the treatment and how to manage the changes as well as maintain them (Zohuri and McDaniel, 2022).

According to Baser (2017), CBT may involve exposure. In this case, the patient is exposed to what they have a problem with in order for them to be able to face and overcome it. If this is not possible to replicate in real life, then it is implemented in imaginary form. This form of treatment helps the patient to overcome what causes their anxiety, face their fears as well as overcome the issue of avoidance of the problem. Cognitive restructuring is then applied before, during or after exposure. This is a process of changing the patient's thoughts through various techniques.

CBT can also be conducted in group format (Kariri et al, 2024). This is especially ideal for conditions like phobia. The patients get to relate to others experiences and some studies have shown that short term intensive CBT can be more effective than a standardized medication-oriented treatment. Developments have also seen the emergence of internet-based CBT (Blackwell and Heidenreich, 2021; Furukawa et al, 2021). This is to cater for those that may be unable to face a therapist for various reasons like geographical location. This also improves accessibility and availability of CBT to people (Hedman-Lagerlof et al, 2023).

There are a few factors that need to be put into consideration before the CBT is undertaken with regards to the patient. One of the most important factors is the willingness of the patient to actually undertake the program (Farrand, 2024). If they are looking forward to being better this positive outlook actually works towards them getting better. If they harbour negative thoughts towards the treatment, then this would most likely affect its progress. As the patient is required to attend all the sessions, it is imperative that they invest in the time needed for these meetings and attend all of them. It is also ideal that the patient has less stress in life and that they have external support. Having a supportive circle of family and friends speeds up progress (Marks et al, 2023). There are times when the patient is required to do some work at home; it is important to ensure they are able to handle the extra workload. The severity of the case is also important as some conditions cannot be treated through CBT like severe mental illness (Martin et al, 2022).

In CBT, supervision and consultation is done to ensure the practitioners have adequate training and are implementing treatments correctly and appropriately (Scott et al, 2021). This can be done through various methods like reports, process notes, audio and video taping and group supervision. The supervisors and consultants should have sufficient training (Darnall et al, 2021). In selection of a CBT supervisor

or consultant, time should be considered as one needs an available consultant. Characteristics like rapport, trust and collaboration are important during specific stages in collaboration with psychotherapies to create great therapeutic relationships (Farrand, 2024).

### ***Dialectical Behavioural Therapy (DBT)***

According to Tyler (2020) dialectical behavioural therapy is a form of cognitive behavioural therapy. This form of therapy helps individuals to manage and cope with negative changes so that they have positive changes in behaviour (Day et al, 2022). DBT specifically focuses on change and acceptance as a combination. This can be done individually, as a group, over the telephone or a group of consultants. A lot of homework is involved as patients have to track their day to day experiences at home. DBT also places emphasis on feeling intense emotions without the need to automatically reacting to them (Teixeira et al, 2022). It teaches adjustment of emotions, successfully dealing with and managing conflict. It focuses on mindfulness as well, having the patient being aware of their present environment. In line with this, DBT treats the destructive, deals with life skills, improves relationship with others with self and promotes happiness and well-being.

Initially DBT was meant for suicidal women. However, some challenges were experienced in implementing the process, specifically being absent in sessions and not doing homework. Clients did not believe that they were capable of changing hence rendering the whole exercise unfruitful (Marsha and Chelsey 2015). Flynn et al (2021) also highlighted some challenges that are associated with the implementation of DBT. The scholars pointed out that lack of funding, unwillingness and reluctance to explore new methods and adaptation problems were barriers to successful implementation of DBT. Scholars like Swales (2010) recommended that before the organization adopted DBT, they were supposed to do a pre-treatment process which would allow the company to evaluate whether the DBT would be a good fit for them. This fitness would also be evaluated with consideration of existing structures and staff in mind as it is important that there be a synergy between it all (Martinez et al, 2022).



### ***Mindfulness Based Cognitive Therapy (MBCT)***

This is a combination of two forms of therapy, that is the mindfulness stress reduction techniques and the cognitive behavioural therapy (Chang et al, 2023). The MBCT was developed by Segal et al developed from the MBSR program. In MBCT, focuses on the cognitive abilities and using them to influence the behavioural aspects. Surawy et al (2015) pointed out that MBCT focused on trying to change the way the individual reacted to thought processing rather than the transformation of the thoughts themselves. It thus gives the individual the option to be responsive. The MBCT technique also places emphasis on meeting the distressing experience head on, dealing with it instead of avoiding it (da Silva et al, 2023). With MBCT the emphasis is on learning to accept a condition and learning about it and how the mind and body reacts to it instead of just focusing on solving the problem and having it go away (Cladder-Micus et al, 2023). The individual accepts the condition with compassion and kindness towards self; and without judgement and criticism (Wagner and Caceres-Melillo, 2023). By nurturing a stance of acceptance, MBCT lowers stress and anxiety associated with a condition and instead promotes wellness and resilience especially where setbacks are concerned.

MBCT was also found to be a great therapy where anxiety is concerned (Maloney et al, 2023). Individuals facing anxiety issues usually end up coming with different scenarios and making them into realities that are really not there. The mind and body react to these constructed realities. MBCT steeps the individual in current reality and helps them to focus more on what is going on around them than constructed realities (Mousavi et al, 2022). Since it encourages the individual to be aware of all the nuances of their condition, MBCT assists in the recognition of early signals and this reduces incidences of relapse (Montero-Marin et al, 2024) as the individual can take action early on and maintain a pro-active stance (Schanche et al 2020).

The MBCT is an eight-week program that is divided into sessions (Troy et al, 2013). Prior to the sessions the MBCT instructor conducts evaluation of the intended patient in order to determine their suitability to the program as well as determine exactly what each patient needs as these can be different from one person to the other (Cattanach et al, 2021). This is also where expectations of the program are formulated. The initial three sessions focus on bringing awareness to sensations. The participants take note of their changes in reactions to different scenario, pleasant and

unpleasant. These sessions are intended to take note of which ones the participants skip but it helps bring attention to these experiences. Meditation techniques are introduced at this point to help bring more awareness and calming effect (Moore et al, 2022). It is also intended to provide engagement with current moments.

The fourth session introduces an educational aspect to the meditation techniques. It is about comparison with what they got with the mindfulness session. The meditation also allows them to observe what is happening and be more aware of it so that they select most appropriate responses to that (Seshadri et al, 2021). Common patterns are also observed as well as those points where the individual loses concentration.

The last three sessions continue with meditation but they draw attention to those incidences that they once avoided. It is also about maintaining healthy levels of anxiety (Raee et al, 2022). This is done by educating participants on how fears or lack of control can make anxiety worse. It also involves mindfulness bringing attention to these experiences but with kindness and acceptance and with other ways of responding (Surya and Wibowo, 2021). Healthy anxiety measures are reflected on and participants through meditation are encourage to view events just as such and that they can interact with them or choose not to.

The last sessions also focus on stress reduction. Participants are taught to be mindful of their activities and note down how the way they spend their time impacts them. They conduct exercises relating to coping with anxiety and depression and identifying signals that they are falling into it (Zhang et al, 2022). The MBCT has maintained its basic principles but implementation of approaches to the problems have evolved.

### ***Mindfulness Based Stress Reduction (MBSR)***

According to De Vibe et al (2017), stress can be attributed to a lot of mental health problems and stress related problems. The scholars explained that MBSR goes a long way in alleviating stress and thus reducing stress related problems in turn. Similarly, Ong et al (2024) pointed out that mindfulness interventions can reduce biopsychosocial conditions. According to Haydon et al (2019), MBSR has positive effect on brain activity particularly in the amygdala, hippocampus, and prefrontal cortex brain areas. These three areas are of utmost importance in the cognitive abilities as they are responsible for emotions, learning and memory and decision

making respectively. Cook et al (2021) also pointed out that MBSR helped recipients to be more attentive and less reactive.

### ***Mindfulness Based Stress Reduction Techniques***

According to Hwang et al (2017), outcomes are a product of intentions. They explained that in MBSR the first step is to outline the goals. This sets out the plan from the onset and this is a specialized thing. Gelles (2020) pointed out that the goal should be realistic. It should also not be one to eliminate or stop the thinking process. MBSR involves a few techniques and these are outlined below.

**Body Scanning.** This refers to paying mind to the physical aspect, what the body is feeling. According to Haydon et al (2019), this process relates to taking note of bodily sensations as they occur. The exercise is done either sitting down or lying down but in a comfortable position. The body is scanned from the feet touching the ground going upwards, noting new sensations as one goes (Bouchard and Gallant, 2024). The aim here is to note down the sensations regardless of their nature, pleasant, unpleasant and so forth (Gan et al, 2022). Each part is scanned singularly then as a whole to note the changes. Even if the mind wanders this is just acknowledged as normal and the exercise continues.

**Sitting Meditation.** In this aspect the attention is on the feelings and emotions. The individual pays attention to sensations like breathing, their thoughts, emotions as well as external functions like sounds (Ferry et al, 2023). It is important that the body be in the right posture for meditation. The individual should sit with their spine vertical and straight, their shoulders aligned with their elbows and their hands palms up in their lap (Crane and Griffith, 2021).

**Breath.** MBSR also places emphasis on breathing. In this exercise the participants are taught to pay attention to the breathing process and its relation to other bodily sensations (Komariah et al, 2022). The participants are required to breathe in via the nose and out through the mouth in this exercise (Fincham et al, 2023). Focus is also put on the movements of the tummy through the breathing process, the expansion and contraction are observed. The process of breathing is done with the internal and external environment in mind (Chui, 2021). Once it is done internally the participant sort of breathes into the outer environment.

**Focused Attention On Thoughts and Feelings.** In this exercise participants are required to observe their thoughts as they occur without being judgemental.

According to Gelles (2020) most of the thoughts will be about the future compared to those of the past. Again, the mind can wander and that is allowed as long as the person continues with the meditation. Through this exercise, the participant will be observing the thoughts only, they neither repress nor act on them (Higgins et al, 2022). The process helps the participant to identify recurring thoughts that are useless and destructive (Brown et al, 2022). It is also imperative that the participant be able to recognize any negative thoughts that may affect the exercise for example thoughts that the whole exercise is in vain. These thoughts should not be entertained as they can have negative consequences not only on progress but on mental health as well (O'Hare and Gemelli, 2023).

The exercise also helps the participant in acknowledging any emotions that have been affecting them (Deshpande et al, 2023). The participant simply notes all these pleasant and unpleasant emotions without engaging them (Zhu et al, 2023). It thus helps in bringing much needed awareness to issues that may be troubling the participant. The therapy also helps in managing difficult and overwhelming experiences (Chan et al, 2021). In turn it confronts negative experiences rather than suppress them which increases negative consequences later. The MBSR also includes awareness on what one eats as well as self-care. Increased awareness in daily activities increases mindfulness awareness, fosters a habit that results in improved habits and greater choices (Arhene 2016).

## **Stress**

According to Tan (2018) stress in physics studies is simply defined as the relationship between force and resistance to counter it. The incorporation of stress in medical studies is attributed to Selye (1956) and his extensive research on stress was later on developed by other scholars addressing limitations that his theory presented. Stress is a “non-specific response of the body to any demand” (Selye, 1956). According to one of the pioneers of stress studies, Lazarus (1966) stress is the relationship between one and the environment which results from more resources being used than are available and is perceived by the individual as being a threat to their well-being. According to Rudland et al (2020), stress is perceived as a sickness and normally associated with negative consequences from an experience. They also highlighted that stress studies are frequent in educational and psychology studies.

Selye (1956) set the foundations of stress research. The scholar attempted to bring together elements of stress so that the scientific research would be better performed. These were the alarm reaction, resistance and the exhaustion stages. The trajectory of these three phases is called the General Adaptation Syndrome (Rice, 2012).

According to McManus et al, (2022) stress is an inherent part of our lives. The individual has the ability to self-regulate in response to stressors, which are triggering events to stress. It was only when adaptive resources were insufficient to counter the stressors that the alarm was triggered. Several responses occurred within the body when this occurred including an initial weakening of the resistance, a stimulation of the nervous system, decrease in hypotension among others (Lu et al, 2021). This phase can last for few moments or hours depending on the strength of the stressor and the individual. If the stressor persevered, then that's when the fight or flight mode is triggered in response. The increase in resistance now leads to the resistance stage where the individual develops more resistance to the stressor. Selye (1976) explained that the responses of the body are an attempt at co-existence between the stressor and the organism. The individual may be able to overcome the resistance. In the event that the stressor overwhelms the resistance, the exhaustive stage is reached. This is where the stressor now begins to have manifesting effects on the individual as a result of the cortisol impact on the system (Kim and Kim, 2023). These would be manifested in the digestive, immune, nervous and circulatory systems among others. That is when an individual can report health problems. If not addressed the stressor ends up overpowering the individual and death results (Bhattacharjee and Ghosh, 2022).

The GAS model was criticized for a few things notably its failure to take into account perception of stimulus as well as cognition. These were addressed and included in his later models of the theory and Selye (1956) pointed out that at the time of the original theory, those aspects were beyond his expertise. Other scholars also pointed out that stress could not just be narrowed into Selye definition as it was broader. Nevertheless, the GAS model formed the foundation upon which Selye and other scholars propounded the theories related to stress.

Lazarus (1966) developed the Lazarus Theory of Stress which explained that stress is reflected in the lack of balance found between demands on the person and their coping resources to cope to these demands (Bhattacharjee and Ghosh, 2022).

This was revised and expounded into the Transactional Theory of stress and Coping by Lazarus and Folkman (1984).

### ***Transactional Model***

Lazarus and Folkman (1984) emphasized that it was not the environment or the response of the individual that defined stress; rather that individual's perception. Hence the impact of stress is a product of the perception of the individual based on their feelings, proneness and coping ability to the situation; not the stressful situation. Rudland et al (2020) pointed out that it was the individuals' response to the stressor that determined the amount of stress they would experience. They further explained that the individual can either look at the stressor as a challenge or an obstacle and their perception of this would relate to how they tackled the situation.

According to Durak et al (2023) theories related to stress explain that there has to be a stressor for there to be learning. According to the scholars, stressors refer to the leaning challenges or expectations. In other words, these are the demands that trigger the emotional response of stress. The response to a stressor is determined by how it is evaluated (Obbarius et al, 2021). According to the transactional theory there are two aspects of stress that stand out and these are the appraisal and the coping. Cognitive appraisals are used to determine stress and engage coping mechanisms. These are based on the individual and their environment. The situation that is causing stress is evaluated based on whether it is threatening and relevant; and whether there are sufficient resources to deal with the situation. This is based on one's beliefs therefore what is stressful to a certain individual may not be regarded so by another.

Primary appraisal is the one that relates to the person and their environment whilst the secondary appraisal is used to determine how to cope if the situation is deemed stressful (Wolfers and Utz, 2022). If the situation is deemed not stressful then it is regarded as irrelevant. Coping mechanisms can be of internal nature like inner strength or external like help from peers. Other coping mechanisms can involve avoidance, support, acceptance, distancing and substance abuse. They can therefore be reactive or proactive (Algorani and Gupta, 2023). However, when the individual feels that they have control of the situation then they simply assess the problem and apply the solution or develop other skills in dealing with the problem (Rogowski et al, 2021).

The transactional model was evaluated and extended by some scholars. For example, Rudland et al (2022) explained that there were other factors that determine whether the stress is perceived as a challenge or hindrance and the experience of it apart from appraisal. These are motivation, situation, mind-set, personality and coping. The scholars explained that motive of the learner can predict if they learn or not. The situation can be a factor depending on whether it occurs one on one or in a group setting, and also if it is busy or not. They also pointed out that mind-set was a great predictor on the experience of stress. If the mind-set is geared towards a negative outcome, then most likely a negative outcome will result and vice-versa. Personality traits also contribute a lot. Introvertedness, perfectionism, pessimism, optimism can all be traits that can heavily influence reaction to a stressor. Coping mechanism can also be a factor in reaction to a stressor. Some people have reserves within them that allow them to continue going on where others simply give up and this can make a difference on the experience of stress.

### ***Causes of Stress***

Acosta-Gomez et al (2018) explained that there are different kinds of stress which include marital, familial, work-related and academic. Marital stress is that associated with marriage relationship. Familial stress is stress that is a result of relationship dynamics in a family setting. Work-related stress on the other hand relates to stress within the working environment. Academic stress relates to stress as a result of academic activities in a learning institution (Yang et al, 2021). The focus of this study was based on academic stress as it is focusing on young adults that are transitioning from high school to universities. Some of these types of stress still have a huge impact on students regardless of them not originating in a school environment. Reddy (2018) pointed out that stress induced the same outcomes whether it is familial, work related, familial or academic. The source of stress however, is what varies (Abdurashitovich, 2024). Stress can also be as a result of failure to manage one's finances, changes in living circumstances, for example moving to a new place and failure in managing one's life.

According to Pascoe et al (2019) young adults face a lot of pressure in school which results in what is termed as academic related stress. They explained that students can be under pressure due to concerns about their performance. The more anxious they are about their academic performance, the higher their levels of stress

(Joseph et al, 2021). There can also be pressure to achieve higher marks. This is especially true in cases where the exams serve as entry qualifications to a higher level of learning institution. Uchil (2017) had a different perspective and pointed out that high stress is not necessarily associated with poor performance. One may be successful in their academic outcomes but what they could be lacking is the motivation for the subject or maybe finding it boring. This was congruent with Montalto (2023) who pointed out that whilst stress can have an impact on memory, this can actually be positive or negative; it all comes down to time and situational factors.

Reddy et al (2018) pointed out that the school environment can help in reducing or increasing the stress of a child. The scholars highlighted that sometimes parents and teachers put too much pressure on the child which erodes their confidence. Insufficient resources can also result in a lot of stress in the students (Goyal et al 2023). It can trigger anxiety say in cases where the students were supposed to have covered certain material but because of insufficient resources, they definitely would not be looking forward to exams.

Clabaugh et al (2021) highlighted that change of environment can be a cause of stress. They explained that these days because of the corona virus pandemic, learning is now taking place online instead of the traditional setting. Students now have to learn from home and this change of environment has resulted in a lot of stress for the students. This was also echoed by Son et al (2020) who explained that the presence of distractions at home and other responsibilities added weight to the stress already experienced by the students. D'Amato (2020) also agreed with this notion and added that whilst some students easily had access to online learning, others were not so fortunate. Some lack the resources and thus end up having additional stress from failure to access learning platforms and lagging behind their peers. Prolonged stress exposure results in poor academic achievement (Lu et al, 2024).

The school workload can also be another stress factor. If there is too much stuff to be covered in the syllabus, or too much assignments, the students may find this overwhelming. As a result, they may start lagging behind in some subjects and this can cause them to be stressed. There is also a high level of uncertainty associated with this in terms of being able to manage and to ultimately perform well.



### ***Effects of Stress***

Several scholars have undertaken studies that highlight the effects of stress. Ribeiro et al pointed out that stress negatively affected the well-being of individuals. They explained that stress was a catalyst to more severe conditions like depression. Reddy et al (2018) pointed out that in India it was a common cause of suicide to such an extent that there was a student committing suicide on an hourly basis. Martincova and Bila (2023) pointed out that stress also resulted in poor academic achievement. This is because stress results in lack of concentration and incompleteness of academic tasks.

Pascoe et al (2019) pointed out that stress especially academic stress also had long term problems. As a result of decreased motivation, students end up dropping out of school. Fazia et al (2023) added that academic stress results in can lead to substance abuse, dropping out and burnout. This does not bode well for the future of the nation as there would be a reduced probability of sustainable employment. This in turn would result in loss of huge amounts of money as the government tries to compensate for this loss somehow say in terms of social welfare support for the unemployed.

Rudland et al (2022) had a different perspective with regards to stress. The scholars pointed out that not all stress was negative and stress should not automatically mean distress. They referred to a term called eustress, named by Selye (1976) from previous studies. Eustress referred to positive response to stress which leads to a positive outcome. The scholars also indicated that eustress was associated with high work performance.

### ***Stress Reduction***

Knowledge of the source of stress is important as it allows tailor made solutions to be made. There are a few tried and tested attempts to reduce different types of stress and these are explained below.

**Emotional Coping.** According to Mason (2017) emotion-focused coping was focused on situations that had occurred in the internal system. This form of coping was triggered when the situation is perceived as negative and with dire consequences. Strategies include avoidance of the problem (Meeks et al, 2023), where the individual totally ignores the situation as if it does not exist; minimizing

where the individual try to make the situation lighter than what it is and wishful thinking where they wish they could do certain things to alleviate the situation.

**Problem-Focused Coping.** This strategy is focused on dealing with external factors as a coping mechanism. These can include trying to change and address the stressor. According to Mason (2017) this form of coping is ideal where the stressor can be changed. It can also include social support as a way of reducing the impact of the stressor. Problem solving techniques are also engaged in this aspect. Other factors have also been outlined in the stress theories. For example, having a certain mindset can be a form of coping. Positivism goes a long way in ensuring that a person is geared up to deal with stressors with a positive outcome in mind (Graves et al, 2021). Other scholars have also pointed out that one's way of looking at a situation can result in them turning it into a growth opportunity rather than a challenge. Healthy living, exercise, lots of sleep and good nutrition are also cited as stress reduction measures. Mean-making is also employed as a coping mechanism. This is where an individual seeks meaning from the stressful situation (Chaabane et al, 2021). This could be linked to religion, social, work related or academic interpretations. These all can provide a room for growth from stressful situations and turn the experience into a positive one. Cognitive and behavioural therapies are also used to reduce stress (Holman et al 2018).

## **Resilience**

According to Yeager and Dweck (2012), resilience refers to positive responses to a challenge. Agasisti et al (2018) referred to resilience as prosperity despite challenging circumstances. Prior studies by Masten (2001) refer to resilience simply as good outcomes despite threat and challenges. Yeager and Dweck (2012) highlighted that it is resilience that determines whether one gives up or keeps going in the face of obstacles. Jain (2024) explained that those with more resilience deal with adversity in an easier manner and can bounce back more easily than those less resilient. In work situations, resilience reduces burnout (Strout et al, 2023).

### ***Resilience as a Process***

A recurring theme in the definition and concept of resilience is the presence of adversity, elements that mediate the adversity which results in better than expected outcomes (van Breda, 2018). The scholar explained that adversity represents any

difficult circumstances or challenges experienced in life and resilience is about overcoming or recovering from the adversities (Verdolini et al, 2021). The mediating process represents the scope and nature of the resilience process or the response to adversity (Fullerton et al, 2021). The outcomes are now the results of the response to adversity; with all three elements interlinked. Some scholars like Rutter (2013) explained that resilience is not just social competence and mental health. He explained that resilience is experienced when one has a good outcome despite the odds and their outcome is better than that of others that experienced the same thing.

Yeager (2012) pointed out that resilience is an essential element especially in students as this determines how they cope with situation as school. Diaz et al (2020) highlighted that with regards to social sciences, resilience means achieving academic success in spite of difficulties. This was also echoed in prior studies by Rudd et al (2021) who referred to academic resilience as academic success despite adversities. Cassidy (2015) pointed out that resilient students thus would be those students that perform better even though they were not supposed to because of situation that they would have encountered or situations that are supposed to stress them and make them perform poorly. This notion was also shared by Cahyani et al (2024) who highlighted that academic resilience enhanced the students' creativity and made them more aware of what was important and helped them achieve success even in times of difficulty.

Other scholars like Higgins (1994) and Bonnano (2004) feel that resilience is a result of traumatic situations and a measure of how one adapts to these situations. In these situations, resilience would be the person's ability to overcome trauma and incorporates the coping mechanisms. Serrano (2021) also pointed out that resilience can be affected by social and demographical characteristics. Other scholars like Sujarwo et al (2020) and Ye et al (2021) pointed out that factors such as way of teaching and quality of teaching also contribute to resilience in the education sector.

Resilience can be a product of the environment and resources available. Romano et al (2021) pointed out that resilience is a skill that can be nurtured. It helps in the reduction of stress and stress related outcomes like anxiety and depression (Bermes, 2021). One of the ways that have been mentioned of increasing resilience is through the management of thoughts where positive thoughts are encouraged to keep the negative ones at bay. Scholars have pointed out that this method can help to combat stressful situations and to bounce back from them (Serrano 2021).

The process of resilience can also be considered in terms of risk factors, therapeutic interventions and resilience protective factors. Examples of risk factors are low self-esteem, lack of social network, poor physical health and cognitive inflexibility among others. Therapeutic interventions can include mindfulness, exercises, good diet and cognitive and behavioural therapy (Masten 2018). On the resilient protective factors this could be strong support system in the form of a social network, good nutrition, cognitive flexibility and self-efficacy among others (Southwick and Channey 2012).

### ***Familial Resilience***

Studies have shown that resilience occurs on different levels, individual, familial, community and organizational. Walsh (2016) explained that familial resilience referred to the “capacity of the family, as a functional system, to withstand and rebound from stressful life challenges – emerging strengthened and more resourceful”. Social support helps one respond to circumstances (Mai et al, 2021; Theron et al, 2022). Chang et al (2020) pointed out that belief systems played a big part in familial resilience and comprised of meaning-making where the members derive meaning from events (Stern et al, 2024); positivism where they adopt a positive outlook and remain hopeful despite the adversity and lastly spirituality, where they have beliefs that everything will end well steeped in their faith (Duncan et al, 2021).

Familial resilience as strengthened by organizational factors as represented by flexibility, connectedness and mobilization of resources (Gayatri and Irawaty, 2022). This involve reorganization as to provide predictability and to allow moving on; drawing support from other members and creation of financial security as well as seeking assistance from the community where necessary.

### ***Community Resilience***

Community resilience focuses on the community level but with input from an individual perspective. It depicts the capacity of community members to cope in a turbulent environment (Verger et al, 2021). It also shows how individual strengths of members are brought together as a collective and leveraged for the betterment of the community (Burgel et al, 2023). Berkes and Ross (2013) identified some factors that

enabled community resilience like social support, structure, group problem-solving and coping with divisions among others (Revens et al, 2021).

### ***Organizational Resilience***

Many times, organizations face a lot of challenges on a day-to-day basis. Their ability to bounce back from those challenges can be attribute to organizational resilience. Resilience is crucial especially in uncertain times as it can help the organization to navigate hard times (He et al, 2023) Organizations actually create a culture of resilience and this is adopted and dispersed in the organization through its values, beliefs and mission (Hepfer and Lawrence, 2023). Organizational resilience also emphasizes on role models. Resilient characters at the workplace are emulate and provide a source of inspiration to others (Do et al, 2022). Provision of support and mentorship to others can help colleagues be resilient and foster general resilience within the organization (Liang and Cao, 2021). Open and effective communication facilitates resilience as well and provides a platform where challenges and be freely aired and solutions be developed. If effort is put into addressing adversities this strengthens the culture of resilience within the organization. It also improves job performance (Beuren et al, 2022).

### ***Theory of Resilience***

The Theory of resilience is one that has seen extensive research from different authors and expanded over a few years as new contributions to research emerged. According to Zimmerman (2014) the theory of resilience provides explanation to why some children become healthy adults despite exposure to risky situations. The theory emphasizes on protective factors and risk exposure. The protective factors are the positive elements that change the path of circumstances that should have seen risk exposures becoming problem behaviours (Rachmad, 2022). They thus enable the youths to counter negative effects of the exposure and consists of assets and resources. The assets refer to the internal factors which comprise of individual characteristics whilst the resources provide the external factors in the form of guidance from others.

The challenge model of resilience posits that resilience stems from challenges and promotive factors serve to neutralize risk exposures; and provides ammunition for any future challenges. Rutter (1987) explained that resilience is nothing superior

but an ordinary response with sufficient resources. Rutter (2013) also pointed out that resilience could be observed at different times to different situations and does not just span a single event. Resilience in children to the impact of the environment and they can be resilient to some situations but not to others (Stern et al, 2024). Causal factors needed to be known but it also had to be understood that not all factors posed risk in all situations (King et al, 2023). Risk is part of development and emphasized that exposure to risk has an inoculating function. However, the initial risk has to be challenging enough to provide motivation to overcome the effects without being too much such that one loses all motivation.

In this model Rutter (1987) also explained that the environmental factors needed to be taken into consideration as these could affect functioning which in turn affects resilience. The scholar also explained about protective factors. He pointed out that there are mental features that could determine how the individual dealt with difficult situations. Social relationships also served as protective factors. This was also echoed by Garmezy (1991).

Zimmerman (2013) explained that the protective model of resilience shows the inter relationship between risk, a promotive factor and outcomes. In this model the assets and resources serve to change the relationship above. For example, character traits like self-esteem can have an impact of the negative effects of stress through increased drinking habits (McKinley et al, 2021) On the other hand, the compensatory model of resilience depicts neutralization of risk exposures and provide a counter effect on outcomes than the risk factors. An example is social support. Garmezy (1991) is well known for his extensive research on resilience and is accredited as one of the pioneers of the subject for his work on resilience in children. The scholar emphasized that the resilient kids should not be perceived as having special abilities or being superkids as a result of their resilience because children will experience stress at one time or the other. Children with backgrounds from tight-knit families were more resilient and unlikely to fold under stress (Stern et al, 2024). They also explained that support from extended family members also went a long way as well as individual factors like dispositional attributes.

## **Well-Being**

According to Qin et al (2021), well-being is a state that has no universal definition as it is perceived differently from one individual to another. It covers a

variety of spectrums from physical, mental, psychological and holistic status. This is reflected in one's daily activities and one being content in any or all of the above spectrums can represent well-being and thus also shows quality of life. Ruggeri et al (2020) explained that well-being was a combination of factors that are associated with happiness, contentment and positivity. They also pointed out that well-being is a sustainable condition and allows individuals and populations to thrive and acknowledge that all is well. According to Xu et al (2021), well-being in young adults is an area of concern and interest as students go through different transformations. It is a time they will be turning into adulthood; they will be transitioning from one level of academia to another and going through lifestyle changes; all of which have an impact on their well-being (Diter and Martin, 2024). Students face too much external pressure and familial expectations, which affects their well-being (Chhajer and Hira, 2024).

The World Health Organization (WHO, 2014) defines mental well-being as a state in which one recognizes their capabilities and is able to cope with stresses in life, working and contributing to their community productively. Khaled and Suyed (2024) highlighted that this includes the emotional and psychological well-being and is important because of how it affects how individuals think and act and cope. Jacob et al (2020) also pointed out that stress was an indicator of well-being and thus the two went hand in hand.

Allin (2017) emphasized that well-being was ambiguous in nature and thus could not be assigned a single measure. They pointed out that any measure of well-being should therefore be all-encompassing of the eudaimonic and hedonic aspects. Eudaimonic well-being encompasses meaning and fulfilment aspects whilst hedonistic well-being involves pleasure and enjoyment (Tang et al 2019).

### ***Theories and Models of Well-Being***

There are a few well-being theories. Some emphasize that well-being is all to do with pleasure versus pain with well-being being the state of experiencing more pleasure (Mariqueo-Rusell, 2023). Others view well-being as a product of desire and satisfaction. If more desires are fulfilled, then well-being is deemed as high. Lastly other theories point out that well-being is subject to other various factors. This study will make use of two theories, the Flourishing Theory by Keyes (2003) and one by Ryff (2007). The latter pointed out that well-being has three elements which are

emotional side, psychological and social well-being. Ryff's (2007) multi-dimensional model has six elements that are acceptance of one-self, personal growth, life purpose, mastering of the environment, autonomy and social relations.

**Hedonism Theory.** According to Crisp (2021) the hedonistic view of well-being places emphasis on the dynamics of pleasure over pain. An abundance of pleasure alludes to everything going well and thus achieving a sense of well-being (Moorhouse et al, 2020). According to early studies by Bentham (1996) more pleasure means better life and more pain worse life. Chaves et al (2021) pointed out that in hedonism there is a balance of the positive and negative aspects; the presence of more pleasure does not imply no pain, but the lesser significance of the negative affect. There will thus be positive elements and low negative elements like moods and distress. This aspect is also referred to as subjective well-being.

**Desire Theory.** According to Moorhouse et al (2020) desire theories emphasize the fulfilment of desires as state of well-being. In this theory increase in fulfilled desires equates to increased well-being. The scholars also pointed out that desire theories had the weakness of ascribing well-being according to the individual and the individual could simply end up desiring easy to attain things. Magnusson and Krepsi (2024) pointed out a weakness of the theory that sometimes what is desired is not really valuable because it is desired but desired because it is valuable.

**Objective List Theory.** The objective list theories hold the view that there are other things apart from those that are pleasurable or desirable that constitute well-being. Schools of thought of this theory contend that things like friendship and success among others can make one's life better (Kader, 2021). Those that are in favour of this theory criticize the desire and hedonistic theory on the basis that they are too simplistic and narrow (Mitchell and Alexandrova, 2021). They end up with one element to well-being and well-being is too broad for that (Schramme, 2017). Critics of the objective list on the other hand, argue that it has too many aspects and that if they are related why should they not be channelled into a single element.

**Flourishing Theory.** The theory was propounded by Seligman (2011). It combines various aspects into the theory in a quest to answer what human flourishing is and how it is triggered. The scholar came up with five aspects and these are Positive Emotion, Engagement, Relationships, Meaning, and Accomplishment. These represent the acronym PERMA (de Carvalho et al, 2023). Waigel and Lemos, (2023) posited that the five aspects of well-being could be adjusted as per need. The



positive emotion being hedonistic in nature can easily be nurtured. The theory is all about allowing one to thrive and live life to the fullest (Chaves et al, 2021).

Engagement represents how deeply occupied one is with a task. When one is truly deeply immersed in it, a person develops heightened awareness for the task at hand and completely loses themselves to it to an extent that they seem one with it and even unaware of the external environment (McGarron, 2022). This induces a feeling of goodness and contentment which translates to a state of well-being (Xi and Lee, 2023).

Relationships are important as man is a social creature (Messer, 2021). Those who have meaningful interactions with others seem to enjoy and be in a state of well being than those who do not. Meaning pertains to having something to make sense of life, this can be one's religion for example. Ryff et al (2007) also place emphasis on the relationship between people as a means to well-being. Kern (2015) pointed out that well-being with regards to relationships with others stem from being cared about and supported as well as satisfaction with those associations. It is derived from serving others and having a higher purpose. This brings about a sense of well-being. Accomplishment pertains to our ability to achieve things. This can be set goals, some tasks, proficiency in a skill and so forth. All this brings a sense of well-being.

### **Related Research**

Roulston et al (2017) explored mindfulness, stress, resilience and well-being in undergraduate students in Ireland. The study employed a mixed methods approach, using experimentation and quantitative methods. The results of the study showed significant changes only in the intervention group. The scholars concluded that though mindfulness was a valuable tool, it did not work the same way for everyone.

Wong et al (2018) conducted a study to determine the effectiveness of mindfulness-based stress-reduction therapy in menopausal women in Hong Kong. The study recognized that menopausal women often exhibited negative emotions and were prone to psychological stress. The study thus sought to establish whether MBSR was instrumental in alleviating these problems. The therapy was found to significantly reduce the symptoms of depression and anxiety.

Yang et al (2018) conducted a study on MBSR on stress in the workplace and mental well-being of psychiatric nurses. The study focused on this population as they

are deemed to experience a lot of stress at work as well as decreased well-being. One of the scales used was the Nursing stress scale. A control and intervention group were used. Prior to the MBSR implementation, a high level of stress was found in the intervention group and this significantly decreased after the MBSR program whilst that in the control group was not significant. The scholars concluded that MBSR techniques were effective in significantly alleviating stress.

Molek-Winiarska and Żołnierczyk-Zreda (2018) assessed MBSR as a stress management technique in mining workers in Poland. The study utilized experimentation as a method and surveys as well based on 66 employees, 32 of whom constituted the experiment and the rest were for the control group. The study focal point was that mining workers lived in fear of their lives as a result of the inherent risk that comes with their profession. The results of the study revealed that MBSR was efficient in reducing stress associated with these fears. The scholars thus recommended the use of MBSR in high risk professions so as to improve their well-being.

Sunbul and Guneri (2019) conducted research on mindfulness and resilience on adolescents in Turkey. The study employed self-compassion as a mediating factor. In order to determine the relationship of the variables, path analysis was used. The results of the study revealed that self-compassion was a predictor of resilience and mediated mindfulness and resilience relationship effects.

Amundsen et al (2020) researched the effect of mindfulness on well-being in primary school children in the United Kingdom. The study was based on a 6-week mindfulness program and well-being was based on self-report measures. The sample size was 108 children from Northern England. The results showed swift improvement in mindfulness in the students that partook in the mindfulness training. Positive outlook and life satisfaction were found to be greatly improved as well.

Klussman et al (2020) sought to determine the impact of mindfulness on well-being. The study employed self-connection as a mediating factor. The study was divided into two parts with one part using the flourishing approach whilst the other used life satisfaction as a measure for well-being. The results reflected that mindfulness enhanced well-being through self-connection and in turn, self-connection was also a mediating factor between mindfulness and well-being

Rava and Hotez (2021) conducted a research to assess effect of mindfulness on well-being in college students in India during the corona virus pandemic. The

research used a qualitative design and used mindfulness exercises as tools for the study. The results of the study indicated that mindfulness exercises helped the students to cope with the stress brought on by the pandemic. Majority of the students reported a shift from negative to positive sentiments as a result of the exercise.

Lampe and Muller-Hilke (2021) conducted a study to determine mindfulness-based interventions in 143 preclinical medical students. The study employed two non-randomized and controlled surveys in order to determine if the program had an impact on stress, mindfulness and academic success. The study used the PSS-10 and MAAS scales to determine perceived stress and mindfulness. Results of exams were used to determine academic success. The study revealed that the mindfulness-based intervention program was an essential aid in maintaining mindfulness and resulted in decreased stress during and after the program. The effect was also observed to last for half a year after the program. On the other hand, academic success was found to only occur after the program had been completed.

Verdes-Montenegro-Atalaya et al (2021) conducted a study to determine effectiveness of mindfulness training program in comparison to an abbreviated training; in tutors and nurse interns in Spain. The study compared a four week and an 8-week program-based and a clinical and randomized trial. Stress levels were evaluated before, during and after the program. The study revealed no impact on stress level on the short-term program; whilst the standard 8-week program was found to have quite an impact on stress level reduction.

Mohammed et al (2018) evaluated the use of MBSR in injured athletes in the United Kingdom. The study explained that injuries to athletes had effects beyond the physical. Twenty athletes were recruited, who had recent injuries and could not participate in their programs for 3-6 months. Results showed that MBSR resulted in increased mindful awareness. This was observed for both the control and intervention groups and the scholars attributed this to physiotherapy that both groups were under. The athletes in the intervention group showed improvement in positive mood and general well-being which those in the control group did not.

Agasisti et al (2018) conducted a study on academic resilience in Paris. They assessed how 15 years olds succeeded in Programme for International Student Assessment (PISA). The study was based on a time series for a period of 10 years. The study emphasized on school factors and resources associated with improvement in academic resilience in children from disadvantaged backgrounds.

Averson (2019) determined the impact of mindfulness practice on stress reduction in high school freshmen in the USA. The researcher employed a quasi-experimental approach. The study was focused on guided meditation as a mindfulness technique. Data analysis was done through t tests. The results showed a strong and significant difference between the pre-test and the post-test which reflected a reduction of stress in the main group but a surprising increase in stress in the control group. This was also because the experiment was done during a very stressful exam week. The conclusion reached was that the mindfulness meditation played a big role in the reduction of stress.

Qin et al (2021) reviewed virtual mindfulness programs to aid well-being in students in Canada. The research used a mixed methods approach for the review and was aimed at the COVID-19 pandemic as it significantly affected students' academic, social life, physical and mental well-being. Qualitative methods were then used to analyse the data. The programs used for mindfulness included Mindfulness-Based Stress Reduction (MBRS) programs, Cognitive Therapy and Learning to Breathe program. Results revealed that MBRS was significant in improving students' well-being.

Kakoschke et al (2021) study was to determine the effectiveness of mindfulness programs on improving well-being in medical students in Australia. The study was based on a 5-week mindfulness program. The results revealed an improvement in study engagement, well-being and reduction in stress. The results were strong and more significant in with regards to informal mindfulness program.

Lensen et al (2021) conducted a study in Netherlands on mindfulness-based stress reduction technique as an intervention program for primary school teachers. The study employed a mixed approach using the quantitative aspect of questionnaires and interviews to gather data. The study worked on the premise that more than half the Netherlands teachers suffered a lot of stress and their mental health and had a high turnover as a result.

Polle and Gair (2021) evaluated mindfulness on stress reduction in medical students. The scholars explained that medical students were under a lot of pressure and mostly suffered from stress and burnout as a result. They highlighted that this puts patients well-being at risk as well and therefore techniques that could reduce stress and improve well-being were a priority. The study reviewed different literature based on qualitative, quantitative and mixed methods. The results of the study

highlighted that MBSR improved antecedents of well-being as well as reduced psychological stress of students.

Kaczmarek and Trambacz-Oleszak (2021) conducted a study in Poland to assess stress in young adults. The study revealed that the school environment was the major contributor of stress in adolescents. The Perceived Stress Scale was employed and the quantitative results revealed that stress was thrice more in girls compared to boys. In the former it was attributed to academic and weight related reasons whilst in the latter it was due to social relationships. The scholars strongly recommended for stress reduction programs to be implemented in order to alleviate the stress problems in young adults.

Haugan et al (2021) conducted a study exploring stress and vulnerability of upper secondary school students in Norway and their coping mechanisms. The study was quantitative in nature and 1215 students participated. Structural Equation Modelling was employed for analysis. Results of the study revealed that girls were more prone to performance related stressors than boys. Support from peers and teachers was found to be major factors in coping with stress. The scholars recommended a holistic approach be employed to determine stressors in order to be able to fully navigate around the coping strategies.

Ye et al (2021) conducted a study on academic resilience in three different countries, Norway, Hong Kong and Peru. The study evaluated how social, economic and cultural factors affected academic resilience in young students. The study revealed a strong and significant association between a sense of belonging and academic resilience in Peru. However, in Hong Kong and Norway absence from school was the one which was found to be associated with resilience.

Garcia-Crespo et al (2021) evaluated academic resilience in the European Union. The study employed personal attributes and familial background as determining factors for academic resilience. The study revealed that factors which had the most impact were self-confidence, sense of belonging and support from family. The school climate was also found to greatly improve academic resilience.

Morales-Rodriguez and Morales-Rodriguez's (2024) study was to determine impact of mindfulness on stress in students in Spain. The mindfulness training program was conducted in four months. The study revealed that the mindfulness program significantly and positively improved stress coping mechanisms. It assisted the students in emotion management.

## CHAPTER III

### Methodology

#### Research Design

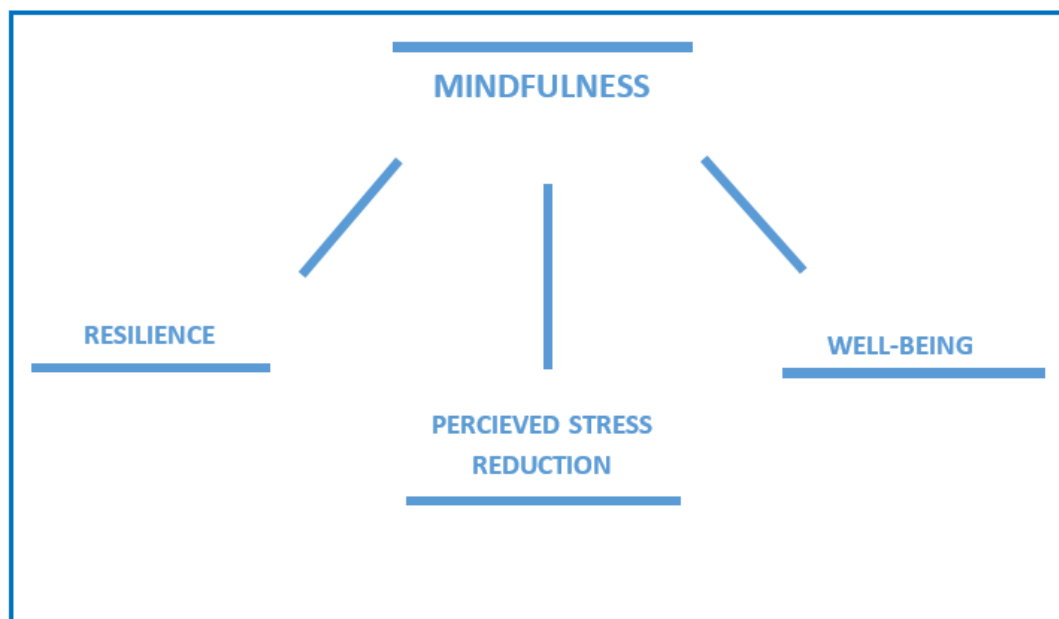
The research design acts as a framework for the study. The research approach is an important aspect as it determines the acquisition of relevant data to the study (Sileyew, 2019). A research design provides the way the study will be conducted in a series of steps. The study was based on an experimental design. An experimental research design allows the researcher to gather data in a controlled environment and to determine the cause and effect between variables (Walliman, 2021). The method uses two sets of data one of which is employed as a constant and the changes in the two groups are then compared to come up with meaningful explanations and conclusions. In the study, level of mindfulness, resilience, perceived stress and well-being was thus assessed before and after implementation of mindfulness meditation program.

The research was based on a quantitative approach. This approach uses statistical means to provide results of a study. The researcher adopted this method as it is ideal for many respondents and can also be easily verified and replicated in future studies. The research was also based on a cross sectional approach. This means that the results reflect the events in real time. The study was based on a deductive approach which entails conducting a study whilst the researcher is an independent observer rather than part of the research participants. This approach also provides the theoretical and empirical research before conducting the study and formulation of hypotheses then testing them (Chalmers, 2021). This research followed the same thing and involved formulation of hypotheses and testing it through experiment and surveys.

#### *Conceptual Model*

The Figure 1 below shows the model for the study indicating the proposed relationships between the variables that are going to be investigated.

Figure 1.

*Conceptual Model of the Study*

**Hypotheses Development.** In order for the relationships between variables to be evaluated there needs to be hypotheses that guide them. Below are the hypothesis developments and the subsequent hypotheses that were developed on mindfulness effect on each variable.

**Mindfulness and stress reduction.** According to Wong et al (2018), MBSR has been shown to reduce stress in clinical and non- clinical trials. They highlighted that it improves self-acceptance and provides an effective coping mechanism to stress. Rush and Sharma (2017) explained that if an individual is continuously stressed, this depletes their energy levels and compounds their stress problems and more often than not leads to conditions like anxiety and depression (Goyal et al, 2023). Since stress is mostly attributed to past and future thoughts, mindfulness helps reduce this by also steeping the individual in the present moment. Roulston et al (2017) also agreed with this view and pointed out that mindfulness resulted in decreased stress which led to better decision making. Matthias et al (2024) pointed out that mindfulness lowers the cortisol which is the stress hormone.

Rush and Sharma (2017) also pointed out that MBSR techniques had significant and positive impact on mood and sleep patterns. This was also echoed by Haydon et al (2019) who added that MBSR helped patients in sleeping. They explained that teachers that taught students with behavioural orders often suffered

from stress and stress-related problems. However, mindfulness helped alleviate these conditions and enabled the teachers to better cope.

Cohen et al (2021) also supported mindfulness as a mechanism of stress reduction. They conducted a group experiment on young adults and indicated that it was a safe and reliable tool. Results showed that mindfulness had a positive impact on adolescents and changed stress perception as well, a notion shared by Bartlett et al (2021). In light of this the researcher thus hypothesizes that mindfulness has a significant and positive impact on perceived stress reduction.

***Mindfulness and Resilience.*** Various scholars stated that mindfulness resulted in increase in resilience (Roulston et al 2017; Sunbul and Guneri 2019; Bourbeau and Ryan 2018). According to Phillipe et al (2021) mindfulness provides a coping mechanism during times of adversity. The scholar found that mindfulness increased resilience during the corona virus pandemic. Mindfulness helps people going through difficulties to better manage emotional challenges sustainably (Chen and Bonnano, 2020). The scholars also pointed out that connectedness, optimism promoted resilience during the pandemic regardless of the degree of exposure. Resilience is positively correlated to positive mental health (Phillipe et al, 2021).

Mindfulness is effective in high stress situations (Christopher et al, 2020). The scholars pointed out that mindfulness reduced the impact of stressors in highly stressing situations and promoted long term resilience. Kwak et al (2019) also explained that mindfulness increased resilience in a sustainable manner. The researcher therefore concludes that mindfulness results in improved resilience in students.

***Mindfulness and Well-Being.*** According to Tang (2019), meditation practises like mindfulness have a profound effect on well-being. It transforms the body and triggers positive emotions, behaviour and cognitive abilities (Lachaud et al, 2023). Feller et al (2018) pointed out that mindfulness resulted in decreased negative emotions. Mindfulness has also been connected with higher levels of satisfaction (Karremans et al 2020) and positive affect (Keng et al 2011; Fisher et al, 2023). Studies have also shown that mindfulness led to improvement of brain activity with relation to control of mental processes (Lomas 2017). It increased focused attention as well as open monitoring.

University of Cambridge (2021) also explained that mindfulness resulted in increased well-being by decreasing incidences of negative conditions like depression



and anxiety. Galante (2021) cautioned that mindfulness programs especially in communities should be exercised correctly for the results to be observed otherwise they would be unfruitful exercises. Roulston et al (2017) had similar thoughts and urged mindfulness in communities to be done properly for maximum benefit to be gained. The scholars also explained that mindfulness increased mental well-being.

Mindfulness enhances well-being through improvement in self connection (Klussman et al 2020). This was also echoed by Rava and Hotez (2021) who pointed out mindfulness exercises greatly improved student well-being. Amundsen et al (2020) added that mindfulness provided effective emotion regulation and this led to increased positivity and improved life satisfaction levels.

### Study Group

A population reflects all the elements under study. The population for the study was high school students in grades 10, 11 and 12 in Northern Iraq. However, because there is no way a researcher can have access to all of them a sample is required. This is a fraction of the population that is studied and the results generalized on the entire population. The study was comprised of 100 respondents, 50 males and 50 females from Erbil city; 50 students underwent the mindfulness training and thus constituted the study group whilst the other 50 did not and constituted the control group for the experiment. The groups were divided into two for the control group and for the experimental group, hence each group had 25 of each gender (Table 1).

Table 1.

#### *Sample*

Control group		Experimental group	
Males	25	Males	25
Females	25	Females	25
Total	50	Total	50

The sampling method that was used for the study was the systematic sampling technique. The formula for this is size of the sampling frame, N, divided by desired sample size, n. In this case this would be  $300/100 = 3$ . The researcher will

thus choose every third student in the frame for the final sample. This technique is a probability sampling technique, which gives all elements equal selection opportunities, hence the reason the researcher chose it. It also allows the generalization of results over the entire population.

### **Data Collection Tools**

A research instrument is necessary for the collection of data (Sallis et al, 2021). The study used two research instruments. It employed the questionnaires to collect data through surveys as well as mindfulness techniques as part of the experiment. The two research instruments are discussed in-depth below.

The questionnaires were used as the research instrument for this study. A questionnaire provides a series of questions to the respondents coded on a different range of responses related to the subject as well as some personal information of the respondents. It was structured and close ended in nature. This is so that there is no overlapping of responses and the respondents do not end up straying from the core of the subject under study. The questionnaires distributed by the researcher herself after all the relevant protocols have been observed. The questionnaires were adopted and adapted from previous research to ensure their suitability and viability as research instruments.

The questionnaires were structured in a way the participant could easily understand. The first part was the demographic characteristics where the respondents shared a little bit of their personal information so as to provide some vital background. The next sections were in relation to the variables.

The researcher adopted scales from various scholars as part of the study. The Psychological well-being scale was one developed by Ryff et al (2007). It is composed of 42 items that measure various attributes of psychological well-being. These aspects are personal growth, positive growth and relations, environmental mastery, acceptance of self, life purpose and autonomy. The scale has a 42 and 18 item version. The researcher used the 18-item version scale as the 42-item version takes a long time to administer according to the originators of the scale.

Stress was measured using the Perceived Stress Scale by Cohen (1988). This scale is the most widely used and accepted scale for this purpose of determining the extent to which an individual is stressed. The scale establishes feelings and thoughts of respondents on how unpredictable or overloaded they perceive their lives to be.

Resilience was measured using a scale by Cassidy (2016). There are many different resilience scales but this one will be chosen as it measures academic success. This is in line with what the researcher's aim for the current study. This scale measures the ability to conquer and succeed in education regardless of facing obstacles and is based on cognitive and behavioural aspects.

The mindfulness awareness scale was adopted and adapted from Brown et al (2003) and Carlson and Brown (2005). The scale establishes the involvement of an individual in their present moment through every-day experiences. All the scales for all the variables were based on a five-point Likert scale in order to easily compute the results.

### **Data Collection Procedures**

The researcher collected primary data from the respondents. This was done through a survey and experiment. Primary data has the advantage of being specifically for the purpose it is intended as well as being straight from the source. The researcher used the mindfulness meditation technique for 6 weeks then measure the students' stress resilience and well-being again to determine change if any in the aforementioned variable characteristics. Secondary data for the study was in the form of peer reviewed scholarly journals as well as textbooks and internet sources. These came in handy when the researcher was comparing the theoretical and empirical findings to determine if any new material arose from the current study.

### ***The Experiment***

The experiment was conducted on grade 10, 11 and 12 students in Northern Iraq over six weeks and some of the details of what it entailed are explained below. The researcher used the sitting meditation and the body scanning as the two methods of DBT technique and employed the CBT technique as well.

**Week 1.** First of all, the researcher explained the topic and the process to the students. The researcher explained stress, resilience and wellbeing to the students and how they have effect on people and also students. Then the researcher explained the two techniques (mindfulness meditation and CBT) that were used during the process. The researcher then conducted the pre-test research by giving 50 questionnaires to 50 students (25 boys, 25 girls) to the study and control groups.

**Week 2.** The researcher taught and did mindfulness sitting meditation for eight minutes with the students. She asked the students to sit in a comfortable seated position, and breathe through their nose and focus their attention on each breath. Also explained to them that it was okay if physical sensation or emotion emerged and to acknowledge them and focus on breathing again.

Figure 2.

*CBT Pie Chart (Source: Quest Counselling Services)*

**Step 1:** Identify the automatic thought that comes to your mind when you are being hard on yourself for something going wrong. For instance, if you get a bad grade on a test you might have the thought, "I failed because I'm stupid."

**Step 2:** Come up with a list of alternative explanations – as many as you can think of. These need not be mutually exclusive explanations. In most cases, all of them probably played some part in the outcome. For the example above, your list may include things like:

- The test was difficult
- I missed several classes
- I studied the wrong material
- The teacher rushed through the material
- Bad luck

**Step 3:** Assign a percentage to each explanation. The percentage should reflect the degree to which each explanation contributed to the situation. For instance, the explanation "I missed several classes" might receive a 50% if a large portion of the test was on material covered during the missed classes. However, if the classes missed were not especially important, you might assign it less importance, like 15%. After going through the list of alternative explanations, assign a percentage to your original automatic thought. Add up the percentages to make sure they add up to 100%. If they don't, reassign the percentages until they do.

**Step 4.** Finally, use the percentages to draw a pie chart.

Now that you've spent time seriously considering alternative explanations, you'll likely put a little less stock in the original automatic thought. The less you believe the unhelpful appraisal, the more you'll feel a softening of the negative emotion that goes with it. Moreover, by considering other factors implicated in the situation, you'll probably feel more empowered to do something to solve the problem, or change your behavior the next time you're in a similar situation.

Students were advised to use this technique everyday half hour or more until next session. After mindfulness sitting meditation, the researcher did a presentation about negative thinking and positive thinking in detail. This research focused on how to use the pie technique to reassess how we make sense of situations that don't go the way we want. This technique is especially useful in helping us rethink things we unfairly blame ourselves for. The pie chart above was used as guidelines in the training (Figure 2). Then the researcher asked the students to use pie chart technique

and mindfulness sitting meditation as a homework during one week until next session.

**Week 3.** The researcher did Mindfulness sitting meditation with the students for 10 minutes again. And the researcher checked the homework about using pie chart technique during a week. Then the researcher talked to the students about how they manage the way they think. She also explained one of the CBT techniques designed to treating thoughts as guesses. This CBT technique to reverse this negative feedback loop is to relate to thoughts less as facts and more as guesses. The reality is many of the thoughts of human have are not facts. They are merely conclusions that develop in response to a limited set of facts. There are many cognitive behavioral therapy techniques designed to helps to learn to see thoughts as guesses. In fact, in some ways most CBT techniques are designed to do just that.

Figure 3.

*CBT Tools (Source: CBT Los Angeles)*

1. When you are feeling an especially strong negative emotion, such as anger, sadness, or anxiety, stop and identify the thoughts that seem most responsible for fueling the emotion.
2. Pick the thought that packs the most punch, and remember that it is just one way of making sense of the available facts and is not necessarily a fact itself.
3. Brainstorm as many other hypotheses as you can, regardless of whether or not you believe them.
4. Pick a few that seem helpful, and write out how you might feel or act differently if you adopted this new thought
5. Once you decide on the most helpful way of making sense of the current situation, remind yourself of this new thought as much as you can. It won't make the other thought disappear, but it will certainly reduce the old thought's airtime in your mind, making it less dominant over your feelings and behavior.

The statements above were used and this was how the researcher prompted the participants to consider a range of possibilities the next time they felt stuck (Figure 3). After that the researcher asked the students to pay attention to use this technique and doing mindfulness sitting meditation every day for one week until next session.

**Week 4.** The researcher did mindfulness body scanning meditation with the students for 15 minutes, ask the students to lie on their back with their legs extended.

From head to toe or toe to head. Slowly focus their attention on each area on their body. Pausing at each body part to become aware of physical sensations and emotions they feel. Students were instructed to use this technique everyday 10 minutes to half an hour for one week until next session. After mindfulness body scanning meditation, the researcher checked the homework and how the students felt about mindfulness meditation. Then explained how to live here and now without focus on past or future. Numerous techniques and instructions have been developed to help people contact their present experience. Teaching and developing mindfulness can be done in several different ways (Janseen, 2018). DBT mainly was developed based on the skills to observe, describe and participate and these are the skills utilized during mindfulness (Flynn, 2021).

The observe skill is all about awareness of things like sensations, thoughts and so forth which helps to regulate emotions. The skill can also emphasize disassociating mentally to ensure one is not caught up in the experience but is able to observe it (Frostadottir and Dorjee, 2019). This way it actually brings up the way of observing from a distance, like a third party which restricts impulsive thinking or acting (Dinesh, 2023). Observation skills also allow one to be able to confront what is happening as people usually avoid and run from any hint of negative emotions (Ryan et al, 2021). Avoidance of negative emotion can lead to poor decision making and emotional dysregulation. The describe skill is all about translating the words into experience. Unpleasant thoughts can build over time especially the more they are believed (Bennett and Dorjee, 2016). The skill was used in the experiment to better get a grasp of the participants' thoughts. The last skill is the participate skill which necessitates fully immersing oneself in what they are doing without reluctance or overthinking (Chen et al, 2022). The researcher thus asked them to use those skills for one week until next session as homework.

**Week 5.** The researcher did mindfulness body scanning meditation with the students for 20 minutes again and check on the students about the homework. To make observe, describe, and participate experiences more powerful, the researcher needs the knowledge and skills on how the participants can use the relevant skills. Focusing on one task at a time makes it easier to note when the mind has detoured (Kuroda et al, 2022). The researcher asked the students to use mindfulness body scanning meditation and use those skills every day until next session.

**Week 6.** This week was last week with the students. As the students had undergone the mindfulness program it was now time to administer the questionnaires again in order to gain insights into the state of the student's post experiment. The same questionnaires as before were given to the students and answered based on the same variables.

### ***Pilot Study***

According to Cooper and Schindler (2014), it is good practice to ensure that the respondents understand the questions on a questionnaire prior too responding to it. This is to ensure that they have sufficient understanding of the subject and can answer in the context that the researcher intended as several meanings can be derived from a specific statement sometimes. This is where a pilot study comes in. The researcher administers the questionnaires to 10 people and have them attempt the questions. This way the researcher gets to see if there are any areas the respondents are failing to interpret correctly, or if there are any adjustments that need to be done and thus amend accordingly (Daniel, 2019). The researcher therefore conducted a pilot study on 10 students. As the respondents were able to correctly understand and interpret the questions, no further adjustments were needed to the research instrument. The questionnaires were therefore deemed reliable and ready for distribution to the targeted population.

### **Data Analysis Procedures**

The researcher used the Statistical Package for Social Sciences (SPSS) for the purpose of data analysis. The researcher determined the relationship between mindfulness on perceived stress reduction, well-being. Descriptive statistics were also being used to establish the frequency of responses based on the variables. For each variable, several questions were asked to determine whether many respondents agreed, disagreed were indifferent and so forth. This helped the researcher gauge the reactions of the respondents to different scenarios. T-tests were also conducted to determine if the mindfulness training had an impact on the control and study group. The paired T tests were employed to establish the answers to the research questions. Since the tests are used to compare between the two groups, the study and control group; they can be easily used to determine the relationship between mindfulness and stress reduction, resilience and well-being in students.

Comparisons between the two groups would help to determine if there were any changes before and after the experiment. This way the results show whether the experiment led to an increase or a decrease in stress reduction, resilience, mindfulness awareness attention and well-being. It is also important to establish whether the results are significant in terms of the differences. Independent tests were conducted to determine if the impact of mindfulness program was on stress reduction, resilience and mindfulness, respectively were significant.

### **Reliability and Validity**

Research instruments should be reliable since they are measurement tools. In order to fulfill this, it is good practice to ensure they are reliable before they are used for a study. This allows them not only to be able to measure what they are intended but for confidence in the output as well. As studies tend to adapt and adopt questionnaires from other studies, if the research instrument is reliable it means it can be easily accommodated for this purpose. The researcher used the Cronbach Alpha to check if the research instrument could be relied upon as a measurement tool. A Cronbach Alpha is a measure of reliability where if the questionnaire scores a high score it shows a high level of reliability.

Table 2 below shows that Cronbach value was at least .60 which is the accepted threshold by most scholars to indicate that the items employed on the variable can be relied upon to measure what the research instrument measures (Taber, 2018). Validity of the research instrument is also necessary to ensure that the contents of the instrument can best reflect the variable being measured. The researcher employed questionnaires that had already been tested for validity ensuring also that the current study had high validity.

Table 2.

#### *Cronbach Alpha Values of Scales'*

Variable	Cronbach Alpha	Number of items
Mindfulness Awareness	.645	15
Stress reduction	.643	10
Resilience	.893	30
Well-being	.644	18



### **Ethical Procedures**

Educational Sciences recommend a researcher observe all the necessary protocol and conduct their research in an ethical manner. The researcher followed this in the course of their study and observed various procedures. The researcher firstly obtained permission to conduct the study from the Near East University ethical committee. After establishing this, the researcher went on to ask permission from the relevant school authorities to conduct a study with their students and then with the students themselves. As some of the respondents were under the age of 18, the researcher ensured that they had the approval of their parents and guardians to take part in the study.

The researcher ensured that the recipients of the study were furnished with all the necessary information pertaining to the study prior participation. The researcher explained everything that was involved in the experiment so that the participants would be aware of all the procedures and what each mindfulness technique involved. It was also made clear that no harm would befall the recipients and the experiments were safe and conducted by an expert.

Participation in the study was voluntary and the students were made aware that they were free to leave the study at any given point. They were also informed that no monetary gains would be awarded for participation in the study, nor would they be required to be part of it. The researcher also explained that their names would not be disclosed and their participation would be treated with the utmost discretion as privacy was a priority. The researcher ensured the safety of the questionnaires by locking them up in a safe and uploading essential data to a secure cloud storage, both of which were only accessible by her.

## CHAPTER IV

### Findings and Discussion

#### Findings Regarding the Pre-Test Analysis of the Experimental Group (Males)

##### *Perceived Stress*

The following statements and responses were made pertaining to perceived stress levels based on the responses never, seldom, sometimes, very often and always (Table 3).

Table 3.

##### *Analyses of the Male Experimental Group Regarding Perceived Stress*

Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Deviation
In the last month, how often have you been upset because of something that happened unexpectedly?	25	1.00	5.00	3.1600	1.02794
In the last month, how often have you felt that you were unable to control the important things in your life?	25	1.00	5.00	3.3600	1.15036
In the last month, how often have you felt nervous and "stressed"?	25	1.00	5.00	3.4800	1.00499
In the last month, how often have you felt confident about your ability to handle your personal problems?	25	1.00	5.00	3.0400	1.51327
In the last month, how often have you felt that things were going your way?	25	1.00	5.00	3.4000	1.00000
In the last month, how often have you found that you could not cope with all the things that you had to do?	25	1.00	5.00	2.9200	1.28841
In the last month, how often have you been able to control irritations in your life?	25	1.00	5.00	3.4000	1.25831
In the last month, how often have you felt that you were on top of things?	25	1.00	5.00	3.4400	1.29357
In the last month, how often have you been angered because of things that were outside of your control?	25	1.00	5.00	3.3200	1.31403
In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	25	1.00	5.00	3.0400	1.48549
Valid N (listwise)	25				

The highest response that was recorded with regards to intensity of perceived stress and nervousness was 3.48 which translates to frequently. The respondents indicated that they had frequently felt nervous or stressed as represented by the mean value of 3.48. The lowest response was 2.92. The respondents showed that they

sometimes felt that they could not cope with all the things that they had to do. The table also shows that the responses had frequently felt that things were not going their way and they sometimes felt like things were outside their control. These meanings are reflected in the mean values of 3.40 and 3.32 respectively. It also indicates that they only sometimes felt like they could not overcome difficulties and things were just piling up as reflected in the mean value of 3.04. The respondents' results also highlighted that they felt positive that they were able to handle things in the previous month as reflected by the mean value of 3.44. Most of the respondents also highlighted that they felt confident in their abilities to deal with their personal problems as shown by the mean of 3.04. The table indicates that the responses with regards to perceived stress ranged from sometimes to frequently.

### ***Resilience***

The participants were asked their opinion for a scenario that they would have failed an assignment after having previously failed twice. Feedback from the tutor would also have been very critical but constructive. The same feedback would have been previously received for the two prior assignments. The responses are recorded in the Table 4.

The table above reveals that the highest positive response was 3.6 which showed agreement to the statement pertaining resilience. The respondents revealed that they would feel like all was ruined and was going wrong if they failed as shown by the mean of 3.7. It also revealed that they would also begin to think that their chances of success at university had passed as reflected by 3.6. Most respondents agreed that they would get annoyed, and think their chances of securing the job were diminished as reflected in the mean values of 3.6 and 3.52 respectively. They also agreed that they would feel annoyed and impose rewards and punishments systems based on their performance. As reflected by 3.6 and 3.68 respectively. Others also revealed that they would take it positively and try different ways of study as shown by the mean of 3.6 and some would strive to stop themselves from panicking as shown by the mean of 3.76. A lot of respondents also highlighted their problem solving abilities as reflected in their intention to come up with new solutions in the mean value of 3.52.

Table 4.

*Analyses of the Male Experimental Group Regarding Resilience*

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
I would work harder	25	1.00	5.00	3.5600	1.55671
I would keep trying	25	1.00	5.00	3.4800	1.41774
I would use the feedback to improve my work	25	1.00	5.00	2.8400	1.43411
I would just give up	25	1.00	5.00	2.9600	1.42829
I would try to think of new solutions	25	1.00	5.00	3.5200	1.22882
I would change my career plans.	25	1.00	5.00	3.2000	1.50000
I would use the situation to motivate myself	25	1.00	5.00	3.2000	1.19024
I would not change my long-term goals and ambitions	25	1.00	5.00	3.3200	1.34536
I would see the situation as a challenge	25	1.00	5.00	2.8800	1.39403
I would look forward to showing that I can improve my grades	25	1.00	5.00	3.7600	1.23423
I would see the situation as temporary	25	1.00	5.00	3.2400	1.16476
I would do my best to stop thinking negative thoughts	25	1.00	6.00	3.4400	1.35647
I would blame the tutor	25	1.00	5.00	3.0000	1.32288
I would not accept the tutors' feedback	25	1.00	5.00	3.1200	1.42361
I would try to think more about my strengths and weaknesses to help me work better	25	1.00	5.00	3.6000	1.15470
I would give myself encouragement	25	1.00	5.00	3.4400	1.38684
I would seek encouragement from my family and friends	25	1.00	5.00	3.2400	1.23423
I would try different ways to study	25	1.00	5.00	3.6400	1.31909
I would set my own goals for achievement	25	1.00	5.00	3.2800	1.13725
I would seek help from my tutors	25	1.00	5.00	3.6800	1.28193
I would start to monitor and evaluate my achievements and effort	25	1.00	5.00	3.3200	1.10755
I would start to self-impose rewards and punishments depending on my performance	25	1.00	5.00	3.6800	1.02956
I would use my past successes to help motivate myself	25	1.00	5.00	3.4800	1.00499
I would feel like everything was ruined and was going wrong	25	1.00	5.00	3.7200	1.17331
I would begin to think my chances of success at university were poor	25	2.00	5.00	3.6400	1.07548
I would probably get depressed	25	1.00	5.00	3.7200	1.17331
I would be very disappointed	25	1.00	5.00	3.4000	1.11803
I would begin to think my chances of getting the job I want were poor	25	1.00	5.00	3.5200	1.19443
I would probably get annoyed	25	2.00	5.00	3.6000	1.04083
I would stop myself from panicking	25	1.00	5.00	3.7600	1.16476
Valid N (listwise)	25				

Most respondents highlighted they would assess their capabilities to enable them to do better as shown in the mean of 3.6. Most were uncertain that they regarded it as an opportunity for self-improvement and the response was a 3.20. An even greater portion agreed that they would keep trying as reflected in the mean of 3.48 whilst a moderate response was reflected in those that felt uncertain that they would utilize the feedback to improve reflected in the value of 2.84. This also corresponded with those that indicated that the situation would not alter their long term plans as reflected in the mean value of 3.32. On the other hand, most were

uncertain or neutral on the notion that they would blame the tutor, even though the response was moderate as reflected in the 3.00 value. Most felt like this would have an impact on their career as reflected in the mean value of 2.92 which reflects neither agreement nor disagreement to the notion. Likewise, most respondents were uncertain whether they would accept the feedback as shown by the mean of 3.12.

### ***Well-Being***

The following responses were with regards to well-being of the respondents. Table 5 shows responses to the respondent's well-being responses. The responses were generally positive and respondents showed that they had a positive attitude to well-being. Most respondents agreed they liked their personality, and liked how life had turned out to be for them looking back as evidenced by the positive values of 3.56 and 3.64 respectively. The results reveal that most respondents agreed they live their life with a purpose not aimlessly as shown by the high mean value of 3.84. The respondents mostly agreed that life was a continuous process of learning, changing and growth as shown by 3.88 and they had confidence in their own opinions and agreed they felt in charge of their life as reflected in the values of 3.64 and 3.56.

Most respondents also agreed that they judge themselves from their own perspectives rather than others'. This is reflected in the in the mean values of 3.60. The table also reveals a moderate response with regards to respondents being influenced by other people's opinions as reflected in the mean value of 3.12. The least response was 2.88 where respondents felt like they take a day at a time and do not worry about the future. This reflected neither agreement nor disagreement. Similarly, the same notion was expressed when it came to the opinion that they had stopped self-improvement and making changes in their lives as shown by the neutral response of 3.32. Likewise, most were neutral on the maintenance of friendships and relationships being difficult as shown by the 3.16 value. However, most respondents agreed they had not experienced many warm and trusting relationships and friendships as shown by the value of 3.56.

Table 5.

*Analyses of the Male Experimental Group Regarding Well-Being***Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
"I like most parts of my personality."	25	1.00	5.00	3.5600	1.08321
"When I look at the story of my life, I am pleased with how things have turned out so far."	25	1.00	5.00	3.6400	1.03602
"Some people wander aimlessly through life, but I am not one of them."	25	2.00	5.00	3.8400	1.06771
"The demands of everyday life often get me down."	25	2.00	5.00	3.3200	.94516
"In many ways I feel disappointed about my achievements in life."	25	1.00	5.00	3.1200	1.05357
"Maintaining close relationships has been difficult and frustrating for me."	25	1.00	5.00	3.1600	1.10604
"I live life one day at a time and don't really think about the future."	25	1.00	5.00	2.8800	1.20139
"In general, I feel I am in charge of the situation in which I live."	25	2.00	5.00	3.5600	1.00333
"I am good at managing the responsibilities of daily life."	25	1.00	5.00	3.6400	.95219
"I sometimes feel as if I've done all there is to do in life."	25	1.00	5.00	3.5200	1.22882
"For me, life has been a continuous process of learning, changing, and growth."	25	1.00	5.00	3.8800	.92736
"I think it is important to have new experiences that challenge how I think about myself and the world."	25	2.00	5.00	3.7600	.96954
"People would describe me as a giving person, willing to share my time with others."	25	2.00	5.00	3.4400	1.04403
"I gave up trying to make big improvements or changes in my life a long time ago"	25	1.00	5.00	3.3200	1.28193
"I tend to be influenced by people with strong opinions"	25	1.00	5.00	3.0800	1.18743
"I have not experienced many warm and trusting relationships with others."	25	1.00	5.00	3.5600	1.15758
"I have confidence in my own opinions, even if they are different from the way most other people think."	25	1.00	5.00	3.6400	1.11355
"I judge myself by what I think is important, not by the values of what others think is important."	25	1.00	5.00	3.6000	1.19024
Valid N (listwise)	25				

***Mindfulness***

The responses below are with regards to the mindfulness awareness attention of the respondents (Table 6). The results reveal that respondents had neutral opinions to several notions. They were uncertain about experiencing emotions and being unconscious of it, breaking things out of carelessness, and staying focused on the present. This is reflected in the mean values of 3.36, 3.16 and 3.16 respectively. Likewise, most respondents tend to notice physical discomfort and tension unless these are really intense as shown by the mean value of 3.4.

Table 6.

*Analyses of the Male Experimental Group Regarding Mindfulness*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
I could be experiencing some emotion and not be conscious of it until sometime later.	25	1.00	5.00	3.3600	1.15036
I break or spill things because of carelessness, not paying attention, or thinking of something else.	25	1.00	5.00	3.1600	1.17898
I find it difficult to stay focused on what's happening in the present.	25	1.00	5.00	3.1600	.94340
I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.	25	2.00	5.00	3.5600	.76811
I tend not to notice feelings of physical tension or discomfort until they really grab my attention.	25	1.00	5.00	3.4000	1.00000
I forget a person's name almost as soon as I've been told it for the first time.	25	1.00	5.00	3.6800	.94516
It seems I am "running on automatic," without much awareness of what I'm doing	25	2.00	5.00	3.7600	.83066
I rush through activities without being really attentive to them.	25	2.00	5.00	3.9600	.84063
I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there	25	1.00	5.00	3.5200	1.26227
I do jobs or tasks automatically, without being aware of what I'm doing.	25	1.00	5.00	3.6000	1.08012
I find myself listening to someone with one ear, doing something else at the same time.	25	1.00	5.00	3.3600	1.11355
I drive places on 'automatic pilot' and then wonder why I went there	25	1.00	5.00	3.4000	1.19024
I find myself preoccupied with the future or the past.	25	1.00	5.00	3.5600	1.15758
I find myself doing things without paying attention.	25	1.00	5.00	3.6400	.95219
I snack without being aware that I'm eating	25	1.00	5.00	3.2800	1.42945
Valid N (listwise)	25				

Most respondents agreed that they walked on without awareness of surroundings as shown by the high value of 3.56. They agreed that they do things on autopilot as shown by the mean value of 3.76, do things without properly paying attention as reflected in the value of 3.96. The respondents also agreed to having a one track mind when it came to goals that they lost touch of reality as shown by the 3.52 value. Likewise, they also agreed to being preoccupied about life past and present and doing things mindlessly as reflected in the 3.56 and 3.64 values respectively. The respondents reflected neutral responses to driving an autopilot, snacking unawares and not attentively listening to others as reflected by the mean values of 3.40, 3.28 and 3.36 respectively. Overall, the table results indicate a general lack of awareness. This is revealed in the affirmative responses to the negative situations reflected in the statements. Moderate responses were only reflected in statements that indicated that they can break or spill things through carelessness

without being aware and can walk quickly to get to where they need to be without stopping to pay attention to what is surrounding them.

### **Findings Regarding the Pre-Test Analysis of the Control Group (Males)**

#### ***Perceived Stress***

Table 7 shows the respondents responses with regards to perceived stress. The respondents frequently felt nervous and stressed as indicated by the high means of 3.96 as well as felt upset by things that had happened previously as indicated by the mean value of 3.64. They also felt like they were unable to control things in their life as shown by the value of 3.72.

Table 7.

#### ***Analyses of the Male Control Group Regarding Perceived Stress***

<b>Descriptive Statistics</b>	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
In the last month, how often have you been upset because of something that happened unexpectedly?	25	2.00	5.00	3.6400	.99499
In the last month, how often have you felt that you were unable to control the important things in your life?	25	1.00	5.00	3.7200	.93630
In the last month, how often have you felt nervous and "stressed"?	25	2.00	5.00	3.9600	.88882
In the last month, how often have you felt confident about your ability to handle your personal problems?	25	1.00	5.00	3.0400	1.20692
In the last month, how often have you felt that things were going your way?	25	1.00	5.00	2.6800	1.21518
In the last month, how often have you found that you could not cope with all the things that you had to do?	25	1.00	5.00	3.6000	1.19024
In the last month, how often have you been able to control irritations in your life?	25	1.00	5.00	2.8800	1.50886
In the last month, how often have you felt that you were on top of things?	25	1.00	5.00	2.9200	1.18743
In the last month, how often have you been angered because of things that were outside of your control?	25	1.00	5.00	3.8400	1.14310
In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	25	1.00	5.00	3.4400	1.22746
Valid N (listwise)	25				



The study also revealed that only sometimes did the respondents feel like things were going their way and on top of things as reflected in the mean value of 2.68 and 2.92 respectively. The respondents mostly expressed uncertainty regarding having confidence to handle personal problems as shown by the 3.04 value. Similarly, the table also reveals that the respondents were uncertain about being able to control life irritations as shown by the value of 2.88. The results reveal high and frequent level of stress. This is reflected in the high mean values. The respondents mostly agreed about being angered a lot about things they could not control as shown by the mean value of 3.84. They also agreed they felt things were becoming overwhelming as shown by the 3.44 value.

### ***Resilience***

Table 8 below reflects the responses with regards to resilience. The responses with regards to resilience were mixed. The most frequent response was with regards to how respondents would feel panicky. Most respondents indicated that they would not stop themselves from panicking and this is indicated by the high mean value of 3.68. Another frequent response was with regard to how they would feel depressed if they failed. This is reflected in the high positive mean value of 3.52. The participants also indicated that they would harbour negative feelings like get disappointed, get annoyed, think that their chances are ruined at university and have poor chances of getting a job. These are reflected in the mean values of 3.32, 3.44, 3.04 and 3.44 respectively. Some respondents showed positivity and showed that they would not let the failure get them down. This is shown by respondents agreeing they would work harder with 3.44 mean value. However, uncertainty showed in a lot of responses. Respondents neither agreed nor disagreed to the notion that they would but themselves through a reward and punishment system as shown by the 3.16, would use past successes for motivation with 2.92, would feel everything was ruined with 3.24. Likewise, some were unsure if this would ruin their chances at university as shown by the mean of 3.04, some would blame the tutor and not accept feedback as reflected in the mean values of 3.08 and 3.40 respectively. Participants expressed neutrality to seeking encouragement from family and friends, using their capabilities for improvement and giving themselves encouragement as shown in the mean values of 2.88, 3.08 and 3.16 respectively.

Table 8.

*Analyses of the Male Control Group Regarding Resilience*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
I would work harder	25	1.00	5.00	3.4400	1.44568
I would keep trying	25	1.00	5.00	2.8800	1.01325
I would use the feedback to improve my work	25	1.00	5.00	3.1200	1.12990
I would just give up	25	1.00	5.00	2.4000	1.11803
I would try to think of new solutions	25	1.00	5.00	3.0400	1.24097
I would change my career plans.	25	1.00	5.00	2.8000	1.41421
I would use the situation to motivate myself	25	1.00	5.00	2.8800	1.16619
I would not change my long-term goals and ambitions	25	1.00	5.00	2.8000	1.15470
I would see the situation as a challenge	25	1.00	5.00	3.0800	1.28841
I would look forward to showing that I can improve my grades	25	1.00	5.00	3.1200	1.36382
I would see the situation as temporary	25	2.00	5.00	3.2400	.77889
I would do my best to stop thinking negative thoughts	25	2.00	5.00	3.1200	.88129
I would blame the tutor	25	1.00	5.00	3.0800	1.18743
I would not accept the tutors' feedback	25	1.00	5.00	3.4000	1.35401
I would try to think more about my strengths and weaknesses to help me work better	25	1.00	5.00	3.0800	.95394
I would give myself encouragement	25	1.00	5.00	3.1600	1.34412
I would seek encouragement from my family and friends	25	1.00	5.00	2.8800	1.39403
I would try different ways to study	25	1.00	5.00	3.3200	1.24900
I would set my own goals for achievement	25	1.00	5.00	3.0000	1.15470
I would seek help from my tutors	25	1.00	5.00	2.9200	1.28841
I would start to monitor and evaluate my achievements and effort	25	1.00	5.00	3.1200	1.09240
I would start to self-impose rewards and punishments depending on my performance	25	1.00	5.00	3.1600	1.10604
I would use my past successes to help motivate myself	25	1.00	5.00	2.9200	.81240
I would feel like everything was ruined and was going wrong	25	1.00	5.00	3.2400	1.30000
I would begin to think my chances of success at university were poor	25	1.00	5.00	3.0400	1.17189
I would probably get depressed	25	1.00	5.00	3.5200	1.00499
I would be very disappointed	25	1.00	5.00	3.3200	1.18040
I would begin to think my chances of getting the job I want were poor	25	1.00	5.00	3.4400	1.12101
I would probably get annoyed	25	1.00	5.00	3.4400	1.00333
I would not stop myself from panicking	25	1.00	5.00	3.6800	1.06927
Valid N (listwise)	25				

Some indicated that they would monitor their achievements and effort as shown by the mean of 3.12, find new solutions and use feedback to improve as shown in the mean values of 3.04 and 3.12. A lot of respondents also indicated that they would work harder and this is reflected in the high positive mean value of 3.44. Some expressed disagreements that they would neither give up nor change their career plans.

### ***Well-Being***

Table 9 shows responses with regards to well-being. Overall the respondents showed agreement with the statements. The highest frequency was with regards to how respondents felt like they feel they have done all there is to life as reflected by the mean of 3.8. The respondents also agreed that they judged themselves based on what they think is important not others value as indicated by the mean value of 3.8.

Table 9.

#### *Analyses of the Male Control Group Regarding Well-Being*

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
"I like most parts of my personality."	25	1.00	5.00	3.0400	1.33791
"When I look at the story of my life, I am pleased with how things have turned out so far."	25	1.00	5.00	3.0000	1.25831
"Some people wander aimlessly through life, but I am not one of them."	25	1.00	5.00	3.2800	1.13725
"The demands of everyday life often get me down."	25	2.00	5.00	3.4800	.91833
"In many ways I feel disappointed about my achievements in life."	25	1.00	5.00	3.4000	1.08012
"Maintaining close relationships has been difficult and frustrating for me."	25	2.00	5.00	3.7600	1.01160
"I live life one day at a time and don't really think about the future."	25	1.00	4.00	3.0400	.84063
"In general, I feel I am in charge of the situation in which I live."	25	1.00	5.00	3.5200	1.12250
"I am good at managing the responsibilities of daily life."	25	1.00	5.00	3.0000	1.22474
"I sometimes feel as if I've done all there is to do in life."	25	2.00	5.00	3.8400	.80000
"For me, life has been a continuous process of learning, changing, and growth."	25	2.00	5.00	3.3200	.94516
"I think it is important to have new experiences that challenge how I think about myself and the world."	25	1.00	5.00	3.5200	1.15902
"People would describe me as a giving person, willing to share my time with others."	25	2.00	5.00	3.4400	1.12101
"I gave up trying to make big improvements or changes in my life a long time ago"	25	1.00	5.00	3.3600	.95219
"I tend to be influenced by people with strong opinions"	25	1.00	5.00	3.2400	1.09087
"I have not experienced many warm and trusting relationships with others."	25	1.00	5.00	3.4000	1.19024
"I have confidence in my own opinions, even if they are different from the way most other people think."	25	1.00	5.00	3.2800	1.13725
"I judge myself by what I think is important, not by the values of what others think is important."	25	1.00	5.00	3.8400	1.17898
Valid N (listwise)	25				

Respondents also showed high frequency about relationships where respondents indicated that maintaining relationships was frustrating as reflected in the mean value of 3.7. Likewise, the respondents agreed to the notion that they felt they had done everything that had to be done in life as reflected by the mean value of 3.84. Similarly, most respondents agreed they were in charge of their life as shown by the 3.52 frequency value. The participants were uncertain that they had not experienced war, and trusting relationships as shown by the mean value of 3.28. The same sentiments were also expressed on the idea that they were influenced by what others thought as shown by a mean value of 3.28 as well. Similarly, the respondents indicated neither agreement nor disagreement to the notion that they felt like they were good at managing responsibilities in their life as shown by the mean value of 3.0 and also pertaining to living life one day at a time as shown by the mean value of 3.04. Most respondents disagreed that they were confident about their capability regarding handling personal problems as reflected in the mean value of 2.36. Likewise, they only felt like they were on top of things very few times as indicated by the value of 2.36 as well. The participants also showed they had felt things going their way very few times as indicated by the 2.04 value. They indicated that they most often felt they could not cope with all they had to do as shown by the high frequency of 4.04. The same sentiment was expressed on ability to control irritations in life reflected by the 4.08 value. However, there was agreement to that respondents felt like they were in charge of the situations in their lives as shown by the mean value of 3.5.

### ***Mindfulness***

Table 10 shows responses to mindfulness awareness. The results in overall range from moderate agreements to positive agreements. The respondents showed agreement to that sometimes they do not listen properly to someone when they are doing another thing at the same time as shown by the mean value of 3.76. The respondents also agreed that they rushed through activities without really paying attention to them as reflected in the mean value of 3.6. Similarly, respondents agreed that they get focused on goals and lose reality as shown by the value of 3.52; do not really notice discomfort and tension as shown by 3.56. Respondents showed they tend to do things on auto mode and get preoccupied by the past and the present as shown by the mean values of 3.6 for both notions.

Table 10.

*Analyses of the Male Control Group Regarding Mindfulness*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
I could be experiencing some emotion and not be conscious of it until sometime later.	25	1.00	5.00	3.0000	1.15470
I break or spill things because of carelessness, not paying attention, or thinking of something else.	25	1.00	5.00	3.0400	1.13578
I find it difficult to stay focused on what's happening in the present.	25	2.00	5.00	3.3200	.80208
I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.	25	1.00	5.00	3.4800	1.15902
I tend not to notice feelings of physical tension or discomfort until they really grab my attention.	25	2.00	5.00	3.5600	.91652
I forget a person's name almost as soon as I've been told it for the first time.	25	1.00	5.00	3.3600	.95219
It seems I am "running on automatic," without much awareness of what I'm doing	25	1.00	5.00	3.6000	1.00000
I rush through activities without being really attentive to them.	25	2.00	5.00	3.6000	.76376
I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there	25	2.00	5.00	3.5200	.87178
I do jobs or tasks automatically, without being aware of what I'm doing.	25	1.00	5.00	3.3600	1.11355
I find myself listening to someone with one ear, doing something else at the same time.	25	1.00	5.00	3.7600	.96954
I drive places on 'automatic pilot' and then wonder why I went there	25	1.00	5.00	3.6000	1.11803
I find myself preoccupied with the future or the past.	25	1.00	5.00	3.6000	1.08012
I find myself doing things without paying attention.	25	1.00	5.00	3.3200	1.21518
I snack without being aware that I'm eating	25	1.00	5.00	3.1600	1.34412
Valid N (listwise)	25				

They however neither agreed nor disagreed that they walk quickly to where they would be going without paying much attention to their surroundings as reflected in the mean value of 3.4. Likewise, the same sentiment was shown on the notion that they snack without awareness as shown by the 3.16 value. Similar notions were expressed on the ideas that the respondents do things without paying attention and forget a person's name shortly as reflected by the values of 3.32 and 3.36 respectively. Respondents also indicated that they got so focused on things that they sometimes lost touch of reality as shown in the mean value of 3.5. However, indifference was shown on the statement that they find it difficult to stay in the present shown by the mean of 3.3. The same sentiments were expressed regarding life being continuously changing, being about learning and growth as reflected in the mean value of 3.32. Respondents were also neutral on not feeling emotions until later

and spilling things without awareness as reflected in the mean values of 3.00 and 3.04 respectively.

### **Findings Regarding the Post-Test Analysis of the Experimental Group (Males)**

#### ***Perceived Stress***

Table 11 shows the frequency of responses related to perceived stress. Generally, the respondents showed that they were able to handle stressful situations. The respondents indicated strong agreement and showed that very often they felt confident about their ability to handle personal problems as shown by the high mean value of 4.04. Likewise, they also showed they were quite often angered about things they could not control as reflected in the mean value of 3.84.

Table 11.

#### ***Analyses of the Male Experimental Group Regarding Mindfulness Perceived Stress***

<b>Descriptive Statistics</b>	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
In the last month, how often have you been upset because of something that happened unexpectedly?	25	1.00	5.00	3.4400	1.12101
In the last month, how often have you felt that you were unable to control the important things in your life?	25	1.00	5.00	2.6800	1.18040
In the last month, how often have you felt nervous and "stressed"?	25	1.00	5.00	3.8400	1.10604
In the last month, how often have you felt confident about your ability to handle your personal problems?	25	2.00	5.00	4.0400	.97809
In the last month, how often have you felt that things were going your way?	25	1.00	5.00	3.2800	1.06145
In the last month, how often have you found that you could not cope with all the things that you had to do?	25	1.00	5.00	3.4000	1.19024
In the last month, how often have you been able to control irritations in your life?	25	1.00	5.00	3.5600	1.41657
In the last month, how often have you felt that you were on top of things?	25	2.00	5.00	3.5200	1.04563
In the last month, how often have you been angered because of things that were outside of your control?	25	2.00	5.00	3.8400	.94340
In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	25	1.00	5.00	2.9600	1.54056
Valid N (listwise)	25				

This also corresponds with how the respondents indicated that in the last month they were upset many times with things that happened unexpectedly as reflected in the mean of 3.44. They also indicated that they had felt nervous and

stressed many times in the past month as also reflected in the 3.44 value. The respondents also indicated that many times they had felt like they were on top of things and able to control irritations in their lives as shown by the mean values of 3.52 and 3.56 respectively. The respondents showed disagreement to the notion that they were unable to control things in their life. Many respondents agreed that they only sometimes felt like difficulties were piling up too high to overcome as indicated by the mean value of 2.96. Most respondents also felt that they only felt sometimes they felt they could not cope as shown by the 3.4 value. Most also indicated that they had felt like sometimes things were going their way as reflected in the mean value of 3.28.

### ***Resilience***

Table 12 shows the frequency of responses related to resilience. Most respondents agreed that they would work harder and would keep trying as reflected by the mean value of 3.48 and 3.84. Most also agreed that they would use the situation to motivate themselves as shown by the mean value of 3.58 whilst most also agreed that they would see the situation as a challenge as shown by the mean value of 3.68. Most respondents strongly agreed that they would look forward to improving their grades as reflected in the mean value of 4.24. Most respondents agreed that they would see the situation as temporary as shown by the mean value of 3.64. However, most respondents could neither agree nor disagree to the notion that they would stop thinking negative thoughts as reflected by the mean value of 3.36. Most respondents disagreed that they would blame the tutor as shown by the mean value of 2.84 and also disagreed that they would just give up as reflected in the mean value of 2.6.

Most respondents agreed that they would try to think of new solutions as indicated by the mean value of 3.72. Most of the respondents agreed that they would stop themselves from panicking as reflected in the mean value of 3.56. Most respondents also agreed that they would get annoyed as shown by the mean value of 3.68. However, most respondents could neither agree nor disagree that they would think their chances of getting a job were poor as reflected by the mean value of 2.68. Most respondents also expressed the same sentiment to the notion that they would get depressed, be very disappointed and would feel like their chances of success at university were poor as shown by the mean values of 3.00, 3.24 and 2.88 respectively.

Table 12.

*Analyses of the Male Experimental Group Regarding Resilience*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
I would work harder	25	1.00	5.00	3.4800	1.29486
I would keep trying	25	1.00	5.00	3.8400	1.34412
I would use the feedback to improve my work	25	1.00	5.00	3.3600	1.49666
I would just give up	25	1.00	5.00	2.6000	1.44338
I would try to think of new solutions	25	1.00	5.00	3.7200	1.06145
I would change my career plans.	25	1.00	5.00	3.5200	1.29486
I would use the situation to motivate myself	25	1.00	5.00	3.5600	1.19304
I would not change my long-term goals and ambitions	25	1.00	5.00	3.4800	1.00499
I would see the situation as a challenge	25	2.00	5.00	3.6800	1.02956
I would look forward to showing that I can improve my grades	25	2.00	5.00	4.2400	1.05198
I would see the situation as temporary	25	1.00	5.00	3.6400	1.18603
I would do my best to stop thinking negative thoughts	25	1.00	5.00	3.3600	1.46856
I would blame the tutor	25	1.00	5.00	2.8400	1.31276
I would not accept the tutors' feedback	25	1.00	5.00	3.2400	1.33167
I would try to think more about my strengths and weaknesses to help me work better	25	1.00	5.00	3.1200	1.53623
I would give myself encouragement	25	1.00	5.00	3.3600	1.38082
I would seek encouragement from my family and friends	25	1.00	5.00	3.0800	1.32035
I would try different ways to study	25	1.00	5.00	3.2400	1.16476
I would set my own goals for achievement	25	1.00	5.00	3.8400	1.37477
I would seek help from my tutors	25	1.00	5.00	3.4000	1.25831
I would start to monitor and evaluate my achievements and effort	25	1.00	5.00	3.1600	1.24766
I would start to self-impose rewards and punishments depending on my performance	25	1.00	5.00	3.3600	1.25433
I would use my past successes to help motivate myself	25	1.00	5.00	3.4800	1.19443
I would feel like everything was ruined and was going wrong	25	1.00	5.00	3.0800	1.49778
I would begin to think my chances of success at university were poor	25	1.00	5.00	2.8800	1.53623
I would probably get depressed	25	1.00	5.00	3.0000	1.19024
I would be very disappointed	25	1.00	5.00	3.2400	1.30000
I would begin to think my chances of getting the job I want were poor	25	1.00	5.00	2.6800	1.62583
I would probably get annoyed	25	1.00	5.00	3.6800	1.31403
I would stop myself from panicking	25	1.00	5.00	3.5600	1.38684
Valid N (listwise)	25				

Most respondents also remained neutral to the notion that they would feel like everything was ruined, they would start to monitor their achievements or impose rewards and punishment on performance. This is reflected in the mean values of 3.08, 3.16 and 3.36 respectively.



### ***Well-Being***

Table 13 reflect responses regarding wellbeing. Most respondents agreed that they liked most parts of their personality as shown by the mean value of 3.76. Most respondents also agreed that when they looked at their lives, they were pleased with how things turned out as reflected by the mean value of 3.56. Most respondents also agreed that some people wandered aimlessly through life but they did not do so as reflected by the mean value of 3.72.

Table 13.

#### *Analyses of the Male Experimental Group Regarding Well-Being*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
"I like most parts of my personality."	25	1.00	5.00	3.7600	1.16476
"When I look at the story of my life, I am pleased with how things have turned out so far."	25	2.00	5.00	3.5600	1.00333
"Some people wander aimlessly through life, but I am not one of them."	25	1.00	11.00	3.7200	1.90438
"The demands of everyday life often get me down."	25	1.00	5.00	2.6800	1.14455
"In many ways I feel disappointed about my achievements in life."	25	1.00	4.00	2.5200	1.00499
"Maintaining close relationships has been difficult and frustrating for me."	25	1.00	5.00	2.6400	1.38082
"I live life one day at a time and don't really think about the future."	25	1.00	5.00	3.0400	1.33791
"In general, I feel I am in charge of the situation in which I live."	25	1.00	5.00	3.1200	1.16619
"I am good at managing the responsibilities of daily life."	25	1.00	5.00	3.4800	1.12250
"I sometimes feel as if I've done all there is to do in life."	25	1.00	5.00	3.3200	1.21518
"For me, life has been a continuous process of learning, changing, and growth."	25	1.00	5.00	3.9600	1.13578
"I think it is important to have new experiences that challenge how I think about myself and the world."	25	2.00	5.00	3.8400	1.06771
"People would describe me as a giving person, willing to share my time with others."	25	2.00	5.00	3.4800	1.08474
"I gave up trying to make big improvements or changes in my life a long time ago"	25	1.00	5.00	3.2400	1.50776
"I tend to be influenced by people with strong opinions"	25	1.00	5.00	3.2800	1.24231
"I have not experienced many warm and trusting relationships with others."	25	1.00	5.00	3.2000	1.44338
"I have confidence in my own opinions, even if they are different from the way most other people think."	25	1.00	5.00	3.7200	1.24231
"I judge myself by what I think is important, not by the values of what others think is important."	25	1.00	5.00	3.3200	1.51987
Valid N (listwise)	25				

Most respondents disagreed that the demands of life often got them down as reflected in the mean value of 2.6. The same sentiment was also expressed with regards to the notion that they felt disappointed about their achievements in life and that maintaining close relationships had been difficult and frustrating. This is reflected in the mean values of 2.52 and 2.64 respectively. Most respondents neither agreed nor disagreed to the notion that they lived their life one day at a time without thinking about the future as reflected in the mean value of 3.04. The same sentiment was also expressed with regards to the notion that they felt that they were in charge of the situation they live as shown by the mean value of 3.12. Many respondents also remained neutral to the notion that they felt like they had done all there is to do in life and this is reflected in the mean value of 3.32. However, most respondents agreed that it was important to have new experiences that challenged their outlook on life as reflected in the mean value of 3.84. Most respondents agreed that many people see them as giving and willing to share their time with others as reflected in the mean value of 3.84. Most respondents however, remained indifferent to the notion that they stopped making big changes in their lives as reflected by the mean value of 3.24. They also remained neutral to the notion that they judged themselves by what is important not what others think as reflected by the mean value of 3.32. The same sentiment was expressed on that they got influenced by others opinions as reflected in the mean value of 3.2. Most respondents agreed that they had confidence in their opinions even if they turned out different as reflected by the mean value of 3.72.

### ***Mindfulness***

Table 14 shows responses to mindfulness. Most respondents revealed that they could experience emotion without being aware of it as reflected in the mean value of 3.28. They also indicated that they tend to spill things because of carelessness as reflected by the mean value of 2.72 which means they neither agreed nor disagreed to the statement. The same sentiment was also expressed with regards to the notion that the respondents found it hard to stay focused to the present as reflected by the mean value of 2.88. Most respondents could also neither agree nor disagree to the notion that they walked quickly without awareness of their surroundings, did not notice physical tension or discomfort as reflected in the mean values of 3.24 and 3.28 respectively.

Table 14.

*Analyses of the Male Experimental Group Regarding Mindfulness*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
I could be experiencing some emotion and not be conscious of it until sometime later.	25	1.00	5.00	3.2800	1.20830
I break or spill things because of carelessness, not paying attention, or thinking of something else.	25	1.00	5.00	2.7600	1.56205
I find it difficult to stay focused on what's happening in the present.	25	1.00	5.00	2.8800	1.01325
I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.	25	1.00	5.00	3.2400	1.39284
I tend not to notice feelings of physical tension or discomfort until they really grab my attention.	25	1.00	5.00	3.2800	1.10000
I forget a person's name almost as soon as I've been told it for the first time.	25	1.00	5.00	2.6800	1.40594
It seems I am "running on automatic," without much awareness of what I'm doing	25	1.00	5.00	3.1600	1.49108
I rush through activities without being really attentive to them.	25	1.00	5.00	3.4000	1.22474
I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there	25	1.00	5.00	3.7200	1.36991
I do jobs or tasks automatically, without being aware of what I'm doing.	25	1.00	5.00	3.0400	1.51327
I find myself listening to someone with one ear, doing something else at the same time.	25	1.00	5.00	3.0400	1.54056
I drive places on 'automatic pilot' and then wonder why I went there	25	1.00	5.00	3.1200	1.53623
I find myself preoccupied with the future or the past.	25	1.00	5.00	2.7200	1.17331
I find myself doing things without paying attention.	25	1.00	5.00	2.5600	1.35647
I snack without being aware that I'm eating	25	1.00	5.00	2.4000	1.70783
Valid N (listwise)	25				

Most respondents showed indifference to the notion that they run on automatic without awareness of what they are doing as shown by the mean value of 3.16. Most respondents also could neither agree nor disagree to the notion that they rush through activities, do jobs automatically, find themselves listening without one ear as shown by the mean values of 3.16, 3.40 and 3.04. They agreed that they found themselves focused on the goal that they lose touch with the present as reflected in the mean value of 3.72. Most respondents also showed indifference to the notion that they drove an autopilot without awareness, found themselves preoccupied, found themselves doing things without attention and snacked without eating. This is reflected in the mean values of 3.12, 2.72, 2.56 and 2.4 respectively.

## Findings Regarding the Post-Test Analysis of the Control Group (Males)

### *Perceived Stress*

Table 15 shows responses to perceived stress frequency. Most respondents showed that they had been upset very often because of something that happened unexpectedly as shown by the mean value of 3.60. They also indicated that they had felt unable to control important things in their lives many times as reflected in the mean value of 3.52. The respondents also indicated that they had felt stressed and nervous many times as reflected in the mean value of 3.68. They also indicated that they had felt confident enough to handle things only a few times. Most respondents felt that things were going their way only a few times as reflected in the mean value of 2.04. They also showed that they felt they could not cope with things they had to do, very often as indicated by the mean value of 4.04. However, many respondents indicated that they had felt able to control irritations in their lives very often as reflected in the mean value of 4.08.

Table 15.

### *Analyses of the Male Experimental Group Regarding Perceived Stress*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
In the last month, how often have you been upset because of something that happened unexpectedly?	25	2.00	5.00	3.6000	.81650
In the last month, how often have you felt that you were unable to control the important things in your life?	25	2.00	5.00	3.5200	.65320
In the last month, how often have you felt nervous and "stressed"?	25	2.00	5.00	3.6800	.80208
In the last month, how often have you felt confident about your ability to handle your personal problems?	25	1.00	5.00	2.3600	1.07548
In the last month, how often have you felt that things were going your way?	25	1.00	4.00	2.0400	.93452
In the last month, how often have you found that you could not cope with all the things that you had to do?	25	3.00	5.00	4.0400	.78951
In the last month, how often have you been able to control irritations in your life?	25	3.00	5.00	4.0800	.70238
In the last month, how often have you felt that you were on top of things?	25	1.00	5.00	2.3600	.99499
In the last month, how often have you been angered because of things that were outside of your control?	25	1.00	5.00	3.8000	1.00000
In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	25	3.00	5.00	4.0000	.86603
Valid N (listwise)	25				

Most respondents indicated that they felt difficulties were piling up very often and they felt unable to overcome them as reflected in the mean value of 4.00. Most respondents indicated that they had been angered often because of things that were outside their control as shown by the mean value of 3.8.

### ***Resilience***

Table 16.

#### *Analyses of the Male Experimental Group Regarding Resilience*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
I would work harder	25	2.00	4.00	2.8800	.72572
I would keep trying	25	1.00	4.00	2.4000	.86603
I would use the feedback to improve my work	25	1.00	3.00	2.0000	.76376
I would just give up	25	3.00	5.00	4.1200	.72572
I would try to think of new solutions	25	1.00	3.00	2.2400	.72342
I would change my career plans.	25	1.00	5.00	4.0000	.95743
I would use the situation to motivate myself	25	1.00	5.00	2.4400	1.22746
I would not change my long-term goals and ambitions	25	1.00	4.00	2.7200	.79162
I would see the situation as a challenge	25	1.00	4.00	2.3600	.99499
I would look forward to showing that I can improve my grades	25	1.00	5.00	2.5600	1.12101
I would see the situation as temporary	25	2.00	5.00	2.9600	.73485
I would do my best to stop thinking negative thoughts	25	2.00	5.00	2.8000	.91287
I would blame the tutor	25	1.00	5.00	3.8800	1.12990
I would not accept the tutors' feedback	25	2.00	5.00	3.6000	.91287
I would try to think more about my strengths and weaknesses to help me work better	25	2.00	5.00	3.0000	.95743
I would give myself encouragement	25	2.00	5.00	2.7600	.87939
I would seek encouragement from my family and friends	25	2.00	5.00	2.8800	.72572
I would try different ways to study	25	1.00	3.00	2.3600	.63770
I would set my own goals for achievement	25	2.00	5.00	2.7200	.79162
I would seek help from my tutors	25	2.00	5.00	3.9200	.75939
I would start to monitor and evaluate my achievements and effort	25	1.00	5.00	2.4800	1.15902
I would start to self-impose rewards and punishments depending on my performance	25	1.00	5.00	2.4400	.86987
I would use my past successes to help motivate myself	25	1.00	5.00	2.5200	.91833
I would feel like everything was ruined and was going wrong	25	2.00	5.00	3.9200	.81240
I would begin to think my chances of success at university were poor	25	2.00	5.00	3.4800	.87178
I would probably get depressed	25	1.00	5.00	3.6800	1.14455
I would be very disappointed	25	1.00	4.00	3.0000	.64550
I would begin to think my chances of getting the job I want were poor	25	1.00	5.00	3.4000	.95743
I would probably get annoyed	25	2.00	5.00	4.1200	.88129
I would stop myself from panicking	25	2.00	5.00	4.0800	.99666
Valid N (listwise)	25				

Table 16 shows responses to resilience. Most respondents showed indifference to the notion that they would work harder as shown by the mean value of 2.88. Most respondents disagreed that they would keep trying as reflected in the mean value of 2.4. The same sentiment was also expressed towards the statements that they would see the situation as a challenge, they would use feedback to improve their work and try to think of new solutions. This is shown in the mean values of 2.36, 2.0, and 2.24 respectively. Respondents were also uncertain whether they would use their experiences to help others as shown by the mean value of 2.52. However, most respondents agreed that they would just give up and change their career plans as reflected in the mean of 4.21 and 4.00 respectively. Most respondents remained neutral on the notion that they would set own goals as reflected by the mean value of 2.72. Likewise, for the sentiment that they would look for help from their friends as shown by the 2.88 value. However, most respondents disagreed that they would monitor their achievements, impose rewards and punishments on performance or use their past successes to help them as reflected in the mean values of 2.48, 2.44 and 2.52 respectively. Most respondents disagreed that they would look forward to showing they could improve their grades as reflected in the mean value of 2.56. Surprisingly, most respondents disagreed that they would start monitoring and evaluating their performance and try an alternative way of studying as shown by the mean of 2.48 and 2.36 respectively. Most respondents agreed that they would feel like everything was ruined as depicted by the mean value of 3.92. They also agreed that they would feel like their chances at university were poor as reflected by the mean value of 3.48. Most respondents agreed that they would get depressed as shown by the mean value of 3.68 but remained neutral on the statement that they would be disappointed and think their chances of getting a job were poor as reflected by the mean value of 3.00 and 3.40. However, most respondents agreed that they would get annoyed and look for help from tutors as portrayed by the mean value of 4.12 and 3.92 respectively. Most respondents agreed that they would stop from panicking as reflected by the mean value 4.08.

### ***Well-Being***

Table 17 shows responses with regards to well-being. The most frequent response was with regards to changes. Most of the respondents indicated that they

gave up trying to make improvements or big changes to their lives a long time ago as reflected in the mean value of 4.2.

Table 17.

*Analyses of the Male Experimental Group Regarding Well-Being*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
"I like most parts of my personality."	25	3.00	5.00	4.1600	.74610
"When I look at the story of my life, I am pleased with how things have turned out so far."	25	1.00	3.00	2.4000	.70711
"Some people wander aimlessly through life, but I am not one of them."	25	1.00	4.00	2.4000	.81650
"The demands of everyday life often get me down."	25	3.00	5.00	3.8400	.55377
"In many ways I feel disappointed about my achievements in life."	25	3.00	5.00	4.0000	.70711
"Maintaining close relationships has been difficult and frustrating for me."	25	1.00	3.00	2.4800	.65320
"I live life one day at a time and don't really think about the future."	25	3.00	5.00	3.8400	.62450
"In general, I feel I am in charge of the situation in which I live."	25	1.00	3.00	2.1600	.62450
"I am good at managing the responsibilities of daily life."	25	1.00	3.00	2.2000	.64550
"I sometimes feel as if I've done all there is to do in life."	25	3.00	5.00	4.0000	.76376
"For me, life has been a continuous process of learning, changing, and growth."	25	2.00	5.00	3.7600	.83066
"I think it is important to have new experiences that challenge how I think about myself and the world."	25	3.00	5.00	4.1600	.80000
"People would describe me as a giving person, willing to share my time with others."	25	2.00	5.00	3.6800	.85245
"I gave up trying to make big improvements or changes in my life a long time ago"	25	3.00	5.00	4.2000	.76376
I tend to be influenced by people with strong opinions"	25	1.00	5.00	3.5200	1.04563
"I have not experienced many warm and trusting relationships with others."	25	2.00	5.00	3.9200	.75939
"I have confidence in my own opinions, even if they are different from the way most other people think."	25	1.00	5.00	2.1200	1.05357
"I judge myself by what I think is important, not by the values of what others think is important."	25	1.00	4.00	1.9600	.84063
Valid N (listwise)	25				

Most respondents agreed they liked a lot about their personalities but felt disappointed about their achievements as reflected by the values of 4.16 and 4.0 respectively. Likewise, the same sentiment was expressed to the notion that life often got them down as shown by the 3.84 value. The results also show that most respondents did not like how things had turned out in their life as shown by the mean

value of 2.16. Most also showed strong agreement to that they sometimes feel as if they had done all there is to life as shown by the mean value of 4.0. Similarly, most respondents strongly agreed they had stopped making big life decisions as shown by the mean of 4.2. Most agreed that they had not experienced warm and trusting relationships in life as indicated by the mean of 3.92. Most respondents also agreed that they just went through life a day at a time not really thinking about the future as shown by the 3.84 value. Likewise, most respondents agreed that life had been about learning and growth for them as shown by the value of 3.76. Strong disagreement was also shown to the statement that they judged themselves by what they think is important and not by what others think. This is shown in the mean value of 1.96. This feeling is also shown through the mean value of 2.12, a disagreement to respondents having confidence in own opinions even if they are different from others'. Similarly, most respondents disagreed that they were in charge of their life situation they live and managing daily responsibilities as indicated by the values of 2.16 and 2.2 respectively. Most responded agreed to the statement that the respondents tend to be influenced by people with strong opinions reflected in the 3.52 value. However, most respondents acknowledged that it is important to have new experiences that challenge way of thinking as shown by the high mean value of 4.16.

### ***Mindfulness***

Table 18 shows the responses to mindful awareness statements. In general, the responses show a lack of mindfulness awareness attention as reflected in the mean values. The most frequent response with a mean value of 4.12 indicated that respondents strongly agreed that they found themselves not quite listening when they are also doing another task. The respondents also indicated strongly that they found themselves breaking things or spilling things without paying attention as shown in the high mean value of 4.0. The table also shows that they walk quickly without paying attention to their surroundings as reflected in the mean of 4.0 as well. The same value of 4.0 was also reflected in the statement that they forgot a person's name quickly. They also responded and agreed that they expressed emotion without really being conscious of it as shown in the mean value of 3.8. Other strong responses were with regards to rushing activities, getting so focused and doing jobs automatically



without really being aware of it as shown by the mean values of 3.7, 3.88 and 3.44 respectively.

Table 18.

*Analyses of the Male Experimental Group Regarding Mindfulness*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
I could be experiencing some emotion and not be conscious of it until sometime later.	25	2.00	5.00	3.8000	.81650
I break or spill things because of carelessness, not paying attention, or thinking of something else.	25	2.00	5.00	4.0000	.95743
I find it difficult to stay focused on what's happening in the present.	25	3.00	5.00	3.7200	.67823
I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.	25	2.00	5.00	4.0400	.78951
I tend not to notice feelings of physical tension or discomfort until they really grab my attention.	25	3.00	5.00	3.6800	.74833
I forget a person's name almost as soon as I've been told it for the first time.	25	3.00	5.00	4.0000	.70711
It seems I am "running on automatic," without much awareness of what I'm doing	25	2.00	5.00	3.8400	.89815
I rush through activities without being really attentive to them.	25	3.00	5.00	3.7600	.66332
I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there	25	2.00	5.00	3.8800	.78102
I do jobs or tasks automatically, without being aware of what I'm doing.	25	2.00	3.00	3.4400	5.80287
I find myself listening to someone with one ear, doing something else at the same time.	25	3.00	5.00	4.1200	.78102
I drive places on 'automatic pilot' and then wonder why I went there	25	1.00	5.00	3.5200	.91833
I find myself preoccupied with the future or the past.	25	2.00	5.00	3.4400	.71181
I find myself doing things without paying attention.	25	2.00	4.00	2.9600	.73485
I snack without being aware that I'm eating	25	1.00	5.00	3.2800	.84261
Valid N (listwise)	25				

Respondents also agreed that they found themselves driving on autopilot and being preoccupied with past and present as shown by the values of 3.52 and 3.44 respectively. This is also corroborated with how most respondents agreed that they find it hard to stay in the present as reflected by the 3.72 mean value. There were moderate responses to the statement that respondents snack without awareness of what they would be eating as reflected by the mean value of 3.28. However, most respondents agreed that they are mostly running on autopilot without awareness of what is going on as shown by the 3.84 mean value. The respondents also expressed the same sentiments of uncertainty on doing things without paying attention as reflected by the mean value of 2.96.

## Findings Regarding the Pre-Test Analysis of the Experimental Group (Females)

### *Perceived Stress*

Table 19 reflects responses to perceived stress. Most respondents agreed that they had felt nervous and stressed in the last month as reflected in the mean value of 4.04. Most respondents also agreed that they had felt unable to control important things many times in their lives as shown by the mean value of 3.92. They had also been angered because of things outside their control and felt the difficulties were piling too high to overcome many times as reflected in the mean values of 3.68 and 3.56 respectively.

Table 19.

### *Analyses of the Female Experimental Group Regarding Perceived Stress*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
In the last month, how often have you been upset because of something that happened unexpectedly?	25	1.00	5.00	3.4800	1.26227
In the last month, how often have you felt that you were unable to control the important things in your life?	25	2.00	5.00	3.9200	1.03763
In the last month, how often have you felt nervous and "stressed"?	25	3.00	5.00	4.0400	.73485
In the last month, how often have you felt confident about your ability to handle your personal problems?	25	1.00	5.00	3.2400	1.23423
In the last month, how often have you felt that things were going your way?	25	1.00	5.00	3.0800	1.25565
In the last month, how often have you found that you could not cope with all the things that you had to do?	25	1.00	5.00	3.0000	1.19024
In the last month, how often have you been able to control irritations in your life?	25	1.00	5.00	3.0800	1.22202
In the last month, how often have you felt that you were on top of things?	25	1.00	5.00	3.1200	1.33292
In the last month, how often have you been angered because of things that were outside of your control?	25	1.00	5.00	3.6800	1.21518
In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	25	1.00	5.00	3.5600	1.15758
Valid N (listwise)	25				

The same was also expressed regarding that they felt upset at things many times as reflected in the mean value of 3.48. However, most respondents expressed that they sometimes felt they were on top of things and able to control irritations in

their lives as reflected in the mean values of 3.12 and 3.08 respectively. Most respondents also indicated that it was only sometimes that they felt they could not cope with things they had to do and felt things were going their own way as shown by the mean value of 3.00 and 3.08 respectively. Likewise, respondents only indicated they had sometimes been confident to handle their problems as shown by the 3.24 value.

### ***Resilience***

Table 20 shows responses to resilience. The highest frequency was a mean value of 4.0 where the respondents agreed that they would look forward to show improvement in grades. Most respondents also agreed that they would work harder as reflected by the mean value of 3.92. They also showed the same sentiment as shown by the mean value of 3.96 where they agreed that they would set own goals for achievements. Most respondents also showed agreement to different statements with a mean value of 3.88. This is with regards to the notion that they would try to think of new solutions, use the situation to improve themselves, give themselves encouragement and also think about strengths and weaknesses to help themselves work better. Most respondents also indicated that they would stop themselves from thinking negative thoughts as reflected by the mean value of 3.96.

Most respondents also agreed that they would probably get annoyed and think their chances of getting their jobs would be low and this was reflected in the mean values of 3.92 and 3.84 respectively. However, most respondents could neither agree nor disagree to the notion that they would see the situation as temporary as reflected by the mean value of 3.12. They also expressed the same sentiment towards that they would not accept feedback from tutors and would blame the tutors as shown by the mean values of 3.32 and 2.96 respectively. Most respondents also showed indifference to the notion that they would seek help from family and friends as shown by the mean value of 2.72 or that they would just give up as reflected in the mean value of 2.88. Most respondents however, agreed that they would start to monitor their achievements and their past successes to motivate themselves as shown by the mean value of 3.76 for both statements.

Table 20.

*Analyses of the Female Experimental Group Regarding Resilience***Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
I would work harder	25	1.00	5.00	3.9200	1.03763
I would keep trying	25	2.00	5.00	3.8000	.86603
I would use the feedback to improve my work	25	1.00	5.00	3.2000	1.11803
I would just give up	25	1.00	5.00	2.8800	1.33292
I would try to think of new solutions	25	1.00	5.00	3.8800	1.16619
I would change my career plans.	25	1.00	5.00	3.2000	1.35401
I would use the situation to motivate myself	25	2.00	5.00	3.8800	.97125
I would not change my long-term goals and ambitions	25	1.00	5.00	3.0000	1.25831
I would see the situation as a challenge	25	1.00	5.00	3.7600	1.30000
I would look forward to showing that I can improve my grades	25	1.00	5.00	4.0000	1.15470
I would see the situation as temporary	25	1.00	5.00	3.1200	1.45258
I would do my best to stop thinking negative thoughts	25	1.00	5.00	3.9600	1.36870
I would blame the tutor	25	1.00	5.00	2.9600	1.39881
I would not accept the tutors' feedback	25	1.00	5.00	3.3200	1.28193
I would try to think more about my strengths and weaknesses to help me work better	25	1.00	5.00	3.8800	1.05357
I would give myself encouragement	25	1.00	5.00	3.8800	1.26886
I would seek encouragement from my family and friends	25	1.00	5.00	2.7200	1.51438
I would try different ways to study	25	1.00	5.00	3.4800	1.41774
I would set my own goals for achievement	25	1.00	5.00	3.9600	1.17189
I would seek help from my tutors	25	1.00	5.00	3.4400	1.52971
I would start to monitor and evaluate my achievements and effort	25	1.00	5.00	3.7600	1.12842
I would start to self-impose rewards and punishments depending on my performance	25	1.00	5.00	3.4400	1.55671
I would use my past successes to help motivate myself	25	1.00	5.00	3.7600	1.42244
I would feel like everything was ruined and was going wrong	25	1.00	5.00	3.2800	1.69607
I would begin to think my chances of success at university were poor	25	1.00	5.00	3.3600	1.55134
I would probably get depressed	25	1.00	5.00	3.8000	1.41421
I would be very disappointed	25	1.00	5.00	3.4400	1.60935
I would begin to think my chances of getting the job I want were poor	25	1.00	5.00	3.8400	1.51877
I would probably get annoyed	25	1.00	5.00	3.9200	1.38203
I would stop myself from panicking	25	1.00	5.00	3.6000	1.55456
Valid N (listwise)	25				

**Well-Being**

Table 21 shows the responses to resilience. Most respondents strongly agreed that they have confidence in their own opinions as reflected by the mean value of 4.32. Most also agreed that they think it is important to have new experiences and challenges in life as reflected in the mean value of 4.00.

Table 21.

*Analyses of the Female Experimental Group Regarding Well-Being*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
"I like most parts of my personality."	25	1.00	5.00	3.7600	1.30000
"When I look at the story of my life, I am pleased with how things have turned out so far."	25	2.00	5.00	3.8000	.95743
"Some people wander aimlessly through life, but I am not one of them."	25	1.00	5.00	3.8400	1.10604
"The demands of everyday life often get me down."	25	1.00	5.00	3.5200	1.15902
"In many ways I feel disappointed about my achievements in life."	25	1.00	5.00	3.1200	1.73973
"Maintaining close relationships has been difficult and frustrating for me."	25	1.00	5.00	3.0000	1.19024
"I live life one day at a time and don't really think about the future."	25	1.00	5.00	2.4800	1.55778
"In general, I feel I am in charge of the situation in which I live."	25	1.00	5.00	3.0800	1.65630
"I am good at managing the responsibilities of daily life."	25	1.00	5.00	3.7200	1.36991
"I sometimes feel as if I've done all there is to do in life."	25	1.00	5.00	2.7200	1.27541
"For me, life has been a continuous process of learning, changing, and growth."	25	1.00	5.00	3.7200	1.24231
"I think it is important to have new experiences that challenge how I think about myself and the world."	25	1.00	5.00	4.0000	1.25831
"People would describe me as a giving person, willing to share my time with others."	25	1.00	5.00	3.7200	1.20830
"I gave up trying to make big improvements or changes in my life a long time ago"	25	1.00	5.00	3.3200	1.46401
"I tend to be influenced by people with strong opinions"	25	1.00	5.00	3.1600	1.31276
"I have not experienced many warm and trusting relationships with others."	25	1.00	5.00	3.1600	1.24766
"I have confidence in my own opinions, even if they are different from the way most other people think."	25	2.00	5.00	4.3200	1.10755
"I judge myself by what I think is important, not by the values of what others think is important."	25	2.00	5.00	3.6800	1.18040
Valid N (listwise)	25				

Most respondents agreed that they judged themselves by what they think is important not what others think as shown by the mean value of 3.68. Most respondents however, could not agree or disagree to the notion that they tend to be influenced by people with strong opinions and have not had many warm and trusting relationships as reflected by the mean value of 3.16 for both statements respectively. They also expressed indifference to the notion that they gave up trying to make big improvements or changes in their lives as reflected by the mean value of 3.32. Most respondents agreed that they like most parts of their personality as shown by the mean value of 3.76. Most respondents agreed that they looked at their life and were

pleased at how things had turned out as shown by the 3.8. Most respondents also agreed that people wandered aimlessly through life but not them as reflected by the mean value of 3.84. The participants agreed that they felt that they were good at managing their daily life as reflected by the mean value of 3.52.

### ***Mindfulness***

The responses above reflect the respondent's views with regards to mindfulness awareness attention (Table 22). Most respondents disagreed that they snacked without being aware of what they were eating as shown by the mean value of 2.6. Most respondents remained neutral over the notion that they found themselves doing things without paying attention or preoccupied with the future as reflected in the mean values of 3.08 and 3.4 respectively.

Table 22.

#### *Analyses of the Female Experimental Group Regarding Mindfulness*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
I could be experiencing some emotion and not be conscious of it until sometime later.	25	1.00	5.00	3.5600	1.29357
I break or spill things because of carelessness, not paying attention, or thinking of something else.	25	1.00	5.00	3.7200	1.51438
I find it difficult to stay focused on what's happening in the present.	25	2.00	5.00	3.5600	.86987
I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.	25	3.00	5.00	4.2000	.70711
I tend not to notice feelings of physical tension or discomfort until they really grab my attention.	25	1.00	5.00	4.0400	1.05987
I forget a person's name almost as soon as I've been told it for the first time.	25	1.00	5.00	2.9600	1.45717
It seems I am "running on automatic," without much awareness of what I'm doing	25	1.00	5.00	3.2000	1.41421
I rush through activities without being really attentive to them.	25	2.00	5.00	3.9600	1.01980
I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there	25	2.00	5.00	4.1200	.78102
I do jobs or tasks automatically, without being aware of what I'm doing.	25	1.00	5.00	3.7600	1.20000
I find myself listening to someone with one ear, doing something else at the same time.	25	1.00	5.00	3.4400	1.44568
I drive places on 'automatic pilot' and then wonder why I went there	25	1.00	5.00	3.5200	1.55778
I find myself preoccupied with the future or the past.	25	1.00	5.00	3.4000	1.47196
I find myself doing things without paying attention.	25	1.00	5.00	3.0800	1.41185
I snack without being aware that I'm eating	25	1.00	5.00	2.6000	1.32288
Valid N (listwise)	25				

Most respondents also agreed that they found it difficult to stay focused and spilled or broke items without being fully aware of it as reflected in the mean values of 3.56 and 3.72 respectively. Most respondents agreed that they found themselves driving on auto-pilot as reflected in the mean value of 3.53. Most respondents also agreed that they found themselves expressing emotion without consciousness as reflected in the mean value of 3.56. Most respondents also agreed that they listen with one ear whilst doing something else as shown in the mean value of 3.44. Most respondents also agreed that they do jobs on autopilot without awareness show by the mean value of 3.76; and that they got so focused on goals and lost touch with reality as reflected in the mean value of 4.12. The same sentiment was also expressed with regards to the statement that the respondents rushed through activities and reflected in the mean value of 3.96. However, most respondents could neither agree nor disagree to the notion that they run on autopilot and to that they forget a person's name soon after hearing of it as reflected in the mean values of 3.2 and 2.96 respectively. Most respondents agreed that they tended not no notice tension or physical discomfort and that they walk quickly without being aware of their surroundings as reflected in the mean values of 4.04 and 4.2 respectively.

### **Findings Regarding the Post-Test Analysis of the Experimental Group (Females)**

#### ***Perceived Stress***

Table 23 reflects the responses towards perceived stress. Most respondents indicated that they had often felt confident about their ability to handle own problems as reflected by the mean value of 3.68. The same sentiment was also expressed with regards to the notion that they felt they were on top of things as reflected in the mean value of 3.56. Most respondents also indicated that they now felt that they could handle irritations in life often as shown by the mean value of 3.84. However, most respondents indicated that they sometimes felt angered because of things outside their control as reflected by the mean value of 2.96. They also expressed the same sentiments to the notion that they felt nervous and stressed as reflected by the mean value of 2.92. Most respondents again expressed the same sentiment with regards to feeling that things were going their way as shown by the mean value of 3.0. The respondents also indicated that sometimes they felt difficulties were piling up and they could not overcome them as reflected by the mean value of 2.36. Most of the

respondents also indicated that they had only sometimes felt upset by things that happened unexpectedly as reflected in the mean value of 3.04. Most respondents however, could not agree or disagree that they felt as if they had done all there was to life as shown by the mean value of 2.72 and the same sentiment was also expressed at the notion that they felt disappointed by their achievements in life.

Table 23.

*Analyses of the Female Experimental Group Regarding Perceived Stress*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
In the last month, how often have you been upset because of something that happened unexpectedly?	25	1.00	5.00	3.0400	1.09848
In the last month, how often have you felt that you were unable to control the important things in your life?	25	1.00	5.00	2.4400	1.12101
In the last month, how often have you felt nervous and "stressed"?	25	1.00	5.00	2.9200	1.49778
In the last month, how often have you felt confident about your ability to handle your personal problems?	25	2.00	5.00	3.6800	1.10755
In the last month, how often have you felt that things were going your way?	25	1.00	5.00	3.0000	1.08012
In the last month, how often have you found that you could not cope with all the things that you had to do?	25	1.00	5.00	2.4800	1.15902
In the last month, how often have you been able to control irritations in your life?	25	1.00	5.00	3.8400	1.28062
In the last month, how often have you felt that you were on top of things?	25	1.00	5.00	3.5600	1.29357
In the last month, how often have you been angered because of things that were outside of your control?	25	1.00	5.00	2.9600	1.30639
In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	25	1.00	5.00	2.3600	1.31909
Valid N (listwise)	25				

***Resilience***

Table 24 shows the responses to resilience. Most of the respondents agreed that they would probably get annoyed with what happened and this is reflected in the mean value of 3.76. Most respondents also agreed they would seek help from tutors as reflected by the mean value of 3.68. Most respondents also showed that they would stop themselves from panicking as shown 3.64. Most respondents neither agreed nor disagreed to the notion that they would monitor and evaluate their achievements as reflected by the mean value of 3.28. The same sentiment was also expressed to the statement that the respondents would think their chances of getting a job were poor and reflected by the mean value of 3.12.



Table 24.

*Analyses of the Female Experimental Group Regarding Resilience*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
I would work harder	25	1.00	5.00	3.6800	1.14455
I would keep trying	25	1.00	5.00	4.0000	.95743
I would use the feedback to improve my work	25	1.00	5.00	3.4400	1.32539
I would just give up	25	1.00	5.00	2.8000	1.75594
I would try to think of new solutions	25	1.00	5.00	3.6400	1.11355
I would change my career plans.	25	1.00	5.00	3.4400	1.44568
I would use the situation to motivate myself	25	1.00	5.00	4.0400	.97809
I would not change my long-term goals and ambitions	25	1.00	5.00	3.6000	1.35401
I would see the situation as a challenge	25	1.00	5.00	3.8000	1.04083
I would look forward to showing that I can improve my grades	25	3.00	5.00	4.6000	.64550
I would see the situation as temporary	25	1.00	5.00	3.8400	1.31276
I would do my best to stop thinking negative thoughts	25	2.00	5.00	4.1200	.78102
I would blame the tutor	25	1.00	5.00	3.7600	1.12842
I would not accept the tutors' feedback	25	2.00	5.00	3.7600	.83066
I would try to think more about my strengths and weaknesses to help me work better	25	1.00	5.00	3.9600	1.42829
I would give myself encouragement	25	1.00	5.00	3.8800	1.39403
I would seek encouragement from my family and friends	25	1.00	5.00	3.3600	1.18603
I would try different ways to study	25	1.00	5.00	3.7600	1.20000
I would set my own goals for achievement	25	3.00	5.00	4.5600	.71181
I would seek help from my tutors	25	1.00	5.00	3.6800	1.31403
I would start to monitor and evaluate my achievements and effort	25	1.00	5.00	3.2800	1.30767
I would start to self-impose rewards and punishments depending on my performance	25	1.00	5.00	3.3200	1.37598
I would use my past successes to help motivate myself	25	1.00	5.00	3.4000	1.44338
I would feel like everything was ruined and was going wrong	25	1.00	5.00	2.6800	1.57374
I would begin to think my chances of success at university were poor	25	1.00	5.00	2.6400	1.55134
I would probably get depressed	25	1.00	5.00	2.9200	1.22202
I would be very disappointed	25	1.00	5.00	3.0000	1.44338
I would begin to think my chances of getting the job I want were poor	25	1.00	5.00	3.1200	1.66633
I would probably get annoyed	25	1.00	5.00	3.7600	1.42244
I would stop myself from panicking	25	1.00	5.00	3.6400	1.49666
Valid N (listwise)	25				

Most respondents strongly agreed that they looked forward to showing that they could improve their grades as reflected in the mean value of 4.6. Most respondents also agreed that they would improve the situation and that they would keep trying as reflected in the mean value of 4.04 and 4.00. They also agreed that they would stop thinking negative thoughts as indicated by the mean value of 4.12. Most respondents agreed that they would work harder and that they would use

feedback to improve their work. This was reflected in the mean value of 3.68 and 3.44. Most respondents strongly agreed that they would set own goals for achievement as reflected in the mean value of 4.56. They also agreed that they would find different ways to study as reflected in the mean value of 3.76. However, most respondents agreed that they would blame the tutor and would not accept the tutor's feedback as shown by the mean value of 3.76. Most respondents could neither agree nor disagree that they would feel everything was ruined and going wrong as shown in the mean value of 2.68. Most respondents showed indifference that they would think their chances of success were poor as reflected in the mean value of 2.64. Most respondents also indicated that they would look at their weaknesses and strengths as reflected by the mean value of 2.6. Most respondents also indicated that they would see the situation as temporary as reflected in the mean value of 2.84.

### ***Well-Being***

Table 25 shows responses with regards to well-being. Most respondents strongly agreed that they judged themselves by what is important not what others think as reflected in the mean value of 4.0. They also agreed that they are good at managing responsibilities of daily life as reflected by the mean of 4.08 and agreed that life has been a process of learning changing and growth as revealed by the mean value of 4.04. Most respondents agreed that they liked most parts of their personality and this is reflected in the mean value of 4.0. The same mean value was also reflected towards the notion that most people wander aimlessly through life but not the respondents. In addition, most respondents also agreed that they were pleased at how things turned out when they looked at their lives as evidenced by the mean value of 3.92. Most respondents also agreed that they have confidence in their own opinions even if they are different from what others and this is reflected in the mean value of 3.84. Most of the respondents disagreed that they felt disappointments about their life achievements as reflected by the mean value of 2.52. Most respondents also disagreed that they found maintaining relationships frustrating and this is shown in the mean value of 2.6. However, most respondents could neither agree nor disagree to the notion that they lived life a day at a time and do not think about the future. The same sentiment was also expressed towards the idea that life got them down often and this is reflected in the mean value of 2.88.

Table 25.

*Analyses of the Female Experimental Group Regarding Well-Being*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
"I like most parts of my personality."	25	1.00	5.00	4.0000	1.19024
"When I look at the story of my life, I am pleased with how things have turned out so far."	25	2.00	5.00	3.9200	.99666
"Some people wander aimlessly through life, but I am not one of them."	25	1.00	11.00	4.0000	1.82574
"The demands of everyday life often get me down."	25	1.00	5.00	2.8800	1.23558
"In many ways I feel disappointed about my achievements in life."	25	1.00	4.00	2.5200	1.00499
"Maintaining close relationships has been difficult and frustrating for me."	25	1.00	5.00	2.6000	1.32288
"I live life one day at a time and don't really think about the future."	25	1.00	5.00	2.7200	1.36991
"In general, I feel I am in charge of the situation in which I live."	25	1.00	4.00	2.6400	1.15036
"I am good at managing the responsibilities of daily life."	25	1.00	5.00	4.0800	1.18743
"I sometimes feel as if I've done all there is to do in life."	25	1.00	5.00	3.3200	1.21518
"For me, life has been a continuous process of learning, changing, and growth."	25	1.00	5.00	4.0400	1.13578
"I think it is important to have new experiences that challenge how I think about myself and the world."	25	2.00	5.00	3.9600	1.05987
"People would describe me as a giving person, willing to share my time with others."	25	1.00	5.00	3.1600	1.14310
"I gave up trying to make big improvements or changes in my life a long time ago"	25	1.00	5.00	3.2000	1.58114
"I tend to be influenced by people with strong opinions"	25	1.00	5.00	3.2400	1.33167
"I have not experienced many warm and trusting relationships with others."	25	1.00	5.00	3.3600	1.28712
"I have confidence in my own opinions, even if they are different from the way most other people think."	25	1.00	5.00	3.8400	1.21381
"I judge myself by what I think is important, not by the values of what others think is important."	25	1.00	5.00	4.0000	1.22474
Valid N (listwise)	25				

***Mindfulness***

Table 26 shows responses to mindfulness awareness attention. The table reveals that the lowest frequency was a strong disagreement in which most respondents strongly disagreed that they snacked without being aware of it as reflected in the mean value of 1.72. Most respondents also disagreed that they do jobs or tasks automatically without awareness and that they found themselves doing things without being aware of it as reflected in the mean values of 1.84 and 1.96 respectively.

Table 26.

*Analyses of the Female Experimental Group Regarding Mindfulness*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
I could be experiencing some emotion and not be conscious of it until sometime later.	25	1.00	5.00	3.0400	1.27410
I break or spill things because of carelessness, not paying attention, or thinking of something else.	25	1.00	5.00	3.2000	1.44338
I find it difficult to stay focused on what's happening in the present.	25	1.00	5.00	2.6000	1.15470
I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.	25	1.00	4.00	2.1600	.89815
I tend not to notice feelings of physical tension or discomfort until they really grab my attention.	25	1.00	4.00	2.4800	.82260
I forget a person's name almost as soon as I've been told it for the first time.	25	1.00	4.00	2.0800	.70238
It seems I am "running on automatic," without much awareness of what I'm doing	25	1.00	3.00	2.0800	.64031
I rush through activities without being really attentive to them.	25	1.00	4.00	2.2400	.66332
I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there	25	1.00	4.00	2.3200	.94516
I do jobs or tasks automatically, without being aware of what I'm doing.	25	1.00	5.00	1.8400	.98658
I find myself listening to someone with one ear, doing something else at the same time.	25	1.00	4.00	2.0800	.90921
I drive places on 'automatic pilot' and then wonder why I went there	25	1.00	5.00	2.1200	1.26886
I find myself preoccupied with the future or the past.	25	1.00	4.00	2.0800	.90921
I find myself doing things without paying attention.	25	1.00	5.00	1.9600	1.17189
I snack without being aware that I'm eating	25	1.00	5.00	1.7200	1.24231
Valid N (listwise)	25				

Respondents also disagreed that they found themselves preoccupied about the future as reflected in the mean value of 2.08 whilst the same mean value and sentiment was also expressed towards the notion that respondents found themselves listening with one ear whilst doing something else. Most respondents also showed disagreements towards that they found it difficult to stay focused on what is happening in the present as reflected in the mean value of 2.6. Most also disagreed that they walked quickly without paying attention as evidenced by the mean value of 2.1. Most respondents disagreed that they forgot a person's name and did things on autopilot as reflected in the mean value of 2.08 for both statements. They also disagreed that they drove on autopilot, rushed through activities and become too focused on the goal they forgot reality as shown by the mean values of 2.12, 2.24 and 2.32 respectively.

## Findings Regarding the Pre-Test Analysis of the Control Group (Females)

### *Perceived Stress*

Table 27 shows the responses in relation to perceived stress. The table shows that generally the perceived stress levels were high. The most frequent response with a mean value of 4.0 reflects that respondents strongly agreed that most frequently felt nervous and stressed. The table also shows that respondents felt they were unable to control things happening in their lives and been angered because of it and got upset as reflected by the mean values of 3.6, 3.52 and 3.64 respectively. The respondents also indicated strong agreement that they were upset by things that happened unexpectedly as shown by the moderate mean of 3.6. They also revealed that they had felt like they were on top of things only a few times as reflected by the mean value of 2.8. The responses also show that there were moderate responses with regards to respondents feeling that often difficulties were piling up so much they could not overcome as reflected in the mean value of 3.52.

Table 27.

### *Analyses of the Female Control Group Regarding Perceived Stress*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
In the last month, how often have you been upset because of something that happened unexpectedly?	25	1.00	5.00	3.6400	1.28712
In the last month, how often have you felt that you were unable to control the important things in your life?	25	1.00	5.00	3.6000	1.11803
In the last month, how often have you felt nervous and "stressed"?	25	2.00	5.00	4.0000	.91287
In the last month, how often have you felt confident about your ability to handle your personal problems?	25	1.00	5.00	3.4800	1.19443
In the last month, how often have you felt that things were going your way?	25	1.00	5.00	3.2000	1.29099
In the last month, how often have you found that you could not cope with all the things that you had to do?	25	1.00	5.00	3.0800	1.03763
In the last month, how often have you been able to control irritations in your life?	25	1.00	5.00	3.0000	1.35401
In the last month, how often have you felt that you were on top of things?	25	1.00	5.00	2.8000	1.22474
In the last month, how often have you been angered because of things that were outside of your control?	25	1.00	5.00	3.5200	1.12250
In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	25	1.00	5.00	3.4000	1.44338
Valid N (listwise)	25				

Most respondents felt that often they felt confident about their ability to handle their problems as shown by the mean of 3.48. Some were not so adversely affected as shown by the moderate response towards the notion that they felt things were going their way which had a high frequency as shown by the mean value of 3.2. They felt that they had been able to control irritations in their lives only sometimes.

### ***Resilience***

Table 28 shows responses to resilience. In general, there were agreements to the statements recorded. The highest frequency was with regards to respondents looking forward to showing that they could improve their grades as reflected in the mean of 4.16, which shows a strong agreement. The other strong agreement was a 4.08 mean value regarding that the respondents felt like they would think more about their strengths and weaknesses in a bid to improve and that they would do their best to stop negative thoughts. Others also agreed and indicated that they would work harder, as shown in the mean value of 3.88. Respondents also showed agreements to the statements that they would try to think of new solutions, give self-encouragement and motivate themselves all indicate by the mean value of 3.80. However, other respondents strongly felt and agreed that they would not accept the tutor's feedback as shown by the high mean value of 3.72. Others also felt like everything was ruined and their chances of university were poor, get depressed annoyed and disappointed. These commanded moderate responses as shown by the mean values of 3.32, 3.12, 3.4, 3.24 and 3.2 respectively. Similar sentiments were expressed by most respondents who were neutral on the notion that they would stop panicking as shown by the 2.76, they would think their chances of getting a job was poor as shown by the value of 3.24. Others also indicated agreements and felt that they would try new ways of study, set own goals for study or seek help from tutors. This is reflected in the mean values of 3.48, 3.52 and 3.28 respectively. Most respondents also agreed that they would change their career plans as shown by the 3.56. Most respondents were indifferent to the idea that they would impose reward and punishment systems on themselves as shown by the 3.32 value. A moderate response of 3.0 reflected that the respondents neither agreed nor disagreed that they would regard the situation as a challenge. Most respondents showed resilience on the idea that they would just give up and disagreed as reflected in the 2.12 mean value. Likewise, most respondents

also showed that they disagreed with the idea they would change their long term goals based on this as reflected in the 2.2 value.

Table 28.

*Analyses of the Female Control Group Regarding Resilience*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
I would work harder	25	1.00	5.00	3.9600	1.01980
I would keep trying	25	1.00	5.00	3.8800	1.12990
I would use the feedback to improve my work	25	1.00	5.00	3.3200	1.21518
I would just give up	25	1.00	5.00	2.1200	1.36382
I would try to think of new solutions	25	1.00	5.00	3.8000	1.19024
I would change my career plans.	25	1.00	5.00	3.5600	1.26095
I would use the situation to motivate myself	25	1.00	5.00	3.8000	1.22474
I would not change my long-term goals and ambitions	25	1.00	5.00	2.2000	1.29099
I would see the situation as a challenge	25	1.00	5.00	3.0000	1.35401
I would look forward to showing that I can improve my grades	25	1.00	5.00	4.1600	1.02794
I would see the situation as temporary	25	1.00	5.00	2.8800	1.36382
I would do my best to stop thinking negative thoughts	25	1.00	5.00	4.0800	1.28841
I would blame the tutor	25	1.00	5.00	3.3600	1.41067
I would not accept the tutors' feedback	25	2.00	5.00	3.7200	1.10000
I would try to think more about my strengths and weaknesses to help me work better	25	2.00	5.00	4.0800	1.03763
I would give myself encouragement	25	1.00	5.00	3.8000	1.44338
I would seek encouragement from my family and friends	25	1.00	5.00	3.1200	1.71561
I would try different ways to study	25	1.00	5.00	3.4800	1.47535
I would set my own goals for achievement	25	1.00	5.00	3.5200	1.47535
I would seek help from my tutors	25	1.00	5.00	3.2800	1.54164
I would start to monitor and evaluate my achievements and effort	25	1.00	5.00	3.2000	1.38444
I would start to self-impose rewards and punishments depending on my performance	25	1.00	5.00	3.3200	1.34536
I would use my past successes to help motivate myself	25	1.00	5.00	3.1200	1.48099
I would feel like everything was ruined and was going wrong	25	1.00	5.00	3.3200	1.67631
I would begin to think my chances of success at university were poor	25	1.00	5.00	3.1200	1.50886
I would probably get depressed	25	1.00	5.00	3.4000	1.55456
I would be very disappointed	25	1.00	5.00	3.2400	1.45144
I would begin to think my chances of getting the job I want were poor	25	1.00	5.00	3.2400	1.64012
I would probably get annoyed	25	1.00	5.00	3.2000	1.50000
I would stop myself from panicking	25	1.00	5.00	2.7600	1.36260
Valid N (listwise)	25				

**Well-Being**

Table 29 shows responses to well-being. In general, the responses leaned towards agreements and strong agreements. The table shows that respondents

strongly agreed that they judged themselves by what they felt was important, not the values of others opinions and had great confidence in their own opinions as shown by the high mean values of 4.24 and 4.2 respectively. Other respondents agreed that they liked most parts of their personality as indicated by the mean value of 4.12 whilst others agreed that they did not wander aimlessly through life as shown by the mean value 4.04. Other respondents indicated that they were influenced by others' opinions whilst many agreed that it is important to experience new things and challenges as reflected in the mean value of 3.80.

Table 29.

*Analyses of the Female Control Group Regarding Well-Being*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
"I like most parts of my personality."	25	1.00	5.00	4.1200	1.26886
"When I look at the story of my life, I am pleased with how things have turned out so far."	25	1.00	5.00	3.5200	1.41774
"Some people wander aimlessly through life, but I am not one of them."	25	2.00	5.00	4.0400	.93452
"The demands of everyday life often get me down."	25	1.00	5.00	3.3200	1.21518
"In many ways I feel disappointed about my achievements in life."	25	1.00	5.00	2.8000	1.41421
"Maintaining close relationships has been difficult and frustrating for me."	25	1.00	5.00	2.8400	1.40475
"I live life one day at a time and don't really think about the future."	25	1.00	5.00	2.3200	1.24900
"In general, I feel I am in charge of the situation in which I live."	25	1.00	5.00	3.1600	1.46287
"I am good at managing the responsibilities of daily life."	25	1.00	5.00	3.4800	1.15902
"I sometimes feel as if I've done all there is to do in life."	25	1.00	5.00	3.3600	1.31909
"For me, life has been a continuous process of learning, changing, and growth."	25	1.00	5.00	3.4000	1.41421
"I think it is important to have new experiences that challenge how I think about myself and the world."	25	1.00	5.00	3.8000	1.38444
"People would describe me as a giving person, willing to share my time with others."	25	2.00	5.00	3.6400	1.07548
"I gave up trying to make big improvements or changes in my life a long time ago"	25	1.00	5.00	3.1600	1.54596
I tend to be influenced by people with strong opinions"	25	1.00	5.00	3.8000	1.32288
"I have not experienced many warm and trusting relationships with others."	25	1.00	5.00	3.2000	1.68325
"I have confidence in my own opinions, even if they are different from the way most other people think."	25	1.00	5.00	4.2000	1.29099
"I judge myself by what I think is important, not by the values of what others think is important."	25	1.00	5.00	4.2400	1.16476
Valid N (listwise)	25				



Other notions to which respondents rendered agreement were that they felt pleased with how things had turned out in their lives, they were good at managing responsibilities in their life, they were giving people, willing to share. This is reflected in the mean values of 3.52, 3.48, and 3.64 respectively. Likewise, respondents agreed that life had been a continuous learning process as shown by the value of 3.4. However, indifferent responses can also be observed. Respondents neither agreed nor disagreed to the notion that the demands of life often get them down and this is reflected in the mean value of 3.32. The same can be observed on the notion that the respondents gave up trying to make improvements and changes in their lives as shown by the mean value of 3.16. The same reaction was observed to the statement that the respondents had not experienced many warm and trusting relationships as shown by the mean value of 3.2. They also echoed that they neither agreed nor disagreed on the notion that maintaining relationships had been difficult and frustrating for them as shown by the mean value of 2.84. The respondents disagreed that they lived their lives one day at a time and did not think of the future as shown in the mean value of 2.32.

### ***Mindfulness***

Table 30 shows responses pertaining to mindfulness awareness attention. In general, the responses ranged from neutral to agreement. Respondents neither agreed nor disagreed on the notion that they snack without being aware of it as shown by the mean value of 2.72. The same was also reflected in the notion that the respondents found themselves doing things without paying attention as shown by the mean value of 3.2. They were also indifferent to the notion that they spilled things because of carelessness without paying attention and forgot a person's name after being told. Both of the statements had a mean value of 3.16. Agreements were shown in the statement that sometimes they could experience emotion and not be aware of it; they tended to walk quickly without regard to their surroundings, seem to run on automatic and rush through activities, all without being aware. This agreement is reflected in the mean values of 3.6, 3.88, 3.8 and 3.88 respectively. The respondents also showed agreement to the statement that they found it difficult to stay focused in the present as shown by the mean value of 3.72 and tend not to notice physical discomfort as shown by the mean value of 3.44. The respondents also indicated that

they got preoccupied, drove on auto-pilot and do not really listen as shown by the mean values of 3.76, 3.68 and 3.48 respectively.

Table 30.

*Analyses of the Female Control Group Regarding Mindfulness*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
I could be experiencing some emotion and not be conscious of it until sometime later.	25	1.00	5.00	3.6000	1.22474
I break or spill things because of carelessness, not paying attention, or thinking of something else.	25	1.00	5.00	3.1600	1.37477
I find it difficult to stay focused on what's happening in the present.	25	2.00	5.00	3.7200	.97980
I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.	25	1.00	5.00	3.8800	1.36382
I tend not to notice feelings of physical tension or discomfort until they really grab my attention.	25	1.00	5.00	3.4400	1.26095
I forget a person's name almost as soon as I've been told it for the first time.	25	1.00	5.00	3.1600	1.46287
It seems I am "running on automatic," without much awareness of what I'm doing	25	1.00	5.00	3.8000	1.29099
I rush through activities without being really attentive to them.	25	2.00	5.00	3.8800	1.12990
I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there	25	2.00	5.00	3.7200	1.17331
I do jobs or tasks automatically, without being aware of what I'm doing.	25	1.00	5.00	3.4800	1.41774
I find myself listening to someone with one ear, doing something else at the same time.	25	1.00	5.00	3.4800	1.22882
I drive places on 'automatic pilot' and then wonder why I went there	25	1.00	5.00	3.6800	1.31403
I find myself preoccupied with the future or the past.	25	1.00	5.00	3.7600	1.39284
I find myself doing things without paying attention.	25	1.00	5.00	3.2000	1.50000
I snack without being aware that I'm eating	25	1.00	5.00	2.7200	1.62070
Valid N (listwise)	25				

**Findings Regarding the Post-Test Analysis of the Control Group (Females)**

*Perceived Stress*

The responses below show respondents' responses to perceived stress (Table 31). The responses ranged from sometimes to very often. The least response where respondents were indifferent, was a mean value of 2.8 which related to how respondents said they felt they were on top of things. The respondents also showed that they felt nervous and stressed very often as showed by the mean value of 4.0. The respondents also indicated that they were most often upset over things that happened unexpectedly as reflected in the mean value of 3.64.

Table 31.

*Analyses of the Female Control Group Regarding Perceived Stress*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
In the last month, how often have you been upset because of something that happened unexpectedly?	25	1.00	5.00	3.6400	1.28712
In the last month, how often have you felt that you were unable to control the important things in your life?	25	1.00	5.00	3.6000	1.11803
In the last month, how often have you felt nervous and "stressed"?	25	2.00	5.00	4.0000	.91287
In the last month, how often have you felt confident about your ability to handle your personal problems?	25	1.00	5.00	3.4800	1.19443
In the last month, how often have you felt that things were going your way?	25	1.00	5.00	3.2000	1.29099
In the last month, how often have you found that you could not cope with all the things that you had to do?	25	1.00	5.00	3.0800	1.03763
In the last month, how often have you been able to control irritations in your life?	25	1.00	5.00	3.0000	1.35401
In the last month, how often have you felt that you were on top of things?	25	1.00	5.00	2.8000	1.22474
In the last month, how often have you been angered because of things that were outside of your control?	25	1.00	5.00	3.5200	1.12250
In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	25	1.00	5.00	3.4000	1.44338
Valid N (listwise)	25				

Many respondents also agreed that they were unable to control important things from happening as reflected in the mean value of 3.6. The respondents also revealed that they had been angered about things out of their control quite often as shown by the mean value of 3.52. They also showed that they felt like they were on top of things seldom as reflected by the mean value of 2.8. Most respondents indicated that sometimes they felt overwhelmed and piling up and could not cope with what they had to do as shown by the value of 3.4 and 3.08 respectively. Similar sentiments were expressed on the idea that things were going their way as shown by the value of 3.2.

***Resilience***

Table 32 shows the responses to resilience. Responses show that the highest frequency was an agreement that the respondents would look forward to showing that they would improve their grades to the given question as reflected by the mean value of 3.76. They also agreed that they would keep trying as shown by the mean value of 3.64.

Table 32.

*Analyses of the Female Control Group Regarding Resilience*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
I would work harder	25	1.00	5.00	3.4000	1.32288
I would keep trying	25	1.00	5.00	3.6400	1.15036
I would use the feedback to improve my work	25	1.00	5.00	3.4000	1.44338
I would just give up	25	1.00	5.00	2.2000	1.25831
I would try to think of new solutions	25	1.00	5.00	3.3200	1.02956
I would change my career plans.	25	1.00	5.00	3.0400	1.33791
I would use the situation to motivate myself	25	1.00	5.00	3.4000	1.19024
I would not change my long-term goals and ambitions	25	1.00	5.00	3.2000	1.11803
I would see the situation as a challenge	25	2.00	5.00	3.5200	1.19443
I would look forward to showing that I can improve my grades	25	1.00	5.00	3.7600	1.36260
I would see the situation as temporary	25	1.00	5.00	3.2000	1.50000
I would do my best to stop thinking negative thoughts	25	1.00	5.00	3.2800	1.40000
I would blame the tutor	25	1.00	5.00	2.6800	1.31403
I would not accept the tutors' feedback	25	1.00	5.00	3.2800	1.30767
I would try to think more about my strengths and weaknesses to help me work better	25	1.00	5.00	3.0000	1.47196
I would give myself encouragement	25	1.00	5.00	3.0800	1.57903
I would seek encouragement from my family and friends	25	1.00	5.00	2.5600	1.35647
I would try different ways to study	25	1.00	5.00	3.1200	1.16619
I would set my own goals for achievement	25	1.00	5.00	3.4000	1.44338
I would seek help from my tutors	25	1.00	5.00	3.0400	1.39881
I would start to monitor and evaluate my achievements and effort	25	1.00	5.00	2.7200	1.36991
I would start to self-impose rewards and punishments depending on my performance	25	1.00	5.00	2.9600	1.42829
I would use my past successes to help motivate myself	25	1.00	5.00	3.4000	1.38444
I would feel like everything was ruined and was going wrong	25	1.00	5.00	2.8000	1.60728
I would begin to think my chances of success at university were poor	25	1.00	5.00	2.6000	1.41421
I would probably get depressed	25	1.00	5.00	2.8000	1.22474
I would be very disappointed	25	1.00	5.00	2.9600	1.27410
I would begin to think my chances of getting the job I want were poor	25	1.00	5.00	3.3200	1.54704
I would probably get annoyed	25	1.00	5.00	3.4800	1.41774
I would stop myself from panicking	25	1.00	5.00	3.4400	1.41657
Valid N (listwise)	25				

The same agreement was also shown by respondents to the notion that they would see the situation as a challenge as shown by the mean value of 3.52. Some also showed agreement to the idea that they would stop themselves from panicking as shown by the mean value of 3.44. Many agreed that they would get annoyed as shown by the mean of 3.48. Some could neither agree nor disagree on the sentiments expressed. Most respondents expressed indifference to the notion that they would use

their past success as motivation as shown by the mean value of 3.4. Most respondents were uncertain whether this would affect their chances of getting into university as reflected by the mean value of 3.32. Most respondents remained neutral on whether they would be depressed or disappointed as reflected by the values of 2.8 and 2.96 respectively. The same was also noted regarding the notion that the respondents would give themselves self-motivation as shown by the mean value of 3.08. For the notion that they would assess their strengths and weaknesses to improve as shown by the value of 3.0. The respondents also showed indifference to the statement that they would not change their long-term goals and ambitions and reflected by a 3.2 mean value. The same was also shown by a mean value of 3.2 to the statement that they would see the situation as temporary. Most respondents also showed indifference to the notion that they would do their best to stop thinking negative thoughts shown by the mean value of 3.28. In contrast, most respondents disagreed that they would give up as reflected by the mean value of 2.2. Most of the respondents disagreed that they would seek encouragement from family and friends as reflected in the mean value of 2.56. Similarly, most respondents disagreed that they would feel their university chances were poor is reflected in the value of 2.6. Most respondents expressed uncertainty when it came to the idea that they would monitor their achievements as reflected in the 2.72 value. For the idea that they would blame their tutor as reflected in the 2.68 value.

### ***Well-Being***

Table 33 shows responses with regards to well-being. Most respondents expressed indifference on the notion that they liked most parts of their personality as reflected by the mean value of 3.24. The same sentiment was also expressed for the notion that when the respondents looked into their lives, they felt pleased and this is shown by the mean value of 3.28. The same was also found on the idea that the respondents judge themselves by what is important not others opinions as shown by the 3.28 value. They also neither agreed nor disagreed that some people wandered through life aimlessly but not them as shown by the mean value of 3.2. Most respondents also showed that they were not sure if others regarded them as generous in time and deed as shown by the value of 3.12. They expressed indifference on the notion that they felt disappointed about their achievements in life and they had done all there is to life as shown by the 2.84 and 2.72 values.

Table 33.

*Analyses of the Female Control Group Regarding Well-Being*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
"I like most parts of my personality."	25	1.00	5.00	3.2400	1.26754
"When I look at the story of my life, I am pleased with how things have turned out so far."	25	2.00	5.00	3.2800	1.13725
"Some people wander aimlessly through life, but I am not one of them."	25	1.00	5.00	3.2000	1.00000
"The demands of everyday life often get me down."	25	1.00	4.00	2.6000	.91287
"In many ways I feel disappointed about my achievements in life."	25	1.00	5.00	2.8400	1.06771
"Maintaining close relationships has been difficult and frustrating for me."	25	1.00	5.00	2.7600	1.33167
"I live life one day at a time and don't really think about the future."	25	1.00	5.00	3.0000	1.19024
"In general, I feel I am in charge of the situation in which I live."	25	1.00	5.00	3.0000	1.04083
"I am good at managing the responsibilities of daily life."	25	1.00	5.00	3.4400	1.22746
"I sometimes feel as if I've done all there is to do in life."	25	1.00	5.00	2.7200	1.10000
"For me, life has been a continuous process of learning, changing, and growth."	25	1.00	5.00	3.1200	1.16619
"I think it is important to have new experiences that challenge how I think about myself and the world."	25	2.00	5.00	3.4400	1.15758
"People would describe me as a giving person, willing to share my time with others."	25	2.00	5.00	3.1200	.92736
"I gave up trying to make big improvements or changes in my life a long time ago"	25	1.00	5.00	3.5200	1.22882
"I tend to be influenced by people with strong opinions"	25	1.00	5.00	3.3600	1.03602
"I have not experienced many warm and trusting relationships with others."	25	1.00	5.00	3.3600	1.28712
"I have confidence in my own opinions, even if they are different from the way most other people think."	25	1.00	5.00	2.8000	1.25831
"I judge myself by what I think is important, not by the values of what others think is important."	25	1.00	5.00	3.2800	1.20830
Valid N (listwise)	25				

Most respondents were also neutral on the notion that they found maintaining relationships difficult and frustrating and that they had not experienced many warm and trusting relationships as reflected in the mean value of 2.7 and 3.36 respectively. Most respondents also projected indifference that they tended to be influenced by people with strong opinions and that they have confidence in their own opinions as reflected by the mean values of 3.36 and 2.8 respectively. Most respondents disagreed that the demands of life often got them down as reflected by the mean value of 2.6. Most respondents agreed to the notion that it was important to have experiences that challenge the way they thought about the world as shown by the

mean value of 3.44. The same mean value of 3.44 was also obtained when respondents agreed that they are good at managing responsibilities of daily life. The highest frequency was reflected in the mean value of 3.52 in which most respondents agreed that they gave up trying to make big improvements or changes in their lives a long time ago.

### ***Mindfulness***

Table 34 reflects the responses to mindfulness awareness attention. The highest frequency of the mean value of 3.88 shows that most respondents agreed to the notion that they can snack without being aware of it. The mean value of 3.72 indicates that most respondents agree to the notion that they can listen to someone half-heartedly whilst engaged in another activity.

Table 34.

#### *Analyses of the Female Control Group Regarding Mindfulness*

<b>Descriptive Statistics</b>	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
I could be experiencing some emotion and not be conscious of it until sometime later.	25	1.00	5.00	3.3600	1.15036
I break or spill things because of carelessness, not paying attention, or thinking of something else.	25	2.00	5.00	3.6000	1.08012
I find it difficult to stay focused on what's happening in the present.	25	1.00	4.00	2.6800	1.10755
I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.	25	1.00	5.00	2.9600	1.42829
I tend not to notice feelings of physical tension or discomfort until they really grab my attention.	25	1.00	5.00	3.0400	.97809
I forget a person's name almost as soon as I've been told it for the first time.	25	1.00	5.00	3.2800	1.13725
It seems I am "running on automatic," without much awareness of what I'm doing	25	1.00	5.00	3.5600	1.15758
I rush through activities without being really attentive to them.	25	2.00	5.00	3.5200	1.04563
I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there	25	1.00	5.00	3.6000	1.19024
I do jobs or tasks automatically, without being aware of what I'm doing.	25	1.00	5.00	3.1600	1.40475
I find myself listening to someone with one ear, doing something else at the same time.	25	1.00	5.00	3.7200	1.10000
I drive places on 'automatic pilot' and then wonder why I went there	25	1.00	5.00	3.5600	1.19304
I find myself preoccupied with the future or the past.	25	1.00	5.00	3.2000	1.08012
I find myself doing things without paying attention.	25	1.00	5.00	3.2800	1.13725
I snack without being aware that I'm eating	25	3.00	5.00	3.8800	.72572
Valid N (listwise)	25				

Most respondents also agreed to the notion that they can break and spill things without being aware of it and also that they get so focused on the goal that they can lose touch of reality as shown by the mean value of 3.6 for both. Most respondents also agreed that they do things on automatic and drive on auto-pilot as reflected in the mean value of 3.56 for both statements. The same sentiment was also expressed on the notion that the respondents rushed through activities without being attentive to them as reflected in the mean value of 3.52. Most respondents also agreed that they run on automatic most of the times as shown by the 3.56 value. Most respondents expressed indifference to the statement that they found themselves preoccupied with the past or future and that they found themselves doing things without paying attention as reflected in the mean values of 3.2 and 3.28 respectively. Similar sentiments were expressed on the notion that they found themselves failing to express emotions unconsciously as shown by the 3.36 value. Most respondents also found it difficult to stay focused when they had to deal with different things as showed by the value of 2.68. The same was highlighted by the respondents on the ideas that they would forget a person's name shortly and mostly do not notice any tension or uncomfortable energies as reflected in the mean values of 3.28 and 3.04 respectively.

### **Paired T Tests**

Table 35 reflects the comparison between the experimental group and the control group, before and after the mindfulness training program with regards to the perceived stress, resilience, well-being and mindfulness awareness attention. The table indicates that the level of perceived stress increased in the control group as shown by the mean value from 45.02 to 46.18. A decrease was reflected for the study group from 33.38 to 32.42. Resilience also suffered a decrease in the control group and decreased from 70.4 to 63.74. In contrast, resilience for the study group increased from 104.34 to 107.70. In terms of well-being both groups had a decrease. The control group's well-being decreased from 77.96 to 75.14 whilst that of the study group decreased from 62.52 to 60.49. Mindfulness awareness attention also had a similar change for both groups. The mindfulness awareness of the control group increased slightly from 51.98 to 54.64 and the results for the study group increased from 39.64 to 52.76.



Table 35.

*Pre-Test and Post-Test Analyses of the Control and Experimental Groups*

Paired Samples Statistics		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Control pre-stress	45.0200	50	15.80298	2.23488
	Stress post	46.1800	50	12.37293	1.74980
Pair 2	Study pre-stress	33.3800	50	5.78489	.81811
	Stress post	32.4200	50	5.58091	.78926
Pair 3	Control pre-resilience	70.4000	50	31.56787	4.46437
	Resilience post	63.7400	50	32.41240	4.58381
Pair 4	Study resilience	104.3400	50	20.70454	2.92806
	Resilience post	107.7000	50	14.84099	2.09883
Pair 5	Control pre-wellbeing	77.9600	50	23.53197	3.32792
	Well-being post	75.1400	50	20.26861	2.86641
Pair 6	Study pre-wellbeing	62.3200	50	9.41219	1.33109
	Wellbeing post	60.4800	50	7.46212	1.05530
Pair 7	Control pre-mindfulness	51.9800	50	8.83751	1.24981
	Mindfulness post	54.6000	50	6.78233	.95917
Pair 8	Study pre-mindfulness	39.6400	50	9.92782	1.40401
	Mindfulness post	52.7600	50	7.23247	1.02283

Table 36.

*Significance of Variables*

		Paired Differences			95% Confidence Interval of the Difference		T	Df	Sig. (2 tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Control pre-stress – post-stress	-1.16000	26.39060	3.73219	-8.66013	6.34013	-.311	49	.075
Pair 2	Exp. pre-stress – post-stress	.96000	7.62905	1.07891	-1.20815	3.12815	.890	49	.037
Pair 3	Control pre-resilience – post-resilience	6.66000	59.96721	8.48064	-10.38249	23.70249	.785	49	.043
Pair 4	Exp. pre-resilience – post-resilience	-3.36000	25.76959	3.64437	-10.68364	3.96364	-.922	49	.036
Pair 5	Control pre-wellbeing – post-wellbeing	2.82000	40.07528	5.66750	-8.56927	14.20927	.498	49	.062
Pair 6	Exp. pre-wellbeing – post-wellbeing	1.84000	12.81479	1.81228	-1.80192	5.48192	1.015	49	.310
Pair 7	Control pre-mindfulness – post-mindfulness	-2.62000	11.14632	1.57633	-5.78775	.54775	-1.662	49	.003
Pair 8	Exp. pre-mindfulness – post-mindfulness	13.12000	11.82636	1.67250	9.75898	16.48102	7.845	49	.000

Table 36 shows whether the changes in the variables of perceived stress, resilience, well-being and awareness-attention are significant. The difference in the perceived stress for the control group was significant as shown by the significant value of 0.075 which is lower than the alpha value of 0.05. The same was also observed for the study group which had a significant value of 0.037. The changes in the resilience were significant for both groups as reflected by the value of 0.043 and 0.036 which are both lower than the 0.05 alpha value. The well-being results were also significant for the control group having values of 0.062 and insignificant for the study group with 0.031 respectively. The control group had mindfulness awareness attention differences before and after training as reflected in the significant value of 0.03 and the study group was also significant having a significant value of 0.00.

### **Independent T Test**

Table 37 provides the information on whether the changes observed between the control and experimental group were significant. The changes observed after the intervention for perceived stress, resilience, well-being and mindfulness were all big and significant differences. This corroborates that the mindfulness training program brought changes that were significant in the intervention group as their results significantly differed from those of students that did not go through the experiment.

Table 37.

*Significance Between Control and Experimental Groups*

Independent Samples Test									
		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower Upper
Pre-stress	Equal variances assumed	73.138	.000	4.891	98	.000	11.64000	2.37991	6.91714 16.36286
	Equal variances not assumed			4.891	61.901	.000	11.64000	2.37991	6.88247 16.39753
Post-stress	Equal variances assumed	69.412	.000	7.168	98	.000	13.76000	1.91956	9.95069 17.56931
	Equal variances not assumed			7.168	68.146	.000	13.76000	1.91956	9.92972 17.59028
Pre-resilience	Equal variances assumed	27.241	.000	-6.357	98	.000	-33.94000	5.33893	-44.53493 -23.34507
	Equal variances not assumed			-6.357	84.574	.000	-33.94000	5.33893	-44.55599 -23.32401
Post-resilience	Equal variances assumed	88.393	.000	-8.720	98	.000	-43.96000	5.04147	-53.96462 -33.95538
	Equal variances not assumed			-8.720	68.681	.000	-43.96000	5.04147	-54.01828 -33.90172
Pre-wellbeing	Equal variances assumed	53.634	.000	4.364	98	.000	15.64000	3.58425	8.52717 22.75283
	Equal variances not assumed			4.364	64.287	.000	15.64000	3.58425	8.48025 22.79975
Post-wellbeing	Equal variances assumed	146.559	.000	4.799	98	.000	14.66000	3.05450	8.59843 20.72157
	Equal variances not assumed			4.799	62.044	.000	14.66000	3.05450	8.55422 20.76578
Pre-mindfulness	Equal variances assumed	.668	.416	-.483	98	.630	-.78000	1.61499	-3.98490 2.42490
	Equal variances not assumed			-.483	94.311	.630	-.78000	1.61499	-3.98647 2.42647
Post-mindfulness	Equal variances assumed	5.374	.023	8.798	98	.000	14.96000	1.70036	11.58569 18.33431
	Equal variances not assumed			8.798	86.557	.000	14.96000	1.70036	11.58010 18.33990

## CHAPTER V

### Discussion

The study revealed that the level of perceived stress for the control group and study group were different. The control group registered an increase in perceived stress levels whilst the study group had a decrease. Both these changes were significant. This finding is in line with the findings of several scholars from the literature view that postulate that mindfulness training results in decreased stress levels for participants. The students had an examination period during the course of the study. This also increased stress levels and confirms the study of Pascoe et al (2019) who pointed out that examinations were a big source of academic stress that affected students in school. Given that after the mindfulness training, the students in the study group registered a decrease in perceived stress levels; it can be observed that the training really plays an important part when it comes to dealing with stress.

The study shows in practice what the Transactional Theory propounds. According to Rudland et al (2020), the reaction of the person to the stressor determines the amount of stress that they will have. This is evident in the descriptive statistics on stress where respondents had different opinions regarding different statements. Whilst some respondents, felt they could not manage irritations in their lives, some felt in control. Whilst others felt like things were not going their way, others felt confident. This indicates that the ability of the respondents to handle pressure also has an impact on the way they react to stressful situations. The results of the study also align with the Transactional Model with regards to the short-term outcomes. The study revealed that respondents felt angry and frustrated which are normal reactions when one is stressed.

The same could also be observed where some respondents would feel like they could manage whilst others could not. For example, prior to the study, most female respondents in the study group indicated that they felt nervous and stressed very often as reflected by the mean value of 4.04 but after the mindfulness training, most respondents indicated that they felt nervous and stressed only a few times as shown by the mean value of 2.96. In contrast, female respondents in the control group indicated that they felt nervous and stressed very often before the mindfulness training. After the mindfulness training, they still felt nervous and stressed very often.

The study also revealed interesting responses with regards to resilience. The results of the study indicate that the students in the control group had a decrease in resilience whilst the students in the study group had an increase in resilience. This revelation is in line with the findings of Pascoe et al (2019) who indicated that mindfulness was important in improving resilience. The study also revealed that the differences between the control group and the study group were significant.

The results of the study also aligned with those of van Breda (2018) who explained that resilience was a process. The scholar pointed out that it was reaction to an adversity. The study gave a scenario in which students would have failed an important assignment as well as a few others and there would be feedback from the tutor. This is evident in the results of the study where respondents indicated that if they got bad marks, they would feel their chances of a good future were ruined or feel like their chances of securing a good place would be affected. Some even showed that they would not take responsibility but would blame their tutor. These sentiments are especially pronounced before the mindfulness training. However, after the mindfulness training it can be observed in the study group that there were great improvements. The level of resilience increased from 104 to 107.

Yeager (2021) pointed out that resilience was essential and helped determine how students coped in school. It is evident from the results of the study that mindfulness training is vital in order to increase the resilience of the students and this would place them in a better position to cope with any internal and external elements that can be deemed as adversaries. This finding aligns with that of Christopher et al (2020) and Kwak et al (2019). As the results of the study indicate that mindfulness results in increased resilience, it is important that positive thoughts be promoted at the expense of negative thoughts as advocated for by Serrano (2021). Mindfulness through increasing resilience, would also result in decreased stressful situations therefore that would be killing two birds with one stone and result in a better mental health especially for the students.

The study also found interesting results with regards to well-being. The study revealed that well-being decreased for both control group and study group. The decrease in well-being for the study group was insignificant as the p value was higher than the alpha value of 0.05. This is in contrast to the literature which generally posits that mindfulness training programs result in the increase in well-being drastically. The changes in the control group and the study group were

significant. The control group registered a decrease in well being without the intervention of the training.

The results diverged from the literature studies of scholars like Klussman et al (2020), Rava and Hotez (2021) and Galante (2021) pointed out that mindfulness resulted in increased well-being by increasing the control of mental and emotional process. Because the fact that the changes in well-being prior and after to the training were significant, the null hypothesis that the mindfulness training does not lead to increased well-being was rejected.

In light of mindfulness awareness attention, the study showed that the control group had increased mindfulness awareness attention slightly whilst the study group had a more positive response. The differences in the groups in terms of mindfulness awareness attention was also a significant one which further shows the great impact that the mindfulness training has on the mindfulness awareness attention.

The results of the study corroborate those of the literature which point out that mindfulness training programs have a more positive impact. According to Rava and Hotez (2021) mindfulness training programs increased self-connection and immersed one more into the present, making them ore aware of what is going on around them. This can be observed in the study especially before and after training in the study group. For example, the male study group most respondents showed that they were neutral towards if they snacked without awareness but after the training, they could actually disagree on this. Whilst most respondents agreed that they got preoccupied about the future, after the training they disagreed that they did so; which goes to show the impact of mindfulness awareness training. Other instances that were reflected show that the respondents were now more aware of what they were doing after the training. This goes in line with most of the studies in the literature like Amundsen et al (2020) who explained that mindfulness training had a positive effect on the regulation of emotion.

The results of the study reveal the importance of mindfulness training on aspects like the perceived stress, resilience, mindfulness awareness attention and well-being in students. The results indicate a great positive impact of the mindfulness training programs on the above-mentioned areas. The results indicate that the differences between the control group are significant. This means that all the bull hypotheses were rejected and the researcher accepted the hypotheses that mindfulness training programs had a positive and significant impact on perceived

stress on perceived stress, resilience and mindfulness awareness attention. Because the results on the well-being indicated a decrease but insignificant effect, the researcher rejects both hypotheses that mindfulness training program results in improved well-being in students and accepts the null hypothesis that the mindfulness training program does not have a positive and significant impact on well-being.

## **CHAPTER VI**

### **Conclusion and Recommendations**

#### **Conclusion**

The study serves as a first of its kind in Northern Iraq and provides insight into the importance of mindfulness training programs. The study reveals that mindfulness training programs can go a long way in improving the perceived stress levels, resilience and mindfulness awareness attention of students. Given that students that are looking forward to starting university face a lot of stress, this is a very important study. The study also provides a good source of literature and a starting point for further studies. The researcher advocates for the inclusion of mindfulness training programs in the schools in Northern Iraq as this will go a long way in preparing students for the future. The study has already shown the importance of the program and given the high levels of stress and anxiety students face; and also, the impact of these problems, the researcher encourages that these matters be taken seriously. The study can also be utilized not only for students in the high school but for all learning institutions as this will go a long way in creating a better learning environment and also increasing the mental health of learners.

#### ***Implications of the Study***

The study focused on mindfulness, well-being, resilience and perceived stress in high school students in Northern Iraq. This study has several implications to different stakeholders. Firstly, this study raises important issues that can address educational policies in Northern Iraq. The findings of the study are relevant in informing decisions regarding education and ways to improve students' performance. It can provide a foundation for collaborations between interested stakeholders in coming up with tools for mindfulness. Teachers can also be trained in mindfulness to ensure that the services are readily available in schools and for the betterment of the education system and future generation.

For students, mindfulness can provide a way to cope with stress. Given that this study highlighted the benefits of mindfulness, this can be a way to help students particularly in that age range deal effectively with stress in a healthy manner. This is something that can actually help them in and out of school and can have long-term benefits. As mindfulness can also promote well-being, this can help students have



meaningful and health relationships with their peers, parents and other people in general.

The study provides more material to the growing literature regarding mindfulness. In particular, it is serving to fill many demographic gaps for such a study in Northern Iraq as studies of this nature are scarce. The findings of this study can therefore lay groundwork for future studies and provide valuable insights that can help literature in this area in Northern Iraq grow.

### **Recommendations**

The study showed the importance of psychology in education sector. Given the study findings, the researcher recommends that Northern Iraq as a country incorporate mindfulness training programs in their education sector. The researcher recommends that this be done at national level to ensure uniform availability of this service in all the schools around the country. The researcher believes this can promote and uplift educational standards of the country, laying a strong foundation for the students. At the same time this can also improve the general well-being of the students which can go a long way in helping them navigate through life at that precarious stage. The scholar also recommends mindfulness training be made available to educators so that it can be easier to implement. Various mindfulness techniques can be explored to find which best suit the students and be upgraded and monitored constantly to ensure continued good results.

The study was only focused on one city in the country of Northern Iraq, Erbil. The researcher recommends that future studies be based on a wider location so as to enhance the effectiveness of the results. The researcher recommends that future studies also encompass learners of higher learning institutions as they also face quite a lot of stress and some of them have to balance a lot of responsibilities like work and study. The researcher also recommends that future studies explore more demographic variables apart from gender in exploring the effects of mindfulness training programs, this can help investigate if there are any moderating or mediating variables on this relationship. The study can also include the qualitative approach so as to get deeper into the feelings of the respondents. The current study was focused on the quantitative aspect only.

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## Appendices

### Appendix A

#### Data Collection Tool (Sample Items)

Dear Participant,

Thank you for your motivation to participate in my research. The questionnaire below is designed as part of my PhD's in Guidance and psychological counseling thesis study that focuses Effectiveness of mindfulness program on perceived stress reduction, resilience and sense of well-being among 12th grade students. Your contribution will be treated with the utmost confidentiality and used for academic purposes only. Please note: participation is voluntary and you are free to quit if you feel like it. In addition, there will be no payment awarded for participation. Your kind assistance is greatly appreciated. Please read the questions carefully and give your honest opinion.

Yours faithfully,  
Rozhan Ali Khdir

#### Section A: Demographics

- Gender
- Age

Please tick as appropriate

Strongly disagree    disagree                      Neutral                      agree                      Strongly agree  
1                      2                      3                      4                      5

#### Section B: Perceived Stress

		1 SD	2 D	3 N	4 A	5 SA
1	In the last month, how often have you been upset because of something that happened unexpectedly?					
2	In the last month, how often have you felt that you were unable to control the important things in your life?					
3	In the last month, how often have you felt nervous and "stressed"?					

#### Section C: Academic Resilience

Please read the question below carefully and use it to respond to the subsequent statements

Q: You have received your mark for a recent assignment and it is a 'fail'. The marks for two other recent assignments were also poorer than you would want as you are aiming to get as good a degree as you can because you have clear career goals in mind and don't want your family to be disappointed in you. The feedback from the tutor for the assignment is quite critical, including reference to lack of proper understanding and poor writing and expression but it also includes ways that the work could be improved. Similar comments were made by the tutors who marked your assignments. What would you do?

		1 SD	2 D	3 N	4 A	5 SA
1	I would work harder					
2	I would keep trying					
3	I would use the feedback to improve my work					

**Appendix A (Cont.)**  
**Data Collection Tool (Sample Items)**

**Section D: Well-Being**

		1 SD	2 D	3 N	4 A	5 SA
1	"I like most parts of my personality."					
2	"When I look at the story of my life, I am pleased with how things have turned out so far."					
3	"Some people wander aimlessly through life, but I am not one of them."					

**Section E: Mindfulness Awareness**

		1 SD	2 D	3 N	4 A	5 SA
1	I could be experiencing some emotion and not be conscious of it until some time later.					
2	I break or spill things because of carelessness, not paying attention, or thinking of something else.					
3	I find it difficult to stay focused on what's happening in the present.					

## Appendix B

### Ethical Consideration



NEAR EAST UNIVERSITY  
SCIENTIFIC RESEARCH ETHICS COMMITTEE

23.03.2024

Dear Rozhan Ali Khdir

Your application titled **"Effectiveness of mindfulness program on perceived stress reduction, resilience and sense of well-being among high school students"** with the application number NEU/EB/2024/C001 has been evaluated by the Scientific Research Ethics Committee and it was decided that there were no ethical violations in the completed study.

Prof. Dr. Aşkın KİRAZ

The Coordinator of the Scientific Research Ethics Committee

## Appendix C

### Similarity Report

#### Effectiveness of Mindfulness Program on Perceived Stress Reduction, Resilience and Sense of Well-Being Among High School Students

##### ORJİNALLİK RAPORU

%8	%3	%3	%5
BENZERLİK ENDEKSİ	İNTERNET KAYNAKLARI	YAYINLAR	ÖĞRENCİ ÖDEVLERİ

##### BİRİNCİL KAYNAKLAR

1	Submitted to Yakın Doğu Üniversitesi Öğrenci Ödevi	%2
2	Rogers, Juriel A.. "An Application of Roger Ulrich's Methods: Designing a Healing Garden for African American Women Living in Low-Income Public Housing.", Mississippi State University, 2017 Yayın	%1
3	www.scirp.org İnternet Kaynağı	%1
4	Submitted to InterActive Pro Öğrenci Ödevi	%1
5	Submitted to University of Gloucestershire Öğrenci Ödevi	<%1
6	www.coursehero.com İnternet Kaynağı	<%1
7	Submitted to Kwame Nkrumah University of Science and Technology	<%1

## CV

Rozhan Ali Khdir

Guidance and Counseling Psychologist

Contact Information

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Email: rozhan.ali93@gmail.com

Location: New Erbil, Erbil, Iraq

### Profile

I am a dedicated and compassionate psychologist with a strong academic background in clinical psychology, guidance, and counseling. In my PhD in Guidance and Counseling, I have developed a comprehensive understanding of psychological theories and their application in teaching, research and clinical settings. My expertise includes psychological rehabilitation, stress management, motivational strategies, and analyzing the psychological impacts of social media.

### Education

- PhD: Guidance and Psychological Counseling  
Near East University, Nicosia, Cyprus (2019 – 2024)
- Master's Degree: Guidance and Psychological Counseling  
Near East University, Nicosia, Cyprus (2018 – 2019)
- Bachelor's Degree: Clinical Psychology  
Koya University, Koya, Iraq (2010 – 2014)

### Experience

- Assistant Lecturer  
Cihan University, Erbil, Iraq (September 2022 – Present)
- Counselor Psychologist  
Computer Institute, Ranya, Iraq (October 2015 – July 2016)
- Volunteer Counselor  
Asuda Organization, Erbil, Iraq (March 2017 – September 2017)

**Clinical Psychologist Internships**

- Psychological Hospital, Erbil, Iraq (October 2012 – June 2013)
- Psychological Center, Sulaymaniyah, Iraq (February 2014 – March 2014)
- Soz Psychological Hospital, Sulaymaniyah, Iraq (March 2014 – April 2014)

**Key Skills**

- Psychological Assessment and Diagnosis: Expertise in evaluating and diagnosing psychological conditions using evidence-based tools.
- Therapeutic Techniques: Proficient in applying diverse therapeutic approaches tailored to client needs.
- Psychological Rehabilitation: Skilled in designing rehabilitation programs for individuals with psychological challenges.
- Lesson Design and Delivery: Experienced in creating engaging and informative course materials for academic settings.
- Empathy and Active Listening: Strong interpersonal skills to foster trust and effective communication.
- Research and Analysis: Competent in conducting psychological research and data interpretation.
- Public Speaking and Presentation: Skilled in delivering impactful presentations on psychological topics.

**Languages**

- Kurdish: Native
- English: Advanced
- Turkish: Intermediate
- Arabic: Basic