

**EFFECTIVENESS OF GROUP MINDFULNESS
INTERVENTION ON STUDENT AWARENESS,
ANXIETY, STRESS AND DEPRESSION AT
VARIOUS LEVELS IN EDUCATION**

***THESIS SUBMITTED TO JADAVPUR UNIVERSITY FOR AWARD
OF THE DEGREE OF DOCTOR OF PHILOSOPHY IN ARTS***

SUBMITTED BY

ABHIJIT BISWAS

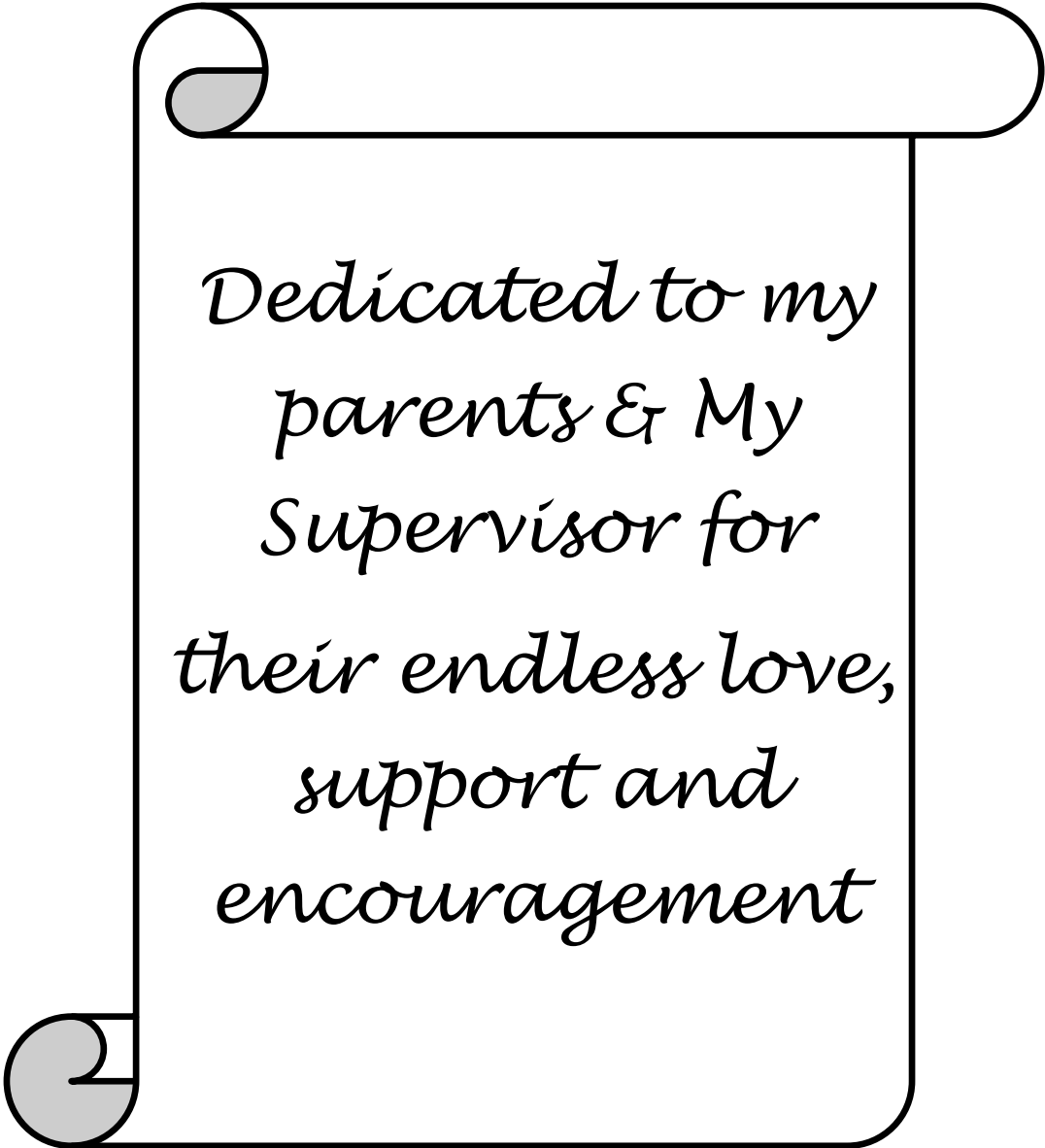
UNDER THE SUPERVISOR OF

PROF. MUKTI PADA SINHA

DEPARTMENT OF EDUCATION

JADAVPUR UNIVERSITY

2022



*Dedicated to my
parents & My
Supervisor for
their endless love,
support and
encouragement*

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CERTIFICATE

Certified that the thesis entitled “**Effectiveness of Group Mindfulness Intervention on student Awareness, Anxiety, Stress and Depression at various levels in Education**” submitted by me for award of the degree of Doctor of Philosophy in Arts (Education) in Jadavpur University is based upon my work carried out under the supervision of Prof. Muktipada Sinha, Professor & H.O.D., Department of Education, Jadavpur University.

And neither this thesis nor any part of it has been submitted before for any degree or diploma anywhere / elsewhere.

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DECLARATION BY THE INVESTIGATOR

I hereby declare that the thesis entitled, “**Effectiveness of group mindfulness intervention on student awareness, anxiety, stress and depression at various levels in education**” has been originally carried out by time under the guidance and supervision of **Dr. Mukti Pada Sinha**, Associate professor and Head of the Department, Department of Education, Jadavpur University, Kolkata. My original work has not been submitted or published elsewhere for award of any degree or recognition.

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Kolkata

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ABSTRACT

Mental health concerns such as sadness, anxiety, and stress are becoming more common among adolescents and young people all around the world. Higher education, like adolescence, is a critical transition point in the lives of young adults. As per global data, 14% of the 14-19-year-old population has mental health issues, particularly depression and stress-related diseases. Mindfulness-Based Stress Reduction (MBSR) is a research-proven method for reducing depression, anxiety, and stress, as well as developing attentive awareness. Mindfulness is defined as an awareness of the present moment that is without of judgement. It is a psychological technique that entails focusing our attention on the current events that surround us, i.e., embracing the present moment as it is without reasoning or avoidance. We become considerably more aware of each moment as a result of mindfulness, fully involved in what is going on around us with acceptance and without judgement. It is possible that it was generated by meditation practise or intervention techniques. It is an eight-week regular programme that involves 45 minutes of daily meditation practise to address unconscious thoughts, feelings, and actions in order to reduce stress, anxiety, and depression and increase consciousness and concentration.

The main objective of this study is to determine the effect of Mindfulness Intervention Therapy on reducing the mental health problems of students of different levels and increasing Awareness. The quasi-experimental pre-test post-test research design method has been used to complete this chapter. Attempts have been made to analyze the objectives of this study based on a total of 120 students (between 60 tested and 60 unregulated groups). In this study, gender and study classes have been selected as explanatory drivers, mindfulness intervention as treatment variables and awareness, anxiety, stress and depression as dependents. The MAA and DASS-21 questionnaires were used to gather objective information from the students. The MAA question paper has 15 questions and the DASS-21 has 21 questions. The days 24/01/2021 have been selected to collect information from the students before the treatment group with the help of question papers and 24/02/2021 days have been selected by applying the treatments. Mindfulness intervention was used as the treatment, which was applied to the students of the tested group for 56

days or 8 weeks. The intervention process is accomplished through a design. Data were collected from the student before and after the treatment and analyzed through SPSS software. Here mean, SD, coefficient of Correlation, Paired sample t-test, ANCOVA, Multiple Regression analysis have been used.

The amount of depressive anxiety stress after treatment has significantly decreased, and awareness has increased significantly among students in the Titman group. But despite this difference between the students in the control group, it was not significant. In the case of the experimental group, Awareness among HS, UG, B.ED and scholar students has increased significantly; Anxiety among HS, UG and scholar students, stress in HS students only and depression in UG level students were significantly reduced in the experimental group. Again there is an increase in awareness among the boys and girls of the tested group as well as a significant reduction in the stress of boys and girls. Although depression decreased significantly among the boys in the experimental group, it did not decrease significantly among the girls in the experimental group; but the anxiety decreased significantly which did not happen in boys. No significant differences between depression, anxiety, stress and awareness were observed among the boys and girls in the control group on the basis of gender variables. Mindfulness Intervention Therapy has been shown to reduce the anxiety of 20% of students, stress of 16% of students and depression of 30% of students with severe mental health problems. Subsequent treatment, i.e. post-test, showed significant differences between the control group and the experimental group in stress, anxiety, and depression, which were not observed in the pre-test. Thus mindfulness intervention can increase awareness among students as well as reduce mental health such as depression, stress and anxiety. Therefore Group Mindfulness Intervention plays an important role in students' Well-being and Mental Health.

CHAPTER – I

CONTEXT OF THE STUDY

1.1 Introduction

Adolescents and young adults are increasingly suffering from mental health issues such as depression, anxiety, and stress around the world. Higher education, like adolescence, is a key transition stage in the lives of young adults. According to global data, 14% of the 14 -19-year-old population suffers from various forms of mental health problems, specially depression and stress-related disorders. Furthermore, the closure of educational institutions as a result of the COVID-19 pandemic crisis has exacerbated mental health issues among the student population. Mindfulness-Based Stress Reduction (MBSR) is an evidence-based strategy for treating depression, anxiety, and stress, as well as improving attentive awareness. Mindfulness is described as an awareness of the current moment that is without any judgment. It is a psychological method that involves focusing our attention on the current situations that surround us, i.e., accepting the current moment as it is without rationalization or avoidance. As a result of mindfulness, we become much more conscious of each moment, fully immersed in what is happening around us with acceptance and without judgments. It might be possibly created by meditation practice or intervention strategies. Mindfulness-Based Stress Reduction (MBSR), introduced by John Kabat-Zinn in 1979, is a significant and pioneering mindfulness intervention approach (Kabat-Zinn, 2006). It is an eight-week regular programme that includes forty-five minutes of daily meditation practice which aims to address the unconscious thoughts, feelings, and behaviors to decrease stress, anxiety, depression and boost awareness attention.

1.2 Mindfulness Meditation

Mindfulness refers to the unresponsiveness of the present subject and the attentiveness without judging the merits. This is the seventh path of Gautam Buddha's eightfold path. In Pali it is derived from 'sati' and in Sanskrit from 'Smriti' (Memory). In Buddhist Philosophy it is known as 'Vipassana'. That is, to perceive the object as its own – "To see things as they really are" (Goenka, 2004). The first step is 'Anapana', which in Pali is called 'ana-apana-sati' meaning awareness of breathing.

This approximately 2500-year-old philosophy of Gautama Buddha has grown in popularity over the last five decades — particularly in the United States. However, over the last two decades, the technique has exploded in popularity (Hayes and Greco, 2008). Although the majority of study has been conducted in the United States, some work has been conducted in the United Kingdom and is currently being implemented in Australia and New Zealand. Although no comprehensive definition of mindfulness has been found, Kabat Zinn is noteworthy in this sense. According to him, mindfulness teaches us to be more present in each moment and to be completely engaged in our environment with acceptance and without judgement. Mindfulness is a practice of concentrating one's consciousness and attention that is based on the Buddhist notion of mindfulness but can be characterized in a variety of ways. It can be cultivated through meditation practice. Meditation is a necessary but insufficient condition for awareness. Attentive living, mindful walking, mindful eating, mindful breathing, and similarly, we may practice mindfulness in every part of our lives. It is derived from the Pali word 'Sati,' which signifies awareness and was utilized in Buddhist philosophy around two thousand six hundred years ago. However, it is now considered a secular expression, and it has been shown to be an effective psychological tool for enhancing our mental health, well-being, and happiness, as well as coping with daily life's tragedies. Throughout the world, mindfulness, a key component of Buddhist traditional wisdom, has shed its religious undertones and gained acceptance in the academic and public arenas. In the American Psychological Association's definition of mindfulness, "awareness of one's experience in the present moment without judgement" is defined as mindfulness. Meditation was reintroduced to Western culture following the work of Jon Kabat-Zinn on MBSR (Mindfulness-

Based Stress Reduction). Alternate therapies for mental health issues such as MBCT (Mindfulness-Based Cognitive Therapy), CBT (Cognitive Behavioural Therapy), and ACT (Acknowledgement and Commitment Therapy) have been established. Meditation, breathing exercises, and paying attention to the present moment are all part of the mindfulness practice, which aims to help people change their thoughts, feelings, and actions while also reducing stress and anxiety.

Mindfulness is not intrinsically religious, despite its Buddhist roots, and it is regularly taught outside of religious situations. Clinical psychology and psychiatry have developed a wide range of therapeutic applications since the 1970s. Despite methodological problems, research on the use of mindfulness activities seems encouraging. According to research, mindfulness practices can help with pain, stress, anxiety, depressive relapse, disordered eating, and addiction. There are additional researches examining the advantages of mindfulness for people who do not have these conditions, such as Mindfulness-based stress reduction.

By practicing mindfulness, I mean paying attention in the present moment and without passing judgement on what you're experiencing. Non-explanatory, non-judgmental, and present-centered awareness is required in order to accept all thoughts, feelings, and sensations as they are. On a moment-by-moment basis, mindfulness entails paying one's whole attention to the present experience. Bishop, Lau, and colleagues (2004) proposed a two-part mindfulness paradigm. The first entails self-controlling attention so that it remains focused on the present moment. The second step entails developing a specific attitude toward one's current circumstances.

According to this two-part paradigm, self-regulated attention comprises conscious awareness of one's current thoughts, feelings, and surroundings, which can lead to improved cognitive skills for concentration regulation. The second component of orientation to experience is accepting one's mental stream, maintaining open and questioning attitudes, and thinking in many categories. Training in mindfulness and mindfulness-based practices, which is commonly done as part of a peaceful meditation session, results in the building of a Beginner's mind, or the ability to look at things as though for the first time. Mindfulness practice can assist people in

recognizing their habitual mental patterns, which have developed through time and allow practitioners to respond to their lives in new rather than habitual ways.

When we are conscious of our behaviors, we pay more attention to what we are doing. It's the polar opposite of going through the motions in that you're tuned into your senses and aware of your thoughts and feelings instead of going through the motions. Even if you don't have time to meditate, you may practice mindfulness by incorporating it into your regular routine.

This genre of meditation includes the exercises of insight or vipassana meditation, zazen, dzogchen, Mahamudra, choiceless awareness, self-remembering, and heart prayer. By combining concentration with mindfulness meditation, we can develop the ability to analyze and instinctively understand the deeper dynamics inside our everyday experience. Mindfulness Meditation is one of the important meditation types that help us to learn a simple thing to pay attention or to be “Mindful”. There are various techniques in this category that we can practice, like:

1. Vipassana Meditation
2. Visualization Meditation
3. Expanding awareness meditation
4. Body Scan Meditation
5. Breathing space meditation
6. Deep breathing Meditation
7. Mindful Breathing
8. Sitting Breathing
9. Walking Breathing
10. Mindful Eating

• Why Mindfulness?

We already have traditional wisdom, known as Buddhist Mindfulness that may be put into practice to achieve this goal. It is an evidence-proof technique to deal with mental health problem as well as it has physical health benefits. Therefore, this Buddhist practice reduces anxiety, depression and stress as well as increase

attention awareness and overall happiness. Mindfulness practice has been associated with numerous of health benefits, including the reduction of anxiety, stress, and depression, as well as an increase in overall happiness. Mindfulness practice enhance our skill and resources for dealing with daily life challenges, stress and catastrophes, this balancing process is called well-being. That is to say, via mindfulness practise, an individual can strengthen his or her own resilience and retain a sense of well-being. Instead of an impulsive reaction, mindfulness can help us respond effectively to the input. The figure below depicts the significance of mindfulness in order to solicit appropriate response (Figure-1.1).

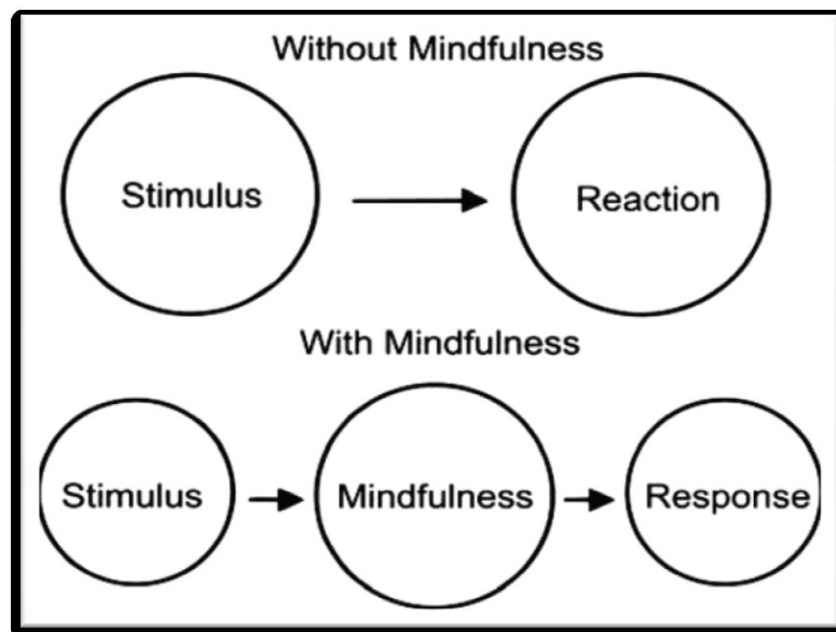


Figure – 1.1: Mindfulness solicited response
(Source: Sinha et. al, 2020)

Mindfulness does not mean only the practice of meditation, rather it is the way of living with awareness at the present moment and observation without any justification. Mindfulness is a nonjudgmental process in which one's complete attention is drawn to the present moment. It has an impact on our thoughts, feelings, and actions, causing cognitive, emotional, and self-regulatory alterations. The growth in academic study on mindfulness related practices in different area has been shown in the figure 1.2.

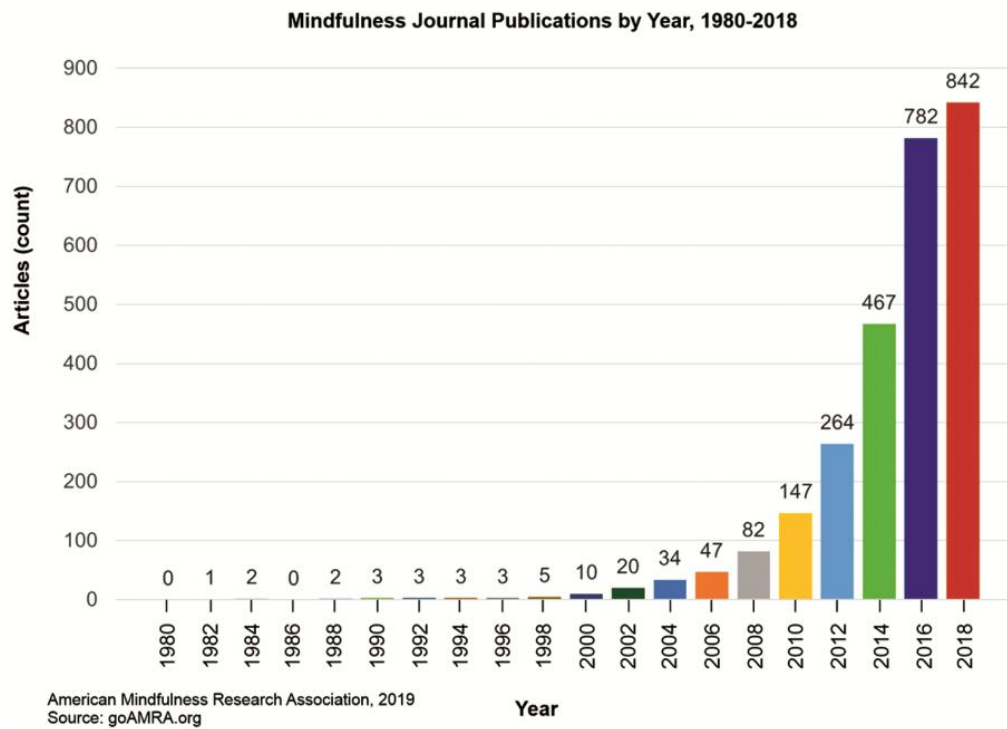


Figure 1.2: Growth in research on mindfulness from 1980-2018
(Source: Sinha et. al, 2020)

1.2.1 Mindfulness in Buddhist philosophy

Awareness of an object is when a stimulus is observed and it comes in contact with human senses (i.e., sense impression) or when an idea is formed in the mind about an object (object cognition) such as thoughts, memories, and emotions. It only lasts for a while, and then it goes away. This is shown in Figure 1.3

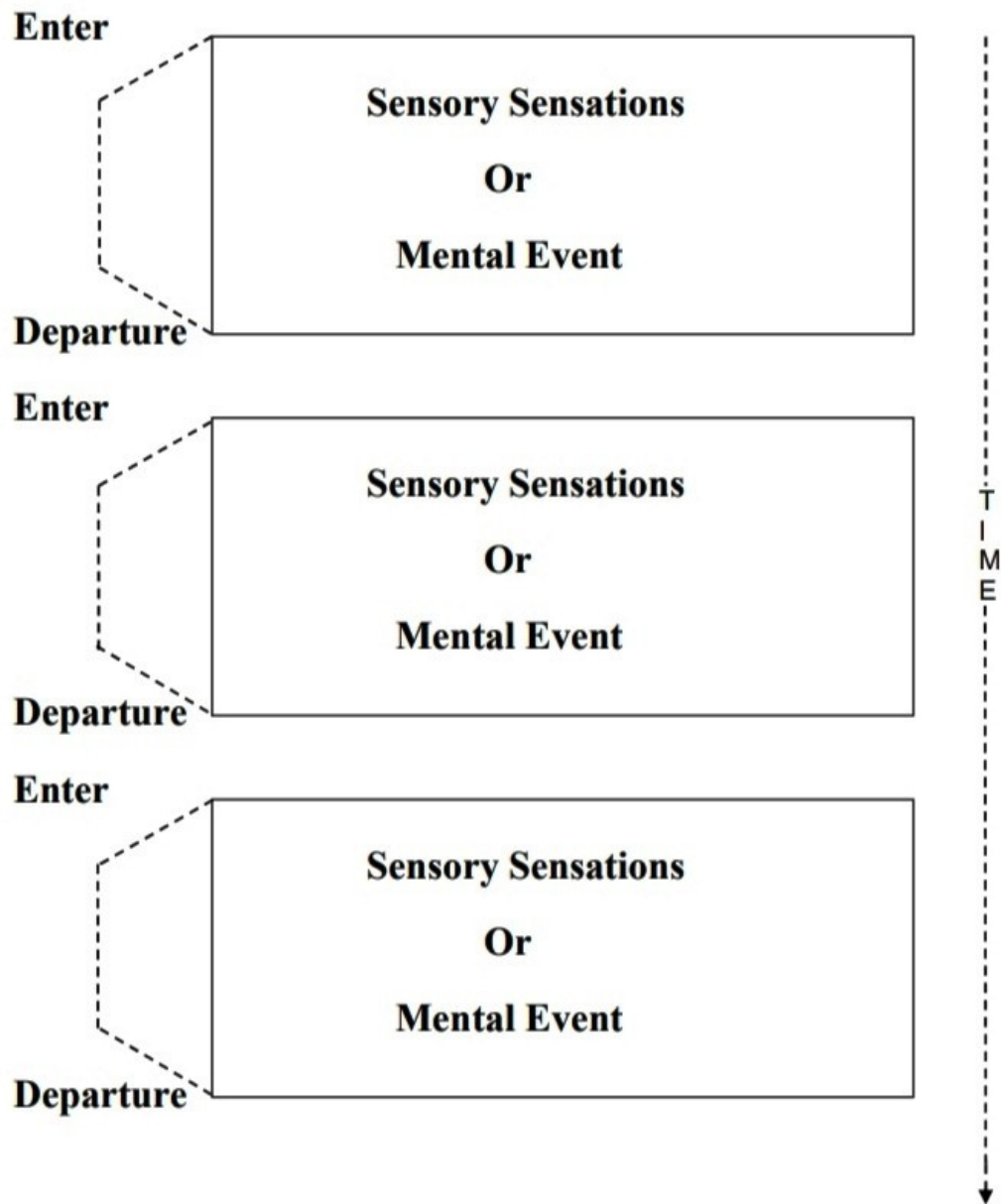


Figure 1.3: Awareness created in every moment

As a result, numerous sensory impressions and mental events are complete and depart at any given time. As a result of these quick and transient feeling incoming and outgoing, the person cannot pay attention to everything which is the cause sadness.

Mindfulness practice has profound roots that might be followed back to every one of the many schools of the Buddhist way of thinking since the days of yore. “Satipatthana Sutta” is the main source of entire mindfulness. Vipassana (understanding) and Mindfulness express an incredible combination to recognize the embodiment of perceiving the Buddhist way of thinking in the conventional formal stage separated from its westernized viewpoint of obliging these tremendous aspects of intelligence exclusively to a specific mainstream strategy. Dissimilar to its western counterpart, it is focused on more extensive objectives like accomplishing Nirvana or extreme delight. The common or present-day parts of care are worried about tracking down the best strategy to accomplish mental prosperity; subsequently, care is considered a technique or instrument for upgrading mental and actual delight. In spite of its far-reaching viability in the field of mental treatment, it has missed the mark concerning the Buddhist viewpoint of this subject.

Mindfulness is “Sati” in Pali which means “Smriti” in Sanskrit. The historical underpinning of Pali proposes memory/review rather than the mental presence. It secures 21 meditational rehearses under four basic points of support, guaranteeing a make way to recovery. They are –

- Physical awareness (Kaya nupassana) –This entails conscious inhalation, posture, and movement.
- Thought of sentiments (Vedananupassana) - Fixation on our feelings in a particular act.
- Thought of psyche (Chittanupassana) - likewise unaccompanied act of familiarity with our perspective.
- Thought of (Dhamma nupassana) - encourage for a definitive euphoria.

These primary foundations of conventional comprehension of Mindfulness should be all around dissected to accomplish our objective of Nirvana as well as secure the contemporary significance of Mindfulness to arrive at our ideal pinnacle. This can be explained:

- **Samadhi (Concentration):**It entangle careful breathing (ana-panasati), which is a mix of inward breath and lapse. The idea of ana-pana-sati is connected with the Modern Mindfulness exercise, that incorporates mental conduct treatment (CBT) (Cognitive Behavioral Practice). It helps us in choosing the objective of concentration and thus looks very similar to the cutting edge Focused Attention strategy.
- **Samantha (Calm):**This stage is tied in with keeping up with internal equilibrium and joining. Because of the blast of acknowledgment and normal information, we become more resistive to interests and cravings.
- **Sati (Mindfulness):**The least demanding way to deal with understanding care is to consider it a procedure for uncovering the truth of things; it faces us with things as they are and awakens us. As our laziness closes, we can see things all the more plainly, making it more straightforward to arrive at content and keep away from repugnance. Mindfulness, specifically, drives us to defy the huge truth of temporariness; motion is the sole reality, as per the Buddhist way of thinking. Shockingly, the mainstream or current form of Mindfulness withdraws from Buddhist insight's fundamental starting points, zeroing in rather on pressure decrease and the acknowledgment of progress. Be that as it may, they ignore the meaning of nonjudgmental mindfulness or nonattachment.
- **Insight (Vipassana):**This stage is committed to acquiring knowledge into the real essence of anguish and the outflow of intelligence. Truth be told, rehearsing care is an incredible technique to instruct bits of knowledge.
- **Vineyya:** Urges us to conquer deterrents on our way to insight, carrying us nearer to Nirvana. Care practice in Buddhism depends on the annihilation of awful encounters to account for sensible and valuable ones. The Four

Brahmaviharas (Metta, Karuna, Mudita, Upeksha) shape our brains and deliver characteristics like appreciation, benevolence, empathy, and self-acknowledgment.

Satipatthana Sutta stresses the underpinnings of care and explains the best type of depictions according to a Traditional point of view. The Buddhist custom will not think about care as a device or a method; maybe they consider care to be an objective all by itself since it announces care to be the act of killing tragedies and embellishment our mind. Mindfulness has a Buddhist angle to it, where Nirvana is the objective and our honesty is just our obligation to expanded prosperity. The clarifications of the Four Noble Facts address the fundamental realities in the Buddhist way of thinking, with the last one stating that there is an unmistakable strategy to free ourselves of torment, which again gets the most fundamental space of the Buddhist belief system, the Eightfold Path or AshtangikaMarga. Right Mindfulness, or Samma Sati, is the seventh way referenced in the AshtangikaMarga. Mindfulness has played an essential effect in present-day mental treatments, with John Kabat-Zinn laying the preparation for it with his trial proof and approaches like MBSR (Mindfulness-Based Stress Reduction). The Buddhist range of Mindfulness is assorted, truth is told really modern information from various points, and it is tended to as the basic familiarity with fleetingness and benevolence, which is Vipassana. Care can likewise be characterized as defensive mindfulness, in which our psyche goes about as a guardian, controlling our faculties (IndriyaSamvara) to evaluate veritable joy. Care is likewise connected with contemplative mindfulness. In this situation, the objective is mental deconstruction and the formation of moving ideas (anussati). Generally, Theravada Buddhists zeroed in on contemplative carefulness, or sampajanna, to screen mental disturbances, which is like a mind filter in current brain research; however, its motivation is all the more long haul, including the destruction of negative states and the joining of ideal ones. Care represented the purposeful utilization of cognizance to the reclamation of quiet.

1.2.2 Psychological aspect of Mindfulness

A psychological attribute, a practise of fostering mindfulness (e.g., awareness practice), a method or condition of consciousness, or a psychological process can all be described by the term mindfulness. Mindfulness has been related to cognitive well-being both conceptually and practically. The components of mindfulness, such as awareness and non - judgmental acknowledgement of one's present experience, are viewed as potentially beneficial prophylactic to usual aspects of psychological frustration, anxiousness, concern, fear, indignation, and so on—many of which involve dysfunctional aptitude to avert, put down, or over-engage with someone's troubling feelings and thoughts. Though mindfulness has been taught for generations as parts of Buddhist and other spiritual practices, its applicability to psychological wellbeing in Western medical and behavioral health settings is a relatively new phenomena, dating back to the 1970s. There has also been a lot of conceptual and practical investigation on the influence of mindfulness on emotional wellbeing to include in this progress.

The psychological basis of Buddhist philosophy is that in most cases the habitual reaction of a person to an object is to respond to perceptible objects or mental phenomena without consciousness and to receive pleasurable reactions without the mind knowing it. One of the major differences between mindfulness and general meditation is that in general meditation, where the focus is only on the content of the meditation, the three characteristics of mindfulness are impermanent, sad and non-existent. In this process the person will be aware that the breath is always changing and will also be aware of the fact that the two breaths are not one and will be aware of the universal acceptability of the impermanent.

The person has to master a certain technique of breathing. But normal breathing cannot be controlled in any way. After practicing this for a long time, the person will gain realization of sorrow and soullessness. Thus long practice will result in direct experience of the person about the three characteristics. This will reduce the habitual Aversion / Attachment feeling. This exercise creates a momentary awareness of the person which is illustrated by the following figure –

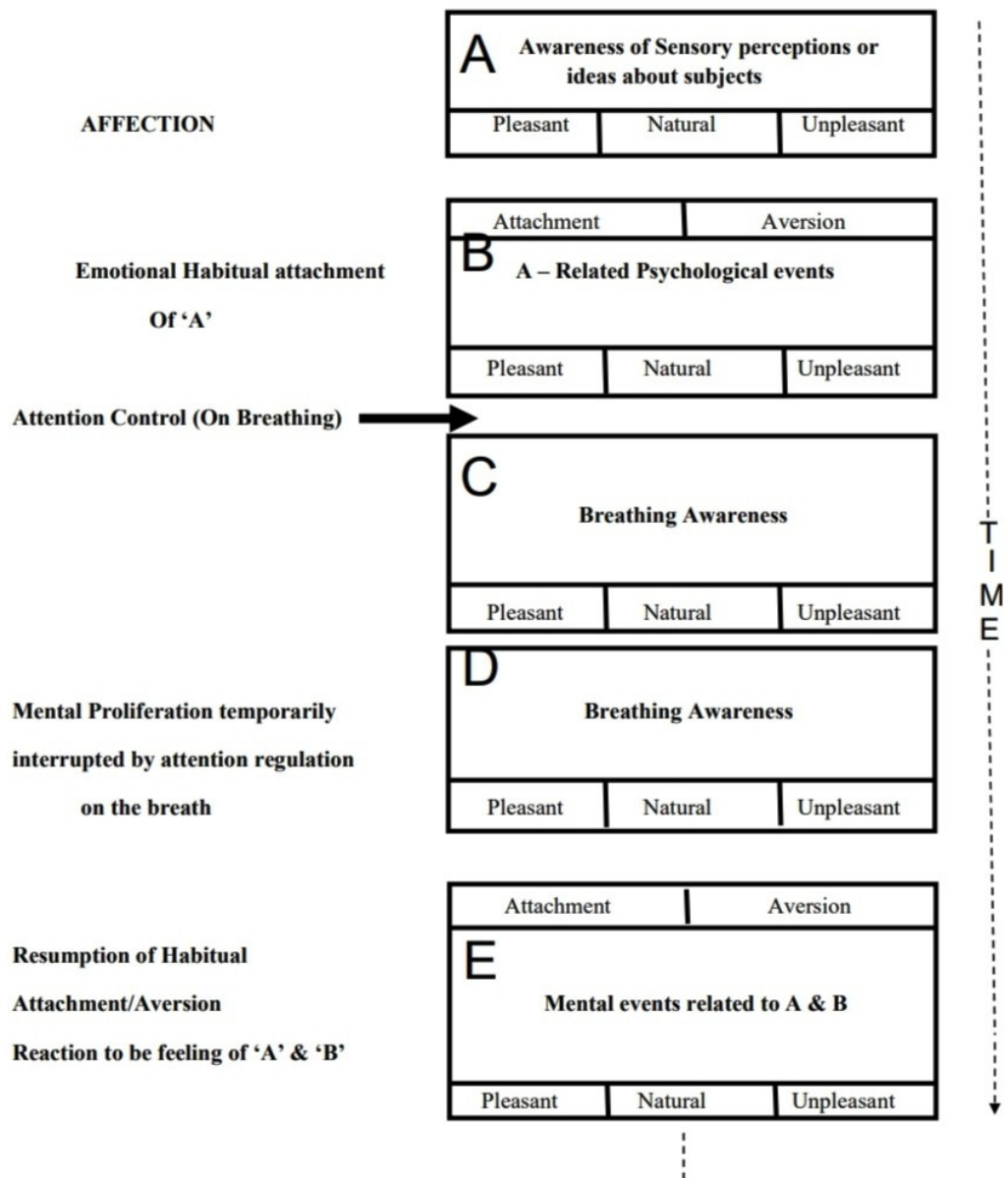


Figure 1.4: How attention control affects awareness

According to Hooker & Foder (2008), Mindfulness affects the way individuals and students thinking and behaves self-regularity and comfort-feeling. Practicing the Mindfulness changes the way people thinking and their behavioral changes accordingly. Actually, mindfulness changes the way a person thinking and thinking pattern. Through the practice of mindfulness, control over one's thinking is established. This process of knowing oneself really helps one to have this self-control.

This allows an anxious person to understand the actual cause of anxiety before engaging in anxious behavior. When an addict has a strong desire to take drugs, for example, this technique of self-control develops awareness about his addiction, allowing him to avoid drugs. Thus, genuine self-awareness and a strong concentration on the present influence the problem-solving process. Even after practising mindfulness meditation, a person feels considerably more calm than before. Mindfulness practise provides a person with the mental fortitude to deal with any difficulty. When mental sufferings, fear, worry, anxiety, and so on are not avoided, a mentality of genuinely embracing them emerges.

1.3 Mindfulness-based Intervention

Mindfulness is a Buddhist idea that is characterized as a deliberate and nonjudgmental familiarity with the current second in the mental writing (Kabat-Zinn, 1990). In secularized mediations like Mindfulness-Based Stress Reduction, care is utilized (MBSR). MBSR is a gathering-based treatment that comprises of the week after week gatherings (typically enduring 3 hours) spread out more than an 8-week time frame. Beginning around 1979, almost 19,000 individuals have partaken in the program (Center for Mindfulness, 2009). Care Based Cognitive Therapy (MBCT) has a comparable design (e.g., two months, bunch based, week after week gatherings, directed care works out, CD for self-practice, the entire day retreat) and is suggested by the National Institute for Health and Clinical Excellence (2009) and the American Psychiatric Association for the treatment of explicit types of despondency (2010). An assortment of elective gathering-based MBIs has been made to address specific circumstances as well as socioeconomics, notwithstanding MBSR and MBCT. Care approaches have additionally been incorporated into an assortment of one-on-one mental conduct treatment procedures, including Dialectic Behavior Therapy (Linehan, 1993) and Acceptance and Commitment Therapy (ACT) (Hayes et al., 1999).

As per a new study directed by the Mental Health Foundation (MHF), 75% of common experts in the UK concur that care is gainful to individuals with emotional well-being issues (MHF, 2010). Without a doubt, new exploration proposes that care-based intercessions (MBIs) might be useful treatments for an assortment of mental and actual sicknesses (Chiesa and Serretti, 2011; Fjorback et al., 2011). Conferred the new flood in interest in care's clinical worth, an appraisal of the logical information and conversation of worries influencing MBIs' moral standing and reliability is convenient. In concentrate on populaces with physical ailments like a malignant growth, diabetes, coronary illness, and constant sluggishness, meta-insightful examinations of MBIs uncover respectably significant pre-post impacts (Hedges' $g = 0.59-0.63$) for decreased uneasiness and state of mind manifestations (Hofmann et al., 2010). MBIs have been demonstrated to be effective in the treatment of a wide range of mental health issues, making them very flexible. MBIs are being utilized to treat an assortment of conditions, including substance use issues (Witkiewitz et al., 2013), issue betting (de Lisle et al., 2012), and HIV (Creswell et al., 2009). In subclinical and solid grown-up populaces, MBIs advance mental prosperity, mental execution, and feeling the executives limit (Chiesa et al., 2011; Eberth and Sedlmeier, 2012; Van Gordon et al., 2013).

1.3.1 Effectiveness of Mindfulness for Health

While mindfulness is a basic practice in many ways, it has significant advantages. Physically, Mindfulness meditation has been proved to decrease cortisol levels, lower blood pressure, and boost the immune system. Cognitively, Mindfulness has been demonstrated to reduce rumination and increase focus. Mindfulness promotes emotional resilience and lowers emotional reactivity. While many of these studies are preliminary, they do begin to offer a compelling picture of mindfulness's overall health advantages. However, current neuro-scientific research demonstrates how mindfulness meditation can profoundly alter the brain, which supplements these preliminary investigations. And these changes don't simply affect cave-dwelling monks; they also affect typical industrious, child-rearing people like the rest of us.

Mindfulness meditation techniques have also been studied in relation to psychological well-being. Psychological well-being was measured in Lykins and Baer's (2009) study, which contrasted mediators with non-mediators. The greater the amount of time spent meditating, the greater one's degree of mindfulness, self-compassion, and general well-being compared to non-meditators. Also, the greater the amount of time spent meditating, the greater one's ability to regulate one's emotions. Components of trait mindfulness have been found to influence the link between meditation experience and psychological well-being in mixed groups (Baer et al., 2008; Josefsson, Larsman, Broberg, & Lundh, 2011). For the first time, mindfulness meditation's underlying psychiatric and neurological components have been studied. As part of an emotional interference experiment done by Ortner, Kilner, and Zelazo (2007), volunteers were given 1–4 seconds to classify tones following either emotionally charged or neutral images.

1.4 Benefits of Mindfulness Intervention

“Meditation can also increase physical experiences, such as increase relaxation, fortify healing, recovery and a stronger immune response, as well as decrease pain, anxiety, stress, depression and blood pressure,” adds Serani. The following potential advantages may be obtained by practising mindfulness meditation-

- **Reduced rumination** - Mindfulness has been found in several trials to lessen ruminating and helps reduce negative affective symptoms, as well as anxiety, depression and stress.
- **Stress reduction** - Mindfulness-based therapy has the potential to change the psychological and emotional processes that underpin a wide range of clinical problems. Mindfulness-based stress reduction and meditation-based cognitive treatment for mental health disorders were both examined by Hoffman et al. in 2010 and found to be effective.

- **Decrease in anxiety, negative affect and emotional reactivity** - Mindfulness meditation helps people experience emotions in a way that enables them to choose between positive and negative emotions. When compared to participants who saw photos but did not meditate, mindfulness meditation practice helped people disengage from emotionally disturbing images and actually concentrate on a cognitive activity.
- **Increasing Attention Span** - Mindfulness Meditation has an effect on our ability to concentrate and block out distracting information. Mindful meditation practitioners had dramatically improved attention and mindfulness, which were directly linked to cognitive flexibility and attention performance.
- **Satisfaction in relationships** - The capacity to be attentive as well as react appropriately to relationship stress and communicate one's emotions to a partner, can assist predict marital satisfaction. Mindfulness: guards against the emotionally draining impacts of conflict in relationships.
- **Maintain a healthy weight** - Mindfulness meditation can assist you in losing weight and sticking to a healthy eating plan. Mindfulness meditation practitioners were more likely to maintain their weight loss. Meditation interventions were "moderately effective for weight loss" and "largely effective in reducing obesity-related eating behaviors".
- **Reduce loneliness in seniors** - Loneliness increases the risk of health problems such as diabetes disease, stroke, dementia, depression, anxiety, and suicide in many persons 50 and older. Cigna's (2020) Loneliness Index: 61% of adults feel lonely, according to the survey. Many research findings indicate that meditation has a positive effect on reducing loneliness.
- **Changing the brain in a protective way** - Researchers from the University of Oregon discovered that integrated body-mind training, a type of meditation, can cause brain changes that may protect against mental disease. In the anterior cingulate brain region, meditation practice was connected Axonal density (the

number of signalling connections in the brain) and myelins (protective tissue) around the axons have both risen.

- **Improved Academic Success** -Mindfulness has been shown to aid students in achieving academic achievement in a variety of ways, and this advantage is not limited to any one group.

1.5 Effectiveness of Mindfulness-based Intervention on Mental Health

- Several research have demonstrated that mindfulness has a significant impact on school kids. This also applies to teachers. In other words, because Mindfulness is useful for adolescents and adults, current school education is becoming more relevant. Several recent studies' findings indicate in that direction. Some of the research' findings are detailed below –
- Studies by Napoli, Krech & Holley (2005) have shown that Mindfulness can significantly increase students' attention.
- According to Hannelly (2011), Student motivation increases confidence, ability and effectiveness.
- According to Schonert-Reichi and Lawlor (2010) children's height, violence, aggression and antagonism are reduced.
- According to Lau Hue (2011) Mindfulness reduces students' depression and increases wellbeing.
- According to Beauchemin, Hutchins & Patterson (2008), Mindfulness reduces anxiety and mental health problems, but also increases the social skills and educational achievement of students with learning disabilities.

- According to Flook et. al. (2010), the practice of mindfulness increases linguistic reasoning, problem solving ability.
- According to Bogels et. al. (2008), Mindfulness eliminates attention and behavioral problems.
- According to Biegel et. al. (2009), mindfulness reduces anxiety, depression and increases self-esteem and reduces sleep disturbances.
- According to Mendelson et. al. (2010), Mindfulness exercises reduce student stress.

As a result, mindfulness plays a vital role in stress management and health. It is possible to overcome mental distress and sleep problems as a result of mindfulness practise. Mindfulness refers to the bodily response of a person's ideas, feelings, and experiences, and it assists the individual in responding correctly to any input rather than a thoughtless reply.

One of the most puzzling elements of modern education is that we encourage students to "pay attention" thousands of times each day while never teaching them how. Mindfulness helps students how to focus their attention, which benefits both academic and social-emotional development (Saltzman, 2011). Take use of instructors' and students' attentiveness in the sphere of education. Adolescence is the most productive time of a person's life. The most important of all the requirements for adolescents is a health facility. Mindfulness is a powerful tool for both children and adults in maintaining pleasure and joy in their lives. The growth of children's cognitive skills, the development of classroom skills, and spontaneous participation in other co-curricular activities, such as sports, complement research on the benefits of mindfulness (Srinivasan M., 2010). Mindfulness is critical in effecting meaningful change in a person's life. Mindfulness has become a driving force in classroom education in recent years. Pochlmann - Tynan et al. (2016) investigated the effectiveness and effects of applying Mindfulness on pre-schoolers from low-income families and discovered that Mindfulness-based curriculum may be applied to these children. Can aid in the development of attentiveness and self-regulation skills.

Bakosh and colleagues (2016) conducted similar tests on elementary school kids and discovered that everyday practise as a result of recorded instruction improved their academic success. Using the Mindfulness method on elementary level students, Dariotis and colleagues (2016) qualitatively analysed the experimental results and discovered that teachers and students were able to identify the different useful points appropriate for learning and practicing skill sets at the end of training as well as adjusting to future difficult emotional experiences. Bluth and colleagues (2016) discovered a significant improvement in student mood by doing a comparable study on at-risk teenagers in the setting of mindfulness. Based on the findings of the preceding research activities, a summary of the advantages of employing the mindfulness approach in the contemporary research school setting is offered below —

- Aids in the development of focus and self-regulation skills.
- Enhances educational abilities.
- Educates students on how to deal with difficult situations and emotional responses.
- Enhances student mood.
- Encourages the acquisition of educational skills.
- Assists in relieving teacher stress.
- Enhances emotional control.
- Enhances the teacher's capacity to control the classroom and tolerate pain.
- Assists in normalising the teaching of secularism.

Body-mind awareness, improvement and understanding of thoughts and emotions, improvement of feelings control skills, increased presence, daily manage stress and resistance to adverse situations, coordination of thoughts, feelings, and behaviours, and the use of mindfulness in everyday life are all examples of mindfulness-based education system. Nowadays, health refers to an individual's

complete well-being, which includes physical, psychological, and religious well-being. Adolescents face a wide range of tough conditions throughout their life. Depression and anxiety in adolescence are clearly unpleasant and distressing concerns that have piqued the interest of mental health practitioners. Parents and teachers commonly seek the counsel of psychologists for their children's anger and anxiety issues.

Relation of Stress, Anxiety and Depression: Depression, anxiety, and stress are really just a several of the symptoms that pupils are increasingly aware of. It could also be difficult to identify between them, yet doing so is critical because illnesses are linked to necessary dreariness and death. General practitioners are all ready to recognise and play a significant part in the treatment of these diseases in order to improve overall psychological well-being results. When depression, anxiety, and stress are combined, the following results:

- are more severe,
- have a higher risk of suicide,
- are more incapacitating,
- and are much difficult to treatment

Each of these outcomes has a greater psychological, physiological, societal, and work-related impact than either scatter alone. Financial stress is also a major source of concern for college newcomers. The tremendous duty of paying not only for college, literature, enrollment fees, and educational expenditures, but also for conveniences, basic essentials such as necessary commodities, digital data of technology, and so on. According to various research that have identified a link between financial stress and depression, financial perspectives can also lead to depression. As a result, the critical components of mental health issues are awareness, stress, anxiety, and sadness. The following sections address the relationship between mindfulness meditation and essential parts of mental health issues:

1.5.1 Mindfulness and Awareness

Although awareness and mindfulness are not synonymous, the two concepts are linked. When you have a strong sense of awareness, you can easily distinguish which of your ideas are necessary and should be carried out from those that are invasive or disruptive to your daily life.

The awareness concept is founded on the notion that people are easily diverted by their thoughts, causing them emotional and psychological distress. Awareness provides a level of solitude that allows you to observe, rather than react to, your genuine feelings. Mindfulness is a type of awareness. Mindfulness demands being aware. Because individual thoughts are transient and ultimately insignificant, awareness is a component of mindfulness that allows you to navigate your psychological state without judgement. The awareness technique enables the student to distinguish between which concepts are actual emotions and which are merely ongoing conversations of overloaded input from sensory distraction. Everyone's mental wellness is really essential. This is a prevalent belief among people of all ages nowadays. Many organizations and mindfulness training institutions have developed new-age practises to enhance well-being in recent years. The traditional meditation practise, on the other hand, is not ignored. Mindfulness and awareness are two beautiful words that are frequently used interchangeably when it comes to mental wellness and living a calm existence. Despite their resemblance in sound, the two have considerable differences.

Mindfulness is a type of meditation that permits you to become aware of your inner self at any moment. While meditating, you should be highly aware of your feelings and emotions. The only requirement is that you must be objective in your perception of feelings. Being aware, on the other hand, is more attentive and similar to mindfulness. The fundamental premise of awareness is how you think about, understand, and absorb what is going on around you. The ability to comprehend an occurrence or circumstance is referred to as awareness.

When Kabat-Zinn first started teaching Mindfulness-Based Stress Reduction, he came up with an operational definition of mindfulness that still holds true today: the ability to be present in the here and now without judgement is known as "mindfulness". That's not to suggest you won't make errors. Indeed, if people pay carefully, they will realize that our minds are almost exclusively filled with judgments. Mindfulness is the ability to access one's own awareness calmly and without becoming engrossed in a never-ending stream of conceptual thought. The challenge is to only take one breath in and one breath out. And I don't mean thinking about our breathing or clapping ourselves on the back for how well we breathe or anything like that. It's simply being mindful of inhaling and exhaling. However, the focus of attention is only on inhaling and exhaling.

These two aspects of meditation have huge effects. Mindfulness and Awareness must coexist. Because it gives internal as well as exterior security. As we practise these techniques, our mind and body become fully synergistic. This enables you to focus more on the vital aspects of life while disregarding the ones that aren't. These abilities can be acquired with sufficient effort and training. Using these in our daily lives, on the other hand, allows us to completely appreciate life.

1.5.2 Mindfulness and Stress

Mental health care providers are increasingly incorporating mindfulness into their practises as a result of multiple studies showing its positive impacts on health and well-being as well as its potential to alleviate stress-related physical and mental issues (Shapiro and Carlson 2009; Hofmann et al. 2010; Grossman et al. 2004). Using mindfulness-based interventions, which have been shown to improve students' well-being and capacity for self-attention, influence, and behaviour, as well as their academic performance, can address the vast majority of the physical and mental health issues that they face at various educational levels (Hall 1999; Astin 1997; Bowlin and Baer 2011; Collard et al. 2008). For students, mindfulness-based therapies offer the possibility of increasing their access to psychiatric services.

When looking into the impact of mindfulness on stress reduction, it's crucial to look at what's already been proven. As previously said, mindfulness-based stress reduction is an innovative approach to increasing the well-being of those who practise it and benefit from cultivating attentive awareness. For decades, MBSR (Grossman, Niemann, Schmidt, & Walach, 2004) has been used to treat mental and physical disorders. It is a group-based practise that usually lasts eight to 10 weeks. In recent years, various levels of students have demonstrated worry, despair, and even suicide thoughts. According to the 2001 National College Health Assessment, 78 percent of respondents reported stressful situations, and 22 percent reported being unable to perform academically as a result of depression brought on by stress (Dixon & Robinson, 2008). Previous study has shown that students who struggle with daily stressors require a strategy to learn how to be more focused and conscious; mindfulness practise is a significant role in lessening the stress these students face.

According to many research, the benefits of mindfulness are linked to its ability to lower the body's stress reaction. Psychological stress can damage the immune system and aggravate a number of other health problems. Mindfulness may have ramifications throughout the body by lowering the stress response.

How Mindfulness Reduces Stress:

- Your ideas become much more conscious of you. You can then take a step back and not take things so seriously. Your stress response will not be triggered in the first time.
- You don't respond to a problem right away. Alternatively, you can take a breather and then utilise your "smart thinking" to figure out the ideal option.
- Mindfulness activates your "being" form of thought, which is related to relaxation. Activity and the stress reaction are connected to your "doing" frame of thought.
- You are much more aware and sensitive to your body's requirements. You may be able to detect pains earlier and take necessary action.
- You are more sensitive to other people's feelings. You're reduced likely to get into a fight as your emotional intelligence improves.

- Your sympathy and caring about yourself and others grows. This loving thinking calms you down and reduces your stress levels.
- The amygdala, a component of the brain, is less active when you practise mindfulness. Because the amygdala is responsible for triggering your stress response, your overall stress level will decrease.
- You have a higher ability to concentrate. As a result, you finish your work more quickly, have a stronger sense of well-being, and your stress response is reduced. You're more likely to enter "the zone," or "flow," as Mihaly Csikszentmihalyi coined the phrase in psychology.
- You have the ability to change your attitude toward stress. Rather than focusing on the negative repercussions of being stressed, mindfulness allows you to think about stress in a new way. Observing how increasing pressure helps you feel more energised has a good impact on your body and mind.

1.5.3 Mindfulness and Anxiety

In the event of anxiety disorders, the above-mentioned physical and mental symptoms can be observed. However, if a person just exhibits one or two symptoms, it cannot be concluded that he is suffering from this condition. If a child has had a number of symptoms for some time and the negative effects continue to bother him, impair his academics, sports, and daily activities, and make it difficult for him to socialise with his parents, siblings, friends, and others. Then we can claim that the issue is anxiety-related health. Anxiety disorders are classified into six categories by the American Psychiatric Association's DSM-IV. GAD, panic attacks, phobias, OCD, and PTSD are a few examples.

Anxiety is a mental state characterised by an inability to manage one's emotional reactions to threats. Anxiety is associated with mental function that is associated to emotional cognitive regulation in an indirect way. Mindfulness meditation can help to relieve anxiety. However, the brain mechanisms behind anxiety reduction with meditation remain mostly unknown. The effects of “Attention

to The Breath (ATB)” and “Mindfulness Meditation (after relaxation techniques)” on state anxiety were compared using pulsed arterial spin labelling MRI in roughly the same people. A four-day mindfulness meditation workshop was attended by fifteen healthy persons who had never meditated before. Although ATB did not reduce physiological anxiety, it did significantly reduce felt stress in each meditation retreat. The “anterior cingulate cortex”, the “ventromedial prefrontal cortex”, and the “anterior insula” all have a role in alleviating anxiety during meditation. When compared to ATB, mindfulness-based activity in these regions demonstrated a substantial correlation with anxiety relief. Those who demonstrated increased default-related activity (i.e., posterior cingulate cortex) during meditation reported higher levels of anxiety, which could be attributed to a lack of control over self-referential thinking. These findings suggest that “mindfulness meditation” decreases anxiety by controlling self-referential cognitive functions through the use of systems involved in their management.

- **How mindfulness can help you cope with anxiety**

When the body is stressed, people often realise that their thoughts, feelings, and sensations seem to be intensified. Mindfulness can help to reduce the intensity of the body's reaction to stressful situations.

Mindfulness enabled a person to step back from the whirlwind of concern and construct a buffer that provides mental protection. By doing so, a person should be able to properly investigate the source of the anxiety.

1.5.4 Mindfulness and Depression

Depression is an illness that is impacting an increasing number of people. Interest in formerly pleasurable activities fades, and the normal functioning of daily life is interrupted. Any sense of frustration or despair, however, is not an illness. We are all agitated by numerous situations in our daily lives, and we are occasionally unhappy and upset. We are frequently depressed and frustrated. However, these

sentiments are usually fleeting and pass on their own. It has little impact on our daily activities or social interactions. As a result, it may take a long time for some. The emptiness and negative feelings in my thoughts grew very strong. I don't like anything, and I don't want to speak to anyone; my eyes are welling up with tears. Unhappiness and the pressure of frustration or apathy in the two eyes - it catches the eye with a small amount of attention. I dislike reading, sports, listening to music, and watching movies. The mind becomes extremely perceptive. The rate of thought, speech, and action is substantially slower. The mind normally desires silence and solitude, as well as the avoidance of others. I believe that frustration occurs only on rare occasions. The mind wants to travel to a distant location. Suicide is an option that has crossed my thoughts. We can term it depression if this profound and deep sort of depression lasts for a long time in one's thinking.

The goal of mindfulness-based cognitive therapy is to help persons with major depressive disorder avoid relapsing into depression (MDD). It incorporates contemporary psychological treatments such as mindfulness and mindfulness training, as well as traditional Cognitive Behavioral Therapy (CBT) procedures. One of the cognitive ways could be to educate the individual about depression. Both mindfulness and mindfulness meditation emphasise being aware of and accepting all thoughts and emotions that arise without attaching or reacting to them. When persons who have previously experienced depression become disturbed, MBCT, like CBT, is based on the premise that they revert to habitual cognitive processes that can trigger a depressive episode. The goal of MBCT is to break these natural cycles by teaching people to absorb and observe incoming stimuli without reacting to them. This mindfulness practise teaches the person to recognise when automatic processes are taking place and to switch to a more contemplative reaction. The efficacy of MBCT in persons who have been depressed three times more than is supported by studies, which shows a 50% drop in survival chances. Below are three primary particular approaches to prevent depression among students of various levels:

- **Being present to oneself entails learning to pause, recognize, and answer:** MBCT mindfulness activities enabled individuals to be more purposefully fully present in the moment, allowing them to stop before reacting impulsively to others. Instead of being upset by rejections or criticism, they took a step back to analyze their own natural reactions—and to become more sensitive to the needs and feelings of others. Instead of becoming swept up in rising negative feeling, awareness provided them with more options on how to react.
- **It's okay to say "no" when confronted with anxieties:** Participants also claimed that they grew more forceful in saying 'no' to others so order to lighten their load of responsibility, allowing them to become more balanced in realising both their own and others' needs. The authors hypothesise that applying conscious awareness to difficult experiences helped participants approach situations they would have avoided previously, fostering self-confidence and assertiveness.
- **Being in the presence of others:** Being present to others allowed people to pay greater attention to relationships and value their time with each other. They discussed how being present to others assisted them in letting go of painful memories, allowing them to relate to people in new ways. Disagreements have become more meaningful as respondents were capable of understanding their communication issues and were better able to adopt another's point of view and concentrate on possible alternatives.

1.6 Define the Importance terms in Education: Awareness, Anxiety, Stress & Depression

- **Awareness:** The state of being aware of something is known as awareness. It is the ability to immediately know and sense events, as well as to feel or be aware of them. Another definition states that it is a state in which a person is aware of some information and that information is directly available to apply to a wide range of behavioural activities. But here the term 'awareness' is used

as Mindful attention awareness. The MAAS assesses a person's proclivity for mindfulness or mindlessness. The MAAS scores are highly linked to self-awareness, rumination, and self-reflection. Higher levels of 'positive affect', 'self-esteem', 'optimism', and 'self-actualization' are reported by those who score higher in mindfulness.

- **Anxiety:** Anxiety is characterized by a sense of dread, fear, and unease. Having a panic attack might cause you to break out in perspiration, feel anxious, and have your heartbeat faster. A natural response to stress may be the cause of this behaviour. Stress results in anxiety, which is our body's natural response to the stress. Dread or fear of what's to come is the underlying emotion. An anxiety disorder may be present if it is persistent, severe, and significantly impairs your daily activities for more than six months.
- **Stress:** The sensation of being overwhelmed or unable to cope with mental or emotional pressure is referred to as stress. Indeed, stress is a typical reaction that the body experiences when changes occur, resulting in physical, emotional, and cognitive responses. Stress responses assist your body in adapting to new environments. Stress can be beneficial in that it keeps us aware, motivated, and ready to avert danger. If you have an important test coming up, for example, a stress response may help your body perform harder and stay awake longer. However, stress becomes an issue when stressors persist without release or periods of rest.
- **Depression:** Depression (major depressive disorder) is a widespread and significant medical ailment that has a negative impact on how you feel, think, and act. Depression is a prevalent form of mental illness. It is estimated that 5.0 percent of adults in the world suffer from depression. Depression is a key cause of disability worldwide and contributes significantly to the global illness burden. Women are more likely than men to suffer from depression. Suicide is a possibility if you're depressed (WHO, 2021).

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CHAPTER – II

PROBLEM OF THE STUDY

2.1 Review of Related Literature

An assessment of related literature work is a written documentation of the current level of knowledge about a study problem. To make a critical analysis of the emerged problem studies available in this area had to be considered for a better insight that was required for the enhancement of an expensive continental context into the problem relevant. It gave an overview of the existing evidence for the topic being studied, which helped to justify the current study. For this purpose contemporary studies on Mindful intervention therapy among the various levels of Students in India the State of West Bengal and of other countries and its effectiveness on Mental health and awareness, which includes source-books, Journals, Report, Article published and unpublished thesis, current reviews periodicals and internet were reviewed to specify the present research problem.

The review of literature enables the researcher to -

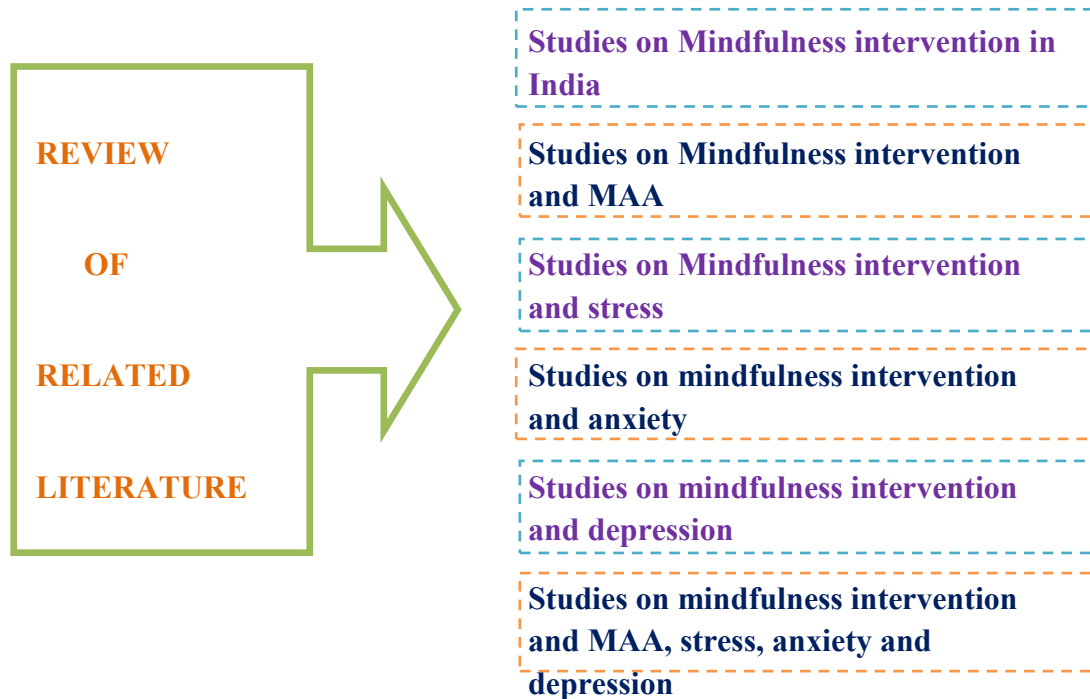
- ✓ Highlight the research topic, theoretical framework, or conceptual framework with evidence.
- ✓ Determine the significance of the study topic.
- ✓ Provide background information about the subject.
- ✓ Make a list of promising methodologies and metrics.
- ✓ Current expertise in the relevant field.
- ✓ Thorough understanding of the researcher's process, tools, and approaches.

With this background, the researcher presents a detailed review of works reported in various sources on Mindfulness Meditation therapy in the field of

Meditation therapy. The review of related literature refreshes the researcher's ideas, regarding the problem of own and helps her in the whole process of research.

The literature review on the present study has been classified into categories such as Anxiety, Stress, Depression, and Academic achievement on Mindfulness meditation. The researcher scanned some studies related to Mindfulness intervention with Mindful attention awareness, Anxiety, Stress, and depression and organized the abstracts of them are given below.

Figure 2.1: An empirical view of review of related literature



2.1.1 Studies on Mindfulness Intervention in India

Among the many studies conducted on Mindfulness Intervention in India, the main content of the important studies are -

Kumar, K. (2014) conducted a research entitled as, “**Academic Anxiety among the students and the management through Yoga**”. The work examined the usefulness of yogic practice-based intervention on academic-related anxiety levels in undergraduate students. A pre-posttest research design was used for the study and thirty college going students were randomly selected to thirty minutes yogic exercise for 45 days. Academic anxiety was remarkably got lowered at the end of that programme.

Sinha, M. et. al (2020) conducted research entitled “**Mindfulness: a traditional Buddhist wisdom to cope with the COVID-19 situation**” which depicted the usefulness of mindfulness as a traditional Buddhist knowledge and its appropriateness to combat mental health problems in disaster situation like the coronavirus pandemic. The study examined the importance of mindfulness, as well as its advantages, as well as some mindfulness techniques that may be used in everyday life to reduce stress, anxiety, fear, worry, and unneeded panic and boost wellbeing among people.

Singh, S. & Menon, P. (2014) conducted a study entitled, “**Personality correlates of Mindfulness: A study in Indian setting**”. The goal of this study is to continue the above attempt by searching for the relationship between mindfulness and the big five characteristic attributes within an experimental approach existent in the Indian setting, in order to provide some cross-cultural justification to establish relationships in the Western environment. As a result of the research, mindfulness was found to have a good relationship with extraversion, however to a smaller amount. In the present study of Yoga students, the investigation found no gender differences in neuroticism, indicating a divergence from a generally held gender divide.

Agarwal, A. & Dixit, V. (2017) conducted a research entitle as, **“The role of Meditation on Mindful awareness and Life Satisfaction of Adolescents”**. This research paper were two objectives, i.e. the first target of the study was to find out The impact of meditation on adolescents' mindful awareness and life satisfaction; and another reparation was to explore the relationship of mindful awareness and life satisfaction of adolescents. The result of the study was found that meditation had no significant difference on life satisfaction of Adolescents and another result was no significant correlation between Mindful attention awareness and life satisfaction of the adolescents.

Roy, P. et. al. (2019) conducted a research entitle as, **“Effectiveness of Raja Yoga Meditation on Depression, Anxiety and Stress in females with premenstrual syndrome”**. The focus of this research was to see if Raja Yoja Meditation may help women with premenstrual syndrome with depression, anxiety, and stress. The findings of the study revealed a significant reduction in depression, anxiety, and stress scores after exercising Raja Yoga meditation, and the study adds to the growing body of evidence supporting the therapeutic impact of Raja Yoga meditation in the management of stress.

Suganya, T. et al. (2018) conducted a research entitle as, **“Mindfulness Meditation Technique on Reducing perceived stress among adolescents in selected School at Puducherry”**. There were three general objectives; i.e (i) to test teenage psychological stress levels, (ii) to assess the efficacy of the mindfulness meditation practise in decreasing perceived stress, and (iii) to correlate teenage perceived stress with a certain demographic variable. Using the paired't' test, the study found that the post-test level of stress of adolescents' average score is lower than the pre-test level of stress mean score. The mindfulness meditation techniques have a significant statistical significance in reducing stress among adolescents, according to this study. Following the implementation of the mindfulness meditation approach, the stress was released significantly.

Sasikumar & Latheef, F. (2017) conducted a research entitled as, **“Effects of Mindfulness based stress reduction (MBSR) on stress, Depression and mindfulness among type 2 Diabetics – A randomized pilot study”**. The purpose of this study was to see how Mindfulness-based Stress Reduction affected Stress, Depression, and Mindfulness in type 2 diabetics living in certain villages. The study's findings revealed that MBSR was a successful intervention in reducing stress, depression, and improving mindfulness awareness among the experimental group's participants.

Amaranth, R. et.al. (2018) conducted a research entitled as, **“Impact of Heartfulness Meditation on Reduction Stress in Nursing Students: A perspective observational study”**. The research paper's major goal is to investigate and evaluate the efficacy of heartfulness meditation in relieving stress amongst participants from nursing school background in a classroom setting. A prevalence study of 120 nursing students was conducted using a standard perceived stress questionnaire. The findings suggest that discernment of one's immediate surroundings of learning and medical practice, tackling individual concerns, and striking a balance between personal life and college pressure are the most prevalent topics. Workload stress scores are greater in fresher students than in the senior students; level of anxiety and persecution is found to be greater amongst sophomores; happiness quotient is higher in sophomores; and stress level is greater in sophomores than in final year students. The participant's workload, concerns, and harassment scores all decreased after attending the Heartfulness Meditation programme, while their joy score increased.

Goyal, A.P. (2017) conducted a research entitled as, **“Yoga, Meditation and Stress in Students Life”**. The study's goals include determining the impact of yogic activity on students' academic performance and determining which yoga poses can aid in boosting academic performance. There are various researches that support this theory, and to a significant extent. Stress is a normal reaction when an individual is confronted with a physiological threat or a situation that forces him or her to step outside of his or her comfort zone. The rate of blood pressure varies as the body's hormonal reaction changes, and this determines whether the person should retaliate or flee. This serves as a retaliatory strategy for the individual. Numerous

experts suggest that physically or mentally workouts aid in the maintenance of the needed balance. In the same vein, research shows that yoga is among the most efficient forms of exercise for reducing stress and keeping its negative effects at bay. There are various asana sequences and, without a doubt, meditation that can assist one deal with daily existence stress and its consequences, starting with basic breathing exercises. When it comes to yogic exercises, it's not just about the end result; it's also about the process itself.

Kumar, H. et. al. (2011) conducted a research entitled as, “**Meditation induces a positive response during stress event in Young adult students**”. The study's major purpose was to see how Integrated Amrita meditation techniques affected people's reactions to life changes. The IAM techniques, Progressive Muscle Relaxation technique and the Life Changes Questionnaire were used and 150 sample randomly chosen for the study. The Integrated Amrita meditation technique is an efficacious tool in lessening Stress as measured by Life Changes Questionnaire.

Singh, S. & Priyanka (2020) conducted a research entitled as, “**Mindfulness Promotes health and Wellbeing-A review**”. Mindfulness has been shown to be a helpful strategy in the treatment of a variety of mental illness and physical incapacities, also in general boosting our productivity, interactive skills, and overall welfare. Training of mindfulness produces immense possibility for the betterment of our health. The present study is an endeavor to explore several research works in the field of mindfulness and its influence on one's overall health and well-being. According to the uncovering of the study, mindfulness meditation has a strong health and well-being appeal.

Kaur, M. & Kumar, R. (2016) conducted a research entitled as, “**Effect of Yoga and Meditation on Stress Management of Female Prisoners in Delhi – a Review Paper**”. The studies used in the present research help in establishing how yoga can improve mood, reduce stress and control anti-social behavior in human beings as compared to those who lack meditation sessions in their routine, all the more in women in prison, since women (and men) prisoners need constant emotional and psychological therapies to guard their anti-social instincts in future. This research

examines the positive and encouraging changes in the health of female convicts in Delhi who practised meditation, yoga, and other stress-reduction practises.

Singh, S. et. al. (2014) Conducted a research entitle as, “**Personality correlates of mindfulness: A study in an Indian setting - Yoga Mimamsa**”. The study's goals are to advance the aforementioned endeavour by investigating the relationship of the big-five characteristic traits found in Indian setting to mindfulness for the purpose of providing certain pluralistic credibility to accepted relationships in the Occidental culture. After controlling for demographics, the outcome of the present study on 60and more students from Yoga background validated prior meta-analysis by demonstrating extremely crucial nominal associations, neuroticism for negative value of -0.45 and conscientiousness for positive of 0.49.Mindfulness has a minor but significant positive relationship with extraversion ($r = 0.29$). Surprisingly, the study foundno differences in neuroticism within the present specimen of Yoga students, irrespective of their gender, are causing a deflection from a generally held gender disparity.

Hussain, D. &Bhushan, B. (2010) conducted a research entitle as, “**Psychology of Meditation and Health: Present Status and Future Directions**”. This work aims to lay out a complete outline of the current state of meditation and health research.It assesses the most important data about meditation and its impact on a variety of diseases.Concentration and mindfulness are the two main types of meditation practises that are now popular.Meditation's effects on human physiology are explored, including heart rate, blood pressure, brain activity, metabolism, respiration, and skin resistance.Meditation's effects on human perception and cognition are also discussed. Tranquility, structure desensitization, allow to leave of repressed memories, un-stressing, and other possible pathways or mechanisms by which meditation influences health are also discussed.Ultimately, key conceptual and methodological challenges that require serious consideration by upcoming investigators are addressed.

Kumari, S. et. al. (2018) conducted a research entitle as, “**Psycho physiological effects of yoga on stress in college students**”. The main focus of this work is to come up with prior corroboration for the psycho physiological results of yoga on anxiety generally prevalent among young adults and college going students. According to the findings, yoga has favourable impacts on a psycho physiological level, resulting in lower stress levels among college students. More research is necessary to confirm how well different forms of yogic practises meet the demands of various college subpopulations.

Jain, V. & Sharma, J. (2017) studied on **Effect of Yogic Intervention: Pranayama on Anxiety & Depression**. The effect of Yoga: Pranayama on Anxiety and Depression has been investigated. A before and post control group design was employed on a subjective sample of 120 people (both male and female in number of 60 each). The tools utilised were the life style questionnaire (referred to in the introduction to health psychology) and Curran & Cattell's 'Eight State Questionnaire,' Indian modification by Shri Malay kapoor New Delhi, and Kapoor & Bhargava (Agra). A study of the data suggests that yoga pranayama had a favourable effect in the experimental group in terms of anxiety and depression management as well as establishing a good self-image, whereas the control group showed no significant change.

Gull, M. (2017) conducted a study entitle as, “**Beneficial Effects of Yoga and Exercise on Psychological Paradigms of an Individual**”. The purpose of the study was to see if yogic and physical training affected one's self-concept. A total of 120 subjects were divided into four groups: light activity, heavy exercise, yoga performers, and the control group. The participants are all males between the ages of 26 and 58. Simple ANOVA was used to examine the data in a multi-group design. According to the findings, the control group had a substantially lower self-esteem than the exercise and yoga participants.

Udupa, K.N. (1985) studied on **Stress and its Management by Yoga**. This monograph focuses on our research into the origins and treatment of the most common and disabling stress and strain illnesses. It is now widely accepted that the brain, with its well-known centres for sensory, cognitive, and emotional processes,

plays a critical part in maintaining a healthy body and mind by releasing the necessary quantity of neurohumors and hormones. Any disruption of this equilibrium, whether caused by hereditary or environmental factors, will result in the emergence of stress illnesses. Initially, the modifications are functional, but later on, physical changes associated with Stress Disorders emerge. During the acute period of treatment, tranquillizers and other medicines may be beneficial. If the issue persists, however, Yoga can substantially assist in overcoming the neuro-humoral changes that are occurring in the brain. As a result, Yoga's comprehensive practise performs an essential function in the prevention and treatment of anxiety associated ailments. For the benefit of all concerned, all of these factors have been addressed in sufficient length throughout the book with relation to each of the stress illnesses.

Gokhale, L.V. et. al. (1992) studied on **“Effect of short-term pranayama on breathing rate and ventilatory functions of lungs”**. Thirty-three fit male and forty-two healthy woman volunteers, with an average life expectancy of 18.5 years, took part in a six-week 'Pranayam' training, and their ventilatory lung capacities were assessed before and after. Forced vital capacity (FVC), forced expiratory volume at the end of the first second (FEV1 percent), maximal voluntary ventilation (MVV), peak expiratory flow rate (PEFR-lit/sec), and breath operating parameters were all improved, according to the study.

Jain, V. (2018) studied on **“Effect Of Yogic Intervention: Pranayama On Depression”**. A research of the effect of Yoga: Pranayama on depression has been attempted. A before and post control group design was employed on subjective sample consisting of 120 people (both male and female in number of 60 each). As tools, the 'Life Style Questionnaire' and Curran & Cattell's 'Eight State Questionnaire', Indian adaptation by Shri Malay Kapoor, New Delhi, Kapoor & Bhargava (Agra) were utilised. The results suggest that yoga pranayama had a good effect in the experimental group in terms of managing depression and establishing a positive self-image, while the control group showed no significant change.

Sao, A.K. (2017) studied on “**Yogic Management of Psychological Disorders Related to BPO Sector**”. The psychological characteristics of stress, anxiety, depression, and exhaustion are well-known in the young working age, and they are also present here. Yoga is thought to be the most effective treatment for several mental illnesses. It includes a variety of light asanas, breathing exercises, and relaxation techniques. A contact centre in New Delhi was used to randomly choose two groups of 40-40 (experimental and control) volunteers (18-35 years) for the study. Over the course of two months, the yogic management programme comprised of 45 minutes of controlled breathing, physical postures and relaxation. Before (at zero time) and after yogic intervention, psychological traits were examined using the Eight State Questionnaire (8SQ) (after 2 months). In the trial group, crucial decline in stress, depression, tension, and fatigue were noted (yoga group). It was pointed that no major transformation occurred in any of the metrics belonging to the control sample (group of non-yoga participants). This yogic management approach is thought to be beneficial for young employees who work rotating shifts and have psychological issues that may cause problems in the future.

Harrer, M. et. al (2019) conducted a research entitle as, “**The Effects of Meditation, Yoga, and Mindfulness on Depression, Anxiety, and Stress in Tertiary Education Students: A Meta Analysis**”. The study investigated the impact meditation, yoga, and mindfulness on stress, anxiety and depression found mostly in the students at higher education level. Major part of the research consisted of poor standard; hence the outcome should be regarded with circumspection. In general, there was mild impact which was significantly reduced when intercessions were contrasted with active control. It's still uncertain if meditation, yoga, or mindfulness have any adverse implications on academic performance.

2.1.2 Studies on Mindfulness Intervention and MAA

Important studies on Mindfulness Intervention and Mindful Attention Awareness are discussed below -

Gregorio, S. & Pinto-gouveia, J. (2013) conducted a research entitled as, **“Mindful Attention and Awareness: Relationships with Psychopathology and Emotion Regulation”**. A massive curiosity in awareness in the opinion of the community of scientists in a particular field of study has begun multiple tone- record means of this cerebral form. The Mindful Attention Awareness Scale (MAAS) is a tone- record means of awareness in a particularity- position. The goal of this paper is to look into the psychometric features of MAAS and validate them for the Portuguese people. Two studies at the beginning, duplicate portions of the approaches from the actual author's work, particularly conformational factor analysis, in two separate samples from the Portuguese general community population. The scale's single-component form was validated by both the analysis conducted and demonstrated a high level of trustworthiness. Furthermore, data acquired from cross-verification revealed that this single-component form is appropriate for a variety of subjects from the public. The Portuguese interpretation of the MAAS was shown to have good coincident and discriminate validity in the third study. Ultimately, the data upholds the psychometric viability of the interpretation in Portuguese of MAAS and indicate that it is a dependable tone-record means of particularity-awareness, a key construct in Clinical Psychology research and intervention.

Ito, D. et. al. (2021) conducted a research entitled **“Mindful attention awareness and cognitive diffusion are indirectly associated with less PTSD-like symptoms via reduced maladaptive posttraumatic cognitions and avoidance coping”**. The study purported to investigate the process by which awareness and cognitive-behavioral components related to post-traumatic negative cognition and avoidance acts are correlated with decreased PTSD-like manifestations. Data was analysed from 254 individuals who had experienced trauma and had PTSD-like indicators. The final SEM model revealed zero direct relationship between aware attentive mindfulness and PTSD-like symptoms, a modest direct relationship between

cognitive prolixity and PTSD-like symptoms, and a strong circular relationship between “post-traumatic negative cognitions” and “avoidance managing”. Because of the study's cross-sectional methodology, firm generalizations about the counterproductive link between awareness and cognitive-behavioral processes or ideas cannot be reached. Nonetheless, our findings imply that further research into the medium of awareness and its application in the treatment of PTSD is warranted. Rather than combining them in the very same model, a substantially accurate study design will hopefully be utilised in the future to analyse the processes of multiple different components linked with enhancement in posttraumatic stress symptoms.

Prado, S. & Anastacio, J. (2018) conducted a research entitle as, “**An assessment of mindfulness intervention as a regular subject in Ecuadorian higher education**”. The current design hypothecated that awareness training should ameliorate the scholastic performance of undergraduate scholars. Despite this, no significant relationships were found between awareness practices and FFMQ or MAAS scores. The “Five Facet Mindfulness Questionnaire (FFMQ)” and the Aware Attention Mindfulness Scale were used to assess two independent groups of university scholars (MAAS). The descriptive analysis of our groups revealed that the awareness exercise resulted in good adjustments in academic concerns. In the first study, there were negative changes in FFMQ, MAAS, and academic pars results. In the other experiment, however, there were positive differences in FFMQ, MAAS, and academic pars problems. The current study's findings show that either the first script's awareness stage is unaffected by awareness activities, or the alternate sample represents an optimal awareness group experience. For specific groups such as engineers or wisdom scholars, the FFMQ and MAAS may need to be modified.

Ruth A Baer, Gregory T Smith, Kristin B Allen (2004) conducted a research entitle as, “**Assessment of mindfulness by self-report: the Kentucky inventory of mindfulness skills**”. For certain groups, such as engineers or wisdom scholars, the FFMQ and MAAS may need to be modified. Three groups of fresher's along with a group of rehabilitants having frame psychosis were used as actors. Based on current awareness discussions, four awareness chops were identified: observing,

describing, acting with mindfulness, and accepting without judgement. Each skill was measured using scales that were devised and estimated. Each skill was measured using scales that were devised and estimated. Connections with other constructions were more significant than expected. The findings imply that distinct characteristics of personality and internal health, such as neuroticism, cerebral symptoms, emotional intelligence, alexithymia, existential avoidance, dissociation, and immersion, are associated to awareness chops in different ways.

Catak, P.(2012)conducted a research entitle as, “**The Turkish Version of Mindful Attention Awareness Scale: Preliminary Findings**”. The researchers wanted to look at the psychometric components of MAAS in respondents from non-clinical Turkish backgrounds, and the links between mindfulness and overall welfare, experiential avoidance, cognitive re-evaluation, and recklessness. The study enlisted 100 people from two different populations.Post a gap of 3 weeks, the same samples received a second MAAS treatment. Inner stability was arrived at with the help of Cronbach's alpha, test–retest dependability was concluded using Pearson association, and factor analysis was utilised to explore the scale's internal structure.The association between mindfulness and conjoining procedures was investigated using Pearson association. According to the research’s initialfindings, the Turkish MAAS has sound psychometric marks.The sole-element composition of the actual scale was established.The predicted orientations of mindfulness and well-being, experiential avoidance, and impulsivity all revealed strong relationships.MAAS is a mindfulness evaluation tool for the Turkish population that is internally consistent and temporally valid.

Seema R. et. al. (2014) conducted a research entitle as “**The Estonian Mindful Attention Awareness Scale: Assessing Mindfulness without a Distinct Linguistic Present Tense**”. The Estonian Mindful Attention Awareness Scale was created in response to a lack of Vipassana meditation diagnostic and therapeutic applications in Estonia (MAAS).Estonian, unlike most languages, lacks a distinct present tense. This could be a stumbling block in determining mindfulness, a psychological concept defined by present-moment awareness. In an Estonian adult sample of students, MAAS scores were unaffected by gender or educational level,

were strongly connected to subjective well-being and self-esteem, and were negatively related to public self-consciousness and social anxiety. According to an investigation of the Estonian version's item response theory (IRT), seven items held the majority of data. The researcher examined how using the MAAS on a specific linguistic context can help to understand mindfulness.

Poorebrahim, A. et. al. (2021) conducted a study entitled as, **“Using Mindful Attention Awareness Scale on male prisoners: Confirmatory factor analysis and Rasch models”**. The construct validity (factor structure) of the Persian Mindful Attention Awareness Scale (MAAS) was investigated in this study on a group of male convicts. Confirmatory component analysis (CFA) and Rasch analysis with divergent item functioning were used to evaluate the build viability of the MAAS (DIF). The DIF was experimented with a variety of conditions of sleeplessness (putting into use the ISI with a ceiling point 15), psychological welfare conditions (putting into use the GHQ-12 with a ceiling point 12), and age groups (putting into use the average age of 39.44 as the ceiling point). As a result, the Persian version of the MAAS has proven to be a trustworthy measure for assessing mindfulness among Iranian male inmates.

Marais, I. (2015) conducted study entitled as, **“A Rasch Model Analysis of the Mindful Attention Awareness Scale”**. Non-meditators and meditators were tested for the psychometric properties of the Mindful Attention Awareness Scale using the polytomous Rasch model. According to the findings, several objects did not work in the same way for these two groups. In terms of mean estimates, meditators outperformed non-meditators overall. The research revealed a group of items as highly discriminating. Van Dam, Earle, and Benders used a different approach in 2010 to classify the same category of things as highly discriminating, and they decided that they had the greatest knowledge. Several Rasch analysis snippets revealed that these items discriminate substantially owing to local dependence and so do not provide independent information. We spoke about how two very distinct measuring methodologies result in two very different conclusions based on comparable findings.

Kapoor, R. (2020) conducted a study entitled as, **“Impact of codependency on personal growth and mindful attention”**. This research is focused on observing the effects of mutual dependency on adult self development and attentive thoughtfulness. The majority of the participants in the research were between the ages of 20 and 40 years old (50 males and 50 females). The SFCS (1991), PGIS-II (2012), and MAAS were utilized as standardized tools (2003). Furthermore, The outcome of the present research demonstrated a strong link between mutual dependency, self-development, and thoughtfulness, as well as a considerable impact of mutual dependency on self development and thoughtfulness.

Maniago, J.D. et. al. (2021) conducted a research entitled as, **“Improving mindful attention awareness among Saudi nursing students through autonomous sensory meridian response stimulation”**. The goal of this study was to see how ASMR stimulation affected nursing students' mindful attention awareness right away. This is a quasi-experimental pre- and post-test design with two treatment groups and a reference group. ASMR is seen as being a viable strategy in nursing education for increasing students' mindful attention awareness. In terms of enhancing nursing students' mindfulness attention awareness, whispering and auditory noises, in particular, outperform personal attention trigger cues.

Morgan, J.R. et. al. (2014) studied on **“A Preliminary Analysis of the Psychometric Properties of the Mindful Attention Awareness Scale among African American College Students”**. The Mindful Attention Awareness Scale (MAAS), which was employed in this study. Nevertheless, only White samples have been used to verify the MAAS so far. Although mindful attention may be a viable idea among people belonging to African American origin, none of the mindfulness steps was made viable for such population. An online survey platform was utilized to collect steps of cognitive anxiety and cognitive adjustability along with the MAAS. “Confirmatory Factor Analysis” demonstrated that the MAAS had a one-dimensional aspect structure in the current test group. The MAAS demonstrated a high level of inner stability, hence associated with minor extent of cognitive discomfort and more cognitive adjustability. Researchers investigating mindfulness among African

Americans may be able to employ the MAAS, based on the findings of this early study.

Osman, A. et. al. (2016) studied on “**The Mindful Attention Awareness Scale: Further Examination of Dimensionality, Reliability, and Concurrent Validity Estimates**”. The component build-up and psychometric attributes of the Mindful Attention Awareness Scale (MAAS) were explored in a test group of 810 college fresher respondents. The researchers found the evidence for a 1-factor solution using standard exploratory factor analysis (EFA) (41.84 percent common variance). A 1-factor confirmatory factor analysis was used to corroborate the 15-item MAAS's unidimensionality (CFA). The EFA and CFA results, respectively, backed up the idea of a one-dimensional model. Using differential item functional analytic methods inside item response theory modelling, this study revealed that those with both higher and lower measures of detachment emitted response resembling MAAS components. Based on a rigorous item analysis, researchers presented a 5-unit smaller model of the apparatus, as well as descriptive data and compound count dependability for the abridged and complete models of the MAAS. Finally, associative studies demonstrated that tally on the MAAS, both the complete and abbreviated models, were correlated to construct-associated variables. In terms of better understanding mindfulness, the 5-component MAAS is just as beneficial as the actual MAAS.

Black D.S. et. al. (2012) studied on “**Psychometric Assessment of the Mindful Attention Awareness Scale (MAAS) Among Chinese Adolescents**”. The psychometric properties of the MAAS are thoroughly examined in this study among Chinese secondary school level students from Chengdu, China. The study included classrooms from 24 different schools, which were picked at random. The researchers looked at three waves of longitudinal data (a total of 5,287 pupils). Using latent factor analyses, the construct and incremental validity of the MAAS were assessed, as well as its measurement invariance across gender. The mean age of the trainers were 16.2 years (SD = 0.7), with 51 percent of them being male. At Wave 1, the 15-component MAAS had a satisfactory suitability to the single-measure trait build, which was reproduced at Wave 2. The results from Wave 3 fit well with an MAAS 6-item short

scale. The MAAS retained its reliability (Cronbach's $\alpha = .89-.93$; test-retest $r = .35-.52$), conjoining/distinguishing soundness, and the potential to explain additional difference in mental hygiene indicators way more than other psychosocial framework. At least some gender factorial invariance was found in both the 15- and 6-item MAAS measures. The findings suggest that the MAAS can be used to predict trait mindfulness in Chinese teenagers. I find the MAAS 6-item short-scale to be a good choice for reducing responder burden. To minimize participant load, the MAAS 6-component small-scale gives a trait mindfulness measuring option.

2.1.3 Studies on Mindfulness Intervention and Stress

Important studies on Mindfulness Intervention and Stress are discussed below -

Omidi, A. & Zargar, F. (2015) conducted a research entitled as, **“Effects of mindfulness-based stress reduction on perceived stress and psychological health in patients with tension headache”**. This investigation evaluated the effectiveness of MBSR in treating tension headache patients' perceived stress and mental wellbeing. Subject matter and procedures: it is a randomised controlled test. The MBSR group was assigned eight new classmates each week for 12-minute sessions. The sessions were conducted according to the MBSR methodology. Each group was given the Brief Symptom Inventory (BSI) and Perceived Stress Scale (PSS) before and after therapy, as well as during the 3-month follow-up. The study's key conclusion is that MBSR can help people with tension headaches reduce stress and enhance their overall mental health.

Dunning, D. et. al. (2018) conducted a study entitled as, **“Research Review: The effects of mindfulness-based interventions on cognition and mental health in children and adolescents - a meta-analysis of randomized controlled trials”**. This metaanalysis attempts to determine the efficacy of MBIs in studies that used a randomised, controlled trial (RCT) methodology for children and adolescents. Up till October 2017, a procedural probe into the writings of RCTs of MBIs was undertaken. In random effects metaanalyses, 33 independent trials involving 3,666

children and adolescents were included, with results being divided into mental, physiological, and sentimental components. Independent arbitrary effect model meta analyses were carried out for each of the seventeen studies ($n = 1,762$) that was based on RCT design accompanied by effective regulatory conditions. The study's main finding is that the efficiency of employing MBIs for enhancing the cognitive hygiene and welfare of kids, as measured by the gold standard RCT technique, is high. In recent future RCT studies must include scaled up definitive test structures to better assess the resilience of MBIs in youth, with an emphasis on techniques of steps incorporated.

Janssen, M. et. al. (2018) attempted to complete a research project titled, **“Effects of Mindfulness-Based Stress Reduction on employees’ mental health: A systematic review”**. The main focus of the current exploratory research was to learn more about the impact of Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT) on employee mental health. According to the findings of this systematic investigation, MBSR may help employees enhance their psychological functioning.

Innes, K.E. et. al. (2011) attempted to complete a research project titled, **“The Effects of Meditation on Perceived Stress and Related Indices of Psychological Status and Sympathetic Activation in Persons with Alzheimer’s Disease and Their Caregivers: A Pilot Study”**. The aim of this research was to assess in what ways a 56 days meditation programme influenced reported tension, sleep, mood, and other results in people having dementia and their care attendants. The participants in the trial were community-dwelling seniors with light mental disability or primary-level Alzheimer's disease, as well as their live-in caregivers. Following a brief tutorial, students were advised to meditation for 11 minutes twice daily for the next eight weeks. Measures of perceived stress, sleep, mood, memory functioning, and blood pressure were among the major outcomes. Participants were evaluated both before and after the intervention. The first results of this study suggest that an 8-week meditation practice may be an effective and efficient way of decreasing felt stress and enhancing specific dimensions of sleep, mood, and memory in adults with cognitive decline and their caregivers.

Schwartz, G.E. & Bonner, G. (1998) attempted to complete a research project titled, **“Effects of mindfulness-based stress reduction on medical and premedical students”**. Using a well-controlled statistical design, the current study investigated the short-term benefits of an 8-week meditation-oriented anxiety depleting intervention on premedical and medical students. The discovery show that involvement in the meditation can be helpful(1) begin to lessen self-reported condition and characteristic associated stress, (2) begin to lessen the findings of general psychological discomfort, such as depression,(3) improve results on general sensations that arise, as well as (4) improve results on an estimate of religious occurrences tested at the conclusion of the session. These discoveries(5) were observed throughout the exam time, (6) were consistent across several studies, and (7) were observed during the wait-list control group.

Astin, J.A. (1997) studied on **ways to reduce anxiety through thoughtfulness meditative practices. Its impact on cognitive symptomatology, sensation of grip, and mystic encounters**. The benefits of 56 days programme for anxiety depletion was contingent upon mindfulness meditation coaching which were investigated in this study. Past study has been complicated by the lack of a sufficient comparison control group, which has hampered previous attempts to demonstrate that this programme may be favourable in terms of lessening anxiety-associated symptomatology and assisting sick people in terms of managing their pain. Twenty-eight people who consented to take part in the study were arbitrarily allocated to anyone of two classes: an experimental set or a nonintervention control set. Mindfulness meditation practises, with their emphasis on developing detached observation and awareness of the contents of consciousness, may be a significant cognitive behaviour coping aid for changing how we react to life experiences. They may also be essential in reducing relapse in those suffering from mood disorders.

Marchand, W.R. (2012) made a study on **Mindfulness-based stress reduction, mindfulness-based cognitive therapy, and Zen meditation for depression, anxiety, pain, and psychological distress**. The practise of learning to divert awareness on present situational experience with openness, inquisitiveness, and acknowledgement is defined as thoughtfulness. Mindfulness is becoming immensely

famous as a corresponding therapy technique for a gamut of therapeutic and cognitive illnesses. This article gives a general outline of three mindfulness therapies which were shown to be useful because of mental manifestations and/or distress. The aim of the current study is to give practising clinicians with an overview of Zen meditation, mindfulness-based stress reduction (MBSR), and mindfulness-based cognitive therapy to serve as a therapeutic reference (MBCT). Although all three methods are based on Buddhist spiritual practises, only Zen is considered a real Buddhist tradition. Manuals and standardised methodologies are used in MBSR and MBCT, which are secular, clinically based therapies. MBSR and MBCT have been shown in studies to provide broad-spectrum antidepressant and anti-anxiety benefits, as well as a reduction in overall psychological discomfort. As an adjuvant treatment for depressive disorders, MBCT is highly recommended. Both MBSR and MBCT appear to be effective as supplementary therapies for anxiety symptoms, according to the data. In both people with medical and psychiatric illnesses and healthy people, MBSR has been shown to improve general psychological health and stress management.

Choi K.E. & Ostermann T. (2011) conducted a research work entitled as, “**mindfulness-based stress reduction for integrative cancer care: a summary of evidence**”. The use of mindfulness-based stress reduction (MBSR) in cancer care is critically appraised in this paper, which gives a detailed summary of the relevant existing evidence. A systematic review was also run to probe the effects of MBSR on QoL, disposition, and anguish. The systematic review found 19 original research papers that fit the inclusion criteria, including 6 reviews that are reported separately. The 19 original publications included five RCTs, four NRCTs, nine OS, and one two-arm observational research. According to the findings of this study, MBSR programmes have been shown to increase QoL and mood in cancer patients while also decreasing distress. More high-quality RCTs with proper controls, longer follow-up periods, big sample sizes, full descriptions of patients' psychological profiles, and the inclusion of qualitative measures, on the other hand, are desperately needed.

Dundas,I. et. al. (2016) studied on **Mindfulness Based Stress Reduction for Academic Evaluation Anxiety: A Naturalistic Longitudinal Study.**

In a study of a batch of 70 graduate and post-graduate students who needed help, the effects of mindfulness-based stress reduction (MBSR) on stress related to educational evaluation stress and morale were examined. A continual step examination of statistical covariance on the 46 respondents (median age = 24 years, 83 percent women) who completed pretreatment and post-treatment assessments revealed that assessment related stress and morale improved. A growth curve examination of the actual number of 70 respondents's demonstrated decrease in both intellectual and affection related features of assessment of stress, which lasted after the intervention. Although further research is needed, this study suggests that MBSR may help people feel less anxious before exams.

Gouda, S. et.al (2016) studied on **Students and Teachers Benefit from Mindfulness-Based Stress Reduction in a School-Embedded Pilot Study.**

There is a paucity of research on the efficacy of a school-based mindfulness-oriented mediation for both children and instructors. To fill this void, the current trial look into whether pupils and educators who take independent Mindfulness-Based Stress Reduction (MBSR) courses improve in a number of cognitive characteristics, such as mental health and creativity. The findings add to an expanding body of research on mindfulness in schools by contrasting and comparing the impact of MBSR on pupils and educators, as well as emphasizing the significance of considering social repercussions.

Rosenzweig, S. et. al. (2009) conducted a study entitle as, "**Mindfulness-Based Stress Reduction Lowers Psychological Distress in Medical Students**". The purpose of this work was to determine whether the MBSR arbitration was effective in a predictable, methodical, cohort-controlled research. The method used in this investigation was A total of 140 sophomores (n = 140) enrolled in a 10-week MBSR course. A didactic course on complementary medicine was attended by the controls (n = 162). To evaluate mood before and after the intervention, the Profile of Mood States (POMS) was utilised. The MBSR group had a higher baseline total mood disturbance (TMD) than the controls, according to the findings. Despite

this initial difference, the TMD score of the MBSR group was considerably lower at the end of the intervention period. Stress-Angst, Perplexity-Bafflement, Exhaustion-Lethargy, and Strngth-Exercise subscales all showed significant effects.

Beddoe, A.E. et.al. (2004) conducted a study entitle as, **“Does Mindfulness Decrease Stress and Foster Empathy among Nursing Students”?**In the present trial study of baccalaureate nursing students, the effectiveness of 56 days mindfulness-based stress reduction (MBSR) programme on anxiety and compassion were studied. The programme's purpose was to give the pupils with the skills necessary to deal with private and work-related anxiety, as well as to generate compassion through relational knowledge. A convenience sample consisting of 16 pupils took part in the programme, listened to guided meditation audiotapes at home, and kept a notebook. Anxiety and compassion were evaluated with the help of paired sample t tests. Students' anxiety levels were significantly lowered after participating in the intervention ($p > .05$). A variety of stress factors, such as attitude, time pressure, and total stress, showed positive trends. Personal sorrow and fantasy, two elements of empathy, also showed lower trends. Meditation at home on a regular basis was linked to extra benefits. Participants said they used meditation in their daily lives as a result of the training, and that it enhanced their well-being and coping skills. According to the findings, being aware may reduce the tendency to take on other people's negative feelings. Mindfulness training can help with stress management and affective domain development, both of which are key aspects of nursing education.

Ramler, T.R. et. al. (2016) studied on **Mindfulness and the College Transition: The Efficacy of an Adapted Mindfulness-Based Stress Reduction Intervention in Fostering Adjustment among First-Year Students.**Given this inclination, as well as the persistent stress experienced by young adults, the current study looked into the effectiveness of a modified mindfulness-based stress reduction (MBSR) treatment in supporting first-year students in adjusting. Anxiety and change indicators were measured using “diurnal salivary cortisol” samples and the “Student Adaptation to College Questionnaire (SACQ)”. Participants in the intervention filled out the Five Facet Mindfulness Questionnaire both before and after the arbitration (FFMQ).According to the findings, mindfulness can (1) as a segment of an adapted

MBSR programme, subscribed to increase first-year modification through several areas, (2) lessen physical anxiety, and (3) be fostered to some extent in pupil samples by comparatively transitory direction. Furthermore, when compared to female individuals, male participants showed much superior adjustment in various areas. These findings emphasize the significance of seriously examining mindfulness-based practices in college settings to promote welfare in this exposed demographic. The shortcomings of the present research, as well as future research challenges, are acknowledged.

Aherne, D. et. al. (2016) studied on **Mindfulness based stress reduction for medical students: optimizing student satisfaction and engagement**. The current study assesses the opinions and satisfaction of first-year (required) and second-year (optional) Graduate Entry Medical School students with a mindfulness-based stress reduction (MBSR) programme. Pupil contentment grades were compared in a mixed approach pre and after study of Year 1 (n = 140) and Year 2 (n = 88) medical learner who underwent a 7-week MBSR course. Theme-based investigation of student responses on their perceptions of the programme was also conducted. When offered as a choice, MBSR training was connected with high levels of contentment and positive response. A successful self-care programme must cater to the participant's particular requirements while also providing a safe environment.

Barbosa, P. et. al. (2013) studied on **Mindfulness-based stress reduction training is associated with greater empathy and reduced anxiety for graduate healthcare students**. In a quasi-experimental trial, this research analyses the influence of MBSR training programme on five students from healthcare graduate courses. This study's technique was as follows: The MBSR programme was completed by 13 students, who were compared to 15 controls. At the standard line, i.e. the end of the programme (week 8) and three weeks after the programme ended, both groups completed validated questionnaires assessing anxiety, burnout, and empathy (week 11). The Burns Anxiety Inventory revealed a prominent reduction in stress was noticed on 8th and 11th week as compared to the benchmark. The Jefferson Scale of Physician Empathy revealed a significant increase in empathy at week 8 (P0.0096). In week 11, all respondents demonstrated a decrease in empathy compared

to the baseline (not statistically significant). At weeks 8 and 11, there were no major differences in burnout levels between the intervention and control groups. These findings support the use of MBSR as a behavioural intervention in graduate healthcare students to reduce anxiety and promote empathy.

2.1.4 Studies on Mindfulness Intervention and Anxiety

Important studies on Mindfulness Intervention and Anxiety are discussed below -

Ahmed, K. et. al. (2017) conducted a study entitle as, **“A Review of Mindfulness Research Related to Alleviating Math and Science Anxiety”**.The researchers in this study are interested in the use of mindfulness meditation in educational settings, particularly to cure math and science anxiety. Because anxiety associated to schooling can have severe implications for children and interfere with academic achievement, researchers are looking into the feasibility and efficacy of incorporating mindfulness programmes into school curricula to help students cope with their worry. This might be especially advantageous to math and science, which are two professions notoriously connected with anxiety but in critical need of professional development.This paper assesses the few studies that link mindfulness to reduced exam anxiety and emphasises the importance of future research that explicitly tests the impact of mindfulness on math and science in particularly.

Carlton, C.N. et. al (2020) conducted a research entitle as, **“Mindfulness-Based Interventions for Adolescent Social Anxiety: A Unique Convergence of Factors”**. Social anxiety disorder (SAD) is a severe and commonly longstanding mental illness that generally begins in initial phase of teenage. Cognitive behaviour therapy (CBT), the present "gold standard" therapy for SAD, focuses on intimidation- and distress-grounded systems that are thought to sustain the disorganization. In spite of such focused procedure, SAD is one of the slightest reactive stress disorder to CBT in juvenile specimens, with a section of people still announcing clinically important traits after treatment, implying that the CBT-family of arbitrations may not completely earmark the disorder's accelerating or continuity

aspects. This discrepancy in effectiveness points out the requirement for novel medicinal approaches. As a result, this short analysis assesses the developing literature reinforcing the function of mindfulness-based therapies (MBIs) for the treatment of juvenile SAD. MBIs could be typically beneficial for handling of sustaining variables in this detection because they can select and disrupt evasion and demotivation cycles. In spite of the limitations of the comparative absence of randomised controlled trials (RCTs) on this subject, a specific combination of features surface from existing research to support the concept that MBIs may have a special potential for reducing SAD symptoms in teenagers. These criteria include: (1) the potential of MBIs to directly address SAD symptoms; (2) the continuous attrition of stress, inclusive of social anxiety symptoms, in teenagers; and (3) the high figures of viability and acceptance in distressed juvenile specimens. We discuss each aspect in short before concluding that MBIs are a promising therapy alternative for reducing social apprehension symptoms in teenagers. However, given the scarcity of evidence on MBIs typically for juvenile SAD, higher number of studies are needed to ascertain whether MBIs are preferable to other present therapeutic choices.

Fumero, A. et. al. (2020) studied on **The Effectiveness of Mindfulness-Based Interventions on Anxiety Disorders. A Systematic Meta-Review**. There is a growing interest in studying the effectiveness of mindfulness-based therapies (MBIs). Many clinical studies and experimental designs have been carried out, with various samples and MBI methodologies being used. Aside from a tendency to indicate low-to-moderate effectiveness, reviews have yielded inconclusive results. The focus of this review is to tested available systematic reviews and meta-analyses to determine the efficacy of MBIs on anxiety problems. The study's key findings were more improved clinical trials are required to demonstrate definite MBI efficacy conditions (protocols, samples, psychological mechanisms, etc.). Furthermore, new outcome measures are necessary when addressing mindfulness processes in order to investigate the incremental impact of MBIs.

Obero, S. et al. (2020) studied on **Association of Mindfulness-Based Interventions with Anxiety Severity in Adults with Cancer: A Systematic Review and Meta-analysis**. Is mindfulness-based intervention linked with lower anxiety in individuals with cancer? was the study's key research question. The goal of this study was to see if MBIs were linked to a reduction in the severity of anxiety in cancer patients. Compared to usual care, waitlist control, or no treatment, mindfulness-based treatments were associated with a decrease in the intensity of anxiety in adults with cancer for up to six months following the delivery of mindfulness sessions; a concomitant decrease in the severity of depression and improved performance in the wellness standard of living was also observed.. Mindfulness-based therapies were not employed in any of the trials involving children with cancer.

Hofmann, S. G., & Gómez, A. F. (2017) studied on **Mindfulness-Based Interventions for Anxiety and Depression**. The application of mindfulness training has advanced cognitive and behavioural treatments for depression and anxiety, according to this article. In the last decade, research on mindfulness-based therapies (MBIs) has exploded. Two of the most common therapies are MBSR and MBCT. In a wide range of persons seeking therapy, MBIs have been illustrated to be beneficial in diminishing the intensity of stress and depressive symptoms. Health education, relaxation training, and supportive psychotherapy are examples of non-evidence-based treatments and active control conditions that consistently underperform MBIs. MBIs are similarly comparable to cognitive behavioural therapy in terms of results (CBT). MBIs for anxiety and depression have treatment principles that are similar to those of normal CBT.

Hoge, E. et al. (2018) conducted a research entitle as, **“The effect of mindfulness meditation training on biological acute\stress responses in generalized anxiety disorder”**. Mindfulness-based therapy is gaining popularity in psychiatry, but better understanding how these therapies influence disorder-relevant indicators will greatly increase utility and explanatory knowledge. Relevant biomarkers should alter if Generalized Anxiety Disorder (GAD) is successfully treated, supporting the effectiveness of treatment and demonstrating better stress resilience. When compared to control participants, MBSR participants showed a considerably lower ACTH AUC. Similarly, the AUC concentrations of inflammatory

cytokines were lower in the MBSR group. Researchers observed that patients with GAD in the MBSR class had lower stress markers than those in the control group; This is the first study to show that MBSR enhances stress resilience by combining hormonal and microbiological data.

Zhou, X., et al. (2020) studied the **Consequences of mindfulness-based tension depletion on stress symptoms in young adults: A systematized examination and meta-analysis**. The researchers examined on the efficacy of MBSR for youngsters with stress indications. According to the meta-analysis, MBSR notably diminished stress indications at post-treatment contrasted with control settings. However, varied intervention durations may change the benefit of MBSR on anxiety manifestation in young individuals, particularly the significance of a interim arbitration (less than 8 weeks). According to present research, MBSR is more effective than control circumstances in treating young persons with anxiety symptoms.

Pots W.T.M. et al. (2016) conducted a research entitled as, **“Effectiveness of online mindfulness-based interventions in improving mental health: A review and meta-analysis of randomized controlled trials”**. The goal of this study was to figure out how much online MBIs affect mental well being. This study includes fifteen randomized controlled trials. The pre-post between-group effect dimensions were determined using a random effects model, and the research quality of each of the related experiments was assessed. According to the study, online MBIs have the ability to improve psychological wellbeing, especially stress. Limitations, research directions in the future, and practical implications are also highlighted.

Dachman L, Lejuez CW. 2012 studied on **Meditative therapies for reducing anxiety: a systematic review and meta-analysis of randomized controlled trials**. Anxiety disorders are among the most common psychiatric disorders, and patients with anxiety often seek out contemplative therapies as a complimentary therapy. Although there have been numerous studies on the general health benefits of meditation, none have looked precisely at its usefulness for anxiety. We screened over 1,000 abstracts and read over 200 entire articles. The meta-analysis includes a total of 36 RCTs. On a scale of 0.0 to 1.0, the study quality ranged from 0.3

to 1.0 (mean = 0.72). Twenty-five research found that the meditation group outperformed the control group statistically. Although meditation has been found to decreasing anxiety level, most research only found at improvement in anxiety symptoms rather than anxiety disorders as clinically diagnosed. The use of contemplative techniques in the treatment of anxiety disorders has substantial clinical implications, although further study is needed to prove their efficacy.

Mark G. Williams (2012) studied on “**Clinical Trial of Mindfulness-Based Cognitive Therapy versus Unrestricted Services for Health Anxiety (Hypochondriasis)**”. The study's major goal is to investigate the efficacy and practicality of current mental treatments for health anxiety (hypochondriasis). The present research's authors compared the effectiveness of MBCT in inclusion to standard services to the effect of unrestricted services alone to determine the influence of MBCT on health anxiety. The impact size between groups was $d = 0.49$ at post-intervention and $d = 0.62$ at 1-year follow-up in a per-protocol (PP) analysis ($n = 68$). Changes in mindfulness influenced group changes in health anxiety symptoms, according to mediation analysis. MBCT participants were significantly less likely than US participants to meet hypochondriasis diagnosis criteria immediately after the intervention phase and at 1-year follow-up.

Kumar N, Balkrishna A. (2012) studied on “**Performance in a substitution task and state anxiety following yoga in army recruits**”. The study included 140 males from the Indian army in north India (M age = 30.3 years, SD = 5.7). They were new to yoga and were divided into two groups of 70 people, one for yoga and the other for breath awareness. A comparison group of 20 healthy males of comparable age (M age = 33.7 years, SD = 7.0) was constructed. They were tested on a digit-letter substitution task and a state anxiety subscale before and after two 45-minute courses. The two groups of troops alternated between doing yoga and practising breath awareness. Meditation music was played for the comparison group. Both the army troops and the comparison group improved their digit-letter substitution scores. State anxiety was lowered by doing yoga and listening to meditation music, but not by practising breath awareness. This demonstrates that a yoga-based intervention or listening to meditation music could assist army soldiers

who are new to yoga in reducing anxiety while improving performance on an attention task.

McDuffie J, Strauss JL. (2011) studied on **“An Overview of Complementary and Alternative Medicine Therapies for Anxiety and Depressive Disorders: Supplement to Efficacy of Complementary and Alternative Medicine Therapies for Posttraumatic stress disorder”**. The Veterans Administration is aiming to increase the amount of PTSD-related services available to veterans. Because depression and anxiety disorders share many of the same symptoms as PTSD, this study was commissioned to examine the effectiveness of complementary and alternative medicine (CAM) therapies for treating depression and anxiety disorders in the hopes of discovering PTSD treatments.

Vollestad J, Nielsen MB, Nielsen GH. (2012) studied on **“Mindfulness- and acceptance-based interventions for anxiety disorders: a systematic review and meta-analysis”**. In the treatment of mental disorders, mindfulness- and acceptance-based treatments (MABIs) are gaining popularity. These therapies may be beneficial to those who suffer from anxiety disorders, however no previous studies have looked into the influence of this lineage of arbitrations on clinical specimens. The goal of this study was to examine and synthesise existing data on MABIs for anxiety disorder patients. There were 19 studies that were deemed to be eligible. These therapies may be beneficial to those who suffer from anxiety disorders; however no previous studies have looked into the influence of this family of interventions on clinical samples. In controlled trials, the overall between-group Hedges'g for anxiety symptoms was 0.83 and 0.72 for depressive symptoms. Moderator analyses looked at whether the kind of intervention, the design of the treatment, the dosage of the treatment, or the patient sample were all linked to systematic variation in effect sizes. Aside from the fact that clinical trials on samples of people with mixed anxiety disorders have a larger impact size, no significant moderating effects on the variables investigated were discovered. Differential effect sizes, However, the advantages of adding psychotherapy content in mindfulness training, as well as the advantage of individual treatment over group treatment, were shown.

Zhihong, R. et. al. (2018) conducted a study entitled as, **“Effectiveness of mindfulness meditation in intervention for anxiety: A meta-analysis”**. Mindfulness meditation is gaining popularity in the medical industry. In both nonclinical and clinical groups, there is a growing amount of studies demonstrating MM's considerable efficacy in lowering anxiety. We investigated whether several research participant characteristics (such as age, geographic area, study format, duration, and at-home practise) influenced the size of the MM therapies' effectiveness. During our search, we discovered fifty-five RCTs from both Eastern and Western countries. The initial advantage of mindfulness meditation for anxiety reduction is found to be moderate to large ($g = 0.60$), however the impact is not consistently seen in follow-up assessments.

Chen, Y. and Yang, X. (2012) studied on **randomized controlled trial of the effect of brief mindfulness meditation on anxiety symptoms and systolic blood pressure in chinese nursing students**. Spite of the fact that practicing mindfulness reduced significantly stress-related anxiety and depression symptoms, no research on its utility in nurses and nursing students has been conducted in China. The purpose of the study was to explore how brief mindfulness meditation altered anxiety, sadness, and autonomic nervous system activity in Chinese nursing students. The difference between pre- and post-treatment Self-Rating Anxiety Scale ratings in the meditation batch was considerably bigger than in the control group. Scores on the Self-Rating Depression Scale, on the other hand, showed no such effect. Just after meditation practice, the meditation group had a 2.2 mmHg lower systolic blood pressure than the control group. A moderate amount of worry was connected with the greatest meditation impact. Brief mindfulness meditation reduced anxiety symptoms and stabilised systolic blood pressure in Chinese nursing students. People with modest anxiety are the most likely to benefit from a short-term mindfulness meditation practise.

2.1.5 Studies on Mindfulness Intervention and Depression

Important studies on Mindfulness Intervention and Depression are discussed below -

Ramel, W. et. al. (2004) studied on **The Effects of Mindfulness Meditation on Cognitive Processes and Affect in Patients with Past Depression**. This research examines the impact of an eight-week Mindfulness-Based Stress Reduction (MBSR; J. KabatZinn, 1982, 1990) course on emotional indicators (depression and anxiety), dysfunctional attitudes, and contemplation. Given the target of mindfulness meditation (MM) on mental process modification, it was expected that the fundamental change in MM practise entails ruminative inclinations being reduced. We looked at a group of people who had a history of mood problems and were examined before and after taking an MBSR course. A waitlist sample was also evaluated to a subgroup of MBSR finishers.

Zhang, P et. al. (2018) conducted a study entitle as, **“Effects of Mindfulness-Based Stress Reduction on Depression in Adolescents and Young Adults: A Systematic Review and Meta-Analysis”**. As a positive mental health intervention, mindfulness is increasingly being utilised to treat depression in young people. The impact of mindfulness-based stress reduction (MBSR) on the treatment of depression in teenagers and young people was studied in this detailed investigation and meta-analysis. At the post-test stage of the study, the researchers discovered that MBSR had a moderate influence on decreasing depression in young people. In the future, more research on the impact of MBSR on depression symptoms in adolescents and young adults is needed.

Heath, N. et al. (2016) studied on **The Relationship between Mindfulness, Depressive Symptoms, and Non-Suicidal Self-Injury amongst Adolescents**. Although mindfulness is frequently used in the treatment of non-suicidal self-injury (NSSI), there has been little study on its role in NSSI. As a result, the current research looked into the connection between mindfulness, depressive symptoms, and NSSI (previous year) in teenagers, taking gender into account. Mindfulness and depressed symptoms were found to be adversely associated; however the NSSI group was much less so. Second, the NSSI group had more

depressive symptoms and a lower level of mindfulness. Finally, it was discovered that mindfulness can partly conciliate the influence of depressed symptoms on NSSI. The current research is the first to give experimental evidence for mindfulness's preventive function in NSSI.

Raj, S., et al. (2019) Studied on **Effectiveness of mindfulness based cognitive behavior therapy on life satisfaction, and life orientation of adolescents with depression and suicidal ideation**. Suicide and depression are two of the most serious issues that people face all around the world. Several explanations have been presented to elaborate the complexities of depression and suicide as a result of the individual's poor psychological adjustment. Several therapeutic options have been developed to help people increase their coping mechanisms, with cognitive behaviour therapy showing encouraging outcome. Such people's well-being has been improved by mindfulness-based cognitive behavioural therapy techniques. The current study sought to investigate how mindfulness-based mental and behavioural treatment improved life satisfaction and life orientation in adolescents suffering from depression and suicide ideation. A comparison of before and after test results revealed a significant increase in life satisfaction, life orientation, and family functioning, as well as a decrease in depressive signs and suicidal thoughts. Mindfulness-based cognitive behaviour therapy has been shown to improve the psychological functioning of depressed and suicidal youth.

Chartier, M. & Mclane, M. (2011) studied on **Adapting mindfulness based cognitive therapy for treatment resistant depression: A clinical case study**. The third most prevalent cause of disability in the world is major depressive disorder (MDD). The majority of MDD's disability is caused by Treatment-Resistant Depression (TRD). Surprisingly, 50% of those with MDD would not remit after two sufficient trials of antidepressant drugs, indicating that they are therapy resistant. The effectiveness of current pharmacological and psychological treatment options for TRD is limited, necessitating the development of novel therapies. Mindfulness-Based Cognitive Therapy (MBCT) is a new psychotherapy treatment that has been shown to be effective in preventing recurrence of depression in those who have been in remission for a long time. MBCT is an 8-week group-based intervention that focuses

on mindfulness meditation as the primary therapeutic strategy. It teaches people how to deal with depressive thoughts and feelings in a different way. Rumination is being reduced, self-compassion is being enhanced, acceptance is being increased, and avoidance is being reduced. This modified version of MCBT, which involves the use of metaphor and revisions to the actual arbitrations, will be discussed using the clinical case of a woman with long-standing TRD. A short assessment of present MBCT literature is presented, as well as future directions for the treatment of TRD.

Britton, W. et al. (2012) studied on **The effects of mindfulness based intellectual therapy on emotional memory recollection dynamics in depression**. According to a growing body of evidence, mindfulness training helps people with depression by decreasing rumination. According to theory, rumination is a multidimensional term that encompasses a variety of neurocognitive characteristics associated with depression, including poor executive control, negative and over general memory bias, and the persistence or stickiness of unpleasant thinking conditions. Present meditation tests, which are mostly self-reports, don't capture these specific elements of ruminative tendencies, and hence are limited in their ability to provide comprehensive information about mindfulness mechanisms. On all three types of recall dynamics, MBCT participants showed a reduction in patterns that may sustain rumination when compared to controls (Pstart, Pstay, and Pstop). MBCT has been proven to diminish the strength of self-perpetuating unfavorable connections networks, which are responsible for depression's persistent and "sticky" negative thought states, while also enhancing the positive associations that are lacking in depression. This research also presents a fresh, objective approach for assessing many indices of ruminative tendencies that are suggestive of rumination's underlying mechanisms.

Kocoviski, N. & Mackenzie, M.B. (2016) conducted a research entitled as, **“Mindfulness-based cognitive therapy for depression: trends and developments”**. MBCT was created as a mental arbitration for people who are at the possibility of relapsing into depression. According to the intervention's theoretical foundations, increases in mindfulness and/or decreases in negative recurrent thoughts are two possible pathways of improvement. This review examines current MBCT

study trends, which includes effectiveness and queries concerning the particular impact of MBCT in view of new assessments with architecturally equivalent control situations, procedures of change, and treatment outcome modifiers. Future trends are also discussed, like the challenges of educating and spreading this therapy to a sufficient number of therapists.

Abbott, K.A. et. al. (2018) studied on **Mindfulness-based cognitive therapy in patients with depression: current perspectives**. Mindfulness-based cognitive therapy (MBCT) was created to help people with depressive illnesses avoid relapse. This frequently utilised intervention has gotten a lot of attention, therefore a thorough examination of current developments is in order. As a result, this review begins with an overview of efficacy, then moves on to mechanisms of action and finally to dissemination. Despite numerous methodological flaws in the evaluated literature, the results offered substantial evidence for the efficacy of MBCT. Specific characteristics, such as mindfulness, recurring negative thinking, self-compassion and affect, and cognitive reactivity, have identified as critical processes of change in terms of mechanisms of action. Finally, despite the fact that MBCT is not widely available outside of urban regions, research has shown that self-help variants can be effective. There are substantial implications for distribution when these findings are combined with the fact that it is possible that teacher competency is not a major predictor of treatment outcome. While MBCT is an effective therapy for depression, this study indicates that further research is needed in the areas of usefulness, mechanisms of action, and distribution.

William C, Ridgway N. (2012) conducted a study entitle as, **“Psychological interventions for difficult-to-treat depression”**. Mindfulness-based cognitive therapy (MBCT) may help avoid recurrence in those who have had three or more depressive episodes. It may also help those who have had less previous depression experiences, according to a new study. If this is confirmed, it raises concerns about how MBCT is supplied, accessed, and maintained.

Schanche, E. et al. (2020) studied on **The effects of mindfulness-based cognitive therapy on risk and protective factors of depressive relapse – a randomized wait-list controlled trial**. The goal of this planned wait-list controlled experiment was to see how Mindfulness-Based Cognitive Therapy (MBCT) affected risk and protective factors for depressive relapse in the cognitive, emotional, and self-relatedness domains. The findings of this study add to the existing body of evidence that MBCT can lower depressive relapse risk variables while simultaneously improving relapse-protective qualities. The most significant changes were reported in the domain of self-relatedness, where people's ability to be less critical of themselves and more sympathetic of themselves was much improved.

Geschwind N. & Peeters F. (2012) studied on **Efficacy of mindfulness based cognitive therapy in relation to prior history of depression: randomized controlled trial**. The researchers want to see if the number of prior depressive episodes affects the effect of MBCT on remaining depression symptoms. Across all subgroups, MBCT outperformed the control condition ($\beta = -0.56$, $P = 0.001$). ($\beta = 0.45$, $P = 0.16$), There was no interaction effect between therapy and subgroup. The key finding was that mindfulness-based cognitive treatment lowers persistent depressive symptoms regardless of previous experiences of major depression.

Freeman, M.P. et al. (2010) studied on **“Complementary and alternative medicine in major depressive disorder: the American Psychiatric Association Task Force report”**. The purpose of this research was to look at a number of different complementing factors and alternative medicine treatments for serious depression (MDD). The report's researchers were selected to participate the American Psychiatric Association's Task Force on Complementary and Alternative Medicine. The panel looked at the research on specific CAM treatments for MDD, as well as methodological issues and CAM's future directions in psychiatry. Individual CAM treatments were evaluated for their effectiveness in treating MDD as well as for risks and advantages. Electronic searches were confined to English-language publications from 1965 to January 2010 and included MEDLINE and PsycINFO reviews as well as manual reference searches. The treatments included in this study were chosen based on (1) established randomised supervised tests in MDD and (2)

extensive application in psychiatric practise along with significant clinical or public health implications.

2.1.6 Studies on Mindfulness Intervention and MAA, Stress, Anxiety and Depression

Important studies on Mindfulness Intervention and Mindful Attention Awareness, Stress, Anxiety & Depression are discussed below –

Mostafazadeh, P. et. al. (2019) conducted a study entitle as, **“Effectiveness of School-Based Mindfulness Training as a Program to Prevent Stress, Anxiety, and Depression in High School Students”**. The purpose of this study was to see how beneficial mindfulness training was at reducing depression, tension, and distress among higher secondary school pupils in Ahvaz over the 2017-2018 academic year. Tools and Procedures: This is a quasi-experimental research featuring a control group and a pre-test-post-test design. In the academic year 2017-2018, the statistical population includes all female high school pupils. The sample size was 40 students, who were randomly split into experimental (n=20) and control (n=20) groups using multi-stage cluster sampling. According to the findings of the data analysis, mindfulness training has been found to reduce depression, tension, and distress, and there is a substantial association between mindfulness education and stress reduction, depression, and distress. According to the findings of this study, In order to regulate their self-control adjustment methods and reduction in the quantity of stress disorder in psychological settings, educators should teach pupils how to train their mind-learning skills.

Breedvelt, J. et. al. (2019) studied on **The Effects of Meditation, Yoga, and Mindfulness on Depression, Anxiety, and Stress in Tertiary Education Students: A Meta-Analysis**. This study looked at the effects of meditation, yoga, and mindfulness on symptoms of depression, anxiety, and stress among tertiary students. We found 11,936 articles after searching the Cochrane Central Register of Controlled Trials, PubMed, and PsycINFO. 24 randomised controlled trials were included in the qualitative analysis after extracting 181 papers for full-text screening. A random-

effects meta-analysis was conducted with 1,373 participants. Because the majority of the researches were of inferior standards, the findings should be regarded with discretion. Overall, the interventions had mild impact that was significantly reduced when compared to active control. It's unknown whether meditation, yoga, or mindfulness have any harmful side effects or affect academic achievement.

Blanck, P. et. al. (2018) studied on **Effects of mindfulness exercises as stand-alone intervention on symptoms of anxiety and depression: Systematic review and meta-analysis**. As a result, researchers conducted a thorough review and meta-analysis of SAMs' impact on anxiety and depressive symptoms. For meta-analyses, a systematic search of electronic databases yielded 18 studies (n = 1150) that satisfied the criteria. This is the first meta-analysis to indicate that simply doing mindfulness exercises on a regular basis is beneficial, even if it isn't part of a larger treatment framework.

Hofman, S.G. et. al (2010) studied on **The Effect of Mindfulness-Based Therapy on Anxiety and Depression: A Meta-Analytic Review**. Analyze the effect size of this widely used anxiety and mood disorder treatment in clinical samples. The search yielded 39 studies with a total of 1,140 patients getting mindfulness-based therapy for a variety of diseases, including cancer, GAD, depression, and other psychiatric or medical issues. According to the findings, mindfulness-based treatment is a viable treatment for stress and dispositional disorders in clinical test samples.

Frostadottir, A.D. & Dorjee, D. (2019) conducted a study entitle as, **“Effects of Mindfulness Based Cognitive Therapy (MBCT) and Compassion Focused Therapy (CFT) on Symptom Change, Mindfulness, Self Compassion, and Rumination in Clients with Depression, Anxiety, and Stress”**. This trial research brought about a comparison of the effects of MBCT with implied benevolence directives against CFT with overt benevolence directives on change of symptoms, mindfulness, kindheartedness, and contemplation. According to the findings, both MBCT and CFT, and hence overt or covert self compassion directives, are effective, yield equivalent therapeutic benefits, with CFT boosting mindfulness regardless of the level of rumination experienced by the client.

Hofmann, S.G. & Gomez A.F. (2017) studied on **Mindfulness-Based Interventions for Anxiety and Depression**. The implementation of mindfulness practises has advanced cognitive and behavioural treatments for depression and anxiety, according to this article. In the last decade, research on mindfulness-based therapies has exploded. Mindfulness-Based Stress Reduction and Mindfulness-Based Cognitive Therapy are two of the most popular. MBIs have been shown to be effective in lowering the intensity of stress and depression manifestation in a broad variety of citizen expecting treatment. MBIs regularly exceed treatments which lack evidence and active control conditions including health education, relaxation training, and supportive psychotherapy. MBIs are similarly comparable to cognitive-behavioral treatment in terms of results (CBT). MBIs for anxiety and depression have treatment principles that are similar to those of normal CBT.

Ritvo, P. et. al. (2021) studied on **A Mindfulness-Based Intervention for Student Depression, Anxiety, and Stress: Randomized Controlled Trial**. The goal of this study was to see if an 8-week MVC programme could help undergraduate students at a large Canadian institution reduce depression, anxiety, and perceived stress (main outcomes) while also developing mindfulness (secondary objective). This study was timed to coincide with a university-wide labour strike, and It was based on the findings of two previous randomised controlled trials (RCTs), both of which showed efficacy when done during normal university operations. Students' reactions to an online mental health programme on an agitated campus, on the other hand, can be useful in anticipating the effects of potential disruptions, such as those caused by the COVID-19 epidemic. When comparison to the WLC group, the MVC programme resulted in statistically significant reductions in PSS during a university labour strike, but no other significant differences appeared between the two groups. Previous rounds of intervention testing, which were completed without disrupting university operations and proved benefit, are compared.

Mostafazadeh, P. et. al. (2019) studied on **Efficacy of School-Based Mindfulness Education as a course to arrest distress, tension and depression in high school pupils**. The goal of this investigation was to find out how successful mindfulness training was at reducing depression, tension, and distress, which is found to be greater in +2 students in Ahvaz over the 2017-2018 scholastic sessions. Tools and Procedures: This is a quasi-experimental research featuring a control group and a pre-test-post-test design. In the academic year 2017-2018, the statistical population includes all female high school pupils. The sample size was 40 students, who were randomly split into experimental (n=20) and reference (n=20) groups using multi-stage cluster sampling. According to the findings of the data analysis, mindfulness training has been found to reduce depression, tension, and distress, and there is a substantial association between mindfulness education and tension alleviation, depression, and distress. According to the findings of this study, educators should teach students how to improve their mind-learning skills so that In psychological contexts, they can tackle better their self-restraint handling methods and diminish the quantity of stress disorder.

Ababkov, V. et. al. (2019) studied on **Short mindfulness-based intervention for psychological and academic outcomes among university students**. The researchers wanted to see how effective a brief mindfulness intervention was at reducing anxiety, tension, and depression symptoms in university students, as well as blocking dominating responses and boosting academic performance. Fifty volunteers with high levels of depression, anxiety, or stress ($M(\text{age}) = 23.8$; $SD = 5.3$) were randomly assigned to either a mindfulness practise group or an active control group (listening to stories). When compared to the control group, students who practiced mindfulness reported lower levels of anxiety, stress, and sadness. The pupils' academic performance improved as a result of the mindfulness training. The ability to regulate dominant responses to neutral stimuli (letters) did not change, but there was a change in responses to neutral faces. The study's clinical ramifications and future research directions are highlighted.

Hakami A. et. al. (2020) studied on **the interplay between mindfulness, depression, distress and educational achievement in medical students: A Saudi outlook**. The study's primary objective was to look into the correlation between cognitive attentiveness, distress, depression, and educational achievement in a group of medical students at King Saud University. The secondary purpose is to see if mindfulness can mitigate the effects of distress on educational achievement and depression in the research sample. According to a correlation study, mindfulness is contrarily connected to depression and tension, whereas not to educational achievement. Multivariate logistic regression has found that mindfulness can help anticipate depression and tension. We also discovered that two mindfulness subscales, non-judgment of inner experience and describing, can help to attenuate the relationship between stress and depression.

Carmody, J.& Baer, R. (2008). Studied on **Relationships between mindfulness practice and levels of mindfulness, medical and psychological indicators and overall welfare in a distress alleviation program based on mindfulness**. Associations between home performance of mindfulness meditation practices and degrees of attention, physical and mental indicators, discernable tension, and mental welfare were explored in a test group of 174 people participating in a clinical MBSR training. The Mindfulness-Based Stress Reduction group programme consists of eight sessions. Attendees in the MBSR training answered questions on mindfulness, perceived stress, symptoms, and well-being. Time spent at home doing meditation techniques was found to be strongly associated to the level of change in most aspects of mindfulness.

Goldin, P.R , & Gross, J.J. (2010). Studied on **Effects of mindfulness-based stress reduction (MBSR) on emotion regulation in social anxiety disorder**. The practise of mindfulness-based stress reduction (MBSR) has been demonstrated to alleviate tension, anxiety, and depression symptoms. In convalescents with social anxiety disorder (SAD), MBSR training has been shown to lower emotional reactivity while improving emotion regulation. SAD-related avoidance behaviours and clinical symptoms may be reduced as a result of these modifications.

2.2 Statement of the Problem

The adolescence stage is full of possibilities. Adolescence, or the first era of a person's life, is always a critical time for parents and instructors to support healthy growth. Adolescents face a variety of threats and challenges that have an influence on the physical and mental health. Adolescents' physical and mental health is both important.

Adolescents are the raw materials on which any country's future social and economic development is built. As a result, governments all over the world sought to gain from adolescent enthusiasm and skills. It is widely accepted that any country's investment in its teenage population may significantly speed up and boost the fight against mental illness, disability, education, nutritional inadequacy, poverty, unfairness, and gender discrimination among adolescents.

Adolescence is the most productive period of human life. The most important of all the essential needs for adolescents is a health facility. In this modern-day, health refers to one's total well-being, including physical, mental, and spiritual well-being. a sense of well-being on all dimensions (physical, mental, and spiritual). Adolescents face a variety of troubling situations throughout this stage of their lives. Anger and anxiety in adolescents are unquestionably challenging and distressing issue that has drawn the attention of mental health professionals. Parents and teachers frequently seek the help of psychologists for their children's anger and anxiety issues.

Mindfulness has been linked to increased well-being (Carmody & Baer, 2008; Priyanka, Singh, 2020) as well as a decrease in psychological stress discomfort (Coffey & Hartman, 2008; Ostafin et al., 2006). Moreover, other studies have indicated that mindfulness-based cognitive therapy helps people become less reactive (Goldin & Gross, 2010; Ortnier, Kilner, & Zelazo, 2007; Segal, 2007) and results in increased cognitive flexibility (Moore & Malinowski, 2009; Segal, 2007). The effects of 15 minute recorded inductions of distracting attention and anxiety were compared to the effects of breathing inductions. (Arch & Craske, 2006).

As a result, the investigator believes that meditation is the best solution to these problems and that meditation should be encouraged in ways to make life meaningful and goal-achieving, and thus the researcher conducted this study.

The study's goal was to see if a group mindfulness intervention could improve students' attention awareness, anxiety, stress, and depression at different levels of education in West Bengal. Barring a handful of studies on the effectiveness of mindfulness awareness intervention on students' attention awareness, anxiety, stress, and depression have been conducted, particularly in West Bengal. The study's investigator is also an academic instructor, thus he is familiar with both psychological distress and concrete challenges in education, particularly teaching. The mindfulness intervention practice assists investigator-trainees in connecting thoughts, emotions, and behaviour.

According to a review of related literature, there are still significant knowledge gaps, and further research is evaluate the efficacy to determine the effectiveness of Mindfulness intervention on students' awareness and mental distress at various educational levels. The current study will attempt to identify research problems by asking the following specific research questions –

- i. What is the present status of Depression, Anxiety, Stress and Mindful Attention among the various levels of students?
- ii. Is it possible to increase awareness among the various levels of students through Mindfulness intervention Program?
- iii. What is the efficacy of a ‘Mindfulness intervention Program’ in reducing Depression, Anxiety and Tension on various levels students?

To find out the answer to the above research questions, the problem of the study is specified and stated as, “***Effectiveness of group Mindfulness Intervention on student Awareness, Anxiety, Stress and Depression at various levels in Education***”.

2.3 Delimitation of the study

The delimitation of this research was set as following:

1. The study sample consisted of the students belongs to the age group of 17 to 25 years.
2. The present study was delimited to 120 samples; 60 were selected experimental group and 60 were selected control group.
3. The sample groups of students were studying in class XII to Higher education level (Ph.D) of West Bengal.
4. The variables of the study were delimited to Gender, Age and study class as independent variables; and the Mindful Attention Awareness, Depression, Anxiety and Stress were selected as dependent variables.
5. MAAS and DASS-21 in Bengali version were used for the study.
6. The main focus of the study was given on the measurement of the effectiveness of Group Mindfulness intervention on Attention Awareness, Depression, Anxiety and Stress among the various levels of students.

2.4 Objectives of the study

Stated objective were framed on the basis of aforesaid research questions and delimitations –

1. To evaluate the present status of Depression, Tension, Distress and Mindful Attention among the various level of students.
2. To assess the effectiveness of Mindfulness Meditation therapies cum intervention programme on Depression, Anxiety, Stress and Mindful Attention among the treatment & control Group students.

3. To observe the variation of explanatory variables (gender& study class) on Depression, Anxiety, Stress and Mindful Attention among the various level of students.
4. To find out the significant relationship between Mindful Attention Awareness, Depression, Anxiety and Stress in pre & post test score among the students when experimental group is concerned.

2.5 Hypothesis of the study

In respect of the basic research questions and objectives of the study the following Null-Hypotheses were inculcated –

- H₀1:** There is no significant mean difference between pre and post test of Mindful Attention Awareness among the various level of students in Experimental group.
- H₀2:** There is no significant mean difference between pre and post test of Stress among the various level of students in Experimental group.
- H₀3:** There is no significant mean difference between pre and post test of anxiety among the various level of students in Experimental group.
- H₀4:** There is no significant mean difference between pre and post-test of Depression among the various level of students in Experimental group.
- H₀5:** There is no significant mean difference between pre and post test of Mindful Attention Awareness among the various level of students in control group.
- H₀6:** There is no significant mean difference between pre and post test of Stress among the various level of students in control group.
- H₀7:** There is no significant mean difference between pre and post test of Anxiety among the various level of students in control group.
- H₀8:** There is no significant mean difference between pre and post test of Depression among the various level of students in control group.

- H₀9:** There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the students at HS level.
- H₀10:** There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the students at UG level.
- H₀11:** There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the students at PG level.
- H₀12:** There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the students at B.Ed level.
- H₀13:** There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the Scholar students.
- H₀14:** There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the various levels of students on the basis of their study class when Control Group is concerned.
- H₀15:** There is no significant mean difference between control and experimental group of Mindful Attention Awareness, Depression, Anxiety and Stress among the various levels of students when pre test score is concerned.
- H₀16:** There is no significant mean difference between control and experimental group of Mindful Attention Awareness, Depression, Anxiety and Stress among the various levels of students when post test score is concerned.
- H₀17:** There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the male students when experimental group is concerned.

- H₀18:** There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the female students when experimental group is concerned.
- H₀19:** There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the male students when control group is concerned.
- H₀20:** There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the female students when control group is concerned.
- H₀21:** There is no significant correlation between Mindful Attention Awareness, Depression, Anxiety and Stress in pre test score among the various levels of students when experimental group is concerned.
- H₀22:** There is no significant correlation between Mindful Attention Awareness, Depression, Anxiety and Stress in post test score among the various levels of students when experimental group is concerned.

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CHAPTER – III

RESEARCH METHODOLOGY

Data collection for research projects is known as Research Methodology. It systematically solves the research problem. The development of necessary tool for data collection is also described. This section presented the process of data collection and procedures used in the research work. It begins with a discussion of the research design, then moves on to the research method, and concludes with an account of the statistical approaches used to address issues of tool validity and reliability.

3.1 Method

The main purpose of the study was to impact the Mindful Meditation technique on Mindful Attention Awareness, Depression, Anxiety and Stress of the students at various educational level of West Bengal. For this purpose, an intensive intervention technique was conducted in 120 students from the state of West Bengal. The study was to find out the effectiveness of mindfulness intervention on Mindful Attention Awareness and mental health among the various levels of students. The topics discussed in the method were design, sample, variables and tools for data collection. These are discussed below:

3.1.1 Research Design

Experimental method among other research methods is considered to be a scientific method of research. It provides a systematic and logical way of answering the research questions. It is the best way to establish cause and effect relationships between the dependent and independent variables. It helps to test hypothesis between the variables. Experimental research helps the researcher to go

more than description and prediction, beyond identification of relationships to partial determination of the cause. The immediate purpose of the test is to predict events in the experimental setting. Experimental design is the most scientifically sophisticated process.

Blueprint of research design – Blueprint is a detailed plan of activities during the whole procedure. Every research study needs a blueprint because it could easily describe the details of the research. The researcher has worked on mindfulness meditation therapy that has already been mentioned in the delimitation area in the current research. The design of the study is illustrated below:

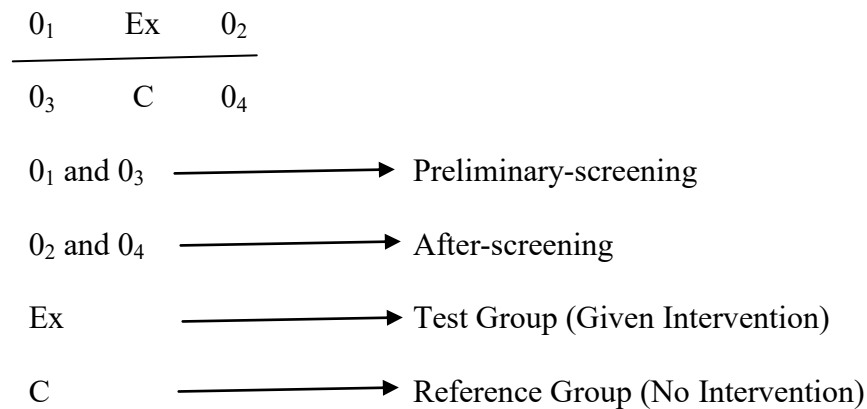
Table 3.1: Blueprint of research design

Groups	Pre-intervention Assessment	Intervention	Post- intervention Assessment
Experimental Group (EX)	Mindful Meditation Awareness, Depression, Anxiety and Stress	Mindfulness Meditation Therapy given in regular basis	Mindful Meditation Awareness, Depression and Anxiety, Stress
Control Group (C)	Mindful Meditation Awareness, Depression, Anxiety and Stress	No intervention was given	Mindful Meditation Awareness, Depression, Anxiety and Stress

It was a quasi-experimental research therefore a pre-test and post-test technique. The above table shows two groups, the first one a test group and the other a reference group. The test group was trained, and the reference group was not. Only some basic ideas and orientation of Mindfulness Meditation were imparted to the control group. In this pre-test and post-test design, the measurable dependent factor was Depression, Anxiety, Stress, and Mindful Attention Awareness.

Figure 3.1: Preliminary-screening & After-screening equivalent subjects design

Preliminary-screening After-screening equivalent subjects design:



The present study was conducted on the basis of a quasi-experimental preliminary-screening after-screening design framework. The course was offered on students aged 17 to 25 years old. In this design, two groups were constructed of the samples selected by randomly. This study was served as positional and statistical plan to determining relationship between experimental group and control group/experimenter's observation in the main plan of the study. Within this framework, the present study design has made an effort to seek reasonable solutions to the following queries:

1. What is the current state of depression, anxiety, stress, and mindful attention among the various levels of students?
2. Is it possible to increase awareness among the various levels of students through a mindfulness intervention programme?
3. What is the effectiveness of a 'Mindfulness Intervention Program' in reducing depression, anxiety, and stress at various levels among students?

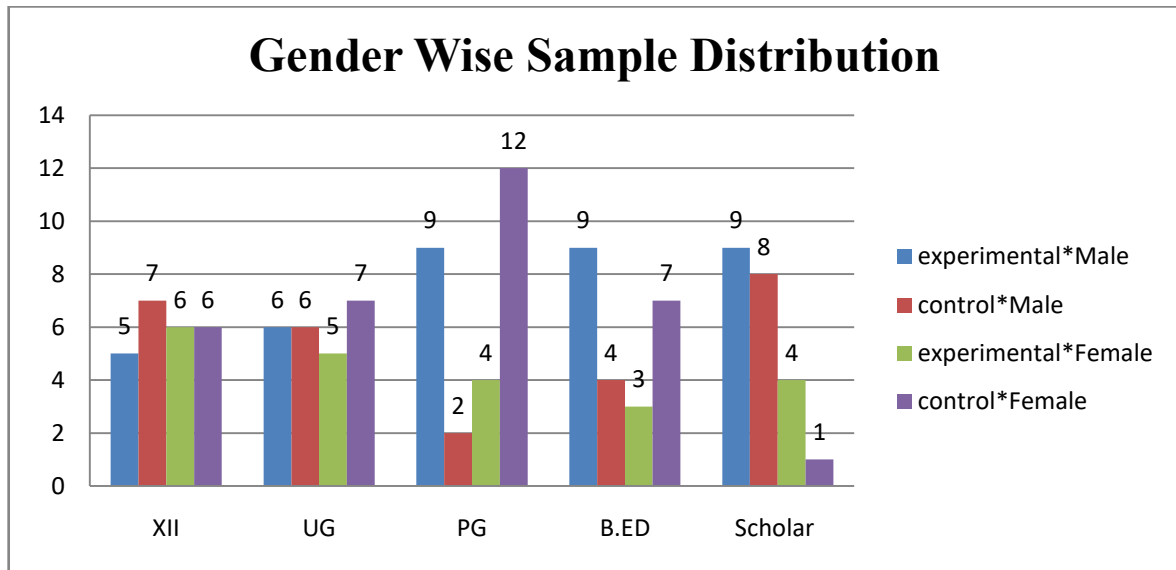
3.1.2 Sample

The sample (120 adult students) selected for the present study was non-random sampling technique. The sample ranged between the age group of 18 to 25 years old. All the students were studying in class XII to Ph.D in West Bengal. Mindfulness Meditation therapy is useful and effective to enhance the attention; and on the other hand this therapy is reduced depression, anxiety and stress of the students, if they are ready to accept the training strategies. Consequently, the study included 120 samples, which were separated into two classes. Each class had 60 students; so, the first was control group (60) and the second was experimental group (60). Table 3.1 is shown gender wise sample distribution of the primary sample.

Table 3.2: Gender wise sample distribution

Present class	Male		Female		Total number
	Experimental	Control	Experimental	Control	
XII	05	07	06	06	24
UG	06	06	05	07	24
PG	09	02	04	12	27
B.ED	09	04	03	07	23
Scholar	09	08	04	01	22
Total	38	27	22	33	120

Figure 3.2: Gender wise sample distribution



3.1.3 Variables of the study

A characteristic, number or quality fluctuates over time, or takes various values under variable situation. So variable is a measurable characteristic or a logical set of attributes of the subjects (participants) of the research that can vary. The following variables are identified for the present study:

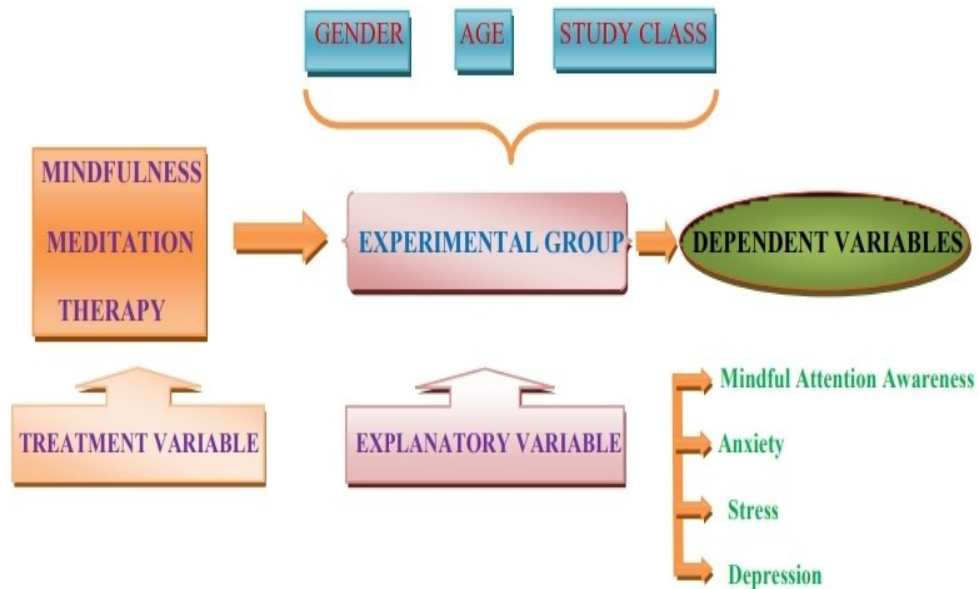
Explanatory Variable: It is also known as the independent variable or predictor variable. It elucidates variations in the response variable; in experimental study, and it is changed by the researcher. Gender, Age and Study class were used for the explanatory variables in this study.

Treatment Variable: In case of any intervention research, treatment variables are always considered as independent variable because those are the influencing factors that affect the dependent variables. In this study, the treatment variable is Mindfulness Meditation therapy techniques.

Dependent variable: Dependent variables are also referred to as responses variable or Left-hand-side variables. The dependent variable is the variable that is being measured or tested in an experimental situation. In this study Mindful Attention

Awareness, Depression, Anxiety and Stress among the various level of students were the main dependent variables for tested in an experiment.

Figure 3.3: Showing the variable interaction of the study.



3.1.4 Tools

As per the research design, tools were employed to obtain relevant information and data. Four tools (questionnaires) were utilised in the current study to assess both theoretical and practical assessments of the variables.

Tool 1: Information about students–

An information scheduled was develop to measure the explanatory variables, viz.- Gender, age, study class and socio-economic status among the adult students (See Appendix - I).

Tool 2: Mindful Attention Awareness Scale –

The second tool was the tool to assess Mindful Attention Awareness developed by Azharul Islam and Saleh Siddique. The questionnaire was adopted in Bengali version and likewise it investigated the dependability, viability and Factor structure as key components of the Mindful Attention Awareness Scale (MAAS) in the aforesaid version, successfully. In the predetermined scales of three, with respect to the Bangla MAAS, the short form of health 36 (SF-36) and the Internet Addiction Test (IAT) – were made applicable to 519 university enrolled students (51.4% female). Ninety-two subjects were retested over a period of two weeks to determine test-retest dependability.

Mindful Attention Awareness Scale in Bengali version was mainly adopted from MAAS (Brown & Ryan, 2003) in English version. MAAS measures our levels of mindfulness over a period of time. It is a scale based on a 1 through 6 Likert scale of a 15 item questionnaire. This scale aims to appraise a certain key specific attribute of dispositional (or trait) mindfulness, including accessible consciousness, and responsiveness to what is occurring in the present situation or existing time. Total 15 questions were measured on a predefined scale of 6 points–

- | | |
|---------------------|---------------------|
| 1 – Usually | 2 – Very often |
| 3 – Somewhat often | 4 – Somewhat rarely |
| 5 - Very frequently | 6 – Scarcely ever |

The overall MAAS score is the sum of all components. A higher score suggests that you have a greater level of dispositional mindfulness. The internal consistency and temporal stability were similarly good (Cronbach's alpha 0.85). The Bengali version of MAAS was found to be notably and conclusively correlated to SF-36 Mental and Physical health factors, but adversely associated with IAT outcome (See Appendix - II).

Tool 3: DASS-21–

The Depression, Anxiety and Stress Scale-21 components (DASS 21) is a regulated set of tripartite self-report system of calibration formulated to calculate the negative mental conditions of depression, anxiety and stress. The system was developed Lovibond and Lovibond (1995). The DASS was built not just as another system of calibration to assess customarily demarcated emotional conditions, but rather to facilitate the procedure of determining, comprehending, and quantifying the pervasive and clinically important mental conditions customarily described as depression, anxiety and stress. As a result, the DASS is required to suit the needs of both investigators and quantum physicist clinicians.

Each of the three DASS scales has 14 items, which are dissected into sub-scales within a range of 2-5 items with identical matter. Despondency, despair, devaluation of life, self-deprecation, and apathy/lack of association, anhedonia, and listlessness are all evaluated on the Depression scale. The Anxiety scale examines physiological arousal, muscle tissue reactions, perceived stress, and subjective perception of uncomfortable affect. The Stress scale is susceptible to general arousal levels that have been existing for a long duration. It assesses restlessness, nervous arousal, and being easily upset or agitated, annoyed/over-reactive, and impatient. Participants are required to assess the degree to which they have encountered each condition during the previous week using a 4-stage severity/density scale. The outcome for Depression, Anxiety, and Stress are derived by adding the result for each item.

A shortened version, the DASS-21, is available in addition to the normal 42-item questionnaire. It has 7 items each scale. It's also worth noting that an early version of the DASS scales was known as the Self-Analysis Questionnaire (SAQ).

Because the DASS scales have projected high internal stability and produce significant differentiation in diverse contexts, they are expected to satisfy the requirements of both researchers and clinicians who want to assess present condition or bring about a transformation in the condition over a period of time (e.g., during

treatment) on the three dimensions of depression, anxiety, and stress (See Appendix - III).

- **DASS-21 Scoring Instructions –**

A face-to-face clinical interview should always be utilized instead of the DASS-21. If you're having serious emotional problems, talk to your doctor about getting consultation from a skilled specialist.

- **Depression, Anxiety and Stress Scale - 21 Items (DASS-21) –**

The Depression, Anxiety, and Stress Scale - 21 Components (DASS-21) is a compilation of three self-rating scales for measuring depression, anxiety, and stress.

Each one of the three DASS-21 scales has seven components that are grouped into subscales that have comparable subject. Dysphasia, despair, devaluation of life, self-deprecation, apathy, distress, and lethargy are all evaluated on the depression scale. Autonomic arousal, muscle tissue reactions, perceived stress, and subjective sensation of anxious affect are all measured on the anxiety scale. The stress scale is responsive to long-standing general arousal levels. Hence, it evaluates trouble relaxing, anxious arousal, and being easily agitated / perturbed, exasperated/ incited, and restless. Calculating values for the respective relevant items produces the required values for depression, anxiety, and stress.

The DASS-21 is founded on a structural, instead of a definitive view of psychological pathology. The DASS-21 was developed on the concept (supported by research data) that the disparities while experiencing depression, anxiety, and stress by samples of non-clinical and clinical subjects are nothing except variations of degree. As a result, the DASS-21 has no immediate consequences for assigning individuals to distinct diagnostic categorization proposed by classification systems like the DSM and ICD.

Reliability of the test:As a result, the DASS-21 has no direct consequences for assigning individuals to distinct diagnostic categorization suggested by classification systems such as the DSM and ICD. Internal consistency, discriminative, concurrent, and convergent validity were all found to be excellent.

The following are the suggested cut-off range for standard intensity designations (normal, moderate, and severe):

NB: Scores on the DASS-21 will need to be multiplied by 2 to calculate the final score.

Table 3.3: Value of DASS-21 range

Level / Meaning	Depression	Anxiety	Stress
Nominal	0 – 9	0 – 7	0 – 14
Mild	10 – 13	8 – 9	15 – 18
Moderate	14 – 20	10 – 14	19 – 25
Severe	21 – 27	15 – 19	26 – 33
Extremely Severe	28+	20+	34+

3.2 Procedure

This phase includes the description of different steps followed in collecting all qualitative and quantitative data from the primary sample under this study and the process of analyzing it. Data was collected from the adults' students, during 28th January 2021 to 24th March 2021.

3.2.1 Tool Administration and data collection

In the present study, the levels of Anxiety, Stress, Depression and Mindful Attention among the various level of students were found with MAAS developed by Azharul Islam and Saleh Siddique and DASS-21 respectively. The score secured by the students were collected and computed for analysis.

3.2.2 Procedure of the experiment

A special hall was exclusively used for the purpose of Meditation Experiment. Every day, Meditation therapy was given to all the adult students (Experimental Group) in this special Hall room for 10 minutes at the same time, because body and mind is such a mechanism that any regular activity become a habit pattern and Physically as well as mentally one is prepared for the particular activity. This activity was conducted for the various levels of students in 56 days or 8 weeks (See Appendix-VI). As no association was to be formed subjects/students were very clearly asked to be loose and natural.

3.2.3 Instruction and Explanation

A melody music (Therapy Related) was used for being consistent in instruction throughout the experiment. Special instructions were to help the sample or students (Experimental Group).

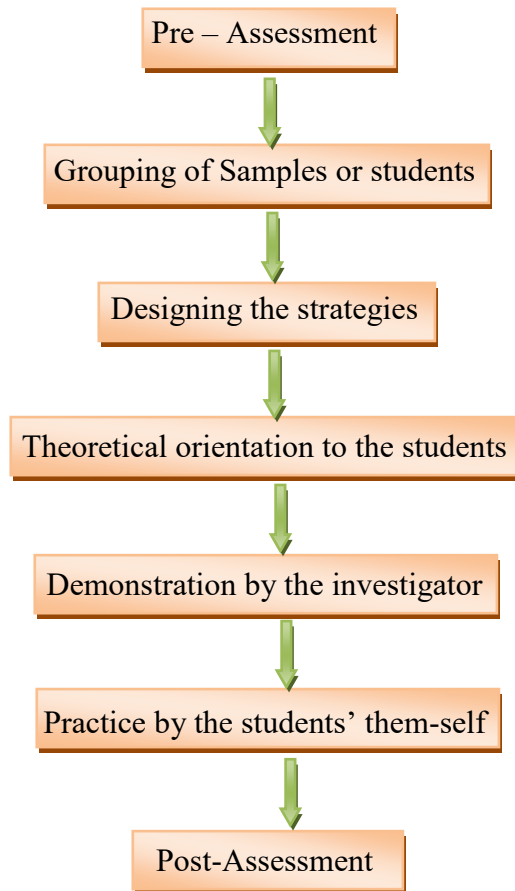
Practice –

Breathing is the key to any practice in mindfulness. Anyone can practice breathing awareness in any moment what so ever. It does not need any particular space or time to practice it. Mindfulness is a simple breathing awareness for about 10 minutes a day. There are various ways to practice it in a very simple method:

- It is possible for all of us whenever we find it convenient.
- It should be a noise-free atmosphere.
- Open the spectacles.
- Keep the body erect.
- Sit comfortably in a comfortable dress.
- Keep the eyes and mouth gently closed.
- Take three deep breathings.
- Focus the entire attention on the area around the nostrils.

- Awareness of every breath that in coming in and going out.
- Breath naturally and normally as it is.
- There should be no forceful effort.
- If it is extended, it is extended; if it is shortened, it is shortened.
- If it is through one nostril let it be so or both the nostrils.
- Attentive vigilance of every incoming and outgoing breath.
- The entire awareness of every incoming and outgoing breath.
- Feel the sensation of every incoming and outgoing breath.
- Towards the beginning the mind has every possibility to get diverted, but very soon it will come back to the attention towards the entrance of the nostril like a gatekeeper, watchman.
- In this way, one may practice at least for 10 minutes a day.
- After 10 minutes take 3 deep breaths and feel relaxed and happy.
- Then gently open the eyes.
- More practice is welcome.
- The first time the practice should be done guided by a person. It can also be done with a soft mindful music or without any such accompaniment, but generally in the traditional practice, it is done with a mindful bell.

3.2.4 Experimentation in Phase



- **Pre – Assessment:** the pre-Assessment of the level of Mindful Attention, depression, Anxiety and stress levels found in the adult participants were assessed by the investigator.
- **Grouping of Samples or students:** After complete the first phase, the primary samples were grouped into two groups; one is Experimental group (60 students) and another is Control group (60 students).
- **Designing the strategies:** The investigator planned the activities for enhancing the student's Mindful attention Awareness; reduced the Depression, Anxiety and stress level.

- **Theoretical orientation to the students** – After conducting the pre-assessment the investigator conducted theoretical orientation programme on Mindfulness Meditation for the Adult Students. Before the orientation programme the students were never aware of mindfulness meditation. This orientation programme helps to enhance the consciousness on Mindfulness Meditation.
- **Demonstration by the investigator** – The Mindfulness Meditation therapy and the practice of Mindfulness Meditation were demonstrated by the investigator. The adult students were allowed to practice during the training period.
- **Practice by the students' them-self** – After the orientation programme and demonstration about the Mindfulness Meditation Therapy, All the students who were selected in the experimental group have practiced this meditation therapy for 56 days.
- **Post-Assessment** – Post-Assessment was conducted by the investigator after implementation of treatment or this therapy. During the post-assessment the same MAAS and DASS-21 measurement scale were used. After collection of post-assessment data, it was analyzed using appropriate techniques.

3.3 Data tabulation

MAAS of 15 items, DASS-21 of 21 items weremarked with scoring values. The scores of the sub scale were added and finally the scores of the sub-scales were added to find out the score of total difficulties. A summary was prepared as the bottom of individual seat. These data so found were edited and tallied to obtain numerical data. The whole data set show acquired was systematically and sequentially tabulated for further analysis and to draw interpretation (See Appendix - IV).

3.4 Statistical Analysis

In the present study, the collected data obtained from assessment scores on the pre and post-assessment on Mindful attention awareness, Depression, Anxiety and Stress secured from 120 adult students have been analyzed. The data analyze has been done using the statistical software SPSS ver. 21.0. The descriptive statistics mean and SD were computed for all the variables. The Pared sample t-test and independent sample t-test were used to test the significance of the levels of the students with respect to the different selected variables. Karl Pearson's correlation coefficients are used to study the relationship of each of the selected variables.

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- Jyothi, K. Swarna and Rao, D. Bhaskara (2011): *Educational Research*, Sonali Publications, New Delhi-110002.
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CHAPTER – IV

ANALYSIS AND INTERPRETATION

An integral part of any research is data analysis. After monitoring the collected data, the next step involves classification and scientific tabulation. For the correct treatment, rationale and diagnosis of the data is a fundamental aspect. Later this data is subjected to statistical analysis and interpretation, to make it substantial.

The new factors are uncovered treating the data to multidimensional perspective. This obviously involves interdependent operations. The statistical methods give two important aids: firstly, it helps the researcher to organize, classify and form a summary of the data swifter comprehension and interpretation of data. Secondly, it helps the research to infer a concrete conclusion.

According to C.R. Kothari (1989) “The term analysis refers to the computation of measures along with searching for patterns of relationship that exist among data-groups”. The analysis deals with hypothesis testing to draw inferences along with estimating unknown parameters of the total population.

The data from the various levels of students were collected under the following dimension –

- a. Mindful Attention Awareness (MAA)**
- b. Stress**
- c. Anxiety**
- d. Depression**

The main focus of this research is to facilitate the enhancement of Mindful Attention Awareness but to reduce the Stress, Anxiety, and Depression level in various levels of students, through Mindfulness Meditation therapy. Therefore, the analyzer made a review on Mindfulness Meditation therapy, Depression, Stress, and Anxiety in different segments of national and international levels. The researcher identified some selected Mindfulness meditation exercises, which form the base for a reduction of anxiety, stress, and depression in helping academic achievement and living.

The above review, lead the researcher to develop and select some standardized measuring tools of Mindful Attention Awareness, Stress, Anxiety, and Depression. After Pre-assessing the theoretical orientation programme on mindfulness meditation exercise, the investigator demonstrated his finds to the students. Next followed, implementation of the mindfulness meditation exercise, post-assessment was conducted by the investigator.

Requisite data has been assimilated from the sample and data analysis conducted. Data analysis includes descriptive analysis, rational and association analysis. The scheme of data analysis has been arranged in two stages. The first stage is descriptive analysis and the second stage is differential analysis (t-test).

4.1 Descriptive Statistics

It describes the characteristics of a specific group of people. To establish the central tendency, the mean and SD were determined.

4.1.1 Mean score distribution of Mindful attention awareness, stress, anxiety, and depression score among the treatment group.

Table 4.1: Mean score distribution of Mindful attention awareness, stress, anxiety, and depression score among the treatment group.

Descriptive Statistics				
	Mean	N	Std. Deviation	Std. Error Mean
Pre-MAA	50.82	60	10.250	1.323
Post-MAA	66.87	60	10.849	1.401
Pre-Stress	20.77	60	7.484	.966
Post-Stress	15.17	60	8.472	1.094
Pre-Anxiety	17.13	60	8.087	1.044
Pos-Anxiety	15.33	60	7.137	.921
Pre-Depression	21.37	60	7.859	1.015
Post-Depression	18.27	60	7.781	1.004

Figure 4.1: Showing means score distribution graph of Mindful Attention Awareness score among the treatment group.

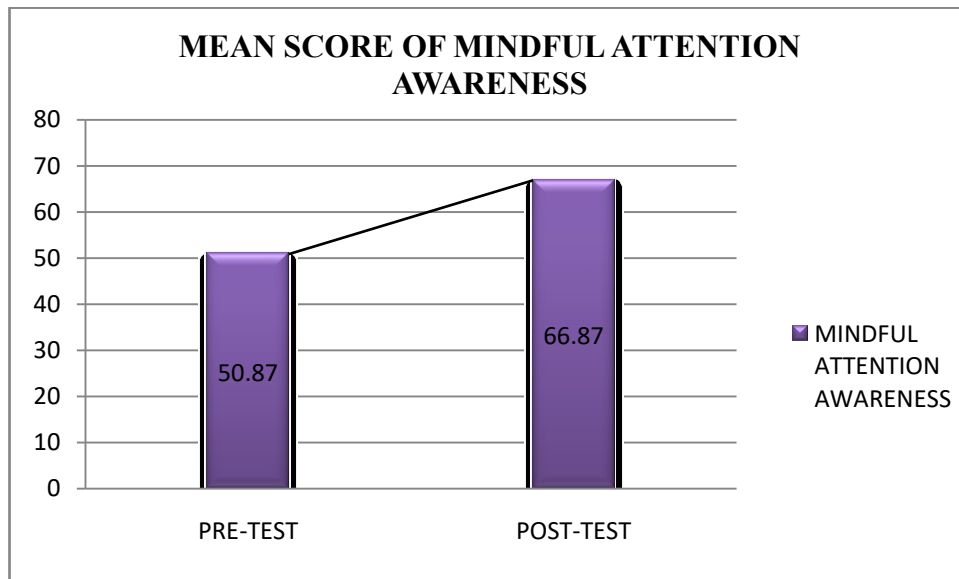


Figure 4.1 depicts the tested group's mean scores of pre- and post-test in Mindful Attention Awareness. In Mindful Attention Awareness, the computed pre-test score is 50.62, and the mean post-test score is 66.87, respectively. The computed mean clearly shows that the post-test score in the treatment group is higher than the pre-test score.

Figure 4.2: Showing mean score distribution graph of Stress score among treatment group.

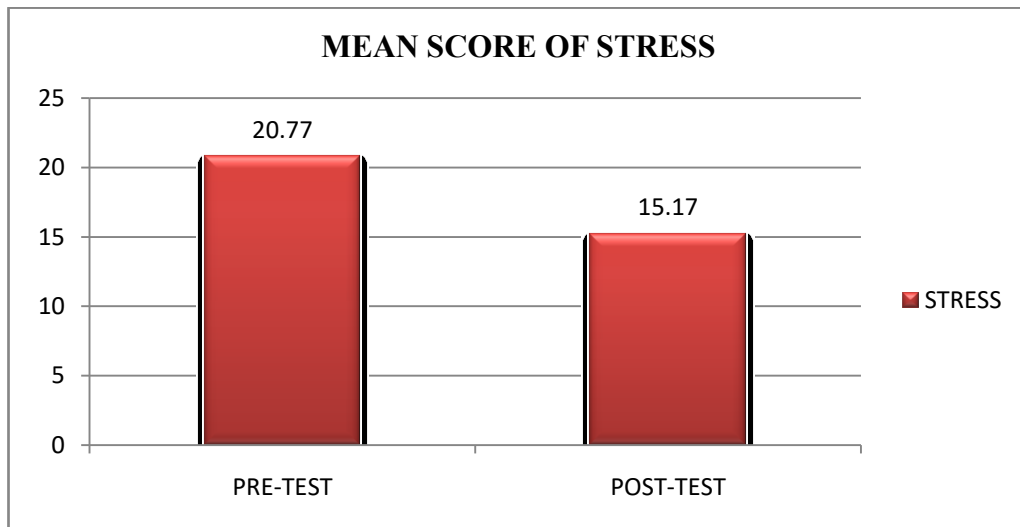


Figure 4.2 represents that the mean pre-test and post-test stress scores of the treatment group among adolescents' students. The computed pre-test mean score is 20.77, whereas the post-test mean score is 15.17. According to the mean stress score, it is clear that the pre-test score is higher than the post-test score in the tested group.

Figure 4.3: Showing means score distribution graph of Anxiety score among the treatment group.

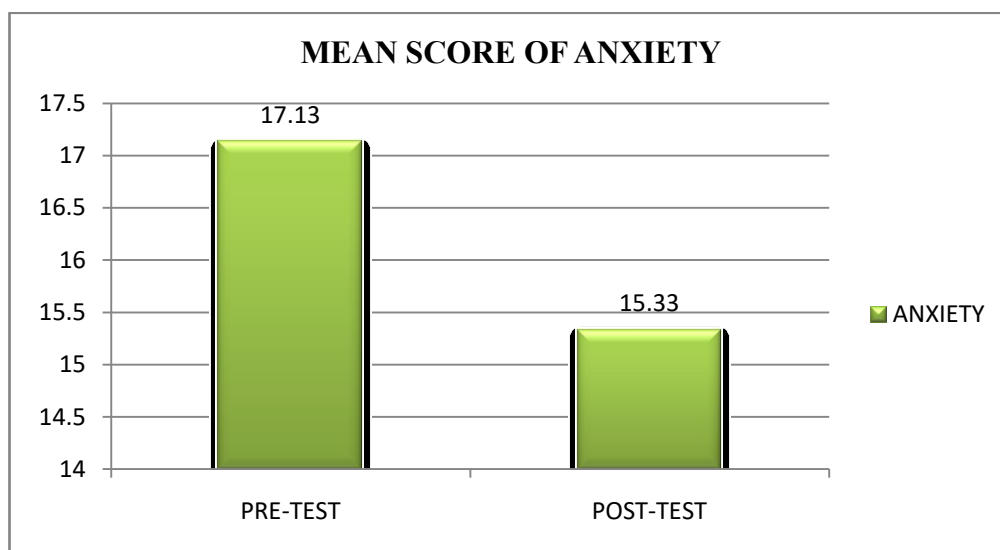
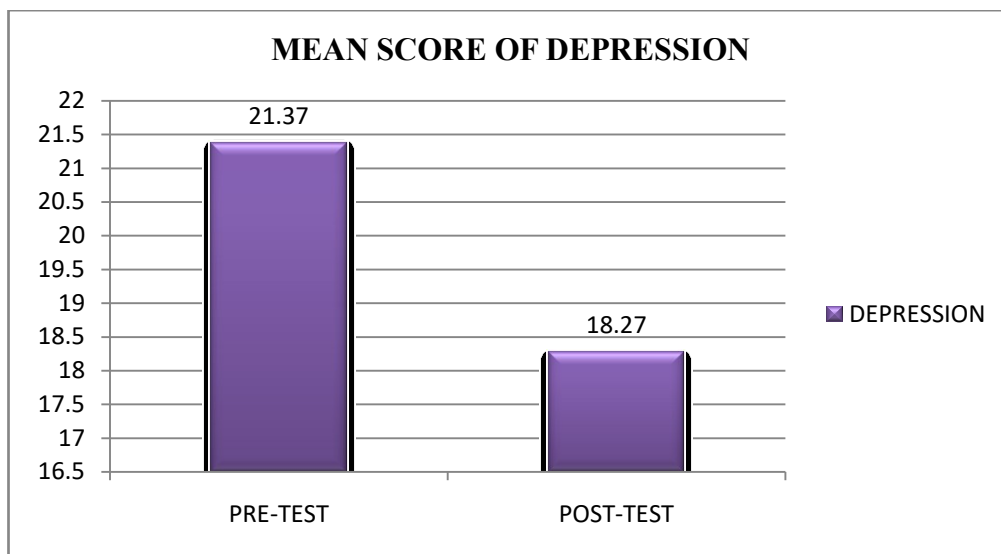


Figure 4.3 shows the tested group's mean pre- and post-test scores in Anxiety among adolescents' students. The computed pre-test mean score is 17.13, whereas the post-test mean score is 15.33. According to the mean stress score, it is clear that the pre-test score is greater than the post-test score in the tested group.

Figure 4.4: Showing mean score distribution graph of Depression score among treatment group.



The mean pre-test and post-test scores of the therapy group in depression among adolescents' students are shown in Figure 4.4. The calculated pre-test mean score is 21.37, and the calculated post-test mean amount is 18.27. According to the mean stress score, it is clear that the pre-test score is greater than the post-test score in the tested group.

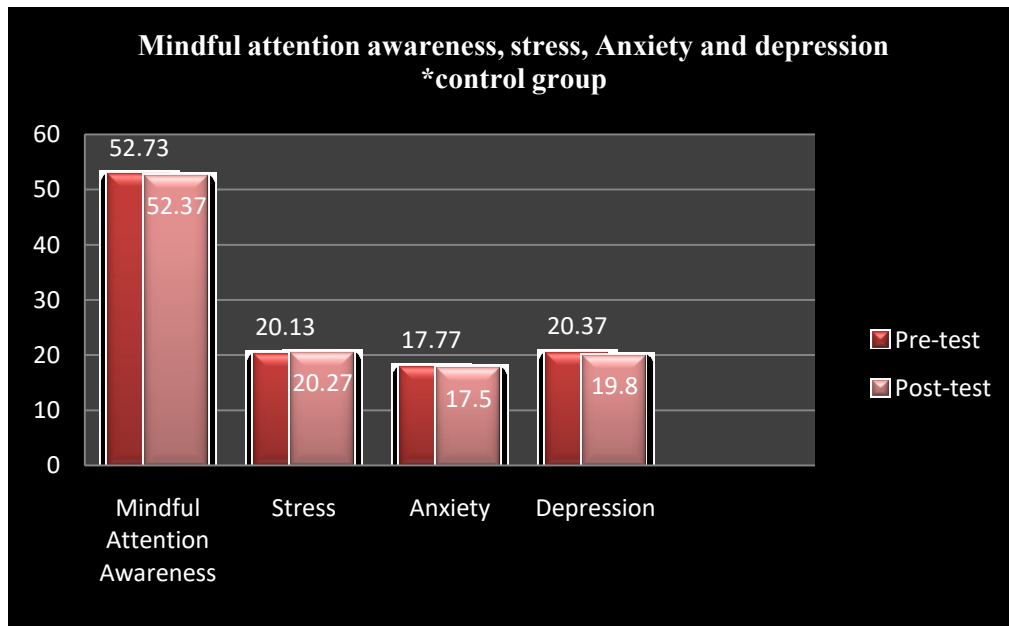
4.1.2 Mean score distribution of Mindful attention awareness, stress, Anxiety, depression and Self-esteem score among control group.

Table 4.2: Mean score distribution of Mindful attention awareness, stress, Anxiety, depression and Self-esteem score among control group.

Descriptive Statistics				
	Mean	N	Std. Deviation	Std. Error Mean
Pre-MAA	52.73	60	10.148	1.310
Post-MAA	52.37	60	9.755	1.259
Pre-Stress	20.13	60	7.973	1.029
Post-Stress	20.27	60	7.068	.913
Pre-Anxiety	17.77	60	9.367	1.209
Pos-Anxiety	17.50	60	7.747	1.000
Pre-Depression	20.37	60	9.662	1.247
Post-Depression	19.80	60	8.082	1.043

From the above table 4.2 illustrates, the pre-test mean amount of Mindful Attention Awareness, Anxiety and Self-esteem are slightly higher than the post-test score; on the other hand the post mean amount of stress and depression are slightly greater than the pre-test amount among the control group students. The illustration is given in figure 4.5

Figure 4.5: Mean score distribution of Mindful attention awareness, stress, Anxiety and depression score among control group.



4.1.3 Distribution of mean difference between Pre and Post test assessment on Dependent variables.

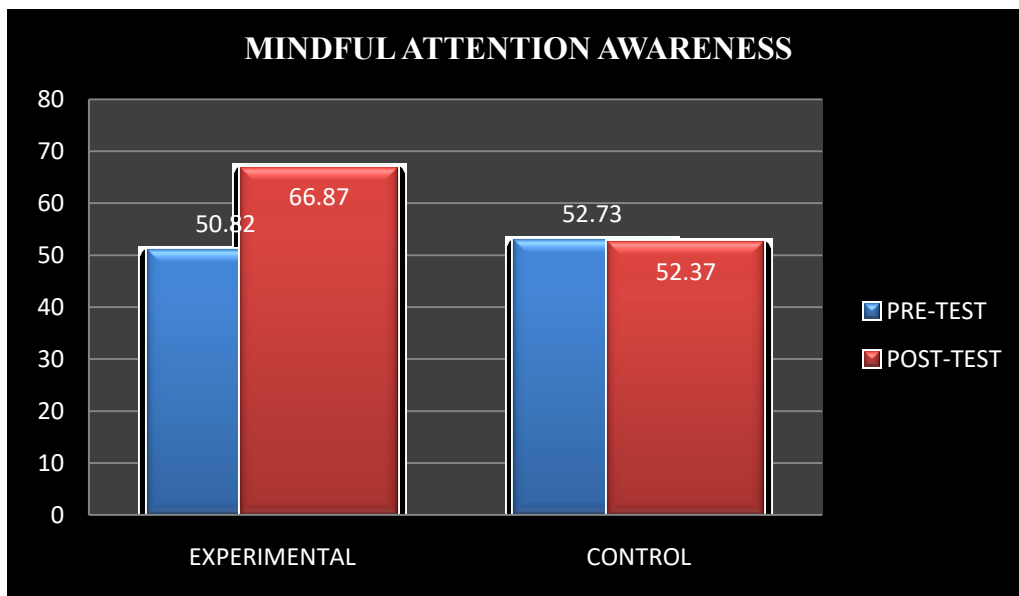
Table 4.3 Distribution of mean difference between Pre and Post test assessment on the level of Mindful Attention Awareness, Anxiety, Stress, Depression and Self-esteem among various levels of students

Sl. No	Variables	Treatment Group			Control Group		
		Pre	Post	D	Pre	Post	D
01	MAA	50.82	66.87	16.05	52.73	52.37	0.36
02	Stress	20.77	15.17	5.6	20.13	20.27	0.14
03	Anxiety	17.13	15.33	1.8	17.77	17.50	0.27
04	Depression	21.37	18.27	3.1	20.37	19.80	0.57

D – Difference

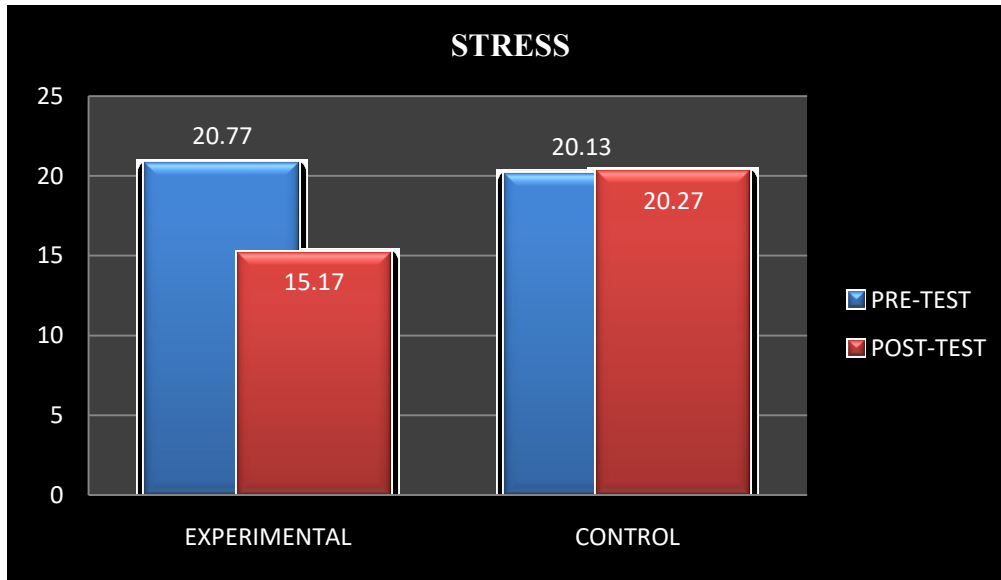
It may be seen in the above table 4.3 that the increase of mean value between pre and post assessment on the level of Mindful Attention Awareness in treatment group is 16.05 and the increase of mean value in control group is 0.36. It is also explored that the increase of mean value in treatment group is greater. It is indicated that the level of Mindful Attention Awareness among the various levels of students is increase by the treatment or treatment group. Figure 4.6 illustrates the treatment and control group wise Mindful Attention Awareness of the students under study.

Figure 4.6: The Treatment and Control group wise Mindful Attention Awareness



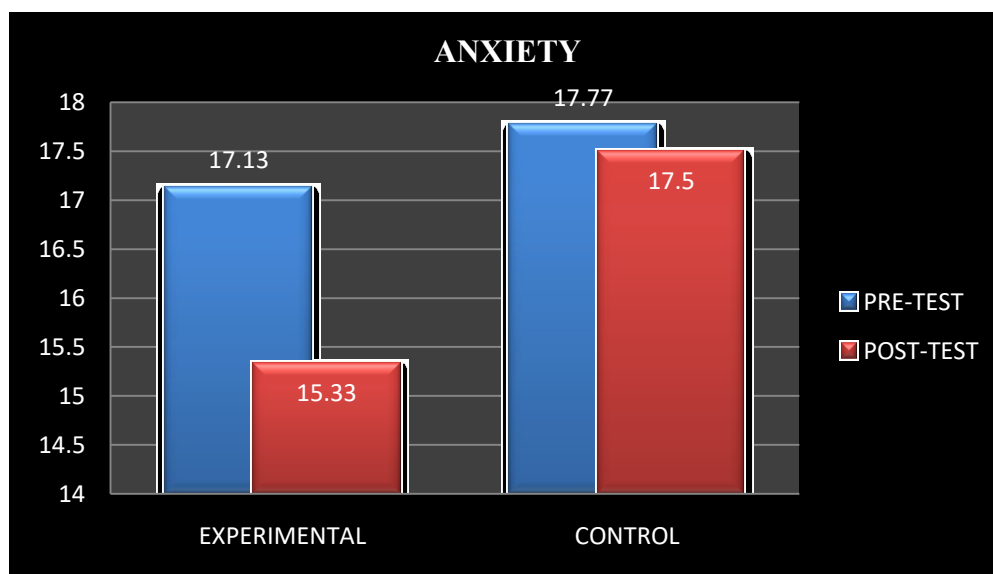
As a result of the above, table 4.3, it is implied that the decrease of mean value between pre and post assessment on the level of Stress in treatment group is 5.60 and the increase of mean value in control group is 0.14. It is also explored that the difference (decrease) of mean value in treatment group is greater. It is implied that the level of stress among the various levels of students is reduced by the treatment group. Figure 4.7 illustrates the treatment and control group wise Stress of the students under study.

Figure 4.7: The Treatment and Control group wise Stress



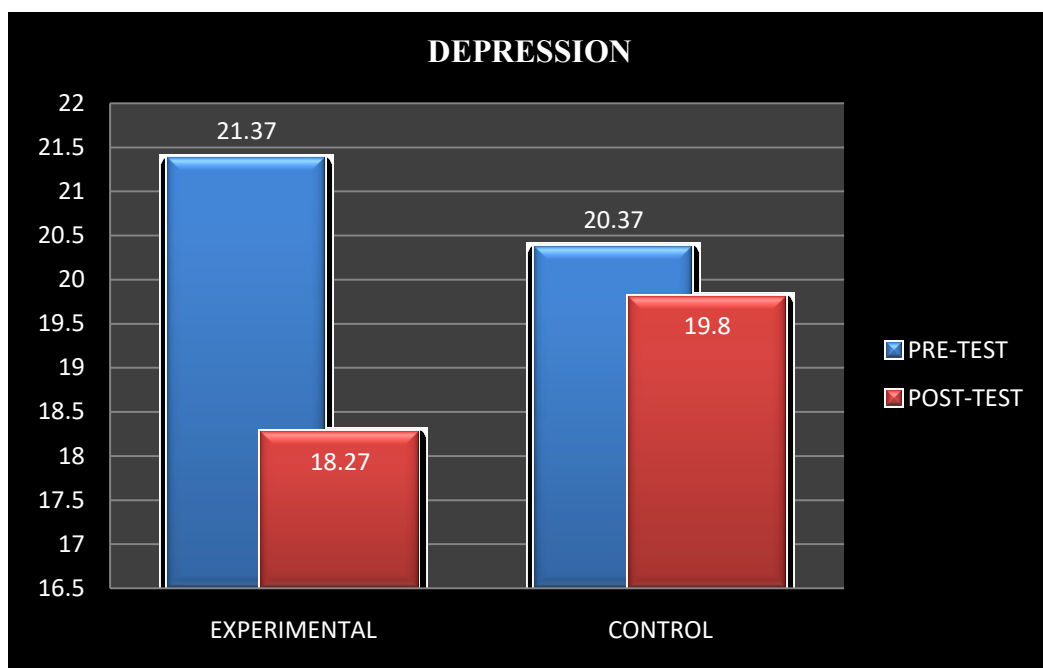
It may be seen in the above table 4.3 that the decrease of average value between pre and post assessment on the level of Anxiety in treatment group is 1.80 and the few decrease of mean value in control group is 0.27. It is also explored that the increase of mean value in treatment group is greater. It is implied that the level of Anxiety among the various levels of students is reduced by the treatment group. Figure 4.8 illustrates the treatment and control group wise Anxiety of the students under study.

Figure 4.8: The Treatment and Control group wise Anxiety



From the above table 4.3, it is indicated that the decrease of mean value between pre and post assessment on the level of Depression in treatment group is 3.10 and the decrease of mean value in control group is 0.57. It is also explored that the decrease of mean value in treatment group is greater. It is indicated that the level of depression among the various levels of students is reduced by the treatment or treatment group. Figure 4.9 illustrates the treatment and control group wise Depression of the students under study.

Figure 4.9: The Treatment and Control group wise Depression



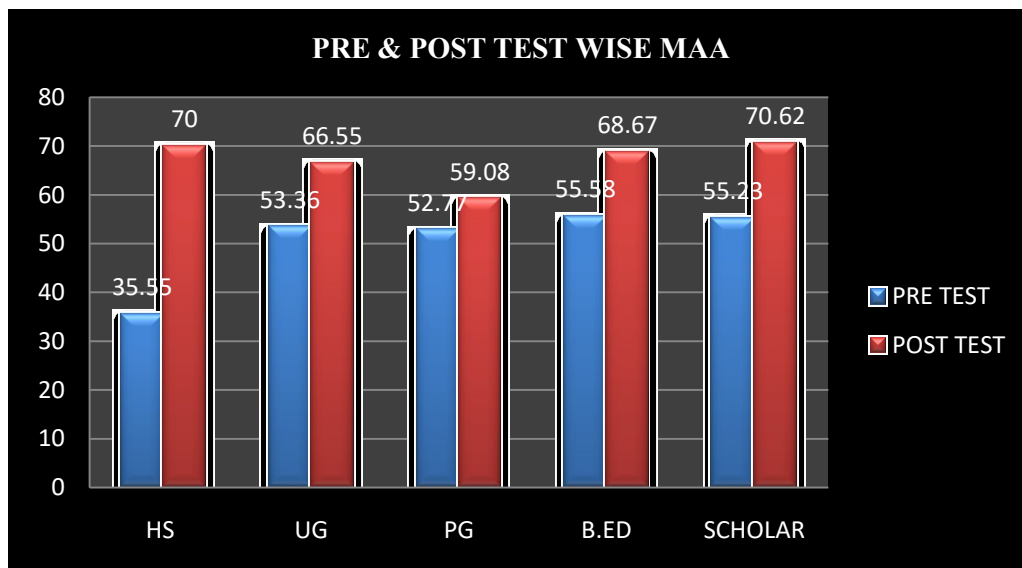
4.1.4 Distribution of mean difference between Pre and Post test assessment on Dependent variables according to study class in treatment group.

Table 4.4: Pre and Post test assessment on Dependent variables according to class.

Variables	HS LEVEL		UG LEVEL		PG LEVEL		B.ED LEVEL		SCHOLAR	
	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST
MAA	35.55	70.00	53.36	66.55	52.77	59.08	55.58	68.67	55.23	70.62
Difference	34.45		13.19		6.31		13.09		15.39	
Stress	24.18	11.82	23.09	11.82	20.31	18.15	17.67	19.17	19.23	14.15
Difference	-12.36		-11.27		-2.16		1.50		-5.08	
Anxiety	22.55	14.73	18.18	13.82	15.38	19.23	14.67	15.67	15.69	12.92
Difference	-7.82		-4.36		3.85		1.00		-2.77	
Depression	22.73	16.36	26.73	17.45	21.23	22.77	19.17	18.50	17.85	15.85
Difference	-6.37		-9.28		1.54		-0.67		-2.00	

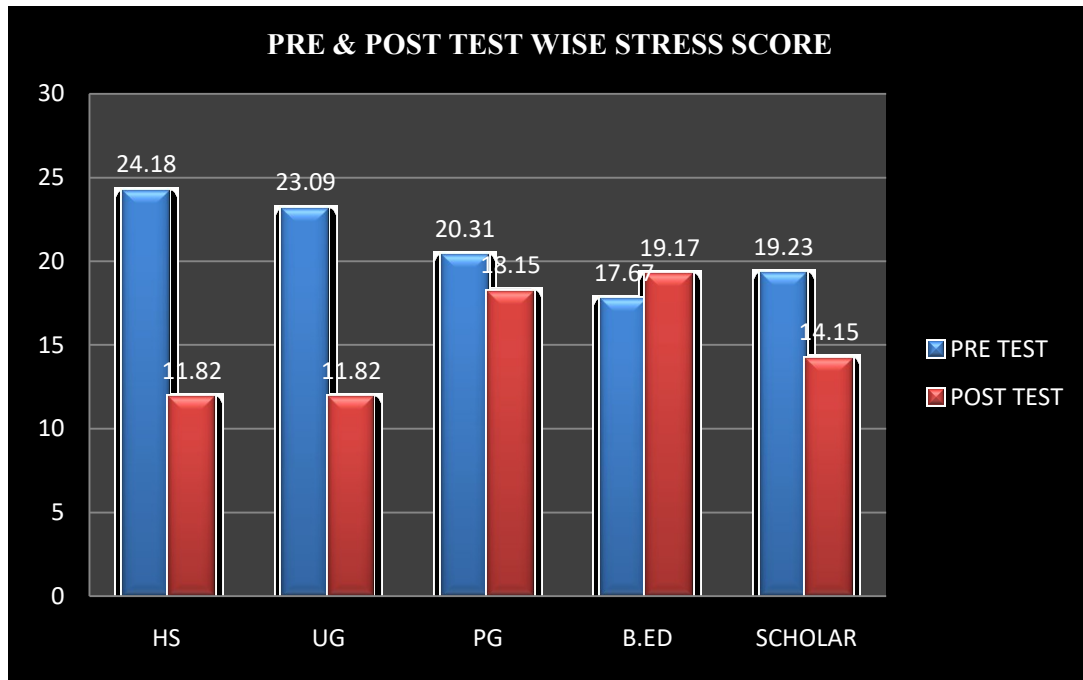
On the basis of table 4.4, it is indicated that the Mindful Attention Awareness mean difference score is more increase in Higher Secondary level than the others level of study class (H.S., UG, PG, B.ED & SCHOLAR). Figure 4.10 illustrates pre and post tests wise Mindful Attention Awareness of the various levels of students under study in treatment group.

Figure 4.10: Pre and post tests wise difference in Mindful Attention Awareness.



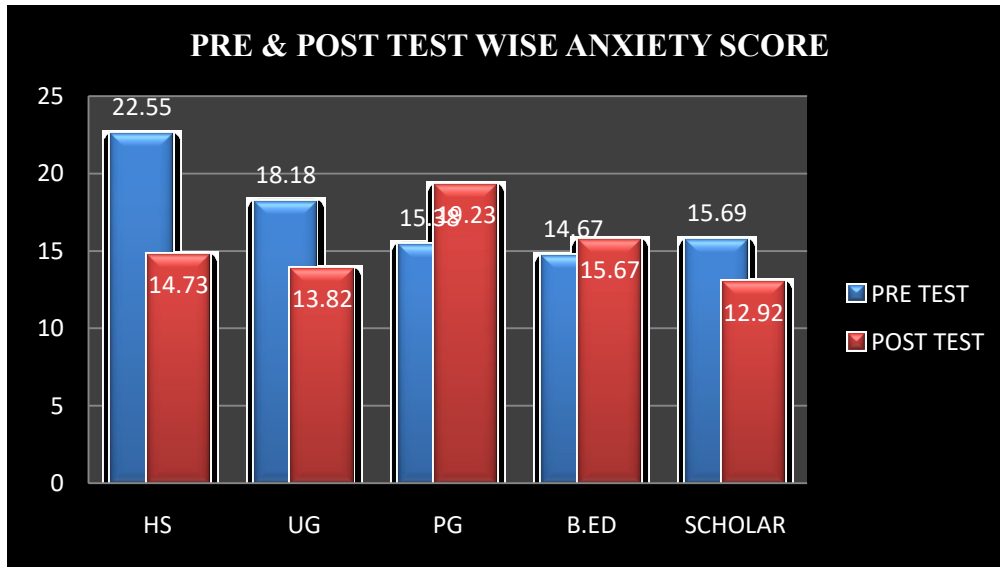
According to table 4.4, the average difference stress level is more reduced in higher secondary level (12.36) than the others study classes (UG, PG, B.ED & Scholar students). Figure 4.11 illustrates pre and post tests wise stress score of the various levels of students under study in treatment group.

Figure 4.11: Pre and post tests wise difference in Stress score.



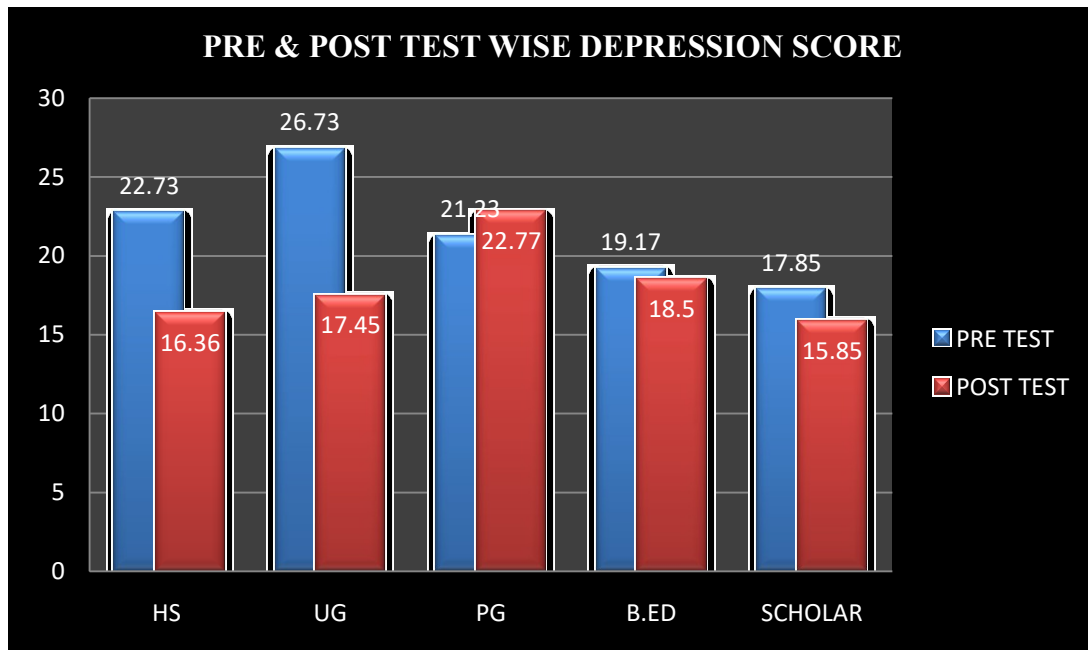
According to table 4.4, the average differential Anxiety score is more reduced in higher secondary level (7.82) than the others study classes (H.S., UG, PG, B.ED & Scholar students). Figure 4.12 illustrates pre and post tests wise Anxiety score of the various levels of students under study in treatment group.

Figure 4.12: Pre and post tests wise difference in Anxiety score.



On the basis table 4.4, it can be said that average difference Depression score is more reduced at Under graduation level (9.28) than the others study classes (HS, PG, B.ED & Scholar students). Figure 4.13 illustrates pre and post tests wise Depression score of the various levels of students under study in treatment group.

Figure 4.13: Pre and post tests wise difference in Depression score.



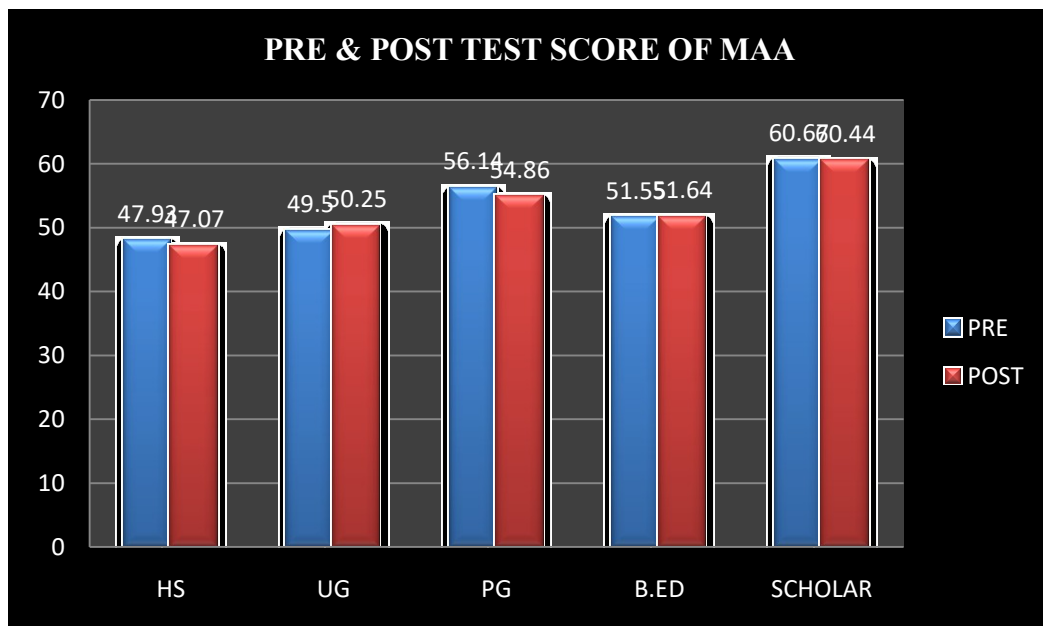
4.1.5 Distribution of mean difference between Pre and Post test assessment on Dependent variables according to study class in control group.

Table 4.5: Pre and Post test assessment on Dependent variables according to class.

Variables	HS LEVEL		UG LEVEL		PG LEVEL		B.ED LEVEL		SCHOLAR	
	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST
MAA	47.93	47.07	49.50	50.25	56.14	54.86	51.55	51.64	60.67	60.44
Difference	-0.86		0.75		-1.28		0.09		-0.23	
Stress	20.43	19.86	19.67	19.50	22.00	22.43	23.64	24.18	13.11	13.78
Difference	-0.57		-0.17		0.43		0.54		0.67	
Anxiety	18.71	17.71	18.00	18.00	20.43	19.86	19.09	18.18	10.22	12.00
Difference	1.00		0.00		-0.57		-0.91		1.78	
Depression	22.86	23.43	22.83	22.33	23.71	22.00	19.09	17.09	9.56	10.67
Difference	0.57		-0.50		-1.71		-2.00		1.11	

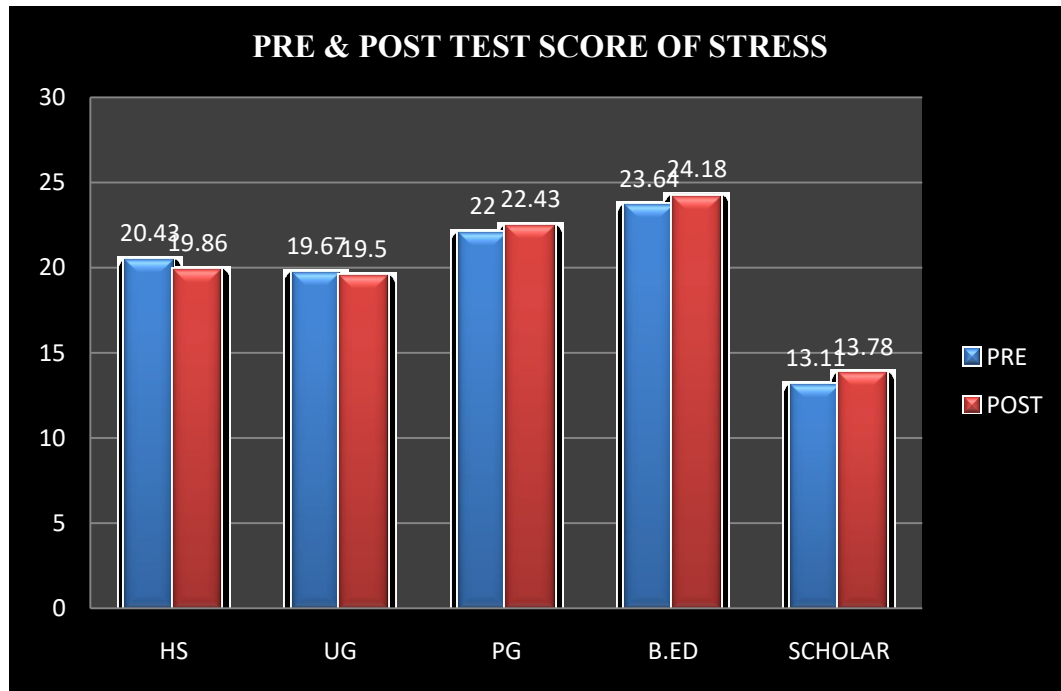
From the above table it can be interpreted that the mean difference of Mindful Attention Awareness was more in the students at post graduate level than the other levels of students. Pre and post tests wise MAA score of the various levels of students under study in control group is showing figure 4.14

Figure 4.14: Pre and post tests wise difference in MAA score.



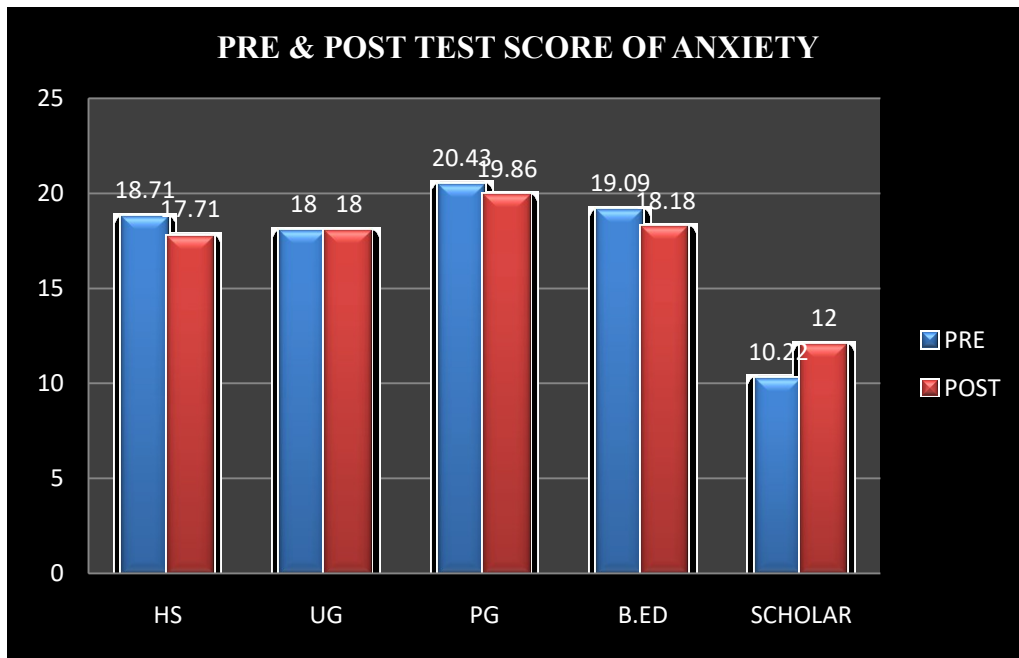
As can be seen from the table 4.5, the average difference in stress is almost negligible in all cases, with a slight increase in some levels and slight decrease in others. Pre and post tests wise stress score of the various levels of students under study in control group is showing figure 4.15

Figure 4.15: Pre and post tests wise difference in stress score.



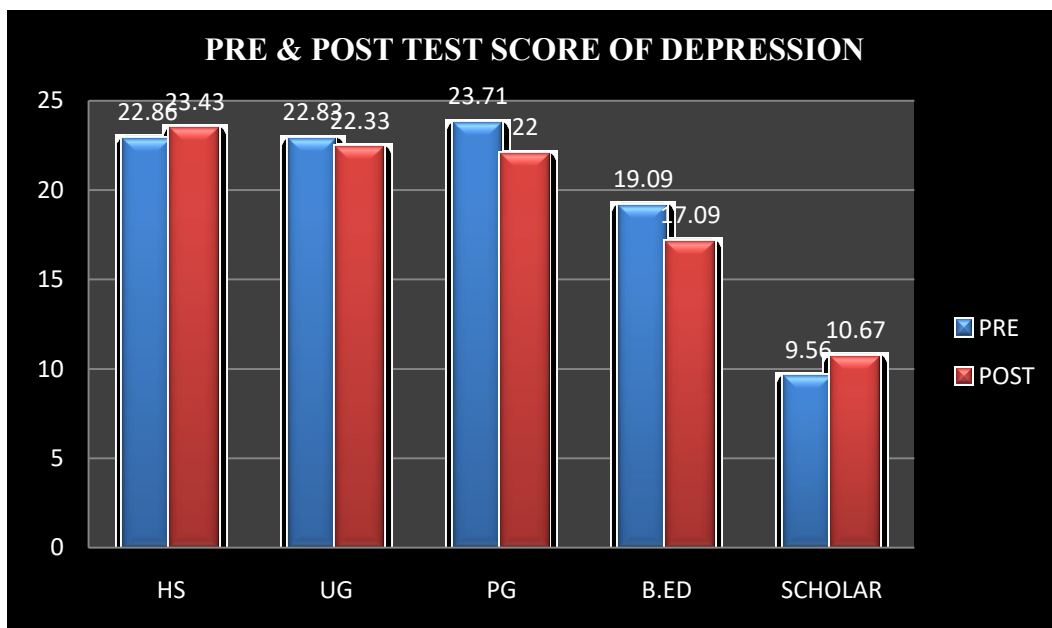
It may be deduced from table 4.5 that the average difference in anxiety was more increase in the scholar students than the other levels of students. Pre and post tests wise anxiety score of the various levels of students under study in control group is showing figure 4.16

Figure 4.16: Pre and post tests wise difference in anxiety score.



On the basis of table 4.5, it can be interpreted that the average difference of depression was more decrease in the students at B,ED. level than the other levels of students. Pre and post tests wise depression score of the various levels of students under study in control group is showing figure 4.17

Figure 4.17: Pre and post tests wise difference in depression score.



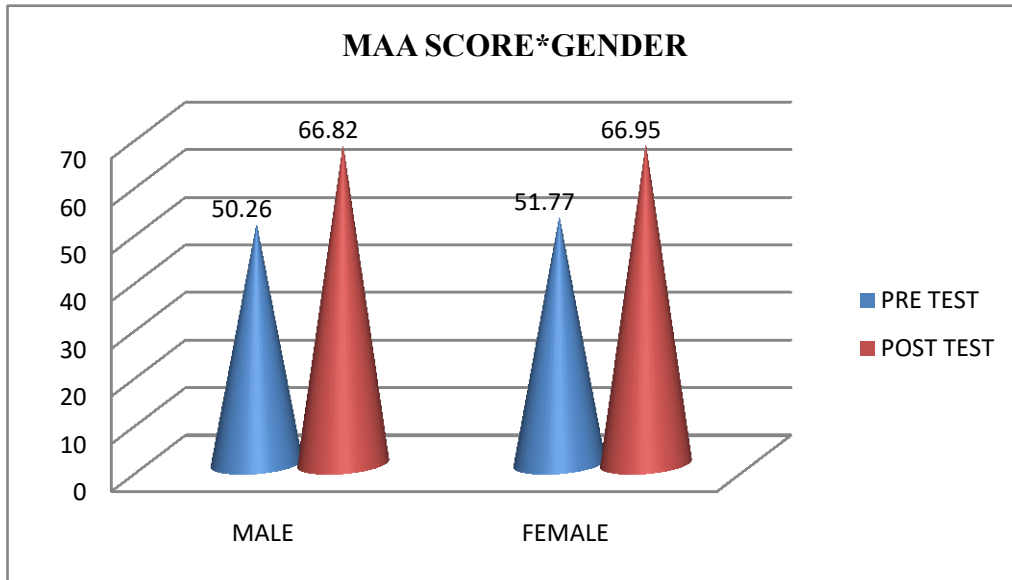
4.1.6 Distribution of mean difference between Pre and Post test assessment on Dependent variables according to gender when the treatment group is concerned.

Table 4.6: Pre and Post test assessment on Dependent variables according to Gender.

VARIABLES	Differences in male		Differences in female	
	PRE	POST	PRE	POST
MAA	50.26	66.82	51.77	66.95
DIFFERENCE	-16.56		-15.18	
STRESS	18.74	15.05	24.27	15.36
DIFFERENCE	3.69		8.91	
ANXIETY	15.32	14.95	20.27	16.00
DIFFERENCE	0.37		4.27	
DEPRESSION	21.79	17.63	20.64	19.36
DIFFERENCE	4.16		1.28	

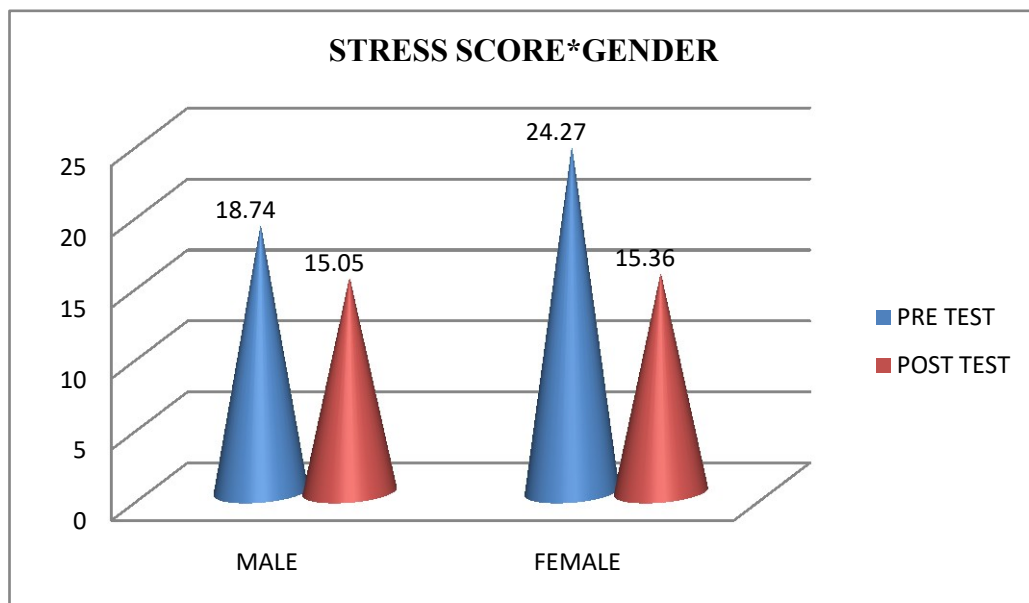
According to the preceding table 4.6, on the basis of gender variable it is concluded that male students (-16.56) is more mean difference (increase) in MAA score than the female students (-15.18) among the various levels of students. Figure 4.18 illustrates pre and post tests wise MAA score of the students under study in treatment group.

Figure 4.18: Pre and post tests wise difference in MAA score.



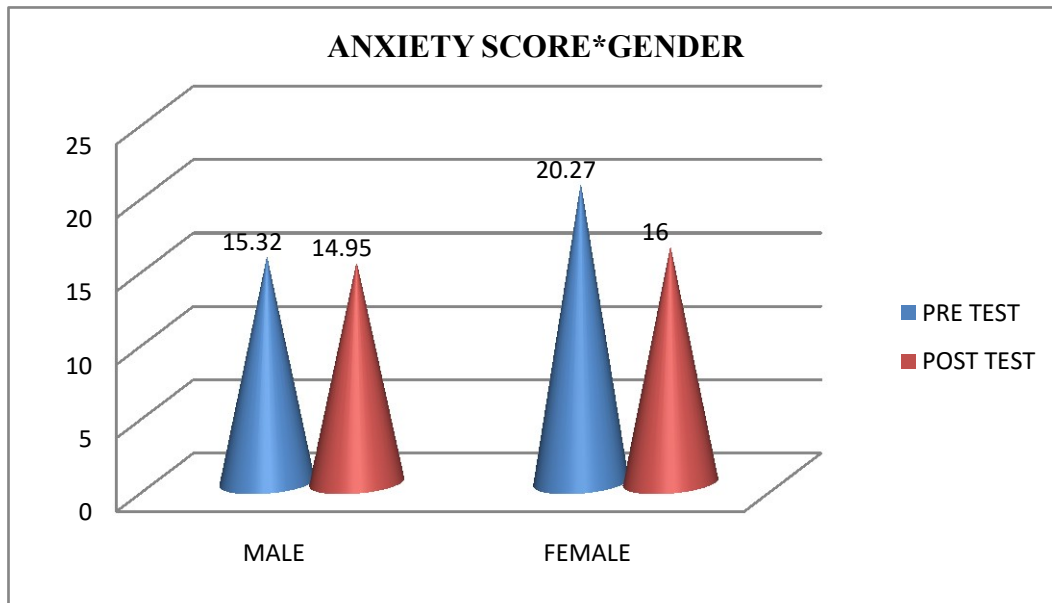
From the above table 4.6, on the basis of gender variable it is indicated that female students (8.91) is more mean difference (decrease) in Stress score than the male students (3.69) among the various levels of students. Figure 4.19 illustrates pre and post tests wise stress score of the students under study in treatment group on the basis of gender variable.

Figure 4.19: Pre and post tests wise difference in Stress score.



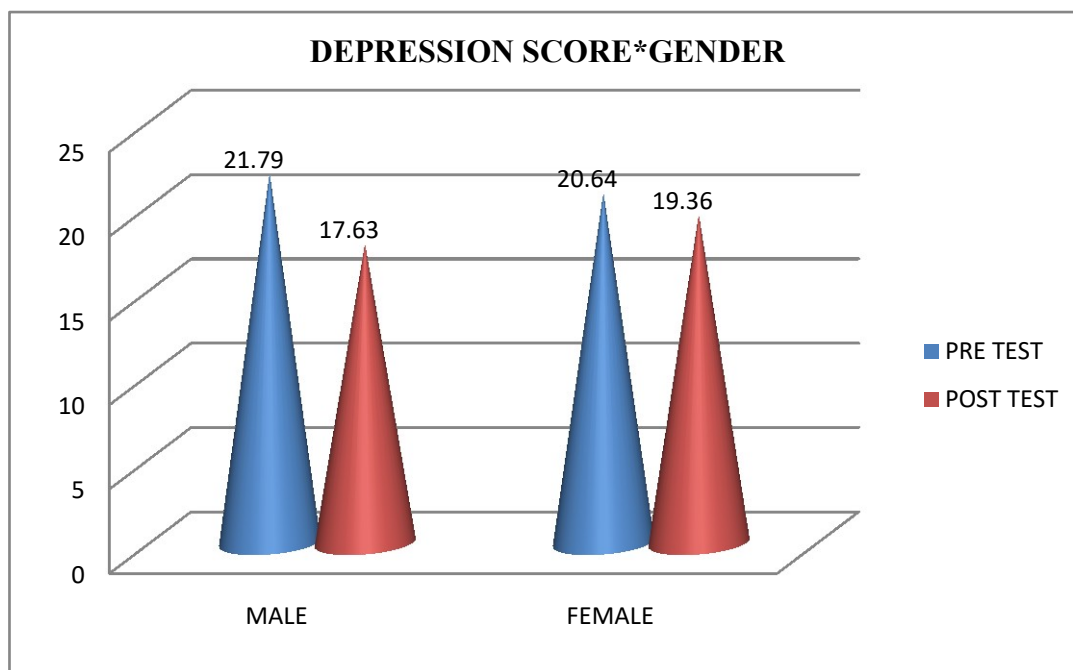
From the above table 4.6, on the basis of gender variable it is indicated that female students (4.27) is more mean difference (decrease) in Anxiety score than the male students (0.37) among the various levels of students. Figure 4.20 illustrates pre and post tests wise Anxiety score of the students under study in treatment group on the basis of gender variable.

Figure 4.20: Pre and post tests wise difference in Anxiety score.



From the above table 4.6, on the basis of gender variable it is showed that male students (4.16) is more mean difference (decrease) in Depression score than the female students (1.28) among the various levels of students. Figure 4.21 illustrates pre and post tests wise Depression score of students under study in treatment group on the basis of gender variable.

Figure 4.21: Pre and post tests wise difference in Depression score.



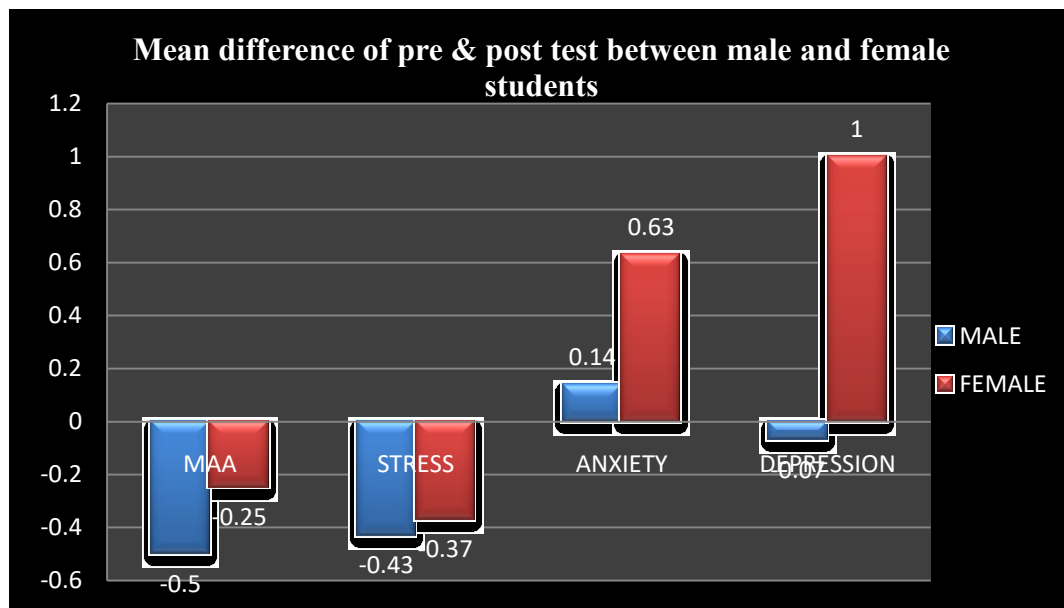
4.1.7 Distribution of mean difference between Pre and Post test assessment on Dependent variables according to gender when the control group is concerned.

Table 4.7: Pre and Post test assessment on Dependent variables according to Gender.

VARIABLES	Differences in male		Differences in female	
	PRE	POST	PRE	POST
MAA	53.86	53.36	51.75	51.50
DIFFERENCE	-0.50		-0.25	
STRESS	19.36	18.93	20.81	21.44
DIFFERENCE	-0.43		-0.37	
ANXIETY	17.00	17.14	18.44	17.81
DIFFERENCE	0.14		0.63	
DEPRESSION	17.50	17.43	22.88	21.88
DIFFERENCE	-0.07		1.00	

Table 4.7 shows that the mean differences in MAA, Stress, Anxiety and Depression between male students are almost negligible in all cases; the same result is going to be noticed even among the female students. The mean difference between pre-test and post-test based on male and female students is shown in figure 4.22.

Figure 4.22: showing the mean difference of pre & post test between male and female students



4.1.8 Distribution of mean difference between Pre and Post test assessment on Dependent variables on the basis of Treatment and control group.

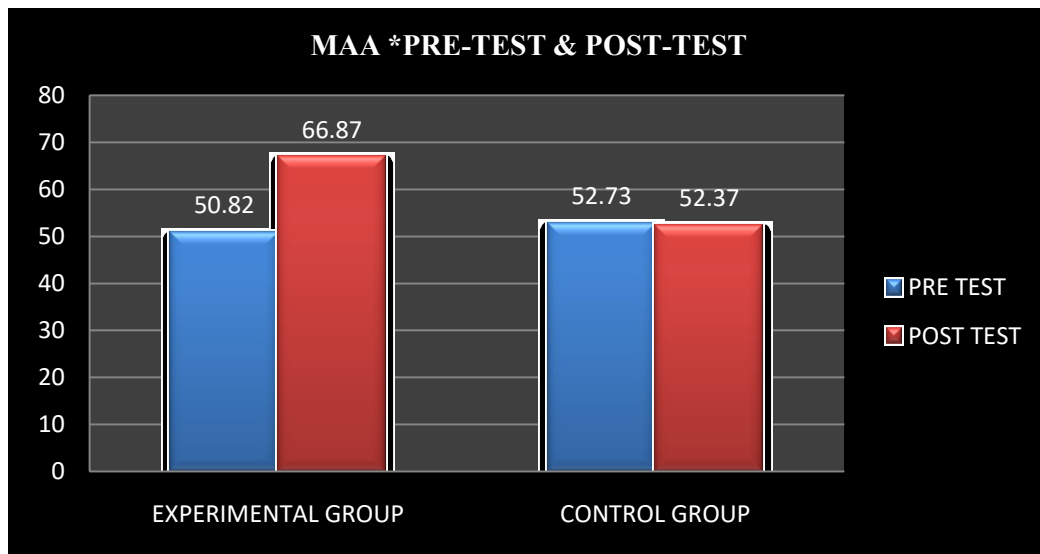
Among the various levels of students, on the basis of treatment and control group the mean difference between pre test and post-test score in different dependent variable is given in table 4.8.

Table 4.8: mean difference between Pre and Post test assessment on Dependent variables on the basis of tested and control group.

			PRE-TEST		POST-TEST	
	EX/CON	N	Mean	SD	Mean	SD
MAA	EX	60	50.82	10.250	66.87	10.849
	CON	60	52.73	10.148	52.37	9.755
STRESS	EX	60	20.77	7.484	14.53	7.990
	CON	60	20.13	7.973	20.27	7.068
ANXIETY	EX	60	17.13	8.087	14.70	7.062
	CON	60	17.77	9.367	17.50	7.747
DEPRESSION	EX	60	21.37	7.859	16.87	6.932
	CON	60	20.37	9.662	19.80	8.082

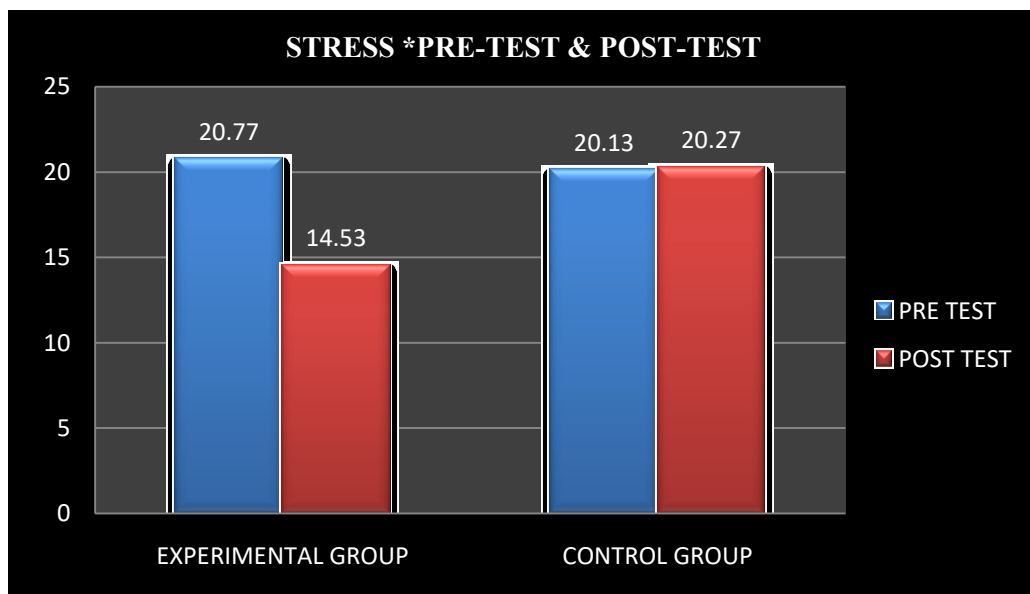
On the basis of table 4.8, it is concluded that the mean score in MAA of pre-test and post-test of treatment group are 50.82 and 66.87; the mean score of MAA in control group shown that the pre-test and post-test score are 52.73 & 52.37. So the difference (increase) is more in treatment group than control group students. The illustration is given in figure 4.23.

Figure 4.23: Mean difference between pre-test and post-test in MAA on the basis treatment and control group.



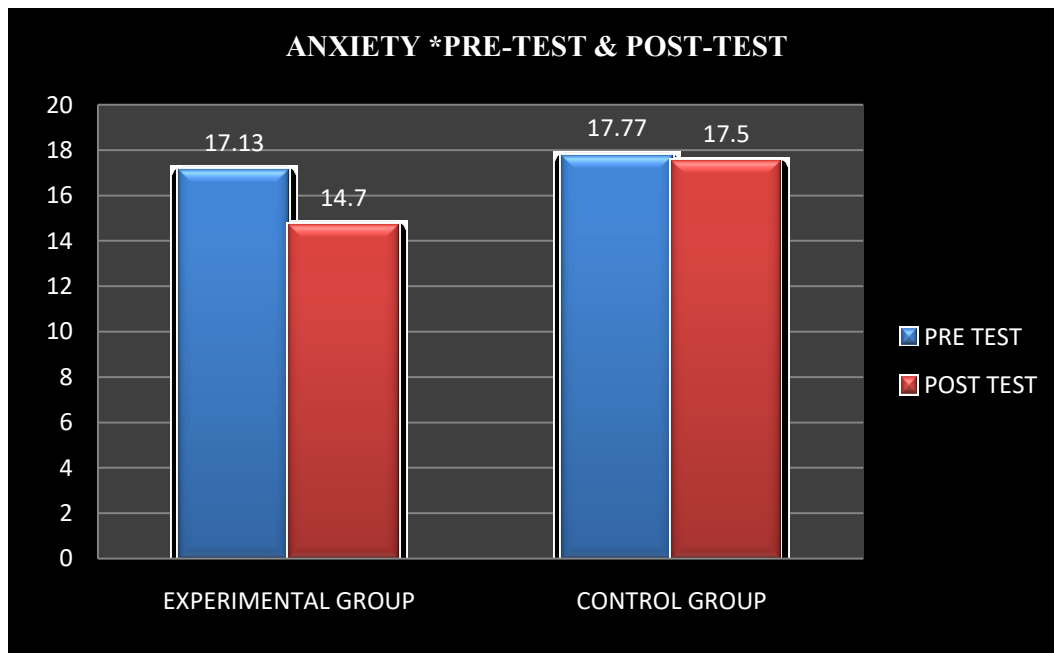
According to table 4.8, the pre-test mean score (20.77) is higher than the post-test mean score (14.53) in Stress in the Treatment group; however, the pre-test and post-test average score of Stress in the Control group are quite near to each other. So the result of treatment group indicated that stress is more difference (reduce) than the control group. Figure 4.24 illustrates the mean difference of stress based on pre and post test.

Figure 4.24: Mean difference of Stress score based on Pre & Post test.



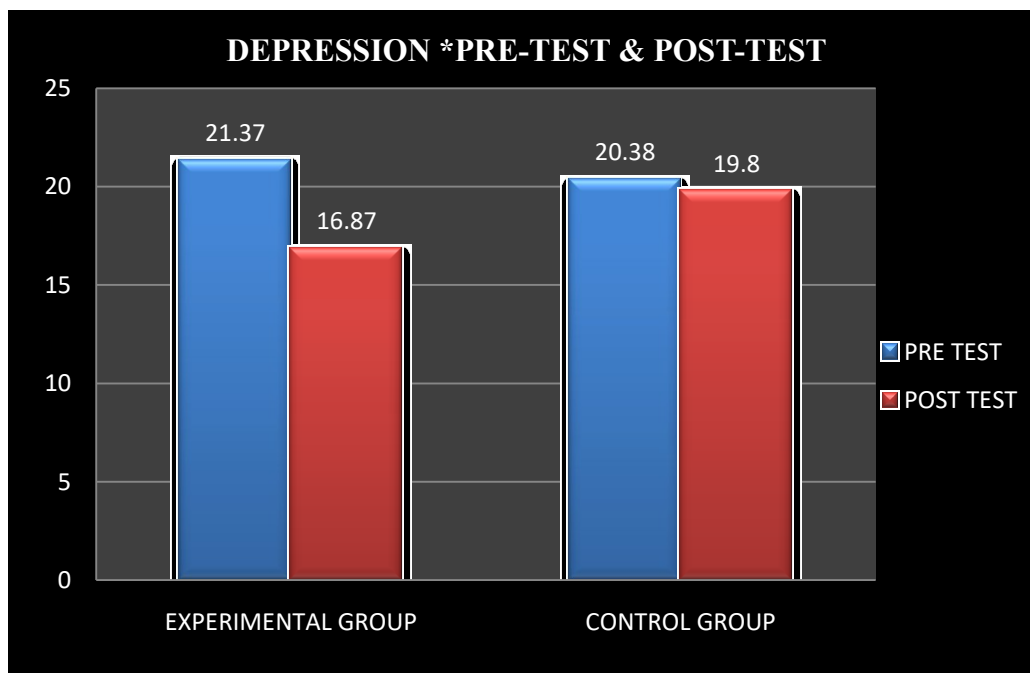
According to table 4.8, in treatment group students mean average of Anxiety in pre-test is 17.13 and post-test score is 14.70. On the other hand, the average score sore of anxiety in pre test is 17.77 and post-test score is 17.50. so the result indicated that mean difference (reduce) in treatment group is more than the control group. Figure 4.25 illustrates the mean difference in Anxiety based on Pre-test and Post-test.

Figure 4.25: Mean difference of Anxiety score based on Pre & Post test.



The table 4.8 implied that the average values of pre-assessment of treatment group in the level of depression is 21.37 then in the post-assessment of treatment group in the level of depression is 16.87. Further, it is noted that the mean in pre-assessment of control group in the level of depression is 20.37 then in the post assessment of control group in the level of depression is 19.80. this showed that there is a average difference between pre and post assessment mean scores in the level of depression among the various levels of students. The illustration is given in figure 4.26

Figure 4.26: Mean difference of Depression score based on Pre & Post test.

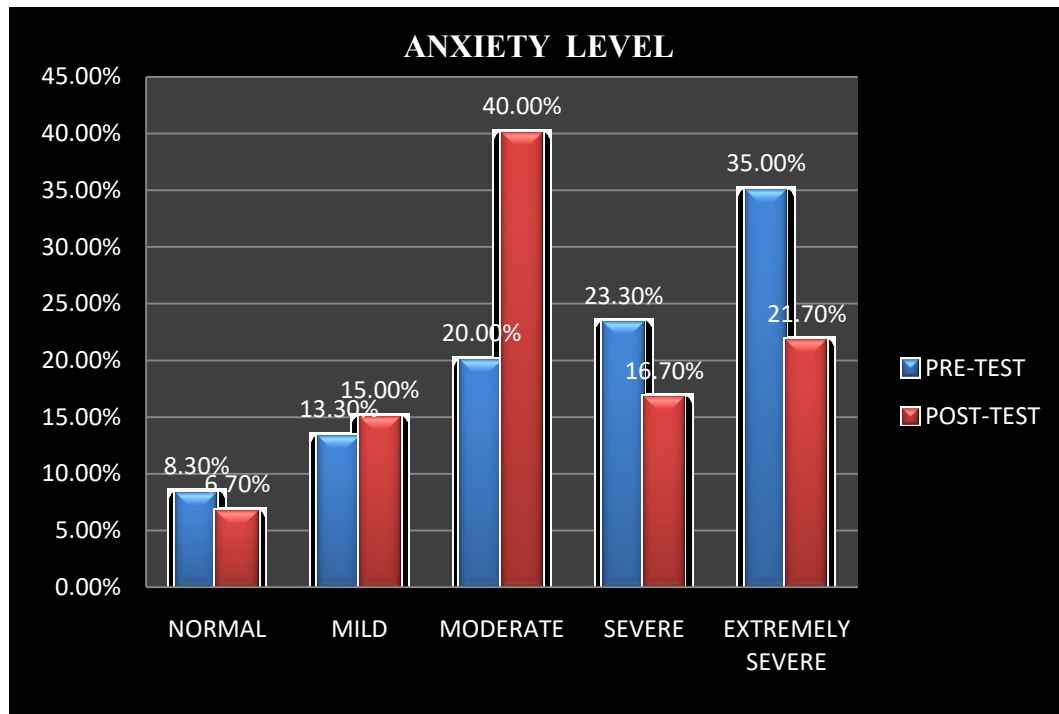


4.1.9 Impact of Mindfulness Meditation Therapy

One of the major objectives of these research work was to the impact of meditation on Depression, Anxiety and Stress. Appendix-6 present the Depression, Anxiety and Stress score of pre and post-test of tested group pupil. Detail Sample wise description for investigating the change in Deression, Anxiety and Stress level among the various levels of students are given bellow:

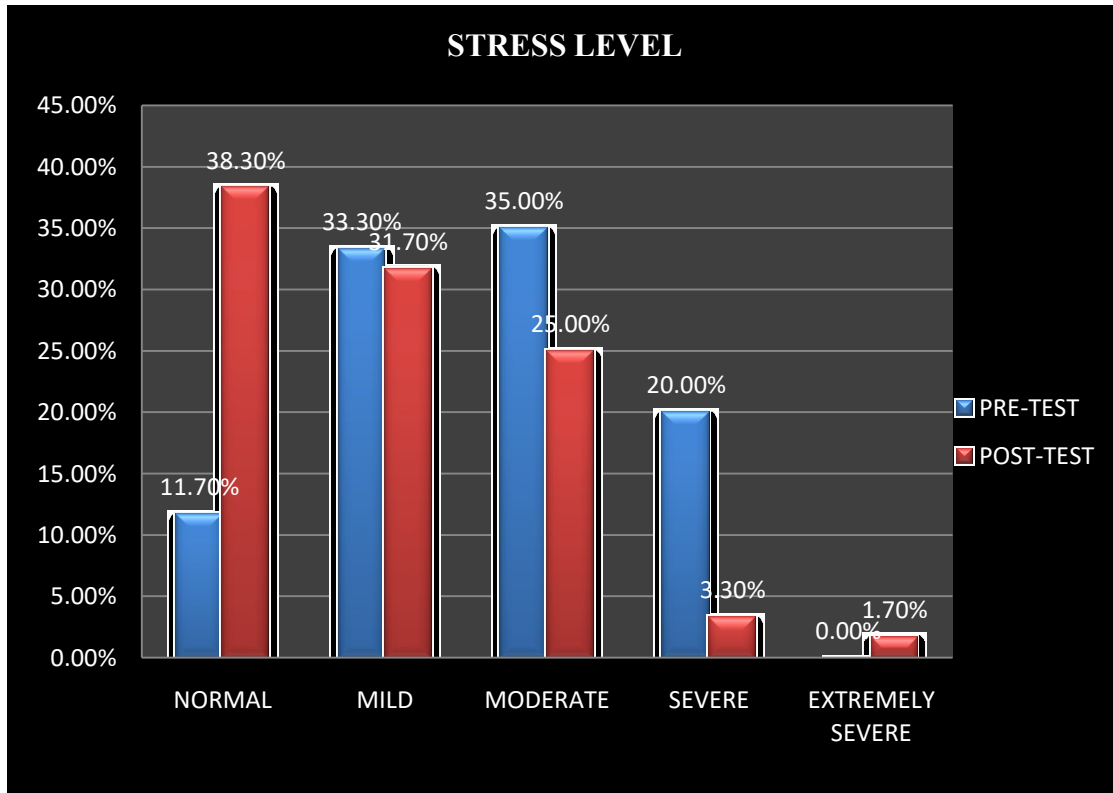
- i. In Treatment group, 8.3% and 13.3% students were categorised as having normal and Mild level of anxiety before the experiment started. 20% students having Moderate level of Anxiety; 23.3% and 35% students were categorised as having Severe and Extremely level of anxiety before the experiment. But after the experiment, 6.7%, 15%, 40%, 16.7% and 21.7% subjects were categorised as having Normal, Mild, Moderate, Severe and Extremely Severe level of Anxiety among the various levels of students. The illustration is given in figure 4.27

Figure 4.27: Differences of Anxiety level in Percentage



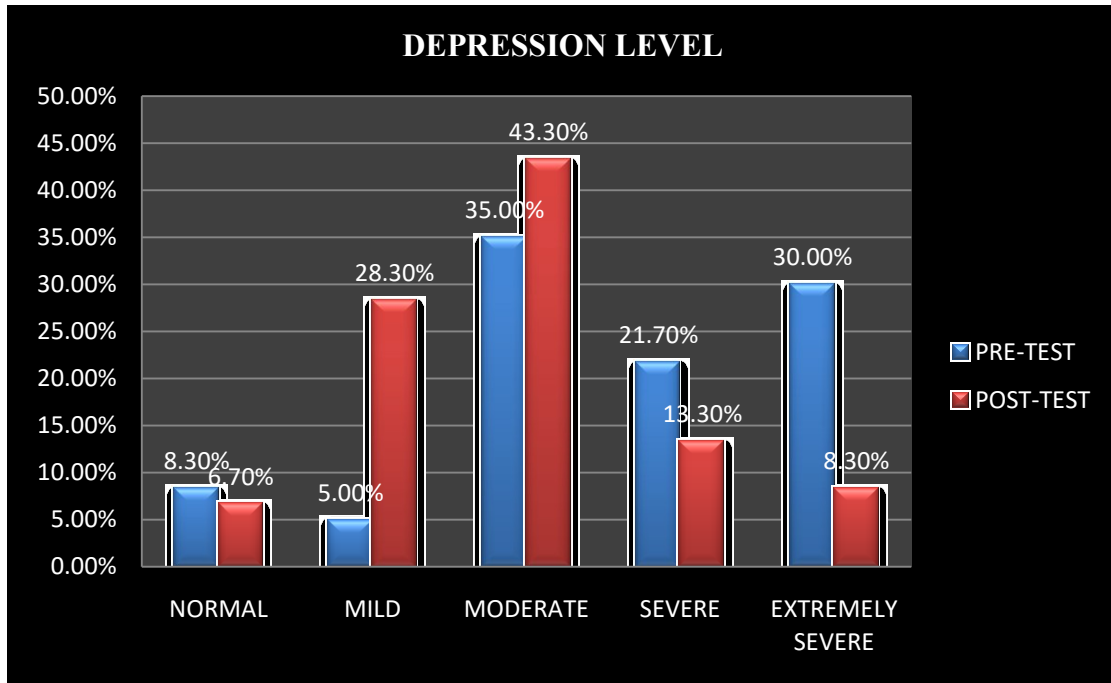
- ii. Before the experiment in Stress, 11.7%, 33.3%, 35% and 20% students were categorised as having Normal, Mild, Moderate, and Severe level of stress; but after the experiment, 38.3%, 31.7%, 25%, 3.3 and 1.7% subjects Normal, Mild, Moderate, Severe and Extremely Severe level of stress among the various levels of students. The illustration is given in figure 4.28

Figure 4.28: Differences of Stress level in Percentage



- iii. Before the experiment in Depression, 8.3%, 5%, 35%, 21.7% and 30% students were categorised as having Normal, Mild, Moderate, Severe and Extremely Severe level of Depression; but after the experiment, 6.7%, 28.3%, 43.3%, 13.3 and 8.3% subjects Normal, Mild, Moderate, Severe and Extremely Severe level of Depression among the various levels of students. The illustration is given in figure 4.29

Figure 4.29: Differences of Depression level in Percentage



4.2 Differential Analysis

Inferential statistics assists researchers in making predictions from data by taking data from a sample and drawing conclusions about the larger population from which the sample was derived. At first, the researcher used Paired sample T-Test to measure the mean differences between groups and also used independent sample t-test. Then, implemented the difference in differences statistical technique to investigate the effect of the treatment particularly among treatment group.

4.2.1 Hypothesis Testing

H₀1: There is no significant mean difference between pre and post test of Mindful Attention Awareness among the various levels of students in Experimental group.

Table 4.9: showing the paired sample t-test based on H₀1

Test	N	Mean	SD	T	Df	p-value	Remarks
Pre test	60	50.82	10.25	-8.205	59	0.00	S*
Post test	60	66.87	10.84				P<0.01

***Significant**

Paired sample t-test comparing the mean scores of Mindful Attention Awareness of the various levels of students in pre-test to be average scores of Students' Mindful Attention Awareness revealed a significant mean difference of the two different groups [$t(59) = -8.205$, $p < 0.01$]. The average score of Post-test ($m=66.87$, $SD=10.84$) was found significantly higher than Pre-test score ($m=50.82$, $SD=10.25$).

Therefore, the null hypothesis is rejected and as a result, the given difference in sample means being significant. From the above analysis, it can be concluded that there is a significant mean difference between pre and post test of Mindful Attention Awareness among the various levels of students in Treatment group.

H₀2: There is no significant mean difference between pre and post test of Stress among the various levels of students in Experimental group.

Table 4.10: showing the paired sample t-test based on H₀2

Test	N	Mean	SD	t	df	p-value	Remarks
Pre test	60	20.77	7.484	4.150	59	0.00	S*
Post test	60	15.17	8.472				P<0.01

***Significant**

Paired sample t-test comparing the mean scores of Stress of the various levels of students in pre-test to be mean scores of Students' Stress revealed a significant mean difference of the two different groups [$t(59) = -4.150$, $p < 0.01$]. The mean score of Post-test ($m=15.17$, $SD=8.472$) was found significantly lower than Pre-test score ($m=20.77$, $SD=7.484$).

Therefore, the null hypothesis is rejected and as a result, the given difference in sample means being significant. From the above analysis, it can be concluded that there is a significant mean difference between pre and post test of Stress among the various levels of students in Treatment group.

H₀3: There is no significant mean difference between pre and post test of anxiety among the various levels of students in Experimental group.

Table 4.11: showing the paired sample t-test based on H₀3

Test	N	Mean	SD	t	df	p-value	Remarks
Pre test	60	17.13	8.087	1.618	59	0.11	NS
Post test	60	15.33	7.137				P>0.05

Not Significant

It can be observed from the table 4.11 that the computed value of paired sample t-test comparing the mean scores of pre-test and post-test of anxiety found no significant difference between two tests [$t(59) = 1.618$, $p > 0.05$]. Mean score of pre-test ($m=17.13$; $SD=8.087$) found to be higher than post-test ($m=15.33$; $SD=7.137$) among treatment group but it is not statistically significant.

Therefore, the null hypothesis is retained at 0.05 level and as a result, the given difference in the means being not significant can only be for some sampling fluctuation. As a result, it is possible to conclude that there is no significant variation in anxiety levels between pre-test and post-test among tested group students.

H₀4: There is no significant mean difference between pre and post test of Depression among the various levels of students in Experimental group.

Table 4.12: showing the paired sample t-test based on H₀4

Test	N	Mean	SD	T	df	p-value	Remarks
Pre test	60	21.37	7.859	2.390	59	0.02	S*
Post test	60	18.27	7.781				P<0.05

***Significant**

Table 4.12 showed that the computed values of paired sample t-test comparing the mean scores of pre-test and post-test on Depression of the various levels of students, found to be significant statistically [$t(59) = 2.390$, $P < 0.05$]. The mean score of post-test ($M=18.27$; $SD=7.781$) was found significantly lower than pre-test score ($M=21.37$; $SD=7.859$).

Therefore, aforesaid null hypothesis 4 (**H₀4**) cannot be retained at 0.05 level; it proves that there exists a significant mean difference among two tests, statistically.

H₀₅: There is no significant mean difference between pre and post test of Mindful Attention Awareness among the various levels of students in control group.

Table 4.13: showing the paired sample t-test based on H₀₅

Test	N	Mean	SD	T	df	p-value	Remarks
Pre test	60	52.73	10.148	0.682	59	0.49	NS
Post test	60	52.37	9.755				P>0.05

Not Significant

It can be observed from the table 4.13 that the computed value of paired sample t-test comparing the mean scores of pre-test and post-test of Mindful Attention Awareness found no significant difference between two tests [$t(59) = 0.682$, $p > 0.05$]. Mean score of pre-test ($m = 52.73$; $SD = 10.148$) found to be quietly higher than post-test ($m = 52.37$; $SD = 9.755$) among control group but it is not statistically significant.

Therefore, the null hypothesis is retained at 0.05 level and as a result, the given difference in the means being not significant can only be for some sampling fluctuation. As a result, it is reasonable to conclude that there is no significant pre-test and post-test difference in Mindful Attention Awareness among students in the control group.

H₀₆: There is no significant mean difference between pre and post test of Stress among the various levels of students in control group.

Table 4.14: Showing the paired sample t-test based on H₀₆

Test	N	Mean	SD	t	Df	p-value	Remarks
Pre test	60	20.13	7.973	-0.433	59	0.66	NS
Post test	60	20.27	7.068				P>0.05

Not Significant

It can be observed from the table 4.14 that the computed value of paired sample t-test comparing the mean scores of pre-test and post-test of Stress

found no significant difference between two tests [$t(59) = -0.433$, $p > 0.05$]. Mean score of pre-test ($m=20.13$; $SD=7.973$) found to be quietly lower than post-test ($m=20.27$; $SD=7.068$) among control group but it is not statistically significant.

Therefore, the null hypothesis is retained at 0.05 levels and as a result, the given difference in the means being not significant can only be for some sampling fluctuation. As a result, it is possible to conclude that there is no significant pre-test and post-test difference in Stress among students in the control group.

H₀₇: There is no significant mean difference between pre and post test of Anxiety among the various levels of students in control group.

Table 4.15: Showing the paired sample t-test based on H₀₇

Test	N	Mean	SD	T	Df	p-value	Remarks
Pre test	60	17.77	9.367	-0.668	59	0.507	NS
Post test	60	17.50	7.747				P>0.05

Not Significant

Paired sample t-test comparing the mean scores of Anxiety of the various levels of students in pre-test to be average scores of Anxiety of the students found a significant difference between the average of the two groups [$t(59) = -0.668$, $p > 0.05$]. The average score of Pre-test ($m=17.77$, $SD=9.367$) was found quietly higher than Post-test score ($m=17.50$, $SD=7.747$).

Therefore, the null hypothesis is not rejected and as a result, the given difference in sample means being not significant. From the above analysis, it can be concluded that there is no significant mean difference between pre and post test of Anxiety among the various levels of students in Control group.

H₀8: There is no significant mean difference between pre and post test of Depression among the various levels of students in control group.

Table 4.16: Showing the paired sample t-test based on H₀8

Test	N	Mean	SD	T	df	p-value	Remarks
Pre test	60	20.37	9.662	1.434	59	0.157	NS
Post test	60	19.80	8.082				P>0.05

Not Significant

It can be showed from the table 4.16 that the computed score of paired sample t-test comparing the mean scores of pre-test and post-test of Depression found no significant difference between two tests [$t(59) = 1.434$, $p > 0.05$]. Mean score of pre-test ($m=20.37$; $SD=9.662$) found to be quietly higher than post-test ($m=19.80$; $SD=8.082$) among control group but it is not statistically significant.

Therefore, the null hypothesis is retained at 0.05 level and as a result, the given difference in the means being not significant can only be for some sampling fluctuation. So, it can be inferred that there is no significant pre-test and post-test difference in Depression among students in the control group.

H₀9: There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the students at HS level when Experimental group is concerned.

Table 4.17: Showing the paired sample t-test based on H₀9

	Test	N	Mean	SD	t-value	df	p-value	Remarks
MAA	Pre test	11	35.55	5.355	-13.36	10	0.000	S*
	Post test	11	70.00	5.254				P<0.01
Depression	Pre test	11	22.73	6.467	1.71	10	0.117	NS
	Post test	11	16.36	9.542				P>0.05
Anxiety	Pre test	11	22.55	6.330	3.47	10	0.006	S*
	Post test	11	14.73	7.171				P<0.01
Stress	Pre test	11	24.18	5.689	3.75	10	0.004	S*
	Post test	11	11.82	7.872				P<0.01

- From the table 4.17, Paired sample t-test comparing the mean scores of MAA of the students at Higher secondary level in pre-test to be average values of MAA of students indicated a significant difference between the average of the two groups [$t(10) = -13.368$, $p < 0.01$]. The average score of Post-test ($m=70.00$, $SD=5.254$) was found significantly higher than Pre-test score ($m=35.55$, $SD=5.355$).

Therefore, the null hypothesis is rejected and as a result, the given difference in sample means being significant. From the above analysis, it can be concluded that there is a significant mean difference between pre and post test of MAA among the students at higher education level in Treatment group.

- Table 4.17 showed that the computed values of paired sample t-test comparing the mean scores of pre-test and post-test on Depression of HS level students, found no significant difference between two tests [$t(10) = 1.717$, $p > 0.05$]. Mean score of pre-test ($m=22.73$; $SD=6.467$) found to be quietly higher than post-test ($m=16.36$; $SD=9.542$) among students at higher education level but it is not statistically significant.

Therefore, the null hypothesis is retained at 0.05 level and as a result, the given difference in the means being not significant can only be for some sampling fluctuation. As a result, it is possible to conclude that there is no significant pre-test and post-test difference in Depression among HS students.

- From the table 4.17, Paired sample t-test comparing the mean scores of Anxiety of the students at Higher secondary level in pre-test to be average values of Anxiety of students indicate a significant difference between the mean of the two groups [$t(10) = 3.479$, $p < 0.01$]. The average score of Pre-test ($m=22.55$, $SD=5.254$) was found significantly higher than Post-test score ($m=14.73$, $SD=7.171$).

Therefore, the null hypothesis is rejected and as a result, the given difference in sample means being significant. From the above analysis, it can be concluded that there is a significant mean difference between pre and post test of Anxiety among the students at higher education level in Treatment group.

- Table 4.17 showed that the computed values of paired sample t-test comparing the mean scores of pre-test and post-test on Stress of students at higher education level, found to be significant statistically [$t(10) = 3.758, P < 0.01$]. The mean score of pre-test ($M=24.18; SD=5.689$) was found higher than post-test score ($M=11.82; SD=7.872$) in stress.

Therefore, the null hypothesis is rejected and as a result, the given difference in sample means being significant. From the above analysis, it can be concluded that there is a significant mean difference between pre and post test of Stress among the students at higher education level in Treatment group.

H₀₁₀: There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the students at UG level when Experimental Group is concerned.

Table 4.18: Showing the paired sample t-test based on H₀₁₀

	Test	N	Mean	SD	t-value	df	p-value	Remarks
MAA	Pre test	11	53.36	10.993	-2.923	10	0.015	S*
	Post test	11	66.55	7.802				P<0.05
Depression	Pre test	11	26.73	6.467	3.162	10	0.010	S*
	Post test	11	17.45	5.663				P=0.01
Anxiety	Pre test	11	18.18	6.720	1.644	10	0.131	NS
	Post test	11	13.82	5.250				P>0.05
Stress	Pre test	11	23.09	6.595	4.113	10	0.002	S*
	Post test	11	11.82	5.095				P<0.01

***S – Significant, NS – Not Significant**

According to table 4.18, on the basis of t-test it can be said that there is a significant mean difference between pre-test and post-test in MAA, Depression and Stress among the students at under graduation level in treatment group; but there is no significant mean difference between pre-test and post-test in Anxiety among the students at under graduation level.

H₀₁₁: There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the students at PG level when Experimental Group is concerned.

Table 4.19: Showing the paired sample t-test based on H₀₁₁

	Test	N	Mean	SD	t-value	df	p-value	Remarks
MAA	Pre test	13	52.77	6.405	-1.790	12	0.099	NS
	Post test	13	59.08	14.620				P>0.05
Depression	Pre test	13	21.23	8.584	-0.647	12	0.530	NS
	Post test	13	22.77	9.001				P>0.05
Anxiety	Pre test	13	15.38	8.500	-1.968	12	0.073	NS
	Post test	13	19.23	9.221				P>0.05
Stress	Pre test	13	20.31	7.739	0.716	12	0.488	NS
	Post test	13	18.15	11.704				P>0.05

NS – Not Significant

- **MAA** = Pre-test score – 52.77, SD – 6.405; Post-test score – 59.08, SD – 14.620
- **Depression** = Pre-test score – 21.23, SD-8.584; Post-test score – 22.77, SD – 9.001
- **Anxiety** = Pre-test score – 15.38, SD – 8.500; Post-test score – 19.23, SD – 9.221
- **Stress** = Pre-test score – 20.31, SD – 7.739; Post-test score – 18.15, SD – 11.704

According to table 4.19, on the basis of t-test it can be said that there is no significant mean difference between pre-test and post-test of MAA, Depression, Anxiety and Stress of the students at post graduation stage in treatment group.

H₀12: There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the students at B.Ed level when Experimental Group is concerned.

Table 4.20: Showing the paired sample t-test based on H₀12

	Test	N	Mean	SD	t-value	df	p-value	Remarks
MAA	Pre test	12	55.58	6.76	-3.359	11	0.006	S*
	Post test	12	68.67	11.68				P<0.01
Depression	Pre test	12	19.17	8.02	0.279	11	0.786	NS
	Post test	12	18.50	5.33				P>0.05
Anxiety	Pre test	12	14.67	7.10	-0.487	11	0.636	NS
	Post test	12	15.67	7.37				P>0.05
Stress	Pre test	12	17.67	7.12	-0.591	11	0.566	NS
	Post test	12	19.17	7.55				P>0.05

***S – Significant, NS – Not Significant**

- **MAA** = Pre-test score – 55.58, SD – 6.762; Post-test score – 68.67, SD – 11.688
- **Depression** = Pre-test score – 19.17, SD-8.021; Post-test score – 18.50, SD – 5.334
- **Anxiety** = Pre-test score – 14.67, SD – 7.101; Post-test score – 15.67, SD – 7.377
- **Stress** = Pre-test score – 17.67, SD – 7.127; Post-test score – 19.17, SD – 7.554

According to table 4.20, on the basis of t-test it can be said that there is no significant mean difference between pre-test and post-test of Depression, Anxiety and Stress among the students; but there is a significant mean difference between pre and post test of Mindful Attention Awareness (MAA) among the students at PG level in treatment group.

H₀13: There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the Scholar students when Experimental Group is concerned.

Table 4.21: Showing the paired sample t-test based on H₀13

	Test	N	Mean	SD	t-value	Df	p-value	Remarks
MAA	Pre test	13	55.23	6.431	-5.003	12	0.000	S*
	Post test	13	70.62	8.530				P<0.01
Depression	Pre test	13	17.85	7.414	0.806	12	0.436	NS
	Post test	13	15.85	7.459				P>0.05
Anxiety	Pre test	13	15.69	9.621	11.48	12	0.273	NS
	Post test	13	12.92	4.941				P>0.05
Stress	Pre test	13	19.23	8.814	2.706	12	0.019	S*
	Post test	13	14.15	6.555				P<0.05

***S – Significant, NS – Not Significant**

- **MAA** = Pre-test score – 55.23, SD – 6.431; Post-test score – 70.62, SD – 8.530
- **Depression** = Pre-test score – 17.85, SD-7.414; Post-test score – 15.85, SD – 7.459
- **Anxiety** = Pre-test score – 15.69, SD – 9.621; Post-test score – 12.92, SD – 4.941
- **Stress** = Pre-test score – 19.23, SD – 8.814; Post-test score – 14.15, SD – 6.555

According to table 4.21, on the basis of t-test it can be said that there is no significant mean difference between pre-test and post-test of Depression and Anxiety among the students; but there is a significant mean difference between pre and post test of Mindful Attention Awareness (MAA) and Stress among the scholarin treatment group.

H₀14: There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the various levels of students on the basis of their study class when Control Group is concerned.

Table 4.22: Showing the paired sample t-test based on H₀14

		Maa	Stress	Anxiety	Depression
HS	Mean difference	0.857	0.571	1.000	-0.571
	T-test	1.048	1.170	1.202	-0.844
	Remarks	Sig. – 0.314 P>0.05	Sig. – 0.263 P>0.05	Sig. – 0.251 P>0.05	Sig. – 0.414 P>0.05
UG	Mean difference	-0.750	0.167	0.000	0.500
	T-test	-0.987	0.200	0.000	0.672
	Remarks	Sig. – 0.345 P>0.05	Sig. – 0.845 P>0.05	Sig. – 1.00 P>0.05	Sig. – 0.515 P>0.05
PG	Mean difference	1.286	-0.429	0.571	1.714
	T-test	1.422	-0.611	0.471	1.710
	Remarks	Sig. – 0.179 P>0.05	Sig. – 0.551 P>0.05	Sig. – 0.645 P>0.05	Sig. – 0.111 P>0.05
B.ED.	Mean difference	-0.091	-0.545	0.909	2.000
	T-test	-0.061	-0.671	1.456	2.622
	Remarks	Sig. – 0.953 P>0.05	Sig. – 0.518 P>0.05	Sig. – 0.176 P>0.05	Sig. – 0.026* P<0.05
Scholar	Mean difference	0.222	-0.667	-1.778	-1.111
	T-test	0.095	-1.155	-4.438	-1.170
	Remarks	Sig. – 0.927 P>0.05	Sig. – 0.282 P>0.05	Sig. – 0.002* P<0.01	Sig. – 0.276 P>0.05

*** Significant**

Based on the table above it is said that, only the B.Ed students in the control group had significant mean difference in depression and the scholar students in anxiety.

H₀15: There is no significant mean difference between control and Experimental group of Mindful Attention Awareness, Stress, Anxiety and Depression among the various levels of students when pre test score is concerned.

Table 4.23: Showing the independent sample t-test based on H₀15

	Test	N	Mean	SD	t-value	Df	p-value	Remarks
MAA	Treatment	60	50.82	10.25	- 1.029	59	0.305	NS P>0.05
	Control	60	52.73	10.14				
Stress	Treatment	60	20.77	7.48	0.449	59	0.655	NS P>0.05
	Control	60	20.13	7.97				
Anxiety	Treatment	60	17.13	8.08	- 0.396	59	0.693	NS P>0.05
	Control	60	17.77	9.36				
Depression	Treatment	60	21.37	7.85	0.622	59	0.535	NS P>0.05
	Control	60	20.37	9.66				

NS – Not Significant

- MAA = Treatment group – 50.82, SD – 10.25; Control group – 52.73, SD – 10.14
- Stress = Treatment group – 20.77, SD – 7.48; Control group – 20.13, SD – 9.97
- Anxiety = Treatment group – 17.13, SD – 8.08; Control group – 17.77, SD – 9.36
- Depression = Treatment group – 21.37, SD – 9.66; Control group – 20.37, SD – 9.66

On the basis table 4.23, It can be stated that there is no significant mean difference in self-esteem between treatment and control group students when pre-test scores are considered.

H₀16: There is no significant mean difference between control and Experimental group of Mindful Attention Awareness, Depression, Anxiety and Stress among the various levels of students when post test score is concerned.

Table 4.24: Showing the independent sample t-test based on H₀16

	Test	N	Mean	SD	t-value	df	p-value	Remarks
MAA	Treatment	60	66.87	10.849	7.698	59	0.00	S* P<0.01
	Control	60	52.37	9.755				
Stress	Treatment	60	14.53	7.990	- 4.163	59	0.00	S* P<0.01
	Control	60	20.27	7.068				
Anxiety	Treatment	60	14.70	7.062	- 2.069	59	0.041	S* P<0.05
	Control	60	17.50	7.747				
Depression	Treatment	60	16.87	6.932	- 2.134	59	0.035	S* P<0.05
	Control	60	19.80	8.082				

***S – Significant**

- MAA = Treatment group – 66.87, SD – 10.84; Control group – 52.37, SD – 9.75
- Stress = Treatment group – 14.53, SD – 7.99; Control group – 20.27, SD – 7.06
- Anxiety = Treatment group – 14.70, SD – 7.06; Control group – 17.50, SD – 7.74
- Depression = Treatment group – 16.87, SD – 6.93; Control group – 19.80, SD – 8.08

Form the above table 4.24 there is a significant mean difference between control and treatment group of Mindful Attention Awareness (sig. level-0.00), Depression (sig. level-0.035), Anxiety (sig. level-0.041) and Stress (sig. level-0.00) among the various levels of students when post test score is concerned.

H₀17: There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the male students when Experimental group is concerned.

Table 4.25: Showing the paired sample t-test based on H₀17

	Test	N	Mean	SD	t-value	df	p-value	Remarks
MAA	Pre test	38	50.26	9.267	-6.728	37	0.000	S*
	Post test	38	66.82	12.311				P<0.01
Stress	Pre test	38	18.74	7.773	2.109	37	0.042	S*
	Post test	38	15.05	8.671				P<0.05
Anxiety	Pre test	38	15.32	7.297	.274	37	0.786	NS
	Post test	38	14.95	7.033				P>0.05
Depression	Pre test	38	21.79	8.197	2.520	37	0.016	S*
	Post test	38	17.63	8.238				P<0.05

***S – Significant, NS – Not Significant**

- MAA = Pre-test – 50.26, SD – 9.267; Post-test – 66.82, SD – 12.31
- Stress = Pre-test – 18.74, SD – 7.77; Post-test – 15.05, SD – 8.671
- Anxiety = Pre-test – 15.32, SD – 7.29; Post-test – 14.95, SD – 7.03
- Depression = Pre-test – 21.79, SD – 8.19; Post-test – 17.63, SD – 8.23

Form the above table 4.25 there is a significant mean difference between Pre-test and Post-test of Mindful Attention Awareness (sig. level-0.00), Depression (sig. level-0.016) and Stress (sig. level-0.042) among the male students when post test score is concerned.

H₀18: There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the female students when Experimental group is concerned.

Table 4.26: Showing the paired sample t-test based on H₀18

	Test	N	Mean	SD	t-value	df	p-value	Remarks
MAA	Pre test	22	51.77	11.932	-4.611	21	0.000	S*
	Post test	22	66.95	7.979				P<0.01
Stress	Pre test	22	24.27	5.531	4.547	21	0.00	S*
	Post test	22	15.36	8.313				P<0.01
Anxiety	Pre test	22	20.27	8.581	2.283	21	0.033	S*
	Post test	22	16.00	7.432				P<0.05
Depression	Pre test	22	20.64	7.365	0.610	21	0.549	NS
	Post test	22	19.36	6.966				P>0.05

***S – Significant, NS – Not Significant**

- MAA = Pre-test – 51.77, SD – 11.93; Post-test – 66.95, SD – 7.97
- Stress = Pre-test – 24.27, SD – 5.53; Post-test – 15.36, SD – 8.31
- Anxiety = Pre-test – 20.27, SD – 8.58; Post-test – 16.00, SD – 7.43
- Depression = Pre-test – 20.64, SD – 7.36; Post-test – 19.36, SD – 6.96

Form the above table 4.26 there is a significant mean difference between Pre-test and Post-test of Mindful Attention Awareness (sig. level-0.00), Stress (sig. level-0.00) and Anxiety (sig. level-0.033) among the female students when post test score is concerned.

H₀19: There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the male students when control group is concerned.

Table 4.27: Showing the paired sample t-test based on H₀19

	Test	N	Mean	SD	t-value	df	p-value	Remarks
MAA	Pre test	28	53.86	10.96	0.527	27	0.603	NS
	Post test	28	53.36	9.91				P>0.05
Stress	Pre test	28	19.36	8.31	1.100	27	0.281	NS
	Post test	28	18.93	7.86				P>0.05
Anxiety	Pre test	28	17.00	9.49	-0.319	27	0.752	NS
	Post test	28	17.14	8.17				P>0.05
Depression	Pre test	28	17.50	10.16	0.143	27	0.887	NS
	Post test	28	17.43	8.62				P>0.05

NS – Not Significant

- MAA = Pre-test – 53.86, SD – 10.96; Post-test – 53.36, SD – 9.91
- Stress = Pre-test – 19.36, SD – 8.31; Post-test – 18.93, SD – 7.86
- Anxiety = Pre-test – 17.00, SD – 9.49; Post-test – 17.14, SD – 8.17
- Depression = Pre-test – 17.50, SD – 10.16; Post-test – 17.43, SD – 8.62

Form the above table 4.27 there is no significant mean difference between Pre-test and Post-test of Mindful Attention Awareness, Stress, Anxiety and Depression among the male students when post test score is concerned.

H₀20: There is no significant mean difference between pre and post test of Mindful Attention Awareness, Depression, Anxiety and Stress among the female students when control group is concerned.

Table 4.28: Showing the paired sample t-test based on H₀20

	Test	N	Mean	SD	t-value	df	p-value	Remarks
MAA	Pre test	32	51.75	9.44	0.427	31	0.672	NS
	Post test	32	51.50	9.68				P>0.05
Stress	Pre test	32	20.81	7.73	-1.380	31	0.177	NS
	Post test	32	21.44	6.18				P>0.05
Anxiety	Pre test	32	18.44	9.35	0.980	31	0.335	NS
	Post test	32	17.81	7.47				P>0.05
Depression	Pre test	32	22.88	8.59	1.679	31	0.103	NS
	Post test	32	21.88	7.07				P>0.05

NS – Not Significant

- MAA = Pre-test – 51.75, SD – 9.44; Post-test – 51.50, SD – 9.68
- Stress = Pre-test – 20.81, SD – 7.73; Post-test – 21.44, SD – 6.18
- Anxiety = Pre-test – 18.44, SD – 9.35; Post-test – 17.81, SD – 7.47
- Depression = Pre-test – 22.88, SD – 8.59; Post-test – 21.88, SD – 7.07

Form the above table 4.28 there is no significant mean difference between Pre-test and Post-test of Mindful Attention Awareness, Stress, Anxiety and Depression among the female students when post test score is concerned.

H₀21: There is no significant correlation between Depression, Anxiety and Stress in pre test score among the various levels of students when Experimental group is concerned.

Table 4.29: Showing the Correlation between Depression, Anxiety and Stress in Pre-test score when treatment group is concerned

Correlations				
		STRESS	ANXIETY	DEPRESSION
STRESS	Pearson Correlation	1	0.635**	0.537**
	Sig. (2-tailed)		0.000	0.000
	N	60	60	60
ANXIETY	Pearson Correlation	0.635**	1	0.481**
	Sig. (2-tailed)	.000		0.000
	N	60	60	60
DEPRESSION	Pearson Correlation	0.537**	0.481**	1
	Sig. (2-tailed)	0.000	0.000	
	N	60	60	60
** . Correlation is significant at the 0.01 level (2-tailed).				

The result of correlation between Depression, Anxiety and stress are given according to table 4.29 –

- Stress and Anxiety – moderately correlated (0.635) and the relation is statistically significant.
- Stress & Depression - moderately correlated (0.537) and the relation is statistically significant.
- Anxiety & Depression - moderately correlated (0.481) the relation is statistically significant.

H₀22: There is no significant correlation between Depression, Anxiety and Stress in post test score among the various levels of students when Experimental group is concerned.

Table 4.30: Showing the Correlation between Depression, Anxiety and Stress in Post-test score when treatment group is concerned

Correlations				
		STRESS	ANXIETY	DEPRESSION
STRESS	Pearson Correlation	1	0.718**	0.815**
	Sig. (2-tailed)		0.000	0.000
	N	60	60	60
ANXIETY	Pearson Correlation	0.718**	1	0.735**
	Sig. (2-tailed)	0.000		0.000
	N	60	60	60
DEPRESSION	Pearson Correlation	0.815**	0.735**	1
	Sig. (2-tailed)	.000	0.000	
	N	60	60	60
** . Correlation is significant at the 0.01 level (2-tailed).				

The result of correlation between Depression, Anxiety and stress are given according to table 4.30 –

- Stress and Anxiety - highly correlated (0.718) and the relation is statistically significant.
- Stress & Depression - highly correlated (0.815) and the relation is statistically significant.
- Anxiety & Depression - highly correlated (0.735) and the relation is statistically significant.

4.2.2 Further Analysis of Data

Significant average differences were found in the hypothesis testing, and the significance was again analyzed by the Related Samples Wilcoxon Signed Ranke Test –

Table 4.31: Re-analysis by Related Samples Wilcoxon Signed Ranke Test

Hypothesis Test Summary				
	Null Hypothesis	Z	Sig.	Decision
1	The median of differences between Pre-MAA and Post-MAA score in treatment group equals 0.	-5.767 ^b	0.000	The null hypothesis must be rejected..
2	The median of differences between Pre-Stress score and Post-Stress score in treatment group equals 0.	-3.579 ^c	0.000	The null hypothesis must be rejected.
3	The median of differences between Pre-Depression score and Post-Depression score in treatment group equals 0.	-2.313 ^c	0.021	Reject the null hypothesis.
4	The median of differences between Pre-MAA and Post-MAA score of HS level students in treatment group equals 0.	-2.938 ^b	0.003	The null hypothesis must be rejected.
5	The median of differences between Pre-stress and Post-stress score of HS level students in treatment group equals 0.	-2.501 ^c	0.012	The null hypothesis must be rejected.
6	The median of differences between Pre-anxiety and Post-anxiety score of HS level students in treatment group equals 0.	-2.361 ^c	0.018	The null hypothesis must be rejected..
7	The median of differences between Pre-MAA and Post-MAA score of UG level students in treatment group equals 0.	2.224 ^b	0.026	The null hypothesis must be rejected.
8	The median of differences between Pre-stress and Post-stress score of UG level students in treatment group equals 0.	2.674 ^c	0.007	Reject the null hypothesis.
9	The median of differences between Pre-depression and Post-depression score of UG level students in treatment group equals 0.	2.404 ^c	0.016	The null hypothesis must be rejected.
10	The median of differences between Pre-MAA and Post-MAA score of B.Ed level students in treatment group equals 0.	-2.668 ^b	0.008	The null hypothesis must be rejected..
11	The median of differences between Pre-MAA and Post-MAA score of scholar students in treatment group equals 0.	2.825 ^b	0.005	The null hypothesis must be rejected.
12	The median of differences between Pre-stress and Post-stress score of scholar students in treatment group equals 0.	2.407 ^b	0.016	Reject the null hypothesis.
13	The median of differences between Pre-depression and Post-depression score of B.Ed level students in control group equals 0.	2.157 ^b	0.031	The null hypothesis must be rejected.
14	The median of differences between Pre-anxiety and Post-anxiety score of scholar students in control group equals 0.	2.530 ^b	0.011	The null hypothesis must be rejected.

Table 4.32: Re-analyze of H_016 by Independent-Samples Mann-Whitney U Test

Hypothesis Test Summary					
	Null Hypothesis	Mann-Whitney U	Z	Sig.	Decision
1	The distribution of MAA post-test scores is the same across treatment and control groups.	539	-6.625	0.000	The null hypothesis must be rejected.
2	The distribution of stress post-test scores is the same across treatment and control groups.	1041	-3.996	0.000	The null hypothesis must be rejected.
3	The distribution of Anxiety post-test scores is the same across treatment and control groups.	1392	-2.151	0.031	The null hypothesis must be rejected.
4	The distribution of depression post-test scores is the same across treatment and control groups.	1351.5	-2.363	0.018	The null hypothesis must be rejected.

Table 4.33: Re-analyze of H_017 & H_018 by Related Samples Wilcoxon Signed Rank Test

Hypothesis Test Summary				
	Null Hypothesis	Z	Sig.	Decision
1	The median of differences between Pre-MAA and Post-MAA score of male students in treatment group equals 0.	-4.576 ^b	0.000	Reject the null hypothesis.
2	The median of differences between Pre-Stress score and Post-Stress score of male students in treatment group equals 0.	-1.813 ^c	0.070	**Retained the null hypothesis.
3	The median of differences between Pre-depression and Post-depression score of male students in treatment group equals 0.	-2.299 ^c	0.022	Reject the null hypothesis.
4	The median of differences between Pre-MAA and Post-MAA score of female students in treatment group equals 0.	-3.494 ^b	0.000	Reject the null hypothesis.
5	The median of differences between Pre-Stress score and Post-Stress score of female students in treatment group equals 0.	-3.402 ^b	0.001	Reject the null hypothesis.
6	The median of differences between Pre-anxiety and Post-anxiety score of female students in treatment group equals 0.	-2.172 ^b	0.030	Reject the null hypothesis.

Table 4.34: mean difference between control and treatment group in pre and post test of male students

treatment and control group wise mean score of male students						
	Test	N	PRE		POST	
			MEAN	SD	MEAN	SD
MAA	Ex	38	50.26	9.26	66.82	12.311
	Con	28	53.86	10.96	53.36	9.912
Stress	Ex	38	18.74	7.77	14.68	8.412
	Con	28	19.36	8.31	18.93	7.860
Anxiety	Ex	38	15.32	7.29	14.63	7.069
	Con	28	17.00	9.49	17.14	8.173
Depression	Ex	38	21.79	8.19	16.79	7.830
	Con	28	17.50	10.16	17.43	8.621

Based on the above table, it can be said that the treatment group in the pre test of male students scored much less than the control group whereas the tested group in the post test resulted in much more Mindful Attention Awareness than the students in the control, group due to proper treatment. Again in the case of stress and anxiety the students of the treatment group scored a little less but after post test it is seen that as a result of proper treatment the treatment group reduced their stress and anxiety a lot. Depression measurement, on the other hand, shows that the treatment

group is much greater than the control group, but the treatment significantly reduces the depression of the treatment group. Figure 4.30 depicts the mean differences in pre-test and post-test scores between the control and treatment groups among female students.

Figure 4.30: Mean differences between control group and treatment group in pre-test and post-test among the male students.

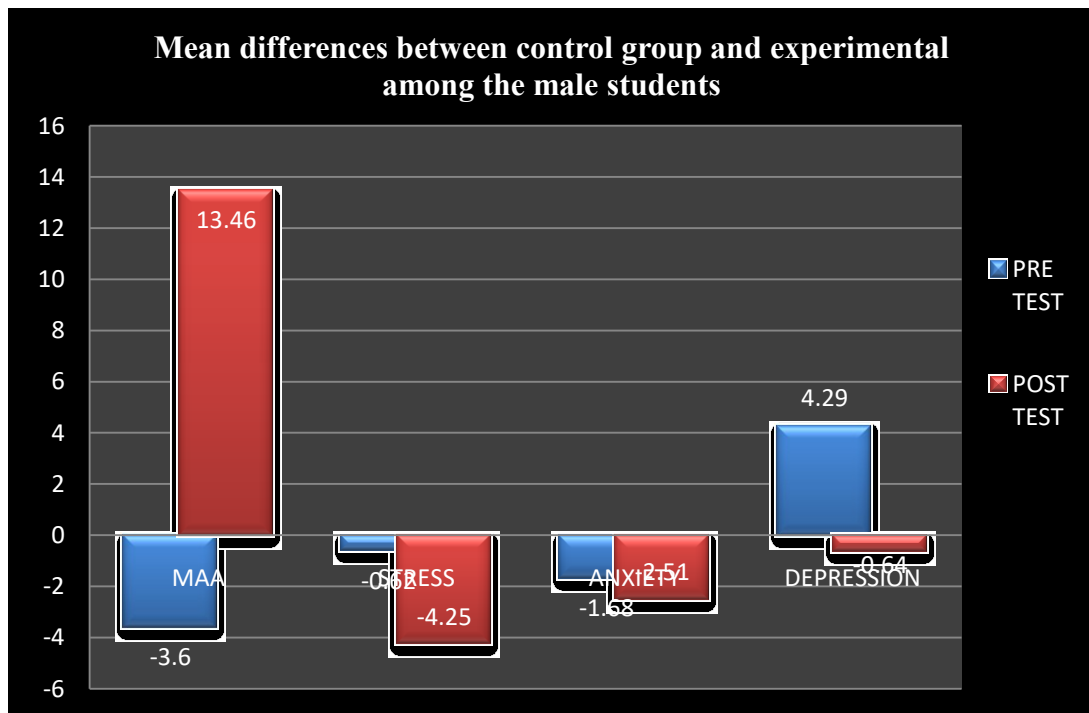


Table 4.35: hypothesis testing based on pre-test & post-test of male students.

H₀₁: There is no significant mean difference between treatment and control group male students in MAA, stress, anxiety and Depression when the pre test is concerned. H₀₂: There is no significant mean difference between treatment and control group male students in MAA, stress, anxiety and Depression when the post test is concerned.						
	PRE TEST			POST TEST		
	DF	T-TEST	Remarks	DF	T-TEST	REMARKS
MAA	64	-1.440	0.155 NS Retained the H ₀	64	4.757	0.000 S* Rejected the H ₀
Stress	64	-0.311	0.757 NS Retained the H ₀	64	-2.082	0.041 S* Rejected the H ₀
Anxiety	64	-0.815	0.418NS Retained the H ₀	64	1.335	0.187 NS Retained the H ₀
Depression	64	1.897	0.062 NS Retained the H ₀	64	0.314	0.755 NS Retained the H ₀

Based on the table 4.35 it can be said that the H₀₁ has been retained but the H₀₂ has been rejected.

Table 4.36: mean difference between control and treatment group in pre and post test of female students

Treatment and control group wise mean score of female students						
	Test	N	PRE		POST	
			MEAN	SD	MEAN	SD
MAA	Ex	22	51.77	11.932	66.95	7.979
	Con	32	51.75	9.443	51.50	9.689
Stress	Ex	22	24.27	5.531	14.27	7.388
	Con	32	20.81	7.735	21.44	6.185
Anxiety	Ex	22	20.27	8.581	14.82	7.215
	Con	32	18.44	9.350	17.81	7.472
Depression	Ex	22	20.64	7.365	17.00	5.192
	Con	32	22.88	8.590	21.88	7.074

Based on the above table, it can be said that there is very little difference in the average score of MAA of pre-test for the female students; later after the post-test, it is seen that as a result of the treatment, the treatment group has paid much more MAA than the control group. In the pre-test, the female students of the treatment group showed a lot of stress and anxiety, while in the post-test, the female students of the treatment group reduced a lot of stress and anxiety. Again the treatment group reduced the amount of depression much more as a result of appropriate treatment in the post test than in the pre test. The mean differences between control group and treatment group in pre-test and post-test among the female students are shown in figure 4.31

Figure 4.31: Mean differences between control group and treatment group in pre-test and post-test among the female students.

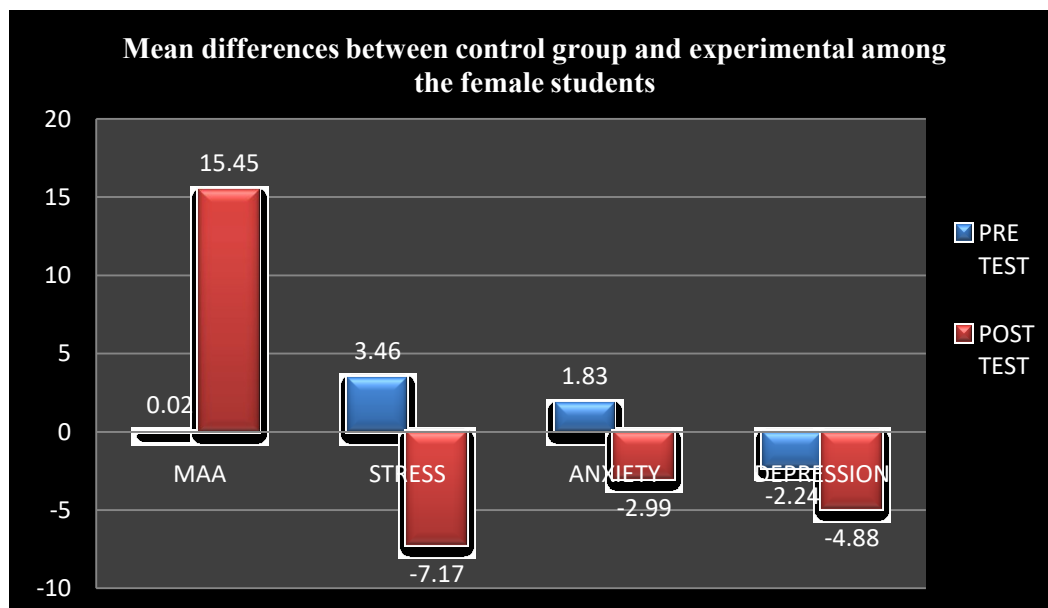


Table 4.37: hypothesis testing based on pre-test & post-test of female students.

H₀₁:There is no significant mean difference between treatment and control group female students in MAA, stress, anxiety and Depression when the pre test is concerned. H₀₂:There is no significant mean difference between treatment and control group female students in MAA, stress, anxiety and Depression when the post test is concerned.						
	PRE TEST			POST TEST		
	DF	T-TEST	REMARKS	DF	T-TEST	REMARKS
MAA	52	0.008	0.994 NS Retained the H ₀	52	6.175	0.000 S* Rejected the H ₀
Stress	52	1.803	0.077 NS Retained the H ₀	52	-3.863	0.000 S* Rejected the H ₀
Anxiety	52	0.732	0.467NS Retained the H ₀	52	-1.467	0.148 NS Retained the H ₀
Depression	52	-0.996	0.324 NS Retained the H ₀	52	-2.758	0.008 S* Rejected the H ₀

Based on the table 4.37 it can be said that the H₀₁ has been retained but the H₀₂ has been rejected.

- Do Study Class and Gender each seem to have an effect on Mindful Attention Awareness when the Pre-test is concerned, and do study class & gender interact?

Table 4.38: Descriptive statistics in MAA based on Gender & Study Class

Dependent Variable: Mindful Attention Awareness				
Gender	Study Class	Mean	Std. Deviation	N
Male	Scholar	54.11	5.487	9
	B.ED	54.11	6.954	9
	MA	50.67	6.103	9
	BA	50.67	12.533	6
	HS	35.20	3.962	5
	Total	50.26	9.267	38
Female	Scholar	57.75	8.539	4
	B.ED	60.00	4.359	3
	MA	57.50	4.655	4
	BA	56.60	9.044	5
	HS	35.83	6.676	6
	Total	51.77	11.932	22
Total	Scholar	55.23	6.431	13
	B.ED	55.58	6.762	12
	MA	52.77	6.405	13
	BA	53.36	10.993	11
	HS	35.55	5.355	11
	Total	50.82	10.250	60

Table 4.39: Factorial ANOVAs based on Gender and Study class
(Between-Subjects Effects)

Dependent Variable: Mindful Attention Awareness						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	3553.289 ^a	9	394.81	7.461	.000	.573
Intercept	138207.16	1	138207.16	2611.92	.000	.981
Gender	276.67	1	276.67	5.229	.026	.095
Study Class	3395.36	4	848.84	16.042	.000	.562
Gender * StudyClass	67.825	4	16.95	.320	.863	.025
Error	2645.694	50	52.91			
Total	161139	60				
Corrected Total	6198.98	59				

a. R Squared = 0.573 (Adjusted R Squared = .496)

From the above table it has been shown that the 49.60% of variance in Mindful Attention Awareness predictable from both independent (Gender & Study Class) variables. Eta squared is an index of the effect size. Thus, about 56% of the variance in Mindful Attention Awareness can be predicted from the Study classes.

Table 4.40: Multiple Comparisons in Mindful Attention Awareness based on Study Class

Dependent Variable: Mindful Attention Awareness				
TUKEY HSD				
(I) academic class	academic class (J)	Mean Difference (I-J)	Std. Error	Sig.
Scholar	B.ED	-.35	2.912	1.000
	MA	2.46	2.853	0.909
	BA	1.87	2.980	0.970
	HS	19.69*	2.980	0.000
B.Ed.	Scholar	.35	2.912	1.000
	MA	2.81	2.912	0.869
	BA	2.22	3.036	0.948
	HS	20.04*	3.036	0.000
M.A.	Scholar	-2.46	2.853	0.909
	B.ED	-2.81	2.912	0.869
	BA	-.59	2.980	1.000
	HS	17.22*	2.980	0.000
B.A.	Scholar	-1.87	2.980	0.970
	B.ED	-2.22	3.036	0.948
	MA	.59	2.980	1.000
	HS	17.82*	3.102	0.000
H.S.	Scholar	-19.69*	2.980	0.000
	B.ED	-20.04*	3.036	0.000
	MA	-17.22*	2.980	0.000
	BA	-17.82*	3.102	0.000
Based on observed means.				
The error term is Mean Square(Error) = 52.914.				
*. The mean difference is significant at the .05 level.				

Table 4.41: Pair wise Comparisons in Mindful Attention Awareness based on Gender

Dependent Variable: Mindful Attention Awareness				
(I) GENDER	(J) GENDER	Mean Difference (I-J)	Std. Error	Sig. ^b
MALE	FEMALE	-4.586*	2.005	.026
FEMALE	MALE	4.586*	2.005	.026
Based on estimated marginal means				
*. The mean difference is significant at the .05 level.				
b. Adjustment for multiple comparisons: Bonferroni.				

The effect of gender and study classes on MAA among different levels of students was investigated using a two-way between-groups analysis of variance. Students were separated into five teams based on their level of education (Group 1: HS; Group 2: UG; Group 3: MA, Group 3: B.ED & Group 3: Scholar). The interaction effect between gender and study classes was not statistically significant, F

(4, 50) = 0.320, $p = 0.863$. The major influence of educational level was statistically significant, $F(4, 50) = 16.042$, $p = 0.000$; however, the effect size was large (partial eta squared = 0.563). Post-hoc comparisons using the Tukey HSD test indicated that the mean score for HS group ($M = 35.55$, $SD = 5.36$) was significantly lower from BA ($M = 53.36$, $SD = 10.99$), MA ($M = 52.77$, $SD = 6.41$), B.Ed ($M = 55.58$, $SD = 6.76$) and Scholar ($M = 55.23$, $SD = 6.43$). The HS group differs from other groups in the Study class of the students. On the other hand the statistically significant main effect for gender, $F(1, 50) = 5.229$, $p = 0.026$; yet, the effect size was small (partial eta squared = 0.095)

❖ **Do Study Class and Gender each seem to have an effect on Mindful Attention Awareness when the Post-test is concerned, and do study class & gender interact?**

*Table 4.42: Factorial ANOVAs based on Gender and Study class
(Between-Subjects Effects)*

Tests of Between-Subjects Effects						
Dependent Variable: POST-MINDFULNESS						
Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1373.072 ^a	9	152.564	1.36	.227	.198
Intercept	235312.012	1	235312.012	2111.61	.000	.977
Class	1055.537	4	263.884	2.36	.065	.159
Gender	.411	1	.411	.01	.952	.000
Study Class* Gender	252.006	4	63.002	.56	.689	.043
Error	5571.861	50	111.437			
Total	275214.000	60				
Corrected Total	6944.933	59				
a. R Squared = .198 (Adjusted R Squared = .053)						

From the above table 4.42, it has been shown that the 5.30% of variance in Mindful Attention Awareness predictable from both independent (Gender & Study Class) variables when the post-test is concerned. Eta squared is an index of

the effect size. Thus, about 15% of the variance in Mindful Attention Awareness can be predicted from the Study classes. The effects of gender and study classes on MAA among different levels of students were investigated using a two-way between-groups analysis of variance. Participants were separated into five groups based on their degree of education (Group 1: HS; Group 2: UG; Group 3: MA, Group 3: B.ED& Group 3: Scholar). The interaction effect between gender and study classes was not statistically significant, $F(4, 50) = 0.565$, $p = 0.689$.

- **Multiple regression analysis considering gender, academic class and mindfulness attention awareness on Anxiety**

Table 4.43: Descriptive statistics of Difference of Anxiety and MAA

Descriptive Statistics			
	Mean	Std. Deviation	N
Difference in Anxiety	-1.80	8.618	60
GENDER	1.37	.486	60
Difference in MAA	16.05	15.152	60
Study class	2.92	1.418	60

Table 4.44: Model Summary on Anxiety

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.516 ^a	.267	.254	7.443	.267	21.097	1	58	.000
2	.571 ^b	.326	.302	7.199	.059	4.997	1	57	.029
a. Predictors: (Constant), DIFFERENCE OF MAA									
b. Predictors: (Constant), DIFFERENCE OF MAA, GENDER									

Table 4.45: Coefficient of Collinearity (in Anxiety)

Coefficients ^a								
MODEL		Un-standardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.914	1.406		2.07	.043		
	DIFF_MAA	-.294	.064	-.516	-4.59	.000	1.000	1.00
2	(Constant)	8.910	3.007		2.96	.004		
	DIFF_MAA	-.300	.062	-.527	-4.84	.000	.998	1.00
	GENDER	-4.315	1.930	-.243	-2.23	.029	.998	1.00
a. Dependent Variable: DIFF_ANX								

A stepwise multiple regression analysis was computed considering gender, academic class and mindfulness attention awareness (MAA: change in score after mindfulness intervention) as predictor variable and anxiety (change in score after mindfulness intervention) as outcome variable. In stepwise analysis, the academic class variable was excluded from the output models due to insignificant impact on outcome variable.

Model-1 explained 26.7% ($R^2 = .267$, $P < .01$) variance in anxiety score. The model indicated that Mindful Attention Awareness (MAA) alone explained a significant amount (26.7%) of variance ($\beta = -.516$, $p < .001$) in change of anxiety score. This model suggested that mild level of improvement in mindful awareness attention resulted in higher reduction of anxiety in the students.

In Model-2, MAA & Gender together predicted 32.6% of variance in change in anxiety score (pre-test score was substituted from post-test score). Therefore, it is evident that Gender alone predicted only 5.9% of variance in change in anxiety score which is not significant at $p < .01$ level.

In earlier analyses, it was found that the post-test score (mean) in MAA was higher than the pre-test score which clearly indicated the positive impact of mindfulness intervention programme in increased Mindful Attention Awareness (MAA) which in continuation has reduced anxiety level in the students. A negative

mean value of change in anxiety score indicated lower level of anxiety among the students after participating in 8-week mindfulness intervention programme under this study. Hence, MAA has reasonably (26.7%) predicted the lowering of anxiety level among the students. Therefore, it can be concluded that the 8-week mindfulness intervention programme have significantly impacted on reducing anxiety to a great extent.

- **Multiple regression analysis considering gender, academic class and mindfulness attention awareness on Stress.**

Table 4.46: Descriptive statistics of Difference of Stress and MAA

Descriptive Statistics			
	Mean	Std. Deviation	N
DIFFERENCE IN STRESS	-5.60	10.453	60
GENDER	1.37	.486	60
DIFFERENCE IN MAA	16.05	15.152	60
ACADEMIC CLASS	2.92	1.418	60

Table 4.47: Model Summary on Stress

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.450 _a	.202	.188	9.417	.202	14.695	1	58	.000
2	.521 _b	.271	.246	9.078	.069	5.407	1	57	.024
a. Predictors: (Constant), DIFFERENCE OF MAA									
b. Predictors: (Constant), DIFFERENCE OF MAA, GENDER									

Table 4.48: Coefficient of Collinearity (in Stress)

Coefficients ^a								
MODEL		Un-standardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.62	1.77		-.35	.73		
	DIFF_MAA	-.31	.08	-.45	-3.83	.00	1.00	1.00
2	(Constant)	7.24	3.79		1.91	.06		
	DIFF_MAA	-.32	.08	-.46	-4.08	.00	.998	1.00
	GENDER	-5.66	2.43	-.26	-2.33	.02	.998	1.00
a. Dependent Variable: DIFFERENCE_STRESS								

A stepwise multiple regression analysis was computed considering gender, academic class and mindfulness attention awareness (MAA: change in score after mindfulness intervention) as predictor variable and Stress (change in score after mindfulness intervention) as outcome variable. In stepwise analysis, the academic class variable was excluded from the output models due to insignificant impact on outcome variable.

Model-1 explained 20.20% ($R^2 = .202$, $P < .01$) variance in stress score. The model indicated that Mindful Attention Awareness (MAA) alone explained a significant amount (20.20%) of variance ($\beta = -.450$, $p < .001$) in change of stress score. This model suggested that mild level of improvement in mindful awareness attention resulted in higher reduction of stress in the students.

In Model-2, MAA & Gender together predicted 27.1% of variance in change in stress score (pre-test score was substituted from post-test score). Therefore, it is evident that Gender alone predicted only 6.9% of variance in change in stress score which is not significant at $p < .01$ level.

In earlier analyses, it was found that the post-test score (mean) in MAA was higher than the pre-test score which clearly indicated the positive impact of mindfulness intervention programme in increased Mindful Attention Awareness (MAA) which in continuation has reduced stress level in the students. A negative mean value of change in stress score indicated lower level of stress among the

students after participating in 8-week mindfulness intervention programme under this study. Hence, MAA has reasonably (20.20%) predicted the lowering of stress level among the students. Therefore, it can be concluded that the 8-week mindfulness intervention programme have significantly impacted on reducing depression to a great extent.

- **Multiple regression analysis considering gender, academic class and mindfulness attention awareness on depression.**

Table 4.49: Descriptive statistics of Difference of depression and MAA

Descriptive Statistics			
	Mean	Std. Deviation	N
DIFFERENCE_DEPRESSION	-3.10	10.047	60
GENDER	1.37	.486	60
DIFFERENCE_MAA	16.05	15.152	60
Study class	2.92	1.418	60

Table 4.50: Model Summary on Depression

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.429 ^a	.184	.170	9.156	.184	13.046	1	58	.001
a. Predictors: (Constant), DIFFERENCE OF MAA									

Table 4.51: Coefficient of Collinearity (in Depression)

Coefficients ^a								
MODEL		Un-standardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.46	1.73		-.844	.402		
	DIFF_MAA	-.28	.079	-.429	-3.61	.001	1.00	1.00
a. Dependent Variable: DIFFERENCE_DEPRESSION								

Gender, academic class, and mindfulness attention awareness (MAA: change in score after mindfulness intervention) were used as predictor variables, while depression (change in score after mindfulness intervention) was used as an outcome variable in a stepwise multiple regression analysis. Gender and study class variables were omitted from the output models in stepwise analysis due to their insignificant impact on the outcome variable.

Model-1 explained 18.4% of the variation in depression score ($R^2 = .184$, $P.01$). Mindful Attention Awareness (MAA) alone explained a significant proportion (18.40 percent) of variation ($= -.429$, $p.001$) in the change of depression score, according to the model. According to this paradigm, a small increase in mindful awareness attention led to a greater reduction in depression among students.

Previously, it was discovered that the post-test score (mean) in MAA was greater than the pre-test score, indicating that the mindfulness intervention programme had a favourable impact on increasing Mindful Attention Awareness (MAA), which in turn reduced depression levels in the students. A negative mean value of change in depression score suggested a reduced degree of depression among students after engaging in this study's 8-week mindfulness intervention programme. As a result, MAA has reasonably (18.4 percent) predicted a decrease in depression levels among students. As a result, it can be stated that the 8-week mindfulness intervention programme had a significant impact on depression reduction.

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CHAPTER – V

CONCLUSION AND DISCUSSION

Among the most important qualities of research is the systematic presentation of findings. Systematization provides insight into the extent to which the objectives were met. Conclusions provide a clear picture of hypothesis testing and acceptance or rejection. Measurement was used, but a more qualitative aspect as well as an introspective report was taken into account. Quantitative indications, on the other hand, were thought to be more particular and precise.

This chapter summarizes the findings and discusses whether the hypothesis should be accepted or rejected. Given that this was a one-of-a-kind initiative, the investigator thought it would be worthwhile to give some recommendations among future study in the same direction.

The study's primary objective is to investigate the effectiveness of Mindfulness Intervention on awareness, anxiety, stress, and depression at various levels among students from various districts of West Bengal studying from class XII to Ph.D level and ranging in age from 17 to 25 years. The study sample includes both male and female students, as well as mental health issues and mindfulness intervention programme awareness. The study also sought to investigate -

- i. What is the present condition of depression, anxiety, stress, and mindful attention awareness among students at various levels?
- ii. Is it possible to raise awareness among students of diverse levels using a mindfulness intervention programme?
- iii. What is the effectiveness of a 'Mindfulness Intervention Program' in decreasing depression, anxiety, and stress among students at various levels?

The current chapter discusses the study's major findings, comparability with other studies, and suggestions among future research.

5.1 Findings of the study

The study was conducted on a total number of 120 samples selected among the study and they were divided into two groups. Each group had 60 students; so, the first was control group (60) and the second was experimental group (60). The major findings of the study in respect to the analysis and interpretation of data are given below:

- ✓ The mean and SD scores in Pre-assessment of treatment group in the level of Mindful attention awareness is 50.82 and 10.25 then in the post-assessment of treatment group in the level of Mindful attention awareness is 66.87 and 10.85 respectively. The mean difference between the two groups is 16.05 and the difference was found statistically significant ($P < 0.01$).
- ✓ The mean and SD scores in Pre-assessment of treatment group in the level of stress is 20.77 and 7.48 then in the post-assessment of treatment group in the level of stress is 15.17 and 8.47; The mean difference between the two groups is 5.60 and the difference was found statistically significant ($P < 0.01$).
- ✓ The mean and SD scores in the pre-assessment of the treatment group in terms of anxiety is 17.13 and 8.09, respectively, whereas the mean and SD scores in the post-assessment of the treatment group in terms of anxiety is 15.33 and 7.14; The mean difference between the two groups is 1.80 but the difference was found statistically not significant.
- ✓ The mean and SD scores in Pre-assessment of treatment group in the level of depression is 21.37 and 7.86 then in the post-assessment of treatment group in the level of depression is 18.27 and 7.78; The mean difference between the two groups is 3.1 and the difference was found statistically significant ($P < 0.05$).
- ✓ The mean and SD scores in Pre-assessment of control group in the level of MAA is 52.73 and 10.15 then in the post-assessment of control group in the level of MAA is 52.37 and 9.75 respectively; The mean difference between the two groups is 0.36 but the difference was found statistically not significant.

- ✓ The mean and SD scores in Pre-assessment of control group in the level of stress is 20.13 and 7.97 then in the post-assessment of control group in the level of stress is 20.27 and 7.07; The mean difference between the two groups is 0.14 but the difference was found statistically not significant.
- ✓ The mean and SD scores in the pre-assessment of the control group in terms of anxiety is 17.77 and 9.37, respectively, whereas the mean and SD scores in the post-assessment of the control group in terms of anxiety is 17.50 and 7.75; The mean difference between the two groups is 0.27 but the difference was found statistically not significant.
- ✓ The mean and SD scores in Pre-assessment of control group in the level of depression is 20.37 and 9.66 then in the post-assessment of control group in the level of depression is 19.80 and 8.08; The mean difference between the two groups is 0.57 but the difference was found statistically not significant.
- ✓ Among H.S. level students, The mean scores in Pre-assessment of treatment group in the level of MAA is 35.55 then in the post-assessment of treatment group in the level of MAA is 70.00 respectively; The mean difference between the two groups is 34.45 and the difference was found statistically significant ($P < 0.01$).
- ✓ Among U.G. level students, The mean scores in Pre-assessment of treatment group in the level of MAA is 53.36 then in the post-assessment of treatment group in the level of MAA is 66.55 respectively; The mean difference between the two groups is 13.19 and the difference was found statistically significant ($P < 0.05$).
- ✓ Among P.G. level students, The mean scores in Pre-assessment of treatment group in the level of MAA is 52.77 then in the post-assessment of treatment group in the level of MAA is 59.08 respectively; The mean difference between the two groups is 6.31 but the difference was found statistically not significant.

- ✓ Among B.Ed. level students, The mean scores in Pre-assessment of treatment group in the level of MAA is 55.58 then in the post-assessment of treatment group in the level of MAA is 68.67 respectively; The mean difference between the two groups is 13.09 and the difference was found statistically significant ($P < 0.01$).
- ✓ Among Scholar students, The mean scores in Pre-assessment of treatment group in the level of MAA is 55.23 then in the post-assessment of treatment group in the level of MAA is 70.62 respectively; The mean difference between the two groups is 15.39 and the difference was found statistically significant ($P < 0.01$).
- ✓ In H.S. level students, The mean scores in Pre-assessment of treatment group in the level of Stress is 24.18 then in the post-assessment of treatment group in the level of Stress is 11.82 respectively; The mean difference between the two groups is 12.36 and the difference was found statistically significant ($P < 0.01$).
- ✓ In U.G. level students, The mean scores in Pre-assessment of treatment group in the level Stress is 23.09 then in the post-assessment of treatment group in the level of Stress is 11.82 respectively; The mean difference between the two groups is 11.27 and the difference was found statistically significant ($P < 0.01$).
- ✓ In P.G. level students, The mean scores in Pre-assessment of treatment group in the level of Stress is 20.31 then in the post-assessment of treatment group in the level of Stress is 18.15 respectively; The mean difference between the two groups is 2.16 but the difference was found statistically not significant.
- ✓ In B.Ed. level students, The mean scores in Pre-assessment of treatment group in the level of Stress is 17.67 then in the post-assessment of treatment group in the level of Stress is 19.17 respectively; The mean difference between the two groups is 1.50 but the difference was found statistically not significant.

- ✓ In Scholar students, The mean scores in Pre-assessment of treatment group in the level of Stress is 19.23 then in the post-assessment of treatment group in the level of Stress is 14.15 respectively; The mean difference between the two groups is 5.08 and the difference was found statistically significant ($P < 0.05$).
- ✓ For H.S. level students, The mean scores in Pre-assessment of treatment group in the level of anxiety is 22.55 then in the post-assessment of treatment group in the level of anxiety is 14.73 respectively; The mean difference between the two groups is 7.82 and the difference was found statistically significant ($P < 0.01$).
- ✓ For U.G. level students, The mean scores in Pre-assessment of treatment group in the level of anxiety is 18.18 then in the post-assessment of treatment group in the level of anxiety is 13.82 respectively; The mean difference between the two groups is 4.36 but the difference was found statistically not significant.
- ✓ For P.G. level students, The mean scores in Pre-assessment of treatment group in the level of anxiety is 15.38 then in the post-assessment of treatment group in the level of anxiety is 19.23 respectively; The mean difference between the two groups is 3.85 but the difference was found statistically not significant.
- ✓ For B.Ed. level students, The mean scores in Pre-assessment of treatment group in the level of anxiety is 14.67 then in the post-assessment of treatment group in the level of anxiety is 15.67 respectively; The mean difference between the two groups is 1.00 but the difference was found statistically not significant.
- ✓ For Scholar students, The mean scores in Pre-assessment of treatment group in the level of anxiety is 15.69 then in the post-assessment of treatment group in the level of anxiety is 12.92 respectively; The mean difference between the two groups is 2.77 but the difference was found statistically not significant.

- ✓ In H.S. level students, The mean scores in Pre-assessment of treatment group in the level of Depression is 22.73 then in the post-assessment of treatment group in the level of Depression is 16.36 respectively; The mean difference between the two groups is 6.37but the difference was found statistically not significant.
- ✓ In U.G. level students, The mean scores in Pre-assessment of treatment group in the level Depression is 26.73 then in the post-assessment of treatment group in the level of Depression is 17.45 respectively; The mean difference between the two groups is 9.28and the difference was found statistically significant ($P=0.01$).
- ✓ In P.G. level students, The mean scores in Pre-assessment of treatment group in the level of Depression is 21.23 then in the post-assessment of treatment group in the level of Depression is 22.77 respectively; The mean difference between the two groups is 1.54but the difference was found statistically not significant.
- ✓ In B.Ed. level students, The mean scores in Pre-assessment of treatment group in the level of Depression is 19.17 then in the post-assessment of treatment group in the level of Depression is 18.50 respectively; The mean difference between the two groups is 0.67but the difference was found statistically not significant.
- ✓ In Scholar students, The mean scores in Pre-assessment of treatment group in the level of Depression is 17.85 then in the post-assessment of treatment group in the level of Depression is 15.85 respectively; The mean difference between the two groups is 2.00but the difference was found statistically not significant.
- ✓ In control group students, the mean difference of anxiety was more increase in the scholar students than the other levels of students; and the difference between pre test and post test is statistically significant.
- ✓ In control group students, the mean difference of depression was more increase in the B.Ed students than the other levels of students; and the difference between pre test and post test is statistically significant.

- ✓ Among the male students, The mean scores in Pre-assessment of treatment group in the level of Mindful attention awareness is 50.26 then in the post-assessment of treatment group in the level of Mindful attention awareness is 66.82 respectively; The mean difference between the two groups is 16.56 and the difference was found statistically significant ($P < 0.01$).
- ✓ Among the male students, The mean scores in Pre-assessment of treatment group in the level of stress is 18.74 then in the post-assessment of treatment group in the level of stress is 15.05; The mean difference between the two groups is 3.69 and the difference was found statistically significant ($P < 0.05$).
- ✓ Among the male students, The mean scores in the pre-assessment of the treatment group in terms of anxiety is 15.32, respectively, whereas the mean scores in the post-assessment of the treatment group in terms of anxiety is 14.95; The mean difference between the two groups is 0.37 but the difference was found statistically not significant.
- ✓ Among the male students, The mean scores in Pre-assessment of treatment group in the level of depression is 21.79 then in the post-assessment of treatment group in the level of depression is 17.63; The mean difference between the two groups is 4.16 and the difference was found statistically significant ($P < 0.05$).
- ✓ In the female students, The mean scores in Pre-assessment of treatment group in the level of Mindful attention awareness is 51.77 then in the post-assessment of treatment group in the level of Mindful attention awareness is 66.95 respectively; The mean difference between the two groups is 15.18 and the difference was found statistically significant ($P < 0.01$).
- ✓ In the female students, The mean scores in Pre-assessment of treatment group in the level of stress is 24.27 then in the post-assessment of treatment group in the level of stress is 15.36; The mean difference between the two groups is 8.91 and the difference was found statistically significant ($P < 0.01$).
- ✓ In the female students, The mean scores in the pre-assessment of the treatment group in terms of anxiety is 20.27, respectively, whereas the mean scores in the post-assessment of the treatment group in terms of anxiety is

16.00; The mean difference between the two groups is 4.27 and the difference was found statistically significant ($P < 0.05$).

- ✓ In the female students, The mean scores in Pre-assessment of treatment group in the level of depression is 20.64 then in the post-assessment of treatment group in the level of depression is 19.36; The mean difference between the two groups is 1.28 but the difference was found statistically not significant.
- ✓ Among the male students, The mean scores in Pre-assessment of control group in the level of Mindful attention awareness is 53.86 then in the post-assessment of control group in the level of Mindful attention awareness is 53.36 respectively; The mean difference between the two groups is 0.50 but the difference was found not statistically significant.
- ✓ Among the male students, The mean scores in Pre-assessment of control group in the level of stress is 19.36 then in the post-assessment of control group in the level of stress is 18.93; The mean difference between the two groups is 0.43 but the difference was found not statistically significant.
- ✓ Among the male students, The mean scores in the pre-assessment of the control group in terms of anxiety is 17.00, respectively, whereas the mean scores in the post-assessment of the treatment group in terms of anxiety is 17.14; The mean difference between the two groups is 0.14 but the difference was found statistically not significant.
- ✓ Among the male students, The mean scores in Pre-assessment of control group in the level of depression is 17.50 then in the post-assessment of treatment group in the level of depression is 17.43; The mean difference between the two groups is 0.07 but the difference was found statistically not significant.
- ✓ In the female students, The mean scores in Pre-assessment of control group in the level of Mindful attention awareness is 51.75 then in the post-assessment of treatment group in the level of Mindful attention awareness is 51.50 respectively; The mean difference between the two groups is 0.25 but the difference was found statistically not significant.

- ✓ In the female students, The mean scores in Pre-assessment of control group in the level of stress is 20.81 then in the post-assessment of treatment group in the level of stress is 21.44; The mean difference between the two groups is 0.63 but the difference was found statistically not significant.
- ✓ In the female students, The mean scores in the pre-assessment of the control group in terms of anxiety is 18.44, respectively, whereas the mean scores in the post-assessment of the treatment group in terms of anxiety is 17.81; The mean difference between the two groups is 0.63 but the difference was found statistically not significant.
- ✓ In the female students, The mean scores in Pre-assessment of control group in the level of depression is 22.88 then in the post-assessment of treatment group in the level of depression is 21.88; The mean difference between the two groups is 1.00 but the difference was found statistically not significant.
- ✓ Before the investigation started, 8.3 percent and 13.3 percent of students in the Experimental group were classified as having a normal or mild level of anxiety, respectively. Before the experiment, 20% of students were classified as having Moderate Anxiety, 23.3 percent as having Severe Anxiety, and 35% as having Extreme Anxiety. However, after the experiment, 6.7 percent, 15%, 40%, 16.7 percent, and 21.7 percent of the students were classified as having Normal, Mild, and Moderate, Severe, and Extremely Severe degrees of anxiety.
- ✓ Just before to the Stress experiment, 11.7 percent, 33.3 percent, 35 percent, and 20 percent of students were classified as having Normal, Mild, Moderate, and Severe levels of stress; however, after the experiment, 38.3 percent, 31.7 percent, 25 percent, 3.3 percent, and 1.7 percent of students had Normal, Mild, Moderate, Severe, and Extremely Severe levels of stress.
- ✓ Before to the depression experiment, 8.3 percent, 5 percent, 35 percent, 21.70 percent and 30 percent of students were classified as having Normal, Mild, Moderate, Severe and extremely severe levels of depression; however, after the experiment, 6.7 percent, 28.3 percent, 43.3 percent, 13.3 percent, and 8.3 percent of students had Normal, Mild, Moderate, Severe, and Extremely Severe levels of depression.

- ✓ On the basis of Pre-assessment score, The mean and SD scores of treatment group in the level of Mindful attention awareness is 50.82 and 10.25 then in the control group in the level of Mindful attention awareness is 52.73 and 10.15 respectively;The mean difference between the two groups is 1.91but the difference was found statistically not significant.
- ✓ On the basis of Pre-assessment score, The mean and SD scores of treatment group in the level of stress is 20.77 and 7.48 then in the control group in the level of stress is 20.13 and 7.97 respectively;The mean difference between the two groups is 0.64but the difference was found statistically not significant.
- ✓ On the basis of Pre-assessment score, The mean and SD scores of treatment group in the level of anxiety is 17.13 and 8.09 then in the control group in the level of anxiety is 17.77 and 9.37 respectively;The mean difference between the two groups is 0.64but the difference was found statistically not significant.
- ✓ On the basis of Pre-assessment score, The mean and SD scores of treatment group in the level of depression is 21.37 and 7.86 then in the control group in the level of stress is 20.37 and 9.66 respectively;The mean difference between the two groups is 1.00but the difference was found statistically not significant.
- ✓ On the basis of Post-assessment score, The mean and SD scores of treatment group in the level of Mindful attention awareness is 66.87 and 10.85 then in the control group in the level of Mindful attention awareness is 52.37 and 9.76 respectively;The mean difference between the two groups is 14.50and the difference was found statistically significant ($P < 0.01$).
- ✓ On the basis of Post-assessment score, The mean and SD scores of treatment group in the level of stress is 14.53 and 7.99 then in the control group in the level of stress is 20.27 and 7.07 respectively;The mean difference between the two groups is 5.74and the difference was found statistically significant ($P < 0.01$).

- ✓ On the basis of Post-assessment score, The mean and SD scores of treatment group in the level of anxiety is 14.70 and 7.06 then in the control group in the level of anxiety is 17.50 and 7.75 respectively;The mean difference between the two groups is 2.80and the difference was found statistically significant ($P<0.05$).
- ✓ On the basis of Post-assessment score, The mean and SD scores of treatment group in the level of depression is 16.87 and 6.93 then in the control group in the level of stress is 19.80 and 8.08 respectively;The mean difference between the two groups is 2.93and the difference was found statistically significant ($P<0.05$).
- ✓ Pre-assessment of Stress and Anxiety (0.635), Stress & Depression (0.537), Anxiety & Depression (0.481) are moderately correlated and the relation is statistically significant when the experimental group is concerned.
- ✓ Post-assessment of Stress and Anxiety (0.718), Stress & Depression (0.815), Anxiety & Depression (0.735) are highly correlated and the relation is statistically significant when the experimental group is concerned.

5.2 Discussion

Children's and adolescents' mental health is an important part of their general health and development, and as a result, its expanding importance is causing concern around the world. The rapid increase in disruptive behaviour and illegal conduct among students of various levels is primarily lacking the ability to deal with their level of aggravation, frustration, and tension. Moreover, students with long-term repressed mental illness are at an increased risk of suicide, substance abuse, psychosomatic disorders, and other significant physical and mental illnesses. Students' mental illness and hostile behaviour are mostly caused by their inability to accommodate themselves, their parents, teachers, peer groups, academic demands, and other factors. They are disabled to adapt to their surroundings environment, which causes them to become increasingly Stress, irritated and angry; and similarly reducing their awareness. A person with a high level of well-being has greater adjustment capabilities with his or her environment and has control over their awareness and negative emotions such as rage and violence. The Mindfulness Based intervention

promotes students' attention awareness in many areas of their lives, including educational and significance activities. It enhances the ability to respond to complicated mental and physical stimuli. As a result, mindfulness-based activities result in structural and functional changes in both the body and the mind. Mindfulness intervention is a series of psychosomatic activities that focuses on training the attention and awareness in order to enhance concentration (Medsker et al. 2016). These practices revitalize and nourish the critical parts of the brain that control emotional regulation, attention and concentration, and sleep, and hence the various levels of student should be encouraged to apply mindfulness techniques in everyday life by purposefully focusing awareness on all of their activities.

The present study aimed to investigate the effect of practicing Mindfulness intervention for 56 days (8 weeks) at the level of awareness, anxiety, stress, and depression as measured using MAAS & DASS-21 scores. In this section, we examined the results of the study to understand the efficacy of Mindfulness intervention (Ānāpānasati Meditation) with respect to different demographic variables viz. Gender & Study Class. The major findings of this study will contribute to a better understanding of the effectiveness of group mindfulness interventions for students' awareness, stress, anxiety, and depression at different levels. In addition to the association between Depression, Anxiety and Stress among the students discussed.

The present study estimated that in treatment group students, students' post assessment has much higher than the pre assessment in MAA. So, based on these results it can be concluded that the attention awareness of the students in treatment group has increased significantly through group Mindfulness intervention programme. Even in the case of the experimental group, it was found that the levels of stress and depression significantly decreased after the test compared to the pre-test results. Alex (2008) discovered that Mindful Meditation therapy led to a decrease in depression levels (Anurekha T K, 2021). A comparable study found that Mindfulness intervention or Ānāpānasati Meditation significantly reduced cognitive distress (Pitch it Muangnapoe, Tony Morris & Garry Kuan, 2016). However, according to another study, the mindfulness meditation practise has piqued the curiosity of researchers and has demonstrated promising benefits in the treatment of depression (Green et al.

2015). But the difference in MAA, Stress, Anxiety and Depression between the pre-test and post-test of control group students was not significant noticed. Therefore, it can be said that as a result of treatment, i.e. for the group Mindfulness intervention program, there is an increase in the awareness among the students as well as a decrease in stress and depression.

There is no specific information on the effectiveness of Mindfulness intervention on attention awareness. But in the present study shows that H.S., U.G., B.Ed and scholar students of experimental group have significantly increased their attention awareness from pre-test to post-test, but not much has been noticed among P.G. level students. But, no significant results were observed among the control group students on the basis of study class. So, Group Mindfulness Intervention plays an important role in raising attention awareness among the students in various levels in education.

Treatment group HS, UG, and Scholar students were given group mindfulness intervention therapy compared to the pre-treatment stress, which resulted in a much more significant reduction in post-treatment outcomes, but this difference between the control group students was not significant. And mindfulness intervention did not have much effect on stress reduction among pg and b.ed students in the treatment group. So it can be said that group mindfulness intervention plays a very important role in controlling stress in adolescents and adult students. On the other hand, in the case of anxiety control, the information obtained after the treatment, i.e. after the application of mindfulness, was significantly reduced in the HS level students only, which was not noticed in the other students in the treatment group. On the other hand, the results of the post-test increased significantly more than the pre-test amount of anxiety of the scholar students of the control group on which the mindfulness intervention training was not given. In examining the significance of depression in the test group, it was observed that post-test depression was significantly reduced in UG level students as compared to pre-test, while post-test depression was significantly less in pre-test students than in other level students. Thus, mindfulness intervention is one of the most important parts of reducing depression in 18 to 21 year old students. But no treatment was applied to B.Ed level

students, and among them there was a significant reduction in depression. This means that depression is reduced due to other reasons such as - academic career growth, gaining professional certificates, etc.

Based on the gender variables of the treatment group, the amount of MAA before taking the test in both male and female students increased significantly after taking the test. In other words, it can be said that the role of Mindfulness Intervention Therapy is very important to increase the awareness among the students especially Attention Awareness. The reason may be that awareness has not increased significantly in the case of boys and girls who have not been given treatment. Similarly, mindfulness intervention has been shown to have a positive effect on significantly reducing stress in both male and female students. Group Mindfulness intervention programme did not significantly reduce anxiety, but did significantly reduce depression in male and female students who were part of the experimental group; however, the treatment of the female students in the experimental group significantly reduced the anxiety, but not so much in the case of depression. It can be said that the role of group mindfulness intervention is undeniable in the increase in mental health and awareness among students based on gender variables. That is, mindfulness plays an important role in the development of cognitive and regulatory skills in boys and girls, in the development of academic skills, in coping with stress-free situations and emotional responses, in improving students' moods, in relieving stress and in relieving depression and even suicide.

Among the students in the treatment group, 58.30% had severe levels of anxiety before taking the test, and about 20% of the students were able to reduce their level of anxiety and get out of the critical level after applying mindfulness intervention therapy. Again, similar results have been observed in the case of stress (reduced by 16%); however, mindfulness intervention has more impact in stress than anxiety. Assessing the level of depression of the students in the treatment group, it was found that 51.70% of the students were in the final stage of depression before the application of treatment and about 30% of the students were able to come out of the final stage of depression after the application of treatment. The effects of mindfulness intervention are particularly significant in reducing depression.

There was no significant difference in mindfulness, anxiety, stress and depression between the experimental group and the control group based on the students' pre-test; But post-tests on the same groups showed significant differences in Muncul attention awareness, stress, anxiety and depression. There is very little difference in the dependent variables (awareness, anxiety, stress & depression) between the experimental group and the controlled group before taking the test. After the test, the experimental team's awareness increased a lot and at the same time the anxiety, stress and depression decreased a lot. After the test, it was found that mindfulness interventions had a much greater positive effect on the awareness and mental health of the experimental group than on the awareness and mental health of the controlled team. Therefore, it can be said that mindfulness meditation therapy plays a significant role in improving the awareness and mental health of students. A positive correlation between depression anxiety and stress has been observed in the test team's pre-test candidates. Where everyone had a moderate relationship with each other, but after taking the test it was found that they had transformed into a highly positive correlation with each other. That is, the positive effects of group mindfulness intervention as a result of the treatment are similar to the effects of anxiety and stress, as well as the effects of depression.

In light of the current study, policymakers, administrators, teachers, parents, educators, and others may adopt some feasible techniques for implementing Mindfulness Intervention on Mental Health and Well-being. All of us have a common goal: to secure the well-being of the next generation and the development of psychological capacities in them to cope with daily life requirements and problems, stress, and disasters. We must instil in children and adolescents a realistic knowledge of self and surroundings, the recognition and expression of one's own emotions, the development of good social and interpersonal relationships, and the ability to cope with daily life challenges. We must do it as soon as possible in order to raise a generation of happy, resilient, and productive people.

5.3 Scope of Further study

The present study is not an end in itself; rather it is a part of ongoing process to achieve the goal of managing and promoting Mental Health and Awareness through Mindfulness Meditation of the of the students at various levels in education. Therefore, a numerous further studies may be conducted by the future researchers considering various dimensions (stress, anxiety & depression etc.) of different variables of Mental Health problems of the students in different levels of education. Research effort may be initiated in the in the direction of developing further sophisticated research tools to assess the effectiveness of mindfulness intervention on Awareness, Anxiety, Stress and depression of different levels of students using sophisticated statistical analyses.

This study was conducted taking limited and small number of sample within a limited time frame. The study was conducted with limited demographic variables – gender and study class; the treatment variable – Group Mindfulness Intervention; Mindful Attention Awareness, Stress, Anxiety and depression as outcome or dependent variables. There is further scope to develop more sophisticated tools by future researchers to assess the effectiveness of Mindfulness Meditation on mental health in facilitating the academic achievement and different influential factors and analysis may also be done by more sophisticated statistical methods and software.

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APPENDIXE – I

প্রশ্নপত্র – ১

ছাত্রছাত্রী সম্পর্কিত তথ্য (Information about students)

ছাত্র / ছাত্রীর নাম

অভিভাবকের নাম

আবাসিক ঠিকানা

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লিঙ্গ (ছেলে / মেয়ে) বয়স

পাঠরত শ্রেণী

APPENDIXES –II

প্রশ্নপত্র – ২

MINDFUL ATTENTION AWARENESS SCALE

নির্দেশনা : নিচে আপনার দৈনন্দিন অভিজ্ঞতা সম্পর্কে কিছু বাক্য রয়েছে। বর্তমানে আপনি কতটা নিয়মিত ভাবে এসব বিষয়ের মুখমুখি হচ্ছেন তা নিচে প্রদত্ত ১-৬ স্কেলের সাহায্যে নির্দেশ করুন। দয়া করে, আপনার অভিজ্ঞতাগুলো কি হওয়া উচিত সেটা না ভেবে আপনি এখন যা অনুভব করছেন ঠিক তাই উল্লেখ করুন। দয়া করে, প্রতিটি ঘটনা আলাদাভাবে চিন্তা করুন।

১ - প্রায় সবসময়, ২ - অধিকাংশ সময়, ৩ - মাঝেমাঝে, ৪ - কদাচিৎ, ৫ - কম ক্ষেত্রে, ৬ - প্রায় হয়ই না

দৈনন্দিন অভিজ্ঞতা	১	২	৩	৪	৫	৬
আমার মাঝে হয়ত কোন আবেগ ও অনুভূতি কাজ করছে কিন্তু আমি তাৎক্ষণিকভাবে তা বুঝতে পারি না। অনেক পরে বুঝতে পারি।						
অসতর্কতা, অমনোযোগিতা বা অন্য কিছু নিয়ে চিন্তায় মগ্ন থাকার কারণে আমি জিনিসপত্র ফেলে দেই বা ভেঙ্গে ফেলি।						
এই মুহূর্তে যা ঘটছে তাতে মনোনিবেশ বা মনযোগী হয়ে থাকাটা আমার জন্য কঠিন হয়ে দাঁড়াচ্ছে।						
কোথাও যাওয়ার সময় আমি এতই দ্রুত যাই যে আশেপাশে কি হচ্ছে সেদিকে ততটা খেয়াল করিনা।						
আমি শারীরিক কষ্ট বা অস্বস্তি, ততক্ষণ পর্যন্ত টের পাই না যতক্ষণ না সেগুলো সেগুলো খুব গুরুতর হয়ে ওঠে।						
প্রথমবারের মত আমি কারোর নাম শুনলে, প্রায় সাথে সাথে সেটা ভুলে যাই।						
মনে হয় আমি যেন ‘স্বয়ংক্রিয় যন্ত্রে’র মত কাজ করে যাচ্ছি, কি করছি সেদিকে খুব একটা লক্ষ্য দিচ্ছি না।						
কোন কাজ করার সময় আমি খুব তাড়াহুড়ো করি এবং কাজটার প্রতি খুব একটা মনোনিবেশ করি না।						

দৈনন্দিন অভিজ্ঞতা	১	২	৩	৪	৫	৬
কোন একটি লক্ষ্যে পৌঁছানোর প্রতি আমি এতটাই মনযোগী হয়ে পরি যে সেই লক্ষ্যে পৌঁছানোর জন্য আমার যা যা করা উচিত সেগুলির সাথে সংযোগ হারিয়ে ফেলি।						
কি করছি সেই খেয়াল ছাড়াই মনে হয় যেন আপনা আপনিই আমার কাজ গুলো করে যাই।						
আমি লক্ষ্য করেছি, কোন কাজ করার মাঝেও আমি এক কান দিয়ে রাখি অন্যের কথা শোনায়।						
চিন্তা ভাবনা না করেই আমি এদিক ওদিক চলে যাই এবং গিয়ে মনে হয় কেন যে সেখানে গেলাম।						
আমি সারাক্ষণ হয় অতীত নিয়ে না হয় ভবিষ্যৎ নিয়ে ভাবি।						
আমি খেয়াল করেছি যে, কোন মনোযোগ ছাড়াই আমি বিভিন্ন কাজ করে যাই।						
আমি নাস্তা (খাবার খাই) করি, কিন্তু আমি যে খাচ্ছি সে সম্পর্কে সচেতন থাকি না।						

APPENDIXES –III

প্রশ্নপত্র – ৩

DASS – 21

অনুগ্রহ করে নিচের প্রতিটি বিবৃতি পড়ুন এবং ০, ১, ২ অথবা ৩ এর মধ্যে গত সপ্তাহ ব্যাপী আপনার জন্য প্রযোজ্য যে কোন একটি সংখ্যায় গোল চিহ্ন দিন। এখানে কোন সঠিক বা ভুল উত্তর নেই। কোন বিবৃতির জন্য বেশি সময় ব্যয় করবেন না।

মানদণ্ডটি (রেটিং স্কেল) নিম্নরূপ:

- ০ আমার জন্য একেবারেই প্রযোজ্য নয়
- ১ আমার জন্য অল্পমাত্রায় বা কখনো কখনো প্রযোজ্য
- ২ আমার জন্য বেশ কিছুমাত্রায় বা বেশখানিকটা সময়ের জন্য প্রযোজ্য
- ৩ আমার জন্য খুব বেশী বা বেশীরভাগ সময়ের জন্য প্রযোজ্য

দৈনন্দিন অভিজ্ঞতা	০	১	২	৩
কোন উৎকর্ষ বা উত্তেজনামূলক কাজের পর আরামদায়ক অবস্থায় ফিরে আসা আমার জন্য কঠিন ছিল।				
আমি বুঝতে পারতাম আমার গলা শুকিয়ে আসছে।				
ইতিবাচক কোন অনুভূতিই আমার মধ্যে কাজ করত না।				
আমার শ্বাসকষ্টের অনুভূতি হতো (যেমন- অতিদ্রুত শ্বাসপ্রশ্বাস, শারীরিক পরিশ্রম ছাড়াই নিঃশ্বাস বন্ধ হয়ে আসা)				
নিজে উদ্যোগী হয়ে কোন কাজ শুরু করা আমার জন্য কঠিন হতো।				
আমার মধ্যে বিভিন্ন পরিস্থিতিতে অতিরিক্ত প্রতিক্রিয়া করার প্রবণতা ছিল।				
আমার শরীর কাঁপার অভিজ্ঞতা হয়েছিলো (যেমন হাত কাঁপা)				
আমার মনে হতো আমি খুব বেশী স্নায়ু চাপে ভুগছি।				
আমি এমন পরিস্থিতি সম্পর্কে দুশ্চিন্তাগ্রস্ত ছিলাম যেখানে আমি তীব্রভাবে আতঙ্কিত হতে পারি এবং এমন কোন কাজ করতে পারি যাতে অন্যরা আমাকে বোকা মনে করতে পারবে।				
আমার মনে হচ্ছিল, ভবিষ্যতে আমার ভালো কিছুই আশা নেই।				

দৈনন্দিন অভিজ্ঞতা	০	১	২	৩
আমি অনুভব করতাম যে আমি খুব অস্থির হয়ে যাচ্ছি।				
আরাম বোধ করা আমার জন্য কঠিন হত।				
আমি মনমরা এবং বিষণ্ণ অনুভব করতাম।				
আমার কাজে বাধা হয় এমন যে কোন জিনিসই আমার কাছে অসহ্য লাগত।				
আমার মনে হত এই বুঝি আমি হঠাৎ তিরভাবে আতঙ্কগ্রস্থ হচ্ছি।				
কোন কিছুতেই আমি বেশী আগ্রহী হতে পারতাম না।				
আমি অনুভব করতাম ব্যক্তি হিসাবে আমার বিশেষ কোন মূল্য নেই।				
আমি অনুভব করতাম আমি একটুতেই মনে ব্যাথা পাই।				
শারীরিক পরিশ্রম না করলেও আমি হৃদপিণ্ডের কাজ করা বুঝতে পারতাম (যেমন- হৃদস্পন্দন বৃদ্ধির অনুভূতি বা বুক ধড়ফড় করা, হৃদপিণ্ডের স্পন্দনে ব্যাঘাত)।				
যথাযথ কারণ ছাড়াই আমি ভীত-সন্ত্রস্ত বোধ করতাম।				
জীবনটা অর্থহীন বলে মনে হত।				

APPENDIXES –IV

DATA TABULATION SHEET

GENDER & STUDY CLASS WISE SAMPLE DISTRIBUTION IN EXPERIMENTAL GROUP

STUDY CLASS * GENDER				
		GENDER		TOTAL
		MALE	FEMALE	
STUDY CLASS	SCHOLAR (AGE: 25 TO 30)	9	4	13
	B.ED (AGE: 24 TO 26)	9	3	12
	PG (AGE: 21 TO 25)	9	4	13
	UG (AGE: 18 TO 21)	6	5	11
	HS (AGE: 17 TO 18)	5	6	11
TOTAL		38	22	60

GENDER & STUDY CLASS WISE SAMPLE DISTRIBUTION IN CONTROL GROUP

STUDY CLASS * GENDER				
		GENDER		Total
		MALE	FEMALE	
STUDY CLASS	B.ED (AGE: 23 TO 28)	4	7	11
	HS (AGE: 16 TO 18)	10	8	18
	PG (AGE: 21 TO 30)	2	12	14
	SCHOLAR (AGE: 27 TO 30)	9	0	9
	UG (AGE: 19 TO 26)	3	5	8
TOTAL		28	32	60

**APPENDIX-V: IMPACT OF MEDITATION ON ANXIETY, STRESS AND
DEPRESSION**

ANXIETY

Subject	Class	Pre-Anxiety	Pos-Anxiety	D	Type of Difference Sate	Group wise Classification
1	Scholar	08	08	00	Mild-Mild	PRE TEST
2	Scholar	14	08	-06	Moderate-Mild	Normal level
3	Scholar	36	16	-20	Extremely Severe-Severe	8.3%
4	Scholar	32	12	-20	Extremely Severe-Moderate	
5	Scholar	16	12	-04	Severe-Moderate	Mild level
6	Scholar	04	02	-02	Normal-Normal	13.3%
7	Scholar	22	14	-08	Extremely Severe-Moderate	
8	Scholar	16	14	-02	Severe-Moderate	Moderate level
9	Scholar	14	16	02	Moderate-Severe	20%
10	Scholar	10	08	-02	Moderate-Mild	
11	Scholar	18	20	02	Severe- Extremely Severe	Severe level
12	Scholar	08	14	06	Mild-Moderate	23.3%
13	Scholar	06	12	06	Normal-Moderate	
14	B.ED	22	30	08	Extremely Severe- Extremely Severe	Extremely Severe level
15	B.ED	22	06	-16	Extremely Severe-Normal	35%
16	B.ED	18	16	-02	Severe-Severe	
17	B.ED	08	12	04	Mild-Moderate	POST TEST
18	B.ED	04	08	04	Normal-Mild	Normal level
19	B.ED	10	10	00	Moderate-Moderate	6.7%
20	B.ED	24	16	-08	Extremely Severe-Severe	
21	B.ED	18	18	00	Severe-Severe	Mild level
22	B.ED	22	20	-02	Extremely Severe- Extremely Severe	15%
23	B.ED	06	08	02	Normal-Mild	
24	B.ED	10	24	14	Moderate- Extremely Severe	Moderate level
25	B.ED	12	14	02	Moderate-Moderate	40%
26	PG	12	18	06	Moderate-Severe	
27	PG	08	10	02	Mild-Moderate	Severe level
28	PG	26	38	12	Extremely Severe- Extremely Severe	16.7%
29	PG	08	22	14	Mild- Extremely Severe	
30	PG	14	24	10	Moderate- Extremely Severe	Extremely Severe level
31	PG	06	10	04	Normal-Moderate	21.7%
32	PG	32	32	00	Extremely Severe- Extremely Severe	

Subject	Class	Pre-Anxiety	Pos-Anxiety	D	Type of Difference Sate	Group wise Classification
33	PG	08	22	14	Mild- Extremely Severe	
34	PG	08	06	-02	Mild-Normal	
35	PG	22	16	-06	Extremely Severe-Severe	
36	PG	14	18	04	Moderate-Severe	
37	PG	16	10	-06	Severe-Moderate	
38	PG	26	24	-02	Extremely Severe- Extremely Severe	
39	UG	22	14	-08	Extremely Severe-Moderate	
40	UG	12	10	-02	Moderate-Moderate	
41	UG	18	14	-04	Severe-Moderate	
42	UG	08	08	00	Mild-Mild	
43	UG	14	26	12	Moderate- Extremely Severe	
44	UG	28	08	-20	Extremely Severe-Mild	
45	UG	16	12	-04	Severe-Moderate	
46	UG	16	20	04	Severe- Extremely Severe	
47	UG	30	14	-16	Extremely Severe-Moderate	
48	UG	14	12	-02	Moderate-Moderate	
49	UG	22	14	-08	Extremely Severe-Moderate	
50	HS	28	12	-16	Extremely Severe-Moderate	
51	HS	22	30	08	Extremely Severe- Extremely Severe	
52	HS	18	08	-10	Severe-Mild	
53	HS	16	16	00	Severe-Severe	
54	HS	16	08	-08	Severe-Mild	
55	HS	22	14	-08	Extremely Severe-Moderate	
56	HS	18	06	-12	Severe-Normal	
57	HS	26	10	-16	Extremely Severe-Moderate	
58	HS	28	10	-18	Extremely Severe-Moderate	
59	HS	36	16	-20	Extremely Severe-Severe	
60	HS	18	12	-06	Severe-Moderate	

STRESS

Subject	Class	Pre-Stress	Post-Stress	D	Type of Difference State	Group wise Classification
1	Scholar	14	12	-02	Mild-Mild	PRE TEST
2	Scholar	26	16	-10	Moderate-Mild	Normal level
3	Scholar	32	16	-16	Severe-Mild	11.7%
4	Scholar	28	08	-20	Severe-normal	
5	Scholar	26	22	-04	Moderate-Moderate	Mild level
6	Scholar	12	12	00	Mild-Mild	33.3%
7	Scholar	32	24	-08	Severe-Moderate	
8	Scholar	10	12	02	Normal-Mild	Moderate level
9	Scholar	10	14	04	Normal-Mild	35%
10	Scholar	14	08	-06	Mild-Normal	
11	Scholar	24	20	-04	Moderate-Moderate	Severe level
12	Scholar	10	08	-02	Normal-Normal	20%
13	Scholar	12	04	-08	Mild-Normal	
14	B.ED	22	30	08	Moderate-Severe	Extremely Severe level
15	B.ED	30	06	-24	Severe-Normal	0.00%
16	B.ED	18	24	06	Mild-Moderate	
17	B.ED	26	26	00	Moderate-Moderate	POST TEST
18	B.ED	12	20	08	Mild-Moderate	Normal level
19	B.ED	14	12	-02	Mild-Mild	38.3%
20	B.ED	26	18	-08	Moderate-Mild	
21	B.ED	18	22	04	Mild-Moderate	Mild level
22	B.ED	14	22	08	Mild-Moderate	31.7%
23	B.ED	08	08	00	Normal-Normal	
24	B.ED	16	20	04	Mild-Moderate	Moderate level
25	B.ED	08	14	06	Normal-Mild	25%
26	PG	12	14	02	Mild-Mild	
27	PG	16	06	-10	Mild-Normal	Severe level
28	PG	26	40	14	Moderate-Extremely Severe	3.3%
29	PG	24	26	02	Moderate-Moderate	
30	PG	26	24	-02	Moderate-Moderate	Extremely Severe level
31	PG	14	08	-06	Mild-Normal	1.7%
32	PG	32	26	-06	Severe-Moderate	
33	PG	08	18	10	Normal-Mild	
34	PG	26	06	-20	Moderate-Normal	
35	PG	16	24	08	Mild-Moderate	

Subject	Class	Pre-Stress	Post-Stress	D	Type of Difference State	Group wise Classification
36	PG	16	04	-12	Mild-Normal	
37	PG	16	04	-12	Mild-Normal	
38	PG	32	28	-04	Severe-severe	
39	UG	22	12	-10	Moderate-Mild	
40	UG	24	10	-14	Moderate-Normal	
41	UG	26	16	-10	Moderate-Mild	
42	UG	10	14	04	Normal-Mild	
43	UG	14	16	02	Mild-Mild	
44	UG	18	08	-10	Mild-Normal	
45	UG	28	12	-16	Severe-Mild	
46	UG	28	22	-06	Severe-Moderate	
47	UG	32	06	-26	Severe-Normal	
48	UG	26	10	-16	Severe-Normal	
49	UG	26	04	-22	Severe-normal	
50	HS	26	16	-10	Severe-Mild	
51	HS	12	22	10	Mild-Moderate	
52	HS	24	08	-16	Moderate-Normal	
53	HS	20	04	-16	Moderate-Normal	
54	HS	18	12	-06	Mild-Mild	
55	HS	28	10	-18	Severe-Normal	
56	HS	30	10	-20	Severe-Normal	
57	HS	32	06	-26	Severe-Normal	
58	HS	26	18	-08	Moderate-Mild	
59	HS	26	04	-22	Moderate-Normal	
60	HS	24	06	-18	Moderate-Normal	

DEPRESSION

Subject	Class	Pre-Depression	Post-Depression	D	Type of Difference State	Group wise Classification
1	Scholar	26	12	-14	Severe-Mild	PRE TEST
2	Scholar	20	14	-06	Moderate-Moderate	Normal level
3	Scholar	32	20	-12	Extremely severe-Moderate	8.3%
4	Scholar	16	10	-06	Moderate-Mild	
5	Scholar	18	20	02	Moderate-Moderate	Mild level
6	Scholar	16	08	-08	Moderate-Normal	5%
7	Scholar	28	24	-04	Extremely Severe-Severe	
8	Scholar	16	12	-04	Moderate-Mild	Moderate level
9	Scholar	20	12	-08	Moderate-Mild	35%
10	Scholar	10	10	00	Mild-Mild	
11	Scholar	08	16	08	Normal-Moderate	Severe level
12	Scholar	14	16	02	Moderate-Moderate	21.7%
13	Scholar	08	06	-02	Normal-Normal	
14	B.ED	22	22	00	Severe-Severe	Extremely Severe level
15	B.ED	32	14	-18	Extremely Severe-Moderate	30%
16	B.ED	22	24	02	Severe-Severe	
17	B.ED	18	18	00	Moderate-Moderate	POST TEST
18	B.ED	12	18	06	Mild-Moderate	Normal level
19	B.ED	14	14	00	Moderate-Moderate	6.7%
20	B.ED	28	16	-12	Extremely Severe-Moderate	
21	B.ED	08	22	14	Normal-Severe	Mild level
22	B.ED	30	18	-12	Extremely Severe-Moderate	28.3%
23	B.ED	18	12	-06	Moderate-Mild	
24	B.ED	18	18	00	Moderate-Moderate	Moderate level
25	B.ED	08	12	04	Normal-Mild	43.3%
26	PG	14	20	06	Moderate-Moderate	
27	PG	24	16	-08	Severe-Moderate	Severe level
28	PG	28	38	10	Extremely Severe-Extremely Severe	13.3%
29	PG	18	30	12	Moderate-Extremely Severe	
30	PG	28	30	02	Extremely Severe-Extremely Severe	Extremely Severe level
31	PG	18	16	-02	Moderate-Moderate	8.3%
32	PG	32	26	-06	Extremely Severe-Severe	
33	PG	14	12	-02	Moderate-Mild	
34	PG	14	12	-02	Moderate-Mild	
35	PG	28	16	-12	Extremely Severe-Moderate	
36	PG	14	10	-04	Moderate-Mild	
37	PG	08	18	10	Normal-Moderate	

Subject	Class	Pre-Depression	Post-Depression	D	Type of Difference State	Group wise Classification
38	PG	36	34	-02	Extremely Severe-Extremely Severe	
39	UG	18	22	04	Moderate-Severe	
40	UG	18	20	02	Moderate-Moderate	
41	UG	30	14	-16	Extremely Severe-Moderate	
42	UG	22	24	02	Severe-Severe	
43	UG	28	20	-08	Extremely Severe-Moderate	
44	UG	32	10	-22	Extremely Severe-Mild	
45	UG	38	12	-26	Extremely Severe-Mild	
46	UG	34	28	-06	Extremely Severe- Extremely Severe	
47	UG	22	14	-08	Severe-Moderate	
48	UG	26	14	-12	Severe-Moderate	
49	UG	26	14	-12	Severe-Moderate	
50	HS	28	16	-12	Extremely Severe-Moderate	
51	HS	22	34	12	Severe- Extremely Severe	
52	HS	20	16	-04	Moderate-Moderate	
53	HS	22	12	-10	Severe-Mild	
54	HS	10	08	-02	Mild-Normal	
55	HS	24	12	-12	Severe-Mild	
56	HS	24	10	-14	Severe-Mild	
57	HS	30	12	-18	Extremely Severe-Mild	
58	HS	14	16	02	Moderate-Moderate	
59	HS	24	10	-14	Severe-Mild	
60	HS	32	08	-24	Extremely Severe-Normal	