

**ROLE AND EFFECTIVENESS OF MINDFULNESS IN
PSYCHOSOCIAL WELLBEING OF YOUNG MOTHERS**

**A Thesis Submitted
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FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
IN
CLINICAL RESEARCH**

**By
SHWETA PATEL
(17SCRH301014)**

**Supervisor
Prof. (Dr.) Diwakar Chauhan
School of Basic Sciences,
Galgotias University, Greater Noida**

**Co- Supervisor
Prof. (Dr.) Ranjana Patnaik
School of Biomedical Sciences
Galgotias University, Greater Noida**



**SCHOOL OF BIOMEDICAL SCIENCES
GALGOTIAS UNIVERSITY, GREATER NOIDA,
UTTAR PRADESH, INDIA
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CANDIDATE'S DECLARATION

I hereby certify that the work which is being presented in the thesis, entitled “**Role and effectiveness of mindfulness in psychosocial wellbeing of young mothers**” in fulfillment of the requirements for the award of the degree of Doctor of Philosophy in Clinical Research submitted in Galgotias University, Greater Noida is an authentic record of my own work carried out under the supervision of Dr. Diwakar Chauhan and Dr. Ranjana Patnaik. The matter embodied in this thesis has not been submitted by me for the award of any other degree of this or any other University/Institute.

(SHWETA PATEL)

This is to certify that the above statement made by the candidate is correct to the best of our knowledge.

(Dr. Diwakar Chauhan)
Supervisor
Professor and Program Chair Research,
School of Basic Sciences,
Galgotias University,
Greater Noida

(Dr. Ranjana Patnaik)
Co-Supervisor
Professor and Dean,
School of Biomedical Sciences
Galgotias University,
Greater Noida

The Ph.D. Viva-Voice examination of SHWETA PATEL, Research Scholar, has been held on_____.

Sign. of Supervisor(s)
Dr. Diwakar Chauhan

Sign. of Co-Supervisor(s)
Dr. Ranjana Patnaik

Sign. of External Examiner

ABSTRACT

Mindfulness implies being present at the moment without passing judgment. It has two components. The first is the technique, which entails being present; the second is consciously aware of our thoughts, emotions, sensations, and perceptions as they arise. Pregnancy and parenthood are known to pose risks to the mental health of individuals. Young mothers experience a change in their physiological and psychological function as they adapt to their parenting role. Gaining weight, sexuality, hormonal changes, postpartum stress, and other issues, including exhaustion, greatly trouble new mothers. These problems could cause or worsen stress, resulting in actual or imagined psychological anguish and crisis. Mindfulness-based program is a very effective strategy to cope with stress and anxiety and young mothers' physical and emotional well-being. Thereby it improves the psychosocial well-being of young mothers.

The study evaluated the Role and effectiveness of mindfulness in the psychosocial well-being of young mothers. A total of 223 subjects were selected depending on the study's inclusion criteria. The selected participants were enrolled in a 4-week recorded program. Data was collected using structured interview questionnaires and assessment of psychosocial well-being using different scales. The scales used in the study were Edinburgh Postnatal Depression Scale, Mindful Attention Awareness Scale, Social Phobia Scale, Warwick Mental Well-being Scale, Eating Attitude Test, and Edinburgh Postnatal Depression Scale. Interventional study design, the pre and post-test responses were recorded from control and experimental groups.

Statistical analysis revealed a significant difference in levels of psychosocial parameters in pre and post-test scores between the experimental (test) and control groups. This study statistically proved that a mindfulness-based program was a highly effective technique for young mothers in improving their stress, anxiety, depression, overall psychosocial well-being, and dispositional mindfulness.

*Dedicated to my Parents and all the
mothers worldwide*

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LIST OF PUBLICATIONS

1. **Shweta Patel**, Diwakar Chauhan, & Ranjana Patnaik. (2021). Effects of Nutrition and Physical Activity in Prevention of Neurological and Cognitive Disorders- A Review Study. *Indian Journal of Forensic Medicine & Toxicology*, 15(4), 3382–3391.
2. **Shweta Patel**, Manindra Rajak Kamini Khatak Ranjana Patnaik Diwakar Chauhan (2020). Assessment of impact of covid-19 (novel corona virus disease) on adult Indian population: a cross sectional questionnaire based survey. *European Journal of Molecular & Clinical Medicine*, 7(9), 10-23.
3. **Patel, S.**, Chauhan, D., & Patnaik, R. (2022). Promotion of psychosocial wellbeing in new mothers through mindfulness-based cognitive therapy. *International Journal of Health Sciences*, 6(S2), 5040–5055.
4. **Patel, S.**, Chauhan, D., & Patnaik, R. (2023). Mindfulness Based Program in Postpartum Symptoms and Maternal Psychosocial Well-being: A Pathway to Healing – *Anil Aggrawal's Internet Journal of Forensic Medicine and Toxicology* –(Communicated).

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LIST OF TRAINING/WORKSHOP/WEBINAR/SEMINAR ATTENDED

- Internationally Accredited Diploma in Mindfulness -International Association of Therapists, 21st July 2023.
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- Internationally Accredited Diploma in Weight loss - International Association of Therapists, 13th June 2020.
- Certification course on How to conduct evidence based research –Elsevier, 25th April 2020.

LIST OF ABBREVIATIONS

Abbreviated form	Expanded form
BMI	Body Mass Index
CBT	Cognitive Behavioral Therapy
CES-D	Center for Epidemiologic Studies Depression
DASS	Depression Anxiety Stress Scale
EAT	Eating Attitude Test
ED	Eating disorders
EFT	Emotional Freedom Technique
EPDS	Edinburgh Postnatal Depression Scale
FDA	Food and Drug Administration
FGA	First-generation antipsychotic
GABA	Gamma Amino Butyric Acid
GWB	General Well-Being
H_0	Null hypothesis
H_1	Alternate hypothesis
HRQoL	Health-related Quality of Life
IH-CBT	In-Home Cognitive Behavioral Therapy
MAAS	Mindful Attention Awareness Scale
MBCT	Mindfulness-based cognitive therapy
MBSR	Mindfulness-based stress reduction
MCH-SF	Mental Health Continuum Short Form
MDD	Major depressive disorders
MVPA	Moderate to Vigorous Physical Activity
NATs	Negative automatic thoughts
PhD	Doctor of Philosophy
PI	Psychological inflexibility
PS	Parenting stress
PWB	Psychological Wellbeing
SAD	Social Anxiety Disorder

SC	Self-compassion
SES	Socioeconomic status
SNRI	Serotonin norepinephrine reuptake inhibitors
SPS	Social Phobia Scale
SPSS	Statistical Package for Social Sciences
SSRI	Selective serotonin reuptake inhibitors
STAI	State-Trait Anxiety Inventory
T-CBT	Telephone-based cognitive behavioral therapy
UP	Uttar Pradesh
WEMWS	Warwick Edinburgh Mental Wellbeing Scale
WHO	World Health Organization

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CHAPTER 1
INTRODUCTION

1.0 Introduction

Mindfulness is the ability of a human being to be fully attentive in the present moment, be aware of what he/she is doing, and not be judgmental about what is happening around. It is an inborn quality that every human being is gifted with; it is not like any skill that one needs to learn how to access it [1].

Psychological well-being is a term that refers to positive overall well-being, such as satisfaction and feeling of happiness. An individual's psychosocial well-being indicates their mental and social health status. A similar term for psychosocial well-being is 'Quality of life,' which explains an individual's physical, emotional, mental, and social aspects [2]. This term is applied nowadays, referring to many issues, including emotional, mental, physical, social, economic, cultural, and spiritual health. The various facets of general well-being should be included in and shown to be interrelated in models of psychological well-being [3].

Going through pregnancy and becoming a parent can be challenging for one's mental health [4]. A young mother's physical and psychological characteristics may evolve as she takes on her parental duties [5]. Gaining weight, sexuality, hormonal changes and other issues, including exhaustion, are considerably trouble new mothers. These problems could cause stress or make existing stress worse, which could result in actual or imagined psychological anguish and crisis [6].

Maternal social welfare includes psychological and social components, including community and family support, empowerment, and tradition, as well as social factors, including mental well-being, discomfort, stress, and depression [7]. MPW is a spectrum having clinical depression at the highly negative end. The incidence of maternal depression in lower-middle-income countries i.e., depression during pregnancy and one year postpartum was reportedly 18% to 25%. Up to half of all women who experience psychosocial adversity have psychosocial distress, according to self-reported questionnaires measuring depression and anxiety symptoms [5]. Parental issues, unsatisfactory childbirth experiences, continuously deteriorating overall health and low maternal assurance, consumption of cigarettes, tobacco,

alcohol, and illicit drug use have all been reported to be connected with depressive symptoms. A positive sense of well-being is linked to woman empowerment, good interpersonal relationships with partners, social support, recognition, and good physical health [7].

Maternal psychosocial health is crucial not only for the mother's well-being but also for the appropriate development and maintenance of the children's health and their development [7,8]. A study showed an appreciable correlation between mothers that suffer from anxiety and their child expressing similar psychological disruptions. A maternal anxiety disorder's type especially social phobias and generalized anxiety disorders severity were found to influence the aggregation of anxiety between the mother and offspring. Optimal mental health is essential for mothers who take on the responsibility of caring for a newborn and family. It is a monumental task to care for a newborn and a family, which requires immense emotional and physical strength. Although it can be challenging and overwhelming, mothers can find strength and resilience with the right support and self-care. They need to prioritize their mental health to ensure they can provide the best care for their families [5].

Melancholy, anxiety, and insomnia, the determinants of psychological well-being, are currently treated with pharmaceuticals or psychotherapy. However, they have drawbacks regarding cost, time commitment, and effectiveness for some women [6].

Mindfulness-Based Cognitive Therapy can be an effective modality in maintaining the individual's mental health. Mindfulness involves paying attention to what's happening right now, without judgment or bias. One can gain a greater appreciation for the present and its opportunities by being mindful. Different ailments of humanity can be cured or alleviated by the practice of mindfulness [9].

1.1 Cognitive Behavioral Therapy

Therapists help patients improve their behavior by confronting and changing their irrational thoughts and beliefs that are most likely causing the maladaptive behaviors. One such strategy they employ is cognitive behavioral therapy, a psychosocial intervention [10]. The most likely cause of maladaptive behavior is irrational thoughts and beliefs that patients must confront and change [11]. Maladaptive habits, seen as counterproductive or harmful, prevent a person from responding effectively to everyday events. The therapist identifies the maladaptive behaviors, recognizes the belief responsible for such behavior, corrects or modifies any inappropriate or insensitive belief that will result in more excellent surviving skills and adaptive behaviors [11]. The research indicates that cognitive behavioral therapy and antidepressants equally are as effective as interpersonal therapy and psychodynamic therapy in treating depression [12]. CBT is problem-oriented and present-focused. Instead of focusing on the reason for past misery or symptoms, it enhances the patient's current state of mind. CBT deals with goals with mutual consent. These objectives should be explicit, quantifiable, attainable, reasonable, and time-bound [13].

A positive data journal is taught to patients in response to their incorrect core beliefs. This is a daily written record of everything they observe; consistent with the new, adaptive schema that makes them feel that "I am useful to everyone". The patient is asked to support or deny their assumptions about dysfunction by providing evidence. Patients were asked to track their thoughts and distinguish thoughts from reality, then analyze how they affected their moods. It helps reduce symptoms, improve function, and relieve disorders. The patient actively engages in a collaborative problem-solving process in cognitive therapy to assess the reality of misperceptions [14]. CBT is considered a reference psychological treatment. The facts favoring this are:

- Most researched form of psychotherapy is CBT
- None of the other forms of psychotherapy are superior to CBT,

- CBT mechanisms are consistent with the current theories of the human mind and behavior [15].

A study reported the effectiveness of in-home CBT (IHCBT) in reducing depression in first-time mothers. The depression score according to Beck Depression Inventory-II was found to reduce significantly after fifteen sessions of IHCBT and a booster session after one month of therapy [16]. An exploratory qualitative study explained how postpartum mothers felt about cognitive behavioral therapy delivered over the phone (T-CBT). T-CBT may be helpful to modalities that can help mothers manage the demands of the parental transition [17]. An interventional trial involving cognitive-behavioral therapy was conducted during the COVID-19 epidemic to determine whether CBT improved psychological stress among patients [18]. The reported results indicated a noteworthy decline in average depression, anxiety, and stress scores among patients undergoing cognitive behavioral therapy. It was concluded that CBT could help improve the psychological well-being of people. Research found Internet-based CBT to be effective in reducing psychological distress in older adults without cognitive impairment [19]. It was stated that new mothers prefer psychological interventions over medications for the treatment of depression, and also CBT was found to be an effective psychological intervention among new mothers. CBT can be offered in different formats such as individual, group, and internet administered [20].

1.2 Measurement of Psychological Well-Being

The Psychological General Well-Being schedule was created in the late 1960s by a psychologist by the name of Harold Dupuy at the National Center for Health Statistics using a 68-item questionnaire to assess the level of "happiness" or potential psychological suffering of the American population. Mental health was of significant interest in the survey, making it one of the best worldwide assessments of overall well-being [21].

1.2.1 Psychological General Well-being Index (PGWBI)

The US has developed a self-observed evaluation of psychological well-being communicated by a synopsis score comprising 22 Health-Related Quality of Life (HRQoL) items. Many countries have used and validated PGWBI on a large volume of the generic population and target audiences like patient groups [22].

1.2.2 Psychological Wellbeing Assessment Scale

The fundamental principle of Ryff's psychological well-being model stated that mental health did not depend on subjective well-being [23]. Embracing oneself with positivity, constantly improving and growing, living a purposeful life, and being in control of one's own destiny are the elements of positive psychological functioning. The theoretically grounded, multidimensional model was designed to include the above components. Among the 18 questions, six points were awarded on a six-point scale, with one indicating "Completely disagree" and six indicating "Completely agree."

1.2.3 The General Well-Being (GWB) Schedule

It emphasizes on individual's subjective psychological well-being and discomfort or internal condition. It has 23 components. It consists of a comprehensive evaluation of total of fourteen items, utilizing a six-point scale that ranged from "All the time" (one) to "Never" (six). The final four things evaluated on a ten-point scale using appropriate response choices for each of these four items. The items, when totaled, generate a range from zero to hundred and ten with higher scores which is indicative of the increased level of well-being [24].

1.2.4 Life Satisfaction Index A

It assesses the psychological health of seniors on factors like self-concept on the physical, psychological, and social levels, fortitude, goal congruence, and enthusiasm for life. It has a total of 20 things. The answers range from 0 for "Disagree" to 1 for "Agree." A number between 0 and 20 is produced by adding the items, with more significant scores indicating higher levels of satisfaction [25].

1.2.5 Multidimensional Personality Questionnaire

The Multidimensional Personality Questionnaire (MPQ) is a robust and well-established instrument used by psychologists and researchers to assess various dimensions of an individual's personality. Developed by Tellegen and his colleagues, the MPQ encompasses three major personality factors: Positive Emotionality, Negative Emotionality, and Constraint. These factors are further divided into smaller subfactors that provide a comprehensive understanding of an individual's personality traits. What sets the MPQ apart from other personality inventories is its emphasis on multiple dimensions instead of a single overall score. This multidimensionality allows for a more nuanced assessment, capturing both positive and negative aspects of personalities, which enhances its validity in predicting behavior and psychological outcomes. With its extensive research base spanning several decades, the MPQ has proven to be reliable and valid across different cultures and populations. Its utility extends beyond clinical settings, often employed in academic research exploring links between personality traits and psychopathology or in studying individual differences within diverse samples. Overall, the Multidimensional Personality Questionnaire stands as an indispensable tool for professionals seeking a comprehensive evaluation of an individual's unique set of personality characteristics. Furthermore, the MPQ has been instrumental in identifying personality traits that are associated with various mental health disorders. By using this questionnaire, researchers and clinicians can gain valuable insights into the underlying factors contributing to psychopathology. Additionally, the versatility of the MPQ allows for its application in a wide range of settings, including educational institutions and workplace environments, where

understanding individual differences in personality can be crucial for effective teamwork and personal development [26].

1.2.6 Measuring What Matters: The Quality of Life Scale

QoL is an invaluable tool utilized to assess individuals' overall well-being and satisfaction across multiple facets of their lives. This scale has been meticulously crafted by experts and scholars in the realm of psychology, with the goal of offering a thorough evaluation of an individual's physical, psychological, and social capabilities. By examining factors such as physical health, emotional well-being, social relationships, and environmental conditions, the QoL scale offers a multi-dimensional approach to measuring quality of life. The utilization of the 4-point Likert scale offers respondents a limited selection of response options, spanning from strongly disagree to strongly agree. This allows professionals to gather precise data regarding an individual's perceived quality of life. By utilizing this scale, professionals can gather valuable information about an individual's satisfaction and happiness levels across multiple dimensions holistically [27].

1.2.7 Eating Attitude Test (EAT)

Eating disorders (ED) have been significantly associated with major depressive disorders (MDD). According to the American Psychiatric Association, the incidence of major depressive disorders in people with Eating disorders ranges from 50% to 75% [28]. The EAT is a screening tool that helps identify whether a person has an eating issue that requires medical intervention. This screening tool is not intended to diagnose an eating disorder or serve as a substitute for expert advice. It consists of 3 parts. Part A: asks for personal details, including height and weight, Part B: consists of questions related to eating habits, and Part C consists of behavioral questions [29].

1.2.8 Edinburgh Post-natal Depression Scale

It was developed to identify a woman who may have postpartum depression. It consists of 10 items. Each item is scored from 0-3, so the maximum total score can be 30. A score of more than 10 suggests the presence of minor or major depression may be present and recommends the need for further evaluation [30].

1.2.9 Mindfulness Attention Awareness Scale

It gauges the propensity to be attentive and conscious of the current moment in everyday life for those who have no prior experience with mindfulness. The evaluation encompasses a set of fifteen items, each rated on a scale from one (1) to six (6), which corresponds to the respondents' provided responses. Then mean of the fifteen items is calculated. Higher scores indicate a higher level of dispositional mindfulness [31].

1.2.10 Social Phobia Scale

It assesses the psychological health of seniors on factors like self-concept on the physical, psychological, and social levels, fortitude, goal congruence, and enthusiasm for life. It has 20 things in total. The answers range from 0 for "Disagree" to 1 for "Agree." A number between 0 and 20 is produced by adding the items, with more significant scores indicating higher levels of satisfaction [32].

1.2.11 Warwick Edinburgh Mental Well-being Scale-WEMWBS

The Scale is self-reporting questionnaire that is widely used to measure psychological well-being in individuals. This scale encompasses 14 positively-worded statements that cover various aspects of psychological functioning and emotional state. It assesses an individual's overall mental well-being based on their feelings of optimism, vitality, ability to relax, self-esteem, and relationships with others. With its high reliability and

validity, the WEMWBS has been recognized as a valuable tool in both research settings and clinical practice. Its user-friendly format allows for easy administration and interpretation of results. By examining different dimensions of mental well-being rather than merely focusing on symptoms or deficits, the WEMWBS provides a comprehensive assessment that can be used to inform interventions aiming to promote positive mental health outcomes among diverse populations [33].

1.3 Achievement of Psychological Well-Being

Maintaining optimal mental health is of prime importance for mothers undertaking significant responsibilities, such as caring for their infant and family [5]. Study have shown a strong relationship between psychological well-being and active aging [34]. Extensive research studies have unequivocally demonstrated the impact of negative psychological factors, personality traits, and mental health disorders on cardiovascular well-being [35]. Pharmacotherapy and non-pharmacotherapy are both effective in treating the stress, anxiety, depression, and other detrimental psychological health issues [36].

1.3.1 Pharmacotherapy

Pharmacotherapy includes Food and Drug Administration-approved drugs such as:

1.3.1.1 Serotonergic/Norepinephrineric Antidepressants –

Serotonergic/norepinephrineric antidepressants, also known as SNRIs, are a class of medications commonly used to treat major depressive disorder and other psychiatric conditions. They work by inhibiting the reuptake of both serotonin and norepinephrine in the brain, leading to increased levels of these neurotransmitters. By enhancing the availability of serotonin and norepinephrine, SNRIs help regulate mood, improve sleep patterns, reduce anxiety symptoms, and alleviate depressive symptoms. Some well-known SNRIs include venlafaxine, duloxetine, and desvenlafaxine. These medications have proven efficacy in treating depression and are usually considered as

second-line options for patients who have not responded adequately to selective serotonin reuptake inhibitors (SSRIs).

1.3.1.2 Tricyclic Antidepressants - Tricyclic antidepressants (TCAs) are a class of medications commonly prescribed to treat major depressive disorder, chronic pain, and certain anxiety disorders. They work by increasing the levels of neurotransmitters like serotonin and norepinephrine in the brain, thereby improving mood and reducing symptoms associated with depression. TCAs have been widely used for decades and were initially developed as an alternative to older antidepressant drugs. Although they are effective in managing various psychiatric conditions, TCAs also come with a range of potential side effects that need careful monitoring. Furthermore, due to their anticholinergic properties, they carry a higher risk for overdose compared to other classes of antidepressants.

1.3.1.3 GABA-Gamma Amino Butyric Acid - GABA, also known as gamma-aminobutyric acid, is a crucial neurotransmitter in the central nervous system. While traditionally associated with inhibitory functions, recent research has shed light on its potential role in the treatment of depression. GABAergic antidepressants target the GABA receptors to enhance GABA signaling and modulate neuronal activity. By increasing GABA levels or enhancing its effects, these medications aim to bring about a calming and stabilizing effect on individuals suffering from depression. Although extensive research is still needed to fully understand their efficacy and safety profile, early studies have shown promising results in terms of symptom reduction and improved overall mental well-being. However, it's important to note that prescribing GABAergic antidepressants necessitates caution due to potential side effects such as sedation and cognitive impairment.

1.3.1.4 Antihistamines - The only FDA-approved antihistamine for anxiety is Hydroxyzine. Children, adults and pregnant women can safely use them. However in patients with neurocognitive problems or elderly adults, there is a danger of anticholinergic toxicity or delirium.

1.3.1.5 Anti-psychotics - Trifluoperazine, a first-generation antipsychotic, is the sole antipsychotic drug that the FDA has approved (FGA). However, there are both immediate and long-term hazards connected with antipsychotics for anxiety disorders, which is why there is a great deal of worry surrounding their use.

1.3.1.6 Novel treatment - These neurotransmitters, such as oxytocin, work through the pathways, including glutamate and neuropeptides.

1.3.1.7 Cannabinoids - Cannabinoids are a set of compounds that naturally occur in the Cannabis plant and have therapeutic properties. These compounds interact with the body's endocannabinoid system to manage certain bodily processes, such as pain, sleep, stress, and immune response. Cannabinoids are believed to be safe drugs that help reduce anxiety and promote relaxation.

Nevertheless, it was discovered that only 60–85% of people with anxiety disorders benefit from modern biological and psychological therapies. Only 50% of the respondents had recovered.

1.3.2 Physical Exercise

Physical exercise is now more widely acknowledged as a successful strategy to enhance mental health outcomes [37]. It has been established that body exercise has antidepressant properties [38]. Exercise has a good impact by increasing the regulation of appetite hormones, raising metabolic rate, and lengthening and improving sleep quality [37]. Exercise also affects the HPA axis and other homeostatic systems in the body's reaction to stress. It slows immune system aging while reducing inflammatory activities [39]. According to the WHO, those who engage in at least 2.5-3.5 hours of moderate-intensity workouts or 1.5-2.5 hours of vigorous-intensity workouts per week have a better chance of lowering symptoms of depression and anxiety [40].

1.3.3 Diet

Behavior, mood, and the pathology and treatment of mental disease have all been linked to nutrition [41]. Exploring how food affects our mental state is an area that has become a significant focus of research lately. The distinct possibility of a reverse causal relationship between nutrition and mental health has been observed, suggesting that mental health can influence dietary choices and vice versa. It highlights the importance of considering nutrition and mental health when developing strategies to improve overall well-being. It can be seen in the eating of comfort foods during depressive states or changes in appetite brought on by stress (Fig 1.1) [42].

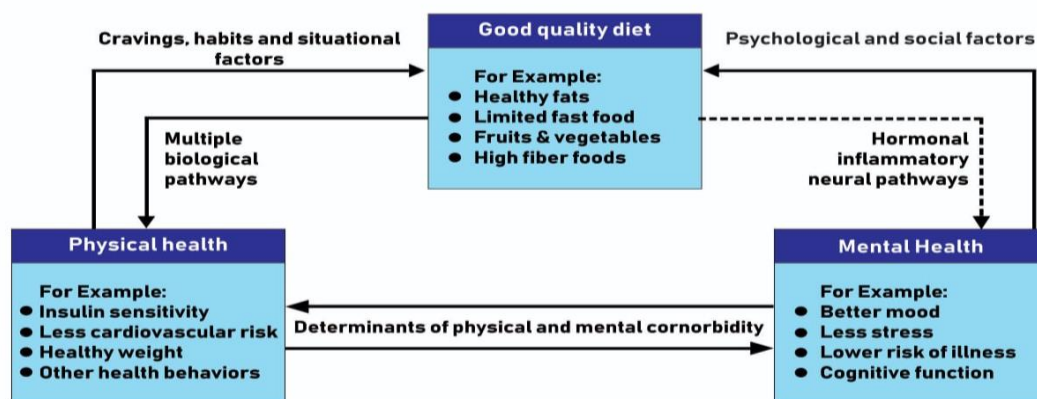


Fig 1.1 Hypothesized connection between diet, physical, and mental health

High glycemic index foods have a detrimental effect on psychological well-being [43]. A high-calorie diet can stimulate immune activation, which has been linked to heightened inflammation. The modern diet, known for its excessive consumption of processed foods, saturated fats, and sugar, along with insufficient intake of fruits and vegetables, has been linked to a multitude of detrimental health effects. Extensive research consistently demonstrates that adhering to a modern dietary pattern significantly heightens the risk of developing chronic diseases, including obesity, diabetes, cardiovascular ailments, and specific types of cancers [44]. A unhealthy diet, characterized by high consumption of refined sugars, saturated fats, and processed foods, has been related with an increased risk of depressive symptoms. Science has proven that a well-balanced diet rich in nutrients, such as fruits,

vegetables, whole grains, lean proteins, and omega-3 fatty acids, can help prevent depression. The mechanisms behind this connection lie in the impact that certain nutrients have on brain function and neurotransmitter production. Fish oil is recognized for its omega-3 fatty acids that have anti-inflammatory properties, helps in relieving symptoms linked to depression [45]. The nutritional impact on the brain is due to numerous complex mechanisms and compounds. Most of the research has concentrated on adult hippocampal neurogenesis. Learning, memory, and mood are parts of the brain that are associated with the hippocampus. It is also one of two structures in the adult brain where neurogenesis stays. The level of hippocampal neurogenesis is directly related to intellect and mood. Therefore, modulating hippocampal neurogenesis by diet has emerged as a probable mechanism by which nutrition may influence brain plasticity, function, and mental health [46].

1.3.4 Psychotherapy (Non-Pharmacological Management)

Psychotherapy is an evidence-based, psychological intervention, encompasses a wide range of therapeutic approaches aimed at helping individuals navigate their emotional and psychological challenges. Psychotherapy provides a safe and confidential space for individuals to explore their thoughts, feelings, and behaviors while working toward personal growth and improving their overall well-being. Integrating various theories and techniques, including cognitive-behavioral therapy (CBT), psychoanalysis, humanistic therapy, or dialectical behavior therapy (DBT), clinicians tailor psychotherapy sessions to address the unique needs of each individual. Additionally, psychotherapy can target specific concerns such as depression, anxiety disorders, addiction issues, relationship problems, or trauma-related symptoms. Psychotherapy can include individual counseling, group counseling, or family therapy.

1.3.4.1 Cognitive Behavioral Therapy - CBT is a widely recognized psychotherapeutic approach to treating various mental health conditions. It operates on the premise that our thoughts, feelings, and behaviors are interconnected, and that by addressing negative or irrational thought patterns, we can positively influence our emotional and behavioral responses. [47]. CBT is usually focused on psycho

education, exercise prescription, and psychosocial support. Psycho-education includes information about the psychophysiology of adverse psychological health [48]. In CBT, the therapist helps patients face and change the unreasonable thoughts and beliefs that are likely to be the cause of their dysfunctional actions [49]. CBT operates under the assumption that one's perception of events and situations influences their emotional and behavioral responses. This therapy aims to help individuals identify and challenge negative or distorted thinking patterns that contribute to emotional distress or problematic behaviors. [50]. Dysfunctional behaviors are ineffective or undesirable because they impede a person from responding effectively to typical situations [49]. The therapist identifies the maladaptive behaviors, recognizes the belief responsible for such behavior, and corrects or modifies any inappropriate belief that will result in more excellent coping skills and adaptive behaviors (Fig 1.2). CBT therapists place a high value on their cognitive world to assist a client in exploring and altering problematic beliefs. As Hoffman explains, empathy is a sense of understanding or feeling what another person thinks or feels in his or her situation, triggered by another's emotions. The therapist can ascertain relevant thoughts and build rapport by understanding how scary the situation is and how real it feels. Establishing efficient behavioral trials to test disastrous concerns requires understanding the personal meaning of symptoms [51]. CBT was pioneered by Beck and Ellis. CBT addresses these interconnected components at three-3 levels of cognition-automatic thoughts, intermediate beliefs, and core beliefs. The automatic thoughts refer to spontaneous and often subconscious cognitions that occur in response to situations. They are characterized by their immediacy, intensity, and lack of rationality. Intermediate beliefs reflect the underlying assumptions or rules that individuals hold about themselves, others, and the world. These beliefs can be conditional (e.g., "If I fail, then it means I am worthless") or unconditional (e.g., "I am unlovable"). Core beliefs are deep-seated fundamental views about oneself or the world developed early in life; they shape one's sense of identity and influence all other levels of cognition. By addressing each level through CBT techniques such as cognitive restructuring and cognitive challenging, individuals can identify negative patterns of thinking, replace them with more realistic thoughts, and ultimately improve their emotional well-being and functioning.

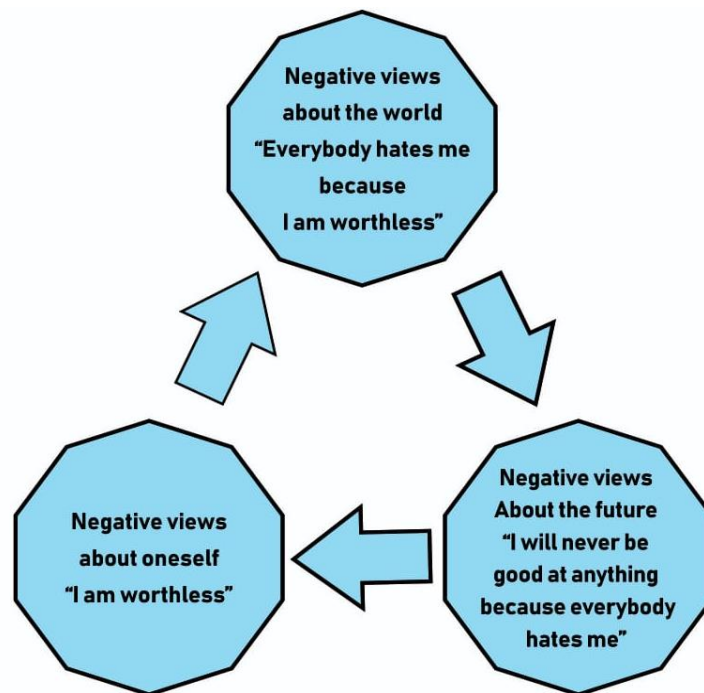


Fig 1.2 The cognitive triad comprises negative core beliefs

By setting specific goals, CBT helps individuals identify and address the specific issues that are causing distress in their lives. These goals are measurable, allowing both the therapist and patient to track progress over time. This measurement aspect of CBT ensures that the therapy remains focused and effective.

Moreover, CBT emphasizes achievable goals, meaning that they are realistic and within reach for the individual. These approaches help prevent feelings of overwhelm or failure, as patients can see tangible progress towards their objectives. By breaking down larger goals into smaller, manageable steps, CBT encourages patients to take action and make positive changes in their lives.

Cognitive Behavioral Therapy has emerged as one of the most effective treatments for depression. Additionally, CBT is a long-lasting treatment, with many patients experiencing sustained relief from their depression symptoms even after the therapy has ended. Cognitive Behavioral Therapy has been proven more effective than other active treatments, such as psychodynamic therapy, problem-solving therapy, and

interpersonal psychotherapy. The approach is centered on empowering patients to actively question their automatic negative thoughts, thereby enabling them to replace these distortions with more realistic and positive alternatives. By embarking on this transformative journey, patients gain the necessary tools to cultivate a healthier and more balanced mindset, ultimately leading to improved well-being and a brighter outlook on life. It has been demonstrated that immediate post-treatment CBT has a medium to significant magnitude effect compared to control or waiting treatments, with significant improvement at follow-up. It has been proved that anger problems are reduced at a moderately effective rate with CBT [14]. The first line of treatment for insomnia is recommended as CBT. The traditional method of CBT, which used to be performed one-on-one, has various drawbacks, including a scarcity of counselors, timing, geographic constraints, and increased treatment cost [19].

1.3.4.2 Modifications of CBT -Some of the modified techniques of cognitive behavioral therapy are as follows:

- **Motivational Interviewing Based CBT:** It is standardized and reproducible. It is based on motivational counseling. It is a client centered, directed counseling strategy for inducing behavioral changes by assisting clients in exploring and resolving conflict [52,53].
- **Telephone Based CBT:** Evidence-based psychotherapeutic interventions like TCBT can help reduce depression and anxiety symptoms in a wide range of individuals. This approach consists of a series of hour-long sessions conducted over the telephone that are designed to help identify, recognize, and address underlying issues and intrusive thoughts while utilizing various CBT techniques. According to research findings, telephone-based cognitive behavioral therapy has been successful in alleviating symptoms of depression in patients suffering from Parkinsons disease [47].
- **Internet Based CBT:** iCBT is a method of delivering cognitive behavioral therapy through online platforms. It has garnered increasing attention and support due to its accessibility, convenience, and cost-effectiveness. iCBT involves using online tools and digital technology such as websites, chat rooms, e-mail, and instant messaging to deliver cognitive therapy and other evidence-based treatments. With the advent of the Internet and its popularity and widespread coverage, CBT has shifted from the old-fashioned

face-to-face approach to internet-based delivery. Insomniac patients can connect with the therapist to get treated at any time and place with the help of Internet-based CBT. Additionally, it helps in reviewing announcements and in maintaining the schedule. It decreases the therapist's time investment while increasing treatment effectiveness [19].

- **In-Home CBT:** IH-CBT is a modified treatment administered at the patient's home. It was created by keeping the needs of new mothers in mind and the benefits of regular home visits to maximize participation and results. Home visits have been discovered to be an effective preventative technique for small children and their mothers. Home visitation is especially beneficial for mothers in need, socially isolated, and underemployed [54].

1.4 Role of Coping Mechanism

Basically, there are two types of coping strategies based on Lazarus and Folkman's definition: problem-focused and emotion-focused. Problem focused coping strategy entails addressing the root cause of the stressor by taking direct action to solve the problem at hand. This approach involves planning, seeking information or assistance, and implementing problem-solving techniques to alleviate the stressor's impact. On the other hand, emotion-focused coping centers on managing emotional distress caused by a stressful situation. Individuals adopting this strategy focus on regulating their emotions through practices like relaxation techniques, expressing feelings through therapy or outlets such as creative arts, or engaging in activities that serves as distractions from stressors. By distinguishing between these two classifications of coping strategies, professionals are better equipped to guide individuals towards effective methods based on their unique circumstances and needs, ultimately promoting adaptive responses to challenging situations. According to previous studies, mothers have developed and adjusted their coping strategies over time to effectively handle the challenges associated with caring for an adult child with disabilities. These adaptations have had a substantial influence on their overall well-being. As they navigate the complexities of providing care for a loved one with special needs, mothers must find ways to cope with the situation's emotional, physical, and financial demands. It can be discouraging, but with the right strategies, mothers can find the

strength and resilience to face the challenges head-on and maintain their well-being. By developing effective coping mechanisms, mothers can enhance their ability to manage the stress and anxiety that often accompany the responsibility of caring for an adult disabled child. This, in turn, enables them to devote their full attention to providing optimal care for their loved ones. The study findings indicate that the utilization of problem-focused coping among parents of adults with mental illness had no impact on their levels of distress. However, it did contribute to an enhanced relationship with their adult child [55].

1.5 Meditation

Meditation has been practiced for thousands of years as a spiritual practice. In recent years, meditation has been discovered to be used to manage general health, alleviate the associated stress and conditions, and relieve stress. Meditation programs have been proven to reduce the adverse psychological effects of stress effectively. The practice of mindfulness can help people gain a better understanding of their emotions and reactions to stressful situations. Through regular meditation, individuals can learn to manage their stress levels and lead healthier, more balanced lives. It does not have any side effect or ill effect on the psychological well-being of the individuals [56].

1.6 Significance of Mindfulness In Enhancing Psychological Well-Being

Practices as well as interventions, including mindfulness, have grown in popularity over the past several years for various mental and physical ailments. Mindfulness is a mode of meditative practice [57]. It has positive effects on mental health. It produces alterations in cognition and thus helps reduce stress and negative emotions [58].

The concept of mindfulness was first derived from ancient Buddhist traditions; mindfulness involves deliberately paying attention to present moment without being judgmental about things happening around. Mindfulness can help individuals cultivate self-awareness and regulate their emotions effectively. Through the practice of

mindfulness, individuals can gain insight into their thoughts and feelings and develop the skills to manage stress and difficult emotions better [57]. The ability to pay attention to the current moment and one's surroundings with openness and curiosity exemplifies self-regulation of attention and orientation, which are the two components of mindfulness [53]. Mind wandering is ever-present as we go through daily activities mindlessly as running in autopilot mode. Focusing on internal experiences fills the mind with self-deprecating, self-reflective or other worrying ideas and emotions. It has been proved that mindless states are maladaptive. A momentary ecological assessment found that nearly 45% of the subjects spent their waking hours in daydreaming. This finding provides insight into the prevalence of daydreaming and its potential implications. Wandering thoughts are linked to eventual unhappiness. The ability to retain present-moment focus may lead to greater psychological well-being. MBIs alter psychopathology-related traits such as emotional dysregulation, interpersonal effectiveness, and cognitive bias.

Mindfulness techniques are congruent with the fundamental principles of CBT as they emphasize essential processes such as better emotional awareness, cognitive adaptability, and goal-oriented behavior. By utilizing these techniques, individuals can gain a greater understanding of their emotions, thoughts, and behaviors, allowing them to make more informed decisions and lead a more fulfilling life [53]. Research found that Mindfulness meditation programs had little evidence for improving anxiety and psychological health but promising evidence for reducing anxiety, depression, and pain. Different aspects of negative affect include stress/distress, depression, anxiety, and depressed mood. It was found that mindfulness had a small but constant influence on the improvement compared to a non-specific active control after examining the total effect on each component [56].

1.7 MBSR -Mindfulness-Based Stress Reduction

This program is well-established and aims to reduce stress and anxiety effectively by cultivating mindfulness. It combines meditation techniques, body awareness exercises, and simple yoga postures to cultivate mindfulness and reduce stress. Developed by Jon Kabat-Zinn in the late 1970s, this program has gained significant recognition in both clinical and

non-clinical settings. Participants focus on present moment experience without judgment or reactivity. This approach helps individuals develop greater self-regulation, stress resilience, and enhanced overall well-being through an increased ability to recognize unhealthy patterns of behavior while creating healthier habits and relationships with themselves. Through research studies, MBSR has been found to be effective in addressing a range of therapeutic outcomes including decreased levels of stress, improved overall mental health functioning, improved immune system functioning, reduced pain syndromes, enhanced physical coordination/flexibility, and improved quality of life. The evidence about the MBSR program is plentiful. Numerous studies have shown the program's effectiveness in reducing stress, anxiety, depression, and physical ailments such as chronic pain. In addition, participants have reported improved sleep quality, better concentration, and greater feelings of peace and well-being. The program teaches participants to cultivate moment-to-moment awareness of themselves and their environment, allowing them to seize control of their thoughts and emotions to live healthier, more mindful lives.

MBSR can help people in numerous ways; more and more people are being drawn to the program. However, before one can begin the process of MBSR, it is essential to remember that it takes commitment and dedication. With patience, effort, and dedication, the benefits of MBSR are invaluable. The eight-week course provides an introduction to the practice of mindfulness and offers opportunities for personal growth.

Mindfulness-Based Interventions (MBIs) have demonstrated remarkable efficacy in alleviating symptoms of anxiety. Extensive research has revealed that Mindfulness-Based Stress Reduction (MBSR), in particular, outperforms other active stress-management education programs when applied to individuals with Generalized Anxiety Disorder (GAD) [59].

1.8 Mindfulness -Based Cognitive Therapy

It is a therapeutic approach that combines cognitive therapy and mindfulness meditation practices. It aims to help individuals who are prone to recurrent episodes of depression or have a history of chronic unhappiness by preventing relapse and

reducing symptoms. MBCT is designed to help individuals observe their feelings, thoughts, and sensations without being judgmental. By integrating mindfulness practices into cognitive therapy techniques, MBCT helps individuals recognize negative thinking patterns and develop more adaptive responses to distressing situations.

The strategy involves training clients to engage in formal meditation practices, such as body scans and sitting meditations, along with informal mindfulness exercises practiced throughout the day. This combined approach fosters self-compassion, encourages non-judgmental observation of internal experiences, and promotes detachment from self-defeating thought patterns. During practice, therapists focus on teaching individuals how to identify and accept difficult emotions, recognize and prevent negative thinking patterns, and practice self-care. Therapists may employ various techniques while leading MBCT sessions, such as identifying and tracking triggers, teaching self-guided mindfulness exercises, setting realistic goals and expectations, and helping individuals develop coping strategies. These skills help individuals to respond skillfully to stressful and uncomfortable emotions.

MBCT has been demonstrated to decrease depression in individuals with recurrent depression and to reduce anxiety levels. Furthermore, research suggests that MBCT can increase emotional regulation, reduce rumination and counterproductive behaviors, and improve one's overall well-being. MBCT provides an effective and safe treatment for individuals struggling with mental health conditions through improved emotional awareness, increased self-compassion, and improved stress management [59].

Characteristics of the practice of MBCT are as follows [57]:

- Sitting meditation
- Group therapy format
- Body scan
- Hatha yoga
- Cognitive therapy
- 8 session intervention

1.8.1 Highlights of MBCT

MBCT has been turning heads in the mental health field for its demonstrated impact on patient well-being, symptom reduction, and general improvement of quality of life. One of the highlights of MBCT is its effectiveness in preventing relapse of depression for individuals who have suffered from recurrent bouts of depressive episodes. MBCT sessions typically consist of a few key components. During the first part of the session, the therapist will help the patient identify and label any stressful thoughts, worries, or moods. Patients are helped in becoming more aware of their feelings and thoughts through this process. Once this awareness has been achieved, the therapist will teach the patient various mindfulness exercises. These exercises serve the purpose of helping the patient break away from ruminating and develop a more balanced awareness of their present experiences.

One of the most fundamental mindfulness exercises taught within MBCT is an exercise known as “twinned attention.” Patients are encouraged to divide their attention between two distinct sensory experiences in this exercise. For instance, the patient may be asked to focus on the sounds of their environment and breathe. As the exercise grows in difficulty, the patient may be asked to attend to more than two experiences. This helps the patient to learn how to attend to their environment without getting caught up in their thoughts and feelings. Another essential component of MBCT is a self-compassion exercise. It is an exercise in which the patient is taught to recognize that they may be feeling overwhelmed or distressed, to have compassion and understanding towards themselves rather than judgment, and to observe any thoughts and emotions they are experiencing without getting caught up in them. These exercises help to teach the patient to observe their emotions and become less reactive to them. Finally, MBCT teaches patients to observe their thoughts and moods more dispassionately and acceptingly. This is known as cognitive diffusion; it teaches the patient to approach their thoughts, worries, and emotions more objectively. It encourages them to observe these phenomena without judgment, which can help to reduce the intensity of their emotions and make it easier for them to let go of negative thoughts. Mindfulness-Based Cognitive Therapy has become widely recognized as an invaluable tool to those encountering mental health issues, primarily anxiety and

depression. The use of mindfulness techniques, cognitive strategies, and self-compassion exercises can help reduce stress and improve overall well-being and quality of life.

1.8.2 Limitations of MBCT

One of the significant limitations associated with MBCT is that it can be challenging to maintain consistency when participating in the program. Mindfulness and cognitive therapy exercises require regular effort to achieve lasting benefits. It often involves attending group sessions and completing daily meditation, which requires considerable dedication and commitment that not all people have. For some, the challenges to consistency can be so significant that they drop out before finishing the program. It can be difficult for individuals to stay motivated during MBCT because it is a long-term process. It is often exacerbated by the simple and monotonous nature of the exercises, which can be challenging for some. Without a consistent understanding and belief in the value of the practice, engaging in mindfulness and cognitive therapy can become a source of frustration and fatigue. Another limitation of MBCT is that it works best for individuals who are stable or able to manage their symptoms without medication. It may be that the risk of further exacerbating a person's symptoms outweighs the potential benefits of mindfulness and cognitive therapy, particularly when they are already taking medication to manage the condition.

In the end, the potential of MBCT is ultimately restricted by how effectively individuals can perceive their own thought patterns and behaviors. Practicing mindfulness and cognitive therapy exercises can enhance self-awareness, but only some have the maturity and insight to achieve this. As a result, some people may struggle to take advantage of MBCT's potential benefits, despite enrolling in the program.

In summary, while MBCT is a valuable psychotherapeutic technique that has been found to provide benefits for various mental health issues, it is essential to recognize its limitations. These include difficulty maintaining consistency, the risk of exhaustion or lack of motivation, the unequal 'fit' for those using the medication, and the ability

to recognize and address thought patterns. Understanding these limitations can help ensure that those seeking relief from MBCT have realistic expectations and access to the best care.

Table 1.1 Comparison of Therapeutic Approaches: Mindfulness-Based Cognitive Therapy (MBCT) and Cognitive Behavioral Therapy (CBT)

MBCT	CBT
<ul style="list-style-type: none"> • MBCT combines elements of both cognitive therapy and mindfulness practices, aiming to help individuals develop a non-judgmental awareness of their thoughts, feelings, and bodily sensations. It specifically targets the prevention of relapse in individuals with recurrent depression 	<ul style="list-style-type: none"> • CBT focuses on identifying and restructuring negative thought patterns and behaviors to alleviate various mental health issues, such as anxiety disorders or phobias.
<ul style="list-style-type: none"> • Encourages a novel approach of “being” in pain and challenging circumstances 	<ul style="list-style-type: none"> • Embraces a unique perspective on how to handle pain and challenging situations
<ul style="list-style-type: none"> • Emphasizes acceptance and observing one's experience without judgment 	<ul style="list-style-type: none"> • CBT employs a more problem-solving-oriented approach to change dysfunctional thinking patterns.
<ul style="list-style-type: none"> • Practicing nonjudgmental awareness of thoughts and emotions, without trying to fix, alter, or evade them 	<ul style="list-style-type: none"> • Evaluating and confronting dysfunctional beliefs while forming innovative meanings
<ul style="list-style-type: none"> • Behavioral intrusions concentrated on developing present moment awareness 	<ul style="list-style-type: none"> • Behavioral intrusions were mainly aimed at enhancing and encouraging more adaptable reactions.

MBCT fosters a deep understanding of the present moment, empowering individuals to wholeheartedly accept their experiences, including those infused with sadness, free from any form of criticism. It may break the pattern of dwelling on one's regrets from

the past or worries about the future, and it may increase compassion for oneself. The Amygdala moderates this bias by identifying threats. As metacognitive awareness increases by consciously categorizing thoughts and feelings as mental events, stressful cognitions become less threatening and, thus, less taxing. As participants engaged in a task similar to mindful mental notes, functional brain imaging has unveiled a notable decline in amygdala activation, accompanied by a corresponding increase in prefrontal cortex activity in participants in mindfulness training for social anxiety disorder. This intriguing finding sheds light on the intricate workings of the human brain, highlighting a shift in neural activity that may have significant implications. Additionally, mindfulness training may strengthen working memory, which will help with attention control and affect regulation [60].

Mindfulness-based cognitive therapy has a solid evidence base documenting its effectiveness. According to recent research, MBCT may be helpful for people who experience recurring depression, anxiety, or other psychological disorders. The patient benefits of MBCT seem to be promising, and it looks to be relatively acceptable. MBCT could be a workable substitute for continued pharmacotherapy for patients unwilling to take their medications. MBCT provided better protection against relapse as compared to antidepressant pharmacotherapy in patients with unipolar depression relapse [61]. It significantly decreased the period before a recurrence in individuals with recurrent depression who were in remission [62]. It treats generalized anxiety disorder in patients aged 21-65 [63].

1.9 Statement of Problem

To assess the role and efficiency of Mindfulness-Based Program in Psychological well-being of young mothers

1.10 Assumptions

In Mindfulness-Based Program under the study, it is assumed that;

- Information provided by the young mothers through survey forms and questionnaires would represent their psychosocial well-being.
- Level of stress, psychosocial well-being, and mindfulness varies from individual to individual.
- The participants could reduce their stress and improve psychosocial well-being and mindfulness after attending the mindfulness training program.

1.11 Research Hypothesis

Null hypothesis (H0) - There is no significant difference in the psychological well-being of young mothers after implementing mindfulness based program.

Alternative hypothesis (H1) - There is a significant difference in the psychological well-being of young mothers after implementing mindfulness based program.

I1: There is a significant difference between pre-test and post-test EPDS score, Social Anxiety score, Mental Well-being score, EAT 26 score, and Behavioral score among young mothers in the test group.

I2: There is a significant difference between post-test EPDS score, Social Anxiety score, Mental Well-being score, EAT 26 score, and Behavioral score among young mothers in the test and control group.

I3: There is a significant correlation between the pre-test scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the test group.

I4: There is a significant correlation between the post-test scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and

Behavioral scale among young mothers in the test group.

I5: There is a significant correlation between the pre-test scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the control group.

I6: There is a significant correlation between the post-test scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the control group.

I7: There is a significant correlation between the scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and Behavioral scale among young mothers in control group.

I8: There is a significant correlation between the scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the test group.

I9: There is a significant correlation between scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental well-being scale, EAT 26 scale, and Behavioral scale among young mothers in both groups.

CHAPTER 2
REVIEW OF LITERATURE

2.0 Study Review

Psychosocial well-being refers to the positive state of an individual's mental, emotional, and social aspects of life. It is a holistic term that describes the impact of relationships and other aspects of life which can influence a person's psychological and social functioning. This concept emphasizes the importance of having a positive and healthy balance between one's mental and emotional state on the one hand and the social environment and relationships on the other.

Mental health has long been associated with emotional health. However, psychosocial well-being also includes one's emotional well-being, primarily determined by dealing with life's emotional ups and downs and resolving conflicts with others. It also includes a person's overall quality of life and outlook on life. A person's psychosocial well-being can be increased through relationships and experiences that promote emotional and mental health, such as satisfying relationships, fulfilling work, hobbies, and intellectual pursuits. Social well-being is connected to the quality of one's relationships, particularly within their social networks, such as family, work, and other groups. People, who have strong and supportive relationships, actively participate in their community, have a sense of security, and have access to resources and opportunities to get ahead are said to have good psychosocial well-being. On the other hand, people who experience social inequities or loneliness are said to have poor psychosocial well-being. Psychosocial well-being is important because it affects physical and emotional health and quality of life. It can be measured in terms of happiness, satisfaction, and feelings of empowerment. People with good psychosocial well-being have a better chance of leading a more fulfilling and meaningful life. They are more likely to have lasting relationships, better career prospects, and are more likely to overcome mental health issues and chronic stress. Good psychosocial well-being includes emotional stability and resilience, positive relationships, meaningful involvement in activities, and the ability to access necessary resources. Factors that impede psychosocial well-being include poverty, poor housing and educational opportunities, health inequities, racism, and discrimination.

2.1 Psychological Well-Being

Psychological well-being is strongly influenced by the amount of control an individual feels over his/her life [64]. The health of an individual is determined by their moods and emotions [65]. Well-being has been defined as “a state of happiness and contentment, with low levels of distress, overall good physical and mental health and outlook, or good quality of life” [66].

A robust psychological function can be characterized by various concepts put forth by influential psychologists. Maslow's concept of self-actualization, Jung's concept of individuation, Rogers' concept of a fully functioning individual, and Allport's concept of maturity all contribute to our understanding of what constitutes a healthy psychological state. Psychological well-being has been elucidated through various theoretical frameworks, including Erikson's psychosocial stage model, Buhler's description of basic life tendencies, and Neugarten's exploration of personality changes in adulthood as well as old age. These influential theories shed light on the intricate nature of human well-being, offering valuable insights into the psychological development and transformation that occur throughout the lifespan [67].

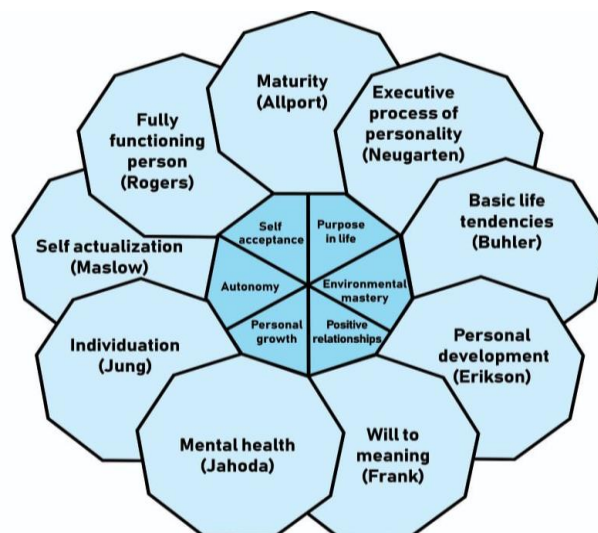


Fig 2.1 Theoretical foundations of psychological well-being and its core dimension

2.1.1 Psychological well-being amongst mothers

Pregnancy and parenthood are known to pose risks to the mental health of individuals [4]. Young mothers experience a change in their physiological and psychological function as they adapt to their parenting role [5]. Concerns about weight gain, sexuality, body image, and other issues, including exhaustion, are challenges for new mothers. These problems could cause stress or worsen existing stress, resulting in actual or imagined psychological anguish and crisis [6].

Goyal D et al. (2011) conducted a study that explored the relationship between depressive symptoms, perceived stress, and socioeconomic status (SE). The interesting thing about their findings is that they discovered depressive symptoms and perceived stress can actually be predicted independently of objective SE. In simpler terms, just because someone has a higher socioeconomic status doesn't necessarily mean they won't experience depression or stress. This challenges the common assumption that financial security automatically leads to better mental health. Majumdar et al. (2021) conducted a study to investigate the relationships between psychological well-being (PWB), self-compassion, psychological inflexibility (PI), and parenting stress (PS) in a sample of 242 urban Indian mothers with children aged ten years and younger. The objective of this study was to explore the interplay between PWB, self-compassion, PI, and PS, with a specific focus on urban Indian mothers. The study participants consisted of urban Indian mothers who were responsible for the care and upbringing of children aged ten years and younger. The researchers collected data through various validated measures to assess PWB, self-compassion, PI, and PS. The findings reveal about complex relationships between psychological well-being (PWB), self-compassion, perceived isolation (PI), and perceived stress (PS) within the context of the COVID-19 pandemic. The results revealed significant associations between these variables, providing valuable insights into the psychological wellness of urban Indian mothers during this challenging period.

Family studies have found that psychological well-being is associated with diverse family roles, family transitions, and unpredicted family events [23]. The theory of

family systems states that a family is a group in which all members have ongoing relationships with each other. Family ties, family functioning, and individual mental health are all interconnected. Parental experience has also been strongly related to adult well-being [68]. Therefore, parental psychological well-being indirectly influences the social environment of a family, notably the nature of the parent-child interaction, which in turn influences children's social and emotional development [23].

The study conducted by Low NC et al. (2012) shed light on a significant correlation between maternal anxiety disorders and anxiety disorders in their offspring. Moreover, the findings indicated that the specific nature and intensity of the mother's anxiety problems, particularly social phobia and generalized anxiety disorder, exerted an influence on the anxiety levels observed in their children [69].

Walker et al. (2020) aimed to explore the potential link between maternal anxiety and depression and its impact on depressive indicators observed in children. To achieve this, the researchers utilized two well-established assessment tools, namely the State-Trait Anxiety Inventory - STAI and the Center for Epidemiologic Studies Depression Scale - CES-D). These instruments were administered to mothers at 13 weeks postpartum to evaluate their levels of anxiety and depressive symptoms. According to study findings, maternal postpartum anxiety or depression appears to have almost no impact on the father and child using a longitudinal route model in Timor-Leste [70].

Rees SJ et al. (2022) enquired into maternal depressive symptoms, trauma-related adversity, and child mental health. They found that maternal depressive symptoms have a long-term association with child mental health, and maternal depressive symptoms are also affected by child mental health [71].

Tania et al. (2023) studied that the process of adaptation that accompanies motherhood was found to have significant effects on various aspects such as mental health, breastfeeding, and newborn care. However, the emergence of the COVID-19 pandemic has forced individuals to distance themselves from their loved ones, friends, and healthcare providers. This unprecedented situation has had a profound impact on the mental well-being of postpartum mothers, as evidenced by an increase in the

prevalence of postpartum depression and reported cases of post-traumatic stress disorder during the COVID-19 lockdowns.

A particularly noteworthy study conducted in Italy examined the relationship between depression in mothers of young children and various factors, including the fear of infection for both the mother and her child, apprehension regarding close contact with individuals infected by the Coronavirus, and financial concerns stemming from potential income loss. The findings of this study hold particular relevance in understanding the challenges faced by postpartum mothers during the pandemic.

It is evident that the process of adaptation that accompanies motherhood is a complex and multifaceted experience. The COVID-19 pandemic has only exacerbated the difficulties faced by postpartum mothers, as they navigate the challenges of caring for their newborns while grappling with the fear of infection, limited social support, and financial uncertainties. These unprecedented circumstances have underscored the need for comprehensive support systems and resources to address the mental health needs of postpartum mothers during these trying times [72].

Adam's RE et al. (2002) examine emotional and physical well-being of mothers with young children amongst the population exposed to the Chernobyl nuclear power plant explosion. The study confirmed poor psychological amongst this study population [73].

Abbeduto L. et al. (2004) studied the psychological health of mothers raising children with developmental disabilities differs depending on the type of disability. The study's findings showed that, although group differences varied somewhat across several well-being dimensions, mothers with fragile X syndrome showed lower levels of well-being than mothers of people with Down syndrome but greater levels than mothers of people with autism [74].

Babore A et al. (2023) found that the mental health of children is also adversely affected by their parents' distress. Children can suffer from depression and anxiety symptoms from the time they are born up until middle childhood if their mothers suffer from depression and anxiety symptoms [75].

Dennis et al. (2012) predicted depressive symptoms and perceived stress independent of objective SES amongst mothers of an infant of low socioeconomic status [76]. A general relationship has been established between early first birth and depression. Numerous studies show a connection between having children young and later health outcomes. Early childbearing has also been connected to higher rates of depression in the US and British women's psychiatric illnesses [77]. Mothers have also experienced elevated levels of stress with pre-term-born infants [4]. Numerous studies have unequivocally shown that maternal psychological health remains compromised for several weeks to months following the premature infant's discharge. These studies have revealed a significant correlation between maternal anxiety and depression and the quality of mother-infant interaction [74].

Kim G and Kim E (2020) shed light on the disparities in QOL between single and married mothers. By examining various socio-demographic and psychological factors, the study aimed to gain a deeper understanding of the reasons behind these differences. Ultimately, the results indicated that married mothers tend to experience a better overall QOL than single mothers [78].

2.1.2 Influence of maternal well-being on family especially children

Up to 20% of young moms experience difficulties such as maternal postpartum anxiety and depression, which can adversely affect the entire family. The stress of being parents may lead to maternal depression, which produces hostility and lack of warmth within the family environment and eventually takes a toll on a child's mental health. Behavioral and emotional issues in young children as well as health issues in mothers can pose to be a future risk issue. Anxiety and postpartum depression are two illnesses that can coexist. However, the symptoms of the two illnesses are distinct depression is characterized by a low positive effect, although physiological hyper-arousal is a distinct symptom of anxiety. Hence, disparities can emerge in how anxiety and depression are passed down from mother to child, as each family may have its unique mechanisms and methods of transmission. Drawing from the family systems theory, a family is an organized entity where all members engage in ongoing

relationships [68].

Poor parenting and bonding may be the mechanism that can cause maternal depression and subsequent issues with the child's mental health. Children may experience helplessness, hopelessness, dysphoria, anger, and bewilderment from depressed mothers due to poor parenting. Additionally, women who are depressed typically cannot make themselves unavailable psychologically. Bonding and attachment with the child may be hampered as a result. These mothers might also be less concerned with enforcing rules and may even serve as examples of undesired encounters, responses, and behaviors [79].

Teasdale J D et al. (2000) conducted a study to assess the efficacy of mindfulness-based cognitive therapy-MBCT in assisting individuals who have recovered from recurrent depression to cease ruminating on negative thoughts that may trigger relapse or recurrence. Two groups of patients were randomly assigned, one receiving standard care and the other receiving MBCT in addition to standard care. For the 60-week trial period, major depression relapse or recurrence was evaluated. The study's findings demonstrated that MBCT dramatically decreased the probability of relapse and recurrence [80].

Kerker et al. (2023) shown that prenatal depression has long-term effects on infant development postpartum, possibly caused by changes in fetal brain development or increased cortisol exposure during pregnancy, which over time negatively impacts the neurodevelopment of an infant. The self-regulation of emotions, attention, and behavior by a caregiver during the postpartum period plays important function in the development of emotional, arousal, attentional as well as bodily regulation capacities in the infant. Mental health disorders such as depression can disrupt a mother's ability to regulate herself, which in turn disrupts the ability to give her child consistent attention and responsiveness. These symptoms significantly impact the mother's capacity to provide the necessary care and support for her infant [81].

March S et al. (2008) did an evaluation of the effectiveness of an internet-based CBT method in treating anxiety disorders in children aged from seven to twelve years.

There were two groups of children one receiving iCBT(NET) and another one on waiting list. The NET condition was assessed before beginning the trial and again after six months. The children participating in the NET group exhibited a modest yet statistically significant decrease in their anxiety scores. However, what truly stood out was the remarkable improvement observed during the six-month follow-up period. After six months, 75% of the children in the NET group were free of their primary diagnosis. It was concluded that delivering CBT through the internet can be a promising way of increasing access to treatment for this population [82].

Rahmann A et al. (2008) carried out study aimed at assessing the efficacy of Cognitive Behavioral Therapy in the treatment of depression among mothers and newborns. Pregnant married women aged between 16-45 years and in their third trimester were included in the study. While untrained primary care providers visited the depressed women an equal number of times in the control group, trained primary care providers provided the psychological treatment in the test group. The finding showed 23% of women in the treatment group and 53% in the control group exhibited symptoms of depression after 6 and 12 months, respectively. These findings highlight a significant disparity between the two groups, indicating a higher prevalence of depression among women in the control group. This is important to highlight that the test group exhibited a significantly reduced occurrence of depression, indicating the potential efficacy of the intervention in alleviating depressive symptoms. This outcome emphasize the significance of addressing depression among women, particularly through targeted interventions. By understanding the prevalence and impact of depressive symptoms, healthcare providers can work towards improving mental health outcomes and enhancing the overall well-being of women in our society [83].

Ammerman RT et al. (2011) carried out an open trial design to evaluate a home-based, evidence-based depression treatment that has been tailored to the requirements of 64 low-income mothers who participate in home visits. The depression amongst the participants was compared with the 241 mothers who were enrolled for the same but did not receive treatment. The study's findings showed that post-treatment, mothers who had received treatment had reduced significant depression diagnosis rates, lower

degrees of reported stress, higher levels of coping and social help, and high degrees of positive views of motherhood. In the context of home visits, IH-CBT is a promising strategy for treating maternal depression [84].

Segal ZV et al. (2017) carried out a research to evaluate the relapse rates in patients who had previously experienced depression but were now in remission. A comparison was made between MBCT and standard care, which involved maintenance antidepressant pharmacotherapy. Patients who achieved remission after eight months of antidepressant treatment guided by an algorithm were randomly allocated to 1 of 3 groups: M-ADM, MBCT, or placebo (PLA). The observation period lasted for 18 months. The outcome showed a significant reduction of 73% in hazard for individuals experiencing unstable remission in Mindfulness-Based Cognitive Therapy (MBCT) and Medication-Assisted Treatment (M-ADM), compared to those in the Placebo-PLA group. However, no notable differences in survival rates were observed among stable remitters. These results highlight the potential benefits of MBCT and M-ADM in promoting stability and reducing risk for individuals struggling with remission. In conclusion, for depressed patients who are unwilling or unable to bear long-term antidepressant maintenance treatment, MBCT provides equivalent relapse prevention [85].

Ammerman RT et al. (2013) evaluated the effectiveness of in-home cognitive behavioral therapy (IH-CBT) among new moms experiencing depression symptoms. The aim of this study was to accurately gauge the severity of depression by utilizing a combination of different evaluation methods. These included conducting interviews with the participants, obtaining ratings from experienced clinicians, and utilizing self-report measures. These assessments were carried out both before and after the treatment, as well as during the three-month follow-up period. The findings showed in terms of satisfying the criteria for major depressive illness at post-treatment, 70.7% of the moms who received IH-CBT were not depressed [86].

Faramarzi M et al. (2015) conducted a research study which included 86 moderate women experiencing nausea and vomiting of pregnancy (NVP). For three weeks, the test group members received pyridoxine hydrochloride (40 mg/day) and eight

individual sessions of intensive MBCT, lasting 50 minutes each. The participants in the control group received only pyridoxine hydrochloride (40 mg daily tablet) as their exclusive treatment for a duration of three weeks. The findings indicate that MBCT is significantly more effective in alleviating psychological symptoms, pregnancy distress, symptoms of nausea and vomiting when compared to medical therapy alone. This highlights the superior benefits of incorporating MBCT into treatment plans for pregnant women [87].

Ye Y et al. (2015) conducted a study with the objective of assessing the effectiveness of Internet-Based Cognitive Behavioral Therapy-ICBT for insomnia in individuals who also suffer from anxiety and depression. The results showed remarkable enhancements in sleep onset latency, total sleep time and sleep efficiency following the implementation of ICBT. These findings reveals that Internet-Based Cognitive Behavioral Therapy, is an innovative and highly promising therapeutic intervention for effectively addressing insomnia [88].

Dobkin RD et al. (2015) carried out a research to examine the effectiveness of telephone-based cognitive-behavioral treatment (T-CBT) in alleviating depressive symptoms among patients diagnosed with both depression and Parkinson's disease (PD). In the experimental group, the patients received T-CBT+TAU (treatment-as-usual), and in the control group, patients received TAU. The study's findings demonstrated that T-CBT outperformed TAU on all measures of quality of life, depression, and anxiety. In conclusion, T-CBT could be a practical depressive solution that meets a substantial unmet medical need and gets over access restrictions to comprehensive therapy [47].

Aysel Karaca et al. (2019) did a experimental research to investigate the usefulness of a MBSR among Turkish nursing students. For 12 weeks, participants had sessions that lasted 90 to 95 minutes each. The data was collected through the utilization of three distinct scales: the Nursing Education Stress Scale, the Mindfulness Scale, and the Stress Management Styles Scale. These scales were employed to ensure comprehensive data gathering and analysis. The findings unveiled a significant

differentiation in the average scores of the Mindfulness Scale between the experimental and control groups [89].

Hayashi et al. (2019) conducted a retrospective observational study aimed at gaining a comprehensive understanding of the present status of Cognitive-Behavioral Treatment diffusion in Japan within the framework of the national health insurance scheme. The study encompassed patients who received CBT through the national health insurance scheme during the 2010 to 2015. The study revealed that 60 out of 304 participants received Cognitive Behavioral Therapy (CBT) throughout the research period. The presence of registered CBT institutions had an important role in determining the accessibility and availability of CBT services to patients. However, despite this association, the provision of CBT did not experience a notable surge during the first six years following its integration into Japan's national health insurance program [90].

The study sought to investigate the efficacy of psychotherapy as a means of reducing anxiety levels in women who had previously experienced preterm labor. By employing a rigorous RCT design, the researchers aimed to provide robust evidence regarding the potential benefits of psychotherapy in this specific population. Women in the experimental group underwent a comprehensive treatment regimen consisting of psychotherapy and medical care, delivered through individualized face-to-face sessions spanning six consecutive days. In contrast, the control group of women solely received medical attention for preterm labor (PTL). The findings indicate that incorporating psychotherapy into hospital care can serve as a viable approach to alleviate stress and anxiety, particularly among pregnant women. This strategy holds promise in effectively addressing mental health concerns during this critical period. [91].

Douglas S et al. (2022) studied the experiences of participants, caregivers, and facilitators who were engaged in the MBCT for adults suffering from dementia and depression. Eighteen participants were interviewed in semi-structured interviews including eight people with dementia and depression, carers, and course facilitators. In conclusion, MBCT could be an effective solution for those suffering from depression and dementia [92].

2.2 Need of the Study

The risks of various health problems are rising rapidly with the change in lifestyle and eating patterns. Postpartum depression (PPD) affects approximately 22% of Indian mothers, according to research released by the World Health Organization. The country needs additional resources to increase its capability for providing maternal health care. While the baby blues are a mild form of depression common among new mothers, The mothers health and the well-being of her child could be negatively impacted if PPD is not addressed with medical intervention [93]. There is a need to emphasize the role and impact of mindfulness in psychosocial well-being to address mental and emotional maternal health as it controls the whole body's function. In today's fast-paced and interconnected world, the importance of psychosocial well-being cannot be overstated. The demands and pressures of modern life can often take a toll on mental and emotional health, leading to stress, anxiety, and even depression. Therefore, it is essential to prioritize the psychosocial well-being and take proactive steps to nurture and maintain it. Additionally, it is mentioned that postpartum time is linked to a decline in physical activity for many women. Unhealthy eating habits, prolonged periods of inactivity, hormonal imbalances, and reduced physical fitness are all the contributors of weight gain. This weight gain and contributing factors, in turn, can have a negative impact on the mental well-being of young mothers. As a result of this a renewed interest has been implanted in investigating the role and effect of mindfulness in addressing psychological problems and analyzing the role of mindfulness in overcoming mental issues in young mothers. That can give a sound basis for how this strategy can be used as treatment along with standard drug therapy to manage psychosocial issues after pregnancy.

Depression, anxiety, and insomnia are primarily treated with medication, psychotherapy, or combinations of these therapies. The drawbacks of these therapies include cost; side effects of medications, time commitment, and ineffectiveness for some people. Thus, in the present study Role and Effectiveness of Mindfulness in the psychosocial well-being of young mothers have been studied.

2.3 Objectives of the Study

1. To evaluate the stress levels, mindfulness, and psychosocial well-being in young mothers under the test and control group before and after administering the Mindfulness-Based Program.
2. To address the effect of Mindfulness-Based Program on weight management in young mothers under test and control group.
3. To determine the correlation between the test and control group pre-test and post-test results for stress, psychosocial well-being and mindfulness.

CHAPTER 3
RESEARCH METHODOLOGY

3.0 Methodology for Research

In this study, the methodology acts as an important factor to ensure the reliability and validity of the findings. The research approach and research design are described in detail in order to accomplish this. A quantitative approach was adopted for this study aiming to gather numerical data that can be analyzed statistically. This enables the researcher to measure specific variables and establish relationships between them.

3.1 Research Approach

The quantitative research approach emphasizes the use of objective measurements as well as statistical, numerical analysis of the data obtained through various data collection processes. In the field of research, the approach undertaken plays a critical role in ensuring reliable and valid results. The research approach refers to the overarching plan or strategy adopted by researchers to guide their investigations.

3.2 Research Design-Investigation Framework

It is a comprehensive framework that outlines the methodologies and techniques a researcher selects to execute their study to maximize control over variables that could potentially compromise the validity of the results. By carefully constructing a research design, researchers can ensure that their study is organized and systematic, allowing them to draw meaningful conclusions from their data. This research investigated the psychosocial well-being of young mothers after implementing a mindfulness-based program. To achieve this, a pre and post-test methodology was utilized. All participants underwent the study measurements at the outset of the trial, and subsequently, four weeks following the completion of the intervention.

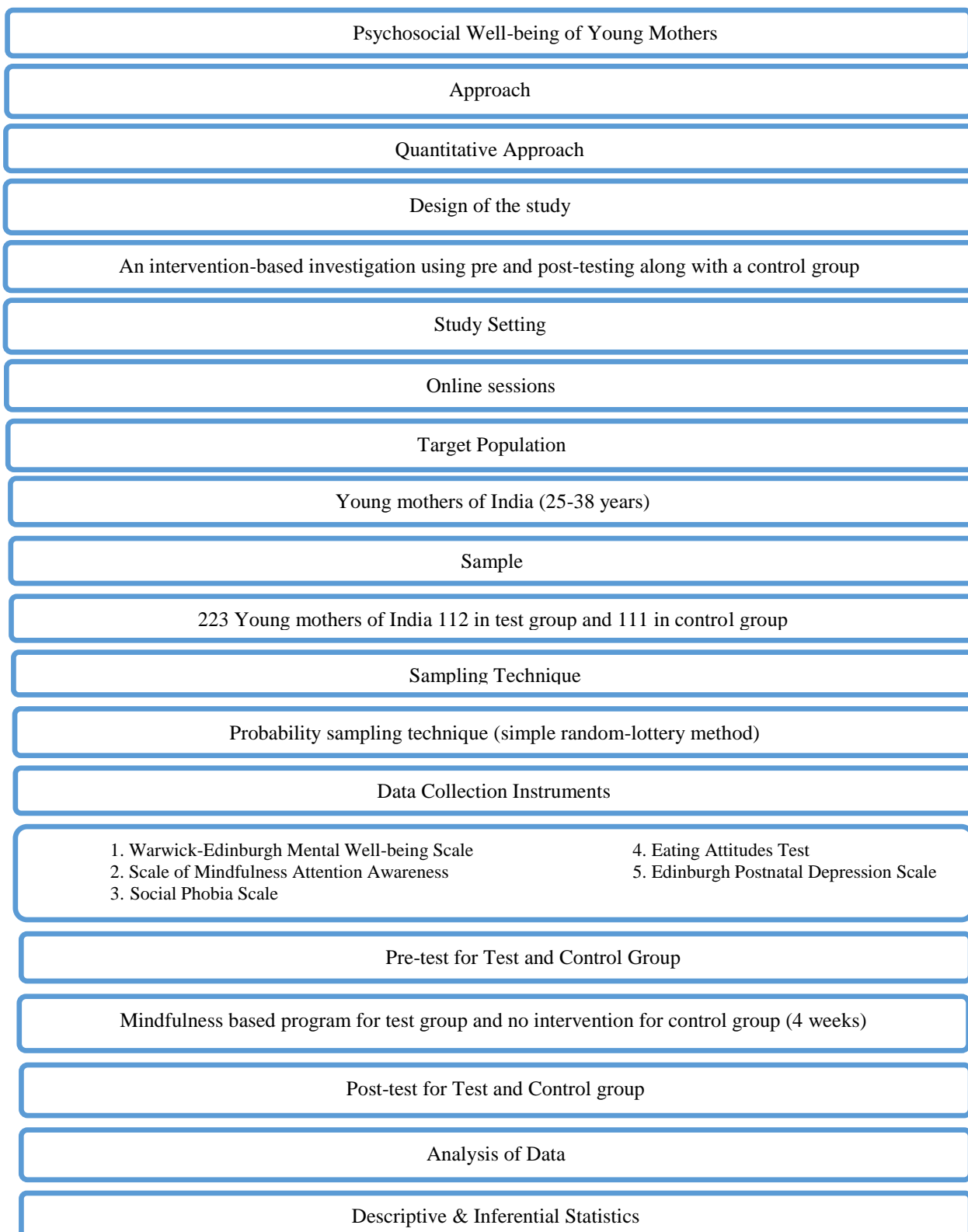


Fig 3.1 Design of the study for Investigating the Influence of Mindfulness-Based Program on the Psychological Well-being of Young Mothers

3.3 Variables

- Program based on mindfulness as an independent variable.
- Stress, psychosocial well-being, and mindfulness are dependent variables.
- Age, gender, family type, neighborhood, religion, education, prior employment, marital status, the total number of children, gender, and economic position are examples of independent variables. Other factors include dietary patterns, hobbies, personal habits, and a history of chronic illness.

3.4 Study Setting

Participating in the present research was completely optional and anonymous. Using Google Forms, a self-made questionnaire was created. The participants were signed up from various Indian cities using internet services like facebook, instagram, email, and WhatsApp. Participants were urged to forward the survey to their personal connections to increase participation. A diverse group participating in the study includes individuals from varied socioeconomic strata, educational levels, professional qualities, marital statuses, demographics, and other factors, in addition to the first point of contact and geographic location in India. Registration links were shared with many people. On clicking the registration link, eligible subjects were directed to a Google form and asked to fill up their demographic details and accept participation in the study. A total of 340 participants were contacted after conducting several rounds of follow-up. Eligibility criteria mandated the participants to be married, have children up to 3 years old, Indian residents living in nuclear or joint families, had a primary education level, deal with postpartum physical and emotional difficulties, and feel some level of worry and psychological distress. Participants had to be older than 25 years old, know English and Hindi (both spoken and written), comprehend it, and be capable of completing digital questionnaires. The study's participants had an inter-quartile range (IQR) median age of 34.0 (30.0-39.0) years. Participants who met the requirements were invited to a four-week online session.

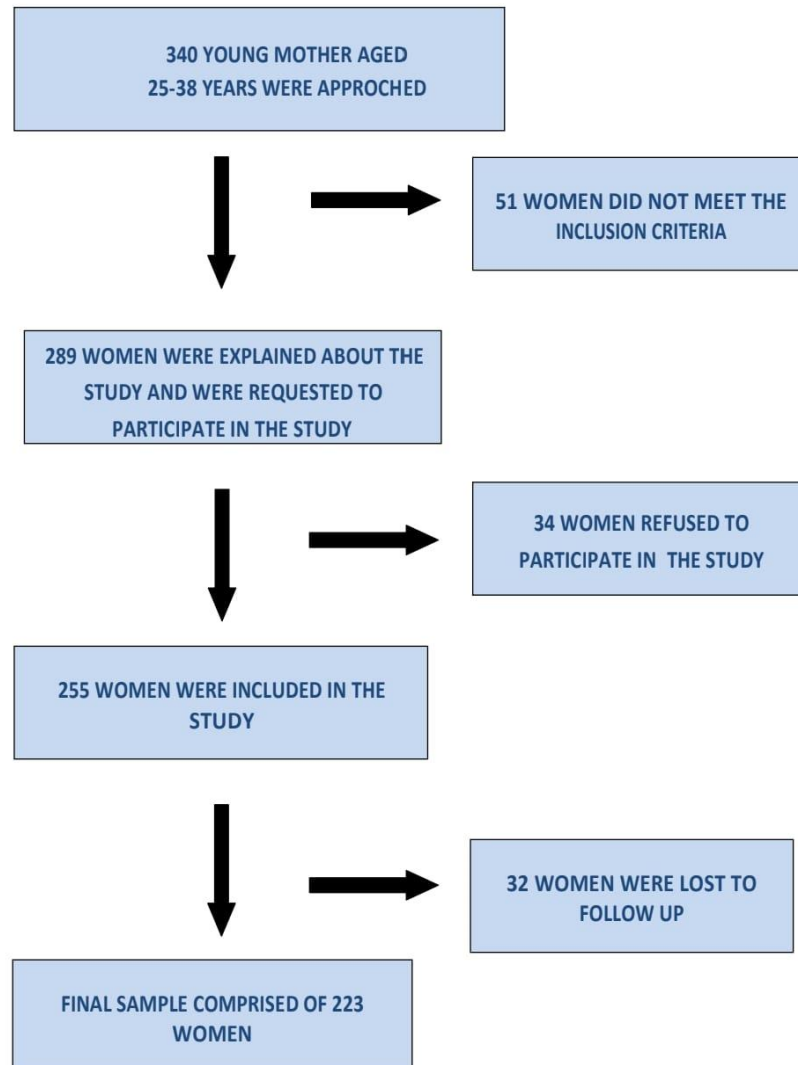


Fig 3.2 Enrolment of the participants in the study

3.5 Population

The term "population" denotes the group of individuals or entities to whom the findings of a study are meant to be extended and put into practice [94]. The target population for the study was young Indian mothers aged between 25-38 years having kids aged up to 3 years.

3.6 Inclusion Criteria

Inclusion criteria are necessary for any clinical study or research trial to ensure safety and accuracy of the results. In order to be considered for inclusion in a study's sample, participants must meet specific requirements. This could include minimum age limits, verified medical history, current medications, and lab results.

The inclusion criteria for current study were the young mothers who were:

- Age 25 years and up to 38 years
- Mothers having kids aged from 0-3 years
- Capable of doing activities of daily living (ADL)
- They have not been to a stress-reduction class in the last six months
- Willingness to take part in the research
- Able to speak, write and understand English and Hindi

3.7 Exclusion Criteria

An exclusion criterion is a set of predetermined criteria that should be used to determine whether an individual should be excluded from participating in a particular clinical, research, or scientific study. It may include various characteristics such as age, gender, previous screenings, health status, occupation, pre-existing conditions and other associated factors which may adversely affect the findings of the study. The elimination criteria for current study were the young mothers who were:

- Acutely ill
- Bed ridden due to any medical reasons
- Mute and Deaf
- Being treated for mental illness
- Having a recent history of persistent back pain, a recent injury, or both
- Having recently experienced heart problems and high blood pressure
- Having migraine complaints

- Having comprehensive disability
- Having no access to social media platforms
- Having no command in using social media platform

3.8 Study Site and Design

This study was interventional survey based research study conducted in India using social media platforms such as Facebook and WhatsApp.

3.9 Population under Study

Population of the study plays a crucial role in every research proposal and must be carefully chosen in order to ensure representative results. Study population typically consists of individuals from the same age and gender range, living with the same characteristics or traits. Depending on the goals of the study, participants may be selected based on ethnicity, income level, geographic area or other demographic factors that are relevant to its research design.

The study population for current study was Indian Young Mothers

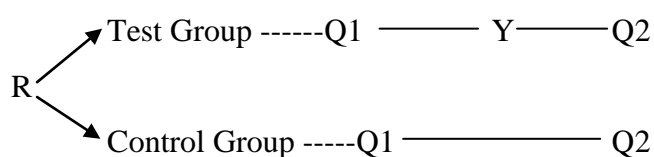
3.10 Study Duration

Study duration is an important consideration for all professionals, as it determines the amount of time required to commit to and complete a course of study. The duration for data collection of current study was ten months.

3.11 Sampling Technique

Sampling techniques are methods used by researchers to provide a representative sample of the study population. The main goal is to obtain accurate results that can be applied to the general population. The present study employed the random sampling technique (simple random-lottery method), which is a form of probability sampling.

The lottery method of random sampling is a crucial technique employed in diverse research domains for participant selection from a target population. This approach involves assigning a distinct number to every individual in the population and subsequently utilizing a random selection process, such as drawing tickets or electronic algorithms, to determine the desired sample size. By employing the lottery method, equal opportunity is guaranteed for every population member to be included in the study, thereby reducing bias and enhancing representativeness.



R= Randomization

Q1 = Pre-test scores of Weight, Height, BMI, EPDS score, Social Anxiety score, Mental Well-being score, EAT 26 score, and Behavioral score among young mothers

Y= Mindfulness-based program for 4 weeks

Q2= Post-test scores of Weight, Height, BMI, EPDS score, Social Anxiety score, Mental Well-being score, EAT 26 score, and Behavioral score among young mothers

3.12 Sample Size

The G* power software latest version 3.1.9.7 was utilized to calculate sample size

Test family- F test

Input parameters:

Effect size- 0.1 (small, according to Cohen)

Alpha-type error-0.05,

Power (1-β)- 0.80, and

Number of groups -2

Number of measurements- 2

Output parameters:

Critical F- 3.88

Sample size- 200

Thus, minimum required sample size is 200 i.e., 100 in each group.

But additional 12 samples included for meeting the expected attrition rate minimum (200 + 23= 223). The study incorporated a comprehensive sample size of 223 subjects, with 112 were in test group and 111 assigned in the control group.

3.13 Statistical Analysis of the Data

In order to conduct a comprehensive analysis, the data was meticulously entered into an Excel spreadsheet. To ensure accuracy and reliability, we employed the use of SPSS (Statistical Package for Social Sciences) version 21.0, powerful software developed by IBM in Chicago. The analysis focused on determining the probability distribution of the data, which was accomplished through the application of the Kolmogorov-Smirnov test. The collected data was analyzed by descriptive statistics. For inter-group comparisons of continuous variables, Independent t-test or the Man-Whitney U test were utilized. Intra-group comparisons of continuous variables were made using the Paired t-test or the Wilcoxon sign rank test. A p-value of less than 0.05 was considered as statistically significant, indicating a meaningful result. Furthermore, a confidence interval of 95% was set to ensure the reliability of our findings.

3.13.1 Statistical Procedure

The data was inputted into a computer using a coding system and carefully checked for any errors during the entry process.

- Once collected, the data was organized and compiled on an MS Office Excel Sheet (version 2019, developed by Microsoft at their Redmond Campus in Washington, United States).
- To gain meaningful insights, the data underwent statistical analysis using the SPSS version 26.0, developed by IBM.
- Descriptive statistics such as mean, standard deviation, and median were utilized to present numerical data in a clear manner.

- Furthermore, demographic comparisons were conducted using parametric tests, which are widely recognized for their effectiveness in making accurate comparisons. Overall, this study employed a meticulous approach to data management and analysis, utilizing advanced software and statistical techniques to ensure reliable and comprehensive results.
- A t-test was used for inter group comparison between two groups.
- The normality of the numerical data was assessed using the Shapiro-Wilk test. Surprisingly, the data did not adhere to a standard curve, necessitating the use of non-parametric tests for comparisons.
- For inter group analysis between two groups, Mann-Whitney U test was utilized, it a robust statistical method known for its ability to handle non-normal data.
- Intra-group comparisons were made by using Wilcoxon Signed rank test, which is suitable for analyzing paired observations. This approach enabled to assess any significant differences within the groups, considering up to two observations.
- To ensure the reliability of findings, a significance level of $p < 0.05$ was adopted for all statistical tests. By doing so, it was aimed to achieve statistical significance while maintaining a 5% α error and a 20% β error. This rigorous approach in study provided a power of 80%, enhancing the credibility of the results. It is important to note that these parameters were consistently applied across all tables, ensuring consistency and comparability.
- By employing these rigorous statistical methods and adhering to strict significance levels, we aimed to provide a robust and reliable analysis of the data.

* = statistically significant difference ($p < 0.05$)

**= statistically highly significant difference ($p < 0.01$)

= statistically non-significant difference ($p > 0.05$)

3.14 Method for Data Collection

It involves the gathering and compilation of precise, relevant information to assess an issue or develop original insights. Depending on the scope of research, methods may utilize surveys, interviews, case studies, experiments, etc., allowing researcher to strategically gather valuable quantitative or qualitative data. The current study was based on survey and interview for collecting the data.

3.14.1 Study Instrument & Design

The list of young mothers belonging to the age group 25-38 years was prepared. The participants who happened to be the most accessible to the researcher were approached. Individuals who satisfied the predetermined inclusion and exclusion criteria and were interested to take part in the research were enrolled. (Fig 3.2)

A four-week recorded program was offered to the selected participants. Before beginning the sessions, baseline information was collected, this included age, height, weight, and assessment of psychosocial well-being using different scales. Two professionals—a life coach and a postpartum health and mindfulness coach—met online with each participant to go over the intervention's specifics, involvement, and expectations before administering a self-created questionnaire (attached in appendix) that was pilot tested for content and validity. The experts have a vast knowledge of mindfulness techniques and its meditation practices. The pilot study had the participation of a sum of fifty respondents. The scales utilized for collecting data were Edinburgh Postnatal Depression Scale, Mindful Attention Awareness Scale, Social Phobia Scale, Warwick Mental Well-being Scale, and Eating Attitude Test.

After assessment at the baseline, the program was initiated. The training was given week-wise for four weeks, followed by one interactive session of about 30-60 minutes at the end of every week. Before the initiation of sessions a brief introduction about mindfulness-based program was given to all the participants. The week one was dedicated to 'Mindful Eating.' The participants were asked to chew the food multiple times, the use of a spoon was not allowed, and participants were asked to eat with

their hands to engage all the senses (i.e., touch, smell, taste, and sight) in the process of eating. Participants were asked not to sit in front of the TV or use mobile phones while eating to promote distraction-free eating. They were asked to follow clean eating. It was advised not to consume sugar and processed food and to include more vegetables, fruits, and grains in their diet; they were encouraged to drink more water and detox waters to help them incorporate long-term healthy habits.

The second week was dedicated to ‘Mindful Physical Fitness’; some physical activities and yoga asanas were introduced. The participants were asked to engage for 30 minutes in any physical activity such as yoga, spot walking, zumba, dance, and stretching. Physical exercises were followed by spending time with hobbies (doing what you love) such as reading books, playing with kids, walking in nature, gardening, drawing, and painting, followed by 20 minutes of visualization meditation.

In the third week, vigorous and stress-relieving exercises were introduced. These included daily affirmation, positive self-talk, and instant stress-releasing EFT (Emotional Freedom Technique) tapping exercises.

The fourth week was dedicated to a self-introspection exercise -Johari window model and evaluation, discussion on emotional challenges, acknowledgment, and development of acceptance attitude.

After the fourth week session, the assessment of psychological well-being was done again with the help of the Edinburgh Post-natal Depression scale, Mindful Attention Awareness scale, Social Phobia scale, Warwick Edinburgh Mental Well-being scale, EAT-26 scale; weight, height and BMI of the participants was reassessed.

Each session began with an example and a brief explanation of how to carry out the exercise. Every session involved 20-30 participants, and the participants performed all the activities under the guidance of instructor.

The questionnaire used in the study for pre, and post-test data collection consists of 89 questions and 6 sections. The Section I consists of 15 questions related to the Mindfulness assessment scale; Section II consists of 10 questions related to Edinburgh postnatal depression scale; Section III consists of 20 questions related to the Social phobia scale; A total of 14 questions are included in Section IV, which relates to mental well-being, Section V consists of 25 questions related with Eating attitude test, Section VI consists of 5 questions related with Behavioral questions.

3.15 Psychosocial Measures

3.15.1 The Warwick-Edinburgh Scale for Mental Health

The 14-item assessment covers both hedonic and eudaimonic components of mental health, positive mood (such as emotions of zeal, enjoyment, and tranquility), positive functioning, and enjoyable interpersonal interactions (strength, clarity of thoughts, self-acceptance, self-growth, and competency). Each item on the likert scale receives a score between one and five, with the lowest score being fifteen and the highest being seventy. Participants are required to select the checkbox that best encapsulates their experiences with each statement over the past two weeks, using a scale ranging from 1 to 5.

3.15.2 Mindful Attention Awareness scale (MAAS)

It is a 15-item scale that assesses an essential feature of mindfulness, specifically, a receptive state of mind in which attention, guided by a sensitive awareness of what is happening in the present, observes what is happening.

3.15.3 Social Phobia Scale

The Social Phobia Scale is a comprehensive self-report assessment tool consisting of 20 items. It is specifically designed to evaluate social anxiety in both adults and teenagers. This scale serves as a valuable resource for professionals seeking to gain insights into the levels of social anxiety experienced by individuals. The measure is based on the anxiety of being observed or inspected while engaging in routine tasks. A typical query on this scale is, "I get anxious that people are staring at me as I walk down the street." The social phobia measure can be used to track the evolution of social anxiety and its associated symptoms over time.

3.15.4 Eating Attitudes Test (EAT-26)

The test has proven to be highly accurate, precise, and effective. On the other hand, this test does not identify an eating disorder. A score of 20 or higher denotes the need for additional testing by a clinical specialist. Even with a lower score (less than 20), eating disorders are still present because denial of symptoms is a common characteristic of eating disorders. Weight history, present BMI, and the percentage of optimal body weight should all be considered when analyzing the results.

3.15.5 Edinburgh Postnatal Depression Scale-EPDS

The EPDS is commonly used questionnaire for the evaluation of postnatal depression. The women answered ten questions about themselves and assessed their mood during the previous seven days. Each task takes about 5 minutes and is graded 0–3 (for a total of 0–30). Higher scores are linked to more depressive symptoms.

After the collection of data it was arranged and tabulated as follows and prepared for analysis:

Section A Demographic characteristics of young mothers under control and test groups

Section B Inter group comparison of mean age

Section C Assessment of pre and post-test weight, height, BMI, Mindfulness score, EPDS score, Social Anxiety score, Mental well-being score, EAT 26 score, and Behavioral score among young mothers in the control and test group before administering the mindfulness-based program

Objective 1A

To evaluate the stress levels, mindfulness, and psychosocial well-being in young mothers under test and control group before administering the Mindfulness-Based Program

Section D Assessment of pre and post-test weight, height, BMI, Mindfulness score, EPDS score, Social Anxiety score, Mental well-being score, EAT 26 score, and Behavioral score among young mothers in the control and test group after administering the mindfulness-based program

Objective 1B

To evaluate the stress levels, mindfulness, and psychosocial well-being in young mothers under test and control group after administering the Mindfulness-Based Program

Section E Assessment of pre and post-test weight, height, BMI, Mindfulness score, EPDS score, Social Anxiety Score, Mental well-being, EAT 26 score, and Behavioral score of young mothers in the control group

Section F Assessment of pre and post-test weight, height, BMI, Mindfulness score, EPDS score, Social Anxiety Score, Mental well-being, EAT 26 score, and Behavioral score of young mothers in the test group

Section G Comparison of pre and post-test weight, height, BMI, Mindfulness score, EPDS score, Social Anxiety score, Mental well-being score, EAT 26 score, and Behavioral score among young mothers in control and test group

Section H Assessment and comparison of pre and post-test weight and BMI in young mothers under test and control group

Objective 2

To address the effect of the mindfulness-based program on weight management in young mothers under test and control groups

Section I Testing Hypothesis

I1: There is a significant difference between pre-test and post-test EPDS score, Social Anxiety score, Mental well-being score, EAT 26 score, and Behavioral score among young mothers in the test (experimental) group.

I2: There is a significant difference between post-test EPDS score, Social Anxiety score, Mental well-being score, EAT 26 score, and Behavioral score among young mothers in the test and control group.

Objective 3

To determine the correlation between test and control group pre-and post-test stress, psychosocial well-being, and mindfulness results

I3: There is a significant correlation between the pre-test scores of Height, weight, BMI, EPDS scale, Social Anxiety scale, Mental well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the test group.

I4: There is a significant correlation between the post-test scores of Height, weight, BMI, EPDS scale, Social Anxiety scale, Mental well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the test group.

I5: There is a significant correlation between the pre-test scores of Height, weight, BMI, EPDS scale, Social Anxiety scale, Mental well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the control group.

I6: There is a significant correlation between the post-test scores of Height, weight, BMI, EPDS scale, Social Anxiety scale, Mental well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the control group.

I7: There is a significant correlation between the scores of Height, weight, BMI, EPDS scale, Social Anxiety scale, Mental well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the control group.

I8: There is a significant correlation between the scores of Height, weight, BMI, EPDS scale, Social Anxiety scale, Mental well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the test group.

I9: There is a significant correlation between scores of Height, weight, BMI, EPDS scale, Social Anxiety scale, Mental well-being scale, EAT 26 scale, and Behavioral

scale among young mothers in both groups.

3.16 Development of the Tool

The development of tools for data analysis has become a critical need for driving successful outcomes in many areas of research. By utilizing such tools, organizations can collect and interpret textual, numeric, and structural data from many sources including web traffic, surveys, social media and other sources. The steps used for preparing tool for current study were:

- Review of related literature
 - Preparation of the blueprint
 - Description of the tool
 - Test for validity
 - Test for reliability
 - Preparation of the final draft
-
- **Review of related literature** - Related books, journals, reports, articles, and published and unpublished research studies in clinical psychology was used to develop the tool.
 - **Preparation of blueprint** - The blueprint items regarding the Mindfulness-based program were Mindfulness Attention Awareness Scale, Eating Attitude Test (EAT-26), The Warwick-Edinburgh Mental Well-being Scale (WEMWBS), Social Phobia Scale as well as Edinburgh Postnatal Depression Scale (EPDS).
 - **Description of the tool**
The tool was divided into 3 parts:

I. Registration form - Age, family type, residential location, religion, education, occupation, marital status, number of children overall, daily water consumption, hobbies, personal habits, and history of chronic illness were some of the demographic factors covered in the semi-structured interview form.

II. Psychological Scales –

Section I. The Scale of Mindful Attention Awareness (MAAS) is used to assess the mental well-being of subjects. It comprises a compilation of statements pertaining to individuals' daily experiences. The utilization of a 1-6 scale allows for the indication of the frequency or rarity of each experience. Participants were requested to respond based on their actual experiences, rather than their perceived experiences.

Section II. Edinburgh Postnatal Depression Scale (EPDS)- EPDS is utilized to evaluate postnatal depression. Not just how they were feeling, they were also asked to answer how they had felt in the past seven days.

Section III. Social Phobia Scale- This form evaluates participants' social well-being. They were instructed to check the box next to each question that best describes how much they believe each assertion to be true for them at the specified time.

Section IV. The Warwick-Edinburgh Mental Well-being Scale-WEMWBS, encompasses various indicators of emotions and thoughts. This scale is designed to assess an individual's mental well-being in a comprehensive and reliable manner. The box that best summarizes a subject's experience with each during the last two weeks was asked to be checked.

Section V. Eating Attitude Test (EAT-26) the form had to be filled out completely, honestly, and accurately by the participants. No response was correct or incorrect.

Section VI. It consists of behavioral questions as per their experiences in the past six months.

III. Training module on Mindfulness-Based Program

The training module consists of all the details of mindfulness program such as guidelines to practice, benefits of program, preparation and techniques of Mindfulness. A module on Mindfulness-Based Program was prepared by the investigator after reviewing related literatures. Some of the points included in the training module were, introduction and benefits of mindfulness based program.

Guidelines to practice, preparations and techniques such as mindfulness yoga, exercises, mindful eating, meditation, stress relieving and self-introspection exercises were explained in detail.

- **Validity of the tool** - It is a crucial aspect to consider when evaluating the effectiveness and reliability of any tool. The guide and specialists from various disciplines including the statistician were consulted to determine the tool's validity.
- **Reliability of the tool**- The term "reliability" refers to a research tool's capacity to produce repeatable results. Reliability of the tool was carried out among 50 young mothers.
- Mindful Attention Awareness Scale (MAAS) is the standardized tool. Its reliability Cronbach's alpha score was $r = 0.760$.
- Edinburgh Postnatal Depression Scale is the standardized instrument. The reliability (Cronbach's alpha) of EPDS was 0.79 [95].
- The Social Phobia Scale is the standardized scale for measuring social phobia. It has shown good reliability; Cronbach's α score was = 0.92 [96].
- Warwick-Edinburgh Mental Well-being Scale-WEMWBS offers great content validity. Its Cronbach's alpha score was $\alpha = 0.87$ [97].
- EAT-26 in the general population and in patients Eat 26 scale be very reliable, and its Cronbach's alpha score was = 0.91 [98].
- **Formulation of the final draft**- After evaluating the tools accuracy and dependability, the final draft was prepared.

3.17 Pilot Study

Furthermore, to delve deeper into the research topic, a pilot study was carried out in addition to the preliminary study. Investigator meticulously handpicked a cohort of 50 participants to ensure the study's validity and reliability. This pilot study spanned from January 2021 to March 2021, allowing for a comprehensive exploration of the subject matter.

- Oral consent forms were taken from all the participants before initiating the study.
- All the objectives, benefits, and guidelines of the study were comprehensively explained to the participants.
- In order to ensure the ethical conduct of our research, oral consent was taken from each participant before commencing the study. By obtaining their explicit agreement, it was aimed to establish a foundation of trust and respect throughout the research process.
- Furthermore, we took great care in providing a comprehensive explanation to the participants regarding the purposes, usefulness, as well as the do's and don'ts of the study. This ensured that they were well-informed and fully aware of the significance and potential impact of their participation.
- By prioritizing transparency and clarity, a professional and ethical environment was maintained, where participants felt empowered and knowledgeable about their involvement in the study.
- The same methodology was used as the main study.
- Findings were computed based on selected statistical methods. This experimental study demonstrated the practicability of the chosen technique and tools. The findings were finalized in order to move forward with the main study.

3.17.1 Procedure and Period of data collection

The data collection for the primary study was conducted between January 2021 to July 2021, as well as from October 2022 to December 2022.

During these periods, comprehensive data was gathered to support the main study.

Pre-test

- Trainers and investigators briefly introduced the goals of the study and advantages to participants after thoroughly explaining its objectives.
- Data was collected after obtaining oral consent from the young mothers.
- All the participants were made comfortable and relaxed in a familiar environment.

- All the participants were assured confidentiality of the information before data collection.
- Privacy was provided while collecting the data.
- The participants were asked to complete questionnaires before starting a four-week mindfulness-based program.
- Young mothers' stress levels, psychosocial well-being, and mindfulness were assessed using rating scales in both the test group and control group.
- It usually took between ten and twenty minutes to conduct the interview.
- Participants responded to all the items.

Intervention (Test)

- After the pre-test, the investigator demonstrated mindfulness-based practices to the test group.
- The investigator organized training or follow-up at a convenient time. Two times were planned and scheduled for the training session: 2.30 to 3.30 pm or 7.30 to 8.30 pm.
- Five training days lasting 10 to 15 minutes each day were provided in the form of recorded video.
- Four weeks of nonstop practice time was required from the participants.
- Over four weeks, participants were required to complete tasks presented via video on the same day for 15 to 20 minutes whenever they had spare time. They were also allowed to complete activities for the day.
- The investigator gathered participants' daily practice reports through WhatsApp. Furthermore, online follow-up sessions on zoom were also scheduled for 30-60 minutes weekly.
- The control group received no intervention and continued their weekly routine as usual.

Post-test

- As per the assessment strategy Post-tests were given to both the test and control group after four weeks of practice. Participants were made comfortable and relaxed in a familiar environment.
- The confidentiality of the information was assured to all participants before the program began.

- The subjects were requested to complete same questionnaires once again after the completion of a four-week mindfulness-based program.
- Young mothers' stress levels, psychosocial well-being, and mindfulness were assessed using rating scales in both the test and control group.
- Interview lasted generally between 15 and 20 minutes.
- Participants responded well to all the items.

Feasibility and acceptability- The completion rate and attendance report were used to gauge feasibility. The everyday routines were also documented. The semi-structured interview and questionnaire qualitative data, in which participants discussed their experiences with the program and offered feedback, were used to gauge acceptability. Moreover, the reasons for refusal to participate were recorded [99].

3.18 Ethical Consideration

Before the administration of research tool participants were explained about purpose of the study. Participants were free to withdraw from the study at any time, as participation was entirely voluntary. Furthermore, it is worth mentioning that no financial incentives were provided for the participation. Oral consent was taken from all the subjects, ensuring their understanding and agreement to participate.

CHAPTER 4
RESULTS AND DISCUSSION

4.0 Analysis and Interpretation of Data

The purpose of this study was to evaluate the role and efficacy of a mindfulness-based program in improving the psychological well-being of young mothers. The research aimed to investigate the impact of this program on the mental health of this specific demographic. By examining the potential benefits of mindfulness practices, this study sought to contribute to the existing body of knowledge on enhancing the psychological well-being of young mothers. A sample of 223 young mothers in India were analyzed and interpreted in this chapter.

Data analysis and interpretation in psychological research play a pivotal role in extracting meaningful insights from raw data. Aim is to understand human behavior and mental processes, through the application of various statistical techniques to analyze large datasets collected through surveys, experiments, or observations. From descriptive statistics such as means, standard deviations, and frequencies to inferential methods like t-tests, ANOVA, or regression analyses, these techniques help researchers identify patterns and relationships within the data. Furthermore, by interpreting these statistical results in the context of the research question or hypothesis, one can draw conclusions about the phenomena under investigation. However, it is crucial to exhibit caution when interpreting data findings as they might be influenced by confounding variables or chance. Additionally, transparent reporting practices concerning data cleaning procedures and potential bias are essential for ensuring the credibility and reproducibility of psychological research. Overall, meticulous data analysis and interpretation allow making evidenced- based claims and contributing to the advancement of our understanding of human behavior.

The data was collected, organized, coded, tabulated, and analyzed using non-parametric tests to meet the objectives and interpret the results as follows:

Section A Demographic characteristics of young mothers under control and test group

Table 4.1 Distribution of subjects as per their occupation in control group

Occupation	Frequency	Percent
Business	17	15%
Home-maker	25	23%
Professional	18	16%
Service/ salaried	28	25%
Not highly employed	23	21%
Total	111	100

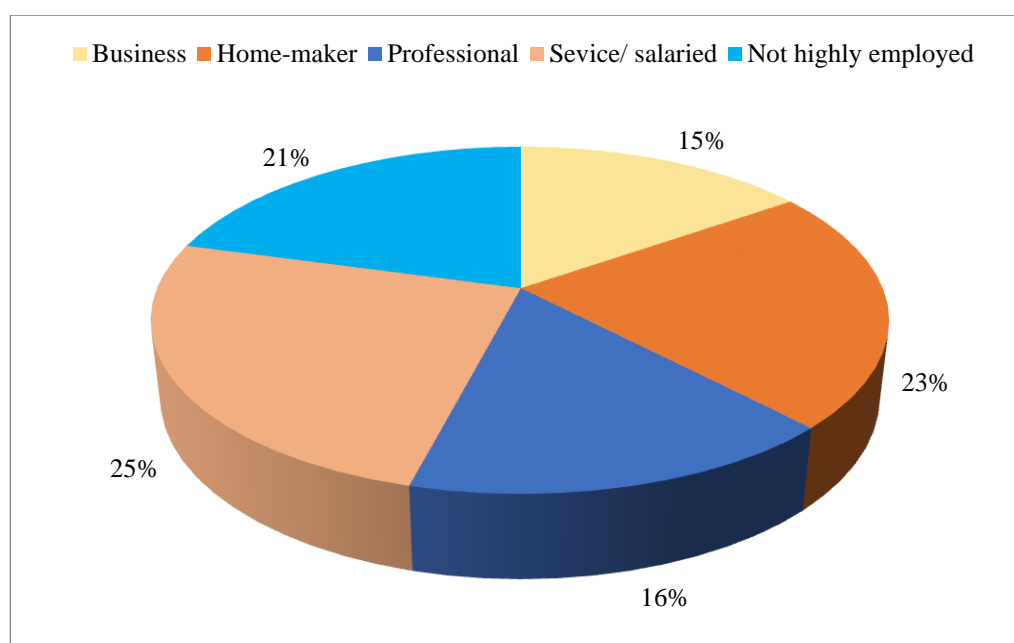


Fig 4.1 Percentage distribution of subjects as per their occupation in control group

The distribution of young mothers as per their occupation in the control group shows that the highest percentages of women, 25% belonged to the service class or were salaried. After that, 23% were homemakers, 21% of women were not highly employed, 16% were professional, and 15% of mothers belonged to the business category (Fig 4.1).

Table 4.2 Distribution of subjects as per their occupation in test group

Occupation	Frequency	Percent
Business	19	15%
Home-maker	35	32%
Professional	21	19%
Service/ salaried	29	26%
Not highly employed	8	7%
Total	112	100

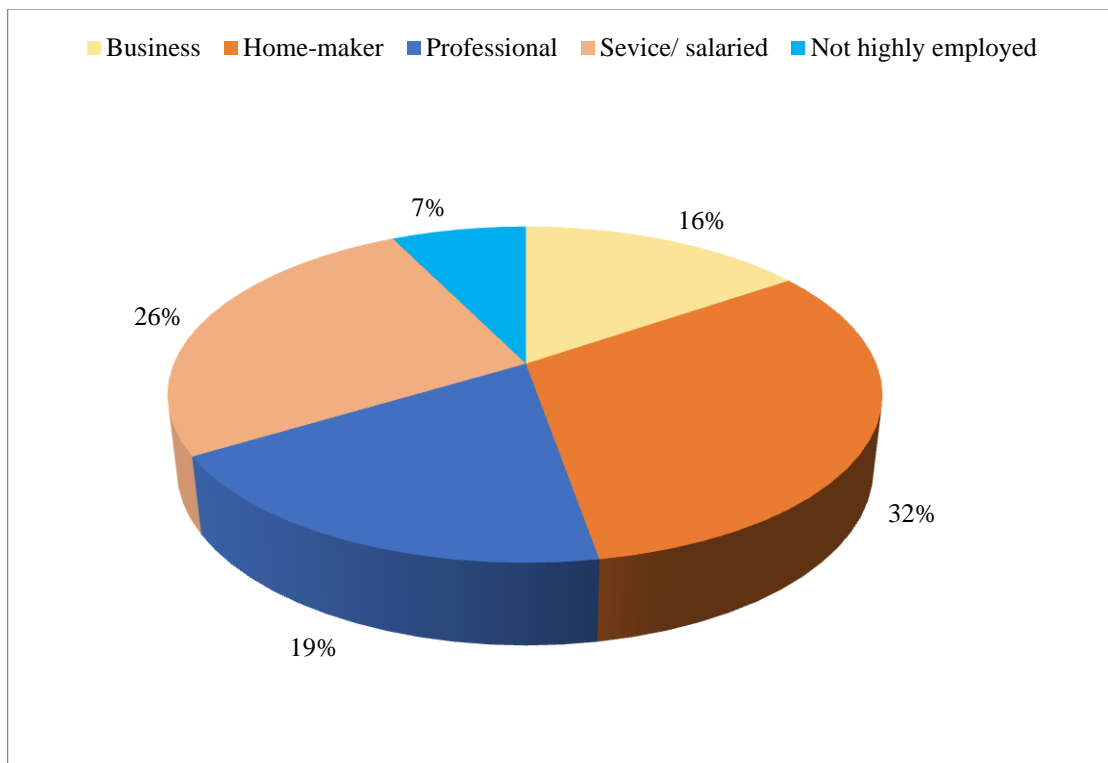


Fig 4.2 Percentage distribution of subjects as per their occupation in test group

The distribution of young mothers in the test group shows the highest percentage of mothers; 32% were homemakers, 26% were doing service or salaried, 19% were professional, 15% were doing business, and 7% were not highly employed (Fig 4.2).

Table 4.3 Distribution of subjects as per their illness in control group

Illness	Frequency	Percent
No	80	72%
Yes	31	28%
Total	111	100

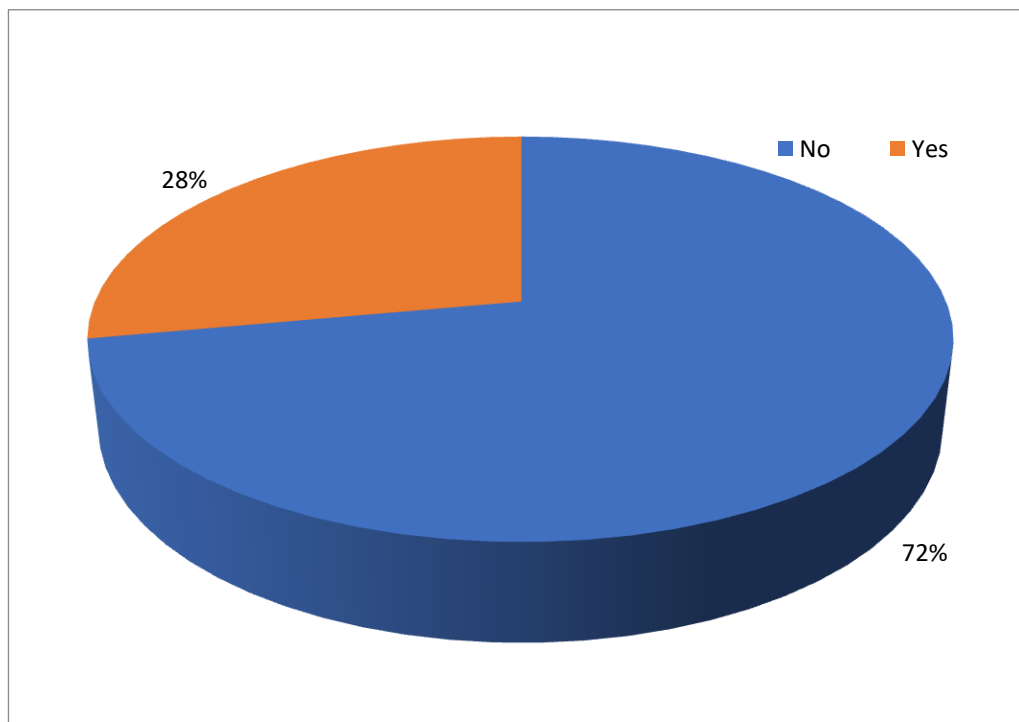


Fig 4.3 Percentage distribution of subjects as per illness in control group

Percentage-wise distribution of young mothers in the control group shows that 72 % of mothers did not have any illness, and 28% of mothers were suffering from some or other type of illness (Fig 4.3).

Table 4.4 Distribution of subjects as per illness in test group

Illness	Frequency	Percent
No	83	75%
Yes	29	25%
Total	112	100

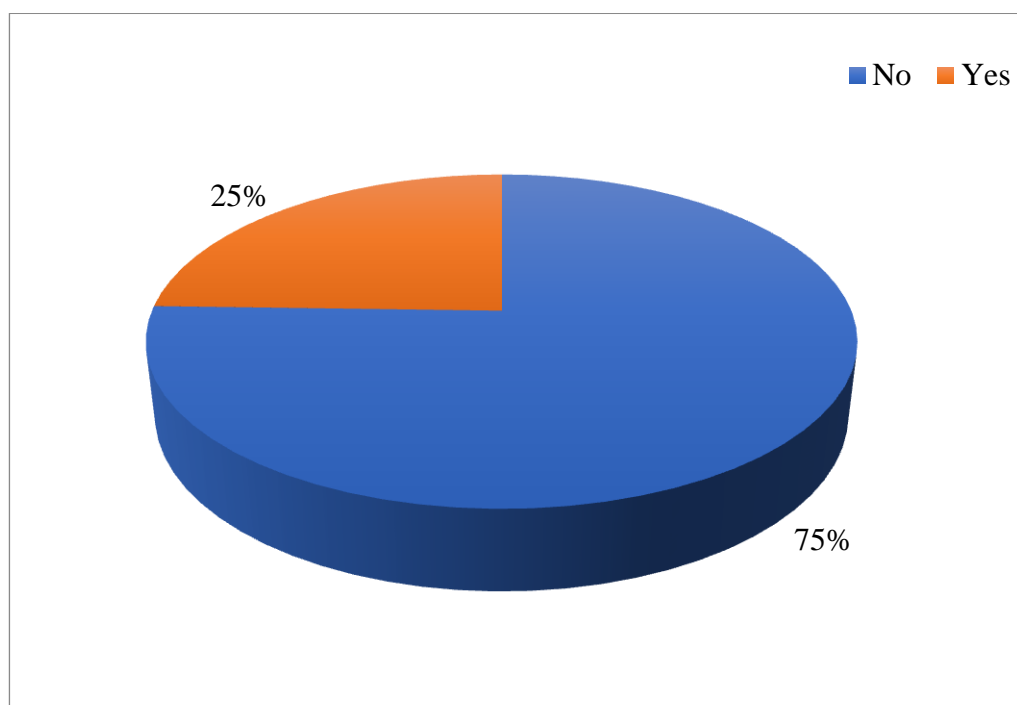


Fig 4.4 Percentage distribution of subjects as per illness yes /no in test group

The percentage-wise distribution of subjects according to the illness under the test group shows that the highest percentage, 75% of mothers, were not having any illness, and 25% were reported to be ill (Fig 4.4).

Table 4.5 Distribution of subjects as per ongoing medication in control group

Ongoing medications	Frequency	Percent
No	88	79%
Yes	23	21%
Total	111	100

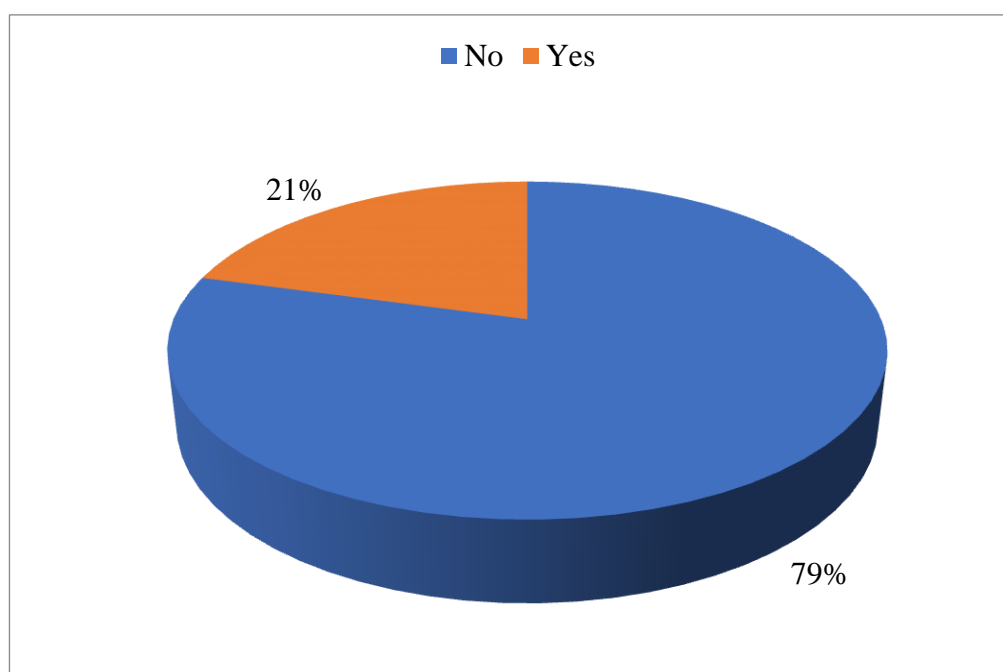


Fig 4.5 Percentage distribution of subjects as per ongoing medication in control group

The percentage-wise distribution of young mothers in the control group shows the highest numbers of mothers 79% were not taking any medicines, and 21% of mothers were on medications (Fig 4.5).

Table 4.6 Distribution of subjects as per ongoing medication in test group

Ongoing Medications	Frequency	Percent
No	99	90%
Yes	13	10%
Total	112	100

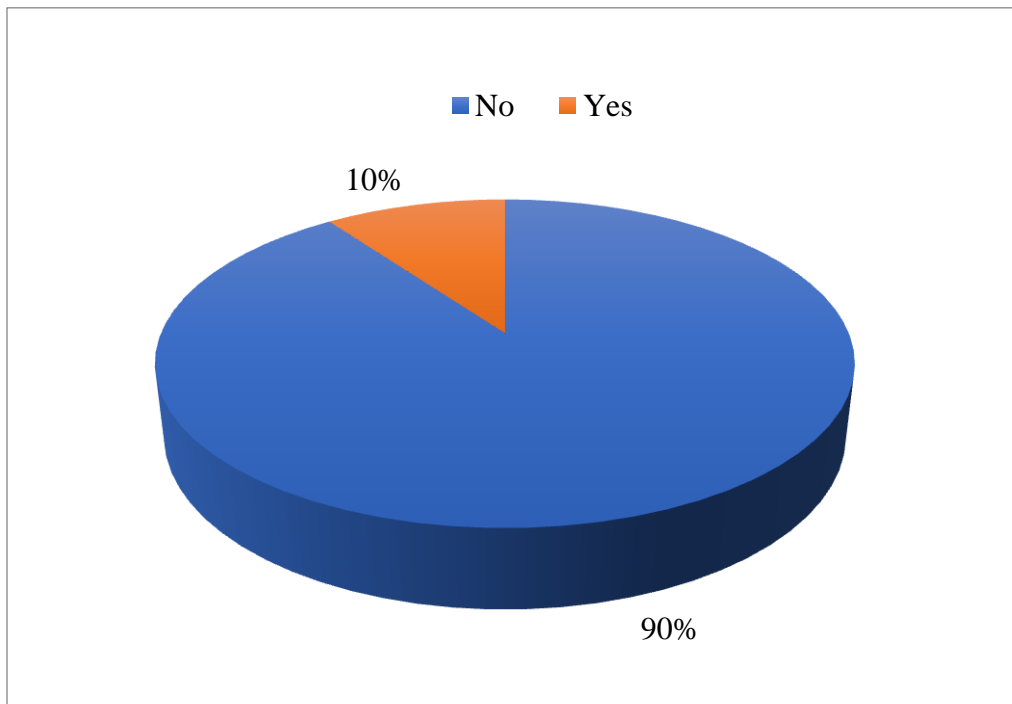


Fig 4.6 Percentage distribution of subjects as per ongoing medications in test group

As per the percentage distribution of young mothers, the highest proportion of women under the test group 90%, were not taking any medications, and 10% were ongoing medications (Fig 4.6).

Table 4.7 Distribution of subjects as per type of family in control group

Type of family	Frequency	Percent
Nuclear family	81	73%
Joint family	30	27%
Total	111	100

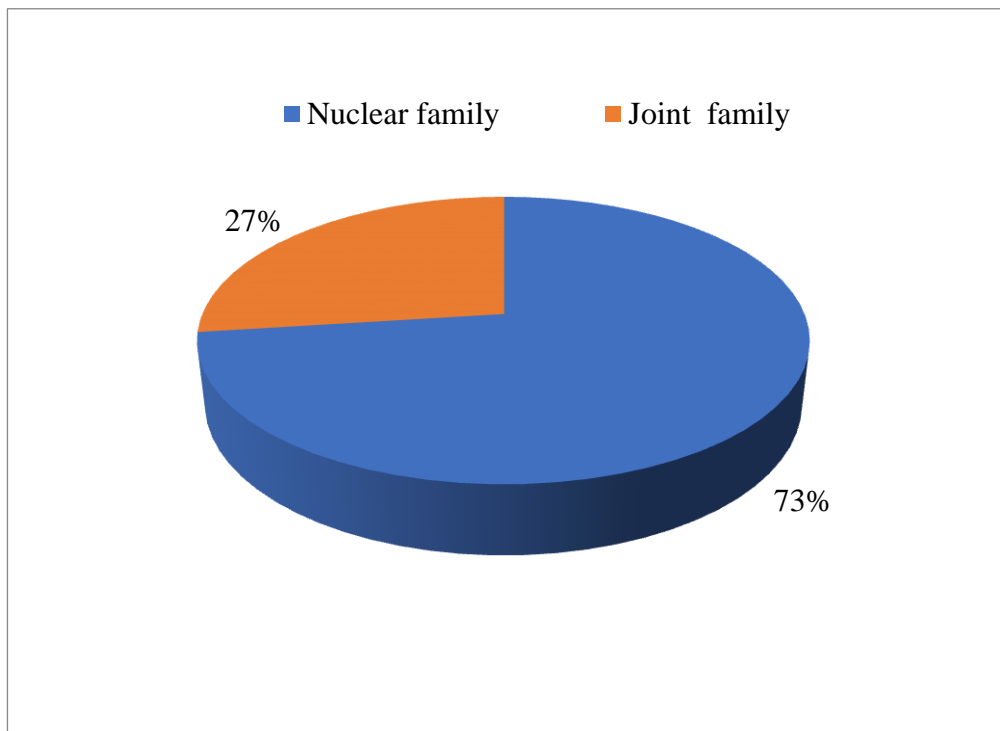


Fig 4.7 Percentage distribution of subjects as per type of family in control group

The percentage distribution of subjects under the control group shows the highest, 73% of mothers were living in the nuclear family, and lowest, 27% were in a joint family (Fig 4.7).

Table 4.8 Distribution of subjects as per type of family in test group

Type of family	Frequency	Percent
Nuclear family	79	70%
Joint family	33	30%
Total	112	100

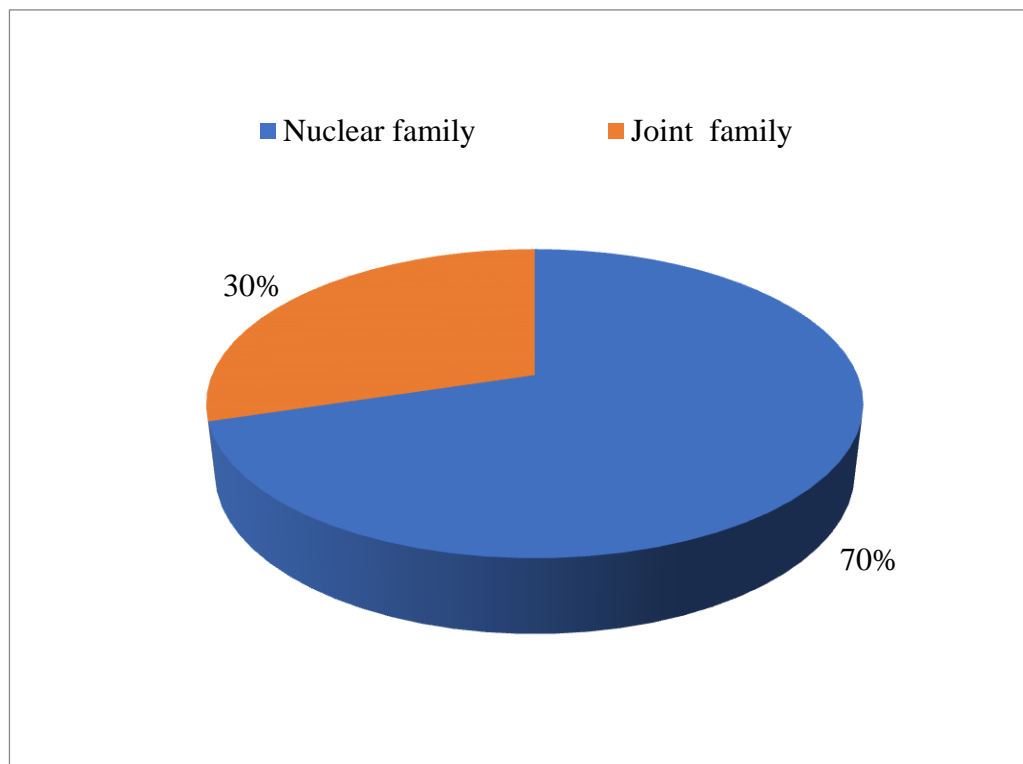


Fig 4.8 Percentage distribution of subjects as per type of family they live in test group

The percentage distribution of young mothers under the test group shows highest, 70% of women live in the nuclear family, and the lowest percentage, 30% live in a joint family (Fig 4.8).

Table 4.9 Distribution of subjects as per the marital status in control group

Marital Status	Frequency	Percent
Divorced	4	3%
Married	104	94%
Widowed	3	3%
Total	111	100

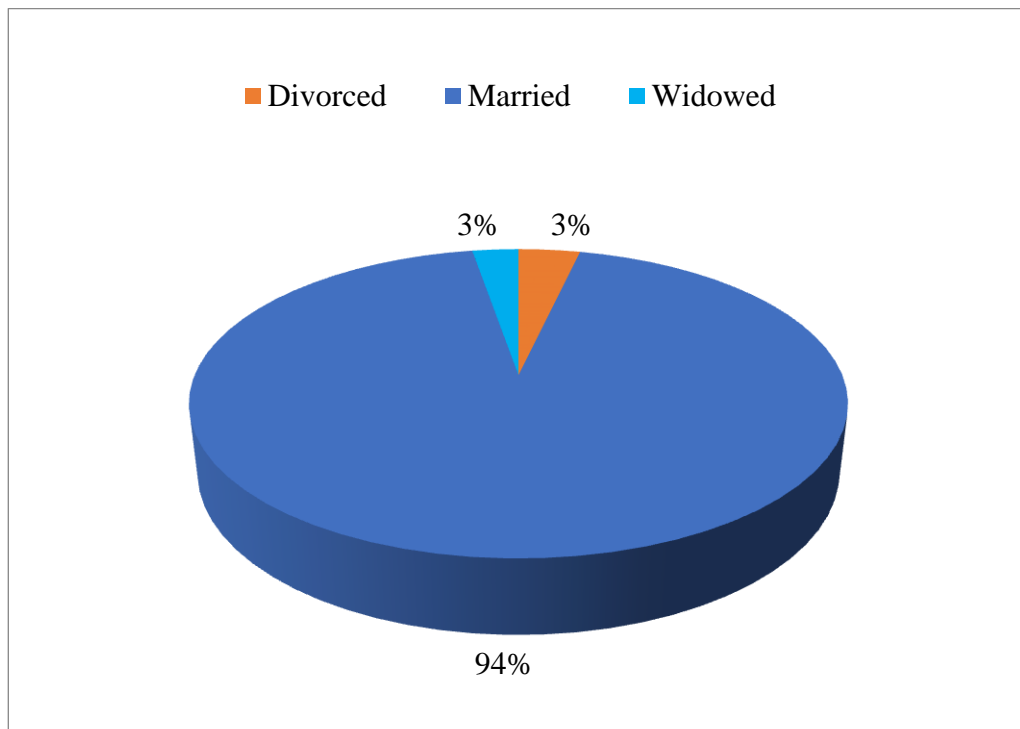


Fig 4.9 Percentage distribution of subjects as per the marital status in control group

The percentage distribution of young mothers in the control group shows the highest, 94% of women were married, and the lowest percentage, 3%, was divorced, and 3% were a widow (Fig 4.9).

Table 4.10 Distribution of subjects as per the marital status in test group

Marital Status	Frequency	Percent
Divorced	6	5%
Married	103	93%
Widowed	3	2%
Total	112	100

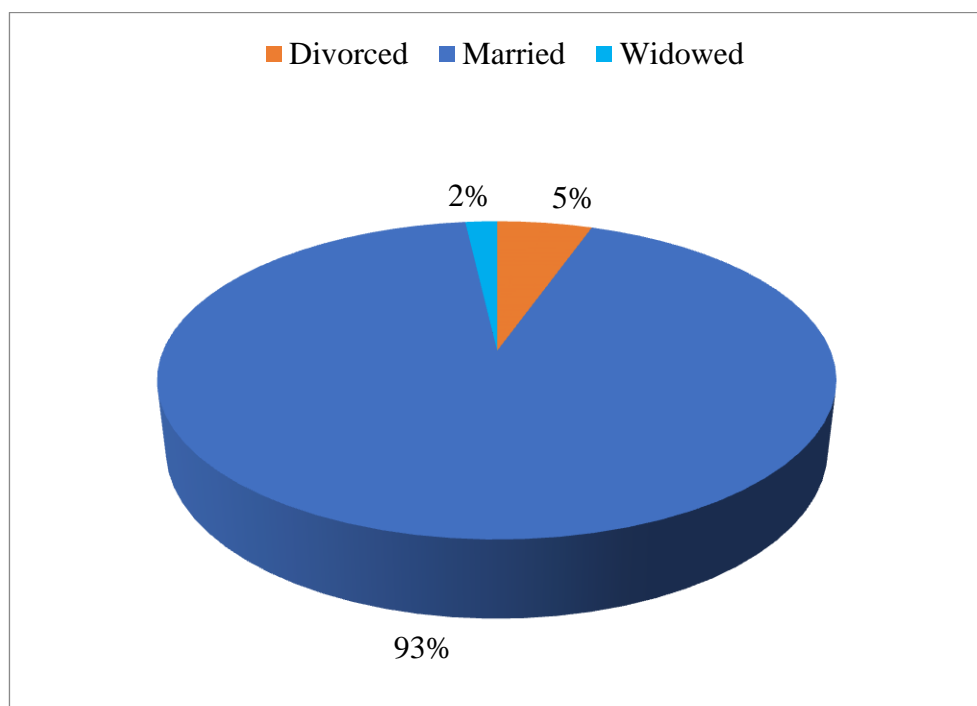


Fig 4.10 Percentage distribution of subjects as per marital status in test group

The percentage distribution of subjects among the test group shows the highest, 93% were married, the lowest, 2% were widows, and 5% were divorced (Fig 4.10).

Table 4.11 Distribution of subjects as per religion in control group

Religion	Frequency	Percent
Hindu	107	96%
Muslims	4	4%
Christian	0	0%
Total	111	100

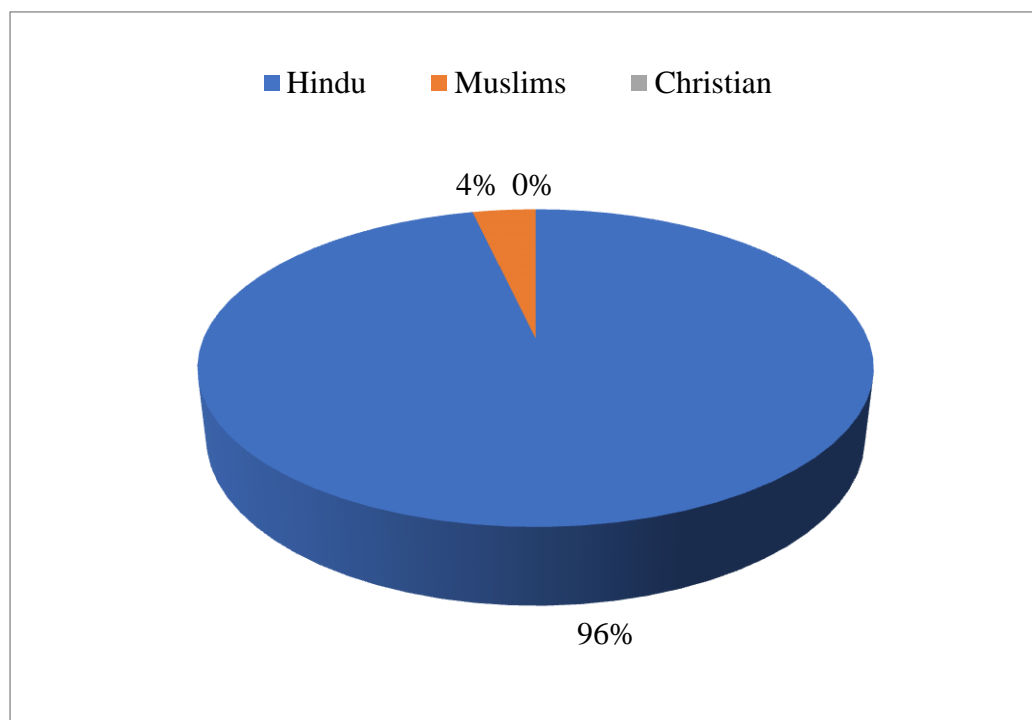


Fig 4.11 Percentage distribution of subjects as per religion in control group

The percentage distribution among young mothers in the control group shows that the highest, 96% were Hindu, and lowest, 4% were Muslims, and 0% was Christian. Hence most of the subjects were Hindu and Muslim only (Fig 4.11).

Table 4.12 Distribution of subjects as per religion in test group

Religion	Frequency	Percent
Hindu	103	94%
Muslims	6	4%
Christian	3	2%
Total	112	100

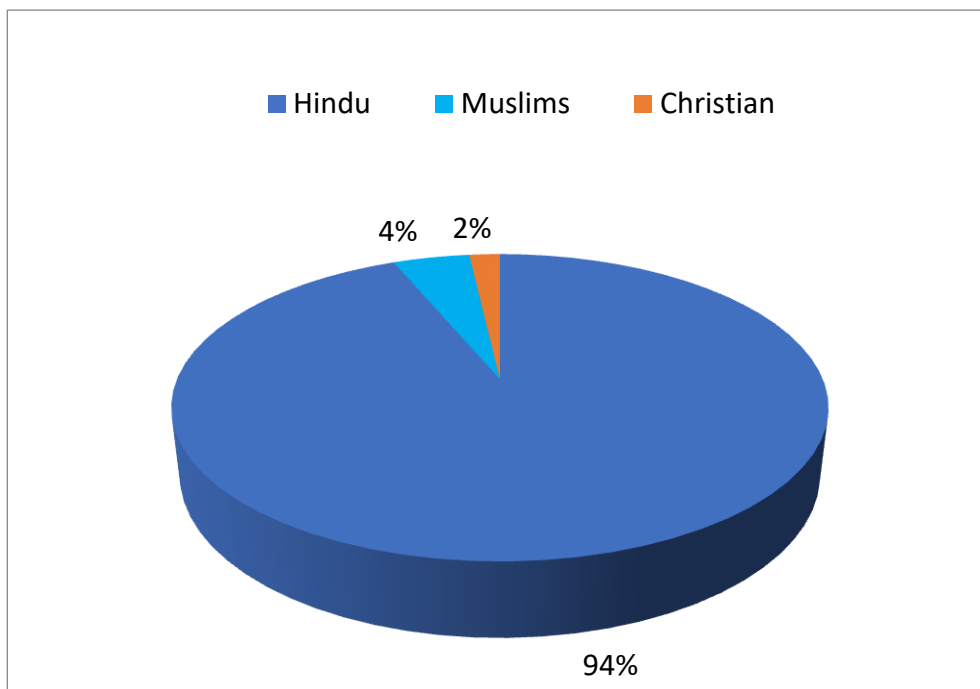


Fig 4.12 Percentage distribution of subjects as per religion in test group

The percentage distribution of young mothers among the test group shows that the highest, 94% were Hindu, and lowest, 2% were Christian, and 4% were Muslims (Fig 4.12).

Table 4.13 Distribution of subjects as per education level in control group

Qualification	Frequency	Percent
Diploma/ Graduation	79	71%
Doctorate/ PhD	4	4%
Post-graduation	21	19%
Upto High school	7	6%
Total	111	100

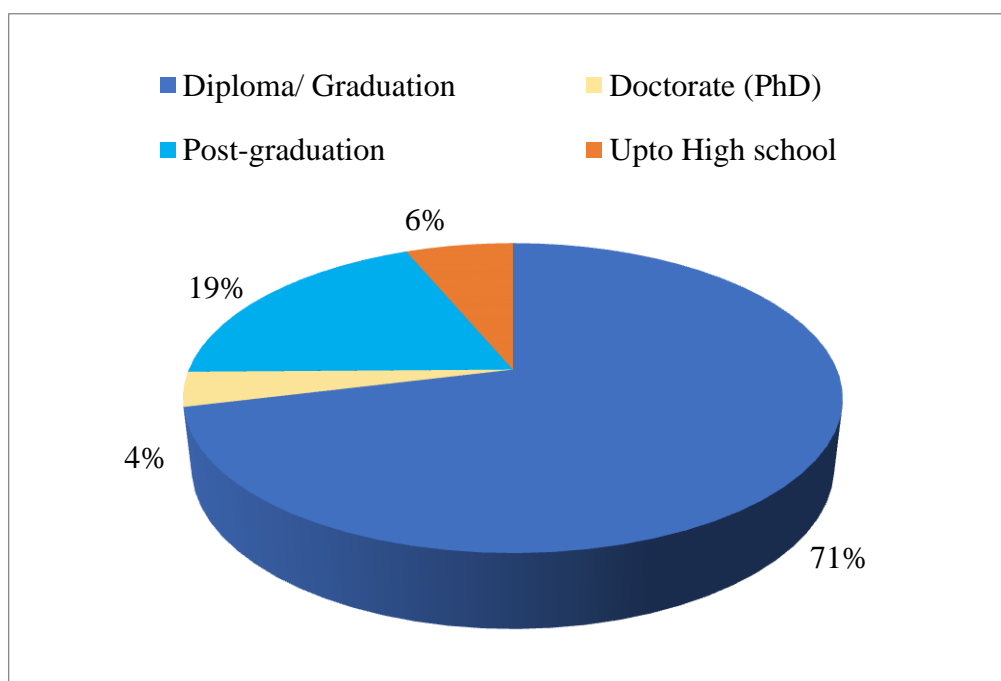


Fig 4.13 Percentage distribution of subjects as per education level in control group

The percentage-wise distribution of young mothers under the control group shows that the highest, 71% had done graduation or a diploma, 19% were postgraduate, 6% were educated up to high school and the lowest 4% were Ph.D. or doctorate (Fig 4.13).

Table 4.14 Distribution of subjects as per education level in test group

Qualification	Frequency	Percentage
Diploma/ Graduation	68	62%
Doctorate (PhD)	9	6%
Post-graduation	29	26%
Upto High school	7	6%
Total	112	100

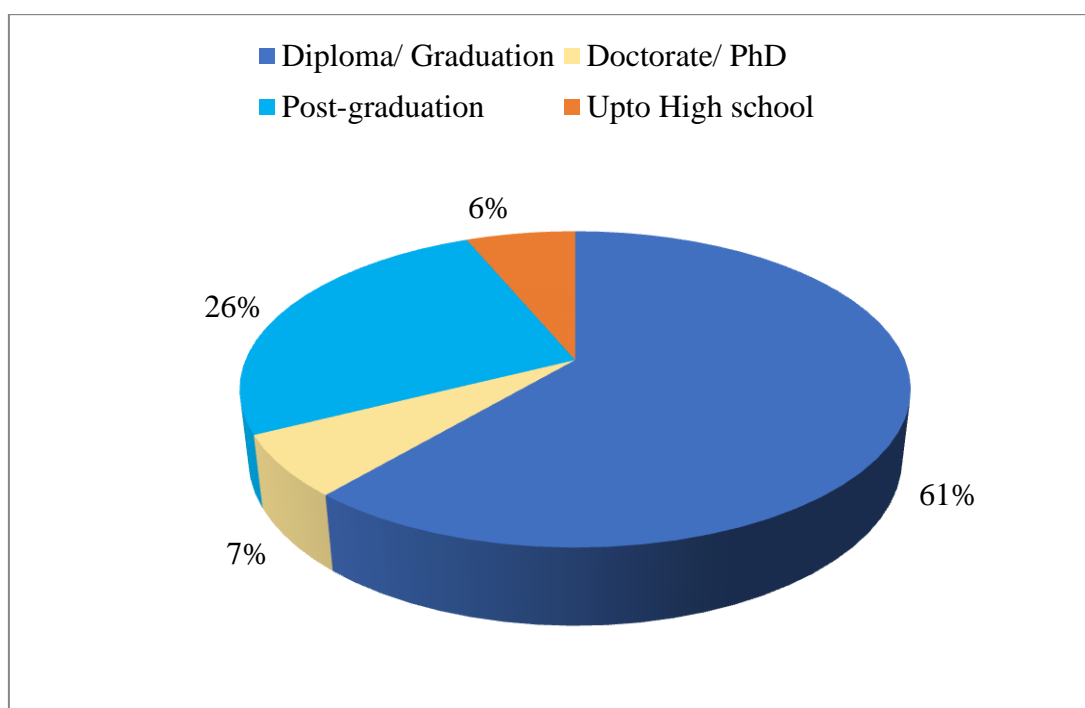


Fig 4.14 Percentage distribution of subjects as per education level in test group

The percentage distribution among young mothers in the test group shows highest, 61% diploma /graduates, 26 % were postgraduates, and 7% were doctorate or Ph.D. On other hand the lowest, 6% were educated up to high school. (Fig 4.14).

Table 4.15 Distribution of subjects as per number of children in control group

No of children	Frequency	Percentage
One	101	91%
Two	6	5%
More than two	4	4%
Total	111	100

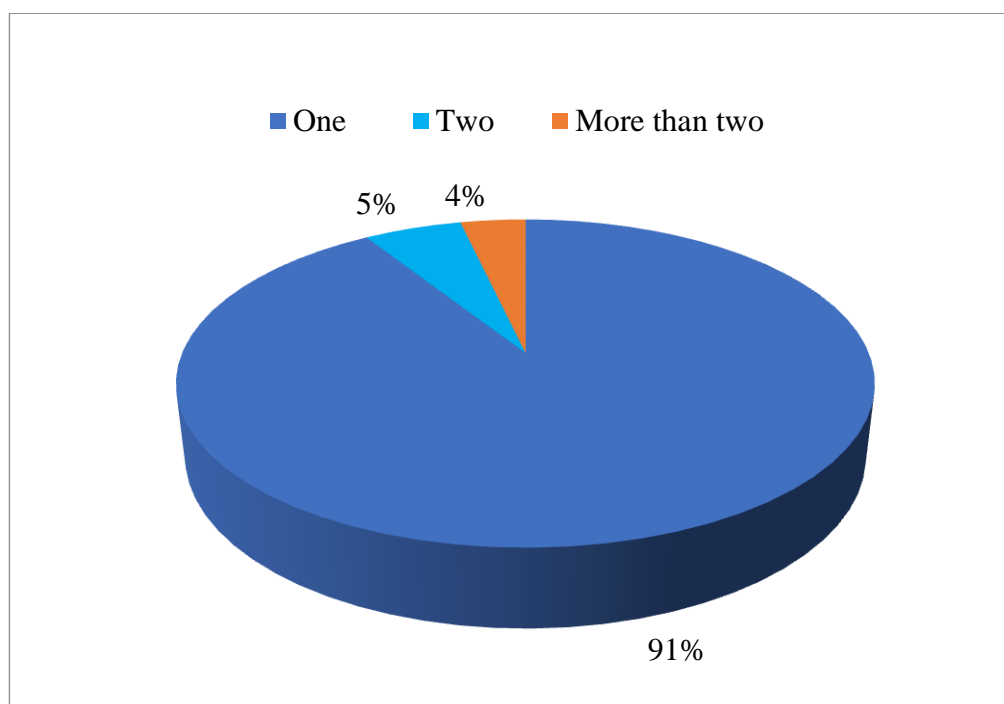


Fig 4.15 Percentage distribution of subjects as per number of children in control group

The percentage distribution among young mothers in the control group shows that 91 % of women had one child. On the other hand, 5 % had two children, and the lowest 4 % had more than two children (Fig 4.15).

Table 4.16 Distribution of subjects as per number of children in test group

No of children	Frequency	Percentage
One	83	74%
Two	19	18%
More than two	10	8%
Total	112	100

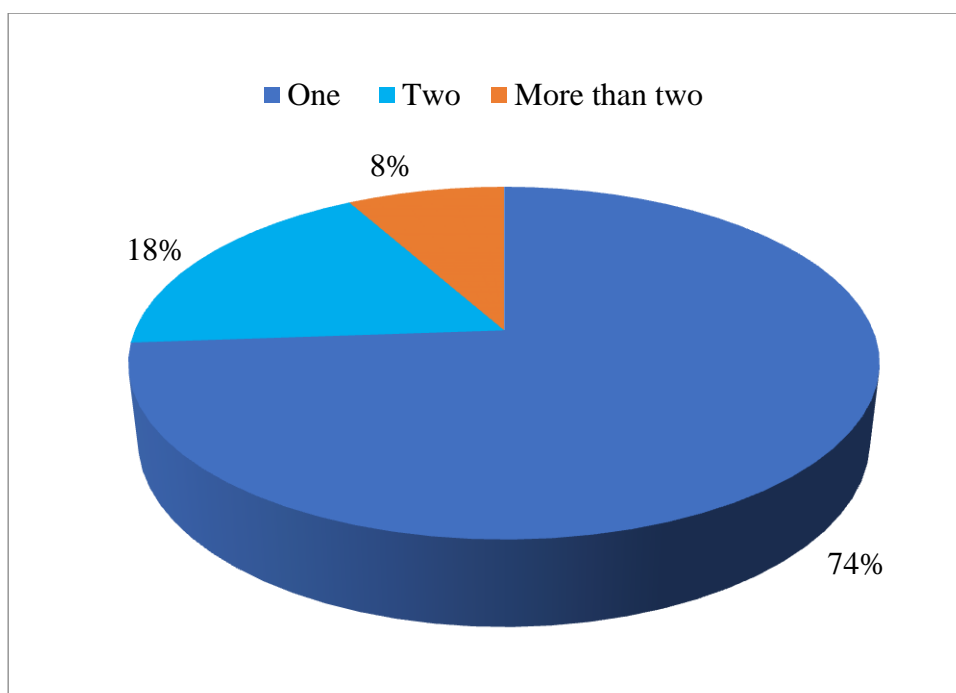


Fig 4.16 Percentage distribution of subjects as per number of children in test group

The percentage distribution among young mothers in the test group shows that 74 % of women had a single or one child. On the other hand, the lowest 8% had more than two children, and 18% had two children (Fig 4.16).

Table 4.17 Distribution of subjects as per residential area in control group

Residential Area	Frequency	Percent
Rural	5	5%
Urban	106	95%
Total	111	100

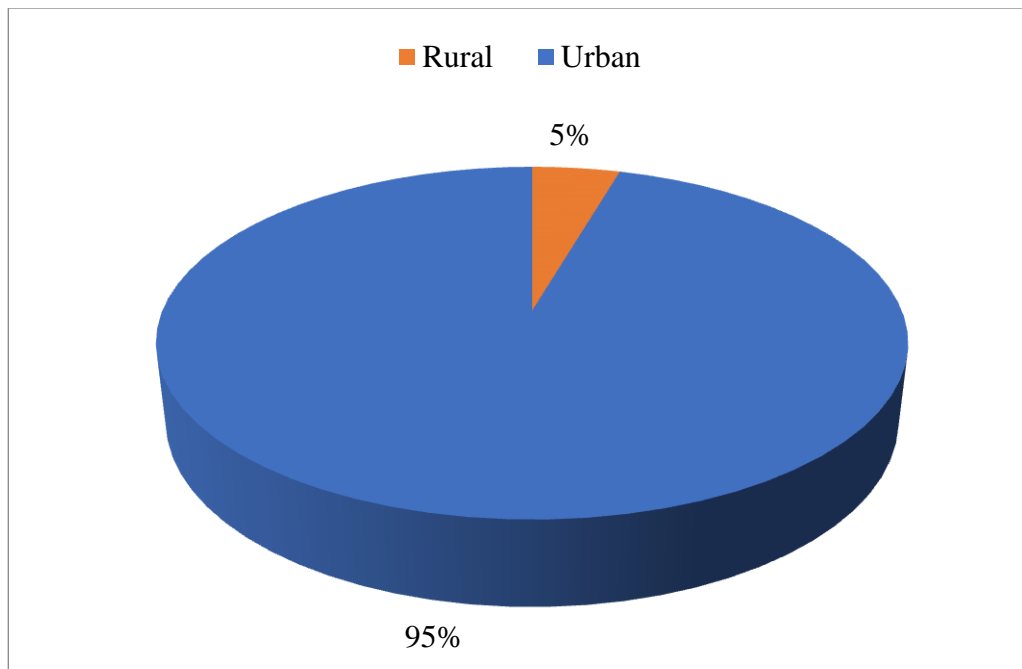


Fig 4.17 Percentage distribution of subjects as per the residential area in control group

The percentage distribution among young mothers in the control group shows that the highest 95% were living in urban areas, and the lowest 5% belonged to rural areas (Fig 4.17).

Table 4.18 Distribution of subjects as per residential area in test group

Residential Area	Frequency	Percent
Rural	10	7%
Urban	102	93%
Total	112	100

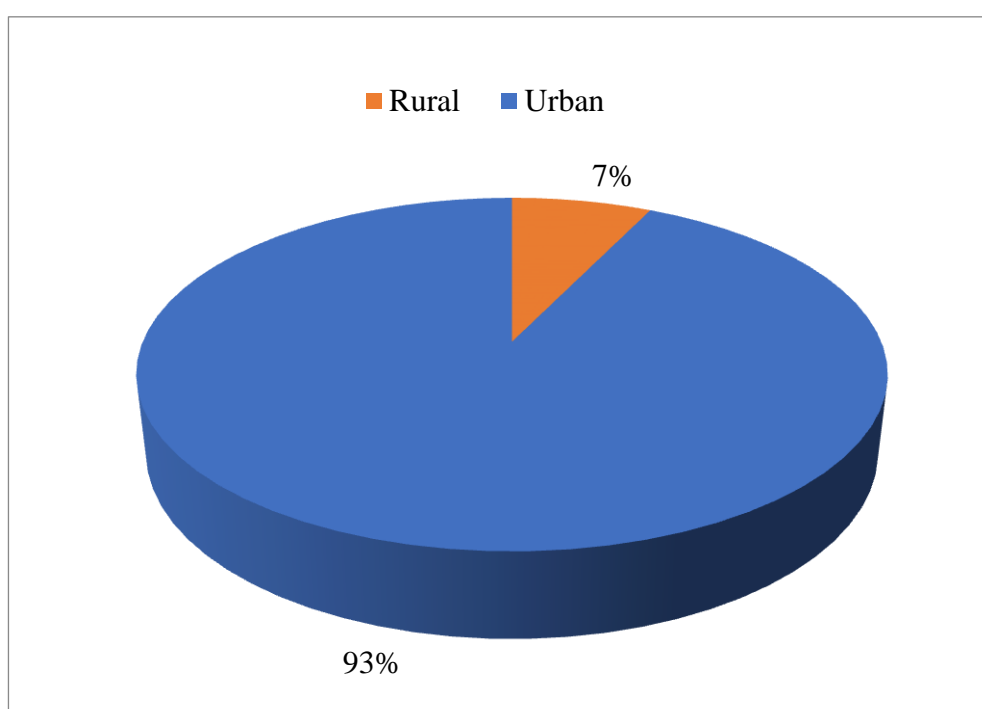


Fig 4.18 Percentage distribution of subjects as per the residential area in test group

The percentage distribution among young mothers in the test group shows that the highest, 93% of women, belonged to an urban area, and the lowest, 7% belonged to a rural area (Fig 4.18).

Table 4.19 Distribution of subjects as per dietary pattern in control group

Dietary Pattern	Frequency	Percent
Veg	92	83%
Non- Veg	19	17%
Total	111	100

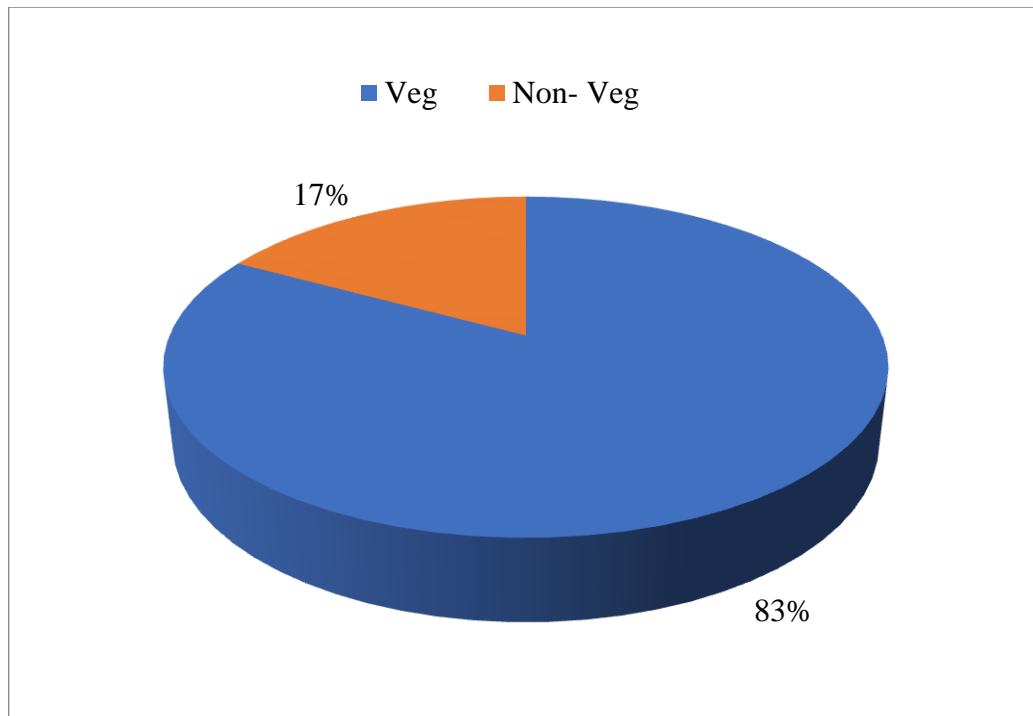


Fig 4.19 Percentage distribution of subjects as per dietary pattern in control group

The percentage distribution among young mothers as per the dietary pattern in the control group shows that the highest, 83% were veg and the lowest, 17% were non-veg (Fig 4.19).

Table 4.20 Distribution of subjects as per dietary pattern in test group

Dietary Pattern	Frequency	Percent
Veg	97	87%
Non- Veg	15	13%
Total	112	100

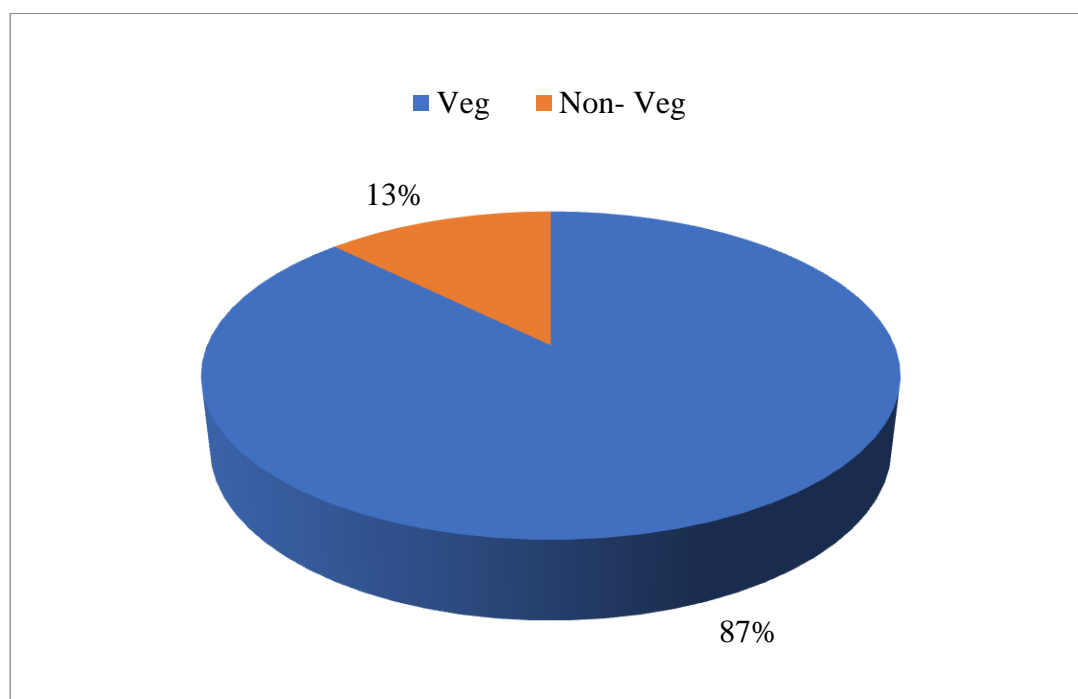


Fig 4.20 Percentage distribution of subjects as per dietary pattern in test group

The percentage distribution among young mothers as per the dietary pattern in the test group shows that the highest, 87% were veg and the lowest, 13% were non-veg (Fig 4.20).

Table 4.21 Distribution of subjects as per daily intake of water in control group

Daily intake of water	Frequency	Percent
1-2 liter	34	31%
1.5-2.5 liter	42	38%
2-3 liter	35	32%
Total	111	100

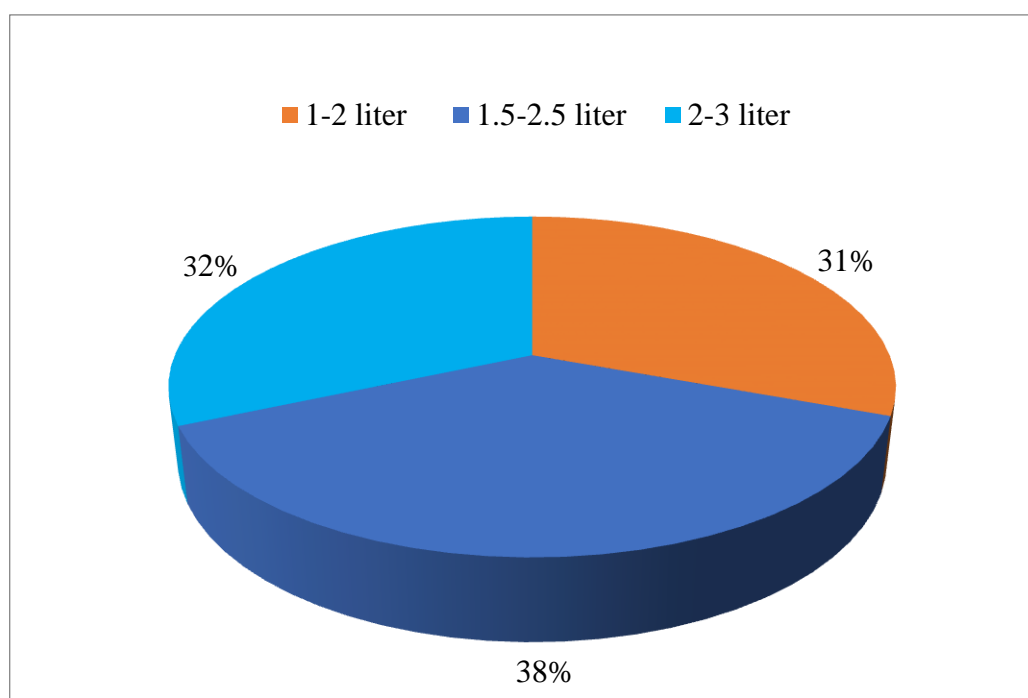


Fig 4.21 Percentage distribution of subjects as per daily intake of water in control group

The percentage distribution among young mothers as per the daily intake of water in the control group shows that the highest, 38% were drinking 1.5-2.5 liter of water, and the lowest, 32% were drinking 2-3 liter, and 31 %, were drinking 1-2 liter water and daily (Fig 4.21).

Table 4.22 Distribution of subjects as per daily intake of water in test group

Daily intake of water	Frequency	Percent
1-2 liter	45	41%
1.5-2.5 liter	28	24%
2-3 liter	39	35%
Total	112	100

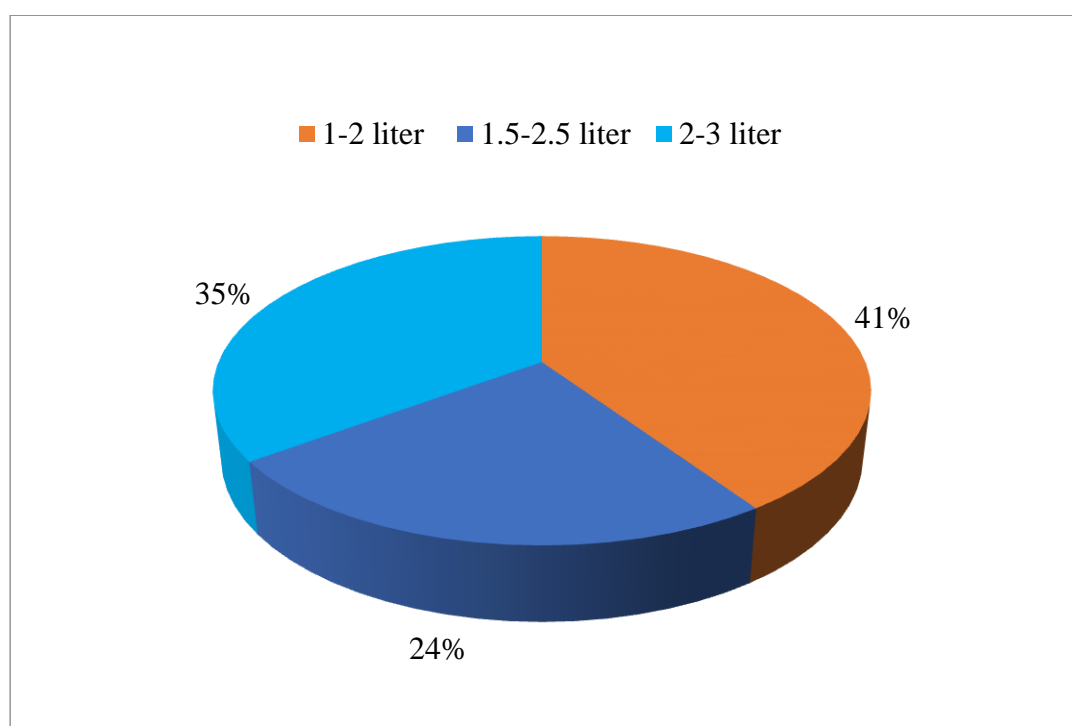


Fig 4.22 Percentage distribution of subjects as per daily intake of water in test group

The percentage distribution among young mothers as per the daily intake of water in the test group shows that the highest, 41 %, were drinking 1-2 liters of water, and 35% were drinking 2-3 liters of water. On the other hand, the lowest 24% were drinking 1.5-2.5 liter, and 31 % were drinking 1-2 liter of water daily (Fig 4.22).

Table 4.23 Distribution of subjects as per hobby in control group

Hobby	Frequency	Percent
Reading books	44	40%
Listening Music	25	23%
Watching TV	11	10%
Dancing	31	28%
Total	111	100

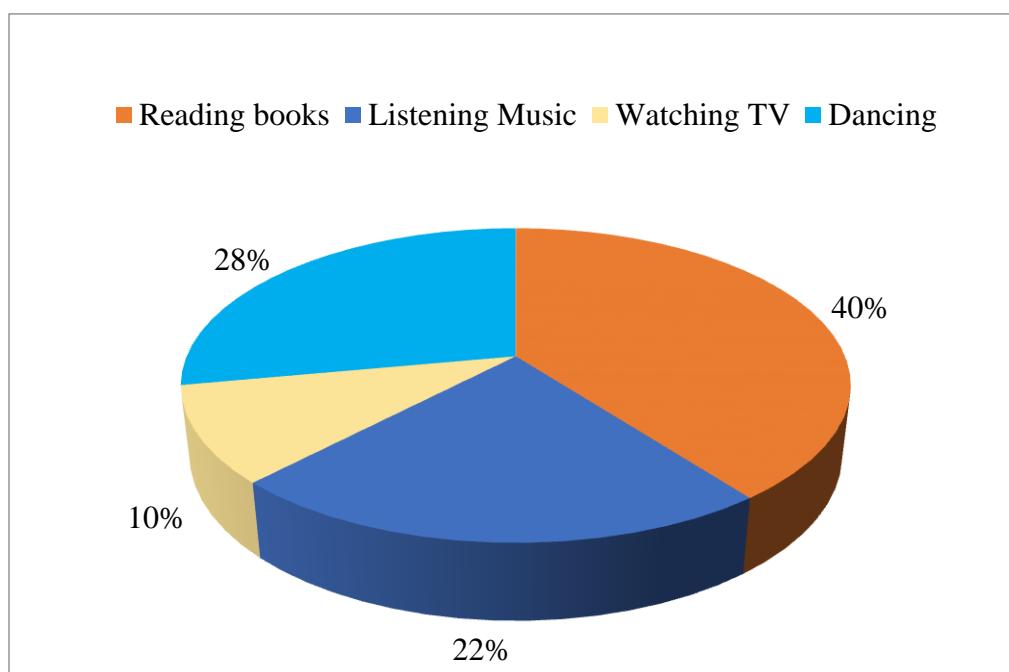


Fig 4.23 Percentage distribution of subjects as per hobby in control group

The percentage distribution of young mothers in the control group as per the hobby shows that the highest 40% liked reading books, 28% liked dancing, 22% liked listening to music, and the lowest 10% liked watching television (Fig 4.23).

Table 4.24 Distribution of subjects as per hobby in test group

Hobby	Frequency	Percent
Reading books	32	29%
Listening Music	36	32%
Watching TV	17	15%
Dancing	27	23%
Total	112	100

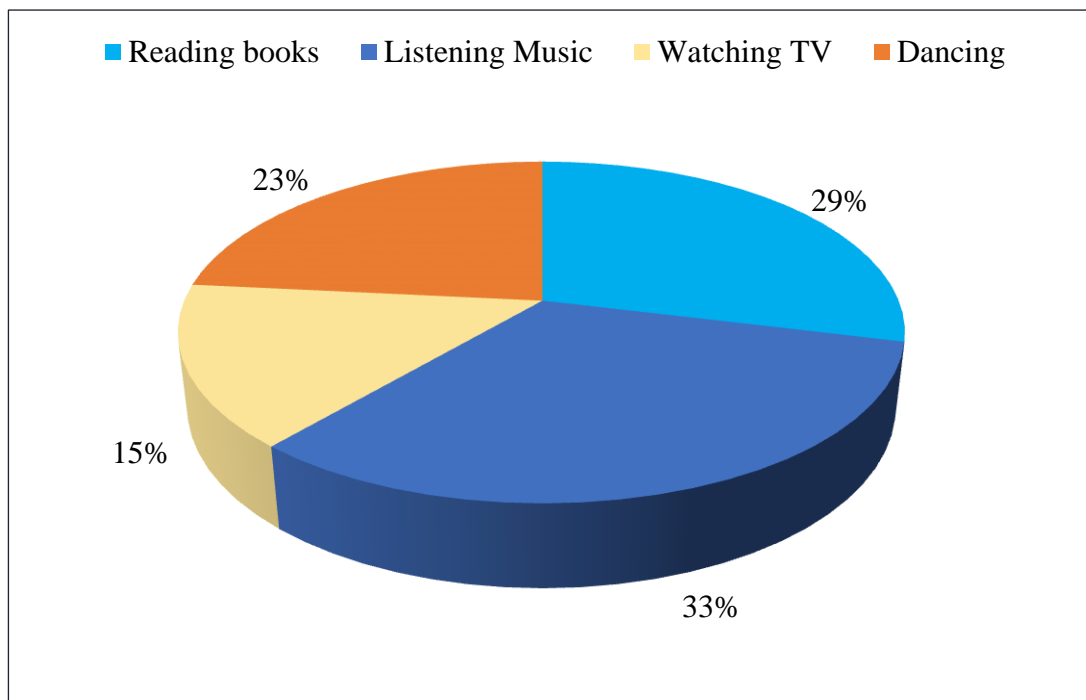


Fig 4.24 Percentage distribution of subjects as per hobby in test group

The percentage distribution of young mothers in the test group as per hobby shows that the highest, 33% liked listening music, 29% liked reading books, 23% liked dancing and the lowest 15% liked watching television (Fig 4.24).

Section B Comparison of Mean age between test and control group

Table 4.25 Inter group comparison of mean age

	Group	N	Mean	Std. Deviation	Std. Error Mean	T value	p value of t test
Age	Test	112	34.60	6.612	0.625	1.843	0.067#
	Control	111	33.29	3.530	0.335		

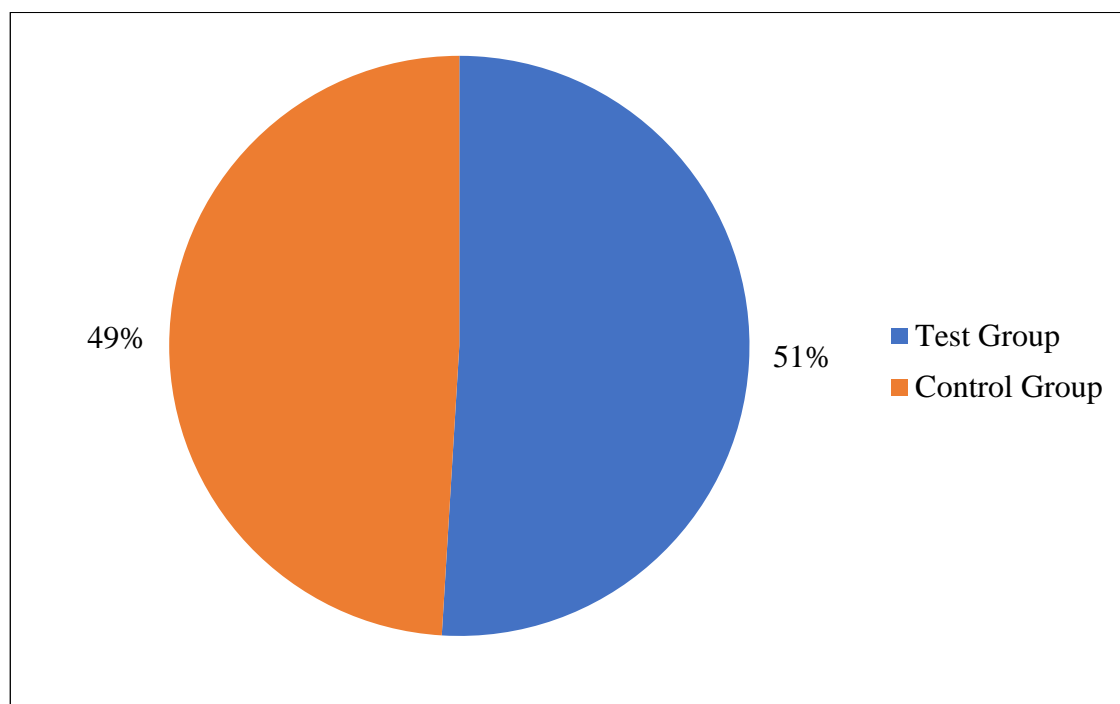


Fig 4.25 Percentage Inter group comparison of mean age

There was a statistically non-significant difference seen for the values between the groups ($p > 0.05$). Inter-group comparison of demographic data was made to know whether the groups were similar at baseline after randomization; Matched groups (similar groups) can be ideally compared. This also means that these independent demographic variables are less likely to affect the outcome (Fig 4.25).

Table 4.26 Percentage distribution of subjects as per the age of children

Children Age	Control Group	Test Group
0- 1.5 Years	21	25
1.5 - 3 Years	78	74

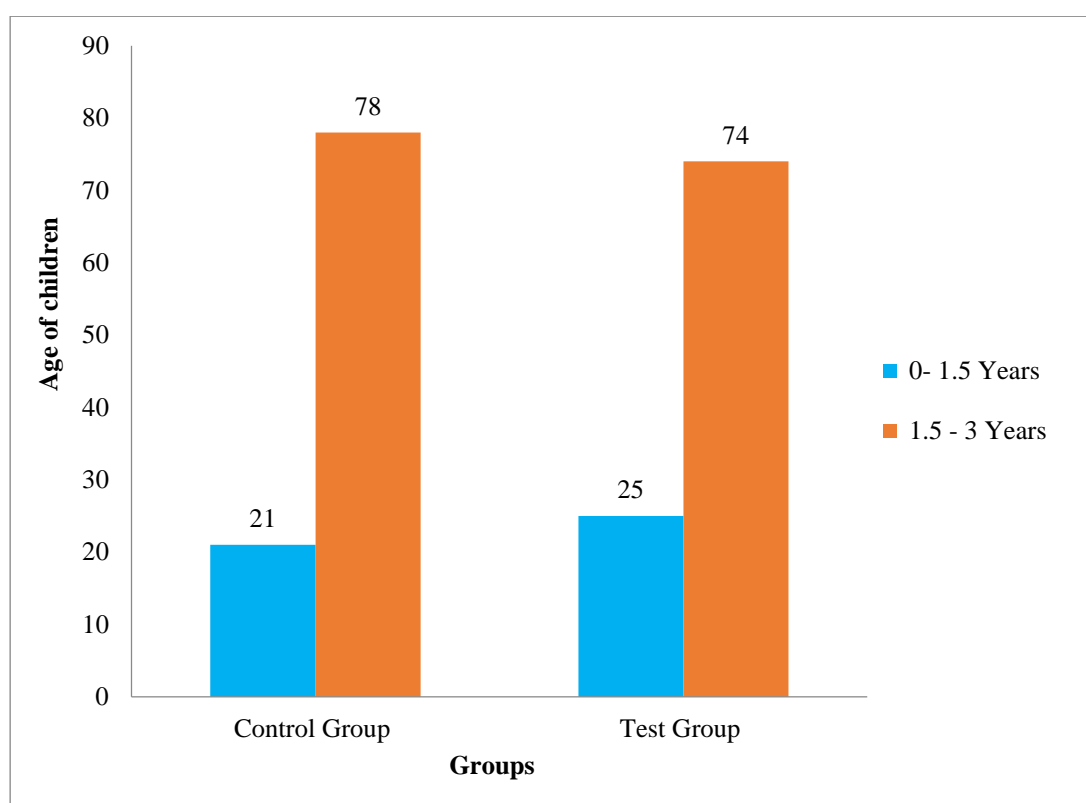


Fig 4.26 Percentage distribution of subjects as per the age of children

The percentage distribution of subjects under control group shows that 21% mothers were having children aged between 0-1.5 years whereas in test group 25% mothers were having children aged between same age group. Similarly, 78% mothers under control group were having children aged between 1.5-3 years whereas in test group 74% mothers were having children aged between same age group (Fig 4.26).

Objective 1A: To evaluate the stress levels, mindfulness, and psychosocial well-being in young mothers under test and control group before administering the Mindfulness-Based Program.

Section C Assessment of pre-test Weight, Height, BMI, EPDS score, Social Anxiety score, Mental Well-being score, EAT 26 score, and Behavioral score among young mothers in the control and test group before administering the mindfulness-based program

Table 4.27 Pre-test scores of Weight, Height, BMI, EPDS score, Social Anxiety score, Mental Well-being score, EAT 26 score, and Behavioral score among young mothers in the control and test group before the administration of the mindfulness-based program

Pre-test Scores							
Variables	Control Group			Test Group			Difference in mean %
	Mean	SD	%Mean	Mean	SD	%Mean	
Scales							
Weight (kg)	71.63	9.14	78.25	73.33	15.41	63.73	14.52
Height (cm)	159.67	7.54	87.21	160.0	6.69	89.38	-2.18
BMI	28.27	4.38	73.27	28.51	5.25	67.57	5.70
Mindfulness Score	4.20	0.69	73.29	3.66	0.64	70.38	2.91
EPDS Score	13.11	4.83	54.62	15.29	3.89	66.47	-11.86
Social Anxiety Score	21.14	12.69	42.28	28.28	11.16	47.93	-5.66
Mental well-being Score	46.53	11.05	66.47	36.35	7.39	56.79	9.68
EAT -26 Score	21.11	7.99	54.12	20.07	6.67	55.75	-1.63
Behavioral Score (each yes =1 and no=0)	1.84	1.24	46.00	2.50	1.09	50.00	-4.00

Comparison of the mean, SD, and mean% among young mothers in the control and test group before the administration of the mindfulness-based program depicts that the mean mindfulness score in the control group was higher, 4.20 ± 0.69 , and 3.66 ± 0.64 lower in the test group. Similarly, the control group's mean EPDS score was less than 13.11 ± 4.83 and 15.29 ± 3.89 higher than the test group. The mean social anxiety score was lower than 21.14 ± 12.69 in the control group and higher 28.28 ± 11.16 in the test group. The mean Mental well-being score was higher 46.53 ± 11.05 in the control group and lower 36.35 ± 7.39 in the test group. The mean EAT-26 score was higher 21.11 ± 7.99 in the control group, whereas it was lower 20.07 ± 6.67 in the test group. The mean behavioral score was reported as lower 1.84 ± 1.24 in the control group and higher 2.50 ± 1.09 in the test group. Thus it is interpreted that subjects under the test group were found to be more prone to psychosocial distress, having low mindfulness and mental well-being scores, and having higher postpartum depression, eating disorder, social anxiety, and behavioral scores before the administration of the mindfulness-based program (Table 4.27).

Objective 1B: To evaluate the stress levels, mindfulness, and psychosocial well-being in young mothers under test and control group after administering the Mindfulness-Based Program.

Section D Assessment of post-test Weight, Height, BMI, EPDS score, Social Anxiety score, Mental Well-being score, EAT 26 score, and Behavioral score among young mothers in the control and test group after administering the mindfulness-based program

Table 4.28 Post-test scores of Weight, Height, BMI, EPDS score, Social Anxiety score, Mental Well-being score, EAT 26 score, and Behavioral score among young mothers in the control and test group after the administration of the mindfulness-based program

Post-test Scores							
Variables	Control Group			Test Group			Difference in mean %
	Mean	SD	%Mean	Mean	SD	%Mean	
Scales							
Weight (kg)	70.06	8.87	77.84	73.11	15.02	63.58	14.28
Height (cm)	159.88	7.69	87.36	160.0	6.69	91.30	-3.93
BMI	27.5	4.28	73.68	28.43	5.13	67.39	6.31
Mindfulness Score	4.23	0.71	71.69	4.72	0.55	84.29	-12.60
EPDS Score	12.25	4.33	51.04	9.00	3.42	47.37	3.68
Social Anxiety Score	21.31	13.52	42.62	16.29	9.14	33.25	9.38
Mental Well-being Score	48.92	10.46	69.88	53.08	5.88	76.92	-7.05
EAT -26 Score	20.35	8.23	52.17	4.83	2.85	34.5	17.68
Behavioral Score (each yes =1 and no=0)	1.76	1.19	44.0	1.09	0.28	54.5	-10.5

Comparison of the mean, SD, and mean% among young mothers in the control and test group before the administration of the mindfulness-based program depicts that the mean mindfulness score in the control group was lower 4.23 ± 0.71 and 4.72 ± 0.55 higher in the test group. Similarly, the mean EPDS score in the control group was higher at 12.25 ± 4.33 and lower at 9.00 ± 3.42 in the test group. The mean social anxiety score was higher, 21.31 ± 13.52 in the control group, and lower, 16.29 ± 9.14 in the test group. The mean mental well-being score was lower, 48.92 ± 10.46 in the control group and higher 53.08 ± 5.88 in the test group. The mean EAT-26 score was higher 20.35 ± 8.23 in the control group, whereas lower 4.83 ± 2.85 in the test group. The mean behavioral score was reported as higher 1.76 ± 1.19 in the control group and lower 1.09 ± 0.28 in the test group. Thus, it is interpreted that subjects under the test group were found to have better psychosocial well-being, higher mindfulness and mental well-being score, and lesser postpartum depression, eating disorder, social anxiety, and behavioral scores after the administration of the mindfulness-based program (Table 4.28).

Section E Assessment of pre and post-test Weight, Height, BMI, EPDS score, Social Anxiety Score, Mental Well-being, EAT 26 score, and Behavioral score of young mothers in the control group

Table 4.29 Comparison of Pre vs. Post-test values in control group

	Time	Mean	Std. Deviation	Std. Error Mean	Mean diff	SD of diff	Z value	p value of Wilcoxon Signed Ranks Test
Weight (kg)	Pre	71.63	9.14	0.86	1.56	1.44	-8.20	0.000**
	Post	70.06	8.87	0.84				
Height (cm)	Pre	159.67	7.54	0.71	-0.20	2.164	-1.00	0.317#
	Post	159.88	7.69	0.73				
BMI	Pre	28.27	4.38	0.41	0.68	0.87	-8.19	0.000**
	Post	27.59	4.28	0.40				
Mindfulness Score	Pre	4.20	0.69	0.06	-0.03	0.33	-2.11	0.035*
	Post	4.23	0.71	0.06				
EPDS Score	Pre	13.11	4.83	0.45	0.85	2.82	-3.35	0.001**
	Post	12.25	4.33	0.41				
Social Anxiety Score	Pre	21.14	12.69	1.20	-0.16	9.56	-0.59	0.554#
	Post	21.31	13.52	1.28				
Mental well-being score	Pre	46.53	11.05	1.04	-2.38	7.98	-2.86	0.004**
	Post	48.92	10.46	0.99				
EAT -26 Score	Pre	21.11	7.99	0.75	0.75	6.53	-1.38	0.166#
	Post	20.35	8.23	0.78				
Behavioral score	Pre	1.84	1.24	0.11	0.08	0.33	-2.49	0.013*
	Post	1.76	1.19	0.11				

There was a statistically highly significant difference seen for the values between the time intervals ($p < 0.01$) for weight (kg) with higher value at pre-test 71.63. BMI showed higher values at pre-test 28.27. EPDS Score with higher values at pre-test 13.11. Mental well-being score with higher values at post-test 48.92.

There was a statistically significant difference in the values between the time intervals ($p < 0.05$) for the Mindfulness score with higher values at post-test 4.23 and the Behavioral score with higher values at pre-test 1.84. There was a statistically non-significant difference seen for the values between the time intervals ($p > 0.05$) for Height (cm), Social Anxiety Score, and EAT -26 Score (Table 4.29).

Section F Assessment of pre and post-test weight, height, BMI, Mindfulness score, EPDS score, Social Anxiety Score, Mental well-being, EAT 26 score, and Behavioral score of young mothers in the test group

Table 4.30 Comparison of Pre vs. Post values in test group

	Time	Mean	Std. Deviation	Std. Error Mean	Mean diff	SD of diff	Z value	p value of Wilcoxon Signed Ranks Test
Weight (kg)	Pre	73.33	15.41	1.45	0.22	6.42	-1.74	0.081#
	Post	73.11	15.02	1.41				
Height (cm)	Pre	160.09 ^a	6.69	0.63	0	0	0.00	1.000#
	Post	160.09 ^a	6.69	0.63				
BMI	Pre	28.51	5.25	0.49	0.078	2.34	-1.74	0.081#
	Post	28.43	5.13	0.48				
Mindfulness score	Pre	3.66	0.64	0.06	-1.05	0.74	-8.28	0.000**
	Post	4.72	0.55	0.05				
EPDS Score	Pre	15.29	3.89	0.36	6.28	3.98	-8.61	0.000**
	Post	9.00	3.42	0.32				
Social Anxiety Score	Pre	28.28	11.16	1.05	11.98	12.33	-7.52	0.000**
	Post	16.29	9.14	0.86				
Mental well-being score	Pre	36.35	7.39	0.69	-16.73	8.75	-8.73	0.000**
	Post	53.08	5.88	0.55				
EAT -26 Score	Pre	20.07	6.67	0.63	15.24	7.61	-9.05	0.000**
	Post	4.83	2.85	0.26				
Behavioral score	Pre	2.50	1.09	0.10	1.41	1.10	-8.17	0.000**
	Post	1.09	0.28	0.02				

A statistically significant difference was seen for the values between the time intervals ($p < 0.01$) for the Mindfulness score with higher values at the post-test 4.720. EPDS Score with higher values at pre-test 15.29. Social Anxiety Score with higher values at pre-test 28.28. Mental well-being score with higher values at post-test 36.35. EAT-26 Score with higher values at pre-test 53.08 and Behavioral score with higher values at pre-test 2.50. There was a statistically non-significant difference seen for the values between the time intervals ($p > 0.05$) for Weight (kg), Height (cm), and BMI (Table 4.30).

Section G Comparison of pre and post-test weight, height, BMI, Mindfulness score, EPDS score, Social Anxiety score, Mental well-being score, EAT 26 score, and Behavioral score among young mothers in control and test group

Table 4.31 Inter group comparison of numerical outcomes

		Group	N	Mean	Std. Deviation	Std. Error Mean	Mann-Whitney U value	Z value	p value of Mann-Whitney U test
Pre-test	Weight (kg)	1	112	73.33	15.41	1.45	6056.00	-0.33	0.740#
		2	111	71.63	9.14	0.86			
	Height (cm)	1	112	160.09	6.69	0.63	5785.50	-0.89	0.371#
		2	111	159.67	7.54	0.71			
	BMI	1	112	28.51	5.25	0.49	6142.00	-0.15	0.878#
		2	111	28.27	4.38	0.41			
	Mindfulness score	1	112	3.66	0.64	0.06	3565.00	-5.50	0.000**
		2	111	4.20	0.69	0.06			
	EPDS Score	1	112	15.29	3.89	0.36	4363.50	-3.85	0.000**
		2	111	13.11	4.83	0.45			
	Social Anxiety Score	1	112	28.28	11.16	1.05	4150.50	-4.29	0.000**
		2	111	21.14	12.69	1.20			
	Mental well-being Score	1	112	36.35	7.39	0.69	2600.00	-7.51	0.000**
		2	111	46.53	11.05	1.04			
	EAT -26 Score	1	112	20.07	6.67	0.63	5788.0	-0.89	0.373#
		2	111	21.11	7.99	0.75			

	Behavioral score (each yes =1 and no=0)	1	112	2.50	1.09	0.10	4320.00	-4.04	0.000**
		2	111	1.84	1.24	0.11			
Post-test	Weight (kg)	1	112	73.11	15.02	1.41	5630.00	-1.21	0.224#
		2	111	70.06	8.87	0.841			
	Height (cm)	1	112	160.09	6.69	0.63	5872.50	-0.71	0.475#
		2	111	159.88	7.69	0.73			
	BMI	1	112	28.43	5.13	0.48	5813.00	-0.83	0.403#
		2	111	27.59	4.28	0.40			
	Mindfulness Score	1	112	4.72	0.55	0.05	3550.00	-5.53	0.000**
		2	111	4.23	0.71	0.06			
	EPDS Score	1	112	9.00	3.420	0.323	3530.50	-5.59	0.000**
		2	111	12.25	4.33	0.41			
	Social Anxiety score	1	112	16.29	9.14	0.86	4726.50	-3.09	0.002**
		2	111	21.31	13.52	1.28			
	Mental well- being score	1	112	53.08	5.88	0.55	4831.00	-2.879	0.004**
		2	111	48.92	10.46	0.99			
EAT 26 Score	1	112	4.83	2.85	0.26	608.00	-11.656	0.000**	
	2	111	20.35	8.23	0.78				
Behavioral score (each yes =1 and no=0)	1	112	1.09	0.28	0.027	4159.00	-4.86	0.000**	
	2	111	1.76	1.19	0.11				
Difference in pre-post test values	Current Weight (kg)	1	112	2.42	5.94	0.56	4994.00	-2.60	0.009**
		2	111	1.56	1.44	0.13			
	Height (cm)	1	112	0.00	0.00	0.00	6160.00	-1.00	0.315#
		2	111	0.20	2.16	0.20			
	BMI	1	112	0.90	2.16	0.20	4929.50	-2.74	0.006**
		2	111	0.68	0.87	0.08			
	Mindfulness score	1	112	1.18	0.52	0.04	538.50	-11.97	0.000**
		2	111	0.17	0.28	0.02			
	EPDS Score	1	112	6.75	3.12	0.29	1180.00	-10.62	0.000**
		2	111	1.50	2.54	0.24			
	Social Anxiety Score	1	112	14.58	9.06	0.85	2252.50	-8.36	0.000**
		2	111	4.90	8.19	0.77			
	Mental Well- being score	1	112	17.58	6.85	0.64	1180.00	-10.625	0.000**
		2	111	3.75	7.43	0.70			

EAT -26 Score	1	112	15.31	7.47	0.70	1313.00	-	10.359	0.000**
	2	111	3.49	5.56	0.52				
Behavioral score (each yes =1 and no=0)	1	112	1.50	0.97	0.09	1376.00	-	10.95	0.000**
	2	111	0.11	0.32	0.03				

Group 1-Test, Group 2-Control

A statistically significant difference was seen between the groups ($p < 0.01$) for the Pre-test Mindfulness score with higher values in the control group 4.20 ± 0.69 . EPDS Score with higher values in the test group 15.29 ± 3.89 . Social Anxiety Score with higher values in test group 28.28 ± 11.16 . Mental well-being score with higher values in control 46.53 ± 11.05 . Behavioral score with higher values in test group 2.50 ± 1.09 .

Similarly, Post-test results show that mindfulness scores with higher values in the test group 4.72 ± 0.55 . EPDS Score with higher values in the control group 12.25 ± 4.33 . Social Anxiety Score with higher values in the control group 21.31 ± 13.5 . Mental well-being score with higher values in test group 53.08 ± 5.88 . EAT 26 scores with higher values in the control group were 20.35 ± 8.23 . Behavioral score with higher values in control group 1.76 ± 1.19 .

Difference between Pre and Post-test values

Weight (kg) with higher values in the test group 2.42

BMI with higher values in the test group 0.90

Mindfulness score with higher values in the test group 1.18

EPDS Score with higher values in the test group 6.75

Social Anxiety Score with higher values in the test group 14.58

Mental well-being score with higher values in the test group 17.58

EAT 26 Score with higher values in the test group 15.31

Behavioral scores with higher values in the test group 1.50

There was a statistically non-significant difference seen for the values between the groups ($p > 0.05$) for Pre-test weight (kg), Pre-test height (cm), Pre-test BMI, Pre-test

EAT-26 Score, Post-test weight (kg), Post-test height (cm), Post-test BMI, Difference pre-post-test height (cm) (Table 4.31).

Table 4.32 Percentage Mean % difference per group

Group	Weight (kg)	Height (cm)	BMI	Mindfulness Score	EPDS Score	Social Anxiety Score	Mental Well-being Score	EAT-26 Score
Test	3.50	0.00	3.50	34.96	45.31	66.77	51.98	72.62
Control	2.15	0.13	2.36	4.06	11.13	24.29	10.30	25.02

The mean percentage difference in the test group was found to be 3.50 BMI, 34.96 mindfulness score, 45.31 EPDS score, 66.77 social anxiety score, 51.98 mental well-being score, and 72.62 EAT-26 score. Similarly mean % difference in the control group was 2.36 in BMI, 4.06 in mindfulness score, 11.13 in EPDS score, 24.29 in Social anxiety score, 10.30 in mental well-being score, and 25.02 in EAT-26 score (Table 4.32).

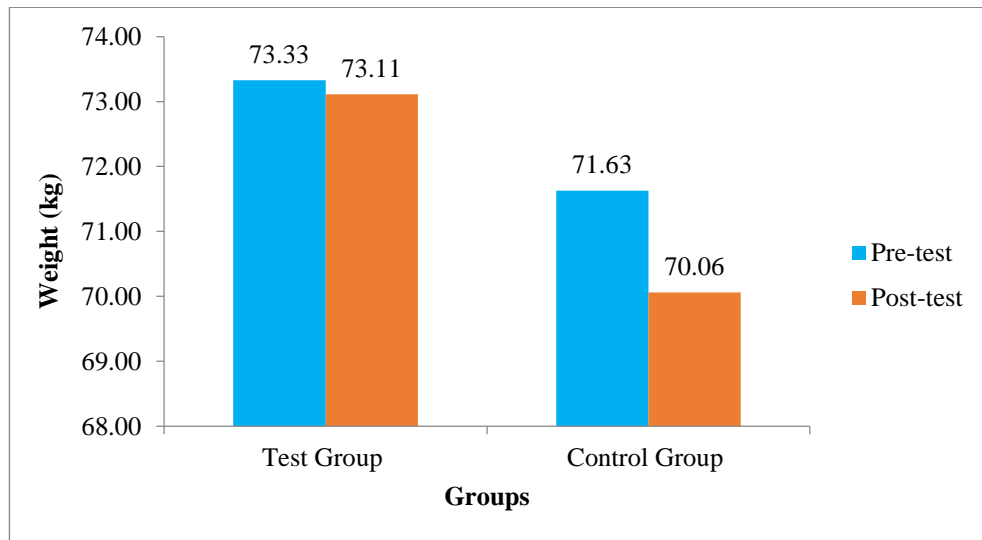


Fig 4.27 Inter group comparison of weight

The intergroup comparison of weight pre and post-test shows a higher weight pre-test, 73.33 kg vs. 73.11 kg in the test group, whereas it was lower in the control group pre-test, 71.63 kg vs. post-test 70.06 kg. It is interpreted that there were no significant changes in weight between the test and control group before and after the mindfulness-based program's administration (Fig 4.27).

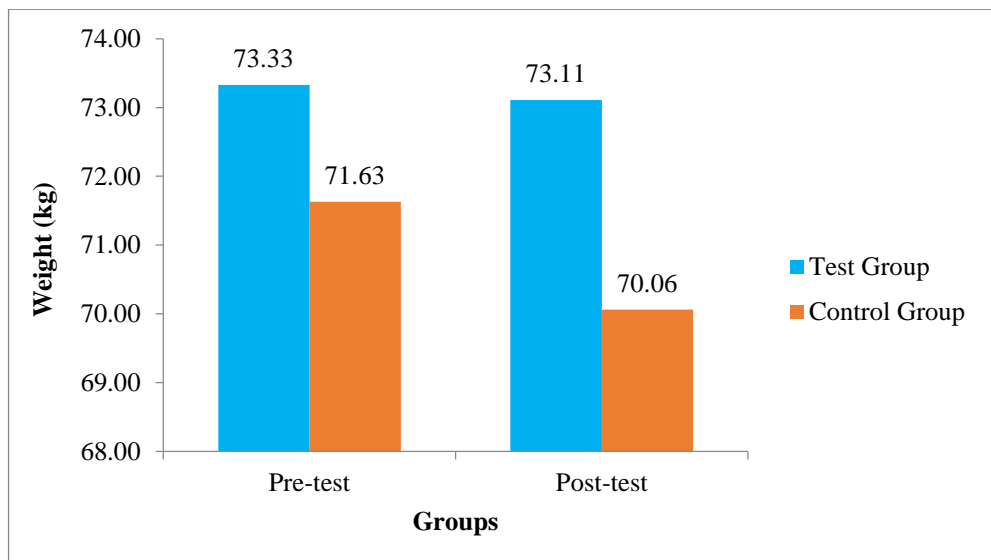


Fig 4.28 Intra group comparison of weight

Intra-group comparison among the test and control groups shows small changes in weight (Fig 4.28).

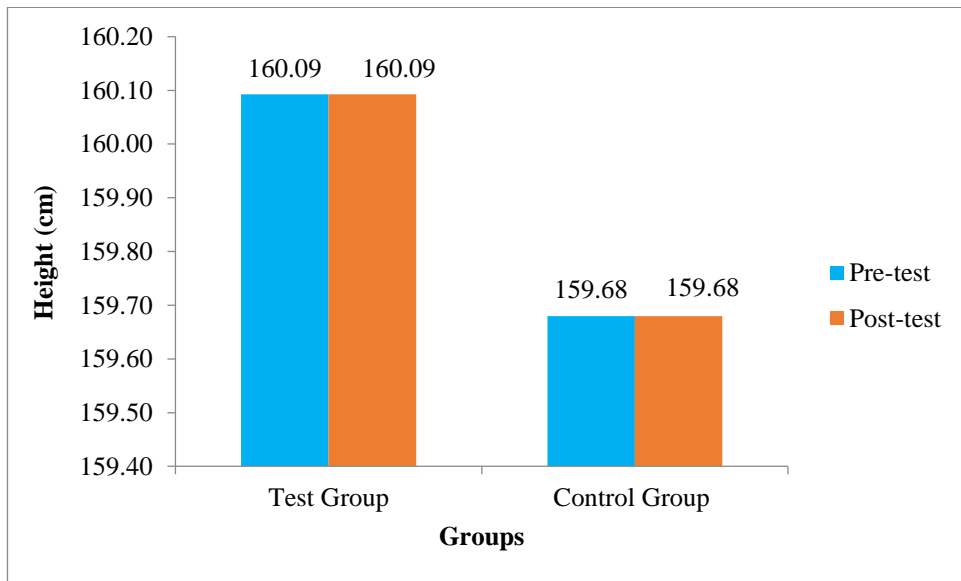


Fig 4.29 Inter-group comparison of height

Intra-group comparison among the test and control groups shows no changes in height (Fig 4.29).

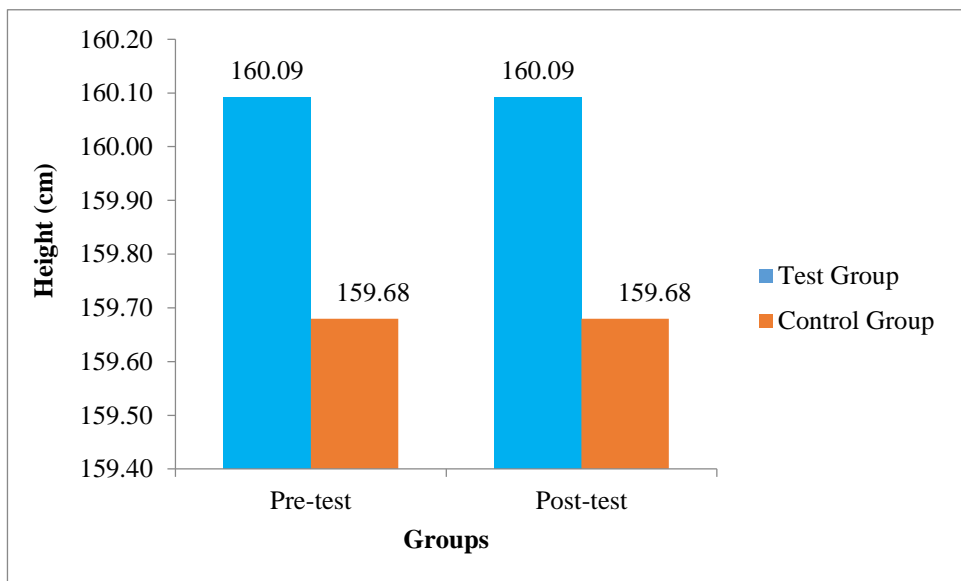


Fig 4.30 Intra group comparison of height

Intra-group comparison shows that there was no change in height before and after the administration of the mindfulness-based program (Fig 4.30).

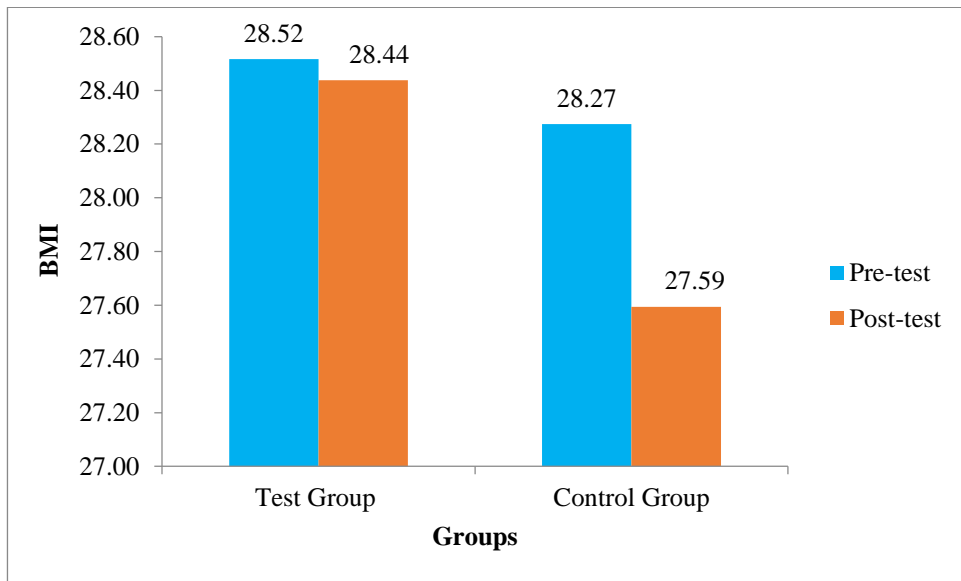


Fig 4.31 Inter-group comparison of BMI

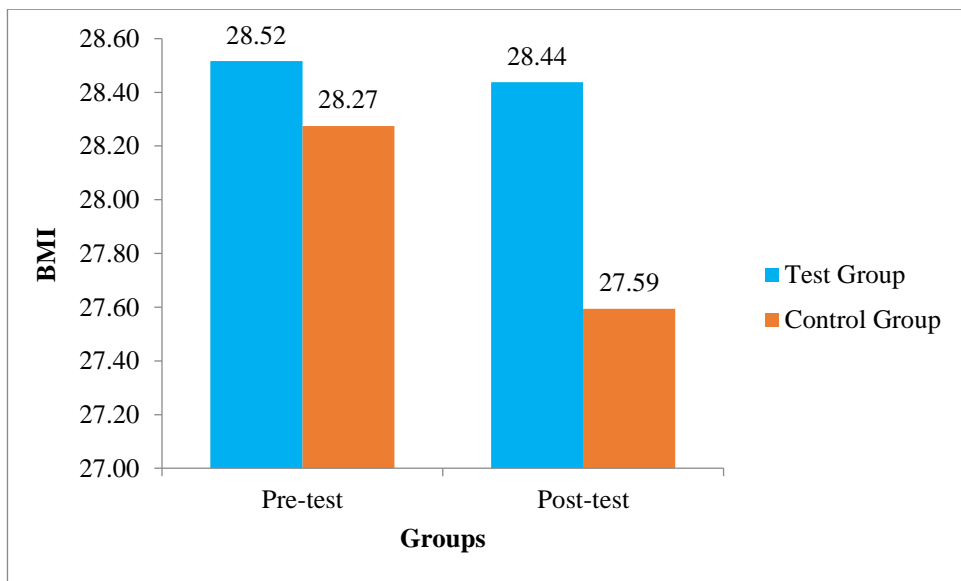


Fig 4.32 Intra group comparison of BMI

Both inter (Fig 4.31) and intra-group (Fig 4.32) comparison of BMI among the test and control group shows no significant changes in BMI before and after the administration of the mindfulness-based program.

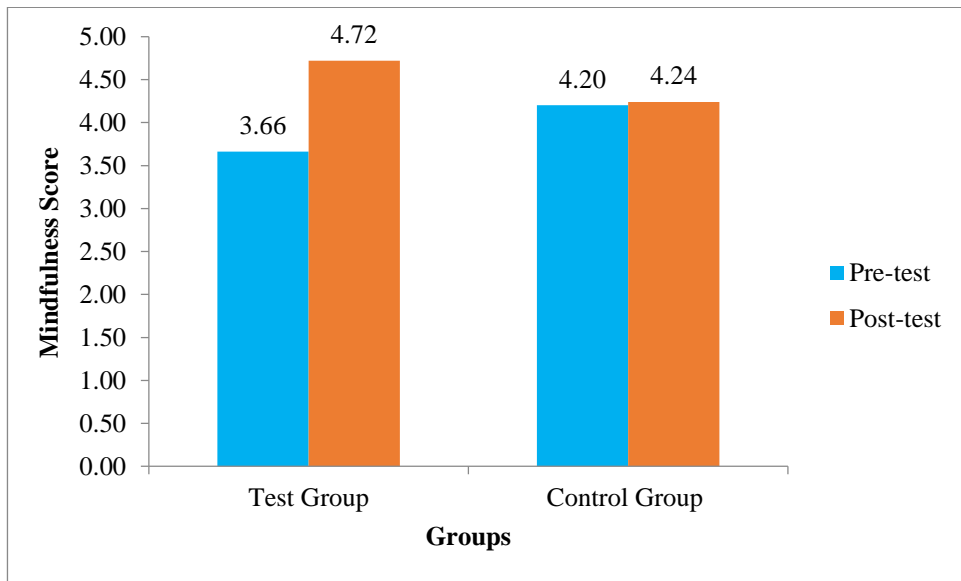


Fig 4.33 Inter-group comparison of Mindfulness score

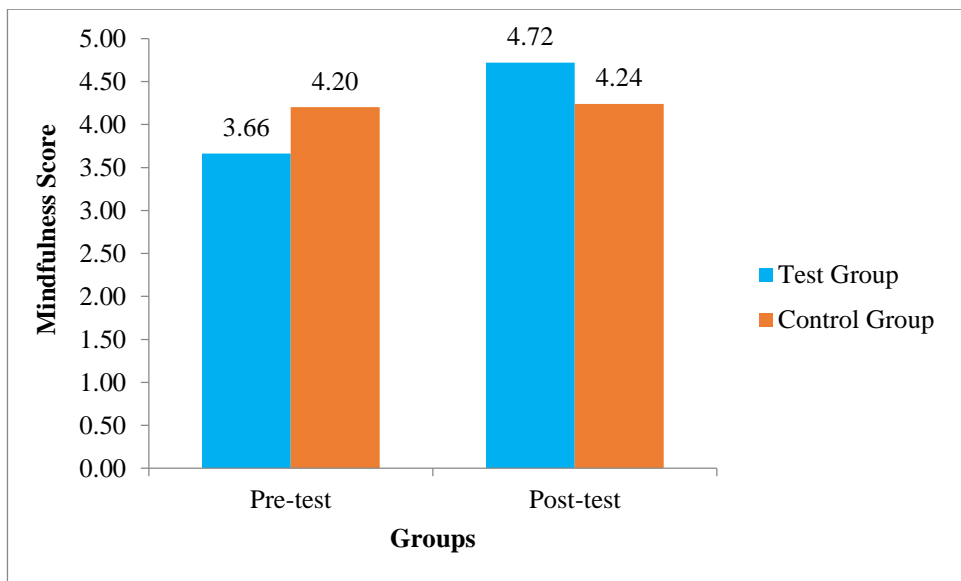


Fig 4.34 Intra-group comparison of Mindfulness score

The comparison of mindfulness scores shows a lower score of 3.66 on pre-tests and a higher post-test, 4.72 in the test group, whereas it was 4.20 pre-test and 4.23 post-test in the control group (Fig 4.33). Thus, it is interpreted that mindfulness scores in subjects under the test group have been highly improved compared to the control group after the mindfulness-based program's administration (Fig 4.34).

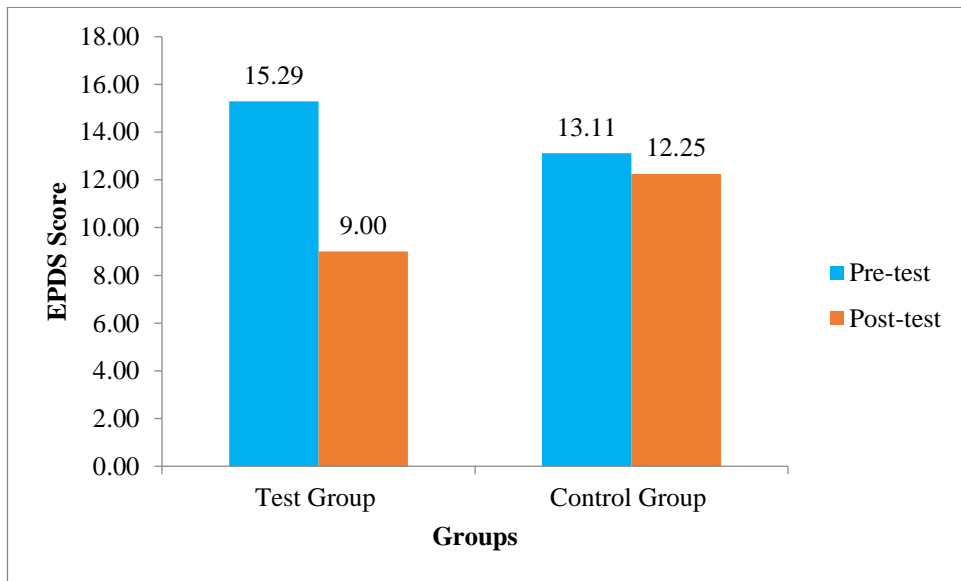


Fig 4.35 Inter group comparison of EPDS score

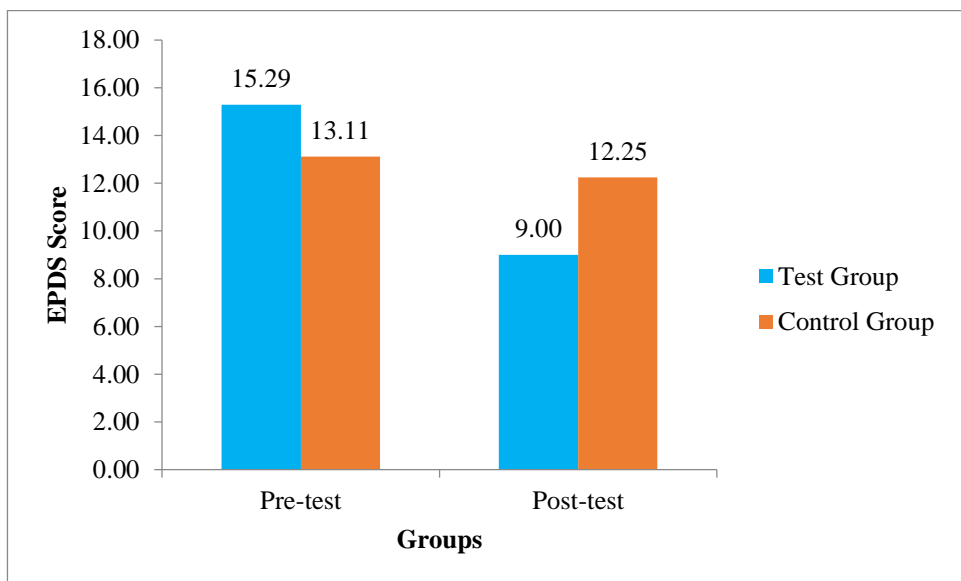


Fig 4.36 Intra group comparison of EPDS score

Inter (Fig 4.35) and Intra-group (Fig 4.36) comparison among the test and control group at pre and post-test shows that the postnatal depression score was higher on the pre-test, 15.29 vs. 9.00 post-test, whereas the score was 13.11 on the pre-test and 12.25 post-test in the control group. This shows that the postnatal depression score has been significantly reduced in the test group after the administration of a mindfulness-based program.

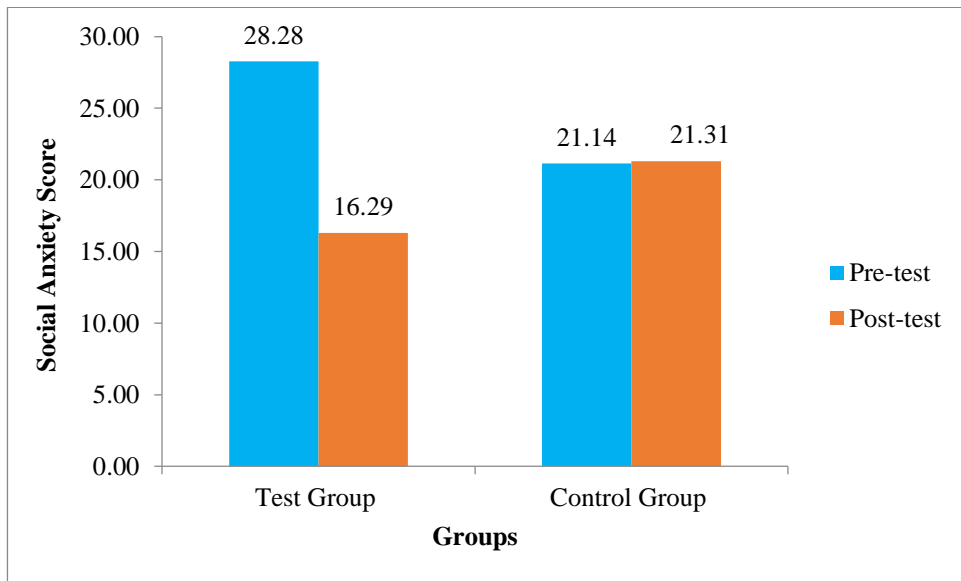


Fig 4.37 Inter-group comparison of Social Anxiety Score

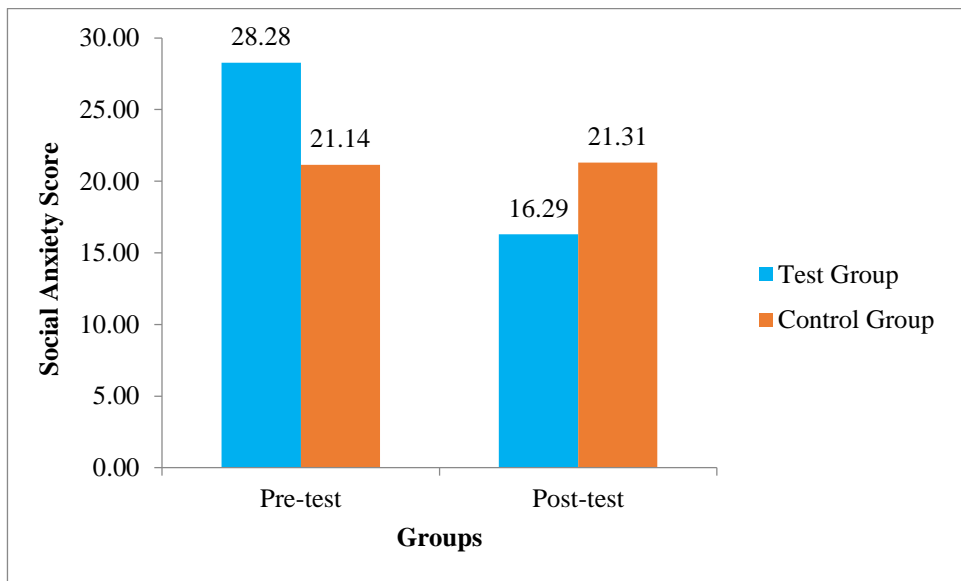


Fig 4.38 Intra-group comparison of Social Anxiety Score

The comparison of social anxiety scores in the test group shows a higher score of 28.28 on the pre-test and 16.29 post-test in the test group, whereas it was 21.14 pre-test and 21.31 post-test in the control group (Fig 4.37 and 4.38). Thus, this interprets that social anxiety among test group subjects has been significantly reduced after the administration of the mindfulness-based program.

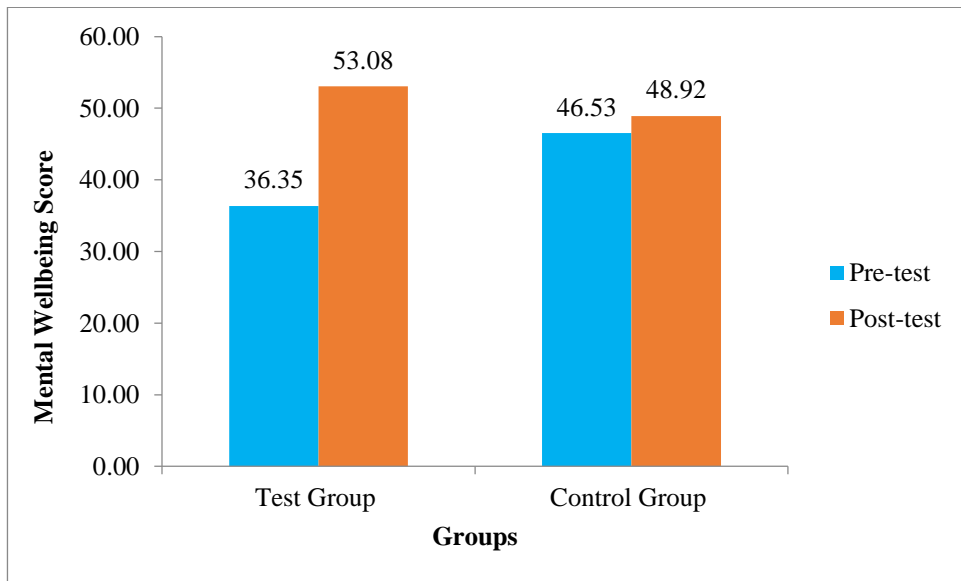


Fig 4.39 Inter-group comparison of Mental Well-being Score

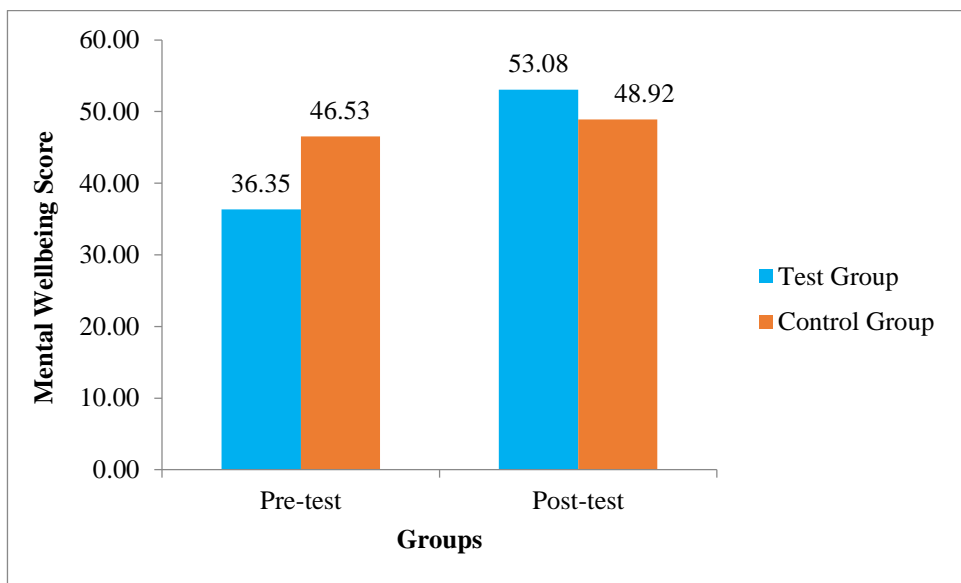


Fig 4.40 Intra-group comparison of Mental Well-being Score

The comparison of mental well-being scores shows higher values, 36.35 on the pre-test and 53.08 post-test in the test group, 46.53 on the pre-test, and 48.92 on the post-test in the control group. It is interpreted that the mental well-being of subjects in the test group has been significantly improved compared to the control group after the administration of the mindfulness-based program (Fig 4.39 and 4.40).

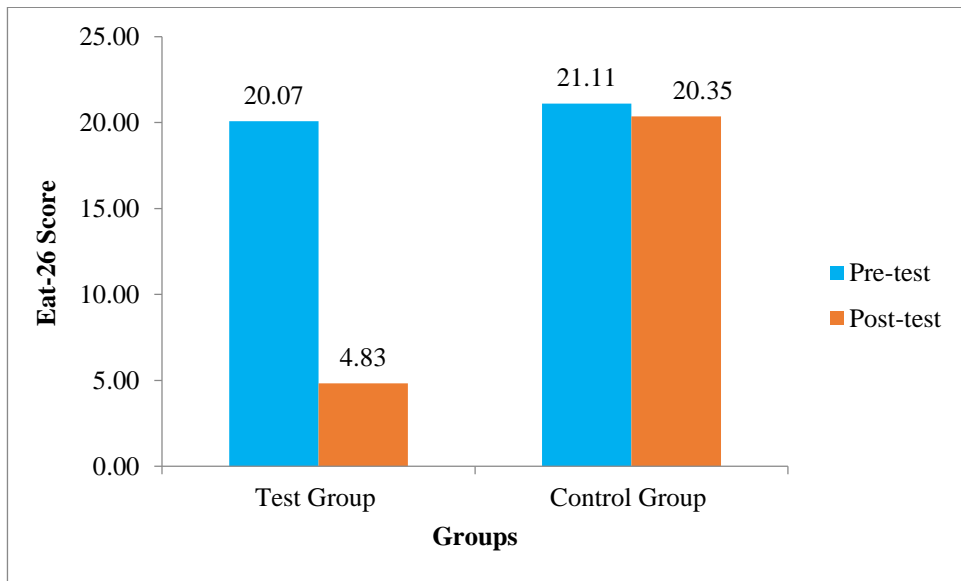


Fig 4.41 Inter group comparison of EAT-26 score

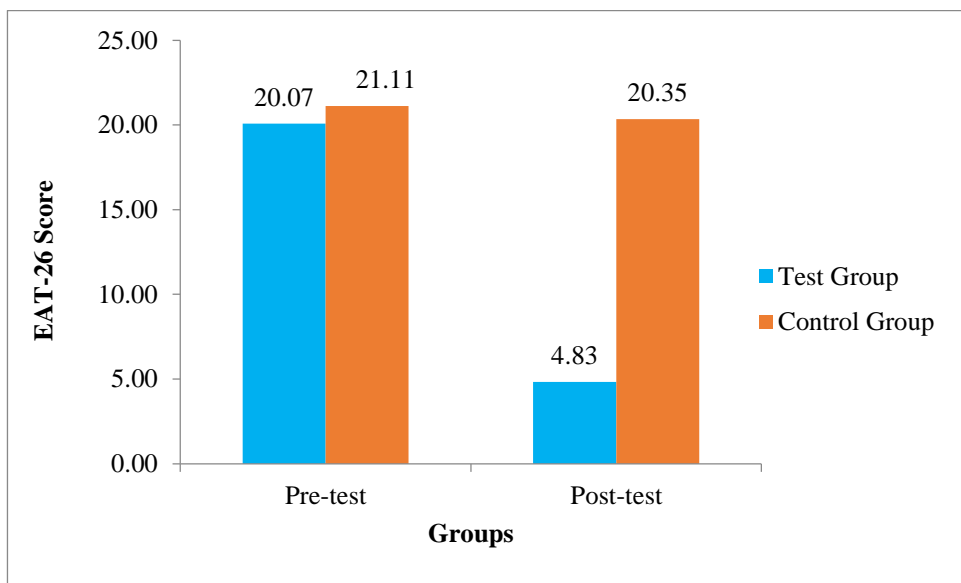


Fig 4.42 Intra group comparison of EAT-26 score

The EAT-26 score states about eating disorder or any difficulty eating habits, and inter and Intra group comparison of EAT-26 score in the test group on the pre-test was 20.07 vs. 4.83 on the post-test. In contrast, it was 21.11 pre-test vs. 20.35 post-test in the control group. This shows a highly significant reduction in EAT 26 scores in the test group after the administration of the mindfulness-based program (Fig 4.41 and 4.42).

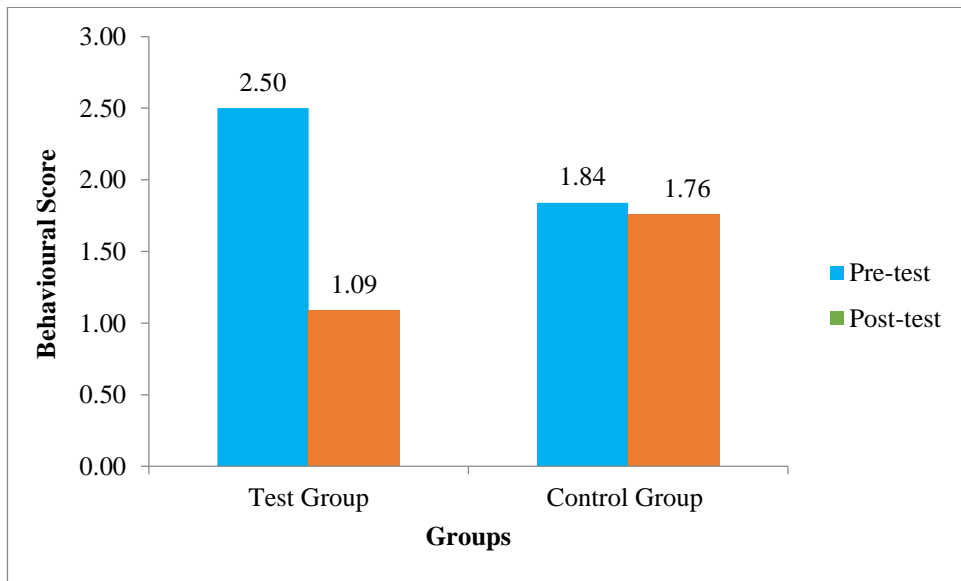


Fig 4.43 Inter group comparison of Behavioral Score

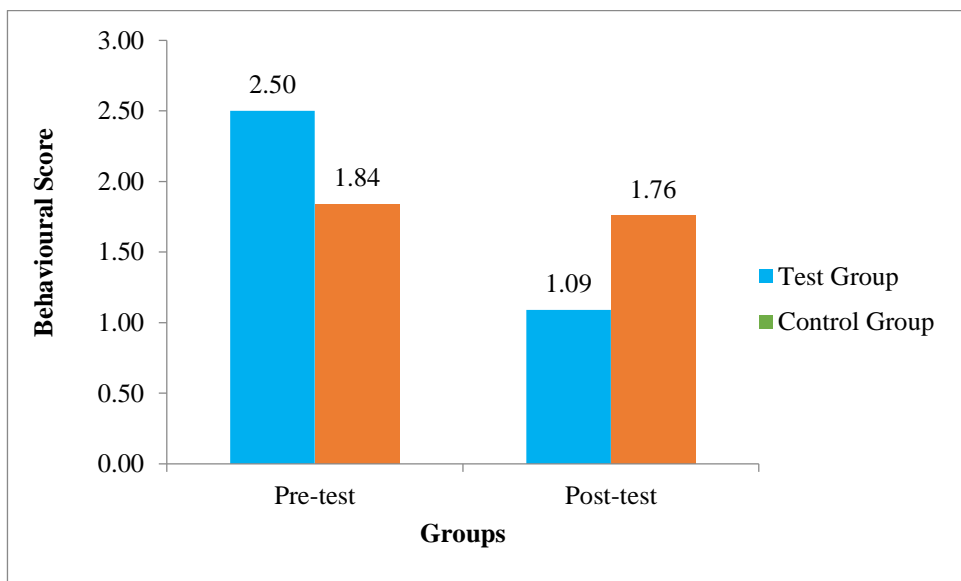


Fig 4.44 Intra-group comparison of Behavioral score

Both inter and intra-group comparison of the behavioral score was 2.5 pre-test vs. 1.09 post-test in the test group, whereas it was 1.84 pre-test vs. 1.76 post-test in the control group. This interprets that behavioral scores have been significantly reduced in the test group after the administration of the mindfulness-based program (Fig 4.43 and 4.44).

Table 4.33 Tests of Normality on pre-post differences

Variables	Group	Shapiro-Wilk		
		Statistic	Df	p value
Weight (kg)	Test	0.433	112	0.000
	Control	0.748	111	0.000
Height (cm)	Control	0.069	111	0.000
BMI	Test	0.446	112	0.000
	Control	0.536	111	0.000
Mindfulness Score	Test	0.975	112	0.034
	Control	0.662	111	0.0000
EPDS Score	Test	0.973	112	0.022
	Control	0.650	111	0.000
Social Anxiety Score	Test	0.959	112	0.002
	Control	0.656	111	0.000
Mental well-being score	Test	0.964	112	0.004
	Control	0.578	111	0.000
EAT -26 Score	Test	0.982	112	0.141
	Control	0.683	111	0.000
Behavioral score (each yes =1 and no=0)	Test	0.894	112	0.000
	Control	0.374	111	0.000

p<0.05 indicates normality not followed

Section H

Assessment of pre and post-test weight and BMI in young mothers under test and control group

Table 4.34 Comparison of Pre vs. Post-test values of weight and BMI in control group

	Time	Mean	Std. Deviation	Std. Error Mean	Mean diff	SD of diff	Z value	p value of Wilcoxon Signed Ranks Test
Weight (kg)	Pre	71.63	9.14	0.86	1.56	1.44	-8.20	0.000**
	Post	70.06	8.87	0.84				
BMI	Pre	28.27	4.38	0.41	0.68	0.87	-8.19	0.000**
	Post	27.59	4.28	0.40				

There was a statistically highly significant difference seen for the values between the time intervals ($p < 0.01$) for Weight (kg) and BMI with higher values at the pre-test (Table 4.34).

Table 4.35 Comparison of BMI of participants Pre vs. Post-test in control group

BMI	Pre-Test	Post-Test
Underweight (N)	1.00	2.00
Percentage (%)	0.90	1.80
Healthy weight (N)	23.00	27.00
Percentage (%)	20.72	23.42
Overweight (N)	50.00	52.00
Percentage (%)	45.04	47.74
Obese (N)	37.00	29.00
Percentage (%)	33.33	27.02

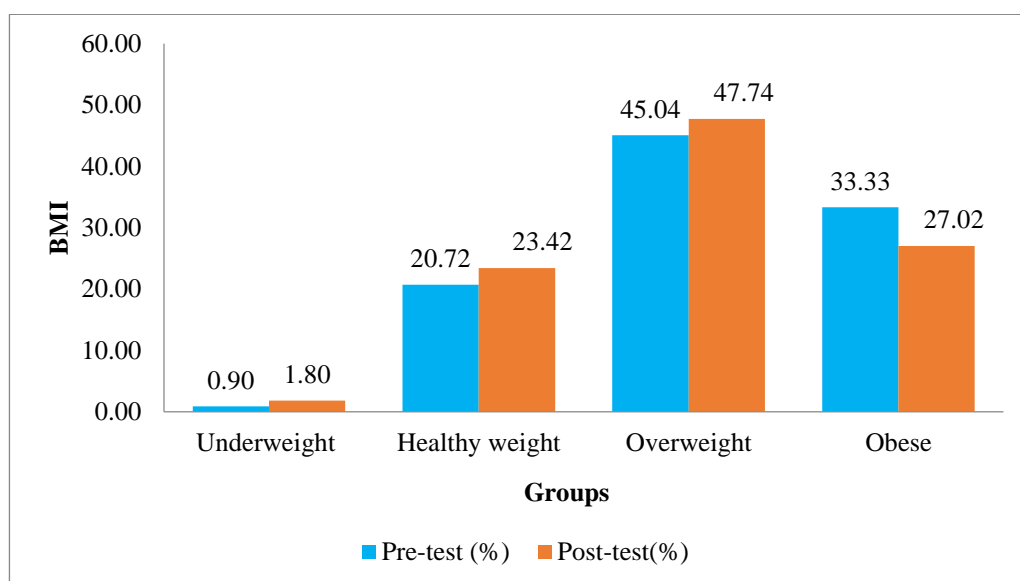


Fig 4.45 Comparison of BMI of participants Pre vs. Post-test in control group

Nearly half of the subjects were overweight at the pre-test, 45%, which was found to be increased post-test to 47 %, and 37% of mothers were found to be obese before the test, which was reduced to 27% after the test. The subjects in the healthy weight category were 20% before the test and increased to 23% post-test. Hence, there were minimal changes in the weight and BMI of the mothers in the control group (Fig 4.45).

Table 4.36 Comparison of Pre vs. Post-test values of weight and BMI in test group

	Time	Mean	Std. Deviation	Std. Error Mean	Mean diff	SD of diff	Z value	P value of Wilcoxon Signed Ranks Test
Weight (kg)	Pre	73.33	15.41	1.45	0.22	6.42	-1.74	0.081#
	Post	73.11	15.023	1.41				
BMI	Pre	28.51	5.251	0.49	0.07	2.34	-1.74	0.081#
	Post	28.43	5.13	0.48				

There was a statistically non-significant difference seen for the values between the time intervals ($p > 0.05$) for weight (kg) and BMI (in Kg/m^2) post-test.

Table 4.37 Comparison of BMI (in Kg/m²) of participants Pre vs. Post-test in test group

BMI	Pre-Test	Post-Test
Underweight (N)	3.00	3.00
Percentage	2.67	2.67
Healthy weight (N)	33.00	35.00
Percentage	29.46	31.25
Overweight (N)	39.00	37.00
Percentage	34.82	33.03
Obese (N)	37.00	37.00
Percentage	33.03	33.03

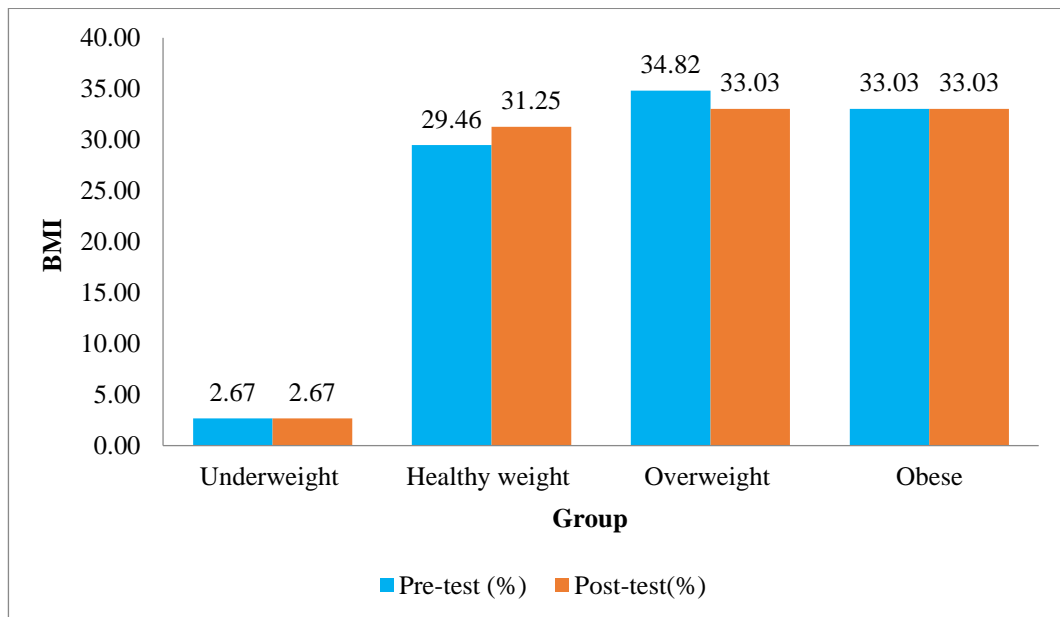


Fig 4.46 Comparison of BMI of participants Pre vs. Post-test in test group

There was no change in weight and BMI after the implementation of mindfulness-based program in test group (Fig 4.46).

Table 4.38 Inter group comparisons of Weight, Height and BMI

		Group	N	Mean	Std. Deviation	Std. Error Mean	Mann-Whitney U value	Z value	p value of Mann-Whitney U test
Pre Test	Weight (kg)	1	112	73.33	15.41	1.45	6056.00	-0.33	0.74#
		2	111	71.63	9.14	0.86			
	Height (cm)	1	112	160.09	6.69	0.63	5785.50	-0.89	0.37#
		2	111	159.67	7.54	0.71			
	BMI	1	112	28.51	5.25	0.49	6142.00	-0.15	0.87#
		2	111	28.27	4.38	0.41			

	Group	N	Mean	Std. Deviation	Std. Error Mean	Mann-Whitney U value	Z value	p value of Mann-Whitney U test	
Post Test	Weight (kg)	1	112	73.11	15.02	1.41	5630.00	-1.21	0.22#
		2	111	70.06	8.87	0.84			
	Height (cm)	1	112	160.09	6.69	0.63	5872.50	-0.71	0.47#
		2	111	159.88	7.69	0.73			
	BMI	1	112	28.43	5.13	0.48	5813.00	-0.83	0.40#
		2	111	27.59	4.28	0.40			

Group 1-Test, Group 2-Control

Section I

Testing Hypothesis

I1: There is a significant difference between the pre-test and post-test Mindfulness score, EPDS score and Social Anxiety score, Mental Well-being score, EAT 26 score, and Behavioral score among young mothers in the test group.

Table 4.39 Level of significance among participants in test group

Test group								
Scales	Pre test		Post test		Mean difference	Z value	p value of Wilcoxon Signed Ranks Test	Level of significance
	Mean	SD	Mean	SD				
Mindfulness Score	0.66	0.64	4.72	0.55	-1.05	-8.28	0.000**	Highly Significant
EPDS Score	15.29	3.89	9	3.42	6.28	-8.61	0.000**	Highly Significant
Social Anxiety Score	28.28	11.16	16.29	9.14	11.98	-7.52	0.000**	Highly Significant
Mental Well-being Score	36.35	7.39	53.08	5.88	-16.73	-8.73	0.000**	Highly Significant
EAT -26 Score	20.07	6.67	4.83	2.85	15.24	-9.05	0.000**	Highly Significant
Behavioral Score (each yes =1 and no=0)	2.5	1.09	1.09	0.28	1.41	-8.17	0.000**	Highly Significant
Overall	106.15	30.84	89.01	22.12	17.13	-50.36	0.000**	Highly Significant

Wilcoxon Signed Ranks Test was conducted to analyze the data in pre and post-test for mindfulness score, EPDS score, social anxiety score, mental well-being score, EAT- 26 score, and Behavioral score of young mothers in the test group shows that there was a highly significant difference found in the all the scores covering different factors the factors. A statistically significant difference was seen for the values between the time intervals ($p < 0.01$). The overall mean difference in the test group was 17.13, and the z-value was -50.36. Hence, the alternate hypothesis was accepted and unveiled that the Mindfulness-Based Program effectively reduced stress levels and promoted young mothers' mental and psychosocial well-being (Table 4.39).

I2: There is a significant difference between post-test EPDS score, Social Anxiety score, Mental Well-being score, EAT 26 score, and Behavioral score among young mothers in the test and control group.

Table 4.40 Post-test level of significance among participants in test and control group

Post-test								
Scales	Control group		Test group		Mean difference	Z value	p value of Mann-Whitney U test	Level of significance
	Mean	SD	Mean	SD				
Mindfulness score	4.23	0.71	4.72	0.55	-0.49	-5.53	0.000**	Highly Significant
EPDS Score	12.25	4.33	9.00	3.42	3.25	-5.59	0.000**	Highly Significant
Social Anxiety Score	21.31	13.52	16.29	9.14	5.02	-3.09	0.002**	Highly Significant

Mental Well-being Score	48.92	10.46	53.08	5.88	-4.16	-2.87	0.004**	Highly Significant
EAT -26 Score	20.35	8.23	4.83	2.85	15.52	-11.65	0.000**	Highly Significant
Behavioral Score (each yes =1 and no=0)	1.76	1.19	1.09	0.28	0.67	-4.86	0.000**	Highly Significant
Overall	108.82	38.44	89.01	22.12	19.81	-33.59	0.006**	Highly Significant

A statistically significant difference was seen for the values between the groups ($p < 0.01$). Mann-Whitney U test was conducted to analyze the post-test data for mindfulness score, EPDS score, social anxiety score, mental well-being score, EAT-26 score, and the behavioral score of young mothers in the test and control group shows that there was a highly significant difference found in the all the scores covering different factors. The overall mean difference between the control and test group was 19.81. The overall z value was -33.59. Hence it can be interpreted that the alternate hypothesis was accepted and unveiled that the Mindfulness-Based Program was effective in reducing the level of stress and promoting the mental and psychosocial well-being of young mothers (Table 4.40).

Objective 3: To determine the correlation between the test and control groups' pre- and post-test stress, psychosocial well-being, and mindfulness results.

I3: There is a significant correlation between the pre-test scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the test group.

Table 4.41 Correlation between pre-test scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the test group

		Age	Weight (kg)	Height (cm)	BMI	Mindfulness score	EPDS Score	Social Anxiety Score	Mental well-being score	EAT -26 Score
Age	Pearson Correlation r value									
	p value									
	N									
Weight (kg)	Pearson Correlation r value	0.187*								
	p value	0.048								
	N	112								
Height (cm)	Pearson Correlation r value	0.064	0.492**							
	p value	0.502	0.000							
	N	112	112							
BMI	Pearson Correlation r value	0.181	0.920**	0.118						
	p value	0.056	0.000	0.216						
	N	112	112	112						
Mindfulness score	Pearson Correlation r value	0.335**	0.020	0.211*	-0.077					
	p value	0.000	0.832	0.025	0.423					
	N	112	112	112	112					
EPDS Score	Pearson Correlation r value	-0.129	0.078	-0.028	0.089	-0.482**				

	p value	0.175	0.415	0.770	0.353	0.000				
	N	112	112	112	112	112				
Social Anxiety Score	Pearson Correlation r value	-0.294**	-0.090	-0.074	-0.065	-0.400**	0.446**			
	p value	0.002	0.345	0.436	0.494	0.000	0.000			
	N	112	112	112	112	112	112			
Mental Well-being score	Pearson Correlation r value	0.353**	0.001	0.295**	-0.110	0.380**	-0.379**	-0.260**		
	p value	0.000	0.992	0.002	0.249	0.000	0.000	0.006		
	N	112	112	112	112	112	112	112		
EAT -26 Score	Pearson Correlation r value	-0.150	-0.359**	-0.019	-0.414**	-0.093	-0.0075	0.036	-0.135	
	p value	0.114	0.000	0.845	0.000	0.328	0.435	0.703	0.156	
	N	112	112	112	112	112	112	112	112	
*. Correlation is significant at the 0.05 level (2-tailed).										
**. Correlation is significant at the 0.01 level (2-tailed).										

It is observed in the pre-test group:

- Mindfulness has a low correlation, and it increases with age.
- EPDS has a negative correlation with mindfulness.
- Social anxiety score decreases with mindfulness and increases with EPDS score.
- Mental well-being increase with age and height (low correlation), and mindfulness decrease with EPDS Score and social anxiety.
- EAT-26 score negatively correlates with current weight and BMI and does not correlate with mindfulness, social anxiety, and mental well-being (Table 4.41).

I4: There is a significant correlation between the post-test scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the test group.

Table 4.42 Correlation between post-test scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the test group

		Age	Weight (kg)	Height (cm)	BMI	Mindfulness Score	EPDS Score	Social Anxiety score	Mental well-being score	EAT 26 Score
Age	Pearson Correlation r value									
	p value									
	N									
Weight (kg)	Pearson Correlation r value	0.164								
	p value	0.084								
	N	112								
Height (cm)	Pearson Correlation r value	0.064	0.487**							
	p value	0.502	0.000							
	N	112	112							
BMI	Pearson Correlation r value	0.155	0.915**	0.101						
	p value	0.102	0.000	0.290						
	N	112	112	112						
Mindfulness Score	Pearson Correlation r value	0.018	-0.048	-0.137	-0.002					
	p value	0.854	0.615	0.150	0.986					
	N	112	112	112	112					
EPDS Score	Pearson Correlation r value	0.041	0.080	0.262**	-0.040	-0.297**				
	p value	0.664	0.401	0.005	0.675	0.001				
	N	112	112	112	112	112				
Social	Pearson	-0.064	-0.166	0.182	-0.262**	-0.322**	0.289**			

Anxiety score	Correlation r value									
	p value	0.505	0.080	0.054	0.005	0.001	0.002			
	N	112	112	112	112	112	112			
Mental well-being score	Pearson Correlation r value	0.008	0.008	-0.035	0.039	0.152	-0.157	-0.194*		
	p value	0.937	0.931	0.710	0.684	0.109	0.098	0.041		
	N	112	112	112	112	112	112	112		
EAT 26 Score	Pearson Correlation r value	0.082	0.118	0.181	0.057	-0.093	0.075	-0.119	0.132	
	p value	0.391	0.215	0.057	0.551	0.331	0.433	0.213	0.165	
	N	112	112	112	112	112	112	112	112	
**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).										

It is observed in the post-test group:

- Mindfulness has no correlations with any of the chosen factors in this study after the intervention (post-test), correlations with age cease to exist
- EPDS has a negative correlation with mindfulness. It is seen that the relationship decreases after the intervention.
- Social anxiety scores decrease with mindfulness and BMI and increase with EPDS scores. It is noted that before the intervention, there were no correlations between social anxiety scores with BMI.
- Mental well-being increase with age and height (low correlation), and mindfulness decrease with EPDS Score and social anxiety. The relationship strength weakens after the intervention.
- EAT-26 score has no correlations with any of the chosen factors in this study after the intervention (post-test), correlations with weight and BMI cease to exist (Table 4.42).

I5: There is a significant correlation between the pre-test scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the control group.

Table 4.43 Correlation between pre-test scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the control group

		Age	Weight (kg)	Height (cm)	BMI	Mindfulness score	EPDS Score	Social Anxiety Score	Mental well-being score	EAT -26 Score
Age	Pearson Correlation r value									
	p value									
	N									
Weight (kg)	Pearson Correlation r value	0.040								
	p value	0.673								
	N	111								
Height (cm)	Pearson Correlation r value	-0.199*	-0.016							
	p value	0.036	0.866							
	N	111	111							
BMI	Pearson Correlation r value	0.132	0.819**	-0.579**						
	p value	0.167	0.000	0.000						
	N	111	111	111						
Mindfulness score	Pearson Correlation r value	0.227*	-0.161	0.053	-0.149					
	p value	0.017	0.091	0.584	0.118					
	N	111	111	111	111					
EPDS Score	Pearson Correlation r value	0.200*	-0.023	-0.120	0.039	-0.436**				
	p value	0.035	0.813	0.210	0.684	0.000				
	N	111	111	111	111	111				
Social	Pearson	-0.224*	0.058	-0.039	0.073	-0.482**	0.449**			

Anxiety Score	Correlation r value									
	p value	0.018	0.548	0.682	0.449	0.000	0.000			
	N	111	111	111	111	111	111			
Mental well-being score	Pearson Correlation r value	-0.278**	-0.044	0.126	-0.102	0.252**	-0.653**	-0.331**		
	p value	0.003	0.649	0.188	0.284	0.008	0.000	0.000		
	N	111	111	111	111	111	111	111		
EAT -26 Score	Pearson Correlation r value	0.027	0.103	0.100	0.025	-0.278**	0.271**	0.078	-0.185	
	p value	0.779	0.282	0.297	0.796	0.003	0.004	0.417	0.052	
	N	111	111	111	111	111	111	111	111	
*. Correlation is significant at the 0.05 level (2-tailed).										
**. Correlation is significant at the 0.01 level (2-tailed).										

It has been observed that:

- Mindfulness has a low positive correlation with Age.
- EPDS has a slight positive correlation with Age and a moderate negative correlation with Mindfulness
- Social Anxiety score has a low negative correlation with Age, moderate negative correlation with Mindfulness, and moderate positive correlation with EPDS Score.
- Mental well-being score has a low negative correlation with Age, low positive correlation with Mindfulness, moderate negative correlation with EPDS & low negative correlation with Social Anxiety.
- EAT 26 Score has a low negative correlation with Mindfulness and a low positive correlation with EPDS (Table 4.43)

I6: There is a significant correlation between the post-test scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the control group.

Table 4.44 Correlation between post-test scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the control group

		Age	Weight (kg)	Height (cm)	BMI	Mindfulness Score	EPDS Score	Social Anxiety score	Mental well-being score	EAT 26 Score
Age	Pearson Correlation r value									
	p value									
	N									
Weight (kg)	Pearson Correlation r value	0.033								
	p value	0.733								
	N	111								
Height (cm)	Pearson Correlation r value	-0.162	-0.023							
	p value	0.090	0.813							
	N	111	111							
BMI	Pearson Correlation r value	0.107	0.813**	-0.593**						
	p value	0.263	0.000	0.000						
	N	111	111	111						
Mindfulness Score	Pearson Correlation r value	0.228*	-0.179	-0.094	-0.075					
	p value	0.016	0.060	0.327	0.434					
	N	111	111	111	111					

EPDS Score	Pearson Correlation r value	0.134	0.008	0.003	-0.007	-0.476**				
	p value	0.160	0.933	0.977	0.941	0.000				
	N	111	111	111	111	111				
Social Anxiety score	Pearson Correlation r value	-0.117	0.090	0.155	-0.019	-0.549**	0.440**			
	p value	0.223	0.349	0.105	0.843	0.000	0.000			
	N	111	111	111	111	111	111			
Mental well-being score	Pearson Correlation r value	-0.207*	-0.104	-0.058	-0.044	0.277**	-0.556**	-0.266**		
	p value	0.029	0.276	0.547	0.649	0.003	0.000	0.005		
	N	111	111	111	111	111	111	111		
EAT 26 Score	Pearson Correlation r value	0.079	0.106	0.237*	-0.062	-0.480**	0.456**	0.352**	-0.316**	
	p value	0.413	0.268	0.012	0.520	0.000	0.000	0.000	0.001	
	N	111	111	111	111	111	111	111	111	
*. Correlation is significant at the 0.05 level (2-tailed).										
**. Correlation is significant at the 0.01 level (2-tailed).										

It has been observed that:

- Mindfulness score has a slight positive correlation with Age.
- EPDS has a moderate negative correlation with Mindfulness score.
- Social Anxiety score has a moderate negative correlation with Mindfulness and a moderate positive correlation with EPDS Score.
- Mental well-being score has a low negative correlation with Age, a low positive correlation with Mindfulness score, a moderate negative correlation with EPDS & low negative correlation with Social Anxiety score.
- EAT 26 Score has a low positive correlation with Height, moderate negative correlation with Mindfulness score, moderate positive correlation with EPDS, low positive correlation with Social Anxiety score, and low negative correlation with Mental well-being score (Table 4.44).

I7: There is a significant correlation between the scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the control group.

Table 4.45 Correlation between the scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the control group

		Mindfulness Score	EPDS Score	Social Anxiety score	Mental well-being score	EAT 26 Score
Mindfulness Score	Pearson Correlation r value					
	p value					
	N					
EPDS Score	Pearson Correlation r value	-0.476**				
	p value	0.000				
	N	111				
Social Anxiety score	Pearson Correlation r value	-0.549**	0.440**			
	p value	0.000	0.000			
	N	111	111			
Mental well-being score	Pearson Correlation r value	0.277**	-0.556**	-0.266**		
	p value	0.003	0.000	0.005		
	N	111	111	111		
EAT 26 Score	Pearson Correlation r value	-0.480**	0.456**	0.352**	-0.316**	
	p value	0.000	0.000	0.000	0.001	
	N	111	111	111	111	
**. Correlation is significant at the 0.01 level (2-tailed).						

It has been observed in the control group that EPDS has a moderate negative correlation with Mindfulness. Social Anxiety score has a moderate negative correlation with Mindfulness and a moderate positive correlation with EPDS. Mental

well-being score has a slight correlation with Mindfulness, a moderate negative correlation with EPDS, and a slight negative correlation with Social Anxiety score. EAT 26 score has a moderate negative correlation with Mindfulness, a moderate positive correlation with EPDS score, a positive low with Social Anxiety score, and a low negative correlation with Mental well-being score (Table 4.45).

I8: There is a significant correlation between the scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the test group.

Table 4.46 Correlation between the scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and Behavioral scale among young mothers in the test group

		Mindfulness Score	EPDS Score	Social Anxiety score	Mental well-being score	EAT 26 Score
Mindfulness Score	Pearson Correlation r value					
	p value					
	N					
EPDS Score	Pearson Correlation r value	-0.297**				
	p value	0.001				
	N	112				
Social Anxiety score	Pearson Correlation r value	-0.322**	0.289**			
	p value	0.001	0.002			
	N	112	112			
Mental well-being score	Pearson Correlation r value	0.152	-0.157	-0.194*		
	p value	0.109	0.098	0.041		
	N	112	112	112		
EAT 26 Score	Pearson Correlation r value	-0.093	0.075	-0.119	0.132	
	p value	0.331	0.433	0.213	0.165	
	N	112	112	112	112	
**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).						

It has been observed in the test group that EPDS has a low negative correlation with Mindfulness. Social Anxiety score has a low negative correlation with Mindfulness and a slight positive correlation with EPDS. Mental well-being score has a slight negative correlation with Social Anxiety score. EAT 26 score does not correlate with Mindfulness score, EPDS score, Social Anxiety score, and Mental Well-being score (Table 4.46).

I9: There is a significant correlation between scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental well-being scale, EAT 26 scale, and Behavioral scale among young mothers in both groups.

Table 4.47 Correlation between the scores of Height, Weight, BMI, EPDS scale, Social Anxiety scale, Mental Well-being scale, EAT 26 scale, and Behavioral scale among young mothers in both groups

		Mindfulness Score	EPDS Score	Social Anxiety score	Mental well-being score	EAT 26 Score
Mindfulness Score	Pearson Correlation r value					
	p value					
	N					
EPDS Score	Pearson Correlation r value	-0.489**				
	p value	0.000				
	N	223				
Social Anxiety score	Pearson Correlation r value	-0.505**	0.430**			
	p value	0.000	0.000			
	N	223	223			
Mental well-being score	Pearson Correlation r value	0.299**	-0.475**	-0.284**		
	p value	0.000	0.000	0.000		
	N	223	223	223		
EAT 26	Pearson	-0.496**	0.505**	0.321**	-0.332**	

Score	Correlation r value					
	p value	0.000	0.000	0.000	0.000	
	N	223	223	223	223	
**. Correlation is significant at the 0.01 level (2-tailed).						

EPDS has a moderate negative correlation with Mindfulness. Social Anxiety score has a moderate negative correlation with Mindfulness and a moderate positive correlation with EPDS. Mental well-being score has a slight correlation with Mindfulness, a moderate negative correlation with EPDS, and a slight negative correlation with Social Anxiety score. EAT 26 score has a moderate negative correlation with Mindfulness, a moderate positive correlation with EPDS score, a positive low with Social Anxiety score, and a negative low correlation with Mental Well-being score (Table 4.47).

CHAPTER 5
CONCLUSION

5.0 Conclusion

This chapter contains conclusion about the outcomes interpreted after the completion of the research study. To meet the objectives and analysis of the collected data, nonparametric tests were used to arrange, encode, tabulate, and analyze the data.

The result of this study was measured by using following Psychological Scales Scores:

- **Mindfulness Attention Awareness (MAAS) Score**

Test Group:

Mean Score (Pre-test) - 3.66

Mean Score (Post-test) - 4.72

Control Group:

Mean Score (Pre-test) - 4.200

Mean Score (Post-test) - 4.239

- **Edinburgh Postnatal Depression Score (EPDS)**

Test Group:

Mean Score (Pre-test) - 15.29

Mean Score (Post-test) - 9.00

Control Group:

Mean Score (Pre-test) - 13.11

Mean Score (Post-test) - 12.25

- **Social Phobia Score**

Test Group:

Mean Score (Pre-test) - 28.28

Mean Score (Post-test) - 16.29

Control Group:

Mean Score (Pre-test) - 21.14

Mean Score (Post-test) - 21.31

- **The Warwick-Edinburgh Mental Well-being Score (WEMWBS)**

Test Group:

Mean Score (Pre-test) - 36.35

Mean Score (Post-test) - 53.08

Control Group:

Mean Score (Pre-test) - 46.53

Mean Score (Post-test) - 48.92

- **Eating Attitude Test (EAT-26)**

Test Group:

Mean Score (Pre-test) - 20.07

Mean Score (Post-test) - 4.83

Control Group:

Mean Score (Pre-test) - 21.11

Mean Score (Post-test) - 20.35

- **Behavioral questions as per their experiences in the past six months.**

Test Group:

Mean Score (Pre-test) - 2.50

Mean Score (Post-test) -1.09

Control Group:

Mean Score (Pre-test) - 1.84

Mean Score (Post-test) - 1.76

Young mothers' psychological well-being was the primary focus of this research. By evaluating the effectiveness of mindfulness-based program, we aimed to provide valuable insights into its potential benefits for this specific population.

To gather the necessary data, a comprehensive survey was administered to 223 young mothers across various regions in India. The survey included a range of questions designed to assess their psychological well-being and the potential changes resulting from their participation in the mindfulness-based program.

Upon analyzing the collected data, several key findings emerged. Firstly, the implementation of the mindfulness-based program led to a substantial improvement in the psychological wellness of participants. This positive change was evident across various dimensions, including reduced stress levels, enhanced emotional regulation, and increased overall life satisfaction.

Furthermore, the analysis revealed that the effectiveness of the mindfulness-based program was consistent across different demographic factors, such as age, education level, and socioeconomic status. This suggests that the program has the potential to benefit young mothers from diverse backgrounds.

These findings highlight the importance of incorporating mindfulness-based interventions into the support systems provided to young mothers. By promoting their psychological well-being, we can empower them to navigate the challenges of motherhood with greater resilience and positivity.

To summarize, the evidence indicates that irrespective of their demographic characteristics, young mothers experience a positive improvement in their psychological well-being through this program. These results emphasize the significance of integrating mindfulness-based interventions into the support systems for young mothers, ultimately enhancing their overall well-being.

The current study aimed to evaluate how well young mothers' psychological wellness was maintained by practicing mindfulness techniques. The average childbearing age of Indian women is 27.4 years old, according to the fertility demographics from World Data 2020. Therefore, the current study involved mothers between the ages of 25 and 38. The intervention focused on making adjustments to the nutrition and eating habits to encourage the use of the senses during the eating process and emphasize clean eating, avoiding sugar and processed carbohydrates while consuming more fruits, vegetables, and cereals. It was suggested to consume less sugar because it is known to be linked to greater psychological wellness. Stretching, Zumba, spot walking, and dance were some of the physical activities that were included in the intervention in test group. Participants were encouraged to do fun-loving activities, follow their hobbies,

and spend some quality time with their kids; they were also asked to do self-introspection exercises and recite affirmations mindfully during the program.

All of the criteria examined in the current study pointed toward the usefulness of mindfulness-based programs in promoting the psychological well-being of young mothers. Current study suggests that mindfulness plays a significant role in alleviating postpartum symptoms and the overall psychological well-being of young mothers after implementing a mindfulness-based program.

Post-partum weight retention is a common issue that many new mothers face, especially those who gain excessive weight during pregnancy. It can be challenging to get back into pre-pregnancy shape instantly, as the body has undergone significant changes, and trying to lose the extra pounds can be discouraging. There is a direct correlation between post-partum weight gain and gestational weight gain, a typical condition after pregnancy. Factors of gestational weight gain can be influenced by a multitude of factors, including maternal characteristics, prenatal behaviors such as physical activity levels, dietary habits, and smoking status and underlying medical conditions. Maternal age, pre-pregnancy weight, and ethnicity have all been identified as significant determinants of gestational weight gain. Moreover, the presence of medical conditions like gestational diabetes or hypertensive disorders can further complicate the equation by potentially necessitating weight restrictions or specific dietary interventions for optimal maternal and fetal health.

Strong evidence shows that 60-80% of women retain weight after giving birth, which may develop into permanent weight gain. This study also reveals similar findings. The concept of Mindfulness was incorporated into the present study to observe changes in weight before and after the intervention. Mindful eating brings attentiveness to how individuals experience their food. As a result of mindful eating, individuals are encouraged to savor the moment, enjoy the food, and stay present during the eating experience rather than being concerned about reducing their weight.

As a new mother, the responsibilities and expectations associated with motherhood can be overwhelming. Becoming a parent often leads to uncertainty and various

accompanying emotions such as anxiety, stress, guilt, and even post-partum depression. Mindfulness has been proven to be a powerful tool for improving new mothers' psychosocial well-being and preventing post-partum mental health issues.

Mindfulness is a technique that trains individual to draw their attention in the present moment, without getting judgmental about things happening around. It is a practice that encourages us to be fully aware of our thoughts, feelings, and sensations non-judgmentally.

By cultivating mindfulness, one can develop a greater sense of clarity and focus in our daily lives. Rather than being ruminating into the past or future, mindfulness makes us more attentive toward the present moment. It helps us to appreciate the beauty and richness of our experiences, whether they are pleasant or challenging.

Mindfulness has also been found to increase self-compassion and improve self-regulation capabilities. When it comes to new mothers, Mindfulness can be an invaluable tool for helping them navigate motherhood's psychological and emotional demands. Mindfulness can help new mothers cope with the stress and anxieties of motherhood. The practice encourages individuals to recognize their emotions, thought patterns, and physical sensations. This can allow mothers to identify when they are feeling overwhelmed, recognize the reasons behind their feelings, and manage those feelings more effectively. It can also help reduce negative thought patterns and promote positive thinking.

The demands of motherhood have the potential to make mothers feel guilty and overwhelmed. Mindfulness can help mothers recognize they are okay and worthy of care and respect. It can allow mothers to gain insight into their needs and prioritize their well-being. It can also help them to let go of unrealistic expectations and acknowledge the need for help and assistance from others. In addition, mindfulness can assist mothers in practicing self-compassion and self-care. Finally, mindfulness can help new mothers to foster meaningful relationships with their babies. Constant distraction and cultural pressures can take away from the quality time mothers need to spend with their babies. Mindfulness can help mothers slow down, focus on the

importance of the moment, and develop a closer bond with their little ones.

In conclusion, Mindfulness improves overall well-being by bringing attention to self-care practices like nutrition, hydration, rest and exercise and it can be potent tools for helping mothers to manage the challenges and demands of motherhood. Mindfulness encourages self-compassion, self-regulation, positive thinking, and meaningful relationships with kids. Therefore, it is an invaluable tool for promoting the psychosocial well-being of young mothers.

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Annexures

Annexure - I

Letter requesting the Experts to Review the Study and Tool

From

Shweta Patel, Ph.D. Scholar,
Galgotias University, Greater Noida, UP.

To

Respected Sir / Madam,

**Sub: Requesting the opinions and suggestions of Experts for the review of research study -
Reg.**

I, Mrs. Shweta Patel, Ph.D. Scholar of Galgotias University, Greater Noida, UP, has selected the topic as mentioned below for my thesis in Ph.D. Degree.

Topic: *Role and effectiveness of Mindfulness in Psychosocial Wellbeing of Young Mothers*

I have enclosed herewith.

- Objectives
- Hypothesis

I request you to go through the items and give your valuable suggestions and opinions to develop the validity of the tool and method used in study. Kindly suggest modifications, addition and deletion, if any, in the remark column. Kindly sign the Certificate of review and validation stating that you have reviewed the study.

Thanking You.

Your's Faithfully,

(Shweta Patel)

Encl:

1. Tool
2. Criteria checklist
3. Review /Validation certificate

Annexure - II

Criteria for Tool Validity Evaluation Checklist

Kindly review the items in the tool and put (✓) mark as appropriate column given below, if there is any need for modification. Kindly suggest in “Remarks” Column.

Section – A- Demographic Variables

Tool	Very Relevant	Relevant and Need Modification	Not Relevant	Remarks
Occupation				
Type of family				
Ongoing medications				
Marital status				
Religion				
Education				
Number of children				
Residential area				
Dietary pattern				
Hobby				
Daily intake of water				
Illness				

Suggestions if any : -----

Signature

Criteria for Validity of Mindfulness Based Program

Kindly go through the Mindfulness Based Program and put (✓) mark as appropriate of the tool and write your remarks if any in the remarks column

S. No.	Items	Adequate	Inadequate	Remarks
1.	Introduction			
2.	Meaning			
3.	Benefits of Mindfulness Based Program in general population			
4.	Benefits of Mindfulness Based Program in young Mothers			
5.	Guidelines to Practice			
6.	Preparation			
7.	Techniques			
8.	Conclusion			

Suggestions if any:-----

Signature

Annexure - III

Certificate of Review/Validation

This is to certify that the tools constructed by **SHWETA PATEL**, Ph.D. Scholar of Galgotias University, Greater Noida, Uttar Pradesh, is to be used in her Study titled, “Role and Effectiveness of Mindfulness on Psychosocial Wellbeing of Young Mothers” has been reviewed and validated by me and found adequate for her study.

Signature :

Name:

Designation:

Seal

Place:

Date:

Annexure – IV

Informed Consent Form

Name

Date

Here I acknowledge that information regarding the project study topic was explained to me and the positive reason was pointed out. I am voluntarily willing to participate in the study. At any time I am free to exclude from the study and promised that all personal information should be kept in confidential.

Signature of Participant

Annexure – V

Tool to assess the psychosocial wellbeing of Young Mothers

The tool has two sections,

Section-I Demographic Variables

Section-II Scales to assess the psychosocial wellbeing of young mothers

- Edinburgh Postnatal Depression Scale (EPDS)
- Mindfulness Attention Awareness Scale
- Social Phobia Scale
- The Warwick-Edinburgh Mental Well-being Scale
- Eating Attitudes Test

Section – I

Demographic Variables

Instruction to the participants

The following questions in this section are related to your personal data. Each question has 2 to 4 options. The soft copy of this form will be given to you for filling up the responses. You may take your time and be comfortable to answer the option that fits you. All the responses were kept highly confidential.

Sample No: _____

Date:

1. Type of family		
1.1. Nuclear	[]
1.2. Joint	[]
2. Residential area		
2.1. Rural	[]
2.2. Urban	[]
3. Religion		
3.1. Hindu	[]
3.2. Muslim	[]
3.3. Christian	[]
4. Education		
4.1. Diploma/ Graduation	[]
4.2. Doctorate/ Ph.D.	[]
4.3. Upto High school	[]
5. Marital status		
5.1. Married	[]
5.2. Widow	[]
5.3. Divorced	[]
6. Total Number of children		
6.1. One	[]
6.2. Two	[]
6.3. More than two	[]
7. Dietary pattern		
7.1. Vegetarian	[]
7.2. Non vegetarian	[]

8. Hobby

- | | | |
|-------------------------------|---|---|
| 8.1. Reading books | [|] |
| 8.2. Listening music | [|] |
| 8.3. Watching Television | [|] |
| 8.4. Dancing | [|] |
| 8.5. Any other, Specify _____ | | |

9. Daily intake of water

- | | | |
|-------------------------------|---|---|
| 9.1. 1-2 liter | [|] |
| 9.2. 1.5 – 2.5 liter | [|] |
| 9.3. 2-3 liter | [|] |
| 9.4. Any other, Specify _____ | | |

10. History of illness

- | | | |
|-----------|---|---|
| 10.1. No | [|] |
| 10.2. Yes | [|] |

11. Occupation

- | | | |
|---------------------------|---|---|
| 11.1. Business | [|] |
| 11.2. Home-maker | [|] |
| 11.3. Professional | [|] |
| 11.4. Service/ salaried | [|] |
| 11.5. Not highly employed | [|] |

12. Ongoing medication

- | | | |
|-----------|---|---|
| 12.1. No | [|] |
| 12.2. Yes | [|] |

Section –II

Scales to assess the psychosocial wellbeing of young mothers

Edinburgh Postnatal Depression Scale (EPDS)

The questionnaire below is called the Edinburgh Postnatal Depression Scale (EDPS) The EDPS was developed to identify women who ma postpartum depression. Each answer is given a score of 0 to 3. The maximum score is 30.

Please select the answer that comes closest to how you have felt in the past 7 days:

1. I have been able to laugh and see the funny side of things

- As much as I always could 0
- Not quite so much now 1
- Definitely not so much now 2
- Not at all 3

2. I have looked forward with enjoyment to things

- As much as I ever did 0
- Rather less than I used to 1
- Definitely less than I used to 2
- Hardly at all 3

3. I have blamed myself unnecessarily when things went wrong

- Yes, most of the time 3
- Yes, some of the time 2
- Not very often 1
- No, never 0

4. I have been anxious or worried for no good reason

- No, not at all 0
- Hardly ever 1

- Yes, sometimes 2
- Yes, very often 3

5. I have felt scared or panicky for no very good reason

- Yes, quite a lot 3
- Yes, sometimes 2
- No, not much 1
- No, not at all 0

6. Things have been getting on top of me

- Yes, most of the time I haven't been able to cope at all. 3
- Yes, sometimes I haven't been coping as well as usual 2
- No, most of the time I have coped quite well. 1
- No, I have been coping as well as ever. 0

7. I have been so unhappy that I have had difficulty sleeping

- Yes, most of the time 3
- Yes, quite often 2
- Not very often 1
- No, not at all 0

8. I have felt sad or miserable

- Yes, most of the time 3
- Yes, quite often 2
- Not very often 1
- No, not at all 0

9. I have been so unhappy that I have been crying

- Yes, most of the time 3
- Yes, quite often 2
- Only occasionally 1

- No, never 0

10. The thought of harming myself has occurred to me

- Yes, quite often 3
- Sometimes 2
- Hardly ever 1
- Never

If you have had ANY thoughts of harming yourself or your baby, or you are having hallucinations please tell your doctor or your midwife immediately or go to your nearest hospital emergency room.

TOTAL SCORE

A score of more than 10 suggests minor or major depression may be present. Further evaluation is recommended.

Mindfulness Attention Awareness Scale

Day-to-Day Experiences

Instructions: Below is a collection of statements about your everyday experience. Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what *really reflects* your experience rather than what you think your experience should be. Please treat each item separately from every other item.

1	2	3	4	5	6
Almost Always	Very Frequently	Somewhat Frequently	Somewhat Infrequently	Very Infrequently	Almost Never

I could be experiencing some emotion and not be conscious of it until sometime later.	1	2	3	4	5	6
I break or spill things because of carelessness, not paying attention, or thinking of something else.	1	2	3	4	5	6
I find it difficult to stay focused on what's happening in the present.	1	2	3	4	5	6
I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.	1	2	3	4	5	6
I tend not to notice feelings of physical tension or discomfort until they really grab my attention.	1	2	3	4	5	6
I forget a person's name almost as soon as I've been told it for the first time.	1	2	3	4	5	6
It seems I am "running on automatic," without much awareness of what I'm doing.	1	2	3	4	5	6
I rush through activities without being really attentive to them.	1	2	3	4	5	6
I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there.	1	2	3	4	5	6
I do jobs or tasks automatically, without being aware of what I'm doing.	1	2	3	4	5	6
I find myself listening to someone with one ear, doing something else at the same time.	1	2	3	4	5	6

I drive places on 'automatic pilot' and then wonder why I went there.	1	2	3	4	5	6
I find myself preoccupied with the future or the past.	1	2	3	4	5	6
I find myself doing things without paying attention.	1	2	3	4	5	6
I snack without being aware that I'm eating.	1	2	3	4	5	6

MAAS Scoring

To score the scale, simply compute a mean of the 15 items. Higher scores reflect higher levels of dispositional mindfulness.

Social Phobia Scale (SPS)

Name: _____

Date: _____

For each question, please tick the box which indicates the degree to which you feel the statement has been true for you in the agreed time period. The rating scale is as follows:

0 = not at all characteristic or true of me 1 = slightly characteristic or true of me

2 = moderately characteristic or true of me 3 = very characteristic or true of me

4 = extremely characteristic or true of me

		Not at all	Slightly	Moderately	Very	Extremely
1	I become anxious if I have to write in front of other people					
2	I become self-conscious when using public toilets					
3	I can suddenly become aware of my own voice & of others listening to me					
4	I get nervous that people are staring at me as I walk down the street					
5	I fear I may blush when I am with others					
6	I feel self-conscious if I have to enter a room where others are already seated					
7	I worry about shaking or trembling when I'm watched by other people					
8	I would get tense if I have to sit facing people on a bus or a train					
9	I get panicky that others might see me faint, or get sick or ill					

10	I would find it difficult to drink something if in a group of people					
11	it would make me feel self-conscious to eat in front of a stranger at a restaurant					
12	I am worried people will think my behaviour odd					
13	I would get tense if I have to carry a tray across a crowded cafeteria					
14	I worry I'll lose control of myself in front of other people					
15	I worry I might do something to attract the attention of other people					
16	when in an elevator, I am tense if people look at me					
17	I can feel conspicuous standing in a line					
18	I can get tense when speaking in front of other people					
19	I worry my head will shake or nod in front of others					
20	I feel awkward and tense if I know people are watching me					

for each question score 0 for "not at all", 1 for "slightly", 2 for "moderately", 3 for "very", and 4 for "extremely"

_____ Subtotal page 1
 _____ Subtotal page2
 _____ Total score

The Warwick-Edinburgh Mental Well-being Scale (WEMWBS)

Below are some statements about feelings and thoughts.

Please tick the box that best describes your experience of each over the last 2 weeks

STATEMENTS	None of the time	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic about the future	1	2	3	4	5
I've been feeling useful	1	2	3	4	5
I've been feeling relaxed	1	2	3	4	5
I've been feeling interested in other people	1	2	3	4	5
I've had energy to spare	1	2	3	4	5
I've been dealing with problems well	1	2	3	4	5
I've been thinking clearly	1	2	3	4	5
I've been feeling good about myself	1	2	3	4	5
I've been feeling close to other people	1	2	3	4	5
I've been feeling confident	1	2	3	4	5
I've been able to make up my own mind about things	1	2	3	4	5
I've been feeling loved	1	2	3	4	5
I've been interested in new things	1	2	3	4	5
I've been feeling cheerful	1	2	3	4	5

Eating Attitudes Test (EAT-26)

Instructions: This is a screening measure to help you determine whether you might have an eating disorder that needs professional attention. This screening measure is not designed to make a diagnosis of an eating disorder or take the place of a professional consultation. Please fill out the below form as accurately, honestly and completely as possible. There is no right or wrong answers. All of your responses are confidential.

Part A: Complete the following questions:

1) Birth Date	Month:	Day:	Year:	2) Gender:	Male	Fema le
3) Height	Feet :	Inches:				□
4) Current Weight (lbs.):	5) Highest Weight (excluding pregnancy):					
6) Lowest Adult Weight:	7) Ideal Weight:					

Part B: Check a response for each of the following statements:		Always	Usually	Often	Some times	Rarely	Never
1.	Am terrified about being overweight.						
2.	Avoid eating when I am hungry.						
3.	Find myself preoccupied with food.						
4.	Have gone on eating binges where I feel that I may not be able to stop.						
5.	Cut my food into small pieces.						
6.	Aware of the calorie content of foods that I eat.						
7.	Particularly avoid food with a high carbohydrate content (i.e. bread, rice, potatoes, etc.)						
8.	Feel that others would prefer if I ate more.						
9.	Vomit after I have eaten.						
10.	Feel extremely guilty after eating.						
11.	Am preoccupied with a desire to be thinner.						
12.	Think about burning up calories when I exercise.						
13.	Other people think that I am too thin.						
14.	Am preoccupied with the thought of having fat on my body.						
15.	Take longer than others to eat my meals.						
16.	Avoid foods with sugar in them.						
17.	Eat diet foods.						
18.	Feel that food controls my life.						
19.	Display self-control around food.						
20.	Feel that others pressure me to eat.						
21.	Give too much time and thought to food.						
22.	Feel uncomfortable after eating sweets.						
23.	Engage in dieting behavior.						
24.	Like my stomach to be empty.						

25.	Have the impulse to vomit after meals.						
26.	Enjoy trying new rich foods.						
Part C: Behavioral Questions: In the past 6 months have you:		Never	Once a month or less	2-3 times a month	Once a week	2-6 times a week	Once a Day or more
A	*Gone on eating binges where you feel that you may not be able to stop?						
B	Ever made yourself sick (vomited) to control your weight or shape?						
C	Ever used laxatives, diet pills or diuretics (water pills) to control your weight or shape?						
D	Exercised more than 60 minutes a day to lose or to control your weight?						
E	Lost 20 pounds or more in the past 6 months	Yes			No		
* Defined as eating much more than most people would under the same circumstances and feeling that eating is out of control							

Annexure VI

Training Module on Mindfulness Based Program

S. No.	CONTENT
1	Introduction
2	Definition
3	Benefits of Mindfulness Based Program
4	Benefits of Mindfulness Based Stress Reduction in Young Mothers
5	Guidelines to Practice
6	Preparation Techniques
7	Techniques I. Mindful Eating II. Mindful Meditation III. Mindful Exercises/Yoga IV. Stress Relieving and Self Introspection Exercises
8	Mindfulness Meditation- Benefits & Steps
9	Mindful Yoga- Asanas Types & Steps
10	EFT tapping – Steps and description
11	Self introspection exercise –Steps and description

MINDFULNESS BASED PROGRAM

Introduction

The Mindfulness-Based program aims to address unconscious thoughts, feelings, and behaviors that are believed to contribute to increased stress and negatively impact one's health. By targeting these aspects, the program seeks to promote overall well-being and improve mental and physical health.

Definition

Mindfulness-based is a structured group program that utilizes mindfulness meditation and mindfulness practices in daily activities. Its purpose is to alleviate suffering associated with physical, psychosomatic, and psychiatric disorders, while simultaneously enhancing an individual's overall wellbeing.

Through the practice of mindfulness, individuals can develop a heightened awareness of their thoughts, emotions, and bodily sensations. This increased self-awareness allows for a deeper understanding of the underlying causes of suffering, leading to more effective coping strategies. It provides individuals with the tools and techniques necessary to cultivate a state of mindfulness, enabling them to better manage their physical and mental health.

Benefits of Mindfulness Based Program

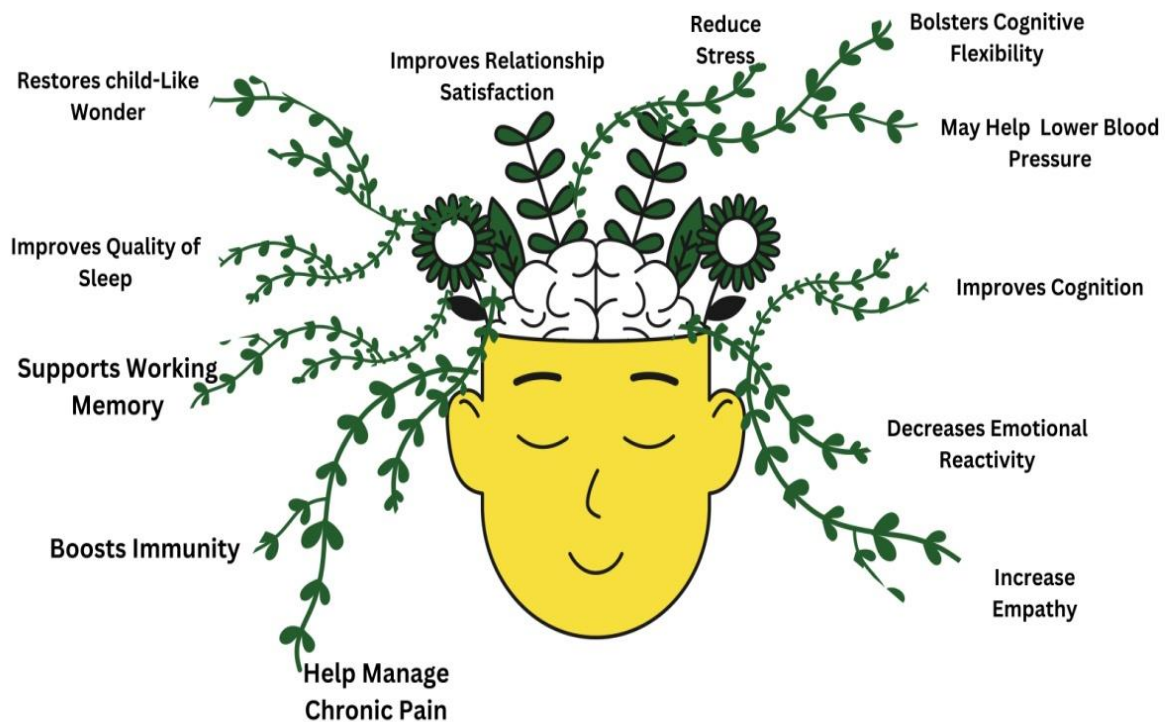
This program has proven beneficial to patients experiencing the following issues;

- Attention Deficit Hyperactive Disorder (ADHD)
- Anxiety
- Depression
- Chronic pain
- Stress
- Stress associated with a chronic illness
- Cancer
- Arthritis
- Heart disease
- Fatigue
- Anger

- Headaches
- High blood pressure
- Sleep problems

Benefits of Mindfulness Based Program in young Mothers

- Reduce stress
- Improvement in sleep quality
- Reduction in worry symptoms
- Relieve depression and anxiety
- Improve wellbeing – physical, psychological/emotional & social
- Increase in immune response
- Postpartum weight loss
- Enhanced emotional regulation
- Better relationship



Benefits of Mindfulness Based Program

Guidelines to Practice

- It is taught in a group format
- This program lasts four weeks, with weekly 1-2 hours sessions
- Each participant has an individual interview with the program instructor before the program
- Daily at home practice is required
- Maximum 10-20 minutes per day to be practiced
- 15 to 20 members in each group can attend the programme

Preparation

- Warm and protected place
- Loose, comfortable and conscious wear
- Nourish yourself before start
- Plan at uninterrupted time and place
- Use rug or mat to do lie down positions

Techniques

The following techniques to be used:

I. Mindfulness meditation

II. Mindful yoga

III. Stress Relieving (EFT Tapping)

IV. Self-Introspection Exercise (Johari window model)



Mindfulness Practices

I. Mindfulness Meditation

Mindfulness is a way of being more deeply present to our own body, thoughts and emotions. It is learning to work with what is already here, in a less reactive, less judgmental manner.

All participants were instructed to engage in a 6-phase binaural meditation led by Vishen Lakhiani. This guided meditation spans duration of 20 minutes, providing guidance on various aspects of life throughout each phase. The 6 Phase Meditation radically alters how you think, act, grow, heal, and influence the world around you in just a few minutes per day.

Benefits of meditation:

- Improve Longevity
- Decreases Loneliness
- Improve Mood
- Reduces Anxiety and stress
- Help connecting with creative and intuitive side
- Increased energy
- Improved sleep
- Increased feeling of gratitude
- Increased Self awareness
- Forgiveness
- Encourages Mindfulness

II. Mindful yoga

Yogasanas

1.NadishodhanPranayam	5.Talasila (Palm tree pose)
2.Sukhasana	6.Konasana
3. Sthitaprarthanaasana (Standing prayer pose)	7.Utkatasana (Fierce pose/chair pose)
3.Ekpadasana (one leg pose)	8. Marjariasana
4.Vakrasana (Standing half spinal twist pose)	

1. Nadishodhana pranayam, alternative nostril breathing. Nadi means energy channel shodhan means cleaning. Nadi shodhan Pranayam helps clear off the blocked energy channels and calms the mind. Nadis can be blocked due to stress, toxin build-up and by living an unhealthy lifestyle. Another name for this Pranayam is anulom vilom Pranayam.

Let's see how to do this sit in sukhasana now we will be only using the right hand to do this pranayama. The fingers will be actively using the thumb and the ring finger of your right hand, now close your right nostril with your right thumb inhale through the left nostril slowly and steadily for count of 3-4 seconds, and now close the left nostril with your ring finger so that both nostrils are closed.

Retain your breath at the top of the inhale for a brief pause and now open your right nostril and release the breath slowly through the right side for 3-4 seconds. Pause briefly at the bottom of the exhale now inhale through the right side slowly, hold both nostrils closed with your right finger and thumb. Open your left nostril and release your breath slowly through the left side pause briefly at the bottom. This is one circle repeated for 5-8 cycles more if you already have experience with this pranayama.



The benefit of this pranayama is that it supports the lungs and respiratory functions it opens and clears out nadi,s, rejuvenates the nervous system, removes toxins, and reduces stress and anxiety. You should avoid doing this Pranayama if you suffer from asthma. The difficulty level of this is beyond 3/ 5 which is suitable for intermediate however if you are a beginner you can try it for one cycle.

2. Sukhasana Easy pose, Sukh means pleasure Sukhasana is called a pleasant or

decent pose. Sukhasana comes from the Sanskrit word sukham which means pleasure comfort or easy.

How to do this meditated pose, sit cross-leg on a mat with heels under opposite thighs and ankles crossed. Keep your body straight, spine erect abdomen is drawn in and your head arises. Completely relax your body of all tension and close your eyes to watch your normal inhalation and exhalation. Concentrate on your breathing by shutting out all thoughts.



The benefits of this asana are that it correct posture and increase the flexibility of knees and ankle. It also acts as a starting point for many asanas and Pranayam.

You should avoid this if you are suffering from Arthritis or any ankle injuries the difficulty level is 2/5 which is suitable for beginners.

3. Sthitprarthanasana, standing prayer pose, sthit means still and Prarthana means prayer. Standing prayer pose, this asana standing pose is performed Standing and the difficulty level is 1 on 5 is performed Standing and the difficulty level is born on 5 it means it's perfect for beginners.

Here how to do this asana stand erect with feet together bring your hands together, and get into the namaste position, draw your abdominals slightly inwards while keeping your back straight, keep the elbows and shoulders relaxed close your eyes and remained steady.



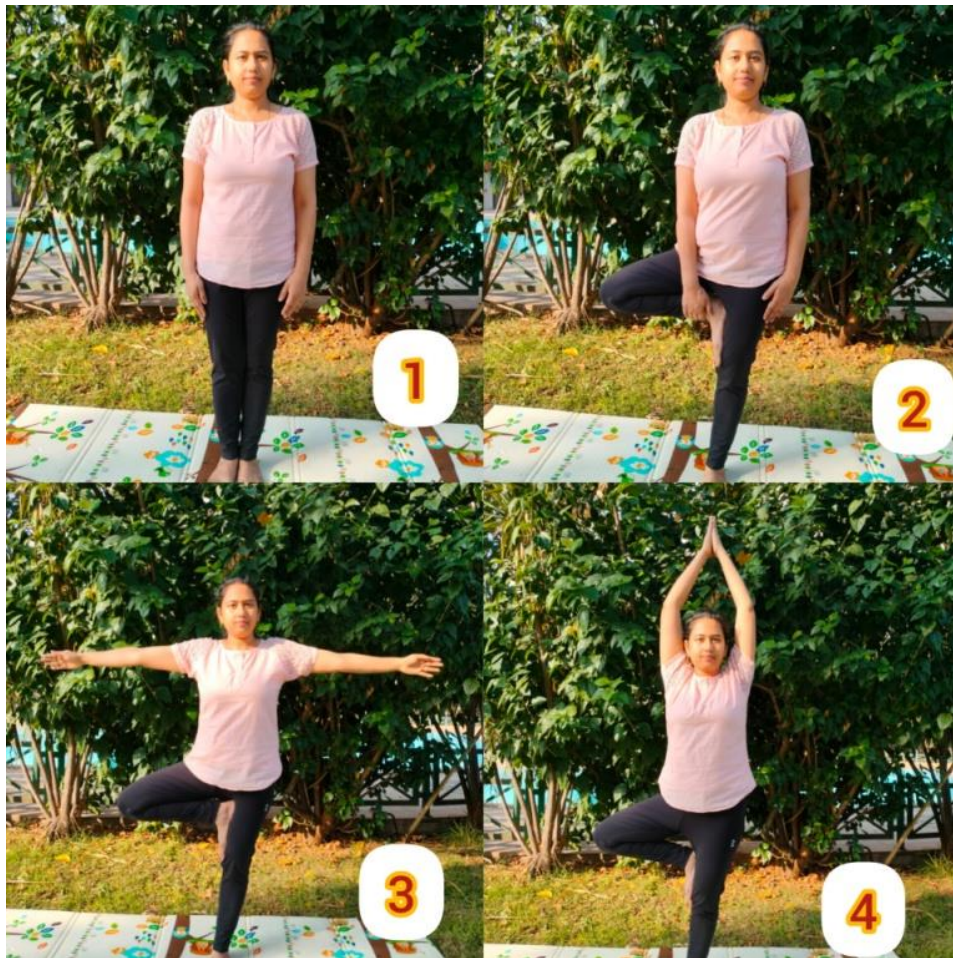
Notice the back is straight shoulders and chest and relaxed and the abdomen is slightly pulled in, you can maintain this asana for 21 seconds until 3 minutes.

The benefit of this is that helps correct posture is good for balance and boys and it is the starting point for many asanas you should avoid doing this as if you suffer from Vertigo.

4. **Ekpadasana** One leg pose, Ek means one so this is a one-leg or foot pose asana, the benefit of this immense it relaxes the muscles of the legs, it helps with nerve control, teaches to maintain balance, helps in neuromuscular coordination, and helps increase concentration.

You should avoid this asana if you're suffering from Vertigo or arthritis. It's a standing asana with a difficulty level of 2/5. The first thing is to stand erect with the feet together and arms side of the body.

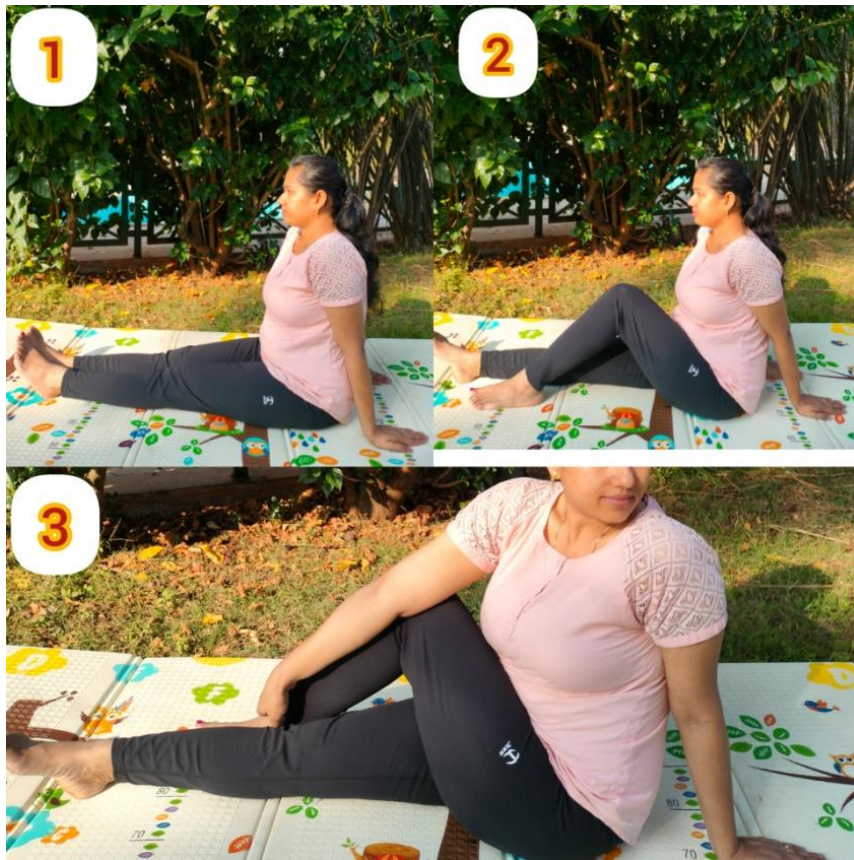
Focus your eyes at a point in front of you place your right foot on the inside of your left thigh near groin area now join your hands into Namaste, a position near the sternum and breathe normally you need to maintain the pose for about 21 seconds until about 3 minutes students the idea here is to gradually build up the time that you do asana. Now do this same asana with the other leg.



Note for absolute beginners if you're not able to do the asana as suggested then you can take the support of a wall or any stationary object, just grab hold of that object and then try to stabilize, if you can then slowly leave that object and get it to the Namaste position now even if you cannot get into the Namaste position it's alright keep taking the support..

5. **Vakrasana(Standing half spinal twist pose)** the benefit of this asana is it exercises the spine neck and hand, it gently massages the abdominal organ you should avoid doing this asana if you are suffering from slip disc. This asana is a standing type and its difficulty level is just 1/5 it's very suitable for beginners.

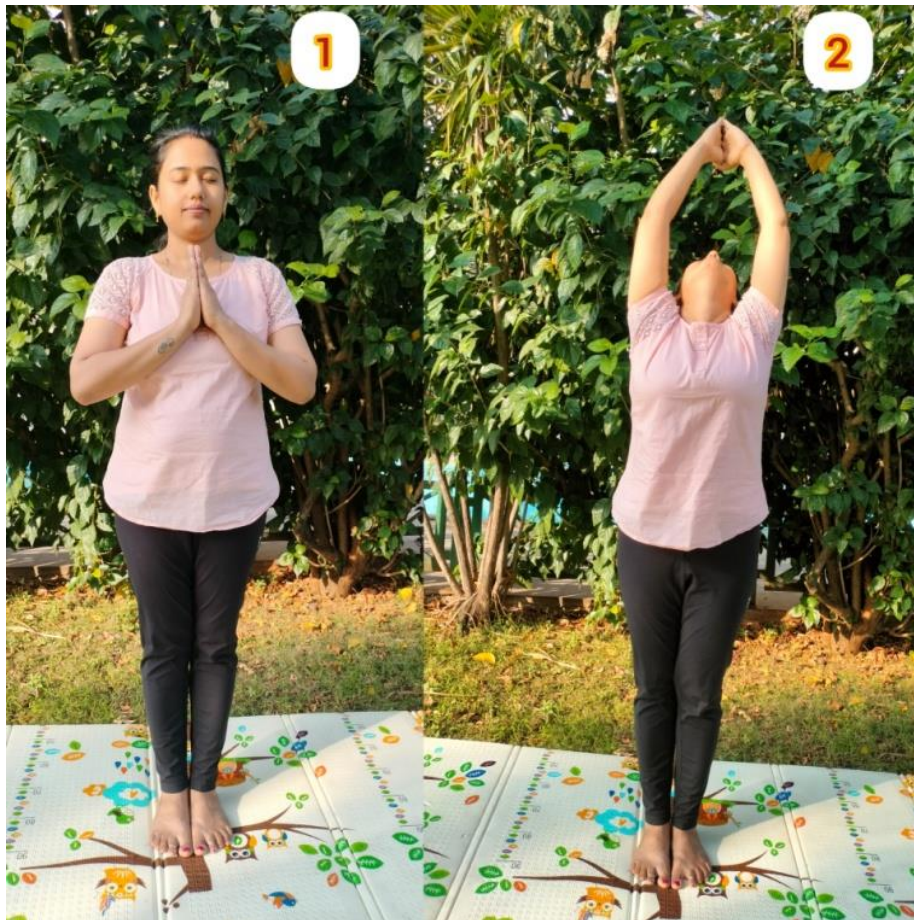
There are two variations of this asana one is standing and the other one is done while sitting down. Let's do the standing one, stand erect with feet approximately 12 inches apart while inhaling raise your arms at shoulder level palms should facing inwards, and while exhaling twist your body from the waist above only your hands and head to the right.



Hold this position for your breath and then inhale and return to the original position, do the same exercise twisting on the left side as well and repeat twisting alternatively towards your right and left side 3 to 5 times.

6. **Talāsana(Palm tree pose)** Tala means palm tree so it is the palm tree pose the benefits of this asana are immense. It stretches the spine vertically and exercises the entire body. Rhythmic breathing expands the lungs and improves the air capacity, improving blood circulation it indirectly massages the abdominal organs. It even helps increase height after a certain age by a vertical stretch of the spine. It increases neuromuscular coordination and lung ventilation. This asana is a standing type with difficulty level of 2/5 There are four variations of this asana.

Let's start with the first one. Stand erect feet 12 inches apart hands on the side chin drawn in, now start by inhaling and raising your arm at the same time rising on your toes maintain your balance now maintain this pose and hold your breath for a few seconds then returned to the normal position by rotating arm backward and downwards with the palm eventually facing outwards.



At the same time simultaneously lowering heel while exhaling for 3 seconds now repeat with the other arm repeat with others do this exercise due time for more than 21 seconds and build up your endurance for up to 3 minutes. Avoid doing this asana if suffer from vertigo or sever cardiac problems.

7. **Konasana Angle pose**, Kona means angle this is the first of the three variations of konasana. Stand tall feet 30 inch apart slightly pointing outwards place one hand on your waist and another hand on the side of your thigh now inhale for a few seconds and then slide the hand on your side down words while simultaneously sliding the other hand which was previously on your waist towards your ribs. Slide until you experience a slight discomfort and then hold the position for a few breaths, if you want to hold the asana for longer than keep breathing normally.

Once you are done and return to their original position by exhaling for a few seconds repeat on the other side. The benefits of this asana are that it stretches the lateral side of the body and the spine.



It helps gently massage your organs like the liver stomach and spleen and it is helpful in relieving back pain and increasing the flexibility of the spine you should avoid this asana if you are suffering from spinal problems, hypertension, severe cardiac problems Vertigo or acute back pain. This kind of asana is standing type and the difficulty level is 2/5.

8. **Utkatasana(Fierce pose/chair pose)** There are many names for this asana like chair pose or fierce pose etc. Utkat means wild or fierce. The benefit of this asana is it strengthens the muscles of the legs, abdomen, and pelvic.



It also improves muscular coordination and balance you should avoid this asana if you are suffering from Vertigo or let's see how to do this asana Stand tall feet 12 inches

apart with arms on the side inhale for a few seconds and raise your body on your toes while bringing your arms forward inclined with shoulders palm facing downwards.

Hold your breath for a few seconds and now exhale for 3 seconds by sitting down and resting on your toes. Retain this position for another few seconds and keep breathing normally Inhale for a few seconds and then stand resting on your toes now exhale and return to the normal position.

9. **Marjariasana** (cat pose) Marjari means cat and so is called cat pose this asana is coupled with cow pose so here is how to do the cat pose, begin on your hands and knees with hands directly under your shoulders and knees directly under your hips, start with your spine in a neutral or long position and keep your head aligned with your Spine and slowly tuck your tail bone and lower the crown of your head so that your back gently ground.



Draw your navel up to the spine and breath gently as you hold the stretch return to the original position and repeat for reputation as desired,

This asana brings flexibility to the spine, strengthen wrist and shoulders massages the digestive organs, tones the abdomen and improves digestion and blood circulation you should avoid doing this asana if you suffer from neck or any back issues, its a seated type of asana with the difficulty level of 1 on 5.

III. EFT Tapping Instant Stress Releasing Exercise

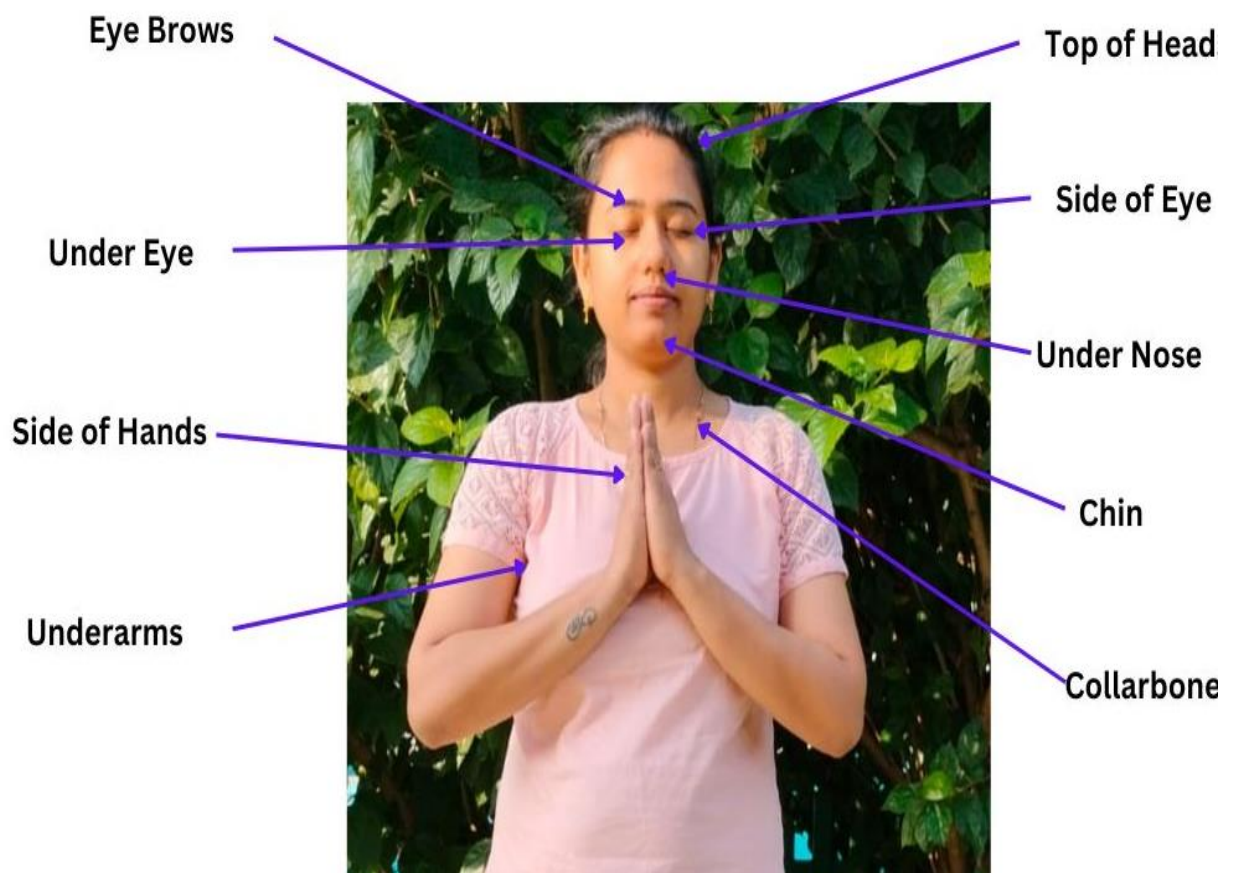
EFT Tapping, known as Emotional Freedom Techniques, is a remarkable stress-releasing exercise that offers instant relief from the negative consequences of stress. By utilizing a combination of focused attention and gentle tapping on specific acupressure points, EFT Tapping harnesses the potential of the mind-body connection to alleviate stress, anxiety, and other emotional disturbances. This technique works by clearing energy blockages within the body's meridian system, thereby restoring balance and promoting a sense of calm and well-being. By incorporating EFT Tapping into one's daily routine, individuals can effectively manage stress, enhancing their overall mental and physical health. Its simplicity and immediate benefits make EFT tapping a valuable self-care tool for reducing stress levels and achieving emotional equilibrium.

How to perform EFT tapping

1. Identify the problem causing stress or anxiety
2. Rate the intensity of your stress: Rate the problem on a scale of 0 to 10, with 10 representing the worst case scenario. This makes it easier to assess your level of stress before beginning the exercise.
3. Create a phrase: Pick a phrase to tap out repeatedly. This mantra should start by acknowledging the problem you're having, followed by an acknowledgment of self-acceptance.
Try something like “Even though I [insert your issue or fear here], I accept myself and my feelings.”
4. Perform the tapping exercise in sequence: You will say your statement five to seven times while tapping the following points with two or more fingers

during the EFT tapping sequence.

1. **Side of hand (SOH).** Tap the side of the outside of your hand (also called the karate chop point).
2. **Top of head (TOH).** Tap the crown of your head.
3. **Eyebrow (EB).** Tap the inner point of your eyebrow at the edge of your nose. You can choose either side, but only need to do one side.
4. **Side of eye (SE).** Tap the edge of the bone at the corner of your eye.
5. **Under eye (UE).** Tap the bone under your eye.
6. **Under the nose (UN).** Tap the area between your nose and upper lip.
7. **Chin point (Ch).** Tap the crease between your lower lip and the tip of your chin.
8. **Collarbone (CB).** Tap slightly under the collarbone, where your collarbone, first rib, and sternum meet up. Some folks find it easier to place their hand on their chest and tap both CB points, one with the thumb and the other with two fingers.
9. **Under the arm (UA).** Tap on your side, just below your armpit.



It's time to reevaluate where you are on the intensity scale once you've completed the sequence. How would you rate the issue you were focusing on, on a scale of 0 to 10?

When compared to your starting point, compare these outcomes. Continue doing this until you rate your intensity as 0.

IV. Self-Introspection exercise

The Johari Window model is a powerful tool used in the field of psychology to enhance self-awareness and interpersonal relationships. Developed by psychologists Joseph Luft and Harry Ingham in the 1950s, this model provides a framework to understand how individuals perceive themselves and others, and how this perception can be expanded and improved. The Johari Window consists of four quadrants: open, blind, hidden, and unknown, which represent different aspects of one's personality.

The Four Regions of the Johari Window Model

The Open Area includes knowledge about ourselves that is known to both ourselves and others, characterized by transparency and mutual understanding.

1. The Blind Spot refers to information about ourselves that others perceive but remains unknown to us, highlighting the importance of feedback and receiving constructive criticism.
2. The Hidden Area represents knowledge about ourselves that we choose not to disclose to others, indicating aspects of our personality or experiences that we prefer to keep private.
3. Lastly, the Unknown Area contains information about us that is not known to ourselves or others, highlighting the potential for self-discovery and personal growth. The Johari Window Model provides a valuable framework for enhancing self-awareness and developing effective communication skills, both essential in personal and professional relationships.

Johari Window is based on a four-square grid - it is like a window with four 'panes'. Here's how the Johari Window is normally shown, with its four regions:

1 Open/Free Area	2 Blind Area
3 Hidden Area	4 Unknown Area

Johari Window Model Quadrant 1

The concept of "Area of free activity" serves as an alternative designation for Region 1. It encapsulates the comprehensive knowledge that both the individual (commonly referred to as the self) and the group (often referred to as the others) possess about a person. This knowledge encompasses a wide range of facets, including behavior, attitude and emotions, as well as other notable attributes such as knowledge, expertise, abilities, and perspectives.

By refining the language and structure, the revised version presents a more polished and engaging description of the topic.

Johari Window Model Quadrant 2

'Blind Self' or 'Blind Area' or 'Blindspot'

Section 2 pertains to the information known by the group but not by the individual. The objective is to minimize this region and thereby broaden the open area, or self-awareness, by actively seeking feedback or soliciting comments from others.

By actively seeking feedback and soliciting comments from others, individuals can gain valuable insights and perspectives that they may not have considered on their own. This process not only expands their knowledge but also fosters a culture of collaboration and continuous learning within the group. By minimizing the realm of information known only by the group, individuals can enhance their self-awareness and make more informed decisions, ultimately leading to personal and professional growth.

Johari Window Model Quadrant 3

'Hidden Self' or 'Hidden Area' or 'Avoided Self' or 'Facade'

Section 3 refers to our personal knowledge that we consciously conceal from others, ensuring they remain oblivious to it. This concealed aspect of ourselves represents the information, emotions, and thoughts that we choose to withhold from external scrutiny. It encompasses sensitivities, phobias, private aspirations, cunning schemes, and any other details that we are aware of but opt not to reveal, driven by various reasons. This covert realm can be considered as the secret domain, where our hidden truths reside.

The objective should be to communicate and reveal relevant knowledge and emotions. This is precisely why the Johari Window employs the terms "self-disclosure" and "exposure process" to describe this procedure and expand the open area.

Johari Window Model Quadrant 4

'Unknown Self' or 'Area of Unknown Activity' or 'Unknown Area'

Neither the individual nor the other group members possess awareness of the information, sentiments, latent abilities, aptitudes, experiences, and so forth, outlined in Section 4. These elements may exist close to the surface, manifesting as positive and beneficial feelings, behaviors, attitudes, skills, and aptitudes. Alternatively, they may reside deeper within an individual's personality, exerting varying degrees of influence over their behavior. It is commonly assumed that younger individuals or those lacking experience or confidence possess large unknown areas.

The primary goal of each quadrant is to enhance an individual's self-awareness.