



# EFFECT OF A BRIEF DAILY MICRO MINDFULNESS MEDITATION ON PERCEIVED STRESS LEVELS AMONG MOTHERS OF YOUNG CHILDREN

Dr S Pavithra Priyadarshoni., Ms Evangeline Supriya  
PG Student, Assistant Professor  
Department of Psychology,  
CDOE, JAIN( Deemed – to – be University) Bengaluru-78, INDIA

**Abstract:** Parenting young children is frequently associated with elevated levels of stress, which can adversely affect both maternal well-being and the overall family environment. While mindfulness practices have been widely recognized for their ability to reduce stress, traditional interventions often require extensive time commitments, making them less practical for mothers in demanding caregiving roles. This study aims to examine the effectiveness of a brief, easily implementable micro mindfulness intervention on perceived stress levels among mothers of children aged 3 to 10 years. Approximately 40 mothers will participate in a two-week program involving a daily 3- minute guided mindfulness meditation delivered through a simple audio format. Perceived stress levels will be measured before and after the intervention using the Perceived Stress Scale (PSS-10). It is hypothesized that mothers will report a significant reduction in perceived stress following the intervention. The outcomes of this study could support the integration of short, accessible mindfulness practices into daily routines, providing a practical strategy to enhance maternal mental health during the early years of parenting.

**Index terms** - micro mindfulness, perceived stress, mothers, parenting, pss-10, brief intervention

## INTRODUCTION

Motherhood during the early and middle childhood years represents a developmental phase marked by continuous psychological, emotional, and practical demands. Mothers of young children are often required to fulfil multiple roles simultaneously, including caregiving, household management, emotional regulation within the family, and, for many, professional responsibilities. The persistent nature of these role demands frequently contributes to heightened levels of stress, making this population particularly vulnerable to stress-related psychological difficulties (Deater-Deckard, 2004; Nomaguchi & Milkie, 2020).

Stress experienced during parenting is not merely a response to isolated events but is often cumulative, arising from ongoing caregiving responsibilities, limited personal time, sleep disruption, and perceived expectations related to ideal parenting standards (Crnic & Low, 2002). When such stress is appraised as overwhelming or uncontrollable, it is experienced as perceived stress, which has been shown to be a stronger predictor of psychological outcomes than objective stressors alone (Cohen et al., 1983).

Elevated perceived stress among mothers has been associated with a range of adverse outcomes, including emotional exhaustion, anxiety, depressive symptoms, and reduced psychological well-being (Lupien et al., 2009). Furthermore, maternal stress has implications beyond individual well-being, influencing parenting

behaviours, emotional availability, and the overall emotional climate of the family system (Abidin, 1995). Given these far-reaching effects, addressing maternal stress is a critical concern for mental health promotion and family well-being.

### **1.1 Perceived Stress and Maternal Well-being**

Perceived stress refers to an individual's subjective evaluation of how unpredictable, uncontrollable, and overwhelming life circumstances are experienced to be (Cohen et al., 1983). Unlike objective stressors, perceived stress captures the cognitive appraisal process through which individuals interpret and respond to demands in their environment. In the context of motherhood, this appraisal is influenced by factors such as social support, coping resources, self-efficacy, and cultural expectations related to caregiving roles (Lazarus & Folkman, 1984).

Research consistently indicates that mothers of young children report higher levels of perceived stress compared to women without caregiving responsibilities (Nomaguchi & Milkie, 2020). Persistent stress during this phase has been linked to dysregulation of physiological stress responses, impaired emotional regulation, and increased vulnerability to stress-related disorders (McEwen, 2007). These findings highlight the importance of early, preventive interventions aimed at reducing perceived stress and enhancing adaptive coping among mothers.

### **1.2 Mindfulness as a Stress-Reduction Strategy**

Mindfulness is commonly described as the practice of intentionally attending to present-moment experiences with an attitude of openness, acceptance, and non-judgment (Kabat-Zinn, 1994). Rooted in contemplative traditions and adapted for psychological interventions, mindfulness has gained substantial empirical support as an effective approach for reducing stress and enhancing psychological well-being.

Mindfulness-based interventions (MBIs) have been shown to reduce perceived stress by fostering greater awareness of internal experiences, decreasing automatic cognitive reactivity, and enhancing emotional regulation capacities (Shapiro et al., 2006). Meta-analytic reviews have demonstrated that MBIs produce moderate and consistent reductions in stress, anxiety, and depressive symptoms across both clinical and non-clinical populations (Hofmann et al., 2010; Khoury et al., 2015).

Within parenting contexts, mindfulness has been associated with improved emotional awareness, reduced parenting stress, and more adaptive parent-child interactions (Bögels et al., 2014). By encouraging present-moment awareness and self-compassion, mindfulness may help mothers respond more effectively to daily stressors rather than reacting automatically to challenging situations.

### **1.3 Limitations of Traditional Mindfulness Interventions**

Despite their established benefits, many traditional mindfulness-based programs such as Mindfulness-Based Stress Reduction (MBSR), require substantial time commitments. These programs typically involve structured sessions over eight weeks, along with daily home practices ranging from 20 to 45 minutes (Kabat-Zinn, 1994). For mothers of young children, such intensive requirements may pose practical barriers related to time scarcity, fatigue, and frequent interruptions.

As a result, adherence to long-duration mindfulness practices may be difficult to sustain in this population, limiting their real-world applicability. These challenges have prompted researchers to explore alternative formats that preserve the therapeutic elements of mindfulness while reducing time demands.

### **1.4 Emergence of Micro Mindfulness Interventions**

Micro mindfulness interventions have emerged as a promising alternative, involving brief practices typically lasting less than ten minutes per day. These interventions aim to integrate mindfulness into everyday routines in a flexible and accessible manner (Bostock et al., 2019). Short-duration mindfulness practices have been shown to produce measurable improvements in stress, mood, and emotional well-being, even when delivered over relatively brief intervention periods (Zeidan et al., 2010).

Digital delivery formats, including audio-guided and app-based mindfulness practices, have further increased accessibility and feasibility, particularly for individuals with limited time resources. Studies examining such formats have reported reductions in perceived stress and improvements in overall well-being among working adults and non-clinical populations (Bostock et al., 2019).

However, despite growing evidence supporting brief mindfulness practices, there remains a notable lack of research examining their effectiveness specifically among mothers of young children. This gap is particularly evident within the Indian context, where cultural norms often place significant caregiving and emotional responsibilities on mothers, potentially increasing stress vulnerability.

### 1.5 Rationale and Significance of the Present Study

Given the high prevalence of stress among mothers of young children and the limitations associated with time-intensive interventions, there is a clear need to examine brief, practical strategies for stress reduction. The present study aims to evaluate the effectiveness of a daily 3-minute guided micro mindfulness meditation on perceived stress levels among mothers of children aged 3 to 10 years.

By employing a short-duration intervention delivered through a simple audio format, this study seeks to determine whether meaningful reductions in perceived stress can be achieved within a two-week period. Establishing the effectiveness of such an intervention has important implications for mental health promotion, as micro mindfulness practices can be easily disseminated through digital platforms and incorporated into daily routines without imposing significant time demands.

The findings of this study are expected to contribute to the existing literature by addressing an under-researched population, examining a time-efficient mindfulness intervention, and providing empirical support for accessible approaches to enhancing maternal psychological well-being.

## II. REVIEW OF LITERATURE

The literature regarding the impact of mindfulness-based interventions on stress and psychological well-being highlights a consistent reduction in negative cognitive patterns across diverse non-clinical populations. This review synthesizes empirical findings on the efficacy of mindfulness practices, with particular emphasis on their psychological mechanisms and the feasibility of shorter “micro” or “pure” meditation formats, especially for mothers.

### 2.1 Meta-Analytic Evidence of Efficacy in Non-Clinical Populations

A substantial body of research demonstrates that mindfulness-based interventions are effective in enhancing psychological well-being and reducing stress among non-clinical adults. Eberth and Sedlmeier (2012), in a comprehensive meta-analysis of 39 studies involving healthy participants, reported a moderate overall positive effect of mindfulness meditation across a wide range of psychological outcomes. Although effect sizes varied depending on the variable assessed, mindfulness practice was consistently associated with increased well-being and reduced psychological distress.

Specifically, non-clinical populations showed significant improvements in emotion regulation and marked reductions in perceived stress, anxiety, and negative affect. These findings indicate that mindfulness-based practices are effective not only as clinical interventions but also as preventive and well-being-enhancing strategies for the general population.

### 2.2 Theoretical Mechanisms: The Role of Rumination and Decentering

One of the primary mechanisms through which mindfulness-based interventions reduce stress is the attenuation of rumination, defined as repetitive and passive focus on negative thoughts and emotions. Rumination is a well-established cognitive risk factor for stress, anxiety, and depressive symptoms.

Meta-analytic findings by Wei et al. (2025) demonstrate that Mindfulness-Based Cognitive Therapy (MBCT) leads to significant reductions in rumination across diverse populations. Importantly, these effects are sustained during follow-up periods, indicating that mindfulness facilitates enduring cognitive change rather than temporary symptom reduction.

In addition to reducing rumination, mindfulness interventions enhance key therapeutic processes such as self-compassion and decentering. Self-compassion enables individuals to respond to stress with reduced self-criticism and greater emotional acceptance, while decentering refers to the ability to observe thoughts and emotions as transient mental events rather than objective truths. Decentering plays a central role in disrupting maladaptive cognitive cycles and reducing emotional reactivity, particularly in contexts of chronic stress such as maternal role strain.

### 2.3 Intervention Duration: Micro and Pure Meditation Practices versus Standard MBSR

Recent literature has increasingly focused on the effectiveness of abbreviated mindfulness interventions. While traditional programs such as Mindfulness-Based Stress Reduction (MBSR) typically involve eight-week structured training, evidence suggests that shorter interventions can also produce meaningful psychological benefits.

Studies indicate that mindfulness interventions with reduced total practice duration continue to demonstrate significant reductions in stress and negative cognitive patterns. Moreover, research distinguishes between comprehensive mindfulness programs and “pure” meditation practices that focus exclusively on meditative

attention without extensive psychoeducation. While full MBSR programs yield broad improvements in psychological well-being, shorter pure meditation practices often demonstrate stronger effects on core mindfulness constructs such as present-moment awareness, decentering, and cognitive flexibility.

Subgroup analyses further reveal that mindfulness-based interventions are particularly effective in predominantly female samples and among adults within the typical age range of active motherhood (25–40 years). These findings highlight the feasibility and relevance of brief mindfulness practices for mothers who experience substantial time constraints alongside elevated cognitive and emotional demands.

### ***I. The Landscape of Maternal Stress and Mental Health***

The transition to parenthood is a major life event that significantly increases vulnerability to psychological distress. Research indicates that the postpartum period is characterized by a high prevalence of mental health challenges; for instance, approximately 13.8% of first-time mothers in mainland China experience clinical levels of depression (Gao et al., 2009). This distress is intrinsically linked to perceived stress—the degree to which a mother views her life situations as unpredictable, uncontrollable, and overloading.

Maternal stress is not a monolithic experience but is exacerbated by specific clinical and social contexts. Mothers of children with specialized medical conditions, such as Differences of Sex Development (DSD), report significantly higher stress levels (mean 24.3) compared to mothers of children with more manageable conditions like hypothyroidism (Sagar et al., 2024). This suggests that the complexity of the child's health and the associated social stigma create a compounding effect on the mother's perceived stress.

### ***II. Socio-Cultural and Contextual Determinants***

Maternal well-being is deeply embedded within cultural and familial frameworks. Factors such as a family's preference for the baby's gender or interpersonal friction with extended family members during traditional recovery periods (e.g., “doing the month”) have been identified as significant predictors of postnatal depression (Gao et al., 2009). These external pressures, combined with the daily hassles of infant care, create a persistent state of arousal. If these stressors are not managed, they can lead to a decline in the mother's quality of life across physical, social, and psychological domains.

### ***III. The Role of Social Support as a Protective Buffer***

A consistent theme in the literature is the role of social support as an interpersonal resource that mitigates the impact of stress. Gao et al. (2009) highlight a significant negative correlation between social support and perceived stress: as a mother's perception of support from her partner, family, and friends increases, her levels of stress and depressive symptoms decrease. However, for mothers facing high-stress scenarios like a child's chronic illness, there is often an increased sense of social exclusion and a lack of specific support for their unique challenges (Sagar et al., 2024). When external support is insufficient, the mother's internal resilience and coping strategies become the primary defense against psychological decline.

### ***IV. Coping Mechanisms: Positive vs. Negative Strategies***

The efficacy of a mother's response to stress is largely determined by her choice of coping mechanisms. Sagar et al. (2024) categorize these into positive coping (e.g., self-control, positive reappraisal, and seeking social support) and negative coping (e.g., escape-avoidance and distancing). High parental stress is frequently associated with an increase in negative coping strategies, which can lead to a cycle of helplessness and further distress.

Micro-mindfulness defined as brief, intentional moments of non-judgmental awareness functions as a targeted intervention for these coping domains. By emphasizing self-control and positive reappraisal, micro-mindfulness allows mothers to interrupt the stress response in real time. Unlike traditional mindfulness programs that require long time commitments, micro-mindfulness is designed to fit into the fragmented schedule of a caregiver, potentially shifting the mother's response from automatic escape-avoidance to intentional, calm appraisal.

### ***V. Theoretical Application: Self-Control and Somatic Relief***

Theoretically, micro-mindfulness acts as a micro-intervention that strengthens a mother's cognitive resources. According to Self-Control Theory (as cited in Gao et al., 2009), individuals use cognitive and behavioral strategies to manage internal responses to external events. Micro-mindfulness allows mothers to apply these strategies in short bursts, helping to lower the physiological markers of stress (such as cortisol and heart rate) and providing a reset for the nervous system. This is particularly vital for preventing the psychosomatic fatigue that often accompanies chronic caregiving stress.

## 2.4 Conclusion

In summary, existing literature supports the efficacy of mindfulness-based interventions in reducing stress and enhancing psychological well-being in non-clinical populations. While comprehensive programs such as MBSR and MBCT remain the gold standard, shorter micro or pure meditation practices have demonstrated significant benefits, particularly in reducing rumination and fostering decentering.

For mothers, brief mindfulness practices represent a practical and empirically supported approach to enhancing psychological resilience. By targeting key cognitive mechanisms underlying stress, these interventions offer an accessible method for reducing cognitive burden and promoting emotional well-being within the constraints of daily life.

The existing literature underscores a critical need for accessible, low-barrier mental health interventions for mothers. Maternal stress is a complex interplay of personal, social, and cultural factors. While social support remains a vital external buffer, the development of internal coping strategies through micro-mindfulness offers a promising avenue for enhancing resilience. By targeting positive coping mechanisms and providing a practical way to manage the transition to motherhood, micro-mindfulness can directly mitigate the psychological burden and improve the quality of life for both the mother and the child.

## III. RESEARCH METHODOLOGY

### 3.1 Research Design

The present study employed a quantitative, pre-experimental one-group pre-test–post-test research design to examine the effectiveness of a brief mindfulness meditation intervention in reducing perceived stress levels among parents. This design enabled the researcher to assess changes in perceived stress by comparing participants' stress levels before and after the intervention within the same group. Since the study did not include a control group, all participants received the intervention, and differences in pre- and post-test scores were analyzed to determine the impact of the mindfulness practice.

### 3.2 Participants

#### Population

The target population comprised parents residing in Chennai, Tamil Nadu.

#### Sample Size

Although the initially proposed sample size was 35–40 participants (based on power analysis for detecting medium effect size at 95% confidence level,  $\alpha = 0.05$ , power = 0.8), the final sample consisted of 30 parents who completed both the pre-test and post-test assessments.

### 3.3 Sampling Method

Convenience sampling was used to recruit participants. Invitations were circulated through social networks and online platforms. Participation was voluntary, and only those who provided informed consent were included in the study.

### 3.4 Inclusion Criteria

- Parents having one or more children.
- Residing in Chennai.
- Willing to participate and provide informed consent.
- Able to understand and follow the meditation instructions.

### 3.5 Exclusion Criteria

- Individuals without children.
- Parents currently undergoing structured psychological therapy for stress or anxiety.
- Individuals practicing mindfulness meditation for more than 10 minutes daily prior to the study.

### 3.6 Tools for Data Collection

#### *Perceived Stress Scale (PSS-10)*

The Perceived Stress Scale (PSS-10) is a 10-item standardized self-report instrument designed to measure the degree to which situations in one's life are appraised as stressful over the past month. Responses are rated on a 5-point Likert scale ranging from 0 (Never) to 4 (Very Often). Items 4, 5, 7, and 8 are reverse scored. The total score ranges from 0 to 40, with higher scores indicating greater perceived stress. The scale has demonstrated good reliability and validity across diverse populations.

### *Demographic Datasheet*

A self-structured demographic questionnaire was administered to collect details such as age, gender, employment status, number of children, and prior mindfulness experience.

#### 3.7 Practice Adherence Measure (Post-Intervention)

In the post-test form, participants were asked to indicate the number of days they practiced the meditation during the 14-day intervention period. Responses were categorized into three groups: 0–3 days, 4–8 days, and 9–14 days. This categorization helped assess adherence levels and explore whether frequency of practice influenced perceived stress reduction.

#### 3.8 Intervention Procedure

A WhatsApp group was created exclusively for the participants to facilitate communication, provide instructions, and ensure structured implementation of the intervention. The researcher shared a 3-minute guided mindfulness meditation voice recording along with clear written instructions regarding how and when to practice. Participants were instructed to practice once daily for 14 consecutive days in a quiet setting at a convenient time. They were encouraged to focus on their breath and bodily sensations as guided in the recording. To monitor adherence, participants were requested to send a brief confirmation message in the WhatsApp group after completing their daily practice.

#### 3.9 Data Collection Procedure

Informed consent was obtained electronically through Google Forms before participation. Pre-test data were collected online using Google Forms, which included the PSS-10 and the demographic datasheet. After baseline assessment, the WhatsApp group was formed and the meditation audio along with instructions were shared. Participants practiced the meditation daily for 14 days. On completion of the 14-day period, post-test data were collected using Google Forms. The post-test form included the PSS-10 and a question assessing the number of days the participant practiced meditation (categorized as 0–3 days, 4–8 days, or 9–14 days).

## **IV DATA ANALYSIS AND DISCUSSION**

The data collected from 30 participants were analyzed using Microsoft Excel. The primary objective of the analysis was to examine whether the meditation intervention resulted in a statistically significant reduction in perceived stress levels.

Pre-intervention and post-intervention Perceived Stress Scale (PSS) scores were entered into Microsoft Excel. Each participant had two scores: a pre-meditation stress score and a post-meditation stress score. The data were screened for completeness prior to analysis, and no missing values were observed.

Descriptive statistics were computed to summarize stress levels before and after the intervention. Measures calculated included the mean (M), standard deviation (SD), mean difference, and standard deviation of the difference.

To determine whether the observed reduction in stress was statistically significant, a paired-samples t-test was conducted. The level of statistical significance was set at  $p < .05$ . Additionally, effect size was calculated using Cohen's  $d$  to determine the magnitude of the intervention effect.

#### 4.1 Correlation Analysis

A Pearson product-moment correlation was conducted to examine the relationship between number of meditation days and reduction in perceived stress scores.

The analysis revealed a weak positive correlation,  $r(28) = 0.09$ ,  $p > .05$ , indicating no statistically significant association between the number of days participants practiced meditation and the magnitude of stress reduction.

#### 4.2 Results

The mean pre-intervention stress score was  $M = 23.56$  ( $SD = 4.5$ ), while the mean post-intervention stress score was  $M = 11.43$  ( $SD = 4.1$ ). The mean reduction in stress scores was  $12.13$  ( $SD = 5.3$ ).

A paired-samples t-test revealed that the reduction in stress scores was statistically significant,  $t(29) = 12.5$ ,  $p < .001$ . The calculated effect size was Cohen's  $d = 2.29$ , indicating an extremely large effect.

Table 1 descriptive statistics and paired-samples t-test results ( $n = 30$ )

Variable	Mean	SD	Mean Difference	SD Difference	t	p
Pre-test	23.56	4.5				
Post-test	11.43	4.1				
Difference			12.13	5.3	12.5	< .001

Note. SD = Standard Deviation.  $t(29) = 12.5$ ,  $p < .001$ . Cohen's  $d = 2.29$ .

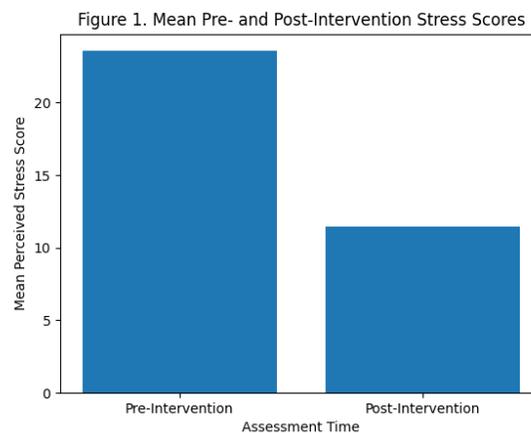


Figure 1 Mean Pre- and Post-Intervention Perceived Stress Scores

## 4.2 Evaluation of Principal Findings

The primary objective of this study was to evaluate whether a brief, three-minute daily micro-mindfulness intervention could significantly reduce perceived stress among mothers of children aged 3 to 10 years. The results demonstrated a substantial and statistically significant reduction in perceived stress following the intervention. Specifically, the mean perceived stress score decreased from a baseline mean of 23.56 to 11.43 after the 14-day intervention period.

The magnitude of this reduction produced a very large effect size (Cohen's  $d = 2.29$ ), suggesting that the intervention was not only statistically significant but also practically meaningful in a real-world caregiving context. A reduction of this magnitude indicates that even extremely brief mindfulness practices may have the potential to meaningfully alter how individuals interpret and respond to everyday stressors.

These findings are consistent with previous research demonstrating that mindfulness-based practices can improve psychological well-being and reduce stress in non-clinical populations. Traditional mindfulness programs such as Mindfulness-Based Stress Reduction (MBSR) have repeatedly shown strong outcomes in reducing stress and improving emotional regulation. However, such programs typically require 30–45 minutes of daily practice over several weeks. The success of the three-minute format used in this study is therefore particularly significant, as it addresses two major barriers commonly reported by mothers: lack of time and mental fatigue.

## 4.3 Theoretical Mechanisms of Stress Reduction

The observed reduction in stress can be interpreted through several psychological frameworks, particularly cognitive appraisal theory and self-regulation theory. Perceived stress is not solely determined by external events but rather by an individual's interpretation of those events and their perceived ability to cope with them.

## 4.4 Decentering and Reduction of Rumination

One potential mechanism underlying the effectiveness of the intervention is the development of decentering. Decentering refers to the capacity to observe thoughts and emotions as temporary mental events rather than identifying with them as objective truths. Through consistent engagement in short mindfulness

practices, participants may have begun to observe stressful thoughts with greater psychological distance. This shift can reduce rumination, which is the repetitive and passive focus on distressing thoughts. Rumination has been identified as a key risk factor for anxiety, depression, and chronic stress. Even brief mindfulness practices can interrupt these repetitive cognitive cycles, allowing individuals to return their attention to the present moment and disengage from negative mental loops.

#### **4.5 Self-Control and Emotional Regulation**

Self-control theory also provides a useful lens for understanding the findings. According to this perspective, individuals rely on cognitive resources to regulate emotional responses to stressors. Micro-mindfulness practices may function as short restorative pauses that replenish these cognitive resources.

A three-minute mindfulness practice can act as a psychological “reset,” allowing individuals to regulate physiological arousal and restore attentional control. Over time, repeated brief interventions may strengthen emotional regulation capacities and reduce the cumulative effects of daily stressors.

#### **4.6 Comparison with Traditional and Brief Interventions**

The findings of this study contribute to a growing body of literature examining the effectiveness of brief mindfulness interventions. While traditional programs such as MBSR and Mindfulness-Based Cognitive Therapy (MBCT) remain the most extensively researched, recent studies have begun exploring shorter, more accessible practices.

Interestingly, the present study found no statistically significant relationship between the number of days practiced and the magnitude of stress reduction. This suggests that even intermittent engagement with the practice may produce meaningful psychological benefits. Such findings support the idea that mindfulness can be integrated flexibly into daily life rather than requiring rigid adherence to long practice sessions.

For mothers managing childcare, household responsibilities, and professional roles, the feasibility of short practices is particularly important. The present intervention demonstrates that meaningful psychological benefits may be obtained from practices that require only minimal time commitment.

#### **4.7 Socio-Cultural and Contextual Considerations**

The results of this study are particularly relevant within the Indian socio-cultural context, where mothers often assume primary responsibility for caregiving and emotional labor within the family. Cultural expectations frequently place mothers in roles that require constant emotional availability, patience, and caregiving capacity.

Such expectations can create substantial psychological pressure, particularly when combined with modern challenges such as dual-income households, reduced extended family support, and increased educational expectations for children.

In this context, mindfulness practices may provide mothers with an internal coping resource that does not rely on external support systems. By cultivating present-moment awareness and emotional acceptance, mothers may be better equipped to engage in positive cognitive reappraisal and reduce maladaptive coping patterns such as avoidance or emotional suppression.

#### **4.8 Implications for Mental Health Promotion**

The delivery of the three-minute meditation through WhatsApp highlights the potential of digital platforms in expanding access to mental health interventions. Mobile-based interventions can overcome logistical barriers such as travel time, scheduling difficulties, and childcare responsibilities.

##### ***Accessibility***

Digital distribution allows interventions to reach participants in their natural environments. Mothers can engage with the practice at moments that fit into their daily routines, such as early mornings, breaks, or before sleep.

## *Preventive Mental Health Care*

Micro-mindfulness interventions may serve as preventive mental health tools. By reducing daily stress levels, such practices may prevent the accumulation of chronic psychological strain that could otherwise develop into anxiety or depressive disorders.

### *Family Well-Being*

Maternal stress has been shown to influence parenting behaviors, parent-child interactions, and the emotional climate of the household. Reductions in maternal stress may therefore contribute to healthier family dynamics and improved developmental outcomes for children.

#### **4.9 Limitations and Recommendations for Future Research**

Despite the promising findings, several limitations should be acknowledged. First, the study employed a pre-experimental one-group pretest-posttest design without a control group. As a result, it is not possible to definitively attribute the observed changes solely to the intervention.

Second, the sample consisted of only 30 participants recruited through convenience sampling within Chennai. This limits the generalizability of the findings to broader populations.

Third, the study examined outcomes over a relatively short intervention period of 14 days. Future studies should consider longitudinal designs to determine whether the benefits of micro-mindfulness practices are sustained over longer durations.

Future research should also employ randomized controlled trials with larger and more diverse samples.

Additionally, comparing different durations of micro-mindfulness practices (e.g., 1-minute, 3-minute, and 5-minute practices) could help identify optimal intervention lengths.

#### **4.10 Conclusion**

The findings of this study suggest that a brief three-minute daily micro-mindfulness practice can significantly reduce perceived stress among mothers. The large effect size indicates that even very short mindfulness practices can produce meaningful psychological benefits when practiced consistently.

By addressing barriers such as time limitations and accessibility, micro-mindfulness interventions offer a practical and scalable approach to stress reduction. Such interventions may play an important role in preventive mental health care, particularly for populations experiencing high caregiving demands.

Ultimately, supporting maternal well-being has broader implications for family health, parenting quality, and child development. Integrating brief mindfulness practices into daily life may therefore represent a valuable strategy for promoting both individual and family resilience.

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## Appendix

### *Demographic Information Sheet*

Please fill in the following details:

1. Age of mother:

\_\_\_\_\_ years

2. Highest education completed:

Primary       Secondary       Graduate       Postgraduate

3. Employment status:

Homemaker       Employed (part/full time or self-employed)

4. Number of children:

1       More than 1

5. Age of children:

6. Previous experience with mindfulness:

Yes       No

**Consent Form***Title of the Study:*

Effect of a Brief Daily Micro Mindfulness Meditation on Perceived Stress Levels among Mothers of Young Children

*Purpose of the Study:*

You are invited to participate in a study examining whether a short daily mindfulness practice can help reduce stress in mothers. This study involves completing short questionnaires before and after a 14-day mindfulness practice.

*Procedures:*

- You will complete a short stress questionnaire (about 3 minutes) before starting the mindfulness practice.
- You will listen to a 3-minute guided mindfulness audio each day for 14 days.
- After 14 days, you will complete the same stress questionnaire again.
- You can stop participating at any time without giving a reason.

*Confidentiality:*

All your answers will be kept confidential and used only for research purposes. Your name will not be attached to your responses in any reports.

*Consent Statement:*

I have read and understood the information above. I agree to take part in this study voluntarily.

Name of Participant

Signature

Date

**Perceived Stress Scale (Pss-10)***Instructions:*

The questions in this scale ask you about your feelings and thoughts during the last month. Please indicate how often you felt or thought a certain way by selecting one option for each question.

*Scoring options:*

- (0) Never
- (1) Almost Never
- (2) Sometimes
- (3) Fairly Often
- (4) Very Often

*Questions:*

1. In the last month, how often have you been upset because of something that happened unexpectedly?

0    1    2    3    4

2. In the last month, how often have you felt that you were unable to control the important things in your life?

0    1    2    3    4

3. In the last month, how often have you felt nervous and “stressed”?

0    1    2    3    4

4. In the last month, how often have you felt confident about your ability to handle your personal problems?

0    1    2    3    4

5. In the last month, how often have you felt that things were going your way?

0    1    2    3    4

6. In the last month, how often have you found that you could not cope with all the things that you had to do?

0    1    2    3    4

7. In the last month, how often have you been able to control irritations in your life?

0     1     2     3     4

8. In the last month, how often have you felt that you were on top of things?

0     1     2     3     4

9. In the last month, how often have you been angered because of things that were outside of your control?

0     1     2     3     4

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

0     1     2     3     4

### Data Sheet

Allotted Name	Premeditation Scores	Post meditation Scores	Difference between pre and post
P1	13	9	4
P2	34	25	9
P3	24	15	9
P4	23	13	10
P5	29	4	25
P6	20	8	12
P7	23	8	15
P8	20	9	11
P9	29	8	21
P10	18	17	1
P11	18	12	6
P12	27	14	13
P13	27	10	17
P14	32	12	20
P15	25	11	14
P16	24	17	7
P17	23	8	15
P18	23	13	10
P19	22	14	8
P20	27	11	16
P21	27	9	18
P22	19	9	10
P23	22	12	10
P24	26	5	21
P25	20	14	6
P26	23	11	12
P27	20	10	10
P28	18	8	10
P29	27	17	10
P30	24	10	14
Mean	23.56666667	11.43333333	12.13333333
Standard Deviation	4.508102539	4.157944895	5.393056413