How to Cite:
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. https://doi.org/10.53730/ijhs.v6nS2.6265

Promotion of psychosocial wellbeing in new mothers through mindfulness-based cognitive therapy

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***Abstract*---**Physical wellness, mental wellbeing, psychological state (feelings, emotions, beliefs, perspectives), and social relationships (connections, behaviours, cultural values, and the influence of family, school, colleagues, and community) all have an impact on an individual's psychosocial well-being as stated by WHO. In order to understand the circumstances, Mindfulness-Based Cognitive Therapy (MBCT) involves mindful, walking, breathing smiling, indepth looking. accepting, love, compassion, a need to alleviate pain and create happiness are always the benefits of being attentive, touching intimately the present moment. MBCT has evolved into something that can help with a variety of concerns which includes anxiety, stress, sadness, overwhelm, frustration as well as behavioural issues like anger control. It's also a great approach to live a more mindful life. MBCT therapists employ these strategies to teach clients how to break free from negative thought patterns that might lead to a depressed state, allowing them to battle depression before it takes hold. It's a method of being in the world as well as a practise. This study is planned as a quasi-experimental study to see if mindfulness training, which includes balanced nutrition, physical activity, self-care, positive affirmations, self-introspection, stress-relieving

International Journal of Health Sciences ISSN 2550-6978 E-ISSN 2550-696X © 2022.
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Manuscript submitted: 27 Feb 2022, Manuscript revised: 18 March 2022, Accepted for publication: 09 April 2022

exercises, and meditation, can help new moms improve their psychological well-being.

***Keywords*---**mindfulness therapy, psychological, psychosocial wellbeing.

Introduction

New mothers frequently experience anxiety. [1-4]. Fewer research have looked at the results of maternal anxiety, however maternal postpartum anxiety may have a detrimental effect on mother-child bonding characteristics. (e.g., mother-infant relationship, parental behaviours) as well as child outcomes (e.g., crying, dissatisfaction with change, social adjustment, and physiological changes) thus increasing the likelihood of child behavioural issues and psychopathology [5-7]. Mindfulness therapy (MBIs) are a non pharmacological intervention that can be effictive in enhancing psychological wellbeing during pregnancy and after childbirth. Mindfulness includes self-regulating attentiveness towards present-moment events with an open and curious attitude. It encourage people to be attentive of their inner experiences in order to alleviate suffering and encourage positive behavioural pattern. Therapy depends largely on mindfulness practise [8]. Techniques include home-based formal activities (e.g., meditation, yoga) as well as informal ones (such as incorporating mindfulness into daily tasks such as walking and eating). This study involves combining regular mindfulness practise in 60 min session once a week and daily home practise up to four weeks. The current study aims to understand if four weeks mindfulness therapy, which includes balanced nutrition, physical activity, self-care, positive affirmations, self-introspection, stress-relieving exercises, and meditation, can help new mothers to improve their psychological well-being in terms of depression, social behaviour, eating attitude and mental health. We hypothesised that all scores would continue to improve after the intervention.

Method

A pre–post test design was used in this investigation. The study measurements were given to all participants at the start of the trial and again four weeks later after the intervention was completed.

Participants

The total of 42 female participants was recruited from different cities of India through social media platforms. Participation in the present study was completely anonymous and voluntary. To be eligible, participants were identified that they were married, having kids aged upto 3 years, living in India in nuclear or joint family, having basic level of education, dealing with postpartum physical and emotional challenges and experiencing some level of psychological distress as well as anxiety. In addition participants were older than the age of 25 years as well as able to speak and understand English language and able to fill up digital questionnaires. The average age of the participants in the study was 33.5417±6.31065 years (range between 27.0-46.0 years). Eligible participants

were invited to attend four weeks online program. Forty two participants registered to participate in study. Thirty three out of forty two completed the program whereas nine drooped out. Individuals reported a variety of reasons for dropping out, including schedule concerns, difficulties participating in MBCT, lack of consistency, multiple engagements. Of 33 participants who have completed intervention, 25 completed both pre-and post intervention questionnaires.

Procedure

As identified above the participants was recruited from different cities of India through social media platforms. Four weeks mindfulness based online program was designed. Two professionals were involved, one was a life coach and another was postnatal health and fitness coach, met online with each participant and explained details, involvement and expectations of the intervention. The professionals have extensive expertise in mindfulness and cognitive behavioural methods, as well as personal meditation practise. The four week therapy includes formal and informal mindfulness video based activities. Every day one video was shared through what's app and they were asked to perform activity everyday till 4 weeks. This program was divided into four weeks. Week one activities include; Mindful distraction free eating, Detoxification and fasting, eating with five senses, chewing food 32 times, Incorporating long term healthy eating habits. Week two activities include; Physical fitness, yoga, fun and relaxing exercises, meditation practice, breathing exercise, hobby practice (doing what they love). Week three activities include; positive affirmation practices, discussion on challenges at emotional level, development of acknowledgement and acceptance attitude. Week four activities include Self introspection exercise- Johari window model and EFT tapping exercise followed by filling up post intervention questionnaires. Each week activities were followed by weekend one hour follow up session for query resolution, discussion on challenges, improvements and experience sharing.

Measures

The Warwick-Edinburgh Mental Well-being Scale

The measure consists of 14 items that address both hedonic and eudaimonic aspects of mental health, as well as positive emotion (feelings of enthusiasm, happiness, and calmness), positive functioning, and pleasant interpersonal relationships (strength, clarity of thoughts, self-acceptance, self growth, and competency). On a scale from 1 to 5, participants must checkbox that best represents their experience with each statement over the last two weeks. The Likert scale assigns a score from one to five to each item, with a lowest score of forteen and a highest score of seventy.

Social Phobia Scale

Social Phobia Scale is a self-report assessment with 20 items which examines social phobia in adults and adolescents. (13+). The scale is based on the fear of being scrutinised or noticed throughout ordinary activities. "I become nervous that people are staring at me as I walk down the street," is a typical question on

this scale. The social phobia scale can be used to monitor the development of social phobia and consciousness symptoms over the time. [9].

Eating Attitudes Test (EAT-26)

Test has shown to be highly accurate, precise as well as effective. [10]. This test, on the other hand, does not provide a clear finding of an eating disorder. A score of more than 20 indicates that further examination by a clinical professional is required. Lower score (less than 20) are nonetheless indicative of serious eating disorders, as denial of symptoms is a common sign of eating disorders. When evaluating the results, weight history, current BMI and percentage of Optimal Body Weight should be considered.

Edinburgh Postnatal Depression Scale (EPDS)

EPDS is extensively used tool for postpartum depression. It's a ten-item self-report questionnaire wherein the women judge their mood over past seven days. Each item is graded 0–3 (for a total of 0–30) and takes approximately 5 minutes to finish. More depressive symptoms are associated with higher scores [11-12].

Data Analysis

The pre- and post-test results from the digital media were entered to a Microsoft Excel spreadsheet (v 2010, Microsoft Redmond Campus, Redmond, Washington, United States). SPSS was used to do statistical analysis on the collected data. The descriptive statistics was performed. The Wilcoxon sign rank test was used for comparision within different groups. We used a statistically significant p value of 0.05. The 95% confidence interval was established.

Results

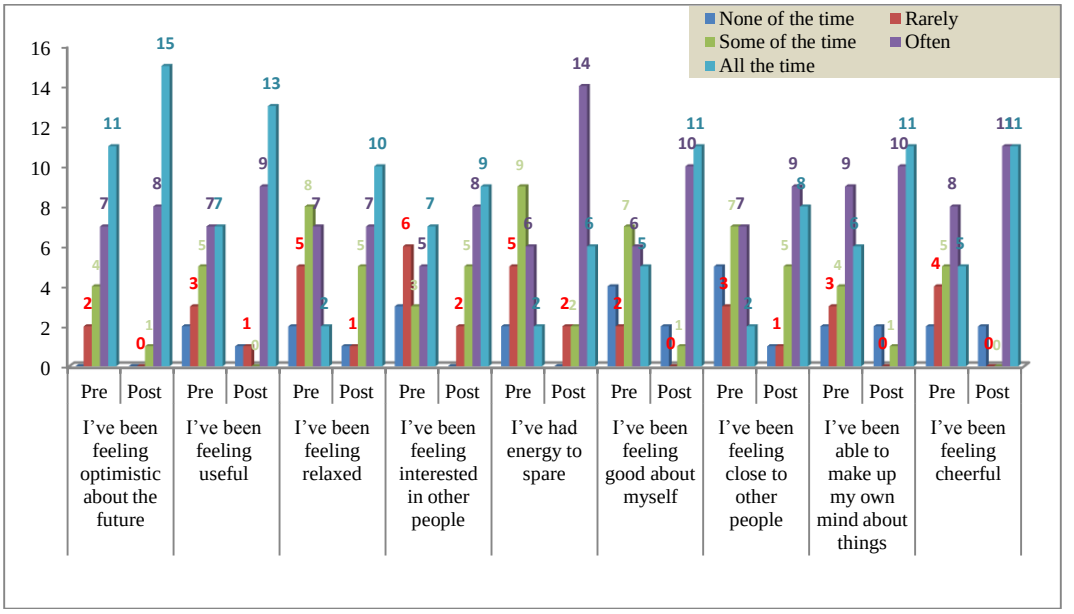
In the study, there was no significant difference in sociodemographic factors or baseline variables between those who complete the intervention and those who left out before the programme began. Table 1 and Figure 1 indicates the responses to all the question pertaining to mental well being indicated a significant improvement in the mental health of the participants after the intervention. The number of participants who started “feeling optimistic”, “feeling useful” “feeling relaxed” all the time increased significantly after the intervention. The proportion of participants reporting “feeling interested in other people” & “I have had energy to spare” ‘often’ and ‘all the time’ is significantly larger after the intervention as compared to before. Following the intervention, a significantly greater number of individuals began to feel good about themselves more 'frequently' and 'all the time.' The feeling of closeness to people had also increased significantly after the programme. Post-intervention, a significantly greater number of people as compared to pre-intervention, reported to feel close to people ‘often’ and ‘all the time’. A significantly greater number of participants could make up their minds about things & had been feeling cheerful ‘often’ and ‘all the time’ post-intervention.

Table 1. The frequency analysis among research participants based on their replies to mental health questions.

	N= 24	None of the time	Rarely	Some of the time	Often	All the time	P value
I've been feeling optimistic about the future	Pre No. of subjects (%)	0 (0.0)	2 (8.3)	4 (16.7)	7 (29.2)	11 (45.8)	<0.05*
	Post No. of subjects (%)	0 (0.0)	0 (0.0)	1 (4.2)	8 (33.3)	15 (62.5)	
I've been feeling useful	Pre No. of subjects (%)	2 (8.3)	3 (12.5)	5 (20.8)	7 (29.2)	7 (29.2)	<0.05*
	Post No. of subjects (%)	1(4.2)	1 (4.2)	0 (0.0)	9 (37.5)	13 (54.2)	
I've been feeling relaxed	Pre No. of subjects (%)	2 (8.3)	5 (20.8)	8 (33.3)	7 (29.2)	2 (8.3)	<.001*
	Post No. of subjects (%)	1 (4.2)	1 (4.2)	5 (20.8)	7 (29.2)	10 (41.7)	
I've been feeling interested in other people	Pre No. of subjects (%)	3 (12.5)	6 (25.0)	3 (12.5)	5 (20.8)	7 (29.2)	<0.05*
	Post No. of subjects (%)	0 (0.0)	2 (8.3)	5 (20.8)	8 (33.3)	9 (37.5)	
I've had energy to spare	Pre No. of subjects (%)	2 (8.3)	5(20.8)	9 (37.5)	6 (25.0)	2 (8.3)	<.001*
	Post No. of subjects (%)	0 (0.0)	2 (8.3)	2 (8.3)	14 (58.3)	6 (25.0)	
I've been feeling good about myself	Pre No. of subjects (%)	4 (16.7)	2 (8.3)	7 (29.2)	6 (25.0)	5(20.8)	<.001*
	Post No. of subjects (%)	2 (8.3)	0 (0.0)	1 (4.2)	10 (41.7)	11 (45.8)	
I've been feeling close to other people	Pre No. of subjects (%)	5(20.8)	3 (12.5)	7 (29.2)	7 (29.2)	2 (8.3)	<.001*
	Post No. of subjects (%)	1 (4.2)	1 (4.2)	5 (20.8)	9 (37.5)	8 (33.3)	
I've been able to make up my own mind about things	Pre No. of subjects (%)	2 (8.3)	3 (12.5)	4 (16.7)	9 (37.5)	6 (25.0)	<0.05*
	Post No. of subjects (%)	2 (8.3)	0 (0.0)	1 (4.2)	10 (41.7)	11 (45.8)	
I've been feeling cheerful	Pre No. of subjects (%)	2 (8.3)	4 (16.7)	5 (20.8)	8 (33.3)	5 (20.8)	<.001*
	Post No. of subjects (%)	2 (8.3)	0 (0.0)	0 (0.0)	11 (45.8)	11 (45.8)	

∞ The Wilcoxon sign rank test was used, and p value of.05 was deemed statistically significant.

Figure 1. Frequency distribution among the study participants based on their responses to questions about mental health



The programme brought the significant change/improvement in the social anxiety scores of the participants with respect to all aspects (p value<0.05) except two viz. feeling self-conscious to eat in front of a stranger at a restaurant and feeling if they have to carry a tray across a crowded cafeteria (p value>0.05) (Table 2, Figure 2).

Table 2. Frequency distribution among the study respondents based on their responses to the Social Phobia questions

Question	N= 24	Not at all	Slightly	Moderately	Very	Extremely	P value∞
I become anxious if I have to write in front of other people	Pre Number of subjects (%)	10 (50.0)	2 (10.0)	3 (15.0)	3 (15.0)	2 (10.0)	<0.05*
	Post Number of subjects (%)	14 (70.0)	3 (15.0)	1 (5.0)	1 (5.0)	1 (5.0)	
I get nervous that people are staring at me as I walk down the street	Pre Number of subjects (%)	6 (30.0)	9 (45.0)	4 (20.0)	1 (5.0)	0 (0.0)	<.001*
	Post Number of subjects (%)	14 (70.0)	6 (30.0)	0 (0.0)	0 (0.0)	0 (0.0)	
I feel self-conscious if I have to enter a room where others	Pre Number of subjects (%)	8 (40.0	4 (20.0)	5 (25.0)	2 (10.0)	1 (5.0)	<00.05*

are already seated	Post Number of subjects (%)	12 (60.0)	5 (25.0)	2 (10.0)	1 (5.0)	0 (0.0)	
I would find it difficult to drink something in a group of people	Pre Number of subjects (%)	13 (65.0)	2 (10.0)	3(15.0)	1 (5.0)	1 (5.0)	<00.05*
	Post Number of subjects (%)	16 (80.0)	2 (10.0)	1 (5.0)	0 (0.0)	1 (5.0)	
It would make me feel self-conscious to eat in front of a stranger at a restaurant	Pre Number of subjects (%)	16 (80.0)	1 (5.0)	2 (10.0)	1 (5.0)	0 (0.0)	>0.05
	Post Number of subjects (%)	17 (85.0)	2 (10.0)	1 (5.0)	0 (0.0)	0 (0.0)	
I would get tense if I have to carry a tray across a crowded cafeteria	Pre Number of subjects (%)	10 (50.0)	4 (20.0)	2 (10.0)	1 (5.0)	3 (15.0)	>0.05
	Post Number of subjects (%)	13 (65.0)	6 (30.0)	0 (0.0)	1 (5.0)	0 (0.0)	
I can get tense when speaking in front of other people	Pre Number of subjects (%)	6 (30.0)	6 (30.0)	4 (20.0)	3 (15.0)	1 (5.0)	<0.05*
	Post Number of subjects (%)	14 (70.0)	3 (15.0)	3 (15.0)	0 (0.0)	0 (0.0)	
I feel awkward and tense if I know people are watching me	Pre Number of subjects (%)	6 (30.0)	6 6 (30.0)	4 (20.0)	3 (15.0)	1 (5.0)	<0.05*
	Post Number of subjects (%)	11 (55.0)	6 (30.0)	3 (15.0)	0 (0.0)	0 (0.0)	

∞ The Wilcoxon sign rank test was used, and *p value of 0.05 was deemed statistically significant.

Figure 2. The frequency distribution among the study respondents based on their responses to the Social Phobia questions

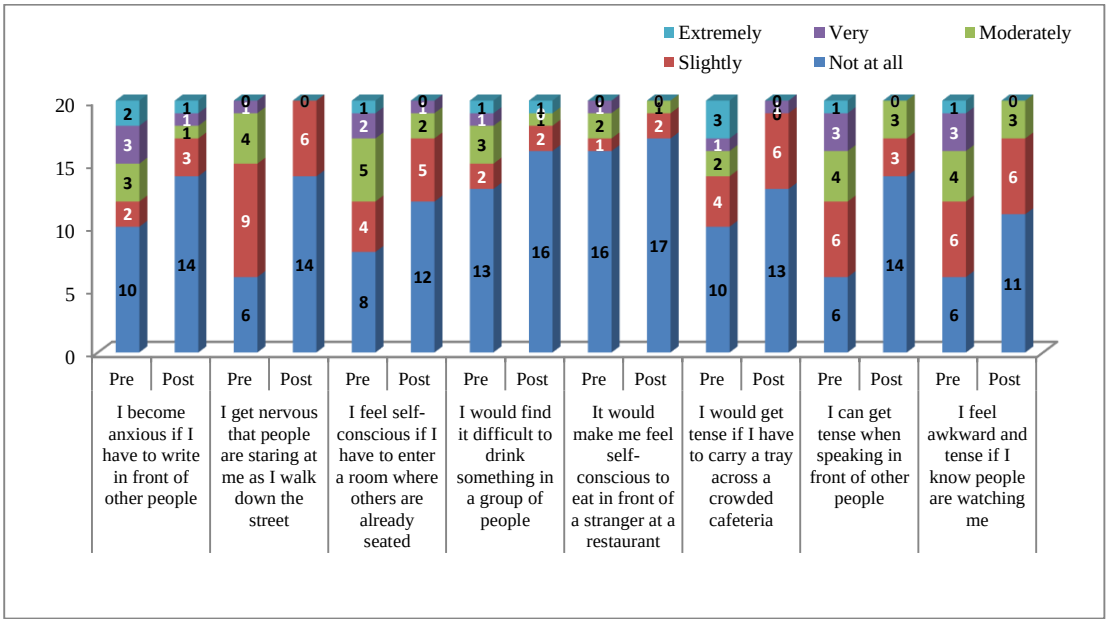


Table 3 and 4 describes the eating behaviour of the participants both before and after the intervention. The number of people who always/usually/often felt terrible about being overweight reduced significantly (p value<0.05) and number of people who rarely felt terrible on being overweight increased significantly after the intervention. None of the participants reported to not to eat food when hungry neither always nor never (0.0%). A statistically significant reduction in number of people "usually" avoiding food on being hungry was seen after the intervention. Before the intervention the proportion of participants reported to be always/usually/often involved in binge eating was significantly great as compared to their number post intervention. Post intervention, significantly more participants 'usually' became aware of the calorie content of the foods that they eat (19.0% vs 66.7%). After the intervention, percentage of participants 'usually' avoiding food with a high carbohydrate content (i.e. bread, rice, potatoes, etc.) increased significantly from 28.6% to 57.1%. A statistically reduction in the number of participants who always or usually felt guilty n eating was seen after the intervention (24.0% vs 0.0%). The tendency of 'always' being preoccupied with the desire to be thinner was found to decrease significantly (38.1% vs 9.5%). The number of participants who 'usually' felt uncomfortable on eating sweets increased significantly after the programme (14.3% vs 61.9%). The frequency of the feeling that food controls life and others pressure them to eat decreased significantly after the intervention (p value<0.05). After the programme, a significantly greater number of participants feels that they always take long than others to eat their meals. There was no significant change in the thought of burning of calories on exercise, enjoyment of trying new rich foods, engagement in dietary behavior, (p value>0.05).

Table 3. The frequency distribution among the study participants based on their responses to the Eating Attitude questionnaires (Part A)

Question	Response	Pre		Post		P value∞
		Number	Percentage	Number	Percentage	
I Am terrified about being overweight.	Always	7	33.3	1	4.8	<.001*
	Usually	3	14.3	1	4.8	
	Often	8	38.1	3	14.3	
	Sometimes	3	14.3	11	52.4	
	Rarely	0	0	5	23.8	
	Never	0	0	0	0	
Avoid eating when I am hungry.	Always	0	0	0	0	<0.05*
	Usually	5	23.8	0	0	
	Often	3	14.3	3	14.3	
	Sometimes	4	19.0	4	19.0	
	Rarely	9	42.9	14	66.7	
	Never	0	0	0	0	
Have gone on eating binges where I feel that I may not be able to stop.	Always	2	9.5	0	0	<0.05*
	Usually	2	9.5	0	0	
	Often	7	33.3	2	9.5	
	Sometimes	6	28.6	12	57.1	
	Rarely	4	19.0	7	33.3	
	Never	0	0	0	0	
I am aware of the calorie content of the foods that I eat.	Always	2	9.5	0	0	<0.05*
	Usually	4	19.0	14	66.7	
	Often	7	33.3	6	28.6	
	Sometimes	4	19.0	1	4.8	
	Rarely	4	19.0	0	0	
	Never	0	0	0	0	
Particularly avoid food with a high carbohydrate content (i.e. bread, rice, potatoes, etc.)	Always	2	9.5	2	9.5	<0.05*
	Usually	6	28.6	12	57.1	
	Often	4	19.0	5	23.8	
	Sometimes	5	23.8	2	9.5	
	Rarely	4	19.0	0	0	
	Never	0	0	0	0	
Feel extremely guilty after eating.	Always	4	19.0	0	0	<0.05*
	Usually	1	4.8	0	0	
	Often	3	14.3	2	09.5	
	Sometimes	8	38.1	9	42.9	
	Rarely	5	23.8	10	47.6	
	Never	0	0	0	0	
Am preoccupied with a desire to be thinner	Always	8	38.1	2	9.5	<0.05*
	Usually	5	23.8	6	28.6	
	Often	4	19.0	6	28.6	
	Sometimes	4	19.0	5	23.8	
	Rarely	0	0	2	9.5	
	Never	0	0	0	0	

Think about burning up calories when I exercise.	Always	6	28.6	3	14.3	>0.05
	Usually	4	19.0	6	28.6	
	Often	6	28.6	6	28.6	
	Sometimes	3	14.3	2	9.5	
	Rarely	2	9.5	4	19.0	
	Never	0	0	0	0	
Take longer than others to eat my meals.	Always	1	4.8	11	52.4	<.001*
	Usually	5	23.8	8	38.1	
	Often	5	23.8	1	4.8	
	Sometimes	3	14.3	1	4.8	
	Rarely	7	33.3	0	0	
	Never	0	0	0	0	
Avoid foods with sugar in them.	Always	4	19.0	8	38.1	<.001*
	Usually	3	14.3	10	47.6	
	Often	4	19.0	3	14.3	
	Sometimes	5	23.8	0	0	
	Rarely	5	23.8	0	0	
	Never	0	0	0	0	
Feel that food controls my life.	Always	3	14.3	2	9.5	<0.05*
	Usually	5	23.8	0	0	
	Often	5	23.8	2	9.5	
	Sometimes	3	14.3	10	47.6	
	Rarely	5	23.8	7	33.3	
	Never	0	0	0	0	
Feel that others pressure me to eat.	Always	1	4.8	0	0	<0.05*
	Usually	4	19.0	1	4.8	
	Often	5	23.8	2	9.5	
	Sometimes	2	9.5	10	47.6	
	Rarely	9	42.9	8	38.1	
	Never	0	0	0	0	
Feel uncomfortable after eating sweets.	Always	1	4.8	2	9.5	<0.05*
	Usually	3	14.3	13	61.9	
	Often	7	33.3	3	14.3	
	Sometimes	6	28.6	2	9.5	
	Rarely	4	19.0	1	4.8	
	Never	0	0	0	0	
Engage in dieting behavior.	Always	1	4.8	2	9.5	>0.05
	Usually	7	33.3	11	52.4	
	Often	8	38.1	4	19.0	
	Sometimes	2	9.5	4	19.0	
	Rarely	3	14.3	0	0	
	Never	0	0	0	0	
Enjoy trying new rich foods.	Always	8	38.1	9	42.9	>0.05
	Usually	7	33.3	7	33.3	
	Often	4	19.0	3	14.3	
	Sometimes	2	9.5	2	9.5	
	Rarely	0	0	0	0	
	Never	0	0	0	0	

∞Wilcoxon sign rank test. *p value<.05 was considered statistically significant.

Table 4 suggests that the frequency of bingeing, induced vomiting, usage of laxatives, diet pills or diuretics (water pills) to manage weight and shape and exercise of more than one hour decreased significantly after the intervention (p value <0.05). The number of participants reporting loss 9 kgs or more in last 6 months was found to be significantly greater after the intervention (p value<.05).

Table 4. Frequency analysis among the study participants based on their responses to the Eating Attitude questionnaires (Part B)

Question	Response	Pre		Post		P value∞
		Number	Percentage	Number	Percentage	
A.Gone on eating binges where you feel that you may not be able to stop?	Never	3	14.3	11	52.4	<.001*
	Once a month or less	8	38.1	9	42.9	
	2-3 times a month	1	4.8	1	4.8	
	Once a week	8	38.1	0	0	
	2-6 times a week	1	4.8	0	0	
	Once a day or more	0	0	0	0	
B.Ever made yourself sick (vomited) to control your weight or shape?	Never	18	85.7	20	95.2	>0.05
	Once a month or less	2	9.5	1	4.8	
	2-3 times a month	1	4.8	0	0	
	Once a week	0	0	0	0	
	2-6 times a week	0	0	0	0	
	Once a day or more	0	0	0	0	
C.Ever used laxatives, diet pills, or diuretics (water pills) to control your weight or shape?	Never	19	90.5	11	52.4	<0.05*
	Once a month or less	2	9.5	7	33.3	
	2-3 times a month	0	0	0	0	
	Once a week	0	0	3	14.3	
	2-6 times a week	0	0	0	0	
	Once a day or more	0	0	0	0	
D. Exercised more than 60 minutes a day to lose or to control your weight?	Never	11	52.4	1	4.8	<.001*
	Once a month or less	2	9.5	1	4.8	
	2-3 times a month	2	9.5	6	28.6	
	Once a week	0	0	0	0	
	2-6 times a week	5	23.8	7	33.3	
	Once a day or more	1	4.8	6	28.6	
E.Lost 20 pounds or more in the past 6 months	Never	12	57.1	4	19.0	<0.05*
	Once a month or less	5	23.8	10	47.6	
	2-3 times a month	3	14.3	2	9.5	
	Once a week	1	4.8	5	23.8	
	2-6 times a week	0	0	0	0	
	Once a day or more	0	0	0	0	

Lost 9kg or more in the past 6 months	Yes	6	28.6	12	57.1	<0.05*
	No	15	71.4	9	42.9	

∞Wilcoxon sign rank test. *p value<0.05 was considered to be statistically significant.

Table 5 detailes about postnatal depression responses. The programme had caused significant reduction in the depression of the participants as evident from their responses to the questions. Prior to the intervention, only 50% of participants reported being able to laugh and see the funny side of things "as much as I always could," but this percentage increased dramatically to 100% after the intervention. Similarly, initially only 54.5 % people have reported that they looked forward with enjoyment to things 'as much as I always could' however, the percentage of such people has since risen up to 95.5%. There was a significant reduction in the number of people who have tendency to blame themselves all the time, for anything unnecessarily went wrong (31.8% vs 0.0%). More than 68% participants 'hardly ever' became anxious or worried for no good reason after the programme, whereas this number significantly less (13.6%) before the programme (p value < 0.05). After enrolling in the programme, there was a statistically significant decrease in the tendency to feel terrified or panicked for no apparent cause (p value < 0.05). The inability to cope at all got decreased significantly (18.2% vs 4.5%) and ability to cope quite well or as ever always has increased significantly (p value < 0.05). There has been a statistically significant decrease in sadness and hence sleeping trouble [22.7% (pre) vs 0.0% (post), reporting sleeping difficulty 'most of the time']. The feeling of sadness or being miserable was found to decrease significantly after the intervention and the tendency of crying out of sadness had also been found to decrease significantly (p value < 0.05). The proportion of people 'quite often' thinking of harming themselves was less (pre-intervention) which further reduced to 0.0% after the programme. However, this reduction was not statistically significant. (p value > 0.05).

Table 5. Frequency distribution among research participants based on their responses to postnatal depression-related questions.

Question	Response	Pre		Post		P value∞
		Number	Percentage	Number	Percentage	
I have been able to laugh and see the funny side of things	As much as I always could	11	50.0	22	100.0	<0.05*
	Not quite so much now	9	40.9	0	0.0	
	Definitely not so much now	2	9.1	0	0.0	
	Not at all	0	0.0	0	0.0	
I have looked forward with enjoyment to things	As much as I ever did	12	54.5	21	95.5	<0.05*
	Rather less than I used to	8	36.4	1	4.5	
	Definitely less	1	4.5	0	0.0	

	than I used to					
	Hardly at all	1	4.5	0	0.0	
I have blamed myself unnecessarily when things went wrong	Yes most of the time	7	31.8	0	0.0	<.001*
	Yes, some of the time	10	45.5	2	9.1	
	Not very often	4	18.2	16	72.7	
	No, never	1	4.5	4	18.2	
I have been anxious or worried for no good reason	No, not at all	1	4.5	4	18.2	<.001*
	Hardly ever	3	13.6	15	68.2	
	Yes, sometimes	17	77.3	3	13.6	
	Yes, very often	1	4.5	0	0.0	
I have felt scared or panicky for no very good reason	Yes, quite a lot	2	9.1	0	0.0	<.001*
	Yes, sometimes	13	59.1	1	4.5	
	No, not much	4	18.2	15	68.2	
	No, not at all	3	13.6	6	27.3	
Things have been getting on top of me	Yes, most of the time I haven't been able to cope at all.	4	18.2	1	4.5	<0.05*
	Yes, sometimes I haven't been coping as well as usual	14	63.6	3	13.6	
	No, most of the time I have coped quite well.	1	4.5	12	54.5	
	No, I have been coping as well as ever.	3	13.6	6	27.3	
I have been so unhappy that I have had difficulty sleeping	Yes, most of the time	5	22.7	0	0.0	<.001*
	Yes, sometimes	7	31.8	0	0.0	
	Not very often	7	31.8	14	63.6	
	Not at all	3	13.6	8	36.4	
I have felt sad or miserable	Yes, most of the time	3	13.6	0	0.0	<0.05*
	Yes, quite often	11	50.0	1	4.5	
	Not very often	5	22.7	14	63.6	
	Not at all	3	13.6	7	31.8	
I have been so unhappy that I have been crying	Yes, most of the time	3	13.6	1	4.5	<0.05*
	Yes, quite often	6	27.3	0	0.0	
	Only occasional	10	45.5	13	59.1	
	No, never	3	13.6	8	36.4	
The thought of harming myself	Yes, quite often	2	9.1	0	0.0	>0.05
	Sometimes	4	18.2	2	9.1	

has occurred to me	Hardly ever	2	9.1	7	31.8	
	Never	14	63.6	13	59.1	

The Wilcoxon sign rank test was used, and *p value of < 0.05 was deemed to be statistically significant.

Discussion

Responses to all the questions related to mental well being indicated a significant improvement in the mental health of the participants after the therapeutical intervention. The number of participants who started “feeling optimistic”, “feeling useful”, “feeling relaxed”, “feeling cheerful”, “feeling good about themselves” has increased significantly after the intervention. The therapy had significantly raised the interest of participants in other people, feeling of closeness to people. Post therapy more people had energy to spare and could makeup their mind on things compared to pre-therapy.

The programme brought the significant change/improvement in the social anxiety scores of the participants with respect to all aspects such as being anxious in writing in front of other people, feeling nervous on being stared while walking down the street, feeling self conscious on entering the room full of people, feeling nervous in drinking or speaking in front of other people, feeling awkward (p value<0.05) However, the feeling of self-conscious to eat in front of a stranger at a restaurant and feeling if they have to carry a tray across a crowded cafeteria could nt altered significantly in participants by the therapy (p value>0.05).

The programme had caused significant reduction in the depression of the participants as evident from their responses to the questions. Mindfulness-based cognitive therapy enabled participants to laugh and see the fun side of situations, as well as look forward to enjoyment. There was a significant reduction in the tendency to self blame, being anxious or worried and sacred or panicky for no good reason. There was a significant decrease in inability to cope with the situation, unhappiness and thus sleeping difficulties (P value<0.05). The tendency to harm themselves was less prevalent amongst the participants, no further significant reduction in number of people thinking of harming themselves was seen after the therapy (p value>0.05).

The mindfulness cognitive therapy significantly reduced the number of people feeling terrible about being overweight (p value<0.05). The tendency to avoid food on being hungry or binge eating was reduced in significant number of people. The number of people being aware about the calorie content of food and those avoiding food with high calorie, not preferring sweets increased significantly after the therapy. Significant reduction in the feeling of guilt on eating, feeling that food controls life and others pressurize them to eat was noticed after the therapy (p value<0.05). The tendency of ‘always’ being worried with the want to be thinner was decreased significantly (p value<0.05). After the programme, a significantly greater number of participants feel that they always take long than others to eat their meals. However, there was no significant change in the thought of burning of calories on exercise, enjoyment of trying new rich foods, engagement in dietary behavior, (p value>0.05).

Conclusion

The findings of this research contribute to the growing of evidence suggesting that MBCT is a potentially beneficial low-intensity mental health intervention that can be implemented in maternal healthcare settings. It can be concluded that the mindfulness based cognitive therapy is an effective method of promoting psychological well being of new mothers. It helps in improving maternal mental well being, social anxiety, eating behaviour and depressive symptoms.

Funding

No external funding was received.

Acknowledgments

The authors are grateful to Dean, School of Basic and Applied Sciences, Galgotias University, Greater Noida for generous support to work. Their kind and benevolent demeanour has aided in the successful production of this work.

Conflicts of Interest

All the authors affirm that they have no personal interest in the work and that there is no breach of ethics.

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