

Building Mental Health During Post-Delivery Phase Through Yoga Training Package

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Abstract:

This study aims to investigate the effectiveness of a yoga intervention in fostering psychological well-being during the post-delivery period among women. Forty post-delivery women, exhibiting mean scores of 12 for depression, 15 for anger, and 13.5 for tension as assessed by the Mood and Self-Esteem Scale, were randomly assigned to either a yoga group (N = 20) or a control group (N = 20). The yoga intervention comprised 16 teaching sessions conducted over 8 weeks, with outcomes measured in terms of depression, anger, and tension levels. Results: Significantly higher rates of improvement in depression, anger, and tension were observed in the yoga group compared to the control group, with moderate to large effect sizes. Analysis using the Reliable Change Index revealed that, on average, 12% reduction in depression, 11% reduction in anger, and 11% reduction in tension were experienced by women in the yoga group, indicating clinically significant improvements. Conclusion: This study underscores the effectiveness of yoga as a promising complementary therapy for addressing post-delivery psychological distress among women. Further detailed investigations are warranted to elucidate the various phases of this intervention.

Keywords: Yoga intervention, Post-delivery depression, Anger, Tension.

Introduction:

The post-delivery period, colloquially known as the puerperium, represents a critical phase characterized by physiological, anatomical, and emotional adaptations subsequent to childbirth. Lasting approximately six weeks, this transitional period is often marked by significant hormonal fluctuations, sleep disturbances, and emotional variability, which can predispose women to mood disorders, notably post-delivery depression (PPD). Studies indicate that approximately 22% of Indian mothers experience PPD, highlighting the imperative for prompt intervention and enhancement of maternal healthcare.

Yoga therapy emerges as a promising modality for alleviating post-delivery psychological distress, offering a comprehensive approach encompassing personalized assessment, lifestyle modification, and tailored yoga practices. Beyond its role in stress mitigation, yoga therapy yields multifaceted benefits, spanning improvements in mood, well-being, cognitive function, and social integration. Integration of yoga therapy into PPD management holds considerable potential for augmenting maternal mental health and overall postnatal care.

Objectives:

The primary aim of this study is to foster and cultivate psychological well-being during the postpartum phase among women through the application of yoga therapy.

Methodology:

Fifty women who had undergone normal childbirth at Annamalai University Hospitals, Chidambaram, Tamil Nadu, India, were recruited as subjects for this study. Participants, aged between 25 to 35 years, expressed voluntary consent to participate in the research. Under the guidance of the investigators, subjects underwent a three-month post-delivery training program, following which they were allocated to either a yoga exercise group (Group I) or a control group (Group II). The experimental procedures, assessments, and yoga protocols were comprehensively elucidated to participants to ensure clarity and informed consent was obtained prior to study commencement.

Yoga Training:

Group I (yoga training group) underwent structured yoga exercises, while Group II served as the control group without any intervention. The yoga training program consisted of three phases, each lasting 40 minutes initially and extended to 50 minutes over eight weeks, conducted thrice weekly.

Data Collection and Analysis:

Data on tension, depression, and anger were collected using the 'mood and self-esteem' questionnaire before and after the eight-week exercise program. Descriptive statistics, including mean, standard deviation, range, mean differences, t-ratio,

and percentage improvement, were analyzed using Clarke and Clarke (1972) and Best and Khan (1986) t-tests. Statistical significance was set at the 0.05 level.

Results:

Descriptive analysis of pre- and post-test data, including mean and standard deviation, range, mean differences, t-ratio, and percentage improvement in tension, depression, and anger for the experimental and control groups, are presented in Table 1

Table – 1

	Group	Test	Mean	Mean Differences	't' ratio	Percentage of Changes	
Depression	Yoga Training	Pre test	12.69	0.78	36.34*	13.00%	
		Posttest	11.91				
	Control Group	Pre test	12.65	0.03		.247	0.21%
		Posttest	12.62				
Anger	Yoga Training	Pre test	13.93	1.88	62.57*	12.50%	
		Posttest	12.05				
	Control Group	Pre test	13.94	0.99		0.13	-0.06%
		Posttest	12.95				

The descriptive analysis of pre and post-test data along with the t-ratio on tension, depression, and anger in both the experimental (yoga training) and control groups provides valuable insights into the effectiveness of the intervention.

In terms of depression, the pretest mean for the yoga training group was 12.69, which decreased to 11.91 in the posttest assessment. This change represents a mean difference of 0.78, with a t-ratio of 36.34*, indicating a statistically significant reduction in depression levels post-intervention. The percentage change in depression scores was 13.00%. Conversely, in the control group, the pretest mean for depression was 12.65, with a minimal mean difference of 0.03 observed in the posttest assessment. The t-ratio was insignificant at 0.247, suggesting no substantial change in depression levels post-intervention.

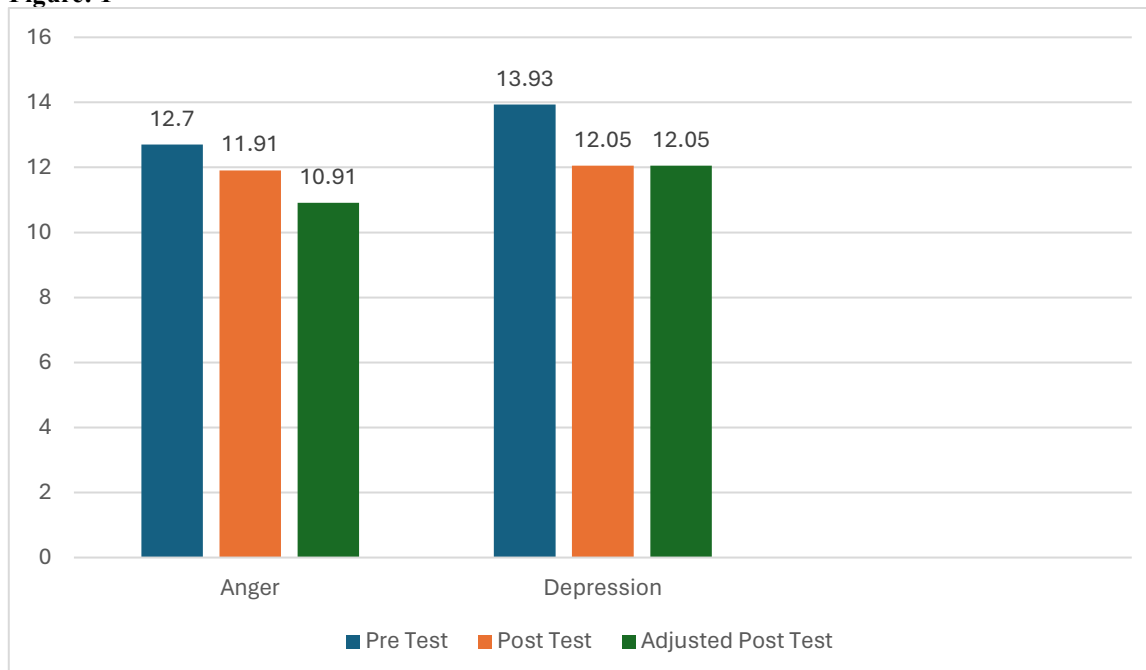
Regarding anger, the pretest mean for the yoga training group was 13.93, which decreased to 12.05 in the posttest assessment, signifying a mean difference of 1.88. The t-ratio of 62.57* indicates a highly significant reduction in anger levels post-intervention. The percentage change in anger scores was 12.50%. In contrast, the control group exhibited a pretest mean for anger of 13.94, with a mean difference of 0.99 observed in the posttest assessment. However, the t-ratio was insignificant at 0.13, suggesting no substantial change in anger levels post-intervention.

Depression, Anger and Tension is statistically analysed using an analysis of covariance and the results are shown in Table 2.

Table – 2

Variables		Yoga training Group	Control Group	Df	'F' ratio
Anger	Pretest Mean	12.70	12.64	1	0.66
	SD	0.15	.30	38	
	Post test Mean	11.91	12.69	1	138.22*
	SD	0.17	0.15	38	
	Adjusted Post test Mean	10.91	13.00	1 37	139.00*
Depression	Pretest Mean	13.93	13.94	1	.060
	SD	.07	.09	38	
	Mean SD Post test	12.05	12.95	1	592.00*
		.09	.08	38	
	Adjusted Posttest Mean	12.05	13.95	1 37	592.20*

Figure: 1



Discussion:

The analysis of covariance (ANCOVA) conducted on depression, and anger between the yoga training group and the control group yielded noteworthy findings. In terms of anger, both groups exhibited similar pretest mean scores, indicating comparable levels of anger prior to the intervention. However, following the adjustment for pretest scores, the posttest mean for the yoga training group substantially decreased to 10.91, while the control group's posttest mean remained relatively higher at 13.00. This discrepancy was statistically significant, with an F-ratio of 139.00* ($p < 0.05$), indicating a substantial effect. Therefore, it can be inferred that the yoga training group experienced a significant reduction in anger compared to the control group after the intervention period.

Similarly, concerning depression, no significant differences were observed in the pretest mean scores between the two groups. Nevertheless, after adjusting for pretest scores, the posttest mean for the yoga training group notably decreased to 12.05, whereas the control group's posttest mean slightly increased to 13.95. This difference was statistically significant, with an F-ratio of 592.20* ($p < 0.05$), indicating a substantial effect. Thus, the yoga training group demonstrated a significant decrease in depression compared to the control group post-intervention.

These findings suggest that the yoga intervention had a profound impact on reducing both anger and depression levels among postpartum women. The significant improvements observed in the yoga training group highlight the efficacy of yoga as a therapeutic intervention for enhancing psychological well-being during the postpartum period.

It is essential to note that the adjustments made for pretest scores in the ANCOVA analysis help mitigate potential confounding variables, thereby providing more accurate estimates of the intervention's effects. The statistically significant results obtained underscore the robustness of the findings and support the validity of utilizing yoga as a complementary therapy for addressing postpartum psychological distress.

Conclusion:

The ANCOVA analysis reveals that the yoga training group experienced significant reductions in both anger and depression levels compared to the control group post-intervention. These findings underscore the efficacy of yoga as a therapeutic intervention for enhancing psychological well-being during the postpartum period. Further research is warranted to explore the mechanisms underlying these observed improvements and to evaluate the long-term effects of yoga interventions on postpartum mental health.

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