Journal of Rare Cardiovascular Diseases
ISSN: 2299-3711 (Print) | e-ISSN: 2300-5505 (Online)
www.jrcd.eu
RESEARCH ARTICLE

Effect Of Yoga on Interpersonal Relationship Compared to Antenatal Exercise Among Antenatal Mothers.

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Article History
Received: 04/08/2025
Revised: 19/08/2025
Accepted: 09/09/2025
Published: 26/09/2025

Abstract: ***Introduction***: Pregnancy is a transformative period in a woman's life, marked by physical, emotional, and psychological changes that can influence her interpersonal relationships. The relationship between an expectant mother and her partner, family, and social circle plays a crucial role in her overall well-being and pregnancy experience. Yoga, an ancient mind-body practice, has been widely recognized for its benefits in reducing stress, enhancing emotional stability, and promoting overall mental and physical health. ***Methods***: The period of study was from September 2023 to May 2024. A simple random sampling technique was used. Based on the inclusion criteria, 80 samples were collected for each group. The samples were selected from the antenatal outpatient department of a selected hospital in Pune. A pretest was given. The interventions given were yoga for the study group and antenatal exercise for the control group. Post-test I conducted at the end of the second trimester and post-test II at end of 36 weeks completetion. Analysis done using mean, standard deviation, and the z-test. ***Result***: It is evident that yoga is significantly more effective in improving interpersonal relationships. The pretest (p =>0.05), posttest I, and post II (P= <0.05), measured by the z test. When scores were compared to those with the antenatal exercises group by applying a z-test, the Interpersonal relationship scores' p-values were small (less than 0.05). ***Conclusion***: yoga is significantly more effective in improving interpersonal relationships, as compared to the antenatal exercises group

Keywords: Effect, Comparison, Yoga, Antenatal exercise, Interpersonal relationship, Antenatal mother.

INTRODUCTION

A bodily alteration amidst during nine months of pregnancy owing to the maturation of the fetus, along with protection, promotion help prepare the mother's body for childbirth. These alterations influence the overall welfare of pregnant women, including all aspects of life such as physical, physiological, biochemical, and immunological at distinct trimesters of pregnancy. It requires the provision of some wellness intervention that can provide a mother with comprehensive care [1,2]. Elevated manifestation of worry, tension, and sadness gives inferior well-being to pregnant women. So pregnant mothers may have poor physical health, disturbed psychological states, and independence levels, which can lead to interrupted family and social relationships. [3] Leanne Dougherty et. al.'s study results suggest that there is little interpersonal communication and social communication of pregnancy-associated issues, suggesting that an intervention to improve such communication could be effective. [4] So yoga and routine exercise can be given during pregnancy as an intervention. The researcher wanted to see the effect on interpersonal relationships was a curiosity of the researcher. And want to know how yoga improves interpersonal relationships?

NEED FOR THE STUDY

The quality of interpersonal relationships, particularly with partners, family members, and healthcare providers, plays a critical role in maternal health. Disruptions in these relationships, especially when coupled with psychological stress, are strongly associated with maternal depression and anxiety. Conversely, strong social support has been shown to protect against adverse emotional outcomes and contribute to a more positive pregnancy experience, ultimately benefiting both mother and child.[5] Given the persistently high rates of unnecessary obstetric interventions and their consequences, there is a growing need to investigate alternative approaches that support maternal well-being. Conventional antenatal exercises, such as walking and stretching, are often recommended to alleviate physical discomfort. However, while beneficial for physical health, these practices may not sufficiently address the psychological and emotional demands of pregnancy. [6] As a result, there is increasing interest in holistic approaches that integrate physical, mental, and emotional well-being. Among these, yoga has emerged as a comprehensive intervention. Combining physical postures (asanas), breathing techniques (pranayama), and meditation, yoga addresses both body and mind. Research indicates that yoga can significantly reduce stress, anxiety, and depression in pregnant women. [7-9] Yoga during pregnancy has also been associated with specific benefits, such as improved sleep quality, reduced back pain, better mood, and enhanced emotional resilience. It fosters a sense of inner calm, strengthens social connections, and improves communication—factors that contribute to better interpersonal relationships. [10]

Despite the availability of conventional antenatal exercises, the increasingly low maternal satisfaction levels indicate the need for more integrative, evidence-based approaches. Although previous studies have explored yoga's benefits during specific trimesters or focused on isolated outcomes, there is a shortage of studies examining the effect of yoga on interpersonal relationships. Moreover, in many of these studies, the comparison group received only standard care. In contrast, the current research introduces a structured antenatal exercise protocol for the control group and compares it with a yoga-based intervention. Therefore, the current investigation intends to bridge this gap.

AIM OF THE STUDY

Present study seeks to explore and compare the effectiveness of yoga and routine antenatal exercises on interpersonal relationships, among antenatal mothers. By assessing these outcomes in a study group practicing yoga and a control group following standard antenatal exercises, this research aims to identify holistic, accessible strategies that support pregnant women**.** Aim of study is assess and compare effect of yoga and antenatal exercise interpersonal relationship**.**

METHODS AND MATERIAL

The research design selected for the present study was experimental design. Independent Variables were Yoga and antenatal exercise and dependent Variable were Interpersonal relationship; Participants were selected from Antenatal Care (ANC) OPD of selected hospitals in Pune. Inclusion criteria were Normal pregnancy, Antenatal mothers who come for registration and have completed 20 weeks of gestation. Exclusion Criteria were Antenatal mothers who have any high-risk factors of pregnancy presently or complicated pregnancy (placenta previea, severe PIH, severe anemia, BOH, twins). The sample size calculated using the formula-

$$n = \frac{(SD2y+SD2c)\,(Z1-\alpha/2 + Z1-\beta)\,2}{(My - Mc)}.$$

Study conducted on 160 participants, among that 80 were included in yoga group and 80 were included in antenatal exercise group by simple random technique. Researcher prepared 80 envelop for study group and 80 envelop for control group. Envelops were sealed. All sealed envelopes were mixed in one container. After the physical examination by investigator and by obstetrician checkup antenatal mothers were assessed for all normal parameters. Her willingness to participate in study was asked. Informed consent was taken. Mother was asked to pick up one envelop. The mother who got study group envelop that mother was included in study group and who got control group envelop that was included in control group. Study group received yoga intervention and control group received antenatal exercise intervention.

Data Collection Instrument -interpersonal relationship was assessed by standard tool (FIAT-Q-SF). Interpersonal relationship Questionnaire. The Functional Idiographic Assessment Template- Questionnaire (FIAT-Q) was developed by Callaghan; G. M. (2006) Permission was obtained from the author to use the tool for this study. A short form of the FIAT-Q is (FIAT-Q-SF) with32 items. It was developed to aid therapists in assessing client interpersonal functioning in a time effective manner. A higher score indicates a greater level of problems in interpersonal functioning [11]

Description of the Intervention The intervention for yoga group consisted of yoga module for 40 minutes for second trimester and third trimester which includes Opening prayer, three times OM for 2min, loosening body movement which includes Loosening fingers, Loosening Wrist, Ankle stretch, Shoulder rotation, Neck loosening's for 8mins. After that Relaxation as savasana was given for 2min in left lateral position. Asanas for 16 min including in-between relaxation. In II trimester mothers performed following asanas. Standing posture asana were Tadasan, Virbhadrasan, Utakatanasa(squat), followed by relaxation. Sitting posture asanas were Dandasana, Vajarasana, Baddakonasan (titileasan/butterfly) followed by relaxation. Supine Posture asanas were Anantaasana Setubandasan followed by savasana for 3min. Same module followed during III trimester only some asanas were different. standing posture were Tadasan, modified Virbhadarasa, Ardhkati chakarasan, Utakatanasa, followed by relaxation. Sitting posture asana were Dandasana, Vajarasana, Baddakonasan (titileasan/butterfly, Upavista Konasana (sitting with wide leg) followed by Relaxation. Supine Posture asanas were Anantaasana, Setubandasan After completion of all asanas mother was given savasan in left lateral position for 3 minutes. Pranayam includes Anulom –Vilom, Bhramari three repitations of each for 7 mins followed by last prayer and silence. Three times Omkar meditation shanti path for 2min. [12]

This module is prepared by the investigator. Reason for using this module was it started with Prayer and loosening body movement, which eases to do further asana. Module included all posture asanas that pregnant mother can do without any harm to her which were relieving discomfort caused due to pregnancy. Module consist of pranayama followed by prayer which gives peace and calm to the mother. Teaching yoga module was limited during hospital visits and follow up visits

The intervention for control group consisted of Antenatal exercises of second trimester and third trimester which includes

- Pelvic Floor exercise -It was done in 10 repetitions, 3 to 5 times a day (morning, afternoon, and night).
- Pelvic tilt exercise- 3 to 5 times a day (morning, afternoon, and night).
- Squat- 10 to 15 repetitions 3 sets (morning, afternoon, and night).[13]

Reliability of the tool was assessed using test – retest method its correlation coefficient r value is 0.89

Ethical Consideration

Ethical permission from Krishna Vishwa Vidyapeeth, (formly known as Krishna Institue of Medical Sciences, "Deemed to be University), Karad was obtained (KIMSD/IEC/04/2023) (487/2022-2023)

Data collection

The period of study was from Semtember2023 to May2023. Simple random sampling technique was used. 80 samples for control and 80 study group were collected. Informed consent was obtained from the subjects. Pretest was given. Yoga practices and Antenatal exercises were conducted on separate timing in a room near the antenatal outpatient department. Benefits and Instructions to follow before doing yoga were taught before starting the session. Yoga module practices were taught to the study group. The participant followed the steps along with the investigator. For control group of participant's instructions before doing exercise was given. Then the demonstration of exercise was done. Participants followed the steps along with the investigator. The continuously three day's intervention session was conducted for both groups. And recorded videos of yoga session and antenatal exercises were sent to the participants on their respective groups. Participants were given a call once in week to ask about they are practicing. Every 15 days when participants came for visits to hospital Yoga session and Antenatal exercise session was conducted for them again. At the end of second trimester post-test I , for interpersonal relationship was conducted for both the groups. Yoga module for third trimester (modified Aasanas) was taught to study group and told to practice it up to 36 weeks while control group was continuing the same schedule. Weekly follow up over phone done and every 15 days when they came for antenatal visits yoga session and antenatal exercises were conducted. At the end of 36 weeks post-test II for interpersonal relationship was conducted for study group and control group. Participant continued yoga module except asanas up to delivery.

RESULTS

Table no I -Comparison of Pretest Interpersonal Relationship among Antenatal Mothers in Yoga and Antenatal Exercises Group N=80, 80

Yoga group	**Antenatal exercises group**	**z**	**p-value**
Mean ±SD	**Mean ± SD**		
114.0±19.4	111.5±13.7	0.9	0.174

Table I interpreting a two-sample z-test was applied to compare the interpersonal relationship score among antenatal mothers in the yoga and antenatal exercise group during the pretest. The average interpersonal relationship score in the yoga group and antenatal exercise group was similar ($p>0.05$), indicating no evidence against the null hypothesis. Therefore, it is evident that the interpersonal relationship scores among antenatal mothers were not significantly different between the yoga and antenatal exercise groups.

Table II. Comparison of Post-test Interpersonal Relationship among Antenatal Mothers in Yoga and Antenatal Exercises Group N=80, 80

Timepoint	**Yoga group**	**Antenatal exercises group**	**z**	**p-value**
	Mean± SD	Mean ±SD		
Post-test1	84.7±17.9	111.5±14.0	10.5	<0.001
Post-test2	60.4±15.7	111.3±13.8	21.7	<0.001

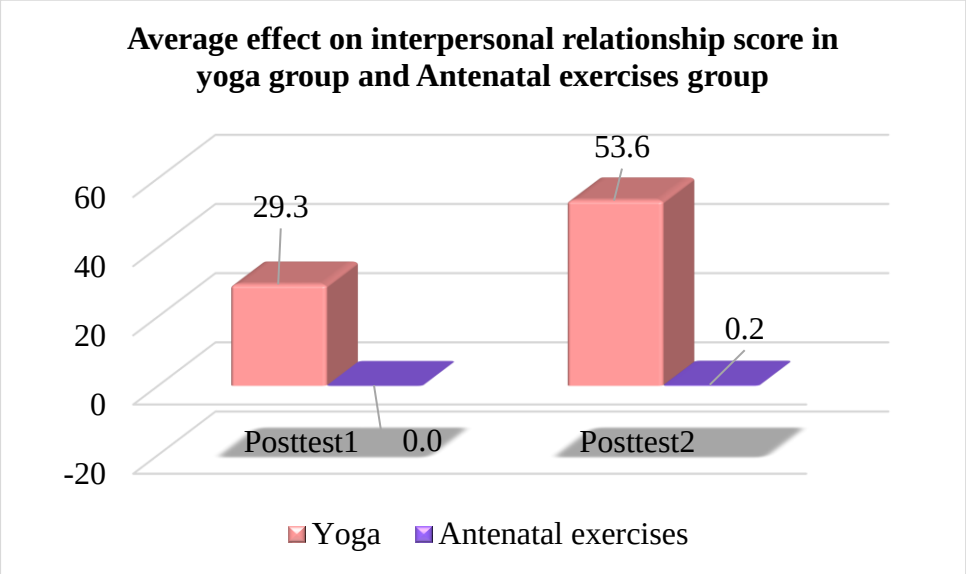
Table II describing two-sample z-test was to compare the interpersonal relationship scores among antenatal mothers in the yoga and antenatal exercise groups in post-test one and post-test two. The average interpersonal relationship score in the yoga group and antenatal exercise group was found significantly different in post-test one and post-test two ($P<0.001$) leading to the rejection of the null hypothesis. It is evident that the interpersonal relationship scores among antenatal mothers in the antenatal exercise group were significantly higher than those in the yoga group in both post-test one and post-test two.

Table No III Comparison of Mean difference of Interpersonal relationship among Antenatal mothers in Yoga group and Antenatal exercises group at pre-test N=80, 80

	Yoga group	**Antenatal Exercise group**		
Timepoint	**Mean difference ±SD**	**Mean difference ±SD**	**z**	**p-value**
Post-test 1	29.3±5.2	0.0±2.2	46.3	0.001
Post-test 2	53.6±9.1	0.2±3.1	49.5	0.001

Table III explaining the interpersonal relationship Mean difference ± SD score was higher in yoga group than antenatal exercise group of post-tests one and post-test two. A two-sample z-test was significantly different ($p < 0.001$) in post-test one and post-test two leading to the rejection of the null hypothesis. It is evident that yoga is significantly more effective in improving interpersonal relationships compared to antenatal exercises.

Fig No- I: **Mean difference Interpersonal Relationship score in Yoga and Antenatal Exercises Group at Pretest d to that in antenatal exercises group.**



Fig, I interpreting the interpersonal relationship Mean difference from pretest to post-test I score was higher (29.3) in yoga group than in antenatal exercise group (0.0). Similarly, from pretest to post-test II score was higher (53.6) in yoga group than in antenatal exercise group (0.2). It is evident that yoga is significantly more effective in improving interpersonal relationships compared to antenatal exercises.

DISCUSSION

In the present study pretest z value was 0.9 and p value was 0.174(>0.05) and posttest I and posttest II z values were 46.3, 49.5 and p values were 0.001(<0.05) It shows yoga group improved interpersonal relation than antenatal exercise group. Shubha Surana and Dr. Sharda Kanwar (2022) found that practicing yoga, interpersonal relationships among the individuals can be improved and it can also improve the overall health of an individual along with the psychological aspects.[14] Average effect on interpersonal relationship score in yoga group was 29.3, 53.6 in posttest I and posttest II respectively which was 0, and 0.2 in antenatal exercises group in posttest1 and posttest II. Corresponding p-values were small (less than 0.05). It is evident that yoga is significantly more effective in improving the interpersonal relationship as compared to that in antenatal exercises. Rukiye Akarsu et al found (pregnancy and, family violence) after yoga practice in experimental group scores obtained from subscales of psychosocial support, spouse relationship were better than control group.[15] The study done by Pooja Nadholta et.al. objective was to find impact of (Gestational Yoga), on the neuropsychology, and personality of pregnant women. Their results showed the Yoga group exhibited a noteworthy decrease in perceived stress, depression, anxiety, and psychological stress; conversely, the control group demonstrated a significant increase in perceived stress, depression, anxiety, and psychological stress.[16] Hu Shujuan etal studied reviews on Yoga as an Exercise Prescription for the Pregnancy The results demonstrated that yoga intervention could significantly reduce depression ($P < 0.001$), anxiety ($P =$

0.003 There was significant improvement in psychological well-being ($P < 0.5$), immune function and the intrauterine fetal growth ($P < 0.5$). Moreover, the yoga intervention group has lower salivary cortisol ($P < 0.001$), salivary alpha-amylase and salivary a-amylase levels ($P < 0.5$) and higher immunoglobulin A ($P < 0.001$) levels when compared with that in control groups.[17]

CONCLUSION

Antenatal yoga was significantly better in enhancing psychological stability, social connection, satisfaction of pregnant women. These benefits translated into better interpersonal dynamics. Antenatal exercises impact on interpersonal relationships was comparatively moderate. The findings highlight that although structured physical exercise during pregnancy is beneficial, it may not be as holistic or transformative as yoga, which integrates mindful breathing, relaxation, and emotional balance into physical activity. This integrative nature of yoga seems to provide additional psychosocial support and resilience, during pregnancy.

A comparative analysis between the two groups revealed statistically significant differences in post-intervention. Interpersonal relationship scores improved substantially only in the yoga group, indicating its potential to foster emotional connectivity and social well-being during pregnancy.

Overall, the study underscores the multifaceted benefits of antenatal yoga, positioning it as a more comprehensive intervention than conventional antenatal exercises. By significantly strengthening interpersonal relationships yoga emerges as a powerful, evidence-based, and holistic practice suitable for integration into standard prenatal care.

Overall, the study concluded that yoga was more effective than antenatal exercise in improving interpersonal relationship among antenatal mother.

Conflict of interest- No conflict of interest to declare

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