

YOGA IN PREGNANCY

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ABSTRACT

Yoga in pregnancy is multidimensional physical, mental, emotional and intellectual preparation to answer the challenges faced by a pregnant woman. The challenges of pregnancy are revealed by the state of happiness and stress while yoga is a skill to calm down the mind. Pregnancy in a woman is a condition in which woman changes both from inside as well as outside. These changes create obstacles or hurdles in the normal life of a pregnant woman and yoga in pregnancy can help the women to cruise through these changes and challenges. Practicing yoga during pregnancy provides a great range of activity and benefits to unborn child and mother by numerous ways. Yoga soothes the mind, refocus the energy and prepare the woman

physiologically and psychologically for labour. Different breathing techniques impart invaluable neuro-muscular control and helps in coordinated relaxation and contraction of uterus. Different type of asanas (postures), are described in Ayurveda and Yoga darshan texts which can be performed by a pregnant woman as they consume low energy and provide greater benefits. Published articles and different studies with references have been considered

to support the effect of yoga in pregnancy. Yoga practicing includes physical postures and breathing techniques which minimizes the complication of pregnancy, like pregnancy induced hypertension, intrauterine growth retardation and pre-term delivery etc. Western exercises bring about what is known as phase contraction of muscles while yogic exercises create a static contraction which maintains a muscle under tension without causing repeated motions. An approach to yoga in pregnancy can improve birth weight; decrease pre-term labour, decreased IUGR with least or no complications.

KEYWORDS: Pregnancy, Yoga, Asanas, Pranayama, Birth weight, stress.

INTRODUCTION

Yoga is an ancient mind-body practice that originated in India and is becoming increasingly recognized and used in developed nations as a health practice for a variety of immunological, neuromuscular, psychological, and pain conditions. The word yoga comes from the Sanskrit term “yug” and directly translates as “to unite”; more broadly, it means to work towards a unified experience of the self and improved health. Most recognized for its potential to create balance along emotional, mental, physical, and spiritual dimensions, yoga is a comprehensive system that uses physical postures (*asana*), breathing exercises (*pranayama*), concentration and meditation (*dharana* and *dhyana*), and contemplative practice. Although there are a plethora of lineages and schools of yoga that are offered in modern society, practices typically include at least the physical postures and breathing exercises. Yoga is thought to alter nervous system regulation and physiological system functioning (e.g., immune, endocrine, neurotransmitter, and cardiovascular) and improve psychological wellbeing (e.g., frequency of positive mood states and optimism) and physical fitness (e.g., strength, flexibility, and endurance).

Pregnancy is a condition in which women undergo distinct physiological changes and stress and is accompanied by unique physical and psychological demands. There is a need to manage the various physical, emotional, mental, and pain states that arise throughout the stages of pregnancy and labour. The well-being and quality of life of the mother is critical for optimal pregnancy outcomes; self-soothing techniques, psychoeducation, and relaxation are particularly important in this transitional and meaningful time. Maternal stress and anxiety during pregnancy is associated with a host of negative consequences for the foetus and subsequent development. For instance, foetal exposure to maternal stress and stress-related peptides is a risk factor for adverse outcomes on the programming of the nervous system and

brain morphology of fetuses, infants, and children. Early gestational stress exposure is associated with negative outcomes at different developmental stages, slowed maturation and behavioural response patterns in fetuses, alterations in neonatal stress regulation and behavioural reactions to stress, blunted cognitive functions and emotional and behavioural problems in infants and toddlers, and reduced brain volume in areas associated with cognitive function in children. In addition, prenatal maternal stress and anxiety may be risk factors for potential negative consequences for children later in life, such as the development of attention deficit hyperactivity disorder or lowered performance on aspects of executive function. It is hypothesized that maternal stress may affect the intrauterine environment and alter foetal development during critical periods, through either activation of the placental stress system, causing the release and circulation of corticotropin releasing hormone, or through diminished blood flow and oxygen to the uterus. Therefore, it is important to regulate maternal stress and provide expecting mothers with coping strategies for the inevitable stresses and changes that occur during pregnancy to increase quality of life and to maximize infant health and development.

Physical exercise can be helpful in the management of stress and other associated conditions or symptoms accompanying pregnancy, such as oedema, gestational hypertension or diabetes, mood instability, musculoskeletal discomfort, aches, and weight gain. Engaging in physical exercise during pregnancy was once regarded as a risky behaviour, although it is increasingly recognized as safe and is encouraged in routine prenatal care. Melzer et al. concluded that regular physical exercise has maternal and foetal advantages that outweigh risks and recommend at least 30 minutes of exercise, most days of the week for the prevention and treatment of conditions associated with inactivity, such as gestational diabetes and hypertension.

Mind-body practices that cultivate general health, diminish distress, and increase self-awareness, such as tai chi or yoga, maybe be particularly effective in addressing both the physical and psycho emotional aspects of pregnancy and labour. Other related practices, including biofeedback, meditation, and imagery, have been found to reduce anxiety and endocrine measures, such as cortisol, in women during labour. Relaxation therapies for pain management in labour have also become popular as women are seeking alternatives to traditional treatment approaches, including analgesics and anaesthesia, which can be invasive and are sometimes associated with negative side effects for both the mother and infant.

Labour pain is a subjective and multidimensional experience that varies according to each woman's individual perceptions of and reactions to nociceptive information during labour and is influenced by psychosocial, cognitive, and physiological factors. It is suggested that practitioners use a multidisciplinary approach to pain management in labour and incorporate both pharmacological and nonpharmacological approaches that can be tailored to individual preferences and needs. Confidence, self-efficacy, and coping ability are considered important for a positive labour experience, and maternal prenatal anxiety is negatively associated with prelabour self-efficacy for child-birth and labour pain. Other psychological factors, such as pain catastrophizing, have been associated with greater lumbopelvic pain during pregnancy and with decreased postpartum physical ability and can also predict the request for pain relief during labour.

Yoga may be effective in the reduction of negative symptoms associated with pregnancy and birth. Given that 35% of women aged 28–33 years already practice yoga, it is important to evaluate its effects on the maternal experience of stress, anxiety, pain, discomfort, and other variables as well as on labour and birth outcomes. A recent review of yoga for pregnancy related outcomes concluded that yoga is positively indicated for use in pregnancy but the findings are not definitive since some of the trials included in that review were uncontrolled and others demonstrated poor methodological quality for different reasons. The primary purpose of the present paper is to systematically evaluate the evidence for the use of yoga during pregnancy and labour and to make recommendations for the direction of future research.

Methods of Data Collection, Selection and Effect on Asanas

Yogasana is to assume a certain bodily position in order to encourage various vital organs and endocrine. Yogasana is to assume a certain bodily position in order to encourage various vital organs and endocrine. Yoga asana is to assume a certain bodily position in order to encourage various vital organs and endocrine glands to function more efficiently leading in turn to overall development of body and mind and to maintain physical strength. It has capacity to produce higher quality of conception, healthy maternal environment for pregnancy and more harmonious birthing experience. Different type of asanas(postures), are described in Ayurveda and Yoga darshan text which can be performed by a pregnant woman as they consume low energy and provide greater benefits. The benefits of these asanas are well established by their use in OPD patient regimen.

Regimen for Yoga asanas is divided in three categories according to trimesters.

First trimester asanas - Practice basic poses with a few modifications. Avoid inversions, closed twists and back bends that might compress the uterus or over stretch it which causes low blood circulation to uterus. Encourage a long relaxation phase after exercise.

Asanas (Postures) in First trimester

1. *Utthitatrikasan* (Extended triangle pose)- It strengthens the pelvic floor muscles, thighs and calf muscles. Increases the flexibility of spine and improves digestion.
2. *Virbhadrasan* (Warrior pose)- It stretches the groin area, strengthens the body and back muscles and tones up the lower body. Increases stamina and flexibility and relieves backache.
3. *Vrikshasan* (Tree pose)- It stretches the legs, back and arms which invigorates the body. It helps to improve concentration.

Second trimester asanas - Avoid lying on back because it reduces blood circulation to uterus and poses that stretch the muscles too much. In second trimester the centre of gravity starts shifting to right, so all standing poses with your heel against the wall for support should be done. While twisting, move shoulders and back rather than waist, to avoid the unnecessary pressure on abdomen.

Asanas (Postures) in second trimester

1. *Vajrasan*- This asana enhances digestive system which increases the energy uptake. Alters blood flow and nervous system impulses in the pelvic region. Relieves stomach ailments like hyperacidity and it is the only asana that can be practiced after taking meals.
2. *Matsyakridasan* (Flapping fish pose)- Stimulates digestion and relieves constipation. It relaxes the nerves of legs and this is an ideal asana for relaxed sleep. It improves blood circulation.
3. *Marjariasan* (Cat stretch pose)- Is very helpful in toning the female reproductive system and muscles of pelvis. This asana increases the flexibility of neck, spine and shoulders muscles which are essential for bearing down efforts during labour.
4. *Tadasan* (Mountain pose)- Stretches the entire spine and helps to clear the congestion of spinal nerves. It also helps in developing physical and mental balance. It stretches and strengthens the rectus-abdominus muscle which an accessory muscle for bearing down.

5. *Bhadrasan* (Gracious pose)- This asana benefits the digestive system and helps in relieving various stomach ailments. It helps in toning the muscles of female pelvic region. Along with meditation, it relieves mental stress.
6. *Katichakrasan* (waist rotating pose)- Tones up the muscles of waist, back and hips. It induces the feeling of lightness and relieves physical and mental stress.

Third trimester asanas - Practice only those asanas which do not exert pressure on abdomen wall. Supine poses should be avoided.

Asanas (Postures) in third trimester

1. *Ardhatitaliasan* (Half butterfly)- Is an excellent asana for loosening of hip joints, which enables fast and easy delivery.
2. *Pornatitaliasan* (Full butterfly)- Tones up pelvic girdle. It is relieving the tension from inner thigh muscles and removes the tiredness of legs. This asana increases the stretching ability of perineum.
3. *Chakkichalanasan* (Churning mill pose)- Is an excellent asana for toning the nerves and muscles of pelvis and abdomen and prepare them for delivery.
4. *Utthanasan* (Squat and Rise pose)- This asana strengthens the muscles of back, uterus, thighs and ankles. It tones up the pelvic girdle and this asana is equivalent to sweeping floor. thus, enables fast and easy delivery.

The practice of yoga asanas essentially tends to exercise and relax almost all muscles of the body to prepare it for a prolonged steady, stable and co-ordinate activity without producing fatigue.

Pranayam (Breathing Technique) – Pranayam is not only helpful in pregnancy but is a gift given by Ayurveda to human race for long life. Pranayam is practice of complete, prolonged and slow breathing. It works on both mind and soul. Pranayam provides extra oxygen to every cell which energizes and rejuvenates them. It should be practiced every day. It tones up the nervous system, improves emotional stability and helps to eliminate anxiety, fears and phobia. It improves breathing capacity and also increases stamina and vitality.

Pranayam in pregnancy

1. Anulom Vilom Pranayam- It strengthens the body mentally as well as physically. During labour, holding of breath for maximum duration can provide great help for pushing during labour. It provides more oxygen to the body so more oxygen is transferred to the foetus.
2. Bhramaripranayam- It is the effective breathing exercise to release agitation, anger and calms the mind. It is very useful for pregnant women because it eases the process of childbirth by controlling the breathing during the process of labour. It improves concentration and removes toxin from body.

Dhyana (Meditation) - Dhyana is an integral part of yoga. It is a practice in which an individual trains the mind which includes techniques designed to promote relaxation and build internal energy. Its goal is to increase focus and calms the mind, eventually reaching a higher level of awareness. It helps us to achieve harmonious balance between body and mind. To practice dhyana, one should sit with straight and erect spine and focus on to something e.g., OM (the famous mantra). During initial stages dhyana should be practiced for about 8 to 10 minutes, after that it can be extended as per capacity. Meditation should be avoided after a heavy meal. Yoga mudras are hand positions that help to stimulate different energies in the body.

DISCUSSION

Yoga practices includes physical postures breathing techniques which minimizes the complication of pregnancy, like pregnancy induced hypertension, intrauterine growth retardation and pre-term delivery. Practicing yoga is helpful in increasing the birth weight of babies. According to a study the birth weight in women practicing yoga group (2.78 +/- 0.52 kg) is significantly higher ($p < 0.018$) than control group (2.55 +/- 0.52kg). Another study reveals that the babies with birth weight greater than or equal to 2500g was significantly higher ($p < 0.01$) in the yoga group. Rate of preterm labour is lower ($p < 0.0006$) in the yoga practicing group. Complications such as isolated intrauterine growth retardation (IUGR $p < 0.025$) and pregnancy induced hypertension (PIH) with associated IUGR ($p < 0.025$) were also significantly lower in the group of patients practicing yoga and there is no significant adverse effect is noted. Pranayam (Breathing exercise) and Dhyana (Meditation) relaxes the mind refocuses the energy and relieve stress from impatient and tensed pregnant woman. A study reveals that a single and multi-sessions of antenatal yoga on measures of moods suggest that antenatal yoga lowered state of anxiety and cortisol levels after a single session and this

effect was consistent over time. Antenatal yoga was associated with significant reduction in fear of childbirth and is potentially preventive against increases in depression symptoms. Yoga is the practice which includes different asanas, pranayama (Breathing exercise) and dhyana (Meditation) and their beneficial effects are mentioned here below.

Asanas (Postures)

1. Its strengthens the pelvic floor muscles and reduces muscle cramps during third trimester.
2. Increases the flexibility of spine.
3. Tones up the lower body.
4. Increases stamina and relives backache.
5. Improves digestion and relives constipation.
6. Improves blood circulation and induce relax sleep.
7. Strengthens the bearing down muscles and helps in the expulsion of fetus.
8. Relives physical and mental stress.

Pranayam (Breathing exercise)

1. Provides extra oxygen to every cell and rejuvenates them.
2. Tones up nervous system and improves emotional stability.
3. Relives morning sickness and mood swings.
4. Eliminate anxiety, fear and phobia.
5. Increases breathing capacity, stamina and vitality which help in bearing down during the process of labour.

Yog mudras

1. Facilitate contractions.
2. Effective in reliving nausea, flatulence and felling of fullness during pregnancy
3. Control intentions for pregnancy to stay positive and healthy.

Methods of Data Collection, Selection and Effect on Asans

CONCLUSION

In conclusion, the present paper suggests that a prenatal yoga program results in benefits during pregnancy as well as throughout labour and on birth outcomes. This budding body of work suggests that improvements were observed on psychological domains during pregnancy and labour (e.g., quality of life and self-efficacy), on physical and pain measures during labour (e.g., discomfort and pain), and on birth variables (e.g., birth weight and number of

preterm births). The only adverse health outcome that was reported was uterine contractions, which can be monitored with a modified approach and appropriate activity reduction. Overall, the evidence that yoga is well suited to pregnancy is positive, but methodological problems with the published literature and a general insufficient wealth of published trials make it impossible to draw any firm conclusion. Our recommendations above will allow researchers to work alongside yoga practitioners to craft potent, standardized programs that are also amenable to evidence-based evaluation in a research environment.

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