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PRENATAL YOGA DURING PREGNANCY: A REVIEW

Ramya Karanam[1]*, Dr. K. Ramesh Babu[2]

[1]Research Scholar, Department of Yoga and Consciousness, Andhra University, Visakhapatnam

[2]HOD, Department of Yoga and Consciousness, Andhra University, Visakhapatnam

***Corresponding author E-mail:** ramyakaranam04@gmail.com

ABSTRACT:

Prenatal yoga has been recognized as a recommended and advantageous supplement to the process of preparing for childbirth. Numerous research has established a correlation between engagement in prenatal yoga and the attainment of advantages for both expectant mothers and their infants. The mother can have several physical advantages, such as a reduction in the duration of labor, alleviation of labor-related discomfort, and enhanced pregnancy-related comfort. There is a notable association between childbirth and many emotional and mental outcomes, including reduced prevalence of sadness and anxiety, heightened self-efficacy throughout labor, and smoother adjustments during the postpartum phase. Ultimately, prenatal yoga has exhibited advantageous effects on the neonate, including a higher incidence of vaginal deliveries, which are less distressing for the newborn, an extension in gestational age at birth, and an augmentation in birth weight. These factors suggest that the newborn is in good health and is physiologically ready for the delivery process and the subsequent adaptation to the external environment. Existing research and anecdotal evidence converge on the consensus that engaging in prenatal yoga confers significant benefits on the overall pregnancy, labor, delivery, and post-partum situations for both the expectant woman and the developing foetus. Consequently, it is recommended that prenatal yoga be actively promoted as an integral aspect of prenatal care, aligning with the principles of patient-centered care and education upheld by healthcare professionals.

KEYWORDS: Prenatal Yoga, Pregnancy, Mental Health, Physical Health

INTRODUCTION

Prenatal yoga is now widely recognised as a valuable and supportive practise to incorporate into birth preparation routine. Engaging in prenatal yoga has been associated with various advantages for both expectant mothers and their infants. One of the physical benefits that mothers can experience is a reduction in labour time, which means that the duration of the childbirth process may be shorter. This can be advantageous as it may lead to a smoother and more efficient delivery. Additionally, mothers may also experience a decrease in labour pain, which can contribute to a more positive birthing experience. Another physical benefit is improved comfort during pregnancy, which can enhance the overall well-being of the mother throughout this special time. There are notable emotional and mental benefits associated with this practise. These include reduced rates of depression and anxiety, enhanced self-confidence during labour, and smoother adjustments during the postpartum phase. Prenatal yoga has been shown to have positive effects on the health of both the mother and the baby. It has been found to potentially increase the gestational age at delivery, resulting in a healthier and more developed baby. Additionally, practising prenatal yoga may contribute to an increase in birth weight, which is beneficial for the baby's overall well-being. By engaging in prenatal yoga, there may also be a reduced need for caesarean sections, which can be a more challenging

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experience for the infant. These signs suggest that the infant is in good health and ready for the birthing process from a physiological standpoint. Extensive research and numerous personal accounts consistently support the notion that engaging in prenatal yoga can have significant positive impacts on various aspects of pregnancy, labour, delivery, and post-partum experiences. Health educators should strongly advocate for the inclusion of prenatal yoga as an integral part of prenatal care, as it offers valuable benefits for both the mother and the baby. The practise of yoga in contemporary society encompasses a myriad of multifaceted connotations. The inherent capacity of this circumstance to engender perplexity regarding the deductions drawn from medical investigations pertaining to the subject matter is evident. The nomenclature "yoga" shall henceforth denote the bodily exercises, the respiratory techniques, and the mind relaxing techniques as delineated in the explication of Hollywood yoga. This particular classification pertains to the realm of yoga that encompasses a comprehensive range of research studies conducted on this subject matter. Prenatal yoga, in its essence, pertains to the engagement in yoga during the state of pregnancy. In conjunction with the practise of Hatha yoga, the discipline of prenatal yoga has experienced a notable surge in both its utilisation and appeal within the Western hemisphere. This has consequently prompted a comprehensive examination of its potential impacts on the well-being of both the expectant mother and her developing foetus. As previously elucidated, prenatal yoga has been empirically demonstrated to ameliorate the physical and emotional discomforts associated with pregnancy, facilitate the intricate process of labour and delivery, and contribute to the optimal preparation of the nascent offspring for the momentous transition of birth (Mayo Clinic Staff, 2019). Women who engage in the practise of prenatal yoga have consistently attested to a myriad of physiological advantages associated with their involvement in this ancient discipline. Prenatal yoga confers a notable enhancement to the maternal immune system's functionality, thereby bestowing advantageous effects upon the physiological well-being of both the expectant mother and the developing foetus. The practise of prenatal yoga has been observed to effectively mitigate the occurrence of back pain commonly experienced during pregnancy, as well as alleviate symptoms such as nausea and vomiting, headaches, and shortness of breath. Yoga encompasses various components that facilitate the cultivation of tranquilly, flexibility, fortitude, and profound, consistent respiration, all of which are meticulously devised to equip the individual, particularly women, with the requisite skills for proficiently engaging in the act of breathing during the process of childbirth. Yoga, in addition to its myriad benefits, serves to induce relaxation in the hip region and facilitate the expansion of the pelvis, thereby priming it for the impending process of childbirth. These factors have been demonstrated to facilitate profound and rejuvenating slumber, as well as enhance the potency, pliability, and stamina of the musculature engaged in the process of parturition (Mayo Clinic Staff, 2019).

YOGA AND PREGNANCY

The primary role of cortisol, a steroid hormone produced by the adrenal glands, is to regulate various bodily processes. One must acknowledge the profound influence exerted by maternal cortisol, a distinct hormone, upon the developmental progression of the nascent foetus. The physiological homeostasis of the human body is intricately governed by the optimal levels of cortisol, a vital hormone. Its crucial role encompasses the regulation of serum glucose, the harmonization of metabolic processes, as well as the modulation of blood pressure and heart

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rate. During the state of homeostasis, the release of cortisol follows a diurnal rhythm, wherein its concentrations reach their zenith during the morning hours, facilitating the process of awakening, and gradually decline as the day progresses. Physical activity, in addition to its myriad benefits, also engenders a surge in cortisol levels, thereby eliciting a concomitant elevation in heart rate, blood pressure, and glucose reserves. This physiological response serves to ensure optimal oxygenation and sustenance of cellular vitality. The occurrence of brief surges in cortisol levels, observed in instances of acute stress or physical exertion, serves as a safeguarding mechanism for the human body. Nevertheless, the protraction of heightened cortisol levels can give rise to various complications (Cleveland Clinic Staff, 2017).

YOGA AND MENTAL HEALTH

The phenomenon of the cortisol stress response is a subject of great intellectual interest. Cortisol, colloquially known as the stress hormone, exhibits notable variations in its concentration within the circulatory system in response to a myriad of external stimuli, cognitive stressors, and physiological perturbations. As the physiological state of pregnancy imposes various physiological demands upon the maternal organism, it is observed that the levels of cortisol, a hormone associated with stress response, exhibit an inclination towards elevation. The physiological phenomenon of this inherent elevation during the state of pregnancy serves to effectively accommodate the augmented fluid volume and heightened metabolic exigencies imposed upon the human organism. Nevertheless, the confluence of psychological strain and apprehension precipitates a substantial surge in cortisol levels. When present in surplus, the typically beneficial effects of cortisol become magnified, resulting in the development of hypertension, hyperglycemia, and heightened adiposity. The aforementioned factors play a pivotal role in the progression of preeclampsia, gestational diabetes, and heightened discomfort experienced during the course of pregnancy (Curtis, Weinrib, & Katz, 2012). It has been demonstrated that cortisol possesses the capacity to diminish the circulation of blood towards the placenta, thereby impeding the customary development of the foetus (Newham, Wittkowski, Hurley, Aplin, & Westwood, 2014). Pregnant women experience a swift and profound metamorphosis in their physical forms within a comparatively brief duration. This phenomenon gives rise to a multitude of bodily discomforts and afflictions that are frequently correlated with the state of pregnancy. Nausea and vomiting experienced during the early stages of pregnancy, commonly referred to as "morning sickness", predominantly afflicts women during the initial trimester of their pregnancy. The phenomenon of morning sickness is commonly ascribed to the progressive elevation of human chorionic gonadotropin, a hormone intricately linked to the initial phases of gestation. The repercussions of morning sickness manifest in a state of profound fatigue and debilitation for mothers, impeding their engagement in customary pursuits and posing challenges in retaining nourishment (Davidson et al., 2016). Yoga offers a more subdued exercise regimen that aids in revitalising the body, addressing various discomforts such as morning sickness, lumbar discomfort, sleep disturbances, and respiratory insufficiency. The empirical evidence supports the notion that the engagement in yoga exercises yields advantageous outcomes across various domains, thereby fostering a state of contentment and physical well-being during the course of pregnancy (Mayo Clinic Staff, 2019). The human physique possesses the remarkable ability to enhance the desire for sustenance, induce a state

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of tranquilly, and facilitate optimal respiration. This facilitates an enhanced sense of maternal comfort on a holistic level. The prevalence of lumbosacral discomfort is likewise notable, as the expanding abdominal region engenders an augmented lumbar curvature that exerts undue force upon the vertebral column (Davidson et al., 2016). The practise of yoga significantly enhances the muscular fortitude within the core region, encompassing the abdominal muscles, obliques, and the posterior musculature. The process of muscular development serves to restore equilibrium amidst the heightened tension exerted upon the posterior region, while the practise of yoga concurrently fosters elongation and tranquilly, thereby alleviating accumulated stress and muscular rigidity.

YOGA AND LABOR

In 2008, a study conducted by Chuntharapat, Petpichetchian, and Hatthakit explored the physical benefits of yoga in relation to labour and delivery. The group that took part in six sessions of prenatal yoga showed positive outcomes in terms of maternal comfort during labour and two hours after labour. They also reported experiencing less pain during labour compared to the control group. The participants in the prenatal yoga group experienced shorter durations of the first stage of labour and the overall time of labour. According to the research findings, incorporating thirty minutes of yoga into pregnant women's weekly routine, at least three times per week for a duration of ten weeks, can be a beneficial addition to their overall well-being. This regular practice of yoga has been shown to contribute to increased maternal comfort, reduced pain during labour and in the two hours following delivery, as well as potentially shortening the duration of labour. These factors play a crucial role in the well-being of pregnant mothers and can greatly impact their labour and birth experience. Engaging in prenatal yoga can be highly beneficial in reducing the overall duration of labour, as suggested by the findings of Chuntharapat et al. (2008). This is an incredibly significant result for both the mother and the baby. Prolonged labour, also known as a prolonged duration of the labour and delivery process, can lead to various undesirable risk factors. However, it is important to note that these risks can be significantly reduced by shortening the duration of labour and delivery. According to a study conducted by Jahdi et al (2016), it was observed that the control group exhibited an average duration of over nine and a half hours for the first stage of labour. The duration of labour experienced by the prenatal yoga group was notably longer, with an average of six and a half hours for their first stage of labour. Additionally, it was discovered that the duration of the second stage of labour, which involves the pushing phase, was 150% longer in the control group compared to the experimental group. The results of this study are indeed noteworthy and have positive implications for the health and well-being of both the mother and the baby.

PREGNANCY AND PHYSICAL HEALTH

It is commonly understood among mothers that a shorter labour duration is often preferred for various reasons. This statement is influenced by various factors, including mental, emotional, and physical aspects. Labour can be quite physically demanding and tiring for the body. Intense pain during labour can make it challenging to find rest, as the consistent contractions can be quite demanding on your body. Additionally, the muscles involved in the labour process may experience fatigue, which can further slowdown the progression of labour. Prolonged labour can potentially lead to various adverse outcomes for the mother. Some potential complications that can occur during childbirth are post-partum hemorrhage, the

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need for forceps or vacuum assistance in the delivery, or vaginal lacerations (Davidson et al., 2016). From a mental and emotional perspective, it is worth noting that a shorter labour can have a positive impact on the mother's energy levels, allowing her to devote more attention to bonding with her newborn baby. Additionally, mothers who experience shorter labors tend to report a more positive overall experience with the process of labour and delivery. Prolonged labour can potentially have significant and long-term effects on the infant's health and well-being. Prolonged exposure of the infant to the birth canal increases the likelihood of reduced oxygen supply to the brain or essential organs. Non-reassuring fetal status, particularly during prolonged labour, is a significant factor that can contribute to the need for a caesarean section (American College of Obstetricians &Gynecologists Staff, 2018). Prolonged labour, which refers to a longer duration of labour than average, can have certain health implications for both the mother and the baby. One potential concern is the increased risk of intracranial hemorrhage, which is bleeding within the skull, for the baby. This risk arises from the extended exposure to pressure during a prolonged labour. Additionally, there is a possibility of infection as the uterus remains open to the environment for an extended period of time. It is important to be aware of these potential complications and consult with healthcare professionals for appropriate guidance and support during labour. (Davidson et al., 2016). Ensuring the comfort of mothers during the labour and delivery process has become increasingly important in recent years. In today's American culture, it is common for many individuals to seek medication for nearly every ache and pain they experience (Bernard, Chelminski, Ives, & Ranapurwala, 2018). Although there are potential advantages to this situation, it has somewhat increased the complexity of obstetric nurses' responsibilities. It is important to note that every medication and intervention has potential side effects that can impact the health of both the mother and the baby. These side effects may have short-term or even long-term implications. The health educators do understand the importance of providing patients with natural interventions that have no adverse effects. Their goal is to achieve the best possible outcomes for patients while minimizing any potential complications (Curtis et al., 2012). Pain can indeed be a challenging concept to objectively measure. The numeric pain scale is a commonly used tool in hospitals to assess pain levels. Patients are requested to assign a rating to their pain on a scale ranging from zero to ten. Zero indicates the absence of pain, while ten represents the most severe pain imaginable. It is crucial to acknowledge and address pain as it plays a vital role in overall well-being. In fact, pain is often referred to as the fifth vital sign. The study conducted by (Jahdi et al. in 2014) aimed to assess pain levels experienced during labour. To achieve this, the researchers employed a numeric pain scale to measure and quantify the pain ratings reported by participants at various stages of the labour process. The study revealed a significant disparity in pain ratings between the control group and the women who engaged in prenatal yoga. During the active labour phase, it is noteworthy that the experimental group reported an average pain rating of less than four, which is significantly lower compared to the control group. In contrast, the control group experienced pain levels above eight during the same stage of labour.

It is important to acknowledge that these findings may be influenced by individual pain tolerance levels. However, it is crucial to highlight that this disparity is significant and deserving of attention (Jahdi, et al. 2016). Childbirth Connection staff conducted interviews with a diverse group of over 2400 women who experienced childbirth between 2011 and

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2012. According to recent surveys, it has been observed that approximately 25% of expectant mothers express a preference for a natural labour and delivery without any medical intervention. However, the actual percentage of mothers who are able to achieve this desire is significantly lower, at only 2% (Childbirth Connection Staff, 2014). It is not uncommon for individuals to experience a lack of physical and mental readiness when faced with certain tasks. Prenatal yoga is a wonderful practice that can empower expectant mothers to actively participate in their own health journey and work towards the desired outcome of a natural childbirth (Campbell & Nolan, 2016).

CONCLUSIONS

Engaging in prenatal yoga can offer significant advantages for both expectant mother and her baby's well-being. Yoga has been found to have a positive influence on both the physical and psychological aspects of pregnancy for expectant mothers (Campbell & Nolan, 2019). Engaging in regular yoga practice during pregnancy has been found to effectively alleviate morning sickness and address various common discomforts experienced by expectant mothers (Mayo Clinic Staff, 2019). Additionally, engaging in regular physical activity during pregnancy helps to prepare the joints, ligaments, and muscles of expectant mothers for the process of labour and delivery (Chuntharapat et al., 2008). Engaging in this practice has been shown to have several positive effects on the birthing process. Research conducted by Jahdi et al. (2016) indicates that it can lead to a reduction in pain and duration of labour. Additionally, there is a decreased likelihood of requiring a caesarean section. Prenatal yoga has been found to be an effective treatment for managing depression and anxiety during pregnancy. This natural intervention has been found to be effective in reducing both maternal and foetal harm caused by these conditions (Campbell & Nolan, 2016). In addition to the benefits for the mother, engaging in prenatal yoga can have a positive impact on the health of the infant. Research has shown that practicing prenatal yoga can help reduce the risk of premature labour, intrauterine growth restriction (IUGR), pre-eclampsia, and hypertension (Field et al., 2013). This means that babies are more likely to be born at full term and with a healthy weight when their mothers practice prenatal yoga. The field of research on the positive effects of prenatal yoga is expanding, and there is an increasing emphasis on promoting this practice. There are a few factors that may be preventing the further implementation of prenatal yoga. One of these factors is the limited knowledge that healthcare providers have about the benefits and importance of prenatal yoga. Another factor is the perceived cost of attending these classes, which may discourage some expectant mothers from participating. Lastly, maternal non-compliance, or a lack of motivation or adherence to the recommended prenatal yoga practices, can also hinder the implementation of this beneficial activity. According to both research and personal testimonies, it is widely acknowledged that engaging in prenatal yoga can have significant benefits for both the mother and the baby throughout the entire pregnancy journey, including labour, delivery, and the post-partum period. As health professionals strive to provide patient-centered care and education, it is highly recommended to incorporate prenatal yoga as a valuable component of prenatal care.

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