

Original Research Article

Maternal dietary practices and perception of newborn skin complexion: a community-based field study

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ABSTRACT

Background: Traditional beliefs continue to influence maternal dietary practices during pregnancy and may affect food choices despite access to antenatal health education. One such belief is that consuming saffron strands with milk during pregnancy contributes to a fairer complexion in the newborn baby. This report describes field observations regarding saffron consumption practices and associated beliefs among pregnant women in Bangalore Urban, Karnataka, India.

Methods: This descriptive field observation report is based on routine maternal health surveillance activities conducted in Bangalore Urban, Karnataka, between January 2016 and December 2022. Observations were made during antenatal counselling sessions and community interactions with pregnant women registered under the National Health Programme.

Results: Among approximately 50-65 pregnant women registered each month, 8-12 women (approximately 16%-18.5%) reported consuming saffron strands with milk during pregnancy. This practice was observed across different educational and socioeconomic backgrounds and was commonly described as a family tradition passed down through generations. Participants believed that saffron consumption during pregnancy would influence the complexion of their newborn baby.

Conclusions: This report documents a traditional dietary belief observed among pregnant mothers during routine community health activities. Although saffron consumption with milk during pregnancy was believed to improve newborn complexion, available scientific evidence does not support this association. Newborn skin complexion is primarily determined by genetic factors rather than maternal dietary practices. These findings highlight the importance of culturally sensitive health education and behaviour change communication during antenatal counselling to address misconceptions and promote informed pregnancy-related dietary practices.

Keywords: Dietary beliefs, Health education, Maternal nutrition, Newborn complexion, Pregnancy, Saffron

INTRODUCTION

Maternal nutrition and dietary practices during pregnancy play an important role in supporting maternal health and optimal fetal growth. Routine antenatal counselling provides an opportunity for healthcare workers to promote appropriate dietary behaviours, address misconceptions, and encourage evidence-based maternal

health practices. Evidence suggests that behaviour change communication combined with guidance on appropriate dietary supplementation contributes to improved maternal weight gain and reduction in low-birth-weight infants.¹

During pregnancy, women are commonly advised to consume a balanced diet containing adequate sources of protein, calcium, vitamins, and iron, including foods such as milk, eggs, green leafy vegetables, pulses, and fruits.

However, dietary decisions during pregnancy are not influenced by nutritional knowledge alone. Traditional beliefs, family customs, and culturally transmitted practices continue to shape maternal food choices in many communities. Studies from India, including Karnataka, have documented the use of medicinal plants and traditional dietary practices among pregnant women, with many beliefs being passed through generations within families.^{2,3} Food-related myths and taboos during pregnancy remain common in South India and continue to influence maternal dietary behaviours.⁴

One such traditional belief is the consumption of saffron strands mixed with milk during pregnancy with the expectation that it will result in a fairer complexion in the newborn baby. Although this practice is commonly followed and discussed within families and communities, scientific evidence supporting an association between saffron consumption and newborn complexion remains limited. The objective of this report was to document the practice of saffron consumption during pregnancy among mothers in Bangalore Urban and examine whether available scientific evidence supports the belief that maternal saffron consumption influences newborn complexion.

METHODS

This is a field observation report that documents traditional dietary practices observed during routine maternal health surveillance activities in Bangalore Urban, Karnataka, between January 2016 to December 2022. During fortnightly follow-up activities conducted under the National Health Programme, the observations involved pregnant women aged 19-33 years who were registered under the programme and participated in routine antenatal counselling and follow-up activities. Approximately 50-65 pregnant women were registered every month, totalling an estimated 3,600-4,680 women over the seven-year period. Women who were not registered under the National Health Program and women who were not pregnant or did not participate in the

counselling sessions were excluded from these observations. Findings from counselling sessions and informal interactions during health education indicated 8-12 women per month, corresponding to approximately 576-864 women over a period of six years (16% - 18.5% overall) practiced an age-old custom of consuming saffron strands with milk, believing that it would influence their newborn's complexion. This practice was described as a family tradition passed down through generations and was observed across various educational and socioeconomic backgrounds.

Ethical considerations

This report is based on findings obtained during routine maternal health surveillance activities conducted under the National Health Programme. Information relating to pregnant women was collected as part of routine public health records and counselling activities. No patient-identifiable information has been disclosed in this manuscript, and confidentiality has been maintained in accordance with government public health reporting practices. The findings presented are reported in an anonymized manner and are intended solely for public health and scientific purposes. As these findings were obtained during routine programme activities and not through a separately designed research study, formal ethical approval was not sought.

Statistical analysis

No formal statistical analysis was performed. Findings are presented descriptively using frequencies and percentages derived from routine field findings.

RESULTS

During community interaction sessions with mothers, it was noticed that pregnant mothers followed a practice of consuming small amounts of saffron strands with warm milk along with their dietary intake, believing this greatly contributes to the newborn's complexion.

Table 1: Characteristics of participants and key findings.

Characteristic	Observation
Study period	January 2016-December 2022
Study setting	Bangalore Urban, Karnataka, India
Age group of pregnant women	19-33 years
Pregnant women registered per month	50-65
Estimated women observed during study period	3,600-4,680
Women reporting saffron consumption during pregnancy	8-12 per month
Estimated women reporting saffron consumption during study period	576-864
Overall proportion reporting saffron consumption	16%-18.5%
Reported purpose of saffron consumption	Belief that it improves newborn complexion
Educational/socioeconomic distribution	Observed across various educational and socioeconomic backgrounds

Among approximately 50-65 mothers aged 19-33 years registered each month, approximately 8-12 mothers (16%-18.5%) had this practice of consuming milk with saffron strands. This practice was passed down by their mothers and grandmothers during their pregnancies as well. The practice was common and was observed irrespective of their education level, economic conditions, cultural practices, and status. This observation was noted from 2016 to 2022 during community surveillance and interaction with mothers during their pregnancy. However, these practices have also been seen to exist for ages and have been passed down from generation to generation. There are similar beliefs recorded in West Bengal, 58% of women believe that consumption of milk with saffron during pregnancy is associated with birth of infants with fairer skin.

DISCUSSION

During routine community surveillance and interaction with pregnant mothers, it was observed that the belief that consumption of saffron with milk during pregnancy contributes to a fairer complexion in newborn babies remains prevalent. The practice was commonly described as a family tradition that had been followed by mothers and grandmothers during previous pregnancies and was observed across different educational and socioeconomic backgrounds.

This observation is not unique to just urban Bangalore. Similar beliefs have been reported from other parts of India. A study from West Bengal reported that 58% of women believed that consumption of milk with saffron during pregnancy was associated with the birth of infants with fairer skin.⁵ These findings suggest that beliefs regarding saffron consumption and newborn complexion continue to influence maternal dietary practices in different regions of the country.

Although the practice remains common, available scientific evidence does not support the belief that saffron consumption during pregnancy influences the complexion of the newborn baby. Studies from North India indicate that traditional practices which benefit maternal health may be continued, whereas practices that have the potential to cause adverse effects should be addressed through appropriate health education.⁶ Evidence also suggests that some medicinal plants are not recommended during pregnancy because of their potential harmful effects; however, saffron consumed in small quantities is not considered unsafe during pregnancy.⁷ Food taboos during pregnancy have also been reported among tribal populations in Gujarat, demonstrating that traditional dietary beliefs continue to influence maternal practices in different parts of India.⁸ Clinical trials have reported that saffron consumption during pregnancy did not adversely affect neonatal outcomes and may have beneficial effects during labour. However, no scientific evidence supports the belief that it influences newborn complexion.^{9,10} Dietary counselling and behaviour change

communication have been shown to improve maternal dietary practices during pregnancy, while scientific evidence confirms that newborn skin colour is genetically determined rather than influenced by maternal diet.^{11,12} The persistence of this belief highlights the importance of strengthening health education and behaviour change communication during antenatal counselling so that pregnant mothers can make informed dietary decisions based on scientific evidence.

This study has certain limitations. The findings are based on routine maternal health surveillance activities and counselling interactions and not on a formally designed research study. Information regarding saffron consumption was obtained from pregnant mothers during counselling sessions and was not independently verified. The observations were made in Bangalore Urban and may not represent practices followed in all parts of India. No follow-up was conducted to assess the complexion of newborn babies or other pregnancy outcomes. These findings are presented as field observations documented during routine public health activities.

CONCLUSION

This report documents a traditional dietary belief observed among pregnant mothers during routine maternal health surveillance activities in Bangalore Urban, Karnataka. The belief that consumption of saffron with milk during pregnancy contributes to a fairer complexion in the newborn babies was observed across different educational and socioeconomic backgrounds and was commonly described as a family tradition passed down through generations. Although saffron consumption in small quantities is not known to adversely affect pregnancy outcomes, available scientific evidence does not support the belief that it influences newborn complexion, which is primarily determined by genetic factors. This report contributes to the understanding of how traditional beliefs continue to influence maternal dietary practices despite the availability of scientific information. These findings highlight the need for targeted health education and behaviour change communication to address this belief and support informed dietary practices during pregnancy.

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