

4

New Born Care Practices and Cultural Beliefs in Lingayath Population of Arsikere Taluk Hassan District, Karnataka

*Ms. HCB Kamma and Prof. M. R. Gangadhar, Department of Anthropology, University of Mysore, Manasagangotri, Mysore 570 006, Karnataka, India.
email: hcbkamma@gmail.com, gangadharmr@yahoo.com*

Abstract

The health of a mother and her infant depends not only on the care she received during pregnancy and delivery, but also during post-natal period. Nearly 27 million babies are born in India each year. Every four million babies die in the first month of the life these take place in India. Mortality may depend significantly on interventions involving or adaptations of cultural practice and beliefs in the home. The study was conducted in 27 villages of Hassan district on Lingayath population. A total 115 mothers with children with 0-1 years of age were included in the study. Interview schedule was used to collect information on cultural practices and new born care practices. The data collected from 115 samples were analysed using descriptive statistics. 107(93.05%) of the months have followed coconut oil massage for the baby before bath. 110 (95.66%) of the mothers were applying talcum powder, 60(52.17%) mothers exposed the baby over a “sambrani dhoopam” smoke after bath and 115(100%) of the mothers are applied “kajal” on baby’s face to prevent bad eye.

Keywords: *New born care, Beliefs, Cultural practices infants.*

Introduction

A human infant from the time of birth up to 28th day of life is called a new born. Nearly twenty seven million babies are born in India every year. 4 million babies die in the 1st month of life in the world every year and quarter of these takes place in India. A package of essential new born practices exists in India, which has proven impact on reducing mortality, how every childbirth and neonatal period are culturally important time during which there is strong adhere to traditional practices. (Reshma and Sujatha 2014).

India is facing a more formidable new born health challenge than that experienced by any other country in the world. The recent estimates show that out of 3.9 million neonatal deaths that occur worldwide, almost 30% occurs in India. The current neonatal mortality rate of 44 per year, 1000 live births, accounts for

nearly 2/3 of are infant mortality and translates into at least two newborn deaths every minute somewhere in this vast country (RGI 2004).

In India the commonest causes of neonatal deaths are septicemia, pneumonia, birth asphyxia injury preterm birth. The community based studies in India reveals a stillbirth rate of 30-35% per 1000 births, i.e. 0.8 million stillbirths in the height for any nation in the world, perinatal, asphyxia and congenital malformations have been reported as common reasons for stillbirths (Lakshmi 2011).

The health of the mother and her newborn child depends not only on the health care she received during pregnancy and delivery, but also in the care of mother and newborn received during the post-partum period (Ludwig and Warman 1984).

Neonatal morbidity and mortality are considerably higher in our country and neonatal mortality accounts for two-third of the infant deaths. 40-70% neonatal deaths are seen during 1st week of life and majority occurs at home. Presently in our country only 34% births occur in health situation, and 42% deliveries are assisted by skilled attendants. There are considerable local variations in delivery and newborn care practices adopted by the community and interventions must take into account the prevailing practice in the area (Das 2008).

In India, Government bilateral and multilateral agencies have made several efforts in the area of maternal and child health welfare. The introduction of government schemes like Janani Suraksha Yojana, Chiranjeevi Scheme, propagation of emergency obstetric care, implementation of integrated management of childhood and neonatal illness (Baiju Dinesh 2013).

The practices of essential newborn care are not studied comprehensively and hence a relatively less knowledge exists about the influence of practice traditional newborn care practices on newborn survival. Studies on the newborn are in some communities shows that the knowledge and practice of basic newborn care for intensification of the prevention hypothermia feeding of colostrum, exclusive breastfeeding are lacking, even awareness regarding care seeking on identification of life threatening signs has been found to be very low. Despite implementation of proven cost effective solutions such as promoting antenatal, tetanus oxide immunization, skilled attendance during delivery, immediate and exclusive breastfeeding and clean cord care there has been relatively little change in neonatal mortality rate (Dutta 2009).

Social determinants of child mortality include early marriage and childbirth at a very young age, less spacing between births and low literacy level among women, in particular those belonging to the urban poor and rural settings. Under national rural health mission (NRHM), there are a number of focused interventions for improving care of the new-born, which include focus on improving access to skilled birth attendance and emergency obstetric care for all women in rural areas. (Vijayalakshmi 2014).

Several programs have been implemented by the Government of India along with WHO and UNICEF to improve the health status of newborns like home-based newborn care. The Government of India launched the HBNC program in 2011 with the purpose of improving community newborn care practices, early detection of neonatal illness and appropriate referral through home visits. The services are supposed to be delivered by the accredited social health activities (ASHAs), the frontline workers at the village level responsible to deliver preventive care services for mothers and newborn in the community (Neogi 2016).

Understanding of the community and traditional new born care practices is necessary to implement the effective programme for promotion of new-borns health for the effective child health care, delivery, information regarding new born care is important. This study was carried out to describe newborn care practices in Lingayath population of Arsikere Taluk, Hassan District Karnataka State.

Methodology

The sample for the study comprises of 115 mothers of 18 - 36 years group and child of 0-12 months of age belonging 27 villages of Arsikere taluk, Hassan District Karnataka. Mother of infants was interviewed using predesigned structured interview schedule. Interview schedule comprises of socioeconomic background of the family, type and place of delivery, newborn care and feeding practices and cultural beliefs practices in the population.

The Population

Lingayatism is a district Shaivite denomination in India, established in the 12th century. It makes several departures from mainstream Hinduism and propounds monotheism through worship centered on Lord Shiva in the Linga or Ishtalinga. It also rejects the authority of the Vedas, the caste system and some Hindu beliefs such as reincarnation and karma. In India, Lingayats are a community legally recognized as a sect of Hinduism.

The adherents of this faith are known as “Lingayats”, a term derived from the Kannada lingavanta meaning “one who wears a lingam. The Istalinga is an oval-shaped emblem symbolizing Parashiva, the absolute reality and is worn on the body by a cord hung around the neck.

Contemporary Lingayatism is a rich blend of reform-based theology propounded by Basava and ancient Shiva tradition and customs with huge influence among the masses in South India, especially in the state of Karnataka. Today, Lingayats along with Shiva Siddhanta followers, Tirunelveli Saiva Pillai, Kashmiri Shaivas, Naths, Pashupaths of Nepal, Kapalikas and others constitute the major portion of the Shiva population.

Lingadharane is the ceremony of initiation among Lingayats. Though Lingadharane can be performed at any age, it is usually performed when a foetus in the womb is 7-8 months old. The family Guru performs Pooja and provides the Ishtalinga to the person, who then ties it to own Ishtalinga until birth. At birth the mother secures the new Isthalinga to her child. Upon attaining the age of 8-11 years, the child receives Diksha from the family Guru to know the proper procedure to perform Pooja of Isthalinga. From birth to death, the person wears the Linga at all times and it is worshipped as a personal Ishtalinga. The Linga is wrapped in a cloth, housed in a small silver and wooden box. It is to be worn on the chest, over the seat of the indwelling deity within the heart. Some people wear it on the chest or around the body using a thread. Both Lingayat men and women participate in these ceremonies in the presence of a Satguru. This practice was begun by Basavanna himself, who refused to undergo Upanayana, because it discriminated against women.

Lingayats today are found predominantly in the state of Karnataka, especially in North and Central Karnataka with a sizeable population native to South Karnataka. Significant populations are also found in parts of Maharashtra, Andhra Pradesh and Telangana bordering Karnataka, as well as Tamil Nadu, Kerala and Gujarat. The Lingayat diaspora can be found in countries around the world, particularly the United States, Britain and Australia.

The members of the community preferred to be called Veerasivas. They are found all over Karnataka with Kannada as their mother tongue. The Lingayaths of Hassan lived in houses similar to those of other communities. Bride prices are not in force, puberty customs are, in practice, widow re-marriages are allowed among in Lingayath population.

Result and Discussion

Socio-demographic variables of mothers revealed that out of 115 mothers, majority 39 (33.92%) were in the age group of 26 - 30 years, 106 (92.18%) belonged to nuclear family, 49 (42.60%) had degree qualification, 97 (84.34%) of them are home makers and 103 (89.56%) had an annual income between 200000-500000 (Table-1).

Table 1: Frequency and Percentage distribution of mother according to demographic characteristics

Demographic Variables	Frequency	Percentage
Age in years		
< 25 years	65	56.53
26-30 years	39	33.92
> 30 years	11	09.56
Type of family		
Nuclear family	106	92.18
Joint family	09	07.83
Education		
Middle school	01	00.86
High school	21	18.26
Pre-University	40	34.78
Degree	49	42.06
Master Degree	04	03.47
Occupation		
Home maker	97	84.34
Employee	18	15.65
Male	58	50.43
Female	57	49.56
Annual income		
<= 100000	08	06.95
200000 - 500000	103	89.56
500000 – 900000	04	03.48

The cultural practices and beliefs regarding bath revealed that 102 (88.7%) of mothers apply the turmeric paste before bath. [Table – 2] 110 (95%) of mothers does not bath before the baby given bath (100%) 115

mothers beliefs that two members are not supposed to give bath to the baby. 60 (52.17%) of mothers expose the baby over a “Sambrani Dhoopam”, Smoke after bath.

49 (42.60%) that exposes below fifty percentage expose the baby to sun lights when the baby skin turns yellow and 52 (45.22%) mother dressing the baby with yellow cloth during jaundice. All the mothers in this study applying “Kajal” on the baby’s face to prevent bad eye, 115 (100%) tying black thread, bangles and “PanchalohaTaita” to the baby’s neck and hand practiced by 98 (85.22%) and 89 (77.39%) respectively. All mothers practiced that empty cradle should not be moved 100 % 115. The baby is not allow to be taken out after 6 and even do baby’s cloth should not place outside a night 98 (85.23%) and 65 (56.53%) respectively.

In this study, majority 100% of mothers apply “Kajal” on the baby’s face to prevent evil eye. According to the selected hospital study conducted in Mangalore that 85% out of 157. (Reshma and Sujatha 2014). Descriptive study conducted in Chandigarh revealed that out of 226 mother’s practice of applying “Kajal” was prevalent in 94.7% in slums and 28.3% urban areas. (Madhu K Chaudhary 2009).

Rearing practice in coastal South India study Explains that 91.4% of mothers applied “Kajal” to the baby’s eye and face and among whom 59.7% did so to ward off evil 20.9% applied it as a part of tradition and 18.7%. (Nitin Kumar 2012). Applying “Kajal” to the eye, face is the old traditional belief considered to ward off evil, with the added cosmetic benefit of making the baby’s eye look bigger and more beautiful.

Nimbalkar (2013) accepts that harmful cultural practices like administration of non-essential syrups 50 (32.5%) and “Kajal” application in the eye were 55(35.7%) common in urban slums and villages of Anand, Gujarat.

Other cultural practices observed in coastal study by (Nitin Kumar 2012) 69.7% of baby piercing ears with in the year. Shaving the head of the baby (13%) and tying black thread around the neck and waist is (63.8%). To compare with our study and mothers of Mangalore taluk get the similarities that applying the Turmeric paste before bath, 95% higher than Lingayath population (88.7%).

Two members are not supposed to give bath the baby is (29%). With our study findings are more or less same with a Mangalore population in exposing baby over a dhoopam i.e. (52.17%) and (41.0%) (Reshma 2014). It was observed in our study that out of 115 newborns delivered.

Table 2: Frequency and Percentage distribution of cultural practices and beliefs

Sl. No.	Item	Frequency	Percentage
1	Applying turmeric paste before bath	102	88.7
2	Mother does not bath before the baby is given bath	110	95
3	Two members are not supposed to give bath to the baby	115	100
4	Exposing baby over a Sambrani Dhoopam smoke after bath	60	52.17
5	Exposing the baby to sun light when the babies skin turns yellow	49	42.6
6	Dressing the baby with yellow cloth during Jaundice	52	42.22
7	Applying Kajal on the baby's face to prevent bad eye	115	100
8	Tying black thread or bangles to the baby's hand prevent bad eye	85.22	98
9	Tying thread with "Panchaloham taita" to the baby	89	77.39
10	Empty cradle should not be moved	115	100
11	Baby is not allow to be taken outside house after 6 PM.	98	85.23
12	Baby's cloth should not be placed outside a night	65	56.53

Table 4 show that (42) 36.53% of babies delivered normally and (73) 63.48% of babies through section. Institutional delivery conducted by doctor (91) 79.14% is higher than that conducted by nurse (24) 20.87%. It was quite surprising to find that the mothers usually did prefer institutional delivery because of education. A primary health centre (PHC) was situated at a distance of about 15 km from studied villages and it is accessible geographically and economically also the staff responsible for maternal and child health were regularly available at the PHC with facilities for delivery and also 108 ambulance.

In this study all the women reported that the instrument used to cut the umbilical cord was cord cutting and cord care. Cord cutting is of particular interest generally being indicative of obstetric care in this study all births occur in hospital so cord cutting done by sterilize scissors and a new string or thread or clip was used to tie the cord. Talcum powder 110%, Turmeric powder was applied for umbilical cord dressing, Talcum powder (110) 95.66% and Turmeric powder 1 (0.86) and both (21.74%) applied for umbilical cord dressing. Oil massage for the baby before the bath is common in all infants and oil used for massage is most of them used coconut oil (107) (93.05%) and followed castor oil (73) (63.48%) and least mixture of coco+castor+commercial oil is 35 (30.44%).

The high number of mothers preferring institutional births (100%) in the study it represents a positive trend in Lingayath community. It's because of availability and access axis to hospitals and of doctors and nurses. Hospital deliveries conducted by doctors 79.14% and by nurse (20.87%) and the findings are really opposite in the study by (Sartaj Ahmad 2012) shows that home deliveries were common 83.92% as compared to institutional deliveries 16.08% and home deliveries conducted by contained birth attendant 51.08% as compared to by trained birth attendant 19.14%. Some report is found in a rural community in baitadi, Nepal 91.5% of deliveries took place at home (69.0% in living room and 22.5% in cattle shed) which were conducted by relatives (29.6%) family members(35.21%) and self (8.5%) (Devkota and Bhatta 2011).

Nearly the same results finding in rural districts and Bangladesh over 90% of delivery took place at home, and 11% were similar findings found in rural Pondicherry that 99.3% were delivered at institutional by (Vijayalakshmi 2014) attended her by a doctor or by a nurse (Barnelt 2006). Application of unhygienic substance on the cord stump is a cause of tetanus neonatorum and infant deaths (Nitin Kumar 2012). In our study, we observed that 95.66% mothers applied talcum powder 0.86% of months applied turmeric powder. A study in costal South India reported that mothers used 59% was boric acid antiseptic powder 20.5% mothers applied oil to the cord 20.5% turmeric powder (Nitin Kumar 2012). Similar observations were made in studies from Bangladesh, where 83% of mother applied turmeric powder on umbilical stump. (Alam 2008). It is encouraging that 85.9% of mothers did not apply anything on the cord stump (Devkota 2011) study carried out in up India the result found that 51.06% of mothers applied turmeric with ghee and 6.38% prudence iodine and 02.13%. Tincture iodine and 04.26% mothers were also used cold cream. (Sartaj Ahmad). All mothers in our study gave (100%) oil massage to their babies. The most

commonly used oil were (93.05%) coconut oil, 73% castor oil; mixture of commercial oil and coconut oil 67% and a mixture of coconut oil, castor oil and commercial oil are 18.35%. The mother practiced oil, massaging to give strength to the limbs and prevent dry skin in babies in a similar study in coastal South India (98.7%), mothers of rural Chandigarh 72.6% and 56.6% mothers in urban area practiced massage to their babies with coconut oil. (Puri S. Bhatia 2008).

55% of mothers were applied ashes, dry cow dung on the umbilical cord of the baby women's of Bangladesh reported applying mustard oil, garlic, talcum powder, boric powder, savlon and coconut oil on the umbilical cord stump is common (Darmstad 2006). However, these practices can be harmful and may lead to infection. The WHO recommends dry cord care where no substances are placed on the umbilical cord. (WHO 1998).

Table 3: Frequency and Percentage distribution of variables

Variables	Frequency	Percentage (%)
Type of Delivery		
Normal	42	36.53
Section	73	63.48
Place of Delivery		
Home	00	00
Institutional	115	100%
Delivery attended		
Doctor	91	79.14
Nurse	24	20.87
Village Women	00	00
Umbilical Cord Dressing		
Talcum Powder	110	95.66
Turmeric	01	0.86
Talcum + Turmeric	02	1.74
Massage oil Application		
Castor oil	73	63.48
Coconut oil	107	93.05
Coco, Commercial Oil	67	58.27
Coco, Castor, Commercial Oil	35	30.44

Breast feeding

In the recent century importance of immediate breast feeding of colostrum is widely recognized all over the world. But still it was not practiced in almost 16.53% of cases. This is because mothers were the opinion that colostrum is not good for babies' health. In this study (97) (84.35%) of the mothers initiated breastfeeding within 24 hours. After (78) (67.83%) of mothers reported first giving their baby honey, white 18.27% give sugar water, 2% gave milk powder and 7% of mother gave lactogen.

Colostrum provides a concentrated course of food for the new born and offers protection against infections (Puri 1976). A higher percentage of mothers, 83.48% in our study gave colostrum to their babies similar observations were made in studies conducted abroad as well as in India. 64% in Dhaka (Allisyn 2009), 92% in Coastal (South India 2012) (Nitin Kumar), 37% in Urban slums of nearest UP. (Sartaj 2012), 79% in Baitadi rural community Nepal (Devkota (2011)), 81% in rural southern of Nepal, (Dominique 2011) mothers, who did not give colostrum, did so on the advice of the elders in the family, who felt that it was harmful to the baby and should be discarded.

According to infant and young child feeding practices (2006) guidelines in India. It is recommended that initiation of breastfeeding should begin immediately after birth. In the present study initiation of breast feeding within one hour after birth was 51.30% and within 24 hours was 84%. Similar findings in rural Pondicherry area 64.7 and 97% our observations are very near to studies of (Jennifer 2013). Ethiopians 52.1% of mothers breastfeed within the first hour after delivery within one hour. 42.4% in rural West Bengal, Das (2008), 58.4% and 70.6% observed in urban slums and villages of Gujarat respectively. Surprisingly delayed breastfeeding especially up to three days was common and totally own feeding of colostrum was recorded by (Baiju 2013).

When compared with Gujarat tribal study and Karnataka among Hakkipikkis tribes 76% of mothers breastfeed their baby immediately after birth. (Dakshayani 2008). Giving pre lacteal feeds are delay the establishment of lactation and can cause diarrhea and electrolyte imbalance in the newborn. (Awasthi 1983).

Present study observed that percentage of newborns who were given pre-lacteal feed was 78%. Among them, 41.73% were given honey as pre lacteal feed and 18.27% of newborns were given sugar water.

Studies from Dhaka, Bangladesh. The majority of the first gave their babies either honeys or sugar water followed with breastmilk upto three to five days. The custom of giving prelacteal feeds for the baby is practiced even outside India, as observed in studies from Pakistan 35% and China 26%. (Qice 2007), (Ali S 2011).

Which were lesser compared to the present study studies from other parts of India reported the practice of giving prelacteal feeds are only 5.9% in rural Pondicherry (Vijayalakshmi 2014). 34% coastal south India (Nitin Kumar), 12% reported in Ethiopia (Jennifer 2013), 31% reported in Mangalore take (Reshma 2014), 80.4% of infants received pre-lacteals mentioned by Dominique in southern Nepal 71% reported by (Sayed E. Mohmood 2012). In the study of the rural population of northern India the main pre-lacteals feeds are “Ghutti” that is water mixed with honey and herbs, boiled water, animal milk and tea. Pre-lacteal feeds are given because it is believed that pre-lacteals act as laxatives or as a means of during the mechanism. (Deshpande 2010).

Table 4: Frequency Distribution of Variables

Variables	Frequency	Percentage (%)
Colostrum Given		
Yes	96	83.48
No	19	16.53
Initiation of breastfeeding		
Within in one hour	59	51.3
Two hour to 24 hour	38	33.04
Pre lacteal Given		
Yes	78	67.83
No	37	32.17
If Yes,		
Sugar water	21	18.27
Honey	48	41.73
Milk Powder	02	1.74
Any Other	07	6.08

Conclusion

The study was conducted to assess the cultural practices beliefs on new born care among mothers and associated it with demographic variables. Every society has its own traditional beliefs and practices

related infant care. There are many practices, beliefs and offerings which either protect or harm the health of the baby.

Our study has revealed areas of similarities and a few distinct differences in newborn care practices when compared with findings within India as well as those conducted abroad.

Majority mothers in our study prefer institutional delivery (100%). Centpercent mothers gave an oil massage to their babies. 83.48% of mothers gave colostrum to their babies these were high compared to national figures. Practices like giving prelacteal feeds, application of substances on cord and some cultural beliefs like “Kajal” to the eyes are still prevalent among mothers in our study area.

References

- Allisyn C Moran, Nuzhat Choudhury, Nazib Uz Zaman Khan, Zunaid Ahsan Karar, Tasnuva Wahed, Sabina Faiz Rashid and M. Ashraful Alam: Newborn care practices among slum dwellers in Dhaka, Bangladesh: a quantitative and qualitative exploratory study. *BMC Pregnancy and Childbirth*. November (2009).
- Archana S Nimbalkar, Vivek V Shukla, Ajay G Pathak and Somashekhar M Nimbalkar: Newborn Care Practices and Health Seeking Behavior in Urban Slums and Villages of Anand, Gujarat. *Indian Pediatrics*, Vol.50. (2013).
- Awasthi N. N., Anil Kaushik M.D. and B.D. Mathur: Feeding and rearing practices in rural area of Jhansi-Bundelkhand. *Indian Journal of Pediatrics* 50; 33-37. (1993).
- Bajju Dinesh Shah, Laxmi Kant Dwivedi: Newborn Care Practices: A Case Study of Tribal Women, Gujarat. *Health Vol. 5, No.8A4, 29-40* (2013).
- Dakshayani B and M.R. Gangadhar: Breast feeding and Weaning Practices among The Iruligas: A Tribal Population of Karnataka. *Man and Life, Vol. 34 (3-4), page.33-38* (2008).
- Das P, Ghosh S, Ghosh M and Mandal A: A study on Delivery and Newborn Care Practices in a Rural Block of West Bengal. *Indian Journal of Public Health, 52(3):159-160.* (2008).
- Deshpande Jayant D, Giri P A, Phalke D B, Phalke V D, Kalakoti P and Syed M M. Socio-Cultural Practices in Relation to Breastfeeding, Weaning and Child Rearing among Indian mothers and assessment of nutritional status of children under five in rural India. *Australian Medical Journal, 3:618–24* (2010).

- Devkota M D and Bhatta M R: Newborn Care Practices of Mothers in A rural Community in Baitadi, Nepal. *Health Prospect Vol.10. (2011).*
- Dominique J. Karas, Luke C. Mullany, Joanne Katz, Subarna K. Khatry, Steven C. LeClerq, Gary L. Darmstadt and James M. Tielsch: Home Care Practices for New-borns in Rural Southern Nepal During the First 2 weeks of Life. *Journal of Tropical Pediatrics Vol. 58, No 3. (2012).*
- Jennifer A Callaghan-Koru, Abiy Seifu, Maya Tholandi, Joseph de Graft-Johnson, Ephrem Daniel, Barbara Rawlins, Bogale Worku and Abdullah H Baqui: Newborn care practices at home and in health facilities in 4 regions of Ethiopia. *Biomedical Central of Pediatrics 13:198 (2013).*
- Lakshmi G: Reproductive and child health situation among Savara and Jatapu tribes of Srikakulam district, AP. *Ph.D. Thesis Page No. 64-67 (2011).*
- Li-Gian Qiu, Xing Xie, Andy Lee, Colin Binns: Infants First Feeds in Hangzhou, PR China. *Asia Pacific Journal of Clinical Nutrition. 22 (3).443 -448. (2007).*
- Ludvig, S.Warman, M. Shekan Baby Syndrome: A Review of 20 Cases. *Annals of Emergency Medicine: Vol 13. Issue 2, 104-107 (1984).*
- Madhu K, Sriram Chowdary and Ramesh Masthi: Breast Feeding Practices and Newborn Care in Rural Areas: A Descriptive Cross Sectional Study, *Indian Journal of Community Medicine, 34(3):243-246 (2009).*
- Md. Ashraful Alam, Nabeel Ashraf ali, Nighat Sulthana, Luke C. Mullany, Katherine C, Teela, Nazib Uz Zaman Khan, Abdullah H. Baqui, Shams El Arifeen, Ishtiaq Mannan, Gary L. Darmstadt and Peter J. Winch: Newborn Umbilical cord and Skin Care in Sylhet District, Bangalesh : Implications for Promotion of umbilical cord cleansing with topical chlorhexidine. *Journal of Perinatol, S61-S68. December (2008).*
- Neogi, SB Sharma, J Chauhan, M Khanna, R Chokshi, M Srivastava, R Prabhakar, P K, Khera A, Kuamr, R, Zodpey, S and VK Paul: Care of Newborn in community and at home. *Journal of Perinatology 36, S13-S17 (2016).*
- Nitin Joseph, B. Unnikrishnan, Vijaya A. Naik, N.S. Mahantashetti, M.D.Mallapur, Shashidhar M, Kotian and Maria Nelliyanil: Infant Rearing Practices in South India: A Longitudinal Study. *Journal of Family Medicine and Primary Care 2(1): 37-43 March (2013).*
- Nitin Kumar, B Unnikrishnan, Rekha T, Prasanna Mithra, Vaman Kulkarni, Mohan Kumar Papanna, Ramesh Holla, Angita Jain: Infant feeding and Rearing Practices adopted by Mothers in

- coastal south India. *International Journal of Collaborative Research on Internal Medicine and Public Health*. Vol.4, No.12, (2012).
- Poreddy Vijaylaxmi, T Sushila, D Mythili: Knowledge, Attitudes, and Breastfeeding Practices of Postnatal Mothers: A cross sectional survey. *International Journal of Health Sciences*. October; 9(4): 364-374.
- Puri, R.K., Khanna, G. Ashok Kumar and Prasada Rao, D.C.V.: Infant Feeding and Child Rearing Methods in Pondicherry, South India. *The Indian Journal of Pediatrics*, Vol.43 (346), pp. 323-333, (1976).
- Puri, S Bhatia, V Swami, H and Magnat C: Comparison of Prevalent Newborn Rearing Practices, In Urban and Slum Population of Chandigarh, Ut, India. *The Internet Journal of Pediatrics and Neonatology*. Vol.9, No 1, (2006).
- Registrar General of India, Sample Registration System, Statistical Report. *New Delhi: Office of the Registrar General, India (2004)*.
- Reshma and Sujatha R: Cultural Practices and Beliefs on Newborn Care among Mothers in a Selected Hospital of Mangalore Taluk. *Nitte University Journal of Health Science*, Vol.4, No.2, June (2014).
- Sartaj Ahmad, Kapil Goel, Gagan Agarwal, Parul Goyal, Vijay Kumar and Ashish Prakash: Assessment of Newborn Care Practices in Home Deliveries among Urban Slums of Meerut, UP India. *Community Medicine and Health Education*. Vol.2, Issue 8, (2012).
- Vijaylaxmi S, Rajkumar Patil and Shib Sekhar Datta: Community-based Study on Newborn Care Practices and its Determinants in Rural Pondicherry, India. *Journal of Neonatal Biology*. Vol. 3. Issue 5 (2014).
- WHO Essential Newborn Care: Report of Technical Working Group Trieste, 25-29 April (1994).