

Impact of Behaviour Change Communication Among Pregnant Women Regarding Good and Harmful Traditional practices

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Abstract: Background: Neonatal survival is influenced much by care provided by the family before, during and after delivery, which in turn is influenced by mother's beliefs, and perceptions of her immediate family. Objective: To assess the behaviour of pregnant women regarding good and harmful neonatal care practices. 2. Implementation and assessing impact of Behaviour Change Communication (BCC) Package among pregnant women regarding good and harmful neonatal care practices. Methods: A community based intervention study was conducted in the field practice area of the Urban Health Training Centre, Department of Community Medicine, Jawaharlal Nehru Medical College, Aligarh Muslim University, Aligarh, Uttar Pradesh, India. 200 pregnant women were enrolled purposively. Data were analyzed with Epi Info version 3.5.1. Percentages, and Chi Square Test used. Results: Due to implementation of BCC Package in intervention, good practices like giving colostrum were increased two times. Initiation of breastfeeding within 1 hour was increased 4.7 times, exclusive breastfeeding was gone up 3.8 times and induction of burping was increased 6 times. There was significant difference (P-value <0.05) between the two groups on 7th and 28th days of delivery. Harmful practices like not washing hand were decreased 3.83 times, use of dark and ill-ventilated room was decreased 2.54 times, and practice of cutting the cord with a used blade, or any unsterile scissors, knife, or sickle, broken cup was decreased 3 folds. Application of ghee/ cow dung on the cord was decrease significantly. Practices of prelacteals and use of pacifier, application of kajal, and witch craft for neonatal illnesses were reduced significantly. Conclusion: There was significant improvement in pregnant women regarding traditional neonatal practices. Some practices had not changed due to some strong cultural beliefs and influence of mother in-law and elderly females of the family. [Khan M et al NJIRM 2013; 4(3) : 37-42]

KEY Words: Witch craft, prelacteal, colostrum, exclusively breastfeeding, pacifiers, kajal, BCC

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Introduction: Traditional neonatal health care practices can be defined as age –old family practices and belief about the care of newborn infants, which have evolved over generations. Often the intent is healthy but the consequences may be unbeneficial, inconsequential, or even harmful. Practices during the neonatal period are determined by elders in the household, primarily the mother-in-law, and reinforced by TBAs. Many practices have their roots in the traditional Indian system of medicine, especially Ayurveda¹.

It is difficult to summarize traditional health care practices that could be considered representative for the entire country. They vary with region, religion, caste, and tribe. There is limited published literature and scientific research in this area. Traditional beliefs like initiation of BF upon seeing the twinkling stars, at the onset of night ('*taraon ki chhaon mein*') so the baby does not forget suckling and suckles adequately subsequently also

prevailed in a few families especially those from backward communities of Uttar Pradesh. Initiating BF after the '*Chhatti Poojan*', a religious ceremony celebrated on 6th day after birth of a baby boy was also practised in families from Bihar².

The National Neonatal Forum³ of India recommended that healthy traditional practices be promoted and reinforced actively. Practices that do not adversely affect neonatal health should be ignored. However, harmful practices should be discouraged through informed counseling.

A recent analysis of the evidence base for efficacy (i.e. impact under ideal conditions) and effectiveness (i.e. impact within a health system) of interventions, and their cost-effectiveness, suggested that feasible, cost-effective interventions exist that could prevent roughly two-thirds of all neonatal deaths⁴.

Moreover because the majority of perinatal and neonatal deaths in developing countries occur in home, there is urgent need to identify solutions at community level. So present study was conducted with the following aims and objectives: 1.To assess the behaviour of pregnant women regarding traditional neonatal practices. 2. Implementation and Assessing impact of Behaviour Change Communication Package among pregnant women regarding traditional neonatal practices.

Materials & Methods: The present community based intervention study was conducted in the field practice area of the Urban Health Training Centre (UHTC), Department of Community Medicine, Jawaharlal Nehru Medical College, Aligarh Muslim University, Aligarh, Uttar Pradesh, India. The UHTC of the Department of Community Medicine is located 2 Kms away from the medical college on the Qila road. The area is basically a peri-urban area situated on the outskirts of the city. The study subjects were residents of four registered areas of the UHTC. UHTC caters a total population of 11199 at the start of the study. There were four areas, i.e. Firdaus Nagar, Nagla Qila, Patwari ka Nagla, and Shahanshabad under UHTC. Out of these 4 areas, 2 areas (Firdaus Nagar, Nagla Qila) were chosen randomly for intervention group and the other 2 areas (Patwari ka Nagla, Shahanshabad) served as non-intervention group. Intervention and non intervention groups were separated geographically so that there was no transfer of BCC Package information from Intervention group to non-intervention group. Both the study groups had same number of subcentre, AWW, and same accessibility to District hospital, Medical College. The population in this area was relatively stable and allowed for follow up visits. Approval for study was passed from the institutional board of study meeting. Purposive sampling i.e. nonrandom sampling to include subjects that serve the specific purpose was used. The study was carried out for one year i.e. from October 2008 to July 2009. This was my thesis work and due to time constrained random sampling was not possible because I visited 6-8 time to each study subject, each sitting took 30-35 minutes. Two hundred pregnant women (100

pregnant women from each intervention and non-intervention groups) as observed from the previous records were chosen for the study.

Exclusion criteria were primigravida, high-risk pregnant women, pregnant women who opted to deliver outside Aligarh. Ethical considerations were local cultural values and ideas, were respected. Confidentiality was assured. All pregnant women were approached individually and an *informed consent* was taken before collecting data. All primigravida in intervention group were also informed about the messages of BCC packages, though they were excluded from the study. Proper management or referral was given to women who were found to have any health problem. The study was conducted in three phases.

Phase I. Base line collection of data: A house to house visit was made to get the information about pregnant women till 200 pregnant women were enrolled in the study. Data were collected by using pre-designed and pre-tested semi structured questionnaire. It included information regarding identification, socioeconomic status, and traditional neonatal practices.

Phase II. Intervention phase (only in intervention group): BCC⁵ package was designed focusing on changing the adverse behaviour of pregnant women regarding good and harmful neonatal practices. The information in this package was given to every individual pregnant woman of the intervention group in the 9th month of gestation repeatedly and self designed pamphlets containing simple messages in local languages (Hindi, Urdu) were distributed to all pregnant women by researcher himself. For those who could not read, their literate family members were asked to read for them. All the information about behaviour change communication package was given explaining why messages were important for them.

Phase III. Follow-up: After first week: All mothers who delivered were contacted after one week of delivery. Data were collected about traditional neonatal practices such as safe and clean delivery

practices, prevention of neonatal infection, breastfeeding and pre-lacteal feeds.

After 28th day: Information regarding exclusive breastfeeding, burping, application of kajal, witch craft was collected.

Data Entry and Statistical Analysis: Data entry and statistical analysis were carried out using Epi Info version 3.5.1. Significant difference was determined using Chi-square test. Intervention and non-intervention were also compared after 7th and 28th of delivery days. The impact of behaviour change communication was assessed using relative risk and difference was accepted significant at more than 95% (p value <0.05).

Results: Majority of pregnant women were in the age group of 15-30 years. Most of the pregnant women were Muslim. 72% of pregnant women were illiterate, 18 % were educated up to high school and only 7% were educated above high school. Education of husbands of pregnant women was also low i.e. 54% illiterate. Majority of the families (64.5 %) were nuclear. 99% pregnant women were housewives. Most of pregnant women (75%) had more than one live issue. 48.5% pregnant women were belonged to upper lower class according to Modified Kuppuswami Scale of socio-economic status⁶. There was no significant difference (p-value>0.05) between the two groups regarding socio-economic status (Table1).

Good neonatal Practices: Due to implementation of BCC Package in intervention, good practices like giving colostrum were increased two times. Initiation of breastfeeding within 1 hour was increased 4.7 times, exclusive breastfeeding was gone up 3.8 times and induction of burping was increased 6 times for first seven days of delivery. There was significant difference (P-value <0.05) between the two groups regarding to good neonatal practices on 7th days of delivery. The differences were significant (P-value-<0.05) on 7th and 28th days of delivery. Significant difference (P-value-<0.05) was also found among the two groups with regard to induction of burping and exclusive

breastfeeding on 7th day and 28th day of delivery (Table 2).

Table1: Demographic profile of pregnant women

Variables	Group A N=100	Group B N=100	χ^2 , p-value-
Age			
15-30	86	80	1.3, >0.05
31-45	14	20	
Religion			
Hindu	02	17	13.08, <0.05
Muslim	98	83	
Education of pregnant women			
Illiterate	78	72	0.97, >0.05
Up to high school	16	20	
Above high school	06	08	
Education of husband			
Illiterate	59	49	3.70, >0.05
Up to high school	37	41	
Above high school	04	10	
Occupation of husband			
Unemployed	58	55	0.59, >0.05
Semiskilled	25	24	
Skilled	09	12	
Clerical/shop	08	09	
Type of family			
Nuclear	67	62	0.54, >0.05
Joint	33	38	
Social class			
Upper	00	02	5.79, >0.05
Upper middle	14	16	
Lower middle	30	35	
Upper lower	51	46	
Lower	05	01	

Harmful practices: Due to impact of BCC Intervention 37% mothers preferred to deliver at institution in the intervention group than non-intervention (15%) group. All home deliveries were conducted by untrained dais. Due to implementation of BCC Package institutional deliveries improved, practices of not washing hand were decreased 3.83 times, use of dark and ill-ventilated room was decreased 2.54 times, and practice of cutting the cord with a used blade, or any unsterile scissors, knife, or sickle, broken cup

was decreased 3 folds. Application of ghee/ cow dung on the cord was decrease significantly. Due to impact of BCC Package, increase the number of deliveries conducted in warm room, bathing to the baby was delayed and decrease practice of

vigorous removal of vernix caseosa was observed (RR=0.45, p-value <.05). There was no significant impact of BCC Package (p-value>0.05) on practices to prevent hypothermia like baby wiped dry immediately after birth (Table 3).

Table 2: Impact of BCC package on good neonatal practices

Variables	Non-Intervention 100			Intervention 100			Impact of BCC Relative Risk, p – value
	baseline	(bcc not given)		baseline	(bcc given)		
		7 th day	28 th day		7 th day	28 th day	
Breastfeeding initiation within 1hr	17	10		15	47		4.7, <0.05
Colostrum given	39	39		43	90		2.3, <0.05
Exclusive breastfeeding	19	15	10	21	58	52	3.86,<0.05, 5.20, < 0.05
Burping most if the time	16	13	17	13	83	85	6.38, <0.05 5.0, <0.05

Table 3: Impact BCC package Intervention on Harmful neonatal practices in home deliveries.

Variables	Non-Intervention group		Intervention group		Impact of BCC Relative Risk, p – value
	Baseline	(bcc not given)	baseline	(bcc given)	
		7 th day		7 th day	
Home deliveries	92	85	91	63	
Home delivery conducted by untrained	91	85	91	63	
Not washing hands	60(65.2)	57 (67.1)	58 (63.7)	11 (17.5)	3.83,<0.05,
Dark and ill-ventilated room Clean surface	77 (83.7)	72 (84.7)	73 (80.2)	21 (33.3)	2.54,<0.05
Cutting the cord with a used blade, or any unsterile scissors, knife, or sickle, broken cup	66(71.7)	62 (72.9)	60 (65.9)	15 (23.8)	3.06,<0.05
Application of ghee/ cow dung on the cord	87 (94.6)	79 (92.9)	84 (92.3)	51 (81.0)	1.14, <0.05
Baby wiped dry immediately after birth	92(100)	85(100)	91(100)	63(100)	
Vigorous removal of vernix caseosa	29(31.5)	21(24.7)	24(26.4)	07(11.1)	0.45, <0.05
Bathing the baby soon after the birth	92(100)	85(100)	91(100)	51(80.9)	0.81,<0.05,
delivery room not warm	53 (57.6)	49 (57.6)	47 (51.6)	13 (20.6)	2.79,<0.05

(Figures in parentheses are percentages)

Practices of prelacteals were reduced, use of pacifier, application of kajal, and witch craft for neonatal illnesses were reduced significantly (P-value <0.05) in intervention group (Table 4).

Discussion: Due to implementation of BCC Package, institutional deliveries improved delivery practices significantly increased in intervention group. There was significant difference (P-value-

<0.05) regarding good breastfeeding practices on 7th day and 28th days of delivery. Harmful breastfeeding practices were reduced significantly

up to twenty eight days and became significant with comparison on seventh day of delivery.

Table 4: Impact BCC package Intervention on Harmful neonatal practices.

Variables	Non-Intervention 100			Intervention 100			Impact of BCC Relative Risk, p – value
	baseline	(bcc not given)		baseline	(bcc given)		
		7 th day	28 th day		7 th day	28 th day	
Witch craft used for neonatal illness	72	72	78	68	64	68	0.89, >0.05 0.87, >0.05
Application of kajal on eyelashes to prevent “evileye”	96	96	96	98	93	93	0.97, >0.05 0.97, >0.05
Prelacteal feeds given	81	66		79	17		3.88, <0.05
Pacifiers not given	75	83	46	70	88	73	1.01,>0.05 1.58,<0.05

Other studies like Prasad and Costelo⁷ reported that breastfeeding was started within 24 hours of birth by 29% of control mothers, 84% in the early follow up and 59% in the late follow up groups. Lutter et al⁸ revealed in his study that exposure to breastfeeding activities was universally high at the program hospital and universally low at the control hospital. Haider et al⁹ reported that peer counseling significantly improved breastfeeding practices. Mothers in the intervention group were less likely to give prelacteals and postlacteals foods. In a study from Shivgarh, Uttar Pradesh by Kumar et al¹⁰ reported improvements in breastfeeding in intervention arms. Sibley and Sipe¹¹ suggest that TBA training is associated with substantial improvement in knowledge, attitude, behaviour, and advice. There was also a small decrease in perinatal or neonatal mortality associated with training. Researcher from Shivgarh¹², Uttar Pradesh, reported improvements in birth preparedness, hygienic delivery, umbilical cord care, skin care in intervention arms. In Sylhet district, Bangladesh¹³ it was reported that neonatal mortality rates were 29.2 per 1000, 45.2 per 1000, and 43.5 per 1000 in the home-care, community-care, and comparison arms respectively. Neonatal mortality was reduced in the home-care arm by 34% during the last 6 months versus that in the comparison arm.

Conclusion: Although there was significant improvement in knowledge of mothers regarding traditional neonatal practices. Some neonatal practices had not changed due to some strong cultural beliefs and influence of mother in-law and elderly females of the family.

Some good practices were already prevalent in the community like new blade which was usually available in the local shops, wiping of baby dry after birth, delivery in a warm room, covering of head and feet of baby, practice of rooming-in and checking the temperature of baby after birth. Most of these practices are not costly and could be done using home available things. Knowledge of exclusive breastfeeding was imparted and a significant improvement in behaviour of mothers was seen. Mostly mothers showed interest and were eager to know about good and harmful neonatal practices.

Harmful newborn care practices were common. This can be attributed largely to dais because most of deliveries were conducted at home and harmful practices were observed most often in these cases. Harmful practice of first bath within six hour of birth had significantly decreased in the intervention group as they were made aware about the consequences of hypothermia. Sterile cord tie with no application on the cord was not accepted by most of the mothers after explaining them the risk of neonatal tetanus during

intervention. Good practices of breastfeeding were improved significantly after implementation of BCC package. Previously mothers were ignorant about the importance of these practices.

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