

Original Article

ASSESSMENT OF SKILLED BIRTH ATTENDANTS REGARDING HELPING BABIES BREATH INTERVENTION TO IMPROVE NEWBORN CARE IN RURAL DISTRICT OF SINDH

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Background: Globally, 3.1 million newborn deaths occur every year out of these estimated 400,000 neonatal deaths occur in Pakistan. All neonatal deaths 99% take place in poorest region and countries of the world, usually within hours of birth; mostly the cause of neonatal deaths is hypoxia. To access knowledge and practice of SBAs regarding HBB and to access the availability of equipments required for HBB.

Methods: Descriptive Cross-Sectional Study on SBAs as trained in HBB. All 46 SBAs trained on HBB working in Labour room eight rural Health centers, four Taluka, One district Head Quarter Health Facilities and thirteen MLBCs of the district, were included in the sample for study. All 41 SBAs were trained on HBB participated in the study.

Results: Mean age of 30 years. Out of total 41 participants 25 were working in B-EmoNC (61%), 3 in C-EmoNC (7.3%) and 13 in mid wife laid birth Centre (MLBC) or birth station (31.7%). About 92.7% of participants said that main purpose of HBB training is to decrease the NMR by improving newborn care. Drying of newborn is 82.7%, hand washing is 95.12% and 85.3% of the study participants said that they gave 30-40 breaths per minutes. Cord clamp and pair of ties was accessible to 85% of participants versus 14.3% who reported it's not accessible. Almost one quarter (34.1%) participants have low knowledge and practice. Knowledge and training had significant effect on the overall practices of the skilled birth attendants for skilled birth deliveries and reduce the neonatal deaths ($P < 0.001$).

Conclusion: Tools play a vital role for the implication of the knowledge into practices and tools were available almost to every participant. Although few barriers also identified for the less application of the helping hand babies trainings in the community.

Keywords: Neonatal health, helping babies breath, Knowledge, practices, instruments.

Introduction:

About one quarter of all neonatal death are caused by birth asphyxia that can be prevented. Birth asphyxia is defined simply as the failure to initiate and sustain breathing at birth. All neonatal death 99% take place in poorest region and countries of the world, usually within hours of birth, mostly the cause of neonatal deaths is hypoxic event some non-breathing neonates responds to simple stimulation alone such as drying rubbing the back and feet some of these need Bag-Mask resuscitation so importantly skilled birth attendant should be trained in basic resuscitation as well as newborn care that is helping babies breath (HBB) training (1). Global reduction in child mortality was not proceeding rapidly to meet the goal to reducing the under 5 mortality by 2/3rd from 1990 level (2). Neonatal mortality is the single largest cause of under 5 mortality accounting for more than 40% of deaths (3). Neonatal Deaths occurred predominantly on the day of birth 98% in low and middle income countries (4). Death due to intra partum related events were a major cause of neonatal mortality and failure to

establish or sustain effective breathing birth (5). Birth asphyxia causes 23% of newborn deaths many of these deaths are avoidable by improving the facility based intra partum care including neonatal resuscitation may be prevent up to 30% intra partum related newborn mortality in low resource setting (6). Global efforts has been made in past decades to develop effective intervention that prevent mortality due to birth asphyxia a leading example of this effort is HBB program (7). Incompetent techniques such as poor or excessive ventilation with the bag and mask and high negative pressured suction being applied with some suction machines (8). When forecasting is done at the facility level there is a failure to prioritize newborn equipment needs (9). The objective of the study was to access knowledge, practice and barriers of SBAs regarding HBB and the availability of equipment required for HBB at Thatta/sujawal, Pakistan.

Methodology:

Descriptive Cross-Sectional Study on SBAs as trained in HBB. All 46 SBAs trained on HBB working in

Labour room eight rural Health centers, four Taluka, One district Head Quarter Health Facilities and thirteen MLBCs of the district, were included in the sample for study. The study tool consisted questions regarding Socio-demographics, knowledge (Birth preparedness: Hand wash, clean and ventilated area, identified helper and prepare an area for ventilation, Check equipment's) and practices were assessed and equipment were assessed. Study was conducted in period of three months i.e From September-November 2015. Data was collected from SBA working in labour room and were trained on HBB working at district thatta/ sujawal. The data was analyzed through SPSS version 21. The data was described using descriptive statistics. The Ethical approval was obtained from Institutional review board. Written consent was obtained before enrolment in the study and strict anonymity and confidentiality was maintained for participants.

Results:

In table No.1 socio demographic characteristics of study participants were analyzed while in second section questions related to knowledge, practice, availability of tools and barriers to skilled birth attendants were analyzed. Age of study participants was calculated in means. On the basis of mean score age participants were categorized in two groups. First group included participants who had mean age of 30 years or less and second group included participants who had mean age greater than 30 years. Descriptive statistics for designation of study participants showed that out of 41 participants 14.6% (n=6) were doctors, 26.8% (n=11) were LHVs, 24.4% (n=10) were staff nurse, while 34.1% (n=14) were CMWs. About 10% of participants had work experience greater than 15 years while 16 participants had work experience of 1-5 years. Similarly about 15% of the participants had salary range of greater than 20,000 PKR/month and when asked about residence status of study participants it was found that about 87% of participants had their own house. Descriptive statistics for designation of study participants about knowledge showed that about 92.7% of participants said that the main purpose of HBB training is to decrease the NMR. Drying is necessary for the new born is said by 82.7%. Similarly 95.12% of participant said that hand washing is necessary before conducting deliveries. About 85% respondents said that they cut the cord and move the babies to ventilation area when babies do not cry at the time of birth and 85.3% respondents said that they gave 30-40 breaths per minutes. If chest of the newborn babies moves and they breathe normally then 87% of participants said that they don't apply mask and positioning of head. More than 90% of participants correctly answered the steps involved in the hand washing

Table 1: Sociodemographic characteristics of study participants

Variable	Categories	Frequency	Percentage
Age	Age <30 Years	13	31.7
	Age >30 Years	28	68.3
Health Facility Type	B-Emonc	3	61
	C-Emonc	13	7.3
	MLBC (Birth Station)	6	31.7
Designation	DOCTOR	6	14.6
	LHV	11	26.8
	STAFF NURSE	10	24.4
	CMW	14	34.2
Marital Status	SINGLE	12	29.3
	MARRIED	29	70.7
	WIDOW	0	0
Experience/ Job Duration	1-5 Years	16	39
	6-10 Years	13	31.7
	11-15 Years	8	19.5
	16-20 Years	3	7.3
	20 Years And Above	1	2.4
Current Salary	2000-10000 PKR	15	36.6
	10001-20000 PKR	0	0
	20001-40000 PKR	19	46.3
	40001-60000 PKR	5	12.2
	60000 And Above	2	4.9
Residence	Government	4	9.8
	Own	36	87.8
	Rent	1	2.4

Responses of study participants about Practices showed that about 97% of participants said that they give skin to skin contact kangaroo care within one golden minute. About 90% respondents said that they don't find any difficulty in identifying the helpers. Response percentage about keeping the babies in warm when the weather is hot was no by 85%. Usage of mask with firm seal was reported by only 24.3% of respondents. While ventilation usage was also

reported by a very small number of participants i.e 12.9% and 73% participants said that they clear secretion by just opening the mouth of new born babies as shown in Table No.2.

Variable	Frequency	%
Do you prepare a ventilation area?	41	100
Kangaroo care is given within one golden minute?*	40	97.6
Do you check the equipment before conducting delivery?	40	97.6
You do not need to identify helper?*	37	90.2
Do you remove wet clothes just after delivery?	38	92.68
There is no need to keep the baby warm if the weather is hot?*	35	85.3
Does rubbing the back of neonate stimulate breathing?	41	100
Do you follow above instructions for those newborn who cry well?	41	100
Do you apply the mask with firm seal?	10	24.3
Do you start the ventilation within the golden minute?	5	12.19
You do not need to look for chest movement during ventilation?	34	82.9
Do you clear secretion by opening the mouth only?	30	73.17

Respondents were when asked about of about accessibility of equipment that hand glove, bag mask, penguin sucker device and stylize scissor with un used blade was available to all the study participants at their workplace. Card clamp was accessible to 85% of respondents. More than 90% respondents said that they had availability of knitting cap for newborn. While more than two third of the participants reported the availability of stopwatch. Descriptive statistics for designation of study participants about Barriers showed that about 90% of participants said that community had the awareness regarding child and maternal health but its acceptance by community was reported only 4%. More than 90% agreed that financial issues are there for the helping baby's breath. Similarly more than 70% believe that geographic road condition and transport are barriers. Most of participants said that lack of community, family

support, HR availability, capacity and motivation are barriers for the helping baby's breath. Overall 34.1% had low knowledge about HBB according to mean score i.e. 9.8 and similarly the mean score for practices was 10.8 and 65.9% participants had good practices for the delivery of HBB. Cross-Tabulation was made between all the socio demographic characteristics of the study participants with their overall practices as shown in Table No.3. Calculated results showed that no significant association was found between age, health facility type, marital status, work experience, monthly income, residence and practices for HBB. However, Significant association was found between knowledge and practices of study participants for helping babies breathe (P Value=0.001).

Table-3: Association between Socio-demographic variables and Practices

Table-3: Association between Socio-demographic variables and Practices

Variable	Categories	Good(N)	Bad(N)	P Value (Chi Square)
AGE				
	Age <30 years	5	8	
	Age>30 years	9	19	0.691
Health Facility Type	B-EmoNC	8	17	
	C-EmoNC	1	2	
	MLBC (Birth Station)	5	8	0.923
Designation	DOCTOR	1	5	
	LHV	5	6	
	STAFF NURSE	3	7	
	CMW	5	9	0.675
Marital Status	SINGLE	6	6	
	MARRIED	8	21	0.168
Experience/Job Duration	1-5 Years	7	9	
	6-10 Years	5	8	
	11-15 Years	2	6	
	16-20 Years	0	3	
	20 Years and Above	0	1	0.535
Current Salary	2000-10000 PKR	5	10	
	10001-20000 PKR	8	11	
	20001-40000 PKR	1	4	
	40001-60000 PKR	0	2	
	60000 and above	2		0.568
Residence	Government	0	4	
	Own	14	22	
	Rent	0	1	0.228
Knowledge	High	25	2	
	Low	2	12	0.001*

Discussion:

Assessment of Skilled Birth Attendants regarding Helping Babies Breath(HBB) Intervention to improve newborn care was done in this study, In study conducted in Pakistan was found that the mean age of participants were about 24 years, nurses and doctors and mostly lived in permanent houses(10). Large number of participants said that main purpose of HBB training is to decrease the NMR and a study conducted in Rwanda had results that training had a sound impact on the reduction of the newborn death (11). Most of participants said that they gave 30-40 breaths per minutes. In South Asia and sub-Saharan

Africa decrease neonate death when they dry babies on time and cry the baby (12). While more than 90% of participants correctly answered the steps involved in the hand washing and a study conducted in Kenya shows that knowledge about the safe deliveries significantly increases through training about HBB (13). Almost three quarter of respondents said that they clear secretions by just opening the mouth of new born babies and almost same findings results closer to the past studies done in UK, Norway and Nepal [12,14-15]. More than two third of participants reported the availability of stopwatch and reduction in neonates deaths through safe deliveries by the use of

safe birth tools also found in the study conducted in Tanzania, India and Pakistan[11,13,8]

Similarities regarding barriers were also found in past study conducted in India (16). More than one third of Participants were with bad practices for the delivery of HBB while a study conducted in Tanzania showed that the skilled birth attendants were with practices (17). However Significant association was seen between knowledge and practices of respondents for helping babies breathe and in studies conducted in Tanzania, Norway, Rwanda and Pakistan it was seen that knowledge and training had significant effect on the overall practices of the skilled birth attendants for skilled birth deliveries and to reduce the neonatal deaths (10, 11, 14 and 16).

Conclusion:

HBB strengthening management of newborn resuscitation holds great potential to reduce newborn mortality in low resource setting. Knowledge about the helping baby's breath found excellent and satisfactory and the skilled birth attendants all applied that knowledge in the form of practices. Tools play a vital role for the implication of the knowledge into practices and tools available almost to every participant. Although few barriers also identified for the less applicable of the helping hand babies trainings in the community.

Recommendations:

It is recommended to refresh training should be conducted on helping baby's breath (HBB) for the health personnel, ensure availability of the equipment, monitoring the practices of the health professionals regarding the practice of HBB and monitor to ensure knowledge and skills for the timely performance are being carried out.

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