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Original Research Article

Awareness Regarding Neonatal Danger Signs among Rural Postnatal Mother in Palpa District, Nepal

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ABSTRACT

Background: Neonatal period is the most vulnerable time for a child's survival. Mothers are the primary caregiver of the newborns/neonates, thus the awareness on neonatal danger signs has great influence on the health of the newborns. The main objective of study is to find out awareness of postnatal mother on the neonatal danger signs in rural community.
Method and Material: A descriptive cross sectional study design was carried out. Setting of this study was two wards of Tansen Municipality. Total of 117 respondents were taken by using non-probability convenience sampling technique within nine months period of data collection (August 1st, 2016 to April 30th 2017). Data collection was done by using pretested semi-structured interview schedule. The collected data were analyzed by using SPSS version 20. Descriptive statistics and inferential statistics namely Chi-square test was used.
Results: The findings of study revealed that out of 117 mothers, 19.7% gave birth before 20 years, 33.3% were Magar ethnic group. Most of mothers (93.1%) delivered their newborn at any health facilities. 100% of mothers were prepared for the place of delivery (Health facility) and early preparation of essential expenditure. Most (94%) mothers heard about neonatal danger signs. Among them, 100% percent of mother aware about unable to suck as neonatal danger followed by fever (99.1%), breathing difficulties and jaundice (88.2%), umbilical cord infection (83.6%), watery stool/ blood in stool (69.1%), hypothermia (62.7%) and least number of mothers (18.2%) were aware about convulsion as a neonatal danger signs. Similarly, most of mothers (94.5%) got information through radio. Most of mothers (89%) did their self-decision within 24 hours of danger signs for the treatments of sick newborn. 48.18% of mothers were aware on the neonatal dangers signs. Awareness on neonatal danger signs was significantly affected by age of postnatal mother and distance of health facility.
Conclusion: Based on the study findings, it is concluded that the more the mature mother the more the awareness on neonatal danger sign. To decrease neonate mortality, a teaching must be provided on neonatal danger signs from the pregnancy to the delivery of baby.

Key words: Awareness, neonatal danger signs, postnatal mother

INTRODUCTION

Neonatal period is the most vulnerable time for a child's survival. Neonatal mortality is a global public health burden mostly concentrated in low- and middle-income countries. A human infant from the time of birth up to 28th day of life is called a newborn or neonate. It is the most

vulnerable time for a child's survival. [1-2] Globally an estimated 5.9 million under five children were dying in 2015. Although the neonatal mortality is declining globally about forty-five per cent of global under-five deaths occur during the neonatal period. Among them three-quarters of neonatal deaths happen in the first week, the highest risk of death is on the first day of life and every day 16,000 newborn dies worldwide. [3]

Regarding the main causes of neonatal deaths are preterm birth, asphyxia, severe infection, diarrhoea, congenital malformation and other causes in the global context. [4] In Nepal the primary cause of newborn death was pre-term birth complications (31%), followed by intra - partum related events (birth asphyxia or birth trauma, 23%) and newborn infection (19%). More than 80% of all newborn deaths in Nepal results from three preventable and treatable condition-complications due to prematurity, intrapartum-related deaths (including birth asphyxia) and neonatal infections. Which are cost-effective, proven interventions exist to prevent and treat each cause but still the neonatal death of Nepal is falling 23 deaths per thousand live births. [5]

Neonates are more prone to show subtle signs of illness and these can only be identified by the immediate care givers who have adequate knowledge on features to look for. Listlessness or difficulty feeding are sometimes the only signs present and illness may advance quickly. [6]

Neonatal mortality and morbidity are the greatest challenges in the current health care scenario due to their own changing environment from intrauterine life to extra-uterine life. Mothers are the primary caregiver of the newborns, thus the awareness of the mothers regarding newborn danger signs has great influence on the health of the newborns. Majority of neonates die because of failure to identify danger signs/illness by mother and inappropriate or delayed care seeking of newborn illness. [7]

Rational of the study

Newborn health and stillbirths are part of the "unfinished agenda" of the Millennium Development Goals for women's and children's health. With newborn deaths still accounting for more than 60% of under-5 deaths in Nepal, newborn mortality and stillbirths require greater visibility in the post-2015 sustainable development agenda. In Nepal, more than 80% of all newborn deaths results from three preventable and treatable condition-complications due to prematurity, intrapartum-related deaths (including birth asphyxia) and neonatal infections. Cost-effective, proven interventions exist to prevent and treat each cause. Improving quality of care on time will save the lives of newborns. [5]

Majority of newborn die because mothers fail to identify danger signs/illness, and inappropriate or delayed care seeking of the sick neonate and delay in the treatment of the sick neonate. That is why the researchers were interested to identify the awareness regarding neonatal danger signs among the rural postnatal mothers.

MATERIALS AND METHODS

A descriptive cross sectional study design was carried out to explore the awareness on neonatal danger signs among rural postnatal mother. The population of the study was consisted of postnatal mothers having neonate in the rural of Nepal. This study was carried out in two purposively selected wards of Tansen Municipality: ward number 9 and 10.All the postnatal mothers having neonate were selected for this study using non-probability convenient sampling technique within nine months period of data collection (August 1st, 2016 to April 30th 2017) and the total 117 postnatal mothers were available during the data collection period.

Before proceeding for data collection, the Ethical approval was taken from the Institutional Review Board of Tribhuvan University, Institute Of Medicine, Maharajgunj. Likewise,

institutional approval was taken from concerned authority of respective ward offices of Tansen Municipality and verbal informed consent was taken from each respondents. A semi-structured interview schedule was used to assess the awareness regarding neonatal danger signs among the rural postnatal mothers. Interview schedule was first developed in English and translated into Nepali version. Data were collected in the home setting among postnatal mothers having neonate after getting information by the Female Community Health Volunteers (FCHVs) about the delivery of pregnant mothers. The collected data were analyzed by using SPSS version 20. Descriptive statistics and inferential statistics namely Chi-square test was used. The total score of the awareness was 12. Respondents who got score 9 or more than 9 were categorized as aware and score below 9 were categorized as not aware on neonatal danger signs.

RESULTS

More than one fourth (36.8%) of respondents were from age group 21 to 25 years. 19.7% of respondents still gave birth before 20 years. Most of respondents (95.7%) were from Hindu religion. More than one fourth (33.3%) respondents belong to Magar ethnicity. Majority of mothers (54.3%) got higher secondary education. Similarly, majority of mothers (65.8%) had agriculture as their occupation. Similarly, 51.2% of the respondents were primiparous and 51.28% respondents visited health facility four times and more than four times for antennal checkup. Only one respondent had never attained her antenatal checkup. Most of (93.1%) respondents delivered their newborn at any health facilities. Regarding birth preparedness 100% of respondents were prepared for the place of delivery (Health facility) and early preparation of essential expenditure, followed by planning of transportation (82.75%) and essential clothing for baby (77.58%). Only one respondent was prepared for compatible blood donor before the delivery of baby.

Table 1: Awareness and Source of Information on Neonatal Danger Signs. N=117

Characteristics	Frequency	Percentage
Heard about danger signs (n=117)		
Yes	110	94.0
N0	7	5.9
If yes, aware on danger signs [a] ***(n=110)***		
Unable to suck	110	100
Hypothermia	69	62.7
Fever	109	99.1
Fast breathing/breathing difficulties	97	88.2
Jaundice	97	88.2
Vomit after each feeding	68	61.8
Eye infection	42	38.2
Umbilical cord infection	92	83.6
Skin infection	68	61. 8
Convulsion	20	18.2
Movement when stimulated	31	28.2
Watery stool/blood in stool	76	69.1
Source of information [a] ***(n=110)***		
Radio	104	94.5
Television	101	91.8
Family members	95	86.4
Friends	50	45.5
News paper	14	12.7
Health workers (FCHVs)	49	44.5

Note. [a]: Multiple responses

Table 2: Type of Care provided, Decision Maker and Time of Care Seeking after Danger Signs. N=110

Characteristics	Frequency	Percent
Type of care provided [a]		
Use home remedy	41	37.2
Traditional healers	12	10.9
Taken to private doctor	57	51.8
Taken to hospital (health post)	93	84.5
Taken to pharmacy	16	14.5
Decision maker for treatment [a]		
Postnatal Mother (self-decision)	98	89.0
Husband	70	63.6
Mother in law	83	75.4
Father in law	21	19.0
Any other (FCHVs)	31	28.18
Duration for seeking care after onset of danger sign		
Within 24 hours	72	65.5
After 24 hours	38	34.5

Note. [a:] Multiple responses

Table 1 reveals that most (94%) of respondents heard about neonatal danger signs. Among them, cent percent of respondents aware about unable to suck as neonatal danger signs followed by fever (99.1%), breathing difficulties and jaundice (88.2%), umbilical cord infection (83.6%), watery stool/ blood in stool (69.1%), hypothermia (62.7%) and least number of respondents (18.2%) were aware about convulsion as a neonatal danger signs. Similarly, most of respondents (94.5%) got information through radio and television (91.8%). It is also revealed that most of respondents (86.4%) got information of

newborn danger signs from family members, 44.5% of mothers from FCHVs, where least number of mothers (12.7%) got information through newspaper.

Table 2 illustrates the care seeking behavior of respondents for the neonatal danger signs. Most of respondents (84.5%) were taken their sick neonate to hospital. More than 50% of respondents prefer private consultation for their sick neonate and least number (10.9%) of respondents believed for the traditional healer's treatment for the neonatal danger signs. Regarding the duration for seeking care after the danger signs, majority (65.5%) of respondents sought care within 24 hours.

Table 3: Overall Awareness Level of Mothers on Neonatal Danger Signs. ***N=110***

Awareness level	Frequency	Percent
Aware	53	48.18
Not aware	57	51.81

Table 3 shows overall awareness level of newborn danger signs, in which more than half (51.81%) of respondents were not aware and 48.18% of respondents were aware on the neonatal dangers signs.

Table 4: Association between Demographic Variables and Awareness on Neonatal Danger Signs. ***N=110***

Variables	Awareness level				χ^2	P value
	Aware		Not aware			
	Frequency	%	Frequency	%		
Age						
<20 years	3	2.72	15	13.63	8.56	.004 [a]
>20 years	50	45.45	42	38.18		
Parity						
Primi	24	21.81	30	27.27	.59	.44
Multi	29	26.36	27	24.54		
Distance of health facility						
<1 hour	28	25.45	16	14.54	7.01	.008 [a]
>1 hour	25	22.72	41	37.27		

Note. [a]= Significant (P<0.05)

Table 4 illustrates that awareness on neonatal danger signs was significantly affected by age of postnatal mother and distance of health facility. Awareness level was not significantly affected by parity of mother.

DISCUSSION

In terms of socio-demographic characteristics, more than one fourth (36.8%) of respondents were from age group 21 to 25 years. 19.7% of respondents still gave birth before 20 years. Most of respondents (95.7%) were from Hindu religion. More than one fourth (33.3%) respondents belong to Magar ethnicity. Majority of mothers (54.3%) got higher secondary education. Similarly, majority of mothers (65.8%) had agriculture as their occupation.

Table 1 illustrates that more than half (51.2%) of the respondents were primiparous and nearly the same percentage of (51.28%) respondents visited health facility four times or more than four times for antennal checkup. Only one respondent had never attained her antenatal checkup. Most of (93.1%) respondents delivered their newborn at any health facilities. Regarding birth preparedness 100% of respondents were prepared for the place of delivery (Health facility) and early preparation of essential expenditure, followed by planning of transportation (82.75%) and essential clothing for baby (77.58%). Only one respondent was prepared for compatible blood donor before the delivery of baby.

Similarly in this study, most (94.5%) of respondents got information through radio and 91.8% got information through television, 86.4% of respondents got information from family members, 44.5% of respondents from Health workers namely Female Community Health Volunteers (FCHVs), where least number (12.7%) of respondents got information through newspaper which is contradictory findings of a study done at Tribhuvan University,

Teaching Hospital of Nepal where 45% of mothers received information from radio, television and magazines and a similar finding on the information from the health workers was found which was 38%. [8]

In this study, more than half respondents (51.2%) were primiparous. More than half (51.28%) respondents visited health facility four times or more than four times for antennal checkup. Only one respondent never attained her antenatal checkup. Most (93.1%) respondents delivered their newborn at any health facilities. Regarding birth preparedness 100% of respondents were prepared for the place of delivery (Health facility) and early preparation of essential expenditure, followed by planning of transportation 82.75% and essential clothing for baby 77.58%. Only one respondent was prepared for compatible blood donor before the delivery of baby.

Similarly, most of (94%) of respondents heard about neonatal danger signs. Among the danger signs, cent percent of respondents were aware about unable to suck as neonatal danger signs. This findings is consistent with the findings of a study done at Tribhuvan University, Teaching Hospital of Nepal where most of the mothers (95.0%) were aware about at least one neonatal danger sign and none of the mothers were aware all neonatal danger signs. [8] In this study almost all mothers (99.1%) were aware about fever, similarly 88.2% of mothers were aware on breathing difficulties and jaundice as newborn danger signs. These finding are consistent with the findings of a study done in India where 91% of respondents were aware on hot to touch, 74.5% of respondents aware on breathing difficulties, and 25.5% respondents were aware on skin, palm and sole yellow. [9]

Regarding the umbilical cord infection 83.6% of respondents were aware in this study, similarly 69.1% of respondents were aware on watery stool/ blood in stool as a neonatal danger signs, like wise 62.7% of respondents were aware on hypothermia as a neonatal danger signs. The finding on awareness on umbilical cord infection is similar with the findings of a study done at Tribhuvan University, Teaching Hospital of Nepal where 82% of mothers were aware on umbilical cord infection. These findings were inconsistent with the findings of a study done in India where only 37% of mothers had correct knowledge regarding loose stool. Similarly in a study finding of Kenya where 9.7% of mothers identified hypothermia as newborn danger sign. Awareness on hypothermia also contrasts with the findings of a study done in India where only 38.3% of mothers were aware on hypothermia. In this study least number of mothers (18.2%) was aware about convulsion as a neonatal danger signs which is similar to the finding of a study done in Kenya where 11.1% of mothers identified convulsion as a neonatal danger signs. [7-9]

With regards to the topic care seeking behavior of respondents for the neonatal danger signs, most (84.5%) of respondents were taken their sick neonate to hospital, more than half (50%) of respondents prefer private consultation for their sick neonate and least number (10.9%) of respondents believed for the traditional healer's treatment for the neonatal danger signs in this study. This finding is similar to the finding of a study done in India where majority (71.9%) of mothers consulted local doctor for any problem during neonate period and only 12% of the mothers approached Govt doctor for treatment. [10] Similarlyin a finding of a study in Peri-Urban Wardha, India reported all sick newborns with danger signs were taken to the doctor and only two mothers consulted faith healer for treatment. [11]

Regarding the decision maker for the treatment of sick newborn most of respondents (89%) themselves provided decision for the treatment of sick newborn in this study. Similarly the duration for seeking care after the danger signs, majority of respondents (65.5%) sought care within 24 hours in this study. Similar finding was found in a study conducted in Tribhuvan University, Teaching Hospital in Nepal

where 63% of mothers shout care within 24 hours after onset of newborn danger signs. [8] With regard to the awareness on neonatal danger signs more than half of respondents (51.81%) were not aware and 48.18% of respondents were aware in this study and awareness on neonatal danger signs was significantly affected by age of postnatal mother and distance of health facility as p value was found.004 and .008 respectively. Awareness level was not significantly affected by parity of mother. This findings is consistent with the findings of a study done in India, where improvement in mothers' knowledge was significantly associated with increasing age ($p<0.01$). [7]

CONCLUSION

On the basis of the findings it can be concluded that more than half mothers (51.81%) were not aware on the neonatal dangers signs in rural Nepal. In addition, awareness on neonatal danger signs was significantly affected by age of postnatal mother and distance of health facility. Most of respondents heard these danger signs from the hospital by health workers, television and Radio and from FCHVs. All most all respondents aware about the unable to suck, fever, fast breathing/breathing difficulties, Jaundice as a newborn danger signs. Based on the study findings, it is concluded that to decrease mortality among neonate a teaching must be provided on neonatal danger signs since pregnancy to the delivery of baby.

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