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Research Article

**KNOWLEDGE OF THE MOTHERS REGARDING NEWBORN
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Pakistan., ³Dow Medical College Karachi, Pakistan., ⁴Combined Military Hospital Malir
Cantonment Karachi, Pakistan.**Article Received:** July 2019**Accepted:** August 2019**Published:** September 2019**Abstract:**

Objective: To assess the knowledge of the mothers regarding newborn care, attending OPDs of the Holy Family Hospital, Rawalpindi.

Background: Neonatal mortality is a persistently present issue in Pakistan, being a major cause of under age 5 deaths. Most of the contributing factors are preventable and have been significantly linked to literacy rate. A number of harmful newborn care practices are observed. Areas where educational intervention has been employed has resulted in considerable positive outcome and awareness.

Materials and methods: This was a cross-sectional study conducted at Holy Family Hospital Rawalpindi. 100 mothers were included and convenience sampling was done. Babies upto 6 months of age were included. Data analysis was done on SPSS version 22.0 and a structured questionnaire was used as data collection tool.

Results: Cord tying ($p=0.001$), place of birth ($p=0.014$), and mode of delivery ($p=0.00$) were significantly linked to the educational status of the mother.

Cord care, physical contact with mother, wiping, bathing and wiping practices, prelacteal feed and its type, colostrum, time of feeding, EPI schedule, handwashing, guidance regarding newborn care were not influenced by the educational status of the mother.

Conclusion: Knowledge about newborn care among mothers visiting OPD was found inadequate, especially regarding place of delivery and cord tying, influenced by the literacy status of the mother.

MeSh Words: Neonatal, Colostrum, Literacy, Cord care.

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INTRODUCTION:

Pakistan is amongst the five countries that contribute to 49% of global childhood deaths. Even though child mortality declines globally, neonatal mortality is still an important cause of under-5 deaths [1]. Most infant deaths occur during this time due to factors many of which are preventable including infections, under nutrition, water sanitation ,hygiene, mother's education and lack of vaccination [2]. Among all of these literacy rate has consistently been found to be a major contributing factor due to lack of knowledge of essential new born care in the developing countries [3].

Illiterate mothers are more likely to use harmful newborn care practices like improper management of the umbilical cord, delivery by unskilled Birth attendants, delay in seeking health care and feeding related misconceptions [4,5, 6]

According to WHO the most decisive factor which needs to be corrected is maternal awareness about neonatal care [7]. A simple educational intervention designed for low-literate population has helped to improve newborn care by mothers in Karachi.[8]

Studies done in Haripur District and Gilgit, Pakistan, highlighted the fact that illiteracy of the mothers resulted in use of more harmful practices ranging from immediate bath after birth to application of soil to the cord after ligation [9,10]

As maternal knowledge and literacy are the decisive factors in the health and the longevity of the neonate, this study is being conducted to assess effect of literacy on the neonatal healthcare knowledge prevalent in the study population.

MATERIALS & METHODS:

This was a cross-sectional retrospective study conducted at Holy Family Hospital Rawalpindi over a duration ---- 2015. The site of the study was Outpatient department of the hospital. A sample size of 100 was taken via convenience sampling. Informed consent was obtained from all subjects and anonymity was ensured. The research was approved by Institutional Review Board. The inclusion criteria was set as mothers with babies up to 6 months of age and exclusion criteria was set as sick mothers who are unable to look after neonates and mothers of premature or sick babies.

A structured questionnaire was used for data collection. Information specifying educational status of mother, economic status of mother, residence, place of delivery, type of delivery, delivery

conducted by, tying of cord, cord-care, first physical contact with the baby, wiping after birth, agent for removal of vernix caseosa, time of bath after birth, wrapping baby, pre-lacteal feed, type of pre-lacteal feed, time of initial feeding, colostrum feeding, exclusive breast feeding, EPI schedule, hand-washing and guidance regarding newborn care were taken as variables. Analysis of data was done on SPSS version 22. Chi-square was done as a test of significance for categorical variables and a P-value of less than 0.005 was taken as significant.

RESULTS:

A total of 100 patients were included in the study. Of these 37% had Matric level education, 29% were graduate and above and 34% were illiterate.

38% of patients had a monthly income range of 10000-20000, 30% above 20000 and 32% had income range of 5000-10,000. 67% of patients were urban residents and 33% rural.

Stratifying variables In relation to educational status of the mother following results were obtained.

In terms of place of birth, of the illiterate mothers 58.8% had hospital birth, 35.3% had home birth and 5.9% had clinic birth. Of the Matriculated mothers, 78.4% had hospital birth, 13.5% had home birth and 8.10% had clinic birth. Of the graduate and above mothers 93.2% had hospital birth, 3.4% had home birth and 3.4% had clinic birth. These differences were statistically significant with a p-value of 0.014.

Correlating with types of delivery, of the illiterate mothers 76.5% had SVD, 17.6% had C-section and 5.9% had episiotomy. of the matriculated mothers, 51.4% had SVD, 37.8% had c-section and 10.8% had episiotomy. Of the graduation and above mothers, 55.2% had SVD, 34.5% had c-section and 10.3% had episiotomy.

55.9% of the illiterate mothers were delivered by a doctor, 35.3% by dai etc and 8.8% by a nurse. Of the matriculated mothers, 86.5% were delivered by a doctor, 8.1% by dai etc and 5.4% by a nurse. Of the graduation and above mothers 100% were delivered by doctors. These differences were statistically significant with a p value of 0.00.

Among illiterate mothers, 51.8% had cord clamped, 29.4% had cord tied by thread and 8.8% had cord tied by cloth. In matriculated mothers, 91.9% had cord clamped and 8.1% had it tied by thread. In graduate level and above mothers, 96.6% had cord clamped and 3.4% had cord tied by cloth.

Of the illiterate mothers 35.3% used spirit for cord care, 32.4% used others, 17.5% used Dettol and 14.7% used an ointment. Of the matriculated mothers, 48.5% used spirit, 24.3% used Dettol and 13.5% used ointment and others each. Of the graduation and above mothers 65.5% used spirit, 17.2% used Dettol, 10.3% used others and 6.9% used ointment.

Of the illiterate mothers, 50% each had physical contact with the baby within 30 minutes. Of the matriculated mothers, 35.1% had physical contact with baby and of graduation and above 58.6% had physical contact with the baby within 30 minutes.

91.2% of the illiterate mothers wiped the baby after birth, 81.1% of matriculated mothers wiped baby after birth and 96.6% of graduation and above mothers wiped baby after birth.

Of the illiterate mothers, 85.3% used water for removal of vernix caseosa, 8.8% used oil and 5.9%

used paraffin wax. Of the matriculated mothers, 70.3% mothers used water, 16.2% used paraffin and 13.5% used oil. Of graduation and above mothers, 75.9% used water, 13.8% used paraffin wax and 10.3% used oil.

55.9% of the illiterate mothers bathed the baby immediately after birth, 29.7% of matriculated mothers bathed the baby after birth and 27.6% of graduate level mothers bathed the baby immediately after birth.

91.2% of illiterate mothers wrapped the baby after birth, 94.6% of matriculated mothers wrapped baby after birth and 96.6% of graduate level mothers wrapped the baby after birth.

64.7% of the illiterate mothers, 56.8% of the matriculated mothers and 51.7% of the graduation and above level mothers gave the baby pre-lacteal feed. Types of pre-lacteal feed used by mothers is illustrated in figure#1

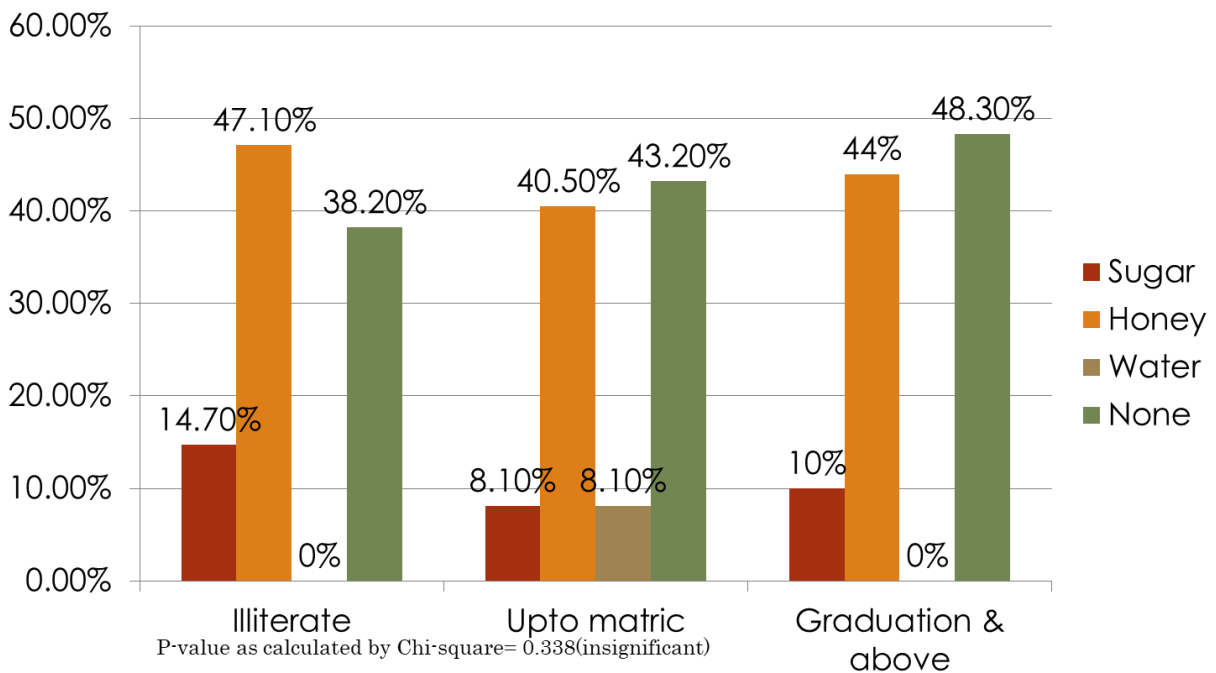


Figure 1 types of pre-lacteal feed - educational level of mother

61.8% of illiterate mothers, 59.5% of matriculated mothers and 69% of graduate and above level mothers fed the baby colostrum.

Correlation of time of initial feeding with educational status is illustrated in figure 2.

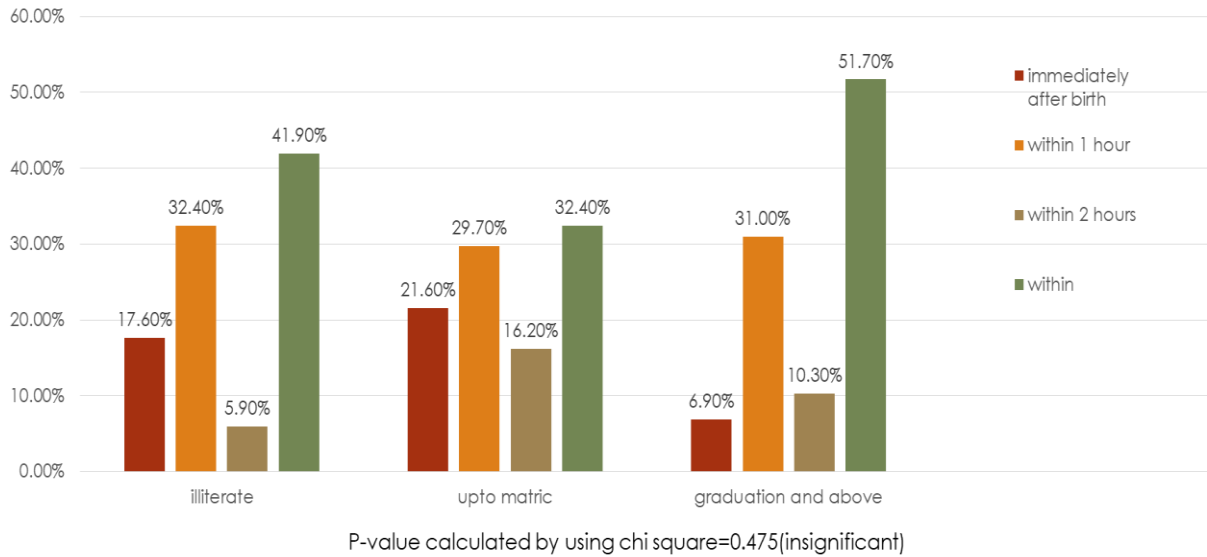


Figure 2 - Time of initial feed

67.6% of illiterate mothers, 64.9% of matriculated mothers and 79.3% of graduate level and above mothers breastfed the baby exclusively.

matriculated and 96.6% of graduate level and above mothers practiced hand washing before handling the baby.

82.4% of illiterate, 78.4% of matriculated and 96.6% of graduate level and above mothers followed the EPI Schedule. 94.1% of illiterate, 91.9% of

The education of mother correlating with guidance regarding newborn care had a p-value of 0.006 and the respective parameters are illustrated in figure 3.

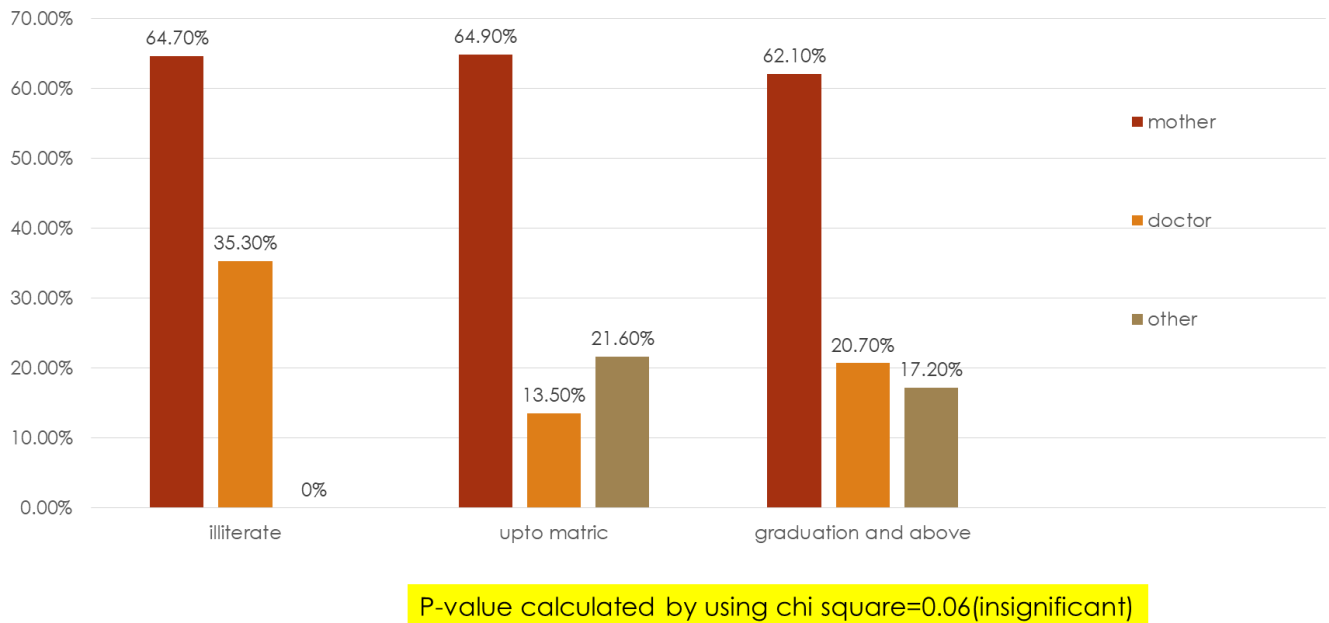


Figure 3- education of mother - guidance regarding newborn care

DISCUSSION:

In our study 98% of mothers whose education was graduation or above and 78.4% of mothers with under matric education preferred delivery in hospital while only 58.8% of illiterate mothers wanted delivery in hospitals. When chi square was applied the relationship between mother's education and place of delivery was found to be highly significant with p value of 0.014 as in a study done in Azad Jammu Kashmir, where 53% of illiterate mothers preferred delivery at home rather than at hospital. (11)

100% of mothers who were graduated or above and with under matric education preferred delivery by doctors while only 55.9% of illiterate wanted delivery by doctors while in Azad Jammu Kashmir's study only 27% of illiterate mothers preferred delivery by doctors (11).

In our research wrapping the baby soon after birth was common in all the three groups i.e up to 90% mothers of all educational groups wrapped their babies soon after birth which is not related to educational status but influenced by cultural beliefs. While 3.4% mothers with graduation and above, 5.4% under matric and 8.8% of illiterate mothers did not wrap the babies soon after birth.

Statistically significant association was found in cross-table analysis between mother's education and the practices of tying ($p < 0.001$) a newborn's umbilical cord, 96.6% of mothers whose education level was graduation and above, 91.4% under matric and 51.8% illiterate mothers had the knowledge of tying the cord with also a clamp, which is similar as seen in a study done in Azad Jammu Kashmir where a statistically significant association was found in cross-table analysis between the illiteracy and the practices of tying ($p < 0.001$) and cutting ($p < 0.001$) a newborn's umbilical cord with unsterilized items. (11)

Under the WHO criteria the bathing of a healthy delivered neonate should be delayed till at least 24 hours (12). In this study, 72% of mothers with graduation and above, 70% up to matric and 58.9% illiterates gave bath to the neonate immediately after birth which is in contrary to the above mentioned criteria and no statistically significant relationship was found between the two variables. In a study done in Gilgit 94% of illiterate mothers gave bath to the newborns soon after birth (6).

In the present study, initiation of breastfeeding immediately after birth and exclusive breastfeeding

practices were common among mothers of all educational levels with no statically significant relationship was seen between education of mother and aforementioned practices, 67.6% of illiterate, 64.9% under matric and 79.3% mothers who were graduate and above were practicing exclusive breast feeding, which is opposite to the results shown in studies at Karachi and Peshawar, where majority of the illiterate mothers were not following these practices (13, 14).

Practice of removing vernex caseosa, giving pre lacteal feed and colostrums was common in all mothers of the three educational levels which is contrary to study conducted in Haryana, India, where these practices were more common among illiterate women (15). No statistically significant association was seen in these practices and educational status of mother.

CONCLUSION:

Knowledge about new born care among mothers visiting OPD was found inadequate especially regarding place of delivery and cord tying, which was also related to mothers low level of education.

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