

# Knowledge about the contents of mother and child protection card among pregnant women and lactating women of a rural field practice area

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## Abstract

**Introduction:** MCH services are not utilized due to unawareness, poverty and lack of scientific knowledge regarding care during the issue. Though all the details are given in the MCPC to follow positive practices, utilization of the card is being done only for recording of the information.

**Objective:** To assess the knowledge about the contents of mother and child protection card (MCPC) among the pregnant and lactating women of a rural area

**Methodology:** This was a cross sectional study conducted on pregnant women and lactating mothers with child less than a year. Knowledge about the contents of MCPC was collected by interview method.

**Results:** In our study, majority of the mothers had good knowledge about tetanus injection (92.5%), consumption of IFA tablets (72.6%), breastfeeding within an hour (92.5%), exclusive breastfeeding for 6 months (95.6%), cereals to be included in the complementary food (90.6%) and good perception about complete immunization of the baby (100%). Knowledge was found to be poor with respect to ANC checkups and examination, tracking weight of the baby and growth chart; assessing danger signs in newborn and emergency preparation.

**Conclusion:** The study showed good knowledge about TT, IFA, nutrition, danger signs and immunization. There was poor knowledge about ANC checkups, baby growth, danger signs in newborn and emergency preparation.

**Key words:** Mother and Child Protection Card, Ante natal care, Knowledge, pregnant, lactating women.

## Introduction

India has recorded a significant reduction in the deaths of mother and infants. According to WHO, the maternal mortality ratio (MMR) has significantly reduced in the current years to 130/1, 00,000 live births (2016). This rate directs the country to achieve the Sustainable Development Goal (SDG) target of an MMR below 70 by 2030<sup>[1]</sup>. Infant mortality rate (IMR) also has been declined to 33/ 1000 live births in 2017<sup>[2,3]</sup>.

However, with the ongoing success on one end, the latest data of the Rapid Survey on Children (2013 -14) (RSOC) records registered pregnancy as 84.1% and only 73% have received Mother and Child Protection Card (MCPC). Along with this, only 61.8% women have received first antenatal care in first trimester<sup>[4]</sup>.

The Mother and Child Health 4 programme in the

country aims to reduce the maternal, neonatal and under-five mortality and morbidity. The National Institute of Public Co-operation and Child Development (NIPCCD) in collaboration with UNICEF and Ministry of Women and Child Development have developed MCPC which was introduced and brought into effect from April 1, 2010<sup>[5]</sup>.

The MCPC has been developed as a tool for communication, used by ASHA, Anganwadi workers, ANMs to explain the families about mother and child health (MCH) services; danger signs during pregnancy; preparation for delivery; dangers in newborn; weight; childhood illnesses; nutrition, immunisation, etc. The card also helps families to become aware of the different types of services provided for mother and children<sup>[5,6]</sup>.

In Indian set up, even with the provision of maternal

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and child health services at free of cost, the efficiency of utilization of the services is not to the mark. This is due to unawareness, poverty and lack of scientific knowledge regarding care during the issue. Awareness about the care during critical condition is necessary to reduce the mortality rates.

Though all the details are given in the MCPC to follow positive practices for achieving good health of pregnant women, young mothers and children; utilization of the card is being done only for recording of the information. Limited studies have been conducted in this part of India to assess the knowledge about the contents of MCPC. Thus, this study was intended to be carried out with the following objectives.

### Objective:

To assess the knowledge about the contents of mother and child protection card (MCPC) among the pregnant and lactating women of a rural area

### Material and methods

A cross sectional study was conducted in a rural field practice area of medical college, consisting of all the pregnant and lactating women with children aged less than one year. The study was conducted from June 2019 to Dec 2019 after obtaining clearance from the institutional ethical committee. A list of pregnant women seeking antenatal services and mothers of children aged less than one year, who were the beneficiaries of the primary health centre was obtained. House to house visit was done to get the information about antenatal care and newborn care from the study subjects.

The questions to obtain the knowledge were drawn with reference to the mother and child protection card prepared by the joint efforts of Health Department and Women & Child Development Department in collaboration with UNICEF<sup>[7]</sup>. It covered about the antenatal care, immunization of the child, nutritional status of the child, growth monitoring etc.

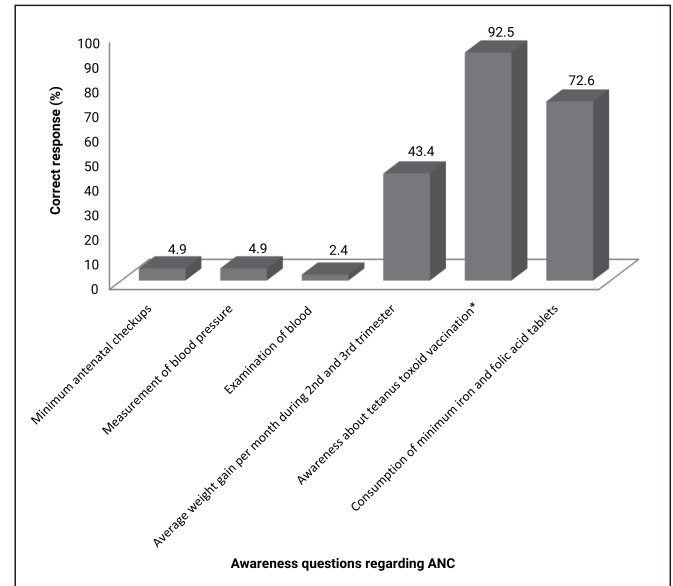
The data collection was done with the help of two interns, who were trained to interview the study subjects in the local language (Kannada). The information was obtained by interview method after obtaining consent from the study participants. Along with this, the socio-demographic profile of the subjects like age, education, occupation, socioeconomic status, type of family was collected. Confidentiality of the data was maintained.

**Data Analysis:** The data collected was entered in excel sheet. The categorical data was represented in the form of frequency and percentage.

### Results

Among 161 mothers, antenatal mothers were 83(51.55%) and lactating mothers were 78 (48.45%). Majority of the mothers were of age group 19 to 24 years i.e., 63(39.1%); 95(59%) mothers were educated till 10<sup>th</sup> std, 75 (46.5%) mothers were labours by occupation, 88 (54.6%) mothers belonged to class 3 socioeconomic status. 121(75.15%) mothers were from joint family.

Assessment of Knowledge of the mothers about antenatal care



**Chart 1: Assessment of the knowledge of mothers about ANC**

\*Though the TT was replaced by Td in 2017, it was referred as TT by the study subjects.

The knowledge of the mothers about antenatal care is described in chart 1. The requirement of minimum three antenatal check-ups was known to only 4.9% of the mothers. 4.9%, 2.4%, and 3.8% were aware about getting the blood pressure checked, examination of blood and urine at each visit respectively. The average weight gain per month (nearly 1kg) during 2<sup>nd</sup> and 3<sup>rd</sup> trimester was answered by 43.3% of the mothers correctly. The knowledge about taking tetanus toxoid was known to 92.5% of the mothers.

Around 73% were aware about the consumption of minimum number (180 tablets) of iron and folic acid tablets during their pregnancy period. But awareness about consumption of calcium tablets (3%) and Tab Albendazole (nil) was poor among the mothers.

When asked about the danger signs of pregnancy,

majority of them recognized pain abdomen (91.3%) as the most common danger sign, followed by fever (33.5%), bleeding PV (22.1%) and rupture of membrane (8%)

When asked about emergency preparations required for delivery, most of them did not know what has to be done (57.7%), and 39.7% and 1.2% knew about arrangement of transportation and identification of hospital in advance.

48% of the women were aware of the ideal gap of 3 years between the deliveries. When questioned about the post delivery danger signs, fever (62.7%) was the most common danger sign perceived, followed by excessive bleeding (23.6%) and foul smelling discharge (8%).

Assessment of knowledge of mothers about newborn care practices

**Table 1: Assessment of knowledge about Newborn and infant care**

Sl no	Knowledge about new born and infant care		N (%)
1	Care of the Newborn*	Breastfeeding within an hour	149 (92.5)
		Keeping the baby warm	69 (42.8)
		Tracking weight of the baby	4 (2.4)
		First bath after 48 hours	70 (43.47%)
2	Duration of Exclusive breastfeeding	6 months	154 (95.6)
3	Danger signs in the newborn*	Fever	71 (44)
		Breathing difficulty	46 (28.5)
		Excessive cry	36 (22.3)
		Difficulty in feeding	14 (8.6)
		Hypothermia	2 (1.2)
4	Food items used in complementary feeding*	Cereals	146(90.6)
		Pulses	69 (42.8)
		Vegetables	16 (9.9)
		Biscuits	16 (9.9)
5	Perception of complete immunization	Yes	161(100)
7	Where should an ideal growth curve lie?	Not answered	110(68.3)
		Incorrect answers	51(31.7)

\*Multiple responses

Breastfeeding the baby was the most common newborn care known to majority of the mothers (92.5%), followed by keeping the baby warm (42.8%)

and giving the first bath after 48 hours (43.47%).

A majority of the mothers (95.6%) comprehended exclusively breastfeeding the baby for 6 months. Hyperthermia (44%), breathing difficulty (28.5%), excessive cries (22.3%) were the most common danger signs of newborn recognized by mothers. Cereals (90.6%), pulses (42.8), vegetables (9.9%) and biscuits (9.9%) were the complementary foods spotted out by mothers to give to their newborns. There was good perception about complete immunization of the child. The knowledge about the position of ideal growth curve was not known to any of the mothers. (Table 1)

## Discussion

In our study, majority of the study subjects belonged to the age group of 19-24 years (39.1%) but in other studies done by Biyyala R, Radhika M and Elavarasan E in Kurnool, Muthukur and a rural area of Kanchipuram district, majority belonged to the age group of 25-34 years (46%), 24-30 years (52.5%) and had a mean age of 24.33 +/- 2.88 years respectively<sup>[8,9,10]</sup>.

The present study showed high number of mothers educated till 10<sup>th</sup> std (59%) which was in line with the studies done by Rama R et al., in a rural area of Kanchipuram district (67%) and Haleema M done in Mangalore(74.7%)<sup>[11,12]</sup>. In contrast to this, studies done by Biyyala R et al., (64%) and Radhika M et al., (42.5%) found illiterates as a major proportion in their study<sup>[8,10]</sup>.

There were 46.5% mothers with daily wage work as occupation in this study but it was found high (89%, 95%) in other studies<sup>[8,10]</sup>. Nearly half of the study subjects belonged to class 3 socioeconomic status but it was 96% in a study done in Kurnool<sup>[10]</sup>. Three-fourth of the mothers belonged to joint family in the present study, whereas in other studies, most of them belonged to nuclear family<sup>[8,10,11]</sup>.

## Awareness about antenatal care

In the current study, knowledge about tetanus toxoid injection was good (92.5%) which was comparatively less in other studies (57.5%, 79%, 65%)<sup>[8,9,13]</sup>. The knowledge about minimum number of consumption of iron and folic acid tablets was 72.6% in the present study which was contrary to the result found by Elavarasan (38%)<sup>[9]</sup>.

There was poor knowledge about the minimum number of antenatal checkups needed in the present study (4.9%). This was dissimilar with that found in state fact sheet, Karnataka -NFHS 5 (70.6% in rural) and other studies<sup>[8,9,10,13,14,15]</sup>.

The knowledge about blood and urine examinations

in every visit was less than 5% in the existing study which was in disparity with the results in studies by Jena D et al., (37%), Radhika M et al., (50%) and Elavarasan et al., (56%) respectively<sup>[8,9,15]</sup>.

Average weight gain per month was correctly assessed by 43.4% but in a study done by Radhika M et al., only 22.5% knew about the average weight gain<sup>[8]</sup>.

Though the knowledge about the danger signs was fair in the present study (pain abdomen - 91.3%, fever - 33.5%); awareness about emergency preparations (1.2%) was poor. Elavarasan E et al., found about 28% were aware of pain abdomen as the danger sign and only 40% did not plan in case of emergency<sup>[9]</sup>. The response for preparation during emergency was appreciable in the study by Jena. D. et al<sup>[15]</sup>.

#### **Awareness about newborn care**

Knowledge about newborn care was fairly good with respect to breastfeeding, complementary feeding and immunization. Around 93% mothers knew that the baby has to be breastfed within an hour. This score is proportionately high as compared to other studies. (45%, 49.48%, 48%, 69%,) and NFHS 5 Karnataka report (47.5%)<sup>[8,9,10,11,14]</sup>. Breastfeeding the baby exclusively for 6 months was known to 95.6% of the mothers. In contrary, this was low in NFHS 5 Karnataka - rural (63%) and the studies done by Radhika M (52.5%) and Elavarasan E (34.02%)<sup>[8,9,14]</sup>.

Cereal was the main food answered by many mothers (90.6%). Similar finding was seen in the study done by Rama. R (87%) and a contrast result was observed in Elavarasan E (42%)<sup>[9,11]</sup>.

Perception towards immunization was excellent in the present study (100%). Analogous result was found in other studies (97.89%, 93%, 86.5%)<sup>[9,11,14]</sup>. But in a study done by Biyyala R et al., the knowledge about immunization was comparatively poor (61%)<sup>[10]</sup>.

Knowledge about keeping the baby warm was known to 42.8% of the mothers in this study. This was not in line to the finding observed in the study done in rural Tamilnadu (23% and 25%)<sup>[9,11]</sup>. Similar range of knowledge was noticed with respect to bathing the baby after 48 hours (43.47%). In the studies done by Elavarasan E et al., and Rama R et al., only 30% of the mothers were aware about bathing the baby after 2 days<sup>[9,11]</sup>. When asked about the danger signs in the newborn, 44% knew fever as one of the danger signs in the present study. Similar finding was reported in other studies (44%, 55%) respectively<sup>[9,11]</sup>.

There was nil knowledge about tracking weight of the baby which was in contrast to that of the findings

from other studies. (42%)<sup>[9,11]</sup>.

#### **Limitation:**

The study subjects might have gained knowledge from other sources like parents, neighbours etc. Which could not be ruled out. The factors responsible for the degree of knowledge were not accessed.

#### **Conclusion:**

In our study, majority of the mothers had good knowledge about tetanus injection (92.5%), consumption of iron and folic acid tablets (72.6%), breastfeeding the baby within an hour (92.5%), exclusive breastfeeding for 6 months (95.6%), cereals to be included in the complementary food (90.6%) and good perception about complete immunization of the baby (100%); recognized pain abdomen (91.3%) and fever (62.7%) as danger sign and post delivery danger sign respectively.

Around 43% of the mothers gave correct responses about the average weight gain in 2<sup>nd</sup> and 3<sup>rd</sup> trimester, keeping the baby warm (42.8%), bathing the baby for the first time after 48 hours (43.47%), distinguished hyperthermia as the danger sign in babies (44%), inclusion of pulses in the complementary food (42.8%), ideal gap between two deliveries (48%).

Knowledge was found to be poor with respect to ANC checkups and examination, tracking weight of the baby and growth chart; assessing danger signs in newborn and emergency preparation.

#### **Recommendation:**

Majority of the mothers even though were educated but lacked knowledge about MCPC, might be because of the inadequate motivation and ignorance. This needs to be addressed by creating community awareness sessions by grassroot workers like ASHA, Anganwadi workers, ANM on MCH services through MCPC during ANC visits.

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