

TO ASSESS THE KNOWLEDGE AND SKILL, ABOUT ANTENATAL AND INTRANATAL CARE AMONG PARAMEDICAL WORKERS POSTED IN HEALTH CENTER OF TRIBAL AREA OF CHHATTISGARH.

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ABSTRACT

Background: Maternal and Neonatal mortality & morbidity are significant health problems in developing countries. Improving maternal and neonatal health care has been an essential element for achieving millennium developmental goals, by 2015. The National Rural Health Mission (NRHM) now NHM seeks to provide effective health care to the entire rural population with special focus on 18 high focus states including Chhattisgarh.[1]. In this study all study subjects posted in tribal areas are trained under NRHM. **Objective:** 1. Pre training evaluation of knowledge and skill of paramedical workers about antenatal and intranatal care. 2. To assess the impact of "Skill Birth Attendant" training on these PMW. **Method:** A cross sectional hospital based study was conducted in medical college during "SKILL BIRTH ATTENDANT TRAINING" of Para Medical Worker (PMW). The total 190 PMW were assessed for knowledge and skill, regarding antenatal and intranatal care. Data were analyzed using SPSS software and p value obtained by doing student t test. **Result:** In this study maximum number of participants are ANM (67.8%) and belong to tribal area 153 (79.6%), knowledge assessment of antenatal and intranatal care revealed that before training it was not satisfactory but their performance was improved after "SBA" training significantly ($p=0.002&.000$). **Conclusion:** The fact that, even the freshly trained PMW were found to be ill-equipped for this essential function which was indeed disturbing. We need to take a fresh look at their training. So ongoing continuous competency based in-service training program should be compulsory for all levels of paramedical workers.

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INTRODUCTION

Pregnancy and child birth are normal events in the life of a woman. Though most pregnancies result in normal birth, it is estimated that about 15% may develop complications, which cannot be predicted [2]. Maternal and neonatal morbidity and mortality are significant health problems in developing countries. Almost 90% of maternal deaths occur in developing countries. It is estimated that about 3.9 million neonatal deaths occur worldwide of these 30% deaths occur in India only [3]. Perinatal care has a tremendous effect on the maternal and child health outcome [4,5].

Since any pregnancy can develop complications at any stage, so timely provision of obstetric care services is extremely important for management of such cases and as such, every pregnancy needs to be cared for by a Skilled Birth Attendant (SBA) during pregnancy, childbirth and the post-partum period. These SBAs must have skills related to routine care provision including identification and immediate management of complications arising during pregnancy and childbirth. [2]. Hence it is very important to

study whether they are able to deliver these essential services at community level. Keeping this in mind the present study has been carried out to assess their knowledge and skill related to antenatal and intranatal care. The objectives of the study are:

Objective

1. Pre training evaluation of knowledge and skill of paramedical workers about antenatal and intranatal care.
2. To assess the impact of "Skill Birth Attendant" training on these PMW.

Study Design: Cross sectional Hospital based study.

Material and Method: A cross sectional study was carried out between April 2013 to May 2015. The study population including 192 female paramedical workers i.e.; Auxiliary Nurse Midwives, Lady Health Visitors and Staff Nurses working in Sub center, PHC and CHC, situated in Tribal area of District Bilaspur, Chhattisgarh. They come in batches of 20-25 to attend "Skill Birth Attendant" training. Study conducted at Medical College Hospital CIMS, Bilaspur (C.G.), during SBA training program for PMW. Total duration

of training was 15 days. Data collection tool in this study was semi structured knowledge based Questionnaire, on antenatal and intranatal care, and an observational checklist were used for assessment of skill. These tools were used to collect data from each study subject before and after training. Same semi structural questionnaire based format was filled by each participant and observational checklist was filled by investigator. After collection of the data it was processed and extensively reviewed. Each answer sheet were coded and scored. The data were statistically analyzed using SPSS software. Mean and proportion were compared Student t- test. Odd ratio calculated $p < 0.05$ was consider to be significant.

RESULT:-

Table 1 shows the General characteristic of study subject, most of the participant serve in the tribal area 153(79.6%) .it was observed that maximum number of study subject are belongs to age group between 35-50 years 90(46.8%), maximum number of study subjects educated up to 12th standard 98(51.1%),most of participant there, total duration of service in health sector up to 5year / less than 5 years were 111(57%) and maximum number of participant in this study are ANM 130(67.8%) attending "SBA" training. As shown in table 2 We have obtained the mean and SD of questions of before & after training are (131.42,23.17),(172.42,7.50). Knowledge related to antenatal care among paramedical worker are significantly improves after attending " Skill Birth Attendant" training programme. Knowledge about objective of antenatal care are 124(68.7%) participant aware about it, before training that's improved to176(91.7%) ,similarly about Tetanus Toxoid dose schedule 163(84.8%) improved to 183(95.3%),Iron folic acid supplementation dose schedule 132(68.7%) improves to 168(87.8%),knowledge related to estimation of gestational age, based on fundal examination previously it was 122(63.5%) participant aware about it and improved to161(83.8%),regarding identification of high risk case only 119(61.9%) paramedical worker aware about it, that's improved to 167(87%), regarding number of antenatal visit maximum study subject already aware about this 161(83.8%) before training and improved to 178(92.7%). The most important and crucial identification of warning sign of pregnancy, when to refers the Obstratric case to next higher level, very low level of awareness among paramedical workers that is alarming only 99(51.6%) study subject aware about it that's improved to174(90.6%).

According to table:-3 We have obtained the mean and SD of questions of before & after training are (99.22,25.72),(160.67,29.86). was observed that remarkable improvement of Knowledge related to Intranatal care among paramedical workers after the training, result are clearly observed that the before training, knowledge about conduction of normal Delivery was 103(53.6%),about 5 clean 99(51.6%),danger sign of home Delivery 92(47.9%), and when to transfer mother in labor is just 57(29.7%). After the training of "Skill Birth Attendant" most of the participant improved and they performed well and scored high in same questionnaire, knowledge about conduction of Delivery174(90.6%), about 5 clean 172(89.5%),danger sign of home Delivery 176(91.7%), and when to transfer mother in labor is was just 57(29.7%) before training improved to 84 (43.7%).Question related to immediate essential new born

care most of the participant scored poorly only 122(63.5%) participant know about the significance of birth weight, 99(51.6%) participant know about the correct method of drying & mopping of new born,103(53.6%) knows the correct method of resuscitation of new born, 134(70%) knows about right practice of umbilical cord ligation, 57(29.7%) aware about dose scheduled of vitamin K injection and only half of participant 99(51.6%) aware that when to refer the new born to next higher level. Post training evaluation result of participant really impressive they improved a lot .After attending the "SBA" training significant ($P=0.000 < 0.01$) improvement of knowledge were observed about the significance of birthweight178(92.7%) answer correctly ,similarly regarding method of resuscitation of newborn 157(81.8%), method of drying and mopping of newborn 170(88.5%),regarding umbilical cord ligation 178(92.7%), dose schedule of vitamin K injection 157(81.8%) and most important when to refer the newborn to next higher level 167(87%) answer correctly.

On skill assessment the practical knowledge of PMW are very poor , only 39% were knew the partogram exercise , while on estimation of blood for Hb% and Urine albumin respectively 51.7% and 59.9% were had knowledge of correct method . Skill assessment of steps of vaginal delivery 49.9% were gave correct demonstration , and of resuscitation only 40.6% were showed correct method of resuscitation . While preparation of microplans practice is very good of PMW and 81.8% replied correctly . Over all knowledge related to skill of various procedure although improved in more then 50% subjects, but was not satisfactory as shown in table no. 4 .

DISCUSSION

In India, 52.3% of births take place at home and of these, just 5.7% of births are *attended by a skilled person* (District Level Household and Facility Survey [DLHS]-3, 2007-08). These figures highlight that high proportions of births in the country are still being undertaken by an unskilled person and as such, contribute to large number of maternal and neonatal deaths.

In this study knowledge of PMW related to tetanus immunization and number of antenatal visit are much better, but knowledge in prevention of anemia and objective of antenatal care none of the PMW had precise knowledge in these area. (87.8 % to 93%). Similar results also observed by various author, most of health workers lacking proper knowledge of dose scheduled of TT injection and iron folic acid supplementation [6&7]. In this study as many as 61.9% answer related to detection of high risk , warning sign of pregnancy (51.6%) and indication for appropriate referral were incorrect . Kaushik Lodhiya et al (2012) found 71.56% female health workers have knowledge about identification of high risk cases [8] and in other study 68% health workers knew about danger sign in pregnancy [9]. Similar study also found the knowledge of TBAs about complication in antenatal and perinatal period was inadequate [9] . To our surprise the large number of response of incorrect answer came from PMW relate to estimation of gestational age on the basis of fundal examination. Monica Agrawal et al also found that only 66.7 % health workers recorded date of LMP and EDD, only 10% measured fundal height [6] . These observations indicate that the knowledge of health worker related to estimation of gestational age were very poor. In our study after

training over all knowledge of PMW related to various aspect of antenatal care were improved (60.9 to 93. %)).

Knowledge related to assist or conduction of delivery is not satisfactory, more than half of PMW worker know about it . Never the less response to questions relating to selection of place, arrangement at delivery, complications anticipated and the point of referral were largely incorrect. How to maintain aseptic precaution, only 51.6% give correct answer regarding 5 clean. Other study also found that the knowledge of health workers were inadequate related to critical hand washing practice [10&11]. This observation revealed that the handwashing practice is still not in use by health workers which is one of important method to prevent infection to mother and neonate. Knowledge when to transfer mother in labour is very poor only 29.7% were answered correctly. Even preparedness before delivery is not in practice seen in community level as seen by observer [11].

Importance of weighing of the baby at birth , significance of categorization on weight basis and point of referral to higher Centre are essential in preventing neonatal mortality .In our study response show to queries in this area is inadequate (63.5%) . Similar study also found 77.06 % health workers had knowledge about significance of weighing of newborn. Health workers must know the need, technique, timing and point of referral for resuscitation of the newborn. In our study we found only 53.3% PMW know these facts regarding assistance for initiation of the first breath . Kaushik Lodhya K found 54.13 % health workers had knowledge about resuscitation of the newborn [8]. Similar result also found by various researcher [11,12] . The need to control heat loss and management of temperature control are essential in the newborn baby to reduce morbidity and mortality due hypothermia . In this study only 51.6% PMW know the method of drying& mopping of newborn baby just after the birth . Other study also shows the Health works had inadequate knowledge related to identification management and prevention of hypothermia [12,13].The basic care of umbilical cord is after delivery cord should be tie cut and cleaned and no ointment / dressing should be done , in present study 70 % PMW know about ligation of umbilical cord when to cut what should be length of stump and about any application , similar observation also found in other study where the health providers were not had sufficient knowledge of this important part of care of new born just after birth [11,12,14] . Knowledge related to vitamin k injection its dose ,route ,site and its significant only 57 % PMW aware in this respect . These studies shows overall knowledge related to essential newborn care just after birth were lacking in a substantial proportion of health workers which need to train them in these aspect . In our study we found over all knowledge related to essential newborncare of PMW were highly significantly improved (p=.002<.01) after training.

On assessment of skill of these paramedical workers in various field of antenatal and intranatal care were inadequate . Only 39% were aware regarding partogram exercise and 51.7% to 59.9% were did about Hb % and urine estimation correctly before training , but after training result were quite acceptable. Skill of PMW also assess for steps of normal delivery which results only 49.9 % were demonstrate correctly steps of normal delivery while on assessment of steps of resuscitation of newborn

only 40.6% PMW demonstrate correctly . These indicate that the clinical skill of PMW specially of assistance / conduction of normal delivery and resuscitation of newborn is lacking . Same observation also found a study done by Kaushik Lodhya K [8] . In this study after training the skill of PMW were improved more then 50 % it may be due skill oriented training program provided to them . On the other hand skill related to preparation of micro plans is better and majority of ANM were demonstrated correctly.

Table 1:- characteristic of study population

Study variable	Total n=192	Number (%)
Age		
20-35	65	(33.8)
36-50	90	(46.8)
51& above	37	(19.2)
Education		
Up to10 th	37	(19.2)
Up to12 th	98	(51.1)
Undergraduate	35	(18.2)
Post graduate	22	(11.5)
Nursing course		
GNM	24	(12.5)
ANM	130	(67.8)
LHV	38	(19.7)
Duration of job		
<5 year	111	(57.8)
>5 year	81	(42.2)
Health center		
Tribal area	153	(79.6%)
Non-tribal area	39	(20.3%)

Table 2 :-Questionnaire related to antenatal care

SN	Questions	Before Training	After Training	P value
1	Objective of Antenatal care	124 (64.6%)	176 (91.7%)	t=5.45 df=6 P=.002<.01 Highly significant
2	TT Immunization dose scheduled	132 (68.7%)	168 (87.5%)	
3	Iron Folic acid supplementation dose scheduled	132 (68.7%)	168 (87.8%)	
4	Estimation of gestational age based on fundal examination	122 (63.5)	161 (83.8%)	
5	Identification of high risk case	119 (61.9%)	167 (87%)	
6	Number of antenatal visit	117 (60.9 %)	172 (89.9%)	
7	Identification of warning sign	99 (51.6 %)	174 (90.6%)	

Table 3 :- Questionnaire related to intranatal care

SN	Questions	Before Training	After Training	P value
1	Delivery conduction	103 (53.6%)	174 (90.6%)	t=8.86 df=8 P=.000<.01 Highly Significant
2	About 5 clean	99 (51.6%)	172 (89.5%)	
3	When to transfer mother in labour	57 (29.7%)	84 (43.7%)	
4	Danger sign of home delivery	92 (47.9%)	176 (91.7%)	
5	Significance of birth weight	122 (63.5%)	178 (92.7)	
6	Method of Resuscitation of newborn	103 (53.6%)	157 (81.8%)	
7	Method of drying mopping of newborn	99 (51.6%)	170 (88.5%)	
8	Umbilical cord ligation	134 (70%)	178 (92.7%)	
9	Injection vitamin k dose scheduled	57 (29.7%)	157 (81.8%)	

CONCLUSION

This study shows there were alarming deficiencies in knowledge and performances of skill of the paramedical workers in relating to antenatal and intranatal care service delivery . The facts that even the freshly trained PMW were found to be ill-equipped for this essential function which was indeed disturbing. We need to take a fresh look at their training.

RECOMMOMNDATION:

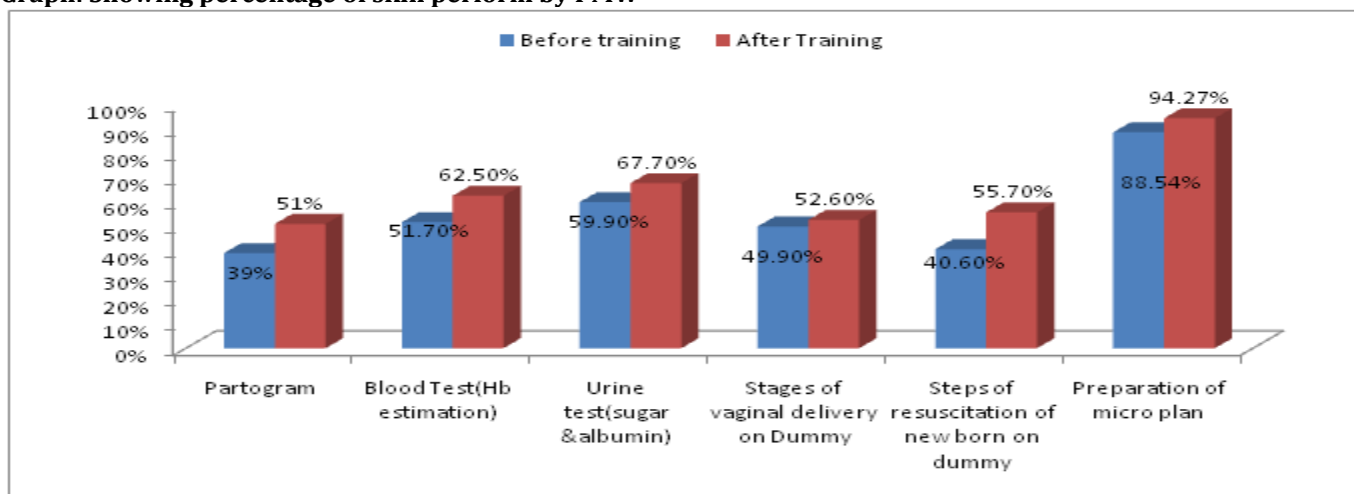
There is urgent need to design appropriate strategies to improve the performance of PMW by enhancing their knowledge and skill, while creating favorable working conditions for PMW in the tribal areas . The service need to be provided by deliberation under a stratified planned program strategy including preparation and revision of training modules , manuals , feedback

technique and method of continued education of all class of health workers .

Table 4 :-Assessments of skill perform byparamedical workers

SN	Type of Skill perform	Before training NO (%)		After training NO (%)	
1	Partogram exercise	75	39	98	51
2	Blood test (Hb estimation)	99	51.7	120	62.5
3	Urine test (sugar & albumin)	115	59.9	130	67.7
4	Stages of vaginal delivery on Dummy	94	49.9	101	52.6
5	Steps of resuscitation of new born on dummy	78	40.6	107	55.7
6	Preparation of micro plan	170	88.54	181	94.27

Graph: Showing percentage of skill perform by PMW



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