International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Index Copernicus Value (2016): 79.57 | Impact Factor (2017): 7.296

The Effectiveness of Skill Competency Programme Regarding Common Obstetric Complications among Staff Nurses in Selected Hospital at Meerut (UP)

Pooja Soni[1], Kalpna Mandal[2]

[1]Lecturer, Muzaffarnagar Nursing Institute

[2]Professor, Subharti Nursing College

Abstract: ***Worldwide, every minute of every day, one-woman dies of pregnancy related complications. Nearly 6, 00, 000 women die each year, of these 99% of death occurs in developing countries. Every single woman who dies, 30 women develop life long illness and injuries related to pregnancy and childbirth, 15% of the woman develops life-threatening complications. Most maternal deaths in India are caused by complications such as haemorrhage (29%), anemia (19%), (8%) hypertensive disorders of pregnancy. METHOD The research approach adopted for the study was evaluative with one group pre-test post-test design to assess the effectiveness of skill competency programme on knowledge and skill regarding common obstetric complications. The sample consisted of 30 staff nurses, who were available at the time of study. Non probability purposive sampling method was used for the selection of samples. The instrument for the data collection was structured knowledge questionnaire and observational checklist. Results: The result of major findings indicated that staff nurses had inadequate knowledge in various aspects of common obstetric complication and ineffective skill. Skill competency programme was found to be a very effective method of providing information regarding common obstetric complications. The mean post-test level of knowledge is significantly higher than the mean pre-test knowledge score that is 12.17% and 16.80% post-test with paired "t" =7.598.at P=<0.05 Significant. The mean post-test level of population comprised of staff nurses skill score is significantly higher than the mean pre-test skill score that is 14.3% and 20.0% Post-test with paired " t"8.16 at P= <.0.05 significance.***

Keywords: Common Obstetric Complications, Competency Programme, Evaluative, Effectiveness, Staff nurses, Hospital

1. Introduction

Pregnancy and childbirth are special events in woman's lives and indeed in the lives of their families. This can be a time of great hope and joyful anticipation. It can also be a time of fear, suffering and even death. Although pregnancy is not a disease but a normal physiological process, it is associated with certain risks to health and survival both for the woman and for the infant she bears.(world health organization) These risks are present in every society and in every setting. At least 40% of all pregnant women will experience obstetric complications during their pregnancies. The death of a woman during pregnancy and childbirth is not only a health issue but also a matter of social injustice. According World Health Organization, it is estimated that 150 million pregnancies occur annually. Worldwide, every minute of every day, one-woman dies of pregnancy related complications. All pregnant women are at risk of obstetric complications & life threatening Complications occur during pregnancy & delivery. Every year more than 1, 00, 000 women Die in India due to cause related to pregnancy. The main causes of maternal mortality are the Complications resulting from haemorrhage, unsafe, abortions, eclampsia, sepsis & obstructed Labour. Deaths from most of these causes are preventable with provision of good quality ante-natal, natal, postnatal care, safe institution delivery services, timely referral & provision of emergency obstetric care.

Anandalakshmy Maternal mortality rate indicates the number of maternal deaths divided by the number of women of reproductive age (15-49). It is expressed per 100, 000 women of reproductive age per year. In India, it is about 120 as compared to 0.5 of U.S. The important common obstetric complication signs during pregnancy are bleeding, loss of foetal movement, poor weight gain, high blood pressure, swelling of face, arms and legs etc. It is important to know that hemorrhage is the common cause of maternal deaths in India and it can cause death of the woman within two hours if immediate care is not provided. The most common condition of obstetric complication 1.Antepartum haemorrhage 2.pregnancy induced hypertension,

Hypertensive disorders of pregnancy are one of the most common causes of death due to pregnancy. They resulted in 29, 000 deaths in 2013 down from 37, 000 deaths in 1990. Preeclampsia usually occurs after 32 weeks; however, if it occurs earlier it is associated with worse outcomes. Iron defiency Anaemia is the leading cause of anemia and consequently, the most common type of anemia during pregnancy. Approximately 15% to 25% of all pregnancies experience iron deficiency anaemia. When too little iron is produced, the body can become fatigued and have a lowered resistance to infection. According to World health organization, over 80% of maternal deaths could be prevented or avoidable through timely interventions proven to be effective and affordable. De Bernis, (2003) make the point that these interventions require a person with midwifery competences as well as selected obstetric skills as a midwife, in order to prevent and take timely actions. Improving women's health is the fifth out of eight Millennium Development Goals (MDG) that was adopted by 149 heads of states in September 2000. Many of the countries will have to work hard to reach the ambitious target that is to reduce by 2015, maternal mortality by 75%

based on the 1990 figure (UNFPA 2006).

2. Literature Survey

Raghuraman (2011) study was conducted on women presenting to hospital Albert Schweitzer in Deschapelles, Diagnosis of preeclampsia or eclampsia. Hospital charts were reviewed to obtain medical & prenatal history, hospital course, delivery information, & fetal/neonatal outcomes. The outcomes included placental abruption, antepartum eclampsia, postpartum eclampsia, maternal death, birth weight <2500g & stillbirth. During the study period, 1743 women were admitted to the maternity service at has HAS & 290 (16.6%) were diagnosed with preeclampsiaoreclampsia. Nearly all (95.0%) patient admitted with preeclampsia had severe preeclampsia there were 83 patient with eclampsia (30.7%) of which 61 (73.4%) had antepartum eclampsia there were 48 still birth (7.8 %) & 5 maternal death(1.9%). patient with antepartum eclampsia were younger, more likely to be nuliparous & had less prenatal care compared to women with antepartum preeclampsia. Antepartum eclampsia associated with placental abruption & maternal death. The rates of preeclampsia & its associated complication, such as eclampsia, placental abruption, maternal death & stillbirth, are high at this facility in Haiti.

Miller (2007) Conducted study on Hypertensive disorders of pregnancy can be chronic hypertension, gestational hypertension, preeclampsia or eclampsia states that preeclampsia complicates 5-7% of all pregnancies. Elder (2002:141) describes preeclampsia as hypertension, obvious oedema of legs, hands and face or sudden weight gain of two or more kilos within a week. Besides to these as the severity increases it includes headache, irritability and sometimes epigastric pain.

Kebeles (2007) A community based cross-sectional study was conducted **o**n a sample of 812 pregnant women selected from, eight rural and two urban awareness of women on danger signs of pregnancy, childbirth and the postpartum period is crucial for safe motherhood. In Ethiopia, a country where maternal morbidity and mortality is high little is known about knowledge level of pregnant women on obstetric danger signs. The objective of this study was to assess pregnant women's knowledge about obstetric danger signs in this study indicated that the knowledge level of pregnant women about obstetric danger signs (during pregnancy, childbirth and postpartum period) was low and affected by residential area. Therefore, the identified deficiencies in awareness should be addressed through maternal and child health services by designing an appropriate strategies including provision of targeted information, education and communication

Otchere SA et al, (Sep 2007) conducted a study on strengthening obstetric care in Vietnam. The objective was to save the children and the ministry of health of Vietnam undertook a project between 2001 & 2004 to improve the availability of access to, quality and utilization of obstetric care services at district and provincial hospitals in Vietnam. Study concluded that improvements in the capacity of existing health facilities to treat complications in pregnancy can be realized in a relatively short period of time and is an essential element in reducing maternal mortality

Tanzania (2005) Conducted study on obstetric danger signs. Descriptive cross- sectional was study carried out among antenatal care clients at Kenya National Hospital it showed that 27.9% of the study respondents were not informed about danger signs in pregnancy. According to this study, Haemorrhage was the most known danger sign in pregnancy mentioned by 64.2% of the respondents, followed by reduced foetal movement which was mentioned by 20.6% of the respondents.

Pawas (2005) conducted study the maternal morbidity due to massive obstetric haemorrhage in Pune, Maharashtra this prospective hospital based study noticed that in 66 percent of cases, massive obstetric haemorrhage occurred in late pregnancy, in 18 percent of cases in early pregnancy and in 16 percent of the cases it was after delivery. There were major complications in 43 percent of the cases. Hypovolemic shock occurred in 53.5 percent of the cases.

3. Statement the of the problem

A study to evaluate the effectiveness of skill competency programme regarding common obstetric complications among staff nurses in selected hospital at meerut."

Objectives of the Study

1) To develop & validate skill competency programme regarding common obstetric complications for staff nurses
2) To assess & evaluate the knowledge & skill of staff nurses before & after administration of skill competency programme regarding common obstetric complications.
3) To find out the relationship between post test knowledge & skill of staff nurses regarding common obstetric complication.

Hypothesis:

H1- The mean posttest knowledge and skill score among staff nurses will be significantly higher than their mean pretest knowledge and skill regarding common obstetric complications as evident by structured knowledge questionnaire and observational checklist.

H2- There will be a significant relationship between the post test knowledge and post test skill of the staff nurses regarding common obstetric complications.

Assumptions:

1) Staff nurses possess some knowledge and skill regarding common obstetric complications during pregnancy.
2) Staff nurses knowledge and skill regarding common obstetric complications can be measured by using structured knowledge questionnaire and observational checklist.

3) Skill competency Programme will be helpful to improve the knowledge & demonstration will improve the skill of staff nurses regarding selected procedures.
4) Staff nurses will cooperate during data collection.
5) Staff nurses will give free frank answer to the questions.

Conceptual framework

Theoretical framework selected for this study was based on general systems theory as postulated by Von Bertalanffy (1998) and afterwards modified by J.W.Kenny (1990). This is regarded as a universal grand theory because of its unique relevancy and applicability (Johnson and Webber, 2005). It is one type of exchange theory. In general systems theory, systems are composed of both structural and functional 5 components that interact within the boundary that filters the type and rate of exchange with the environment. Here all the living systems are open systems because there is an ongoing exchange of matter, energy and information.

4. Operational Definitions

Evaluate: It refers to the estimation of outcome of skill competency programme regarding common obstetric complications.

Effectiveness:-It refer to the extent to which the skill competency programme will bring changes in knowledge & skill of the staff nurses regarding common obstetric complications interm of significant gain in knowledge & skill scores.

Skill competency: A competency is the capability to apply or use a set of related knowledge, skills, and abilities required to successfully perform procedures for common obstetric complication based on the four components by measuring blood pressure, foetal monitoring, measuring weight of the mother, administration of injectable drugs.

Common Obstetric complications: Obstetric complications are the complications that occur after 20- 28 weeks of pregnancy and it will affect the maternal health and foetal survival e.g. Antepartumhaemorrhage, Placentapraevia, Placental abruption, Gestational hypertension or pregnancy-induced hypertension. Preeclampsia, Eclampsia, iron deficiency anemia.

Staff nurse: It refers to a nurse, who has successfully completed Diploma/ Degree Nursing Course from recognized institute and registered in the State Nursing Council and working in maternity unit.

5. Methodology

The research approach adopted for the study was evaluative with one group pre-test post-test design was used to assess the effectiveness of skill competency programme on knowledge and skill regarding common obstetric complications. The sample consisted of 30 staff nurses, who were available at the time of study. Non probability purposive sampling method was used for the selection of samples. The instrument for the data collection was structured knowledge questionnaire and observational checklist.

6. Result & Discussion

Frequency and percentage distribution of demographic characteristics of the staff nurses**,** N=30

Demographic Variables		Frequency	Percentage%
Age group	25-30years	21	70.0
	31-35years	5	16.7
	36-40years	1	3.3
	41-45years	3	10.0
Professional education	ANM	0	0.0
	GNM	27	90.0
	Post BSC.	2	6.7
	Bsc.	1	3.3
Income monthly	Rs 10, 000-15, 000	28	93.3
	Rs 16, 000- 20, 000	0	0.0
	Rs20, 000 & above	2	6.7
Any previous course attended regarding obstetric emergencies/ complication	Yes	9	30.0
	No	21	70.0
Year of working experience	5 years	11	36.7
	3 year	10	33.3
	2 years	3	10.0
	1 years	6	20.0

1) **Distribution of age**
The socio-demographic variable related to age indicates that maximum (n= 70%) of the staff nurses were of aged years, 25-30, 16.7 % of them who were 31-35-years, 3.3 % of them who were 36-40 years and 10.0 % of them were above 41-45 years.
2) **Distribution of professional qualification**
The socio-demographic variable related to professional qualification indicates that majority of the staff nurses (n= 90.0%) were gnm, 6.7 % were post basic 3.3% were bsc. nursing, 0.0% were anm.
3) **Distribution of income monthly**
The socio-demographic variable related to income monthly indicates that majority of the staff nurses income monthly (n=93.3%) were10, 000-15, 000, 6.7 % were 20, 000 & above, 0.0% were 16, 000-20, 000.
4) **Distribution of any previous course attended regarding obstetric emergencies/ complication**
Most of the (n= 70.0%) of staff nurses had no any previous course attended regarding emergencies /complications, 30% had yes taken previous course attended regarding emergencies/ complication.
5) **Distribution of year of working experience**
Most of the (n= 36.7%) of staff nurses had 5 year experience, 33.3% had 3 year experience, 20.0% had 1 year experience, 10.0% had 2 year experience.

Table 2: Mean, mean difference, standard deviation of difference, standard error of mean difference and 't' value of pre-test and post-test knowledge scores of staff nurses. n=30

knowledge scores	mean	mean difference	sd_d	se_{md}	t' value
pre test	12.17	4.63	3.30	0.42	7.598
post test	16.80				

df – 29 p=<0.05 significance

Data presented in table show that the mean post- test knowledge score (16.80%) of staff nurses on common obstetric complication was higher than the mean pre-test knowledge score (12.17%) with the mean difference of 4.63% the obtained mean difference was found to be statistically significant as evident from the obtained t value (7.598%) for df (29) at 0.05 level of significance.

Table 3: Frequency and percentage of pre-test and post-test knowledge score of staff nurses on common obstetric complication, n=30

Level of Knowledge	Pre Test		Post Test	
	Frequency	Percentage	Frequency	Percentage
good knowledge (18-25)	1	3.3	16	53.3%
average knowledge (9-17)	29	96.6	14	46.6%
below average knowledge (0-8)	0	0.0	0	0.0

Above data depicted that (96.6%) of staff nurses were having average knowledge and (3.3%) were having good knowledge score in pre-test, but in post-test majority of the staff nurses having good knowledge i.e. (53.3%) and only (46.6%) having average knowledge score.

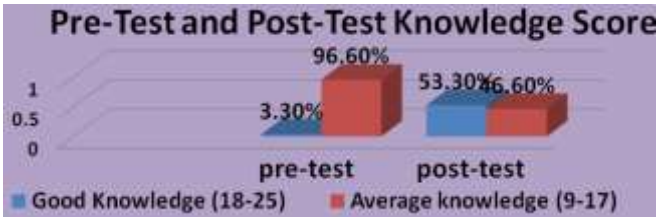

Figure 1: Showing the distribution percentage of pre-test and post-test knowledge score

Table 4: Area wise knowledge gain after skill competency programme, n=30

knowledge assessment	% of pre-test knowledge	% of post-test knowledge	% of knowledge gain
1) Common obstetric complications	57.1	84.0	26.9
2) Foetal monitoring	50.0	70.0	8.0
3) Measure blood pressure	90.0	98.0	20.0
4) Weight measure	38.0	58.0	20.0
5) Administration of drugs in midwifery	74.0	82.0	8.0
Overall	58.4	80.6	22.2

The above table shows the comparison of knowledge on common obstetric complications before & after skill competency programme. In all the aspects staff nurses improved their knowledge after the administration of skill competency programme. the staff nurses gained the maximum knowledge in common obstetric complications with the percentage of 26.9 % and minimum knowledge on foetal monitoring 8.0 %.overall 22.2 percent of knowledge gain is the net benefit of this study, which indicates the effectiveness of skill competency programme.

Table 5: mean, mean difference, standard deviation of difference, standard error of mean difference and 't' value of pre test and post test skill scores of staff nurse, n=30

Skill scores	mean	mean difference	sd_d	se_{md}	't' value
pre test	14.3	5.73	3.95	0.51	8.16
post test	20.0				

df(29)p=<.0.05 sig.

Data shows that the mean post- test skill score (20.0%) of staff nurses on common obstetric complication was higher than the mean pre-test skill score (14.3%) with the mean difference of 5.73 t which was found to be statistically significant evident from the obtained 't' value (8.16) for df (29) at 0.05 level of significance.

Table 6: Frequency and percentage of pre-test and post-test skill score of staff nurses on common obstetric complication, n=30

skill scores	pre test		post test	
	Frequency	Percentage	Frequency	Percentage
poor skills (1-10)	0	0.0	0	0.0
average skills (11-20)	30	100	14	46.6
good skills (21-30)	0	0.0	16	53.3

Data depicted that (100%) of staff nurses were having average skill in pre-test, but in post-test majority of the staff nurses having good skill (53.3%) thus it indicated that the skill competency programme was effective to improve the skill of staff nurses regarding common obstetric complication.

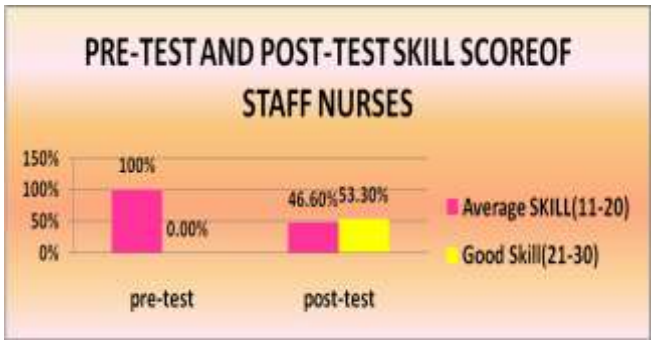

Figure: Showing the percentage of pre-test and post-test knowledge score

Table 7: Co-efficient of correlation between post test knowledge and post-test skill of staff nurses regarding common obstetric complications, n=30

Scores	mean	'r' value	'p' value
Knowledge Scores	16.80	.349	.058
Skill Score	20.0		

There is a statistically significant negative substantial correlation between the post-test Knowledge score and post-test skill score of the staff nurses. It means when the Knowledge score increases their skill score also increases.

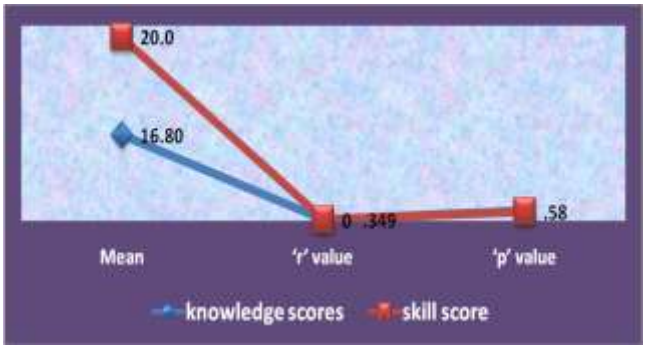

Figure: Showing distribution of the co-relation of knowledge score and skill score

7. Conclusion

The conclusion drawn from the study is the staff nurses initially had low level of knowledge & poor skill toward common obstetric complications. The maximum deficit was found in area of prevention of common obstetric complications. The minimum deficit was found in area of meaning of common obstetric complication. The skill competency programme was found more effective in increasing the knowledge after administration of skill competency programme regarding common obstetric complication. The skill competency was found more effective in developing the good skill toward common obstetric complications.

8. Nursing Implication

Nursing education
To improve the knowledge and skill of staff nurses regarding common obstetric complications the nurse educator provide training related to common obstetric complication to all staff nurses so, that they all will have adequate knowledge regarding common obstetric complications which will help them in their working area.

Nursing practice
For update improving the skill of staff nurse, there is a need for regular teaching programme. Which will improve their skill level of staff nurses which leads to timely intervention. to reduce the cases of common obstetric complications(after 20 weeks of pregnancy) also reduce the motility rate. to improve the skills of staff nurses in service education & workshop & regular teaching should be organized at regular period so that their skill will be updated and refined.

Nursing administration
As a administrative role of nurse will enhance the working capabilities of staff nurses in the hospital areas. the nurse administrator assess the quality of care provided by the staff nurses regarding common obstetric complications. it will improve the quality assurance of staff nurses in rendering care to during pregnancy at the hospital.

Nursing research
The findings of the present study are helpful for the nursing professionals and nursing students to conduct further studies to find out the effectiveness of various methods of providing education on improving the knowledge and skill regarding common obstetric complications among staff nurses. it will in turn strengthen nursing research pertaining to the obstetrics & gynecology nursing.

9. Recommendations

The study can be replicated in various settings.

References

[1] Benett R, Linda K Brown. (1993) Myles Text book for Midwives. 12th ed. Edinburgh: Churchil Living Stone;.
[2] DC DUTTA, (2008) textbook for gynaecology, 5th edition, , published by new central book agency (p) LTD,
[3] Dutta D.C, Text book of obstetrics. 7th edition edited by hiralalkonar.
[4] International Confederation of Midwives. Essential competencies for basic midwifery practice.(2013). Available
[5] Anandalakshmy PN, Buckshee K. Maternal Mortality in a referral hospital of northern India - A sixteen year review. The Journal of Family Welfare: September 1997; 43 (3): 1-4.
[6] Cressman, AM; Natekar, A; Kim, E; Koren, G; Bozzo, P (July 2014). "Cocaine abuse during pregnancy.". Journal of obstetrics and gynaecologyCanada : JOGC = Journal d'obstetrique et gynecologie du Canada : JOGC 36 (7): 628–31.

Author Profile

Pooja Soni is Lecture, Muzaffarnagar Nursing Institute, Muzaffarnagar, UP in department of obstetrical & gynecological.

Prof. Kalpana Mandal is Dean cum Prof. Panna Dhai Maa Subharti Nursing College Meerut UP. In department of community health nursing. Previous experience clinical instructor Retired as Principal, Raj Kumari Amritkaur College of nursing New Delhi, Teaching experience, UG. PG. NSG. Research guidance more than 200 MSC (N) Prog. Management of group D, C.B.A Staff