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# Effectiveness of Planned Teaching Programme on Knowledge and Practices of Primi Gravida Antenatal Mothers Regarding High Risk Factors of Pregnancy: A Case Study to Show Use of Problem Solving Approach

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## Abstract

**Background:** According to World Health Organization (WHO) Every day in 2020, approximately 800 women died from preventable causes related to pregnancy and childbirth - meaning that a woman dies around every two minutes. Sustainable Development Goal (SDG) target 3.1 is to reduce maternal mortality to less than 70 maternal deaths per 100 000 live births by 2030. A high-risk pregnancy is a pregnancy that involves increased health risks for the pregnant person, fetus or both.

**Methodology:** As a part of evidence based midwifery care, problem solving approach was used to identify problem of high risk pregnancy among primi gravida mothers and their possible solutions. Subjective Objective Assessment Planning Interventions and Evaluation (**SOPIE**) method of nursing process was used a frame work for study. Study sample were registered primi gravida, at community health centre Nand Nagri, Delhi. Assessment Performa to assess the knowledge and expressed practices was used as research tool.

**Results:** Study reveals the ignorance factors among primigravida mothers which leads to make them high risk which further may become a cause of maternal motility and morbidity. There was deficit in knowledge and practice of primigravida mothers regarding high risk factors of pregnancy. Teaching programme on prevention of high risk pregnancy was prepared and implemented. Mean post for knowledge scores (22.43) was significantly higher than mean pre-test knowledge score (7.5) at 0.01 & 0.05 level of significant. Maximum knowledge deficit existed in all the area as majority of the mothers (80%) scored marks with range of 6-9 out of 35. After implementing the intervention, knowledge gain was in all for area as it was the topic of their interest and needed at their stage of life. Majority if mother i.e., 28 out of 30 scored marks in the range of (20-25) after intervention in post test. Study concludes that planned and need based teaching may a solution to solve this practical problems.

**Keywords:** Primi gravida antenatal mothers, high risk factors of pregnancy, problem solving approach.

## Introduction

As per WHO every year more than 2 lakh women died during and following pregnancy and child birth and

majority of them fall under high risk pregnancy. Every day in 2020, approximately 800 women died from preventable causes related to pregnancy and childbirth - meaning that a woman dies around every two minutes. A high-risk pregnancy is a pregnancy that involves increased health risks for the pregnant person, fetus or both. Sustainable Development Goal (SDG) target 3.1 is to reduce maternal mortality to less than 70 maternal deaths per 100 000

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live births by 2030. (1). There is a need to sensitized antenatal mother. Study by Kuppusamy P et.al(2) stated that 49.4% of pregnancies were high-risk in India and in some of states, the prevalence was even higher, with 67.8% having one or more high-risk factors. It is evident that high risk factor in pregnancy leads to some common complications like breech presentation, heavy bleeding, obstructed labor, and prolonged labor. It is important for antenatal mother to know about high risk pregnancy and further the ways to prevent associated complication.

Risk factors defines maternal morbidity as any health condition that negatively impacts a woman's well-being or functioning during pregnancy or childbirth. The WHO is committed to ending preventable deaths due to pregnancy and childbirth, and to ensuring that women have control over their reproductive lives. High-risk pregnancies (HRP) place women and their offspring at the highest risk for morbidity and mortality. Maternal and medical risks increase pregnancy risk and complications during pregnancy and childbirth. The current prevalence of high-risk pregnancies among Indian women, which is defined through various factors such as maternal, lifestyle, medical, current health risk and adverse birth outcomes.

### Need for the Study

The danger of child bearing can be greatly reduced if women is healthy and well nourished before becoming pregnant, if she is aware of the normal course of pregnancy, what to expect and what are the warning signs, the appearance of which should be immediately reported to the doctor.

The primary focus of modern obstetrical nursing is on preventive care of the pregnant women, the main aim of which is to help the mother to have safe and natural childbirth. Care of pregnant mothers has been emphasized ever since human beings became aware of complications of labour.

Teaching of the complications of pregnancy and the related warning signs during antenatal period will be helpful in primary health care, the essence of which is self care in the spirit of self reliance and self determination of the individual in the community.

With any pregnancy, there is a risk that something may go wrong. Most of these complications cannot be predicted. The first delivery is the most dangerous for both mother and child. Because dangers problems can arise without warning during pregnancy, childbirth or just after the birth, all families need to know special risk factors and be able to recognize the warning signs of possible

problems and also know the location of the nearest hospital or clinic and have plans and funds for quickly getting the woman there at any hour.

So, the investigator planned to conduct an experimental study to find at the feasibility and effect of health education regarding the complications and the warning signs in primipara mothers visiting O.P.D.

**Statement of the Problem:** "Lack of Knowledge Regarding Prevention of High Risk pregnancy factors in Terms of Knowledge and Practice in primipara mothers".

General Learning Objectives for Nurses:

**Will be able to:**

- Utilize the available resources to identify the common nursing care problem and manage problems of mothers using the problem solving approach
- Provide information to the primipara mothers regarding the complications of high risk pregnancy.
- Educate the mothers about the high risk factors, which should be reported immediately.

**Definitions of Terms Used in research:**

1. **Primipara:** woman giving birth to the baby for the first time.
2. **Antenatal Period:** Period between the dates of conception till the expulsion of foetus.
3. **Warning Signs:** such signs and symptoms during pregnancy and childbirth, which need immediate medical intervention, the lack of which may be fatal.

Criteria for selection or delimitation

**The study is only limited to:**

1. Antenatal primipara mothers.
2. Those who are willing to participate.
3. No associated complications of pregnancy.
4. Age: 18 years and above.
5. Booked cases.
6. Risk factors i.e., anaemia, PET, early bleeding and diabetes mellitus.

**Specific Objectives of present research:**

1. To assess the knowledge of primigravida mothers regarding high risk factors of pregnancy.
2. To assess the expressed practice of primigravida mothers regarding high risk factors of pregnancy.
3. To provide information to the primigravida mothers regarding high risk factors of pregnancy and related complications.

4. To assess the effectiveness of health teaching on concept of high risk factors and common risk factors i.e., Anaemia, PET Early bleeding and diabetes mellitus in pregnancy in terms of knowledge and expressed practice.

## Methodology

As a part of evidence based midwifery care, problem solving approach used by nurse researchers to identify common nursing care problems and their possible solutions to manage problems of mothers. In present research using a problem solving approach, was conducted on primigravida mothers who are registered at community health centre at Nand Nagri, Delhi. **SOPIE** method of nursing process was used a frame work for study.

**Step-1: The problem Identification:** The problem identification was done by utilization of following measures.

- i. Informal talks and discussion with nursing tutors going to the community field.
- ii. Discussion with head of department of Community Health Center, Public Health Nurse and social workers.
- iii. Self observation of high risk cases while working in ANC clinic.
- iv. By past community field experience
- v. Review of literature.
- vi. By survey of the community using interview technique.

**Step-2: Problem identified-There was** lack of knowledge regarding prevention of high risk pregnancy factors in terms of knowledge and related practice in primigravida mothers.

**Step-3: Assessment:** The problem was assessed by interviewing the mothers (ANC) using structured interview schedule developed by researcher to assess knowledge and related practice in primi gravida mothers. Further analysis was done to assess the knowledge and expressed practice related to concept of risk factors and common high risk factors in pregnancy.

**Step-4:** Possible solution planned

- Planned group teaching programme – for ANC
- For mother in laws
- For health workers
- For husbands of antenatal mothers

- Prepared flash cards complications and warning signs of pregnancy.
- For service providers i.e., ANM, Quiz competition to refresh their knowledge related to problem.

**Sample size:** 30 Primigravida antenatal mothers

**Step-5:** Implementation:

- Interviewed 10 mothers per day followed by planned health teaching with the help of flash cards.
- Could do same for mother in laws i.e., for 20.
- Not able to do for husbands.
- Using pre-experimental research design-O1 X O2

O1– Pre-test assessment

The structured knowledge interview schedule had three sections:

**Section I:** Consisted of items on background data of primi mothers. (9 items)

**Section II:** Knowledge items consisted the following content area:

- Concept of high risk pregnancy(6 items)
- Anaemia in pregnancy(7 items)
- Pre-eclampsia toxemia in pregnancy(11 items)
- Early bleeding in pregnancy(2 items)
- Diabetes mellitus in pregnancy. (9 items)

**Section III:** Practice Items(15 items)

- X– Treatment i.e. planned teaching session on prevention and control of high risk Pregenancy
- O2 – Post-test is planned to be given after two days

An interview schedule was planned to assess the knowledge and practice of mothers regarding high risk factors of pregnancy.

Planned to give pre-test to 10 mothers per day followed by planned teaching with the help of flash cards.

- Could do same for 20 mother-in-laws.
- Was not able to do for husbands.

**Step-6:** Evaluation:

The effectiveness of the planned health education was done by comparing pre test and post test scores of knowledge and practices items. Total knowledge items 35, maximum marks 35.

**Table 1: Number and percentage distribution of Antenatal registered at Health centre, sunder nigari by their age, religion, educational status and occupation. N-30**

S.No.	Variables	Number	Percentage
<b>1.</b>	<b>Age:</b>		
0.1	Below 20 years	21	70%
0.2	21-25 years	7	21%
0.3	26-30 years	2	9%
0.4	31-35 years	-	-
0.5	35 years and above	-	-
<b>2.</b>	<b>Religion:</b>		
2.1	Hindu	27	90%
2.2	Muslim	3	10%
2.3	Sikh	-	-
2.4	Christian	-	-
2.5	Any other	-	-
<b>3.</b>	<b>Educational Status:</b>		
3.1	Illiterate	7	14%
3.2	Literate	19	66%
3.3	Primary Education	4	10%
3.4	Middle Education	-	-
3.5	Senior Secondary	-	-
3.6	Graduates	-	-
<b>4.</b>	<b>Occupation:</b>		
4.1	House wife	30	100%
4.2	Private Job	-	-
4.3	Government Job	-	-

Table -1 shows that Majority of the primipara mothers are of age group below 20 years i.e. 21 (70%).Ninety per cent (90%) are belonging to Hindu religion i.e. (27).Majority of the antenatal mothers are only literate 66 percent i.e. (19).All are house wife.

**Table 2: Number and Percentage Distribution of Primi A.N.C. mothers registered at Sundar Nagri Health centre by their type of family, monthly income, food habits and History of Disease. N-30**

S.No.	Variables	Number	Percentage
<b>1.</b>	<b>Type of Family:</b>		
	• Joint	24	80%
	• Single	6	20%
<b>2.</b>	<b>Monthly Income:</b>		
	• Below Rs. 4000	27	90%
	• Rs. 4001-Rs. 6000	1	3%
	• Rs. 6001 - Rs. 8000	1	3%
	• Rs. 8001 and above	1	3%
<b>3.</b>	<b>Food Habits:</b>		
	• Vegetarian	18	60%
	• Non-vegetarian	12	40%
<b>4.</b>	<b>Family History of any Disease:</b>		
	• Hypertension	5	15%
	• Diabetes Mellitus	1	3%

Table-2 represents that Majority of the antenatal mothers are belonging to joint family i.e. 80 per cent (24). Majority of the mothers are belonging to monthly income of below Rs. 4000 i.e. 27 (90%). Sixty per cent (60%) are vegetarian i.e. 18. Fifteen per cent (15%) of total sample are having family history of hypertension i.e. 5.

**Table-3: pre-test and post test knowledge and practice scores and percentage of scores on items related to high risk pregnancy factors**

Study sample Code no	Knowledge Max Marks – 35				Practice Max Marks – 15			
	Pre-test	%	Post-test	%	Pre-test	%	Post-test	%
1.	10	28.57	24	68.57	5	33.3	10	66.6
2.	5	14.28	20	57.14	4	26.6	10	66.6
3.	7	20	22	62.85	6	40	10	66.6
4.	11	31.42	26	74.28	5	33.3	9	60
5.	8	22.8	23	65.71	4	26.6	8	53.3
6.	7	20	21	60	6	40	11	73.3
7.	9	25.71	24	68.57	6	40	11	73.3
8.	6	17.14	23	65.71	4	26.6	9	60
9.	6	17.14	21	60	4	26.6	9	60
10.	7	20	22	62.85	4	26.6	9	60
11.	7	20	20	57.14	3	20	8	53.3
12.	8	22.8	23	65.71	2	13.3	7	46.6
13.	11	31.42	25	71.42	3	20	8	53.3
14.	4	11.4	19	54.28	3	20	8	53.3
15.	6	17.14	20	57.14	4	26.6	9	60
16.	15	42.85	30	85.71	4	26.6	9	60
17.	7	20	22	62.85	5	33.3	10	66.6
18.	9	25.71	23	65.71	5	33.3	10	66.6
19.	9	25.71	23	65.71	7	46.6	12	80
20.	11	31.42	25	71.42	7	46.6	12	80
21.	7	20	22	62.85	6	40	10	66.6
22.	7	20	23	65.71	5	33.3	11	73.3
23.	6	17.14	21	60	5	33.3	10	66.6
24.	6	17.14	21	60	4	26.6	9	60
25.	11	31.42	26	74.28	4	26.6	9	60
26.	7	20	22	62.85	5	33.3	10	66.6
27.	7	20	22	62.85	6	40	10	66.6
28.	6	17.14	20	57.14	4	26.6	10	66.6
29.	6	17.14	20	57.14	3	20	8	53.3
30.	7	20	20	57.14	3	20	8	53.3
<b>Total</b>	225		673		140		295	
<b>Mean</b>	7.5		22.43		4.6		9.8	
<b>Mean Difference</b>	14.93				6.2			

Learning shift in knowledge item was 42.7%. The mean difference obtained was 14.7% on knowledge items.

Total practice item 15, maximum marks 15. Learning shift in the practical item was 34.3%. The mean difference was obtained 6.2%. 70% of mothers were below the age of 20. Majority (80%) of mothers score marks in ranging 6 to 9 in pre test which indicates that they are not aware of common risk factors.

Study reveals the ignorance factors among primigravida mothers which leads to make them high risk and further may become a cause of maternal motility and morbidity planned and need based teaching may a solution to solve this practical problems.

This was deficit in knowledge and practice of primigravida mothers regarding high risk factors of pregnancy.

Mean post for knowledge scores (22.43) was significantly higher than mean pre-test knowledge score (7.5) at 0.01 & 0.05 level of significant maximum knowledge deficit existed in all the area as majority if the mother i.e., 24 out of 30 scored mark with range of 6-9 out of 35.

Knowledge gain was in all for area as it was the topic of their interest and need at their stage of life. Majority if mother i.e., 28 out of 30 scored marks in the range of (20-25) after in post test.

Results :Present study reveals the ignorance factors among primi gravida mothers which leads to make them high risk which further may become a cause of maternal motility and morbidity. There was deficit in knowledge and practice of primigravida mothers regarding high risk factors of pregnancy. Teaching programme on prevention of high risk pregnancy was prepared and implemented. Mean post for knowledge scores (22.43) was significantly higher than mean pre-test knowledge score (7.5) at 0.01 & 0.05 level of significant. Maximum knowledge deficit existed in all the area as majority of the mothers (80%) scored marks with range of 6-9 out of 35. After implementing the intervention, knowledge gain was in all for area as it was the topic of their interest and needed at their stage of life. Majority if mother i.e., 28 out of 30 scored marks in the range of (20-25) after intervention in post test. Conclusion :Study concludes that planned and need based teaching may be a solution to solve the practical problems of lack of in knowledge and practice of primigravida mothers regarding high risk factors of pregnancy.

Discussion :Similar to present study, Snehlata C et.al (3) ,Righteous Delfia ,et al(4) and Johncyrani R, Arulappan J. (5) revealed in their study that there is inadequate knowledge among antenatal mothers regarding high risk factors of pregnancy. In congruence to the findings of present study it was revealed by Nithya R, Dorairajan G, Chinnakali P. (6) and Novick,G(7) that target people for MCH care desired comprehensive and relevant information to clear their doubts, and enable them take informed decisions

similarly, the women in study of Bridgit Omowumi11 et.al mentioned issues about which they wanted more information. The overall findings of Righteous Delfia R, Suriya G., et al.(4) and Nithya R, Dorairajan G, Chinnakali P. (6) were similar to present study that relevant information related prevention and control of high risk pregnancy need to communicated to antenatal mothers.

**Ethical Clearance:** Taken

**Conflict of Interest:** Nil, Source of Funding :Nil

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