

Assessment of the Knowledge and Practice Regarding Modern Methods of Contraception among Antenatal Mothers Attending Gynae OPD, Jawaharlal Nehru Institute of Medical Sciences, Imphal

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Abstract: India, with a population exceeding 1.39 billion, has surpassed China as the most populated country. Family planning is integral in achieving population stabilization and enhancing maternal and newborn health outcomes. This study aimed to assess the knowledge and practice of modern contraceptive methods among 150 antenatal mothers attending Gynae OPD, JNIMS, Imphal, using quantitative cross-sectional design. Findings revealed that 46% of participants had inadequate knowledge and 66.6% demonstrated poor practices regarding contraception. A significant association was observed between knowledge, practice and demographic variables ($p < 0.05$), with a positive correlation ($r = 0.423$) between knowledge and practice scores.

Keywords: Contraceptions, antenatal mothers, maternal health, knowledge - practice correlation, India

1. Introduction

India being the most populated country in the world highlights the critical role of family planning, not only for achieving population stabilization but to improve the maternal and newborn health outcomes. Even though India has made considerable progress in reducing maternal mortality ratio, it still contributes to 20% of maternal deaths worldwide. Family planning can avert more than 30% of maternal deaths and 10% of child mortality if couples spaced their pregnancies more than 2 years apart (Cleland J et al, 2006 Lancet). As per the World Health Organization estimates, 210 million pregnancies occur annually, out of which 38% are unwanted and 22% end up with abortion worldwide. In India, about 11 million abortions take place annually and around 20,000 women die every year due to abortion-related complications.

The purpose of this study is to evaluate the knowledge and practice regarding modern methods of contraception among antenatal mothers and to examine their association with demographic variables.

This study is significant as it highlights gaps in knowledge and practice among antenatal mothers, providing insights for targeted interventions to improve maternal health outcomes.

2. Literature Survey

Dipak Mandi et al (2020) conducted a descriptive cross-sectional observational study on knowledge, attitude and practice of contraception among 1000 antenatal mothers attending antenatal clinic of a tertiary institute of India using purposive sampling technique. The study results showed that 879 (87.9%) out of 1000 had knowledge about contraception while 121 mothers (12.1%) did not have any

knowledge about contraception. 340 women had positive attitude towards birth spacing while 98 had negative attitudes, 70 were undecided and 365 women had no idea about the necessity of birth spacing. Majority of the primigravida preferred oral contraceptive pill, i.e. 212 (36.3%) but majority of multigravida i.e. 102 (34.58%) preferred tubectomy. Statistical analysis was done using percentage chi-square test and significant association was found between the level of knowledge and demographic variables of age and number of living children considering $P < 0.05$ as statistically significant. Majority of the subjects mainly depended on the health workers for the selection of contraceptions.

Objectives -

General objectives: To assess the level of knowledge and practice regarding modern methods of contraception among antenatal mothers attending Gynae OPD, Jawaharlal Nehru Institute of Medical Sciences, Imphal.

- 1) To assess the association between level of knowledge regarding modern methods of contraception and their selected demographic variables.
- 2) To assess the association between level of practice regarding modern methods of contraception and their selected demographic variables.
- 3) To find out the correlation between knowledge and practice regarding modern methods of contraception among antenatal mothers and their selected demographic variables

Hypothesis: All hypotheses were tested at 0.05 level of significance.

H1: There will be a significant association between the level of knowledge and their selected demographic variables

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regarding modern methods of contraception among antenatal mothers.

H2: There will be a significant association between level of practice and their selected demographic variables regarding modern methods of contraception among antenatal mothers.

H3: There will be a significant co - relation between the level of knowledge and practice regarding modern methods of contraception among antenatal mothers.

3. Methodology

The research approach adopted for this study was non experimental quantitative and the design adopted was cross sectional study design. The study was conducted after getting approval from Institutional ethics committee. Using non probability convenience sampling technique, 150 antenatal mothers were selected for the study. The study was conducted in Gynae OPD, JNIMS Hospital, Imphal, Manipur.

Tools Used -

The tools consist of the following sections:

Section I: Socio demographic variables

It includes 10 items regarding the demographic variables which include age of the mother, educational status, occupational status of the mothers, monthly family income, religion, years of marriage, place of residence, gravida, number of living children and sources of information.

Section II: Structured knowledge questionnaires to assess the level of knowledge regarding modern methods of contraception among antenatal mothers attending Gynae OPD, JNIMS, Imphal.

This section consists of 48 structured knowledge questionnaires. Each item consists of multiple choice options out of which one is correct and the rest are incorrect. The maximum possible score is 48.

Scoring interpretation for knowledge questionnaires: scores will be categorized into three groups:

- Less than 50% (1 - 24) = Inadequate knowledge
- 51 - 75 (25 - 36) = Moderately adequate knowledge
- More than 75% (37 - 48) = Adequate knowledge

Section III: Structured practice checklist to assess the level of practice regarding modern methods of contraception.

This section consists of 20 statements of structured practice checklist regarding modern methods of contraception. The respondents have to record any response of her choice. Out of 20 items, there are 4 negative statements and the remaining are positive statement. The respondents have to tick from the options yes/no given.

The scoring of positive and negative items is given in the following table.

Positive statement	Negative statement
Yes= 1	Yes=0
No=0	No=1

Procedure for Data Collection

The study was conducted after obtaining approval from institutional ethics committee. Formal permission was obtained from the Hospital administration. After seeking permission, the sample were drawn using by using non convenience sampling techniques. A brief self introduction were done and consent were taken from the participants, i. e 150 antenatal mothers meeting the inclusion criteria, keeping in mind the confidentiality of every participants. The structured knowledge questionnaires and practice checklist were used to assess the knowledge and practice level through structured interview scheduled.

4. Result and Discussion

Section 1: Description of demographic variables of antenatal mothers.

The Majority 65 (43.3%) of respondents under the study were in the age group 21 - 30 years. In education, Majority 47 (31.3%) out of 150 completed primary education. Regarding occupations, majority 92 mothers (61.3%) were housewives. Regarding income, majority of the mother under study 56 (37.3%) had a monthly family income of 10, 000 to 20, 000. In view of religion, more than half, 90 (60%) belonged to Hinduism and Majority of the mother 58 (38.7%) out of 150 were between 1 - 5 years of marriage. In regards to area of residence, 86 (57.3%) and 64 (43.7%) belong to rural and urban respectively. In terms of gravida, majority 64 (42.7%) mothers out of 150 were mother of gravida less than 3 pregnancies. 58 (39%) mothers out of 150 received information regarding modern methods of contraception from health personnels.

Table 1: Frequency and percentage distribution of demographic variables of antenatal mothers. N=150

Sl. no.	Demographic characteristics	No. of Respondents	Percentage (%)	
1	Age	Less than 20 yrs.	20	13.3
		21 - 30 yrs.	65	43.3
		31 - 40 yrs.	48	32
		41 - 50 yrs.	17	11.3
2	Educational Qualification	Illiterate	12	8
		Primary	47	31.3
		Secondary	44	29.3
		Graduate and above	47	31.3
3	Occupation	Government employee	14	9.3
		Private employee	18	12
		Self - Employee	26	17.3
		House Wife	92	61.3
4	Monthly Income	less than 5000	9	6

		5000 – 10000	33	22
		10000 - 20000	56	37.3
		20000 & above	52	34.7
5	Religion	Hinduism	90	60
		Islam	27	18
		Christianity	32	21.3
		Others	1	0.7
6	Years of Marriage	Less than a year	26	17.3
		1 - 5 yrs.	58	38.7
		5 - 10 yrs.	29	19.3
		10 yrs. & above	37	24.7
7	Residence	Rural	86	57.3
		Urban	64	42.7
8	Gravida	Primigravida	51	34
		Less than 3 Pregnancy	64	42.7
		3 - 5 Pregnancy	33	22
		More than 5 Pregnancy	2	1.3
9	No. of living Children	0	54	36
		1	50	33.3
		2	30	20
		3 and above	16	10.7
		Total	150	100
10	Sources of information	Relatives	55	37
		Health personnels	58	39
		Mass media	35	23
		Others	2	1
Total number of respondents			150	100

Section II: Level of Knowledge regarding Modern Methods of Contraception among Antenatal Mothers.

Overall level of knowledge regarding modern methods of contraception among antenatal mothers. The overall knowledge regarding modern methods of contraception showed that majority of the mothers under study which constituted of 69 (46%) out of 150 had inadequate knowledge, 48 (32%) had moderately adequate knowledge and the remaining 33 (22%) antenatal mothers had adequate knowledge regarding modern methods of contraception.

Section III: Level of Practice regarding Modern Methods of Contraception among Antenatal Mothers.

With respect to practice regarding modern methods of contraception, out of 150 respondents, more than half, 100 (66.67%) respondents have poor practices, 34 (22.67%) had moderately good practices and the remaining of only 16 (10.67%) had good practice.

Section IV: Association between the Level of Knowledge and their Selected Demographic Variables regarding Modern Methods of Contraception among Antenatal Mothers

S. No.	Demographic characteristics		Knowledge Level			Total (%)	Chi - square	P - value
			Inadequate (%)	Moderately Adequate (%)	Adequate (%)			
1	Age	Less than 20 years	20 (100.00)	0 (0.00)	0 (0.00)	20 (13.33)	48.148	<0.001 (S)
		21 - 30 yrs.	31 (47.69)	28 (43.08)	6 (9.23)	65 (43.33)		
		31 - 40 yrs.	14 (29.17)	13 (27.08)	21 (43.75)	48 (32.00)		
		41 - 50 yrs.	4 (23.53)	7 (41.18)	6 (35.29)	17 (11.33)		
2	Educational qualification	Illiterate	10 (83.33)	1 (8.33)	1 (8.33)	12 (8.00)	62.14	<0.001 (S)
		Primary	33 (70.21)	14 (29.79)	0 (0.00)	47 (31.33)		
		Secondary	23 (52.27)	14 (31.82)	7 (15.91)	44 (29.33)		
		Graduate and above	3 (6.38)	19 (40.43)	25 (53.19)	47 (31.33)		
3	Occupation	Government employee	0 (0.00)	3 (21.43)	11 (78.57)	14 (9.33)	51.73	<0.001 (S)
		Private employee	1 (5.56)	8 (44.44)	9 (50.00)	18 (12.00)		
		Self - Employee	14 (53.85)	10 (38.46)	2 (7.69)	26 (17.33)		
		House Wife	54 (58.70)	27 (29.35)	11 (11.96)	92 (61.33)		
4	Monthly family Income	less than 5000	6 (66.67)	1 (11.11)	2 (22.22)	9 (6.00)	37.9	<0.001 (S)
		5000 – 10, 000	24 (72.73)	8 (24.24)	1 (3.03)	33 (22.00)		
		10, 000 – 20, 000	31 (55.36)	17 (30.36)	8 (14.29)	56 (37.33)		
		20, 000 and above	8 (15.38)	22 (42.31)	22 (42.31)	52 (34.67)		
5	Religion	Hinduism	45 (50)	27 (30.0)	18 (20.00)	90 (60.00)	5.014	0.542 (IS)
		Islam	13 (48.15)	9 (33.33)	5 (18.52)	27 (18.0)		
		Christianity	10 (31.25)	12 (37.50)	10 (31.25)	32 (21.33)		
		Others	1 (100.0)	0 (0.00)	0 (0.00)	1 (0.67)		
6	Years of marriage	less than a year	18 (69.23)	7 (26.92)	1 (3.85)	26 (17.33)	10.05	0.122 (IS)
		1 - 5 years	27 (46.55)	17 (29.31)	14 (24.14)	58 (38.67)		

		5 - 10 years	11 (37.93)	10 (34.48)	8 (27.59)	29 (19.33)		
		10 years and above	13 (35.14)	14 (37.84)	10 (27.03)	37 (24.67)		
7	Residence	Rural	52 (60.47)	27 (31.40)	7 (8.14)	86 (57.33)	26.79	<0.001 (S)
		Urban	17 (26.56)	21 (32.81)	26 (40.63)	64 (42.67)		
8	Gravida	primigravida	36 (70.59)	14 (27.45)	1 (1.96)	51 (34.00)	35.66	<0.001 (S)
		Less than 3 Pregnancy	28 (43.75)	21 (32.81)	15 (23.44)	64 (42.67)		
		3 and More Pregnancy	5 (14.29)	13 (37.14)	17 (48.57)	35 (23.33)		
9	Number of living children	1	36 (66.67)	16 (29.63)	2 (3.70)	54 (36.00)	28.96	<0.001 (S)
		2	23 (46.00)	16 (32.00)	11 (22.00)	50 (33.33)		
		3 & above	10 (21.74)	16 (34.78)	20 (43.48)	46 (30.67)		
10	Sources of information	Mass media	5 (14.28)	17 (48.57)	13 (37.14)	35 (23.33)	24.96	<0.001 (S)
		Health personnel	1 (1.72)	21 (36.20)	36 (62.06)	58 (38.66)		
		Relatives	17 (30.90)	21 (38.18)	17 (30.90)	55 (36.66)		
		Others	1 (0.5)	0 (0.0)	1 (0.5)	2 (1.33)		
Total			69 (46.00)	48 (32.00)	33 (22.00)	150 (100.00)		

p - value<0.05, significant

Section V: Association between the Level of Practice and their Selected Demographic Variables Regarding Modern Methods of Contraception among Antenatal Mothers:

S. No.	Demographic characteristics		PRACTICE				Chi square	P - value
			Poor (%)	Moderately good (%)	Good (%)	Total (%)		
1	Age	Less than 20 years	19 (95.00)	0 (0.00)	1 (5.00)	20 (13.33)	20.05	0.003 (S)
		21 - 30 yrs	47 (72.31)	15 (23.08)	3 (4.62)	65 (43.33)		
		31 - 40 yrs	27 (56.25)	14 (29.17)	7 (14.58)	48 (32.00)		
		41 - 50 yrs	7 (41.18)	5 (29.41)	5 (29.41)	17 (11.33)		
2	Education	Illiterate	11 (91.67)	1 (8.33)	0 (0.00)	12 (8.00)	14.906	0.021 (S)
		Primary	38 (80.85)	8 (17.02)	1 (2.13)	47 (31.33)		
		Secondary	26 (59.09)	12 (27.27)	6 (13.64)	44 (29.33)		
		Graduate and above	25 (53.19)	13 (27.66)	9 (19.15)	47 (31.33)		
3	Occupation	Government employee	2 (14.29)	6 (42.86)	6 (42.86)	14 (9.33)	26.951	<0.01 (S)
		Private employee	10 (55.56)	6 (33.33)	2 (11.11)	18 (12.00)		
		Self employee	20 (76.92)	4 (15.38)	2 (7.69)	26 (17.33)		
		Housewife	68 (73.91)	18 (19.57)	6 (6.52)	92 (61.33)		
4	Monthly Family Income	Less than 5000	7 (77.78)	2 (22.22)	0 (0.00)	9 (6.00)	8.526	0.202 (IS)
		5000 - 10, 000	22 (66.67)	9 (27.27)	2 (6.06)	33 (22.00)		
		10, 000 - 20, 000	42 (75.00)	10 (17.86)	4 (7.14)	56 (37.33)		
		20, 000 and above	29 (55.77)	13 (25.00)	10 (19.23)	52 (34.67)		
5	Religion	Hinduism	66 (73.33)	14 (15.56)	10 (11.11)	90 (60.00)	9.769	0.135 (IS)
		Islam	17 (62.96)	9 (33.33)	1 (3.70)	27 (18.00)		
		Christianity	16 (50.00)	11 (34.38)	5 (15.63)	32 (21.33)		
		others	1(100.0)	0 (0.00)	0 (0.00)	1 (0.67)		
6	Years of marriage	Less than a year	23 (88.46)	2 (7.69)	1 (3.85)	26 (17.33)	9.456	0.149 (IS)
		1 - 5 years	40 (68.97)	13(22.41)	5 (8.62)	58 (38.67)		
		5 - 10 years	17 (58.62)	8 (27.59)	4(13.79)	29 (19.33)		
		10 years and above	20 (54.05)	11 (29.73)	6 (16.22)	37 (24.67)		
7	Residence	Rural	62 (72.09)	18 (20.93)	6 (6.98)	86 (57.33)	3.731	0.156 (IS)
		Urban	38 (59.38)	16 (25.00)	10 (15.63)	64 (42.67)		
8	Gravida	Primigravida	44 (86.27)	5 (9.80)	2 (3.92)	51 (34.00)	21.022	0.002 (S)
		Less than 3 pregnancy	42 (65.63)	15 (23.44)	7 (10.94)	64 (42.67)		
		3 - 5 pregnancy	13 (39.39)	13 (39.39)	7 (21.21)	33 (22.00)		
		More than 5 pregnancy	1 (50.00)	1 (50.00)	0 (0.00)	2 (1.33)		
9	No. of Living children	zero	45 (83.33)	6 (11.11)	3 (5.56)	54 (36.00)	20.289	<0.001 (S)
		one	35 (70.00)	10 (20.00)	5 (10.00)	50 (33.33)		
		two	15 (50.00)	11 (36.67)	4 (13.33)	30 (20.00)		
		three and above	5 (31.25)	7 (43.75)	4 (25.00)	16 (10.67)		
10	Sources of information	Media	29 (82.86)	4 (11.43)	2 (5.71)	35 (23.33)	26.114	<0.01 (S)
		Health personnels	25 (43.10)	21 (36.21)	12 (20.69)	58 (38.67)		
		Relatives	45 (81.82)	8 (14.55)	2 (3.64)	55 (36.67)		
		Others	1 (50.00)	1 (50.00)	0 (0.00)	2 (1.33)		
Total			100 (66.67)	34 (22.67)	16 (10.67)	150 (100.00)		

p - value<0.05, significant

Section VI: Correlation between the Level of Knowledge and Practice regarding Modern Methods of Contraception among Antenatal Mothers.

The correlation coefficient value of knowledge and practice regarding modern methods of contraception were found to be $r=0.423$ with the p value (< 0.05) at level of significant which indicates that there is positive correlation and are statistically significant.

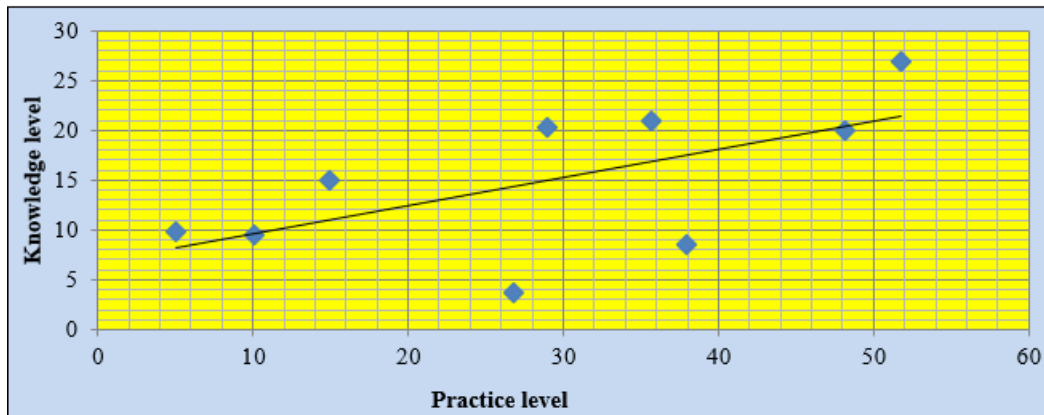


Figure 6: Scatter diagram showing correlation between the level of knowledge and practice regarding modern methods of contraception among antenatal mothers.

5. Conclusion

This study underscores inadequate knowledge and poor practices regarding modern methods of contraception among antenatal mothers in Imphal. Significant associations with demographic variables highlight areas for targeted education and policy interventions. Further research with diverse populations is recommended to generalize these findings.

6. Future Scope

Based on the findings, the future scopes are -

- A similar study can be conducted on a large scale sample to validate the findings and make generalizations.
- A similar study can be carried out in other setting with the involvement of different population characteristics and adequate sample size.
- A similar study can be undertaken among non pregnant reproductive women. .
- A planned teaching programme can be conducted to assess the knowledge, practice regarding modern methods of contractions among antenatal mothers.

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