International Journal of Trend in Scientific Research and Development (IJTSRD)
Volume 9 Issue 2, Mar-Apr 2025 Available Online: www.ijtsrd.com e-ISSN: 2456 – 6470

Knowledge and Attitude Regarding Neural Tube Defect among Pregnant Women in Selected Rural Area in Barabanki

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ABSTRACT

A descriptive study to assess the knowledge and attitude regarding neural tube defect among pregnant women in selected rural area in Barabanki. The study aimed to assess knowledge and attitude regarding neural tube defect among pregnant women in selected village Dahila of Barabanki. Objective of the study was to assess the level of knowledge regarding NTD among pregnant women, to assess the level of attitude regarding NTD among pregnant women, to find out relationship between knowledge and attitude regarding NTD among pregnant women, to find out the association between the level of knowledge with selected demographic variables among pregnant women, to find out the association between the level of attitude with selected demographic variables among pregnant women. Quantitative approach and descriptive survey research design was used in this study. Total 80 sample were selected through convenient sampling technique. Data was collected by researcher through structured interview schedule. Structured knowledge questionnaire containing 15 items was used to assess knowledge and five-point Likert scale to assess attitude. Data was collected during 01/05/2024 to 30/05/2024 in Dahila village. Results revealed that almost 50% pregnant women had poor knowledge, 47.5% pregnant women had average knowledge and 2.50% pregnant women had good knowledge regarding NTD. Similarly, about 62% pregnant women had neutral attitude, 32% pregnant women had negative attitude and only 5% pregnant women had positive attitude regarding neural tube defect. There was low positive correlation between knowledge and attitude score of pregnant (r= 0.49). Study finds that there was no statistically significant association between knowledge level of pregnant women with their selected demographic variables, as well as there was no significant association between most of selected demographic variables with attitude of pregnant women regarding NTS except their educational status.

How to cite this paper: Abhilasha Saha | Anupam Verma "Knowledge and Attitude Regarding Neural Tube Defect among Pregnant Women in Selected Rural Area in Barabanki" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-9 | Issue-2, April 2025, pp.1108-1112, URL: www.ijtsrd.com/papers/ijtsrd78635.pdf

IJTSRD78635

KEYWORDS: *Neural Tube Defect, Pregnant Women, Rural Areas, Barabanki, Knowledge, Attitude*

INTRODUCTION

Neural Tube Defects are the most typical congenital malformations, with almost 300,000 cases annually worldwide. The incidence varies amongst geographical ranges from 0.2 to up to 11 per 1000 live births. In India, incidence is reportedly higher in north than south and can be attributable to diet and genetic variances.

The prevalence of NTDs in India has been reported to vary from 0.5 to 11 per 1000 births. In India, 68.85% of the population resides in rural areas (Census 2011), therefore, it can be assumed that on an average there are almost 2.2 times higher frequency of reproducibly active female in the rural areas. These females often undergo delivery in supervision of untrained dais, and most of defective births die prior to getting treatment.

Statement of problem

A descriptive study to assess the knowledge and attitude regarding neural tube defect among pregnant women in selected rural area in Barabanki

Objective

1. To assess the level of knowledge regarding NTD among pregnant women

2. To assess the level of attitude regarding NTD among pregnant women
3. To find out relationship between knowledge and attitude regarding NTD among pregnant women
4. To find out the association between the level of knowledge with selected demographic variables among pregnant women.
5. To find out the association between the level of attitude with selected demographic variables among pregnant women.

Hypothesis

H1: There will be a significant association between l e v e l o f knowledge regarding neural tube defect with selected demographic variables.

***H2*:** There will be a significant association between level of attitude regarding neural tube defect with selected demographic variables.

Delimitation

- The data collection period was limited to 4 weeks.
- Sample size was limited to 80 samples (after power analysis).
- The study area was limited to rural area.

Methodology

In this study quantitative approach is used. Descriptive survey research design used in this study

Sociodemographic variables Age, Education status of pregnant women, education status of husband, Occupation of husband, Monthly income of family, Source of information regarding neural tube defect, Previous obstetric history of neural tube defect in offspring.

Research setting :-Selected rural area Dahila village in Barabanki district.

Target population:- Pregnant women of selected rural area. Dahlia village of Barabanki.

Accessible population:- pregnant women who were available during study, visiting health centre of village Dahila for ANC checkup

Inclusion criteria

Pregnant women including all three trimesters.
Pregnant women who were present during study.

Exclusion criteria

Pregnant women who were not willing to participate in study.
Women who were not pregnant.

Sampling

Sample Size- 80 samples (after power analysis).

Sampling Techniques- Convenient sampling technique

Research tools

Research tool were divided into three sections

1. **Section-A:** Socio-demographic variables
2. **Section-B:** Structured knowledge questionnaire
3. **Section-C:** Five-point Likert scale

SECTION-A: Section A includes seven items related to socio demographic variables i.e. Age, Education of pregnant women, education status of husband, Occupation of husband, Monthly income of family, Source of information regarding neural tube defect, Previous obstetric history of neural tube defect in pregnancy.

SECTION-B: Section B includes 15 items (structured knowledge questionnaire), each correct item carries one score.

SECTION-C: Section C includes five-point Likert scale (15 items) to assess attitude regarding NTD among pregnant women. Statements 3, 7, 9, 15 assess negative attitude rest all statement assess positive attitude
Minimum score is "one"
Maximum score is 75

Ethical consideration

Ethical clearance was taken from the institutional ethical committee.

1. Permission was taken from village authority (Village Pradhan).
2. Informed written consent was taken from each participant of the study.
3. Confidentiality and privacy of the study participants was maintained throughout the study.

Validity

Validity of tool was ascertained by 7 experts opinion from the department of child health nursing and other related departments. The tool was modified according to the suggestion and recommendation by the expert and finalized.

Reliability

Reliability (r) of the structured interview schedule was established for stability and internal consistency. Reliability was assessed by test- retest method, Karl Pearson's formula was used. The calculated value (r=0.83) thus tool was found to be reliable.

The reliability of five-point Likert scale was established by stability and internal consistency. Internal consistency was assessed by split half method The internal consistency was assessed by Cronbach's alpha method. The value was found (r=0.7) thus tool was found to be reliable.

Procedure of data collection

Research project was submitted to IRC for ethical clearance. After approval of IRC, permission was

obtained from Gram Pradhan of village Dahila of Barabanki District. Before collection of data/ interview schedule, written consent was taken from each pregnant women who are participants of the study. Interview was taken by the researcher from each pregnant women it took around 25-30 minute. Everyday 3-4 interview was taken. Data were collected for a period of four weeks from 1/5/2024-30/5/2024 among 80 Samples by using convenient sampling technique. Response of each candidate were recorded individually.

Analysis and interpretation of results

Section- I:- Demographic variables of pregnant women

68% of pregnant women belongs to age category 2630 year, 17.5% pregnant women age group 19-25 year, 13.8% 31-35 year and there was not any pregnant women above age group 36 year.

57.5% of pregnant women had secondary education, 28.7 has primary education, 10% pregnant women had graduation and above and 3.8% pregnant women had no formal education.

53.8% pregnant women's husband were acquired secondary education, 46.3% pregnant women's husband acquired graduation and above and there were no

33.8% pregnant women's husband were vendor, 22.5% pregnant women's husband were farmer, 22.5% are businessmen and 21.3% pregnant women's husband were private or government employee.

78% pregnant women's monthly family income was 10000-50000, 12% of women's family income was between 12.5, 8.8% percent family income was less than one thousand and no one's monthly income was more than 1 lakh.

52% of pregnant mothers had no information regarding neural tube defect, 30% pregnant women had information from health worker and 17.5% pregnant women had information from mass media.

100% of pregnant women had no history of neural tube defected offsprings.

Section II:- Level of Knowledge and attitude regarding NTD among pregnant women

50% pregnant women had poor knowledge, 47% pregnant women had average knowledge and 2.5% pregnant women had good knowledge regarding Neural tube defect.

32.5% pregnant women had negative attitude, 62% pregnant women had neutral attitude and 5% pregnant women had positive attitude regarding NTD.

Section III:- Relationship between knowledge and attitude score of pregnant women regarding neural tube defect

correlation coefficient of knowledge and attitude score is 0.9 which has low positive correlation at $p < 0.05$ level.

Section IV:- Association between the level of knowledge regarding NTD with selected demographic variables of pregnant women.

Demographic variables	Knowledge level			Obtained value (X^2)	DF	P value
	Poor	Average	Good			
Age in years						
19-25 years	6	7	1	5.02	6	0.82 NS
26-30 years	28	27	0			
31-35 years	6	4	1			
36 and above	0	0	2			
Education qualification of participant						
No formal education	1	2	0	4.49	6	0.73 NS
Primary education	15	7	1			
Secondary education	21	24	1			
Graduation and above	3	5	0			
Education qualification of husband						
No formal education	0	0	0	1.26	6	0.59 NS
Primary education	0	0	0			
Secondary education	24	18	1			
Graduation and above	16	20	1			
Husband occupation						
Business	9	9	0	9.16	6	0.62
Farmer	13	5	0			
Vendor	12	13	2			
Private and government employee	6	11	0			

Monthly income of family NS						
<10000	3	4	0	4.29	6	0.69 NS
10001-50000	34	28	1			
50001-1 lakh	3	6	1			
More than 1 lakh	0	0	0			
From where you receive information regarding folic acid						
No such information	26	15	1	8.28	10	0.75 NS
Mass media	3	11	0			
Friends and relatives, offspring	0	0	0			
Attended classes related to neural tube defect	0	0	0			
Information from Health worker	11	12	1			
Other sources	0	0	0			
Do you any previous history of offspring with neural tube defect						
No such history	40	38	2	0	6	0.58 NS
1 child	0	0	0			
2 children	0	0	0			
More than 2 children	0	0	0			

Table value revealed that no significant association between demographic variables of the pregnant women with their knowledge regarding neural tube defect so hypotheses 1 was rejected and null hypotheses was accepted. It means there is no significant association between knowledge level of participant with their selected demographic variables.

Section V:- Association between the level of attitude regarding NTD with selected demographic variables of pregnant women.

Demographic variables	Attitude score			Obtained value (X^2)	DF	P value
	Negative attitude	Neutral attitude	Positive attitude			
Age in years						
19-25 years	1	13	0	10.65	6	0.63 NS
26-30 years	23	28	4			
31-35 years	2	9	0			
36 and above	0	0	0			
Education qualification of participant						
No formal education	1	1	1	17.31	6	0.45 S*
Primary education	2	19	2			
Secondary education	19	27	0			
Graduation and above	4	3	1			
Education qualification of husband						
No formal education	0	0	0	2.45	6	0.57 NS
Primary education	0	0	0			
Secondary education	11	29	3			
Graduation and above	15	21	1			
Husband occupation						
Business	5	12	1	4.02	6	0.76 NS
Farmer	6	10	2			
Vendor	7	9	1			
Private and government employee	8	19	0			
Monthly income of family						
<10000	0	6	1	5.15	6	0.60 NS
10001-50000	23	37	3			
50001-1 lakh	3	7	0			
More than 1 lakh	0	0	4			

From where you receive information regarding folic acid						
No such information	15	25	2	5.82	10	0.58 NS
Mass media	4	9	1			
Friends and relatives, offspring	0	0	0			
Attended classes related to neural tube defect	0	0	0			
Information from Health worker	7	16	1			
Other sources	0	0	0			
Do you any previous history of offspring with neural tube defect						
No such history	26	50	4	0	6	0.67 NS
1 child	0	0	0			
2 children	0	0	0			
More than 2 children	0	0	0			

Table value revealed that there was a statistically significant association between pregnant women's educational status and level of attitude regarding NTD at the level of $p<0.05$. Thus hypothesis H2 is being accepted

Though there was no statistically significant association has been found with other socio demographic variables and level of attitude regarding NTD.

Limitations of the study

1. The study was limited 80 samples of pregnant women of all three trimester.
2. The data collection was limited only to rural area of Barabanki.
3. The data collection period was limited to four weeks only.

Recommendations

1. A comparative study can be conducted to assess knowledge attitude and practice in parents regarding NTD.
2. The study highlights the need for further studies with a large sample size.
3. A similar study can be replication on a different sample with different demographic characteristics and different techniques.

Conclusion

The present study assessed the knowledge and attitude regarding neural tube defect among pregnant women major finding of the study showed that pregnant women had inadequate knowledge and neutral attitude regarding neural tube defect. Educating and creating awareness among pregnant women regarding neural tube defect can reduce the mortality and morbidity associated with neural tube defect.

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