



Knowledge of Pregnant Women About Congenital Anomalies: A Cross-Sectional Study at Krishna Hospital Karad

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ABSTRACT

Women are still not knowledgeable on a factor that can affect them and their unborn children negatively which leads to maternal and infant mortality. Inadequate knowledge about the defects among prospective mothers could result in delayed interventions. Knowing the causes, risk factors and early recognition of some features are of congenital anomalies in pregnant women is the base of prevention and important for planning care.

Objectives: 1. To assess the knowledge of pregnant women about congenital anomalies.

2. To associate the results with demographic variables.

Methodology:

Data was collected from 200 antenatal mothers attending antenatal clinics at Krishna Hospital Karad, selected by Non probability convenient sampling method. Knowledge was assessed by structured questionnaire. The data was analyzed through descriptive and inferential statistics. Frequency, percentage and standard deviation is used for described demographic variables. Online Non parametric Chi - square test is used to find out the relationship between demographic variables and knowledge level of antenatal mothers.

Results: In the present study maximum mother were belongs to 21-25 (48%) years of age groups, visited 4-6 (69%) times for antenatal checkup, Hindu y religion (85%), graduates (38%), housewife's (73.5%), belongs to nuclear family (50.5%), are having income five to ten thousand (70%), having two child (45%), had information from health professionals (24%) and residing at urban community (53.5%). The mean knowledge score of mothers regarding birth defect was 11.33. Maximum (63.5%) participants were having good knowledge, and 31.5 % were having average knowledge. Only 3 participants had poor knowledge and 07 mothers having very good knowledge. Association of result with demographic characteristic shows that Number of antenatal visit, Type of the family, Number of children, Income of the family per month, Sources of information and residency type are having association where as religion, education and occupation were not having any association.

Conclusion: Proper health education during antenatal visit and creating awareness through mass media will improve mother's knowledge hence incidence and prevalence of birth defect can be reduced.

KEYWORDS

Knowledge, Mothers, Birth defect.

Introduction:

No mother in the world likes her baby to get any kind of congenital anomaly. The happiness of a family depends on the health of the children. Birth defects (BD) are an important public health issue as it is under-recognized cause of mortality and disability among infants as well as fetal mortality. The World Health Organization (WHO) defined BD as structural or functional abnormalities that are commonly seen at birth¹.

Children born with birth defect have life-long physical, cognitive and social defect and any medical and psychological interventions are limited for them. At least 40% of all pregnant women usually experience some type of complication during their pregnancies. About 15% of this complication is potentially life threatening. Such complications can occur in pregnancy, during labour, delivery and postpartum period that require high quality obstetric care (Koblinsky, 1993²). Indian

people are living in the midst of risk factors for birth defects, e.g., universality of marriage, high fertility, large number of unplanned pregnancies, poor coverage of antenatal care, poor maternal nutritional status, high consanguineous marriages rate, and high carrier rate for hemoglobinopathies³.

Every year, an estimated 7.9 (7.0%) million children of total births world-wide are born with a serious birth defect⁴. Prevalence rate is more severe in middle and low-income countries where-in more than 94% of births with serious birth defects and 95% of the deaths of these children occur⁵. In 50% of cases; the cause is un-known. Among genetic etiology, chromosomal abnormalities constitute 6%, single gene disorders 25% and multi-factorial in 20-30% of cases⁶. Recent review shows that 2.5% of infants at birth and accounted for 10-15% neonatal deaths and 8-18% of perinatal mortality in India⁷. Under the Action Plan for Global Strategy for the Prevention and Control of non-communicable diseases 2008-2013, prevention and care of the birth defects was given due emphasis⁸.

Women are still not knowledgeable on a factor that can affect them and their unborn children negatively which leads to maternal and infant mortality. Inadequate knowledge about the defects among prospective mothers could result in delayed interventions. Knowing the causes, risk factors and early recognition of some features are of congenital anomalies in pregnant women is the base of prevention and important for planning care. In order to prevent anomalies, there are measures that help include avoidance of teratogenic exposures and radiation, smoking, drinking alcohol, medical treatment of maternal illnesses, good nutrition, and routine obstetrical care. This also includes clean and safe delivery as well as post-partum care for mothers and infants (WHO 1997). India being the second most populous country with a large number infant born annually with birth defects should focus its attention on strategies for control of birth defects³. It is estimated that 10% of all birth defects caused by prenatal exposure to teratogens. These exposures include but are not limited to medication or drug exposure, maternal infections, disease, environmental & occupational exposures. Teratogen caused birth defects are potentially preventable. Most of the birth defects can be prevented by providing knowledge & awareness to the women.

Nurses play a major role in preventing fetal congenital anomalies, since they are the one who spends most of the time with antenatal mothers in hospital. Ultimately, the knowledge about prevention of congenital anomalies is necessary for the antenatal mothers to deliver a healthy baby. Improved knowledge on birth defect helps in early recognition, regular antenatal visit, and use of proper genetic counseling services, preventing malnutrition and taking appropriate steps in treatment which leads to decline in birth defect rate. Awareness of birth defects as well as their causes and prevention may also encourage mothers to adopt more positive preventive behaviors. Health promotion aimed at prevention, early detection and prompt treatment of birth defects can be achieved by improving the transmission of information to mothers at antenatal clinics and educating the populace through mass media and health care workers⁹. With regard to cultural aspect, consanguineous marriage is major contributing factor for birth defect. If mother or family members have adequate knowledge on consequences of consanguineous marriage it would play major role in preventing burden of birth defect. Need of genetic counseling is also important aspect of knowledge which woman should have before pregnancy. Proper utilization of genetic counseling services before marriage and before pregnancy also reduces prevalence of birth defect.

The study is conducted with the aim of determining the knowledge, risk factors and prevention of birth defects among mothers. The study will provide baseline information on the knowledge s of mothers about birth defects in general.

Objectives:

- To assess the knowledge of pregnant women about congenital anomalies.
- To associate the results with demographic variables.

Methodology:

After getting approval from the hospital authorities, a descriptive cross-sectional study was conducted among women attending antenatal clinics at Krishna Hospital Karad. Data was collected from 200 antenatal mothers, selected by Non probability convenient sampling method, who attend antenatal O.P.D. Consent was obtained after explaining the purpose of the study assuring confidentiality and the anonymity of the participating women.

The instrument was designed by researcher on knowledge of birth defect, risk factor and prevention of birth defect. The first part was comprised of variables of sociodemographic status such as mother's age, marital status, level of education, religion, number of children in the family and other related questions. The second part included 20 questions about the participants' specific knowledge of birth defect risk factor and its prevention. Questions were closed-ended "yes," "no," "i don't know" answers. Correct answers scored one point and a zero score was given for each wrong answer and don't know type response. Scores in the knowledge domain were categorized into Poor Knowledge (0-5), Average Knowledge (6-10), Good knowledge (11-15) and Very good knowledge (16-20).

The data was analyzed through descriptive and inferential statistics. Frequency, percentage and standard deviation is used for described demographic variables. Online Non parametric Chi - square test is used to find out the relationship between demographic variables and knowledge level of antenatal mothers¹⁰.

Results:

Table 01: Demographic Variables of the Mother N=200

Sl. No.	Characteristics	Categories	Frequency F	Percentage %
1.	Age of the mother (Years)	15-20 Years	25	17.5
		21-25 Years	95	48
		26-30 Years	50	25
		Above 30 Years	30	15
2.	Number of antenatal visit	1-3	35	17.5
		4-6	138	69
		7-9	21	10.5
		10-12	16	08
3.	Religion	Hindu	170	85
		Muslim	24	12
		Christian	06	03
4.	Educational status	Uneducated	28	14
		Up to SSLC	46	23
		PUC	56	28
		Graduate	76	38
		Post graduate	11	02
5.	Occupational status	House wife	147	73.5
		Labourer	15	7.5
		Private employee	35	18
		Govt. employee	13	02
6.	Type of the family	Nuclear family	101	50.5
		Joint family	99	49.5
7.	Income of the family per month	Rs. 1001-5000	45	22.5
		Rs. 5001-10000	140	70
		Rs. > 10000	25	12.5
8.	No. of children	One	88	44
		Two	90	45
		More than two	22	11
9.	Sources of information	Mass media	32	16
		Health professional	48	24
		Friends and relatives	25	12.5
		Family members	45	22.5
10.	Residence	Urban	107	53.5
		Rural	93	46.5

In the present study maximum mother were belongs to 21-25 (48%) years of age groups, visited 4-6 (69%) times for antenatal checkup, Hindu y religion (85%), graduates (38%), housewife's (73.5%), belongs to nuclear family (50.5%), are having income five to ten thousand (70%), having two child (45%), had information from health professionals (24%) and residing at urban community (53.5%).

Table 02: knowledge level of mothers on birth defect:

Sl no	Level of knowledge	Range	Frequency	%
1	Poor Knowledge	0-5	03	1.5
2	Average Knowledge	6-10	63	31.5
3	Good knowledge	11-15	127	63.5
4	Very good knowledge	16-20	07	3.5
Mean knowledge score was 11.33.				
Sl no	Level of knowledge	Range	Frequency	%
1	Above mean	0-10	54	1.5
2	Below mean	11-20	146	31.5

The mean knowledge score of mothers regarding birth defect was 11.33. Maximum (63.5%) participants were having good knowledge, and 31.5 % were having average knowledge. Only 3 participants had poor knowledge and 07 mothers having very good knowledge.

174 (87%) mothers believed that birth defect (BD) is disease acquired by pregnant women, 84 (42%) mothers know that It can affect baby development in the womb. 125 (62.5%) woman are aware that it can be prevented with specific health precautions. More than 50% of mother are having knowledge on risk factors such as alcohol consumption during pregnancy 153 (76.5%), use of some un-prescribed medications 100 (50%), smoking before and during pregnancy 118 (69%), maternal disease like any severe infection during pregnancy 112 (56%), exposure to radiation during pregnancy 136 (68%), maternal age (under 18 years over 35 years) 134 (67%) and family history of birth defect 142 (71%). It was surprised that only 88 (44%) mother know that a consanguineous marriage increase the risk of giving birth to a child with BD.

Table 03: Association of results with socio demographic variable:

Sl no	Characteristics	Categories	Above mean	Below mean	chi square value	P value	Significance
01	Age of the mother (Years)	15- 25 Years	91	37	0.7469	0.3874	Not significance at 0.05
		Above 26 Years	56	16			
02	Number of antenatal visit	1-6	41	130	7.3431	0.006732	Significance at 0.05
		7 - 12	14	15			
03	Religion	Hindu	44	125	0.5146	0.4731	Not significance at 0.05
		Muslim & Christian	10	21			
04	Educational status	Below Graduates	37	88	0.7373	0.3905	Not significance at 0.05
		Graduates & Post graduate	18	57			
05	Occupational status	House wife & Laborers	45	47	2.5505	0.1102	Not significance at 0.05
		Private & Govt. employee	65	43			
06	Type of the family	Nuclear family	39	61	14.6119	0.000132	Significance at 0.05
		Joint family	15	85			
07	No. of children	One & Two	52	125	4.4178	0.3556	Significance at 0.05
		More than two	02	21			
08	Income of the family per month	Below Rs 10000	41	135	13.0047	0.000311	Significance at 0.05
		Above Rs. > 10000	14	10			
09	Sources of information	Mass media & Health Professional	19	117	37.9514	0.1136	Significance at 0.05
		Friends and Relatives	36	28			
10	Residence	Urban	18	91	14.1034	0.000173	Significance at 0.05
		Rural	37	54			

Association of result with demographic characteristic shows that Number of antenatal visit, Type of the family, Number of children, Income of the family per month, Sources of information and residency type are having association where as religion, education and occupation were not having any association.

It is also seen that number of antenatal visit is associated with knowledge score. 130 (65%) mother had less than 6 antenatal visits and had score below mean level of knowledge which ultimately indicate increased visit to clinic may give chance to talk to health professional to gain knowledge on birth defect (BD). In sources of information category also it indicated that maximum information received by mother is from health professionals. Hence regular visit to hospital and contact with health care professional may help to be aware of risk factor of BD.

Discussion:

Many studies were done on knowledge of mothers on birth defect. A study by ajediran Bello et¹¹ al on 443 pregnant women at University of Ghana found that 205(46.3%) had high knowledge on the risk factors while 213(48.1%) and 224(50.6%) had moderate overall knowledge and specific knowledge about BD respectively. Most of the participants (48.1%) believed that BD were of supernatural origin. The age, level of education, number of antenatal visits and parity of the participants were not significantly correlated (p > 0.05) with their specific and overall knowledge, which results are almost similar to our study. Study by Taiwo Akeem Lawal¹², clearly states that Lack of established guidelines, screening protocols, unavailable support during high risk pregnancy, delay in recognition, delayed visit to the hospital, delivery outside recognized obstetric health care settings and socioeconomic challenges are factors contributing increased incidence of birth defect. In their study of 714 mothers at two major

hospitals in Nigeria, Only 183 (25.6%) were aware of birth defects. Another study of Masoumeh P¹³ et al from Iran on 150 pregnant women which shows Half 75 (50%) of the participants had low scores on specific knowledge on birth defect. Many 80 (53.3%) of the participants had high scores on their knowledge of risk factors and prevention of congenital anomalies. Esposito G¹⁴ also found that 42% of women had main maternal risk factors in pregnancy (alcohol, smoking, passive smoking and obesity) in his 513 pregnant women's study from the gynecological ambulatory services of five hospitals in Naples, Italy. Comparing with the above study results our study indicates good results on knowledge of BD. But if Knowledge is improved through Regular and frequent antenatal visits, awareness through mass media, counseling by health care professionals may make dramatic change in decreasing the prevalence rate of birth defect.

Conclusion:

Genetic counseling before marriage and before pregnancy, for couples helps to prevent incidence of BD. Our study also indicated that knowledge on risk of consanguinity for birth defect is very less. But consanguinity is very common culture in India, public awareness is in need. Behavioral modifications such avoiding alcohol, miss use of drugs among young population especially girls is required. It can be achieved by simple education and training program for high school girls. During hospital visit counseling by trained personal to mothers and family members also improve knowledge. As study indicates the association of antenatal visit and knowledge level, Women with special health problems or a high-risk pregnancy may have many more visits to the antenatal clinic. Regular check-ups during pregnancy are very important factors early detection, diagnosis and starting prompt treatment.

Limitations:

The study is limited to antenatal mother who attends antenatal O.P.D. as the daily visit of outpatient care is more than 150 patients, with small sample size this study cannot be generalized. This study results are limited to Krishna hospital Karad.

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