

Original Research Article

Knowledge on Preconception Care among Reproductive age Women

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Abstract: Preconception care is any intervention provided to women and couples of childbearing age, regardless of pregnancy status or desire, before pregnancy, to improve health outcomes for women, newborns and children. Preconception care mainly focuses on health promotion, screening and interventions for women of reproductive age to reduce risk factors that might affect future pregnancies. A descriptive research design was used for this study. Non-probability purposive sampling technique was used to select the respondents. Two hundred twenty-seven reproductive age women were interviewed face to face using structured questionnaires. Most of the respondents 99 (43.61%) were in between the age group of 21-25 years. Majority of respondents 218(96.03%) belonged to Hindu religion. Most of the respondents 152(66.96%) belonged to nuclear family. Only 65(28.63%) had information regarding preconception care. Majority of respondents 192(84.58%) had average level of knowledge. Highest knowledge score was in the area of reproductive health risk factors, and lowest in the area of health promotion. The overall mean percentage was 57.39. There was significant association of Reproductive age women had average level of knowledge on preconception care. Highest knowledge was in the area of reproductive health risk factors where lowest was in the area of health promotion. Awareness program is required to improve the different aspects of knowledge regarding preconception care.

Keywords: Knowledge, preconception care, health promotion, reproductive age women, Nepal.

INTRODUCTION

Preconception care defined as “any intervention provided to women and couples of childbearing age, regardless of pregnancy status or desire, before pregnancy, to improve health outcomes for women, newborns and children” [1]. It is an integral part of antenatal care because this care programme has potential to assist women by reducing risk, promoting healthy lifestyle and improving readiness for pregnancy. As well as it is important to minimize fetal malformation [2].

There is growing evidence that preconception care may have an important role in preventing short and long term adverse health consequences for women and their offspring [3]. Reproductive health outcomes will be obtained by focusing and improving preconception health. Also, it has potential for reducing societal costs as well [4]. Worldwide in 2010, 287000 women died, with many more suffering long-term disability, from causes related to pregnancy and childbirth. In the same year, globally 3.1 million newborn babies died in their first month of life while 14.9 million were born prematurely and 2.7 million were stillborn. Hence, preconception care is important or necessary to further reduce maternal, newborn and child deaths [5].

Preconception care helps in addressing pre-pregnancy health risks and health problems that could

have negative maternal and fetal consequences. Therefore, it has potential to further reduce global maternal and mortality and morbidity especially in low income countries where the highest burden of pregnancy related deaths and disability occurs [6].

Every women of reproductive age who is capable of becoming pregnant is candidate for preconception care, even if she is not planning to conceive. Men should also receive preconception care, although the components are not as well defined in men as they are in women [7]. Preconception care aims to promote the health of women of reproductive age before conception preventing pregnancy related outcomes such as low birth weight, premature birth and infant mortality [8].

Reproductive health is a national priority program of Nepal. The notion of preconception care aims to target the existing risks before pregnancy, whereby resources may be used to improve reproductive health and optimize knowledge before conceiving. The preconception period provides an opportunity to intervene earlier to optimize the health of potential mothers (and fathers) and to prevent harmful exposures from affecting the developing fetus. These interventions include birth spacing and preventing teenage pregnancy, promotion of contraceptive use, optimization of weight and micronutrient status, prevention and management of

infectious diseases, and screening for and managing chronic conditions [9].

The benefits of preconception care are to reduce the risks of adverse health effects for women, fetus or neonate by optimizing the health and knowledge before planning and conceiving a pregnancy [10]. The benefit of preconception care is the improvement of public health which is gained through the improvement of individual's health. Preconception care serves as an opportunity to screen for current and future health threats like malnutrition and obesity [11].

Several risk behavior and exposures affects fetal development and subsequent outcomes. The greatest effect occurs early in pregnancy, often before women enter prenatal care or during pregnancy. For instance, risk of neural tube defects can be minimized through supplementation of folic acid 3 months before conception. During, the first weeks (before 52 days gestation of pregnancy, exposure to alcohol, tobacco and other drugs, lack of essential vitamins (eg folic acid) and workplace hazards can adversely affect fetal development and results in pregnancy complications and poor outcomes for both mother and infant [6].

This study aims to determine the level of knowledge on preconception care among reproductive age women and to find out the association of level of knowledge on preconception care among reproductive age women with their selected demographic variables

MATERIALS AND METHOD

The descriptive research design was employed to assess the knowledge of reproductive age women on preconception care. The study was conducted in ward number 12 of Tulsipur municipality of Dang District, Nepal. The study population comprises of married women of reproductive age group (15-49yrs). The study was carried out during May –June 2015. Non probability purposive sampling technique was used to select the sample of the study. The sample size of the study was 227 reproductive age women.

The instruments was modified after reviewing literature, pretesting and reliability of the instruments as well as consulted with supervisor. The research was based on primary data which was collected by structured interview schedule. Level of knowledge was classified as Poor (0-36). Average (37-74) and Good (75-110) based on the score get by the responses to structured interview schedule. The study was conducted after receiving permission from, School of health and Allied Sciences, Pokhara University and Ward number 12 of Tulsipur Municipality, Dang, Nepal. Informed written

consent was obtained from the participants and the confidentiality of the received information was maintained. The collected data was tabulated and analyzed using SPSS.

RESULTS

Demographic Performa of respondents

Out of 227 respondents 99(43.62%) were in the age group of 21-25years. The mean age of the respondents was 23.5years. Majority of the respondents 218(96.03%) belonged to Hindu religion and 152(66.96%) respondents belonged to nuclear family. Majority of the respondents 206(90.75%) had got formal education. Among them 96(46.62%) had got secondary level education. Majority of the respondents 154 (67.84%) were house worker and 76 (33.48%) monthly income ranged between Rs21001 – 28000. With regard to number of the children, most of the respondents 111(48.89%) had 2 children. Majority of the respondents 162 (71.37%) had no information and 65 (28.63%) respondents had information regarding preconception care. Out of 65, 31 (47.69%) respondents got information from radio/ television [Table 1].

Level of knowledge of respondents

The study results shows that majority of the respondents 192 (84.58%) had average knowledge and 35 (15.42%) of respondents had good level of knowledge regarding preconception care. The total score for level of knowledge was 110. Minimum score was 34 and maximum score was 70. The overall mean percentage was 57.39 with mean and SD 63.13 \pm 7.14. [Table 2]

Knowledge aspects of respondents regarding preconception care

The study result illustrates that highest knowledge was in the area of identification of reproductive health risk factors regarding preconception care, the mean percentage was 68.19 with mean and SD 28.64 \pm 3.40. Likewise, in the area of health promotion, mean percentage was 48 with mean SD of 9.12 \pm 1.97 which was lowest. In the area of concept of preconception care mean percentage was 65.41 with mean and SD 11.12 \pm 2.40. In the area of the intervention the mean percentage was 54.73 with mean and SD 14.23 \pm 2.31. [Table 3]

Association of level of knowledge with their selected demographic variables

The study reveals that there is no significant association of level of knowledge with selected demographical variables; age, type of family, education status, and occupation. [Table 4]

Table-1: Demographic Performa of respondents n = 227

SN	Variables	Frequency(f)	Percentage (%)
1.	Age (in years)		
	15-20	19	8.37
	21-25	99	43.62
	26-30	73	32.16
	>30	36	15.85
2.	Religion		
	hindu	218	96.03
	buddhist	0	0
	christians	9	3.97
	muslim	0	0
3.	Type of family		
	nuclear family	152	66.96
	joint family	75	33.04
4.	Education Level of respondents		
	literate		
	formal	206	90.75
	in formal	21	9.25
	if formal		
	primary level	39	18.93
	lower secondary level	34	16.50
	secondary level	96	46.62
	higher secondary level	21	10.19
	bachelor level and above	16	7.76
5.	Occupation of pregnant women		
	house worker	154	67.84
	service holder	60	26.43
	business	13	5.73
	labour	0	0
6.	Income of family(Rs/month)		
	7000-14000	33	14.54
	14001-21000	75	33.04
	21001-28000	76	33.48
	≥28001	43	18.94
7.	Number of Children		
	None	21	9.25
	1	72	31.72
	2	111	48.90
	≥3	23	10.13
8.	Do you have any Information regarding preconception care?		
	yes	65	28.63
	no	162	71.37
	If yes , Source of information		
	radio/ television	31	47.69
	health worker	21	32.31
	friends/family	0	0
	newspaper/books	13	20.0

Table-2: Distribution of respondents according to the level of knowledge (n =227)

Level of knowledge	Frequency(f)	Percentage (%)
Poor	0	0
Average	192	84.58
Good	35	15.42

Table-3: Knowledge aspects of respondents regarding preconception care. (n=227)

S.N	Knowledge aspects	Max. Score	Mean \pm SD	Mean Percentage (%)
1	Concept of preconception	17	11.12 \pm 2.40	65.41
2	Reproductive health risk factors	45	28.64 \pm 3.40	68.19
3	Health promotion	22	9.12 \pm 1.97	48
4	Intervention	26	14.23 \pm 2.31	54.73
	Overall	110	63.13\pm7.14	57.39

Table-4: Association of level of knowledge with selected demographic variables. (n = 227)

SN	Variables	Total score		χ^2 value	DF	P value
		Median \leq 65	Median $>$ 65			
1.	Age(in years)			0.009	1	0.926 NS
	\leq 25	70	48			
	\geq 25	64	45			
2.	Type of family			0.246	1	0.620 NS
	Nuclear	88	64			
	Joint	46	26			
3.	Educational status			1.246	1	0.264 NS
	Literate	124	82			
	illiterate	10	11			
4.	Occupation			2.165	1	0.141 NS
	House worker	96	58			
	Working	38	35			

NS = non significant; S* significant, $\chi^2=3.84$ at 1 df.

DISCUSSION

In present study, most of the respondents 99(43.61%) were in between the age group of 21-25 years. Majority of respondents 218(98.03%) followed Hindu religion. Majority of the respondents 152(66.96%) belonged to nuclear family. With regards to educational status majority of the respondents 206 (90.75%) had formal education. Majority of the respondents 206(90.75%) had got formal education. Among them 96(46.62%) had got secondary level education. Majority of the respondents 154 (67.84%) were house worker and 76 (33.48%) monthly income ranged between Rs21001 – 28000. With regard to number of the children, most of the respondents 111(48.89%) had 2 children. Majority of the respondents 162 (71.37%) had no information and 65 (28.63%) respondents had information regarding preconception care. Out of 65, 31 (47.69%) respondents got information from radio/ television. Majority of the respondents 192(84.58%) had average knowledge and 35(15.42%) of respondents had good level of knowledge regarding preconception care.

The result of this study was supported by a quantitative study conducted at Saradha College of education, Salem and Gover. Arts College for women to assess the level of awareness regarding preconception care. The total sample size was 100. The sample was collected by non- probability convenient sampling technique. The study shows that majority of respondents, 67% were in the age 20-22years, 80% belonged to nuclear family and 96% belonged to Hindu religion. The study result shows that 61% of respondents have

moderate knowledge about preconception care this study supports this study to some extent[12].

In present study regarding concepts of preconception care 127(55.94%) of respondents mentioned correct answer of preconception care that is care provided to couple before conception. Majority of the respondents 182(80.18%) mentioned preconception care was need to have safe pregnancy. Majority of the respondents 205(90.30%) mentioned promoting health as the components of preconception care. Most of the respondents 95(41.86%) provided correct answer that 15-49years falls under reproductive age group. Most of the respondents 107(47.15%) provided correct answer that preconception care should be focused on both married and unmarried people. The result of this study was supported by a cross sectional study which was conducted to assess preconception care in southern Nigeria tertiary institution. The total sample size was 194 antenatal attendants. The study shows that 35.05% of the respondents were aware of preconception care and 86.60% of them thought that preconception care was important [13].

In present study, all the respondents have some sorts of knowledge regarding benefits of preconception care. Most of the respondents 204(33.9%) mentioned preconception care is beneficent to promote the health of future children. Most of the respondents 104(45.80%) provided the correct answer that preconception counseling are given to couple prior to plan pregnancy. All 227(100%) respondents provided the correct answer that preconception care is important to health of future

children. The result of this study was supported by a survey report conducted on topic Preconception Health: Physician practices in Ontario. The sample size was 700. Data was collected through survey questionnaire. The study results shows that 97.2% of the respondents said preconception care is beneficent to the health of future children and 97.2% of the respondents indicated that preconception care is very important or important to the health of future children [14].

The result of this study regarding identification of risk factors reveals majority of the respondents 218 (96.03%) mentioned miscarriage as the effects of alcohol in pregnancy. The result of present study was similar to a descriptive cross-sectional study which was conducted to assess alcohol consumption among pregnant women attending the antenatal clinic of tertiary hospital, Nigeria. The sample size was 221. The study shows only 114(51.58%) of the respondents knew of the harmful effects of alcohol on the fetus [15].

In present study regarding knowledge related to health promotion most of the respondents 145(63.87%) mentioned poor nutrition as the condition amenable to preconception care. Regarding the routine laboratories test 190(83.70%) mentioned urine screening for protein and glucose tests include in preconception care. Regarding knowledge on vaccination to be provided to women 35 (15.42%) respondents mentioned correct answer that rubella vaccine should be provided to women before conception. Only 12(5.29%) of respondents provided correct answer that minimum gap between two children should be 3years. The result of this study was supported by a cross sectional study conducted on West Bengal, India to assess the fertility perception. The total sample size was 2000 married women. Data was collected by stratified multistage sampling. The study shows that 23% had incorrect knowledge about spacing between subsequent pregnancies i.e ≥ 3 years [16].

In this study, regarding knowledge on vaccination to be provided to women, 35 (15.42%) respondents mentioned correct answer that rubella vaccine should be provided to women before conception. The result of this study was supported by a cross sectional study conducted to assess the knowledge about rubella and congenital rubella syndrome. The sample size was 1242. The sample populations were female age 15-45 years. The result of this study shows that 137(11.03%) reported having received rubella vaccination. Only 20.3% knew that infection could cause severe congenital malformation and 1.7% knew that it could cause spontaneous abortion [17].

The result of present study shows that most of the respondents 125(55.07%) provided correct answer that is women should start preparing for pregnancy 3 months before conception. Only 74(32.60) of the respondents provided correct answer for preventing

neural tube defect is the folic acid. Only 26(11.46%) of the respondents provided correct answer that folic acid should be taken 3month before conception. Majority of the respondents 179(78.85%) mentioned the benefits of multi vitamin supplementation before conception is to lower incidence of still birth. This study was supported by a study which was conducted to assess knowledge and use of folic acid by women of childbearing age in United States. The total sample size was 2115 women of aged 18-45years. The study shows that awareness of folic acid was lowest among women aged 18-24years i.e. 50% and women who had less than a high school education 40%. Of all the women surveyed 13% knew that folic acid helps in preventing birth defects [18].

In this study, majority of the respondents 175(77.10%) said condom is a temporary family planning measures helps in preventing sexually transmitted disease. The result of present study was supported by a cross sectional descriptive study done to assess awareness and practice of family planning methods. The sample size was 200 women. The study shows 78% of respondents said depo-provera as the best known method of temporary contraceptives followed by 74% oral contraceptives and 71% use of condoms [19].

In this study, all the respondents had some sorts of knowledge regarding preventing measures of STI. Majority of the respondents 209(92.07%) said use of condom while having intercourse prevents STI and 81.93% said avoid of multiple partners prevents STI. The study result was supported by a cross sectional descriptive study was carried out to assess the vulnerability, knowledge and Prevention of STI in Southeast Nigeria. The total sample was 200. The study population was female traders aged 15-49years. The study shows that 75.5% respondents said that risk factors for STI were multiple sexual partners, 62% of respondents said non-use of condom as the risk factors for STI [20].

CONCLUSION

The study findings highlights the majority of respondents had average level of knowledge on preconception care. The more knowledge was found in the area of identification of reproductive health risks factors regarding preconception care and lowest knowledge was found in the area of health promotion. The overall mean percentage was 60.70. The more education and information should be needed to increase the level of knowledge on different aspects of preconception care of reproductive age women.

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