An exploratory study to assess the perceptions of preconception care among undergraduate girls with a view to develop information booklet in selected colleges of district Sirmour (Himachal Pradesh)

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ABSTRACT

Preconception care recognizes that many adolescent girls and young women will be thrust into motherhood without the knowledge, skills or support they need. Objectives: The study aimed to determine the level of perception among undergraduate girls regarding preconception care. Method: Exploratory research design was adopted to collect data from 288 undergraduate girls of the selected colleges of District Sirmour (H.P) using the multistage sampling technique. Data was collected by self-administered questionnaire using 5-point Likert scale. Results: The present study findings showed that 37.2% of undergraduate girls had favorable perceptions regarding preconception care, 62.8% of undergraduate girls had moderately favorable perceptions (neither positive nor negative) regarding preconception care and none of them (0%) had unfavorable perceptions regarding preconception care. There was significant association of age with the perception of undergraduate girls at the level of significance p<0.05. Conclusion: The results of the present study reveals that there is lack of awareness regarding preconception care. Hence student's perception regarding its benefits are not favorable. So, there is a need to shift the care at the earliest to prevent further complication during pregnancy.

Keywords— Undergraduate Girls, Preconception Care, Information Booklet

1. INTRODUCTION AND BACKGROUND

Health is an important indicator for the wellbeing for women, new born and children. It is necessary that women should have optimal health in order to give birth to healthy baby. Preconception Care is important for every reproductive age women as a candidate who is capable of becoming pregnant. There has been increasing recognition that a women's health status, life style and history prior to conception strongly influence the achievement of healthy pregnancy outcome. Once a pregnancy is confirmed, proper care should be taken so as to improve the health of mother and baby.
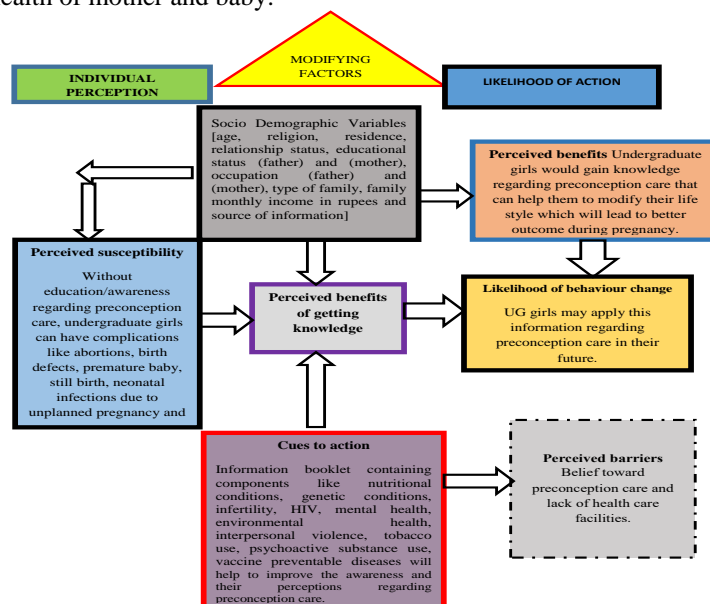

Fig. 1: Conceptual framework of the study based on Health Belief Model

1.2 Need for the study
Around 15.6 million abortion took place in India in 2015 and half of all pregnancies were unplanned says (Lancet study) which is the 1st National study of the incidence of abortion. The risk of maternal mortality is twice in women aged 15–19 years and five times high in girls aged 10–14 years as compared to women aged 20–29 years A cross sectional was study conducted in the University of Hail, Saudi Arabia to explore the preconception care perspective in women and the result showed that 63% of the responders were well educated from college level onwards. A large proportion 93% were convinced and desired to recommend it to their family and friends and to help achieving healthier generations. [1]

1.3 Conceptual Framework
The health belief model (HBM) is a psychological health behaviour change model which is mainly developed to explain and predict health-related behaviours, particularly in regard to the uptake of health services. The health belief model proposes that a person's health-related behaviour depends on the person's perception of four critical areas: Perceived Susceptibility, Perceived Benefits, Likelihood of behaviour change, Perceived barriers, Cues to action.

2. REVIEW OF LITERATURE
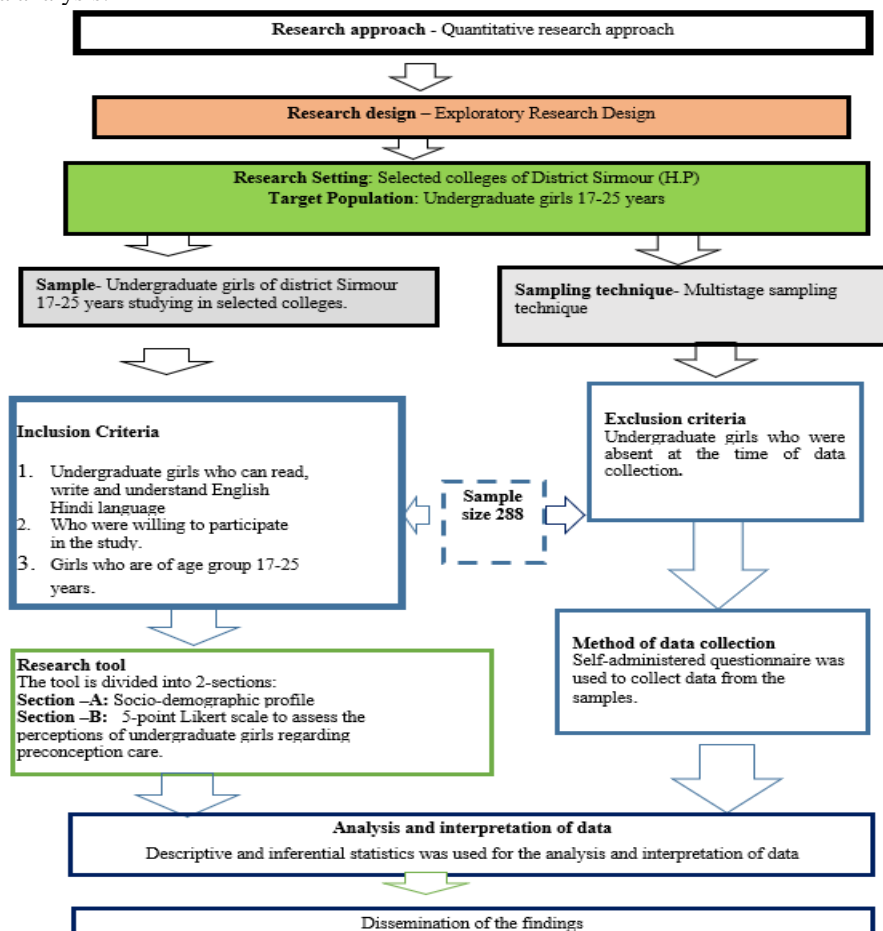Section A: (Literature related to perception regarding preconception care)
A qualitative study was conducted by using semi structured interviews among women aged 18-45 years of Pakistan, India, Caribbean, African, White and mixed ethnic origin. The main objective of the study was to explore perceptions about preconception health and care among women from these communities to identify opportunities and challenges for intervention development in primary care and the result showed that women had modest or poor awareness of preconception health issues and there was little prevailing culture of preparing for pregnancy and the realities of their pregnancies often being unplanned [2]

Section B: (Literature related to interventional studies regarding preconception care)
A study was conducted in the selected colleges of Nagpur city among young adults to assess the existing knowledge among regarding preconception care. A pre experimental and descriptive research approach was used with one group pre-test post-test design to evaluate the effectiveness of planned teaching programme on 60 samples who all were selected by non-convenient sampling method. The pre-test was administered to 60 young adults and after 7 days post test was conducted. The result showed that structured teaching programme enhanced the knowledge of young adults regarding preconception care. The overall mean percentage of post-test knowledge scores of young adults 64.43% is apparently higher than the overall mean percentage of pre-test knowledge score 44.3% and was significant at 0.05 level. [3]

3. RESEARCH METHODOLOGY
This chapter deal with the methodology including research approach and design, research settings, population, sample, criteria for sample selection, sampling technique, sample size, description of tool, ethical consideration, pilot study, procedure of the data collection, plan for data analysis.

Research approach - Quantitative research approach

Research design – Exploratory Research Design

Research Setting: Selected colleges of District Sirmour (H.P)
Target Population: Undergraduate girls 17-25 years

Sample- Undergraduate girls of district Sirmour 17-25 years studying in selected colleges.

Sampling technique- Multistage sampling technique

Inclusion Criteria
1. Undergraduate girls who can read, write and understand English Hindi language
2. Who were willing to participate in the study.
3. Girls who are of age group 17-25 years.

Sample size 288

Exclusion criteria
Undergraduate girls who were absent at the time of data collection.

Research tool
The tool is divided into 2-sections:
Section –A: Socio-demographic profile
Section –B: 5-point Likert scale to assess the perceptions of undergraduate girls regarding preconception care.

Method of data collection
Self-administered questionnaire was used to collect data from the samples.

Analysis and interpretation of data
Descriptive and inferential statistics was used for the analysis and interpretation of data

Dissemination of the findings

Fig. 2: Schematic Presentation of research methodology

4. DATA ANALYSIS AND INTERPRETATION

Name of the tool	Description
Socio-Demographic profile (11 questions)	It includes Age, Religion, Type of family, Area of residence, Relationship status, Educational Status (Father), Educational Status (Mother), Occupation (Father), Occupation (Mother), Family Monthly Income (In Rupees) and Source of information.
Likert scale for assessing the perception of undergraduate girls regarding preconception care (46 statements)	It includes statements related to various components (a) Nutritional Condition (b) Tobacco use (c) Genetic conditions (d) Environmental health (e) Infertility (f) Interpersonal Violence (g) Sexually transmitted Diseases (h) HIV (i) Mental Health (j) Psychoactive substance use (k) Vaccine Preventable diseases (l) Awareness and understanding

Section A. Background information of undergraduate girls.

Table 1: Frequency and percentage distribution of undergraduate girls based on their socio demographic variables, N=288

Variables	Options	Frequency	Percentage (%)
AGE	17-19yrs	9	3%
	20-22yrs	**248**	**86%**
	23-25yrs	31	11%
RELIGION	Sikh	8	3%
	Hindu	**265**	**92%**
	Muslim	15	5%
	Christian	-	-
FAMILY	**Nuclear Family**	**233**	**81%**
	Joint Family	55	19%
	Extended	-	-
RESIDENCE	Urban	79	27.4%
	Rural	**188**	**65.3%**
	Semi urban	21	7.3%
RELATIONSHIP STATUS	**Unmarried**	**260**	**91%**
	Married	28	9%
	Divorced	-	-
	Widow	-	-
EDUCATIONAL STATUS (FATHER)	No Formal Education	-	-
	Primary	2	1%
	Higher Secondary	39	13%
	Senior Secondary	**227**	**79%**
	Graduation & above	20	7%
EDUCATIONAL STATUS (MOTHER)	No Formal Education	-	-
	Primary	4	1%
	Higher Secondary	57	20%
	Senior Secondary	**224**	**78%**
	Graduation & above	3	1%
OCCUPATION (FATHER)	Self-employed	58	20%
	Unemployed	-	-
	Government Job	**175**	**61%**
	Private Job	55	19%
OCCUPATION (MOTHER)	**Homemaker**	**234**	**81%**
	Government job	2	1%
	Private job	18	6%
	Self Employed	34	12%

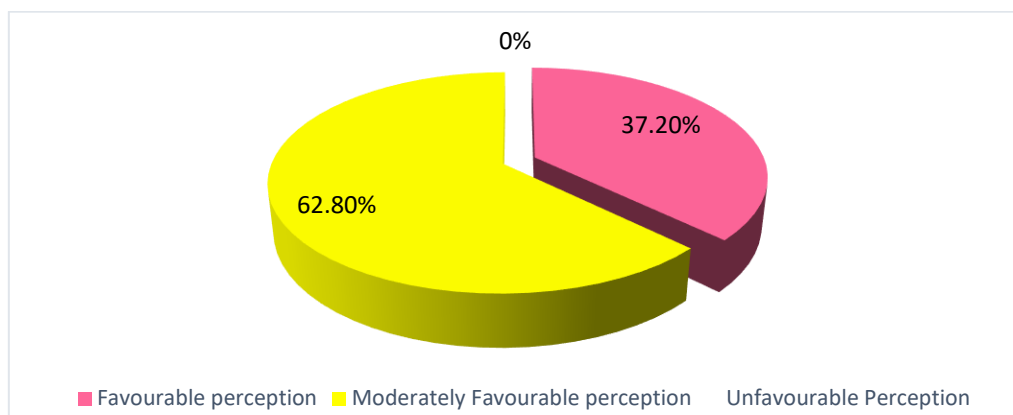| FAMILY MONTHLY INCOME IN RUPEES	< 10,000	-	-
	10,001 – 20,000	85	30%
	20,001-40,000	**185**	**64%**
	> 40,001	18	6%
SOURCE OF INFORMATION	Family	5	2%
	Teacher	15	5%
	Friends	-	-
	Mass Media	**268**	**93%**

Table 1 shows that respondents were distributed in various categories according to age, religion, type of family, relationship status, educational status (father), educational status (mother), occupation (father), occupation (mother), family monthly income in rupees and source of information. According to age table interprets that 248 (86%) undergraduate fall under the age group of 20-22 years. The majority of girls 265(92%) belonged to Hindu religion. According to type of family majority of girls 233(81%) belonged to nuclear type of family. For the category of residence maximum number of girls i.e. 188(65%) were residing in rural area. Majority260 (91%) of girls were unmarried. In educational status (father) majority of girl's fathers 227(78%) were having senior secondary education and mothers 224(79%) were also having senior secondary education. Majority of girls fathers 175 (61%) were working as Government employees whereas maximum undergraduate girl's mothers were homemaker. According to the category of family monthly income majority of girls i.e. 185(64%) had their family monthly income between 20,001– 40,000. Majority of girls i.e. 268 (93%) had their source of information from mass media.

Section B

Table 2: Percentage distribution of the perception scores among undergraduate girls regarding preconception care.

N=288	Frequency	Percentage
Favourable perception (124-184)	107	37.2%
Moderately favourable perception (62-123)	181	62.8%
Unfavourable perception (0-61)	-	-

Table 2 shows that majority of girls 181 (62.8%) had moderately favourable perception, 107(37.2%) undergraduate girls had favourable perception regarding preconception care and no one had unfavourable perception regarding preconception care.

Fig. 3: Percentage distribution showing the perception scores among undergraduate girls regarding preconception care.

Table 3: Association of perception scores with socio demographic variables.

Demographic Data		(N=288)			Association with perception Score		
Variables	**Options**	**Favourable perception**	**Moderately Favourable Perception**	**Unfavourable Perception**	**Chi Square**	**P Value**	**df**
Age	17-19yrs	7	2		6.569	0.037*	2
	20-22yrs	89	159				
	23-25yrs	11	20				
Religion	Sikh	0	8		5.770	0.056[NS]	2
	Hindu	103	162				
	Muslim	4	11				
	Christian	-	-				
Type of family	Nuclear Family	86	147		1.698	0.428[NS]	2
	Joint Family	20	34				
	Extended	1	0				
Residence	Urban	29	50		0.168	0.919[NS]	2
	Rural	71	117				
	Semi urban	7	14				

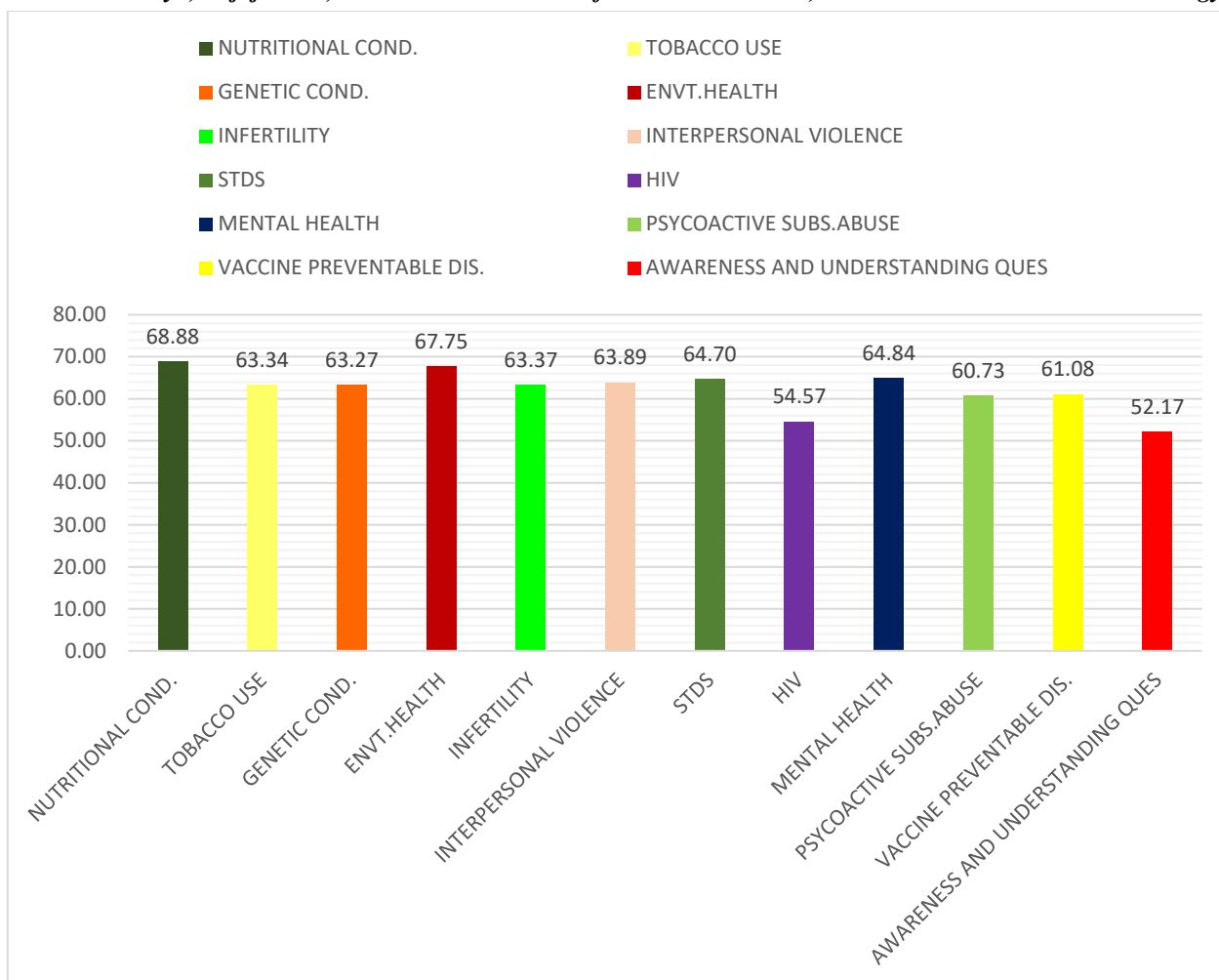|							
Relationship Status	Unmarried	97	163				
	Married	9	18		1.863	0.394[NS]	2
	Divorced	-	-				
	Widow	-	-				
Educational status (father)	No Formal Education	-	-				
	Primary	1	1				
	Higher Secondary	14	25		0.239	0.971[NS]	3
	Senior Secondary	84	143				
	Graduation & above	8	12				
Educational status (mother)	No Formal Education	-	-				
	Primary	3	1				
	Higher Secondary	18	39		3.291	0.349[NS]	3
	Senior Secondary	85	139				
	Graduation & above	1	2				
Occupation (father)	Self-employed	25	33				
	Unemployed	-	-		1.366	0.505[NS]	2
	Government Job	64	111				
	Private Job	18	37				
Occupation (mother)	Homemaker	93	141				
	Government job	0	2		4.670	0.198[NS]	3
	Private job	6	12				
	Self Employed	8	26				
Family monthly Income in rupees	< 10,000	-	-				
	10,001 – 20,000	35	50		0.875	0.646[NS]	2
	20,001-40,000	66	119				
	> 40,001	6	12				
Source of information	Family	4	1				
	Teacher	7	8		4.716	0.095[NS]	2
	Friends	-	-				
	Mass Media	96	172				

*Significant at p<0. 05, NS Not Significant Association.

Table 3 shows that there is significant association of age with the perception score at the level of significance p<0.05 regarding preconception care and there is no association of perception score with other variables like religion, type of family, relationship status, educational status of father and mother, occupation of father and mother, family monthly income in rupees and source of information.

Table 4: Shows scoring of components according to rank related to the perceptions of undergraduate girls regarding preconception care

Descriptive Statistics	Mean	S.D.	Median	Mean %	RANK
Nutritional conditions	16.53	2.807	17	68.88	1
Tobacco use	7.60	2.269	8	63.34	7
Genetic conditions	15.18	3.052	15	63.27	8
Environmental Health	10.84	2.468	11	67.75	2
Infertility	7.60	2.381	8	63.37	6
Interpersonal violence	7.67	1.934	8	63.89	5
STDS	7.76	2.449	9	64.70	4
HIV	6.55	2.224	6	54.57	11
Mental health	7.78	1.594	8	64.84	3
Psychoactive substance abuse	7.29	2.506	7	60.73	10
Vaccine preventable diseases	7.33	2.767	8	61.08	9
Awareness and understanding questions	12.52	4.406	12	52.17	12

Table 4 Depicts the scoring and rank of items according to the domain regarding the perception of preconception care among undergraduate girls. Each component rank has been given in which nutritional conditions got 1st Rank i.e. 16.53±2.807 and mean% 68.88, Environmental conditions got 2nd Rank i.e. 10.84±2.46 and mean% 67.75 and mental health got 3rd Rank 7.78±1.59 and mean% 64.84.

Fig. 4: Mean% score according to components related to the perception of undergraduate girls regarding preconception care

5. DISCUSSION

5.1 Background information sheet of undergraduate girls

In the present study, 248(86%) undergraduate girls fall under the age group of 20-22 years. The majority of girls 265(92%) belong to Hindu religion. According to type of family majority of girls 233(81%) belongs to nuclear type of family. For the category of residence maximum of girls 188(65%) residing in rural area. Majority260 (91%) of girls were unmarried. In educational status majority of girl's father 227(78%) were having senior secondary education and mothers 224(79%) were also having senior secondary education. Majority of girl's fathers 175(61%) were working as Government employees whereas maximum undergraduate girl's mother were homemaker. According to the category of family monthly income majority of girls 185(64%) had their family monthly income between 20,001– 40,000. Majority of girls 268((93%) had their source of information from mass media.

Same study was conducted regarding preconception care in this study non probability purposive sampling technique was used to select the participants. Using structured questionnaire women were interviewed out of which 99 (43.61%) were in between the age group 21-25 years Majority of respondents 218(96.03%) belonged to Hindu religion. Most of the respondents 152(66.96%) belonged to nuclear family 65(28.63%) had information regarding preconception care. Majority of participants 192(84.58%) had average level of knowledge.

5.2 To assess the perception of undergraduate girls regarding preconception care
- The present study findings showed that 37.2% of undergraduate girls had favorable perceptions regarding preconception care.
- 62.8% of undergraduate girls had moderately favorable perceptions (neither positive nor negative) regarding preconception care.
- 0% of undergraduate girls had unfavorable perceptions regarding preconception care.

A qualitative study was conducted on perceptions of preconception counselling among women planning a pregnancy. Analytic approach was used to explore the hesitation of women who all were seeking for preconception counselling. In-depth, semi-structured, face-to-face interviews of 16 women desiring to conceive were conducted, and responses were analyzed using the determinants 'attitude' and 'subjective norms' of the Theory of Planned Behaviour. The result showed that the interviewed women expressed a positive attitude towards preconception care in general but were hesitant about seeking preconception care themselves.

5.3 To find out the association between the perception of undergraduate girls regarding   preconception care with the selected socio demographic variables.
- There was significant association of age with the perception of undergraduate girls at the level of significance p<0.05.

The other study findings showed that there was significant association between the level of knowledge and their area of residence and other socio demographic variables (age, education, type of family, family monthly income and religion) were having no significance with the level of knowledge. The findings of association between level of knowledge and area of residence of the students was found to be statistically significant value at 0.05 level. It shows that there is significance between association of level of knowledge and area of residence of the students.

5.4 To develop an Information Booklet on Preconception care
In present study Information booklet regarding preconception care includes components such as nutritional conditions, environmental health, tobacco use, genetic conditions, psychoactive substance use, infertility, HIV, sexually transmitted diseases, mental health, interpersonal violence, vaccine preventable diseases so to raise awareness and to improve the perceptions of undergraduate girls regarding preconception care.

A study was conducted to assess the effectiveness of informational booklet regarding preconception care as a guide to improve the student's knowledge on preconception care aspect. Booklet was prepared based on review of literature, textbook, published journals, internet search, published and unpublished thesis and personnel experience of the researcher. The content was organized into various sub topics which include the consumption of balanced diet, maintaining normal body eight & Components involved in preconception such as folic acid supplementation, stress reduction, mental preparation, understanding fertile period and early signs of pregnancy. The responses of the participants was assessed, which showed that out of 100 samples, all the samples have read the Informational Booklet. 89 samples really felt that the booklet was useful and remaining 11 felt that further teaching could have more benefitted them. The areas which needed to be more addressed are consumption of balanced diet 45(45%), maintaining normal body weight 61(61%), folic acid supplementation 78(78%) and stress reduction 27(27%).[4]

6. ASSUMPTIONS
- Undergraduate girls may have some awareness regarding preconception care.
- There may be significant association between the preceptions of undergraduate girls with socio-demographic variables.
- Information Booklet on preconception care will improve the perception of undergraduate girls to obtain optimum health at the time of conception.

7. STRENGTHS OF THE STUDY
- Large sample size.
- Strong sampling design was adopted.
- Undergraduate sample was assessed to give strong base to the findings.

8. LIMITATIONS
- Undergraduate girls of age group 17-25 years were only taken as sample.
- Study was limited to the selected colleges of District Sirmour (H.P).

9. NURSING IMPLICATIONS
The study has its implications in the areas of nursing practice, nursing administration nursing education and nursing research.

9.1 Nursing practice
The community health nurses working in the community area should be involved in increasing the awareness of preconception care among college students and their family members. Health education is the core to nursing practice. Nurse can educate the nursing students as well as general public regarding the complications during pregnancy which can cause harmful impact on health. Nurses can plan to organize various types of workshops; role plays and other related programs to guide public regarding the importance of preconception care.

9.2 Nursing education
Nursing students should be made aware of the importance of preconception care and its programs and services. In nursing curriculum preconception care topic should be included as a focused area so as to improve the knowledge of nursing students. Nursing students can also help women in educating and rendering services to improve their present and also make benefit for future outcome. Conducting health surveys will help them in increasing their practical skills.

9.3 Nursing research
Interventional nursing research can be carried out to increase the awareness and importance of preconception care among college students so they can modify their lifestyle whenever they plan pregnancy Comparative studies can be carried out between government and private colleges for undergraduates.

9.4 Nursing administration
Nursing administrator can provide facilities and promote education to students regarding the benefits of preconception care. Nurses as a supervisor can play a role in enhancing the perinatal experience of women by providing services during preconception care.

10. RECOMMENDATIONS
- Similar study can be replicated on the married women.
- Encourage each woman, man and couple to have a reproductive life plan.

- Increase public awareness about the importance of preconception health behaviors and services by using information and doing counselling for them.
- As a component of maternity care, government should include one pre conception visit mandatory for couples planning pregnancy.

11. CONCLUSION
The result of the present study reveals that there is lack of awareness regarding preconception care; hence students' perception regarding its benefits are not favorable So there is a need to shift the care at the earliest to prevent further complication during pregnancy. It is necessary to identify and modify the behaviours for optimum health outcome so researcher should put efforts to create awareness for better result.

12. REFERENCES
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