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Original Research Article

Knowledge, Attitude and Practice of Preconception Care among Women Attending Appointments at a Teaching Hospital in Lahore, Pakistan

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Abstract

Preconception care is the treatment of women of reproductive age before or between births, in order to ensure that signs and behaviors that may cause a risk to mothers and infants are identified and monitored. The detection and mitigation of risks suggested by a previous adverse pregnancy outcome is a specific component of interconnection treatment. We meant to assess the knowledge, attitude and practices of preconception care among women appointed at a hospital. This study was carried out through the women of the Teaching Hospital in Lahore between September 2020 to December 2020. The questionnaire was circulated on knowledge, attitude and practice of preconception care. The data was analyzed on SPSS-21. The data was analyzed using SPSS (Social Science Studies Statistical Package) version 21 software. The findings of the research show that 2.05±.874 participants have sufficient knowledge and positive approaches while 3.38±1.03 participants have good attitudes about preconception care and 1.28±43.1 participants have good practice at reproductive age. Pregnant women's awareness, attitude and experience of preconception care tests, dietary patterns, and drug consumption may influence their pregnancy outcomes. In this study, the level of knowledge, attitude and practice has participants respond positively.

Keywords: Attitude and Practice, Knowledge, Lahore, Preconception care

INTRODUCTION

Preconception care is defined in details as reducing adverse effects of pregnancy by enhancing the overall health status of women prior to conception. In order to ensure the identification and monitoring of signs and behaviors that could cause a danger to mothers and children, preconception therapy is the care of women of reproductive age before or between pregnancies (Kabir and Khan, 2013). The detection and mitigation of risks suggested by a previous adverse pregnancy outcome is a specific component of interconnection treatment. The key components of preconception care are risk assessment (identification of disorders that may be amenable to behaviors that adversely affect reproductive health outcomes), education and health promotion, and medical and psychosocial interventions (Waji and Seman, 2019). There are different definitions of pre-conception treatment ranging from a pre-pregnancy preparation visit to a portion of each female health experience in the months before conception. Ideally, preconception care for women of reproductive age must be an important part of primary and preventive care (Kassa et al., 2018). Preconception care is a series of steps aimed at recognizing and altering biomedical, behavioral and social threats in women of reproductive age. The aim of pre-conception treatment is to improve the outcomes of pregnancy and the general health of women through disease prevention and the management of existing conditions. Research shows that relying on

positive preconceptions can lead to enhanced reproductive success, healthier pregnancies, and healthier kids. An important communication mechanism for patients about their reproductive priorities is a reproductive life plan (Ahmed et al., 2015). Preconception treatment aims to improve the health of women of childbearing age previously to birth and to maximize the outcome associated with pregnancy. For all women of reproductive ability, various suggest about the incorporation of preconception treatment into routine wellness care. It applies to the welfare of reproductive-age women. Preconception treatment includes detecting and controlling possible risks to enhance the outcomes of pregnancy (Hillemeier et al., 2015). Preconception treatment is the detection of certain situations that may impact a potential pregnancy or fetus and that may be necessary for intervention (Biratu, 2017). The preconception period of highest vulnerability of the developing fetus to maternal health conditions and exposure to the environment is between 4 and 10 weeks of pregnancy, that is, between the first and third missed periods of the mother (Johnson et al., 2006). Preconception treatment attempts to improve the health of a woman before the conception of a first or subsequent pregnancy in order to minimize harmful maternal and child effects such as preterm birth, low birth weight and infant mortality (Azeem et al., 2011). It can be an important strategy to minimize congenital abnormalities and improve the health outcomes of women of childbearing age to start treatment before pregnancy. Congenital disorders, also known as birth defects, congenital diseases or congenital anomalies, are described as abnormalities that affect the physical structure or function of the body that is present from birth, including metabolism and intellect. More than seven thousand congenital abnormalities, ranging in severity from mild impairments of function to lethal defects, are identified. Preconception treatment is known to minimize certain congenital complications, such as neural tube defects (NTDs), heart disease, cerebral paralysis, and congenital deafness. In addition, enhanced interaction with the healthcare system can benefit the individual health of a woman and provide an opportunity for screening, promotion of health and vaccination (Huang et al., 2019). Preconception treatment is the provision of biological, behavioral and social health services to women and partners for preconception in order to strengthen their health status and individual and environmental factors associated with poor maternal and child health outcomes in the short and long term (Stephenson et al,. 2014).

Research Questions

What are the Knowledge, attitude and practices (KAP) of preconception care among women?

Significance

1. This research was helpful in enhancing my own understanding and interpretation of pre-conception treatment.
2. This research strengthened my perception of the presence of pre-conception treatment.
3. This study can encourage nurses and doctors to make improvements in their practices to the preconception care services given to women.
4. Several workshops were also conducted to provide guidance and teaching on the broad subject of pre-conception treatment.

Purpose of the study

The purpose of the study was to assess the knowledge, attitude and practices of preconception care among women.

Research Objectives

1. To evaluate the knowledge of women toward preconception care.
2. Identify the attitude of women in preconception care.
3. To examine the practices of preconception care among women.

METHODOLOGY

Study Design

For this study, a quantitative descriptive cross-sectional study design was used to examine and group women's knowledge, attitude and practice about preconception care.

Descriptive study explains what happens and can help to discover new details and definitions. The descriptive analysis is intended to obtain further knowledge on features within a specific field of study.

Study Site

The study site was the Teaching Hospital of Lahore University (UOLTH).

Study Setting

The more basic areas where data collection happens are environments.
The teaching hospital in Lahore, Pakistan, was the setting for the research.

Target Population

Target Population was the hospital women in Lahore, Pakistan.

Sample Size

Slovin's sampling formula was used to find the sample size of the study population. The total population is 214

Sample Method

A convenient sampling technique was used to collect data.

Data Analysis Plan

One of the main sources for data collection is the Data Collection Strategy. To gather data from the study participants, a self-administered questionnaire was used. The authorization was received from the faculty and women of the class. Time was given and a free hand was given to complete and return it.

Research Tool

Usage of Likert scale was used to test preconception care awareness, attitude and practices (KAP) among women in Lahore, Pakistan. The questionnaire consisted of four parts: Describe the first part of the consent form and demographic details of women with complications related to pregnancy, pregnancy, age, gynecological background, employment, medical history. And the clarification of the second part of the preconception care awareness questionnaire, the third part of the preconception care attitude questionnaire and the fourth part of the preconception care practices questionnaire.

Data Analysis

The Data was analyzed on the Statistical Package for the Social Sciences (SPSS) version 21.

Ethical Consideration

Permissions were obtained from the appropriate HOD by letter of permission, and from the University of Lahore Ethical Review Board Committee and the Lahore School of Nursing Department's HOD for conducting research. Consent was obtained from all participants and free hand was given to participate in the study to the participants or refused to participate, participants were also entitled to mention the name or not. With the assistance of complete consent, participants were given sufficient study specifics and this was achieved through a consent form attached to the questionnaire. By asking participants, privacy was taken into account. The participants' rights were protected by the Nuremberg Code of Ethics.

Data Analysis

Descriptive Statistics

The above table 1 indicates that 29.4% (n=63) of women belonged to the 18-22 age group, 37.4% (n=80) of women belonged to the 23-27 age group, 26.2% (n=56) of women belonged to the 28-32 age group, and 7.0% (n=15) of women belonged to the age group above 32 years. 85.0 percent (n=182) of women had 1-5 pregnancies, 14.0 percent (n=30) of women had 6-10 pregnancies, and 9% (n=2) of women had 11 to 15 pregnancies. 39.3% (n=84) females are working and 60.7% (n=130) females are unemployed. 53.7% (n=115) of women planned to become pregnant and 46.3% (n=99) of women planned to become pregnant. 59.8% (n=128) women are aware of pregnancy-related complications; 40.2% (n=86) women are not aware of pregnancy-related complications. 53.7% (n=115) of women planned to become pregnant and 46.3% (n=99) of women planned to become pregnant. 59.8% (n=128) women are aware of pregnancy-related complications; 40.2% (n=86) women are not aware of pregnancy-related complications. 49.5 (n=106)%. 49.5% (n=106) people know about the history of gynecology and 50.5% (n=108) women don't know about the history of gynecology. 52.3% (n=112) females are familiar with medical history and 47.7% (n=102) females are not familiar with medical history.

Knowledge toward preconception care

The below table 2 indicates that 22.4% (n=48) women are aware of high risk of pregnancy at below 18 years of age, 21.5% (n=46) women are aware of high risk of pregnancy at small body size, 36.4% (n=78) women are aware of high risk of first pregnancy at 35 years of age, and 19.6% (n=42) women are aware of high risk of pregnancy at twin pregnancy. 40.2% (n=88) women know about the possibility of inadequate birth spacing due to anemia, 21.5% (n=46) women know about the cause for congenital malformation during pregnancy, 28.0% (n=60) women respond to the reason for premature labor, and 10.3% (n=22) women respond to the reason for postpartum hemorrhage. 18.2% (n=39) women respond to good one-year birth spacing, 57.0% (n= 122) women respond to good 2-4 year birth spacing, 57.0% (n= 122)

Table 1. Demographic Analysis

		(*f*)	(%)
Age	18-22 years	63	29.4%
	23-27 Years	80	37.4%
	28-32 Years	56	26.2%
	Above 32 Years	15	7.0%
	Total	214	100%
Number of pregnancies	1-5	182	85.0%
	6-10	30	14.0%
	11-15	2	9%
	Total	214	100%
Employment	Yes	84	39.3%
	No	130	60.7%
	Total	214	100%
Pregnancy	Yes	115	53.7%
	No	99	46.3%
	Total	214	100%
Pregnancy-related complication	Yes	128	59.8%
	No	86	40.2%
	Total	214	100%
Gynecological history	Yes	106	49.5%
	No	108	50.5%
	Total	214	100%
Medical history	Yes	112	52.2%
	No	102	47.7%
	Total	214	100%

Tables 2. Knowledge toward preconception care

Sr#	Questions		(*f*)	(%)
1	Risk for high risk pregnancy?	Age below 18 years	48	22.4%
		Small body size	46	21.5%
		First pregnancy at 35 years and above	78	36.4%
		Twin pregnancy	42	19.6%
		Total	**214**	**100%**
2	Risk of poor birth spacing?	Anemia	86	40.2%
		Congenital malformation	46	21.5%
		Premature Labor	60	28.0%
		Postpartum hemorrhage	22	10.3%
		Total	**214**	**100%**
3	Recommendation for good birth spacing practices?	One Year	18.2	18.2%
		Between 2 to4 Years	57.0	57.0%
		Between 5 to 7 Years	19.6	19.6%
		More than 7 Years	5.1	5.1%
		Total	**214**	**100%**
4	Knowledge of diet during pregnancy?	Eat a balanced diet but more frequently than non-pregnant women	88	41.1%
		Eat a diet with higher iron content	67	31.3%
		Eat a diet with higher calcium content	24	11.2%
		Eat less fat	35	16.4%
		Total	**214**	**100%**
5	Risk of maternal anemia for baby?	Low birth weight	62	29.0%
		Pale	61	28.5%
		Good appetite	29	13.6%
		Increased blood pressure	62	29.0%
		Total	**214**	**100%**
6	Smoking causes harm to the baby?	Yes	181	84.6%
		No	33	15.4%
		Total	**214**	**100%**

Table 3. Attitude toward Preconception Care

Questions	S.D *f* (%)	D *f* (%)	N *f*(%)	A *f*(%)	S.A *f*(%)
Preconception care is important during the reproductive age?	4 1.9%	12 5.6%	16 7.5%	99 46.3%	83 38.8%
Preconception care has implications for pregnancy and delivery?	50 23.4%	68 31.8%	27 12.6%	61 28.5%	8 3.7%
Government facilities are the best place to receive preconception care?	72 33.6%	71 33.2%	40 18.7%	25 11.7%	6 2.8%
Private health facilities are the best place to receive preconception care?	5 2.3%	16 7.5%	26 12.1%	86 40.2%	81 37.9%
Folic acid supplementation and risk reduction of congenital malformation?	4 1.9%	11 5.1%	30 14.0%	102 47.7%	67 31.1%
	S.D= Strongly Disagree, **D=** Disagree. **N**= Neutral, **A=** Agree, **S.A=** Strongly Agree				
			Total = 214(100%)		

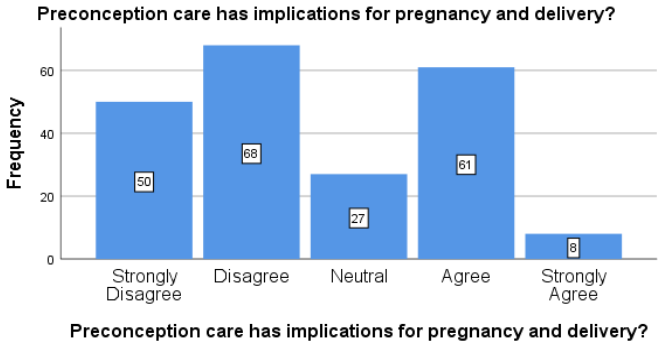

Figure 1. Indicates that women's attitude towards preconception care have consequences for pregnancy and delivery; 23.4% (n=50) women strongly disagree, 31.8% (n=68) women disagree, 12.6% (n=27) women are supportive, 28.5% (n=61) women agree and 3.7% (n=8) women agree strongly with this argument.

women respond to good birth spacing, 19.6% (n=42) women respond to good birth spacing between 5 and 7 years and 5.1% (n=11) women respond to good birth spacing over 7 years. 41.1% (n=88) women are conscious of eating a healthy diet during pregnancy, but more often than non-pregnant women, During pregnancy, 31.3% (n=67) women know about eating a diet with a higher iron content, 11.2% (n=24) know about eating a diet with a higher calcium content during pregnancy, and 16.4% (n=35) women know about eating less fat during pregnancy. 29.0 percent (n=62) women respond to the risk of baby maternal anemia at the low birth weight level, 28.5 percent (n=61) women respond to the risk of baby maternal anemia at the pale condition stage, 13.6 percent (n=29) women respond to the risk of baby maternal anemia at the healthy appetite stage and 29.0% (n=62) of women refer to elevated blood pressure conditions regarding the possibility of maternal anemia for babies. 84.6% (n=181) females are aware of smoking causing harm to the baby and 15.4% (n=33) females are not aware of smoking causing harm to the baby.

Attitude toward Preconception Care

The table 3 indicates that preconception care attitude among 214 women; 1.9% (n=4) females strongly disagree with preconception care is very important at reproductive age, 5.6% (n=12) females disagree, 7.5% (n=16) females are neutral, 46.3% (n=99) females agree and 38.8% (n=83) females strongly agree with this argument. The best set to provide preconception treatment is 214 women's attitude towards government facilities; 33.6% (n=72) women are strongly disagree, 33.2% (n=71) women are disagree, 18.7% (n=40) women are neutral, 11.7% (n=25) women are agreed and 2.8% (n=6) women are strongly agreed with this assertion. The best area to recognize preconception treatment is women's attitude towards private facilities; 2.3 percent (n=5) women strongly disagree, 7.5 percent (n=16)

Table 4. Practice toward preconception care

Sr#	Questions	(*f*)	(%)	Total
1	Early preparation practices before pregnancy for women with a chronic medical illness?(e.g.,DM/HPT/Asthma)	96	44.9%	
		61	28.5%	
		32	15.0%	
		25	11.7%	
				214 100%
		Yes ***f*(%)**	**No** ***f*(%)**	**Total**
2	Engages in exercise?	146 68.2%	68 31.8%	214 100%
3	Exercises less than 2 times per week?	147 68.7%	67 31.3%	214 100%
4	Consumed folic acid supplementation before pregnancy?	144 67.3%	70 32.7%	214 100%
5	Eat daily meals and vegetables?	146 68.2%	68 31.8%	214 100%
6	Attended early antenatal care appointments? (first 3 months)	174 81.3%	40 18.7%	214 100%
7	Frequency of receiving health information per week?	131 61.2%	83 38.8%	214 100%
8	Frequency following all advice from the doctor?	171 79.9%	43 20.1%	214 100%
9	HIV screening completion?	131 61.2%	83 38.8%	214 100%
10	Frequency of eating junk food while planning for pregnancy?	132 61.7%	82 38.3%	214 100%
11	Consumed drugs without doctor's advice while planning for pregnancy?	96 44.9%	118 55.1%	214 100%

women disagree, 12.1 percent (n=26) women are neutral, 40.2 percent (n=86) women agree and 37.9 %(n=81) women strongly agree with this declaration. Women was attitude about risk reduction of congenital malformation; 1.9% (n=4) women are Strongly Disagree, 5.1% (n=11) women are Disagree, 14.0% (n=30) women are Neutral, 47.7% (n=102) women are Agree and 31.3% (n=67) women are Strongly Agree with this statement. The figure indicates that women were behaviors regarding childbirth and pregnancy implications; 23.4% (n=50) women strongly disagree, 31.8% (n=68) women disagree, 12.6% (n=27) women are neutral, 28.5% (n=61) women agree and 3.7% (n=8) women strongly agree with this argument.

Practice toward preconception care

The above table 4 indicates that for women with a chronic medical condition before pregnancy, 44.9 percent (n=96) women were untimely medical checkups for pregnancy planning at early preparation practices, 28.5% (n=61) women are waited until confirmed pregnancy before going to clinic for medical checkups, 15.0 % (n=32) women are scheduled not to get pregnant and In this statement, 11.7% (n=25) women receive advice from friends and family. During pregnancy, a total of 214 women practice preconception care; 68.2 % (n=146) females in interred exercise, 31.8 percent (n=68) females in exercise are not interred. 68.7% (n=147) of women exercised 2 days a week and 31.3% (n=67) of women did not exercise 2 times a week. Before pregnancy, 67.3% (n=144) women received extreme folic acid supplementation and 32.7% (n=70) did not receive extreme folic acid supplementation before pregnancy. 68.2% (n=146) of women consume vegetables and meals on a daily basis. And 31.8% (n=68) of women did not consume vegetables and meals on a daily basis and 31.8% (n=68) of women do not eat vegetables and meals on a daily basis. Early preconception care appointments are attended by 81.3% (n=174) women (first 3 months) and 18.7% (n=40) women attend care appointments (First 3 months). 61.2% (n=131) females received health status information early in the week and 38.8% (n=83) females did not receive health information early in the week. 79.9% (171) women followed all of the doctor's advice and 20.1% (n=43) women did not follow all of the doctor's advice. 61.2% (n=131) females were aware of HIV screening, and 38.8% (n=83) females were not aware of HIV screening. For pregnancy planning extreme

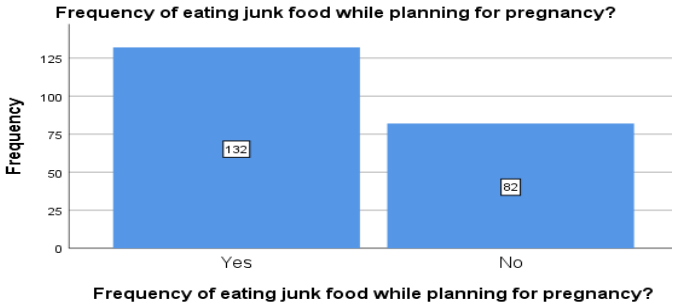

Figure 2. Shows that 61.7% (n=132) women decided to get pregnant while eating fast food. When preparing for pregnancy, 38.3% (n=82) females do not consume fast food.

Table 5. Summary of descriptive

Variable	*Range*	*Mean*	*Median*	*S.D*	*Variance*
Demographic Data	3	1.53	1.42	.540	.316
Knowledge	3	2.05	2	.874	.913
Attitude	4	3.38	3.5	1.03	1.08
Practice	3	1.28	1.18	43.1	.289

drugs, 44.9 percent (n=96) women were without a discus to the doctor, while 55.1 percent (n=118) women were without a discus to the doctor for pregnancy planning extreme drugs.

Descriptive analysis

This table 5 shows the summary of descriptive analysis of demographic data. Knowledge, attitude and practices of preconception care among women.

Demographic Data

In order to carry out descriptive analysis of demographic data, summary scores were used to measure mean range, variance and standard deviation. For the study reason range of score, the sample of 214 women was 3 as our mean and standard deviation (Mean= 1.53, Variance= .316 and SD= .540) was used.

Knowledge

The calculate range of means, variance and standard deviation with the purpose of conducting descriptive analysis of knowledge. The total Sample size of 214 women was used for analysis range of score was 3 as our mean, variance and standard deviation are (Mean = 2.05, Variance =.913 and SD = .874).

Attitude

The calculate range of means, variance and standard deviation with the purpose of conducting descriptive analysis of attitude. The total Sample size of 214 women was used for analysis range of score was 4 as our mean, variance and standard deviation are (Mean =3.38, Variance =1.08 and SD =1.03).

Practices

The calculate range of means, variance and standard deviation with the purpose of conducting descriptive analysis of practices. The total Sample size of 214 women was used for analysis range of score was 3 as our mean, variance and standard deviation are (Mean =1.28, Variance =.289 and SD =43.19).

DISCUSSION

In this study, the total sample size is 214 women in Teaching Hospital in Lahore, Pakistan. The selection of age group was 18 to 32 year above women made with an objective of assessing the knowledge, attitude and practice about preconception care. This study shows a positive response of knowledge, attitude and practice about preconception care. 36.4% (n=78) women know about the first pregnancy of risk at 35 year old while 41.1% (n=88) women know about pregnancy diet. 46.3% (n=88) women had a good response about preconception

is very important during the reproductive age while 68.2% (n=146) women were interested in exercise. Studies show that the finding of knowledge that means 2.05±.540 range from total sample size 100% (n=214) while the attitude that finding means 3.38±1.03 range from total sample size and practice that finding means 1.28±43.1 range from total sample size. In another UK study, where 37% had insufficient knowledge of preconception treatment, 61 percent had moderate knowledge and 2% had adequate knowledge (Kasim et al., 2016). The study of practices where about half (45.2%) of respondents had good practice contradicted the other study results. Less than 25 years (38.6%), 25-29 years (60.5%), 30-34 years (56.3%) and 35 years and above had sufficient skills in other study respondents by their age. They had greater awareness than most for 35 years and above.

Limitation

In this study the limitation was firstly difficulty in collecting the data because the time is shortest and single hospital. Secondly sample size was small for that reason the result may not be generalized

CONCLUSION

This study shows that positive responses of participants about preconception care and participants have sufficient knowledge. The majority of participants know about risk of pregnancy at reproductive age while good response toward attitude and practice about preconception care.

RECOMMENDATION

We propose that awareness of pre-pregnancy care should be consistently provided because women lack preventive health measures such as regular exercises in preconception care.

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