ORIGINAL ARTICLE

Preconception Care Knowledge's Among Reproductive Age Women

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ABSTRACT

Introduction: Preconception care involves any intervention that can identify and modify medical, psychosocial, behavioral or environmental risks to female or male reproductive health and future pregnancies. A descriptive study was carried out to identify the knowledge of reproductive age women on preconception care . **Methods:** Non proba-bility purposive sampling was selected from Baghdad Teaching Hospital .Study sample was consisted (110) women at reproductive age . The questionnaire format was constructed which include socio-demographic information , medical and reproductive history , and knowledge related to concept and components of preconception care .Data were collected by personal interview from January 2018 to March 2018 , and the data were analyzed descriptively . **Results:** The findings of the present study indicated that the highest percentage 41.8% of participants were in age group 20-29 years, 60% housewives, 31.8% college graduate ,73.6% multigravida, 67.2% multipara ,32.7% have 4 and more children ,(59.1%,70%,78.2%,78.2%,94.5%) no history of previous abortion , still birth , newborn death , preterm birth and congenital deformity respectively .The highest percentage 84.5% of them never know about preconception care , the main sources of preconception care information were 88.2% from websites , 76.5% health workers and 70.6% face book .Also the results revealed that women's knowledge about preconception care compo-nent were inadequate regarding take folic acid , weight , modify diet , exercise , dental care and genetic counseling , while their knowledge were adequate regarding avoid smoking , alcohol , illicit drugs , environmental hazards and blood tests, and there were significant association between women's knowledge regarding preconception care com-ponent and their age and occupation. **Conclusion:** The highest percentage of study sample have adequate knowledge about some of preconception component while others have inadequate.

Keywords: Preconception care , knowledge's , Reproductive age

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INTRODUCTION

"Preconception care seeks to ensure optimal health for all women of childbearing age before a first pregnancy or between pregnancies . Preconception care involves identifying and managing health issues that may pose a risk to mothers or infants and that require action before conception or very early in pregnancy for maximal impact" (1p.S21).
 Pre-pregnancy stage is an important period in a woman's life during reproductive ages , health of women during these period leads to coveted results for both mother and infant, and lead to many decreases percentage related problem such as congenital defects, small for gestational age, premature labor, and fetal death (2). Therefore, providing health care for mother and child is priority for health care services (3).

 Preconception care (PCC) includes counseling and the provision of biomedical, behavioral and social health interventions to promote the health of mother and their partners before pregnancy, and optimize health for themselves and their children (4).

In the preconception stage, the health of the mother does not only contribute to improving the outcome of pregnancy but has to her health and the health of the children in the long term (5).

The preconception environment is critically important for the developmental process. Poor health and diet of women before conception and in the early months of pregnancy can lead to defect in fetal and infant growth, poor birth outcomes and long-term effects on cardiovascular and metabolic disease (4).

Healthy behaviors before pregnancy include mother and her husband planning for pregnancy and life style changes to have better chance fertility and coveted pregnancy outcome (5).The preconception stage is critical for developing a healthy pregnancy, and there for health improvement and disease prevention procedures should be completely achieved before pregnancy (6).

"A number of community intervention studies have found that women and their partners who receive PCC are more likely to have improved knowledge and show positive health behaviors. Such behaviors include decreased smoking, increased use of folic acid and greater engagement in antenatal care" (4 p.424).

These procedures consist of preconception care , which is mean provide any interventions to woman and couples during age of childbearing , regardless of pregnancy status willingness , before pregnancy to refinement health status for mothers, newborns and children (7) .

According to some statistics reports ,all over the World in 2010,showed "about 287000 women died, with many long-term health problems related to pregnancy and labor, 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 still born. So preconception care is important or necessary to reduce maternal, newborn and child death" (8 p.1) .

Objectives of study:- 1- To identify the level of knowledge on preconception care among reproductive age women .

2- To identify the relationship between women's knowledge regarding preconception care component and socio-demographic variables.

MATERIALS AND METHODS

Study design
Descriptive design was carried out to determine the knowledge of reproductive age women on preconception care ,at Baghdad Teaching Hospital from maternity wards .

Study sample
Non probability purposive sampling was used for select the sample of the study among (110) married women of reproductive age group (15 – 49 years) .

Questionnaire format
The questionnaire format was constructed after reviewing previous studies , which covering following information's :
- Personal data (socio – demographic information)
- Medical and reproductive history
- Questions related to general concept of preconception care and women's knowledge about

preconception component .

Collection of data and statistical analysis
Data were collected by direct interview from January 2018 to March 2018 and then the data tabulated and analyzed descriptively by using frequency, percentage , mean of score , standard deviation and Chi-Square , and the results were determined as significant at(p≤ 0.05) .
Cut – off point : it was calculated according to the following formula
Cut-off point = 2+1 / 2 = 1.5
Through two levels of score ,(2) for correct answer (yes) , and (1) for incorrect answer (No) , so cut-off point above 1.5 mean adequate level of knowledge , and less than 1.5 mean inadequate level of knowledge .

RESULTS

Table I / Refers to highest percentage 41.8 % of study sample at age group 20.29 years with mean score and standard deviation 29.6 ± 10.7,while the lowest percentage 13.6 % of them at age less than 20 years , the majority of mothers were house wives 60% .

Regarding their husbands occupation, the highest percentage 70.9 % of them were workers .

Concerning level of education , the highest percentage 31.8 % of study sample were college graduate also highest percentage 41.8 % of their husbands level of education were college graduate .

Table II / Reveals that the highest percentage 73.6 % ,

Table I / Distribution of study sample according to socio-demographic characteristics N = 110

Variables	F	%		F	%
Age/years					
< 20	15	13.6			
20 – 29	46	41.8			
30 – 39	27	24.5			
40 – 49	22	20			
Mean ± SD		29.6 ± 10.7			
Occupation			Husbands occupation		
House wife	66	60	Worker	78	70.9
Worker	18	16.4	Retired	13	11.8
Student	26	23.6	Private	19	17.3
Level of education			Husbands level of education		
Primary	27	24.5	Primary	12	10.9
Intermediate	25	22.7	Intermediate	29	26.4
Secondary	23	20.9	Secondary	23	20.9
College	35	31.8	College	46	41.8

67.2 % of study sample were multigravida , multipara respectively .

With regard to number of alive children 32.7% of study sample had 4 and more children . Concerning the history of previous abortion , the study showed that more than half 59.11 % of study sample had no previous history of abortion , and majority of them 70 % no still birth , 78.2 % no newborn dead , no history of preterm birth and 94.5 % no congenital deformity .

While the lowest percentage of study sample were reported history of abortion , still birth , newborn death , preterm birth and congenital deformity .Regarding the use of contraceptive, the study shows that 50.4 % of study sample use contraceptive.

Concerning medical problems the present study reveals to highest percentage 80.9 % of study sample no history of previous diseases while lowest percentage 19.1 % of them had previous history of some medical problems such as diabetes mellitus , hypertension , anemia , UTI , asthma , heart diseases and toxoplasmosis .

Table II / Distribution of study sample according to medical and reproductive history N = 110

Variables	F	%
Gravida		
Primigravida	29	26.4
Multigravida	81	73.6
Para		
Non	6	5.5
Primipara	30	27.3
Multipara	74	67.2
No. of Alive children		
None	6	5.5
1	25	22.7
2	24	21.8
3	19	17.3
4 and more	36	32.7
History of previous abortion		
Yes	45	40.9
No	65	59.1
Still birth		
Yes	33	30
No	77	70

CONTINUE

Table II / Distribution of study sample according to medical and reproductive history N = 110 (CONT.)

Variables	F	%
Newborn death		
Yes	24	21.8
No	86	78.2
History of preterm birth		
Yes	24	21.8
No	86	78.2
History of congenital deformity		
Yes		
No	6	5.5
	104	94.5
Use of contraceptive		
Yes	56	50.9
No	54	49.1
History of previous disease		
Yes	21	19.1
No	89	80.9

Table III / Reveals that the highest percentage 84.5 % of study sample haven't heard about preconception care , while lowest percentage 15.5 % of them have heard of preconception care .

The result show that 49.1 % of study sample responded that only women will needed preconception care , low percentage 13.6 % of them don't know ,and while about two – third of study sample 70 % responded that preconception care was important for baby and mother and highest percentage 44.5 % of women responded that home is site for preconception care .

Regarding the main source of preconception care information was registered high percentage among studied women and accounted followed by(Net 88.2 % , health worker 76.5 % , face book 70.6 % , friends and family 52.9 % , radio / television 29.5 % ,in addition 14.5 % among subject have information source from newspaper \books.)

Table IV / Reveals that the mean of score was higher than cut-off point in some items such as (avoid cigarette smoking , alcohol consumption , illicit drugs , environment free from radiation , chemical , stressors and blood test) which mean women's knowledge regarding these items were adequate , while the mean of score was lowest than cut-off point in other items such as (take folic acid , weight , modify diet , exercise , dental care and genetic counseling) which mean women's knowledge regarding these items were inadequate .

Table V/ Indicated that there were significant association

Table III / women's knowledge regarding general aspects of preconception care N=110

Variables	F	%
Have you heard of preconception care ?		
Yes	17	15.5
No	93	84.5
Preconception care needed for		
Mothers	54	49.1
Husbands	1	0.9
Mothers and Husbands	40	39.4
Don't know	15	13.6
Preconception care important for		
Child	8	7.3
Mothers	10	9.1
Child and mothers	77	70
Don't know	15	13.6
Site for preconception care from		
Home	49	44.5
Health centers& Hospitals	19	17.3
Home and Health centers& Hospitals	35	31.8
Don't know	7	6.4
Source of information regarding preconception care		
Health worker	13	76.5
Friends / family	9	52.9
Newspaper / books	11	14.5
Face book	12	70.6
Net	15	88.2
Radio / television	5	29.5

Table IV / women's knowledge about preconception care component

Items	Yes	No	Total	Mean score
Take folic acid	42	68	110	1.3
Weight should be maintained	48	62	110	1.4
Modify diet	49	61	110	1.4
Regular exercise	44	66	110	1.4
Avoid cigarette smoking	79	31	110	1.7
Avoid alcohol consumption	105	5	110	2
Avoid illicit drugs	103	7	110	1.9
Environment free from radiation	91	19	110	1.8
Chemical	97	13	110	1.9
Stressors	106	4	110	2
Dental care	47	63	110	1.4
Blood test	98	12	110	1.9
Genetic counseling	39	79	110	1.3

between age, occupation of study sample and women's knowledge regarding preconception care , and not significant for the remaining variables .

DISCUSSION

Table V / Associations between women's knowledge regarding preconception care component and socio-demographic characteristics .

Socio-demographic variables	X^{2*}	d.f.*	S.*	P≤ 0.05
Age	12.2	3	S	0.007
Educational levels	3.33	3	NS*	0.343
Occupation	9.26	2	S	0.026
Husband educational levels	4.25	2	NS	0.119
Husband occupation	2.69	3	NS	0.442

*X ^{2}(Chi-Square) , *d.f. (degree freedom) , S. (Significant) , NS(Not significant)

Scio demographic characteristics :-
The findings of present study reveals that the highest percentage 41.8 % of study sample at age group 20.29 years with mean score and standard deviation 29.6 ± 10.7, and 60 % of them were house wives .

This study was supported by study of (Gayatri , 2017) who reported that 50 % of the respondents were from age 21 – 25 years , and 57 % of them were house wives (7) .Other study found that out of 227 participants 43.2 % were in age group of 21-25 years and mean age of the participants was 23.5 years (8) .

Regarding their husbands occupation, the highest

percentage 70.9 % of them were workers .Yitayal , 2017 found that 25.4 % , 19.8 % of study sample participants husbands were tradesman and primary school respectively (9) , other study found that majority of the respondents 67.8 % were house wives (8) .

Concerning level of education , the highest percentage 31.8 % of them were college graduate also highest percentage 41.8 % of their husbands level of education were college graduate .The findings of present study was consistent with study by (Yitayal , 2017) who reported that the majority of the sample had a secondary education level 33.1% , while other study found that among the study sample (46.6 %) had got secondary level education (8) as shown in table /1 .

Reproductive characteristics :-
The study represent that the highest percentage 73.6 % , 67.2 % of them were multigravida , multipara respectively .

The findings was disagree with study done by (Roghieh ,2014) who found that 39 % of the subjects were nulliparous (3) , while other studies found 36.4 % , 12.6 % , 45.3% and 5.7 % of respondents were no Para , primipara , multipara and grand multiparous respectively (9) .

With regard to number of alive children 32.7% of study sample had 4 and more children , the findings was supported to (Yitayal ,2017) who stated that 37.3 % of study sample had 3 or more alive children , while other study found that nearly half of the respondents 48.8 % had 2 children (9) .

Concerning the history of previous abortion , the results shows that more than half 59.11 % of them had no previous history of abortion , and majority of them 70 % no still birth , 78.2 % no newborn dead , no history of preterm birth and 94.5 % no congenital deformity .
  The findings of current study is not consistent with previous studies done by (Ana , 2016) who reported that , just over one – third of study sample were reported a previous abortion (6) ,While the lowest percentage of study sample were reported history of abortion , still birth , newborn death , preterm birth and congenital deformity and these results of present study were agree with other study who found lowest percentage regarding history of abortion , preterm , congenital anomaly , neonatal death , and still birth (5.6 % , 2.2 % , 1.9 % , 1.5 %) respectively (9) .

Regarding the use of contraceptive, the results shows that 50.4 % of study sample use contraceptive, the findings is supported by (yitayal , 2017) who found that more than half 58.1 % of study sample used contraceptive methods (9) .

Concerning medical problems the present study reveals to highest percentage 80.9 % of study sample no history of previous diseases while lowest percentage 19.1 % of them had previous history of some medical problems such as diabetes mellitus , hypertension , anemia , UTI , asthma , heart diseases and toxoplasmosis .

The present study agree with previous study which noted that the respondents had a chronic health problems such as hypertension, diabetes , asthma , renal disease and anemia (17.1 % , 11.4 % , 8.5 % 11.4 % and 5.7 %) respectively (9) .

Knowledge's about preconception care components :-
The mean of score was higher than cut-off point in some items such as (avoid cigarette smoking , alcohol consumption , illicit drugs , environment free from radiation , chemical , stressors and blood test) which mean women's knowledge regarding these items were adequate , while the mean of score was lowest than cut-off point in other items such as (take folic acid , weight , modify diet , exercise , dental care and genetic counseling) which mean women's knowledge regarding these items were inadequate .

Previous studies found that, more than half of study sample 51% had inadequate knowledge, while 42% of them having moderate level of knowledge and 7 % of them had adequate level of knowledge (7).

The results of this study is agreement with (Roghieh , 2014) who stated that, "only 33.9 % of mothers regularly take folic acid supplements during the pre-pregnancy period and the most of mothers 83 % did not take any dental care during the pre-pregnancy period , so there was a significant relationship between educational level and taking folic acid supplement and dental care before pregnancy" (3 p.131) .

This is evidence that the issue of preconception care was not given any importance and according to the opinion of mothers, care begins with pregnancy .
(Roghieh , 2014) reported that, "among five component of life style the highest mean was related to nonsmoking and drugs , and the lowest mean was related to physical activity and safety oversight" (3 p.131) .

Associations between women's knowledge regarding preconception care component and socio-demographic characteristics .
The study indicated that there was significant association between women's knowledge regarding preconception care and their age, occupation.

The current study finding was in agreement with other study which the finding revealed that a woman's age was statically associated with women's knowledge in preconception care and women's occupation determines their knowledge level. While other study done in Adet west gojjam , found that there were association between

level of knowledge on preconception care and some variables such as level of education, women who had higher education level had two times higher adequate of knowledge on preconception care (13,14) .

This may be interpret as the women's educational status is increase their health looking behavior concerning preconception care will also increase.

CONCLUSION

The study has concluded the following:
The highest percentage of study sample were in age group 20-29 years , housewives , college graduate , multigravida , multipara , have 4 and more children , no history of previous (abortion , still birth , newborn death , preterm birth , and congenital deformity) .

The highest percentage of study sample haven't know about preconception care , the main sources of preconception care information by websites , health worker and face book .

Concerning the preconception component the study concluded that women's knowledge regarding (take folic acid , weight , modify diet , exercise , dental care and genetic counseling)were inadequate ,while regarding (avoid smoking , alcohol , illicit drugs , environment free from hazards and blood test) were adequate , and there was significant association between women's knowledge regarding preconception care and their age and occupation.

RECOMMENDATION

1- Constructing preconception care delineation which can comprise the main components of the care and inviting women's education is important .
2- Awareness program is required to refinement the different concepts of knowledge concerning preconception care .
3- All women who have decision for pregnancy must be educated about preconception care and take care of her health before pregnancy.
4- All family members should be equally included in health promotion programs as a support for refinement dietary and physical practices for women .
5- Prenatal care should start before pregnancy to lessen bad pregnancy and labor outcome.

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