Medical Sciences
ISSN: 1308 7312 (NWSAMS)
ID: 2018.13.4.1B0060

Status : Original Study
Received: July 2018
Accepted: October 2018

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DOI	http://dx.doi.org/10.12739/NWSA.2018.13.4.1B0060	
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PRECONCEPTIONAL CARE RECEIVING RATES OF TURKISH PREGNANT WOMEN, INFLUENCING FACTORS AND THE QUALITY OF THE CARE RECEIVED

ABSTRACT

The aim of the study was to estimate the rates of preconception care in Turkish pregnant women, the affecting factors and the quality of care. The cross-sectional study was carried out in the clinics of Department of Obstetrics and Gynecology of a State Hospital in the east of Turkey. Between the February 2017 and July 2017, 1050 pregnant women became the samples of the study. The received preconception care rate was 17.3%.When the quality of the received preconception care; From the components of the preconception care, it was identified that the order of the most frequently asked topics are; The ages of the mother and father (68.1%), past pregnancy status (91.8%) and delivery status (84.1%), the presence of a systemic disease such as DM or HT (%74.2), the presence of a drug that must be used consistently (63.7%), the presence of a contagious disease (47.8%) and tetanus vaccination (33.5%), consanguinity with husband (72%), the status of smoking and alcohol consumption (64.3%). It was determined that the folic acid tablets (85.2%) were prescribed the most in the antenatal health supplement component. The rate of preconception care in pregnant women was very low and it can be said that the quality of received care was moderately good.

Keywords: Preconception Care, Quality of Preconception Care, Factors Affecting Preconception Care, Turkish Pregnant Women, Promotion of Prepregnancy Health

1. INTRODUCTION

Preconceptional care is an approach aiming to make a healthy start on desired pregnancy by eliminating or minimizing the problems that may affect maternal and child health before having a baby. Furthermore, preconceptional care is a preventive health service that provides mothers/babies to be healthier, and that aims to promote spouses' health by preventing/reducing problems related to pregnancy, as well as being a health conception that includes consulting in addition to the treatment through scanning (Baysoy and Özkan, 2012:77; Tyden, 2016:207). The World Health Organization (WHO) underlined in 2013 that preconceptional care is necessary for all women in the reproductive age, and that all women at fertility age and their spouses (whether they think of having children or not) should be provided with this service, especially those who plan to become pregnant should be provided with this service more intensively (Tyden, 2016:207; WHO, 2012). The preconceptional care receiving rate has been reported as lower in the systematic assessments made (Poels, 2016:6039. There is no data regarding preconceptional counseling in Turkey Demographic and Health Surveys (TDHS) 2013 data. (Hacettepe University Institute of Population Studies, 2014). Only two studies

How to Cite:
Sis Çelik, A. and Aksoy Derya, Y., (2018). Preconceptional Care Receiving Rates of Turkish Pregnant Women, Influencing Factors and The Quality of The Care Received, **Medical Sciences (NWSAMS)**, 13(4):129-144, DOI: 10.12739/NWSA.2018.13.4.1B0060.

concerning this issue has been found. In the study by Arslan and Özkan (2005) with 142 women in the west of Turkey, it was found that 2.8% of the women were found to receive preconceptional care; in a study by Yılmaz et al. (2015) with 296 pregnant women in the same region, the preconceptional counseling receiving rate was found as 34% and preconceptional examination rate as 38%. In many countries, preconceptional health assessment focuses on women with pre-defined risk factors such as diabetes, hypertension, and obesity. But, preconceptional care focuses on all women in general population, regardless of predetermined risk factors (Temel, et.al., 2013:19). Preconceptional care intervention issues are harmful conventional applications such as nutritional status, smoking status, genetic factors, fertility narratives, environmental health, interpersonal violence, very early, at frequent intervals and undesired pregnancies, sexually transmitted infections, HIV, mental health, psychoactive substance use, diseases preventable by vaccines, and female circumcision (WHO, 2012). Within the scope of the interventions mentioned, it should be aimed to improve pregnancy outcomes, and women's health in general through the management of risk factors affecting the prevention of diseases and the health of next generations (Tyden, 2016:207).

2. RESEARCH SIGNIFICANCE

It is emphasized in the literature that healthy behavioral changes should be started from the prepregnancy period, that is, from the preconceptional period, in order to prevent potential risk factors that can negatively affect fetus's health. But, it is stated that women generally wait for the actualization of pregnancy to make a healthy behavioral change (Toivonen, et.al., 2017:1). Since the most critical period of organ development takes place before many women know they are pregnant, it is often being late on the changes in lifestyle behaviors that provide the protection and promotion of health. Furthermore, the evidences supporting that general health status and lifestyles in prepregnancy period can affect pregnancy outcomes are ever increasing (Tyden, 2016). The factors such as reluctance of individuals to receive preconceptional care, ignorance, lack of social susceptibility and awareness, reluctance of healthcare professionals to provide this service, adverse policies, insufficiency of financial resources and lack of cooperation among sectors, pose an obstacle in providing preconceptional care services (Coşkun, 2011:8).

3. PURPOSE OF STUDY

In this study, it was aimed to examine the preconceptional care receiving rates of Turkish pregnant women, influencing factors and the quality of the care received.

4. MATERIALS AND METHODS

4.1. Aim and Sampling

This retrospective study was conducted between February-July 2017 at the Polyclinics of Gynecology of State Hospital of a province in the east of Turkey. 1050 pregnant women, who applied to the related polyclinic between the dates mentioned, who agreed to participate in the study and became pregnant without receiving infertility treatment, created the sample of the study.

4.2. Data Collection Tools

In the collection of the data, the "Questionnaire Form", prepared by the researchers in accordance with the literature information, was used. "The questionnaire form" consists of two sections. In the first section, there are 20 questions created to

determine some individual characteristics of the pregnant women (age of woman and of her spouse, educational level, employment status, family type, income status, fertility narrative), and their preconceptional care receiving conditions. The second section was applied to the pregnant women who were receiving preconceptional care. In this section, a total of 77 questions were prepared in the light of the literature, aiming to determine the quality of the care which the pregnant women were receiving (Baysoy and Özkan, 2012:77; Stubblefield, et al., 2008:373; Toivonen, et al., 2017:1; Reeve, et al., 2014:1066; De Weerd, et al., 2002:505; Arslan and Özkan, 2005:65; Dunlop, et al., 2008:310; Başgöl and Oskay, 2012:1524; Douglas and Genetics Committee, 2011:57; Gökdemir 2015:173). Within the scope of preconceptional care, whether these questions were asked to the pregnant women, and whether some applications were made, were assessed by healthcare professionals.

4.3. Evaluation of Data

The coding and evaluation of the data were performed on computer environment through SPSS 16.0 package program. Arithmetic mean, percentage distribution and X^2 test were used in the evaluation of the data obtained as a result of the study.

4.4. Ethical Considerations

The approval of the Ethics Committee and written permission of the relevant institution were received for the collection of research data. Moreover, oral consent was obtained from the women who agreed to participate in the research.

5. FINDINGS AND DISCUSSIONS

When the demographic characteristics of the pregnant women, included in the scope the research, were examined, it was found that 30.8% of the pregnant women were between the ages of 25-29, 27.5% were primary school graduates, and 89.7% were unemployed (Table 1).

Table 1. Distribution of pregnant women by demographic characteristics (N=1050)

Demographic Characteristics	n	%	Demographic Characteristics	n	%
Age			Spouse's Age		
Aged 24 And Below	319	30.4	Aged 24 And Below	85	8.1
Aged Between 25-29	324	30.8	Aged Between 25-29	296	28.2
Aged Between 30-34	216	20.6	Aged Between 30-34	308	29.3
Aged 35 And Older	191	18.2	Aged Between 35-39	203	19.3
			Aged 40 And Older	158	15.1
Educational Level			Spouse's Educational Level		
Illiterate	48	4.6	Primary School Graduate	202	19.2
Primary School Graduate	289	27.5	Secondary School Graduate	261	24.9
Secondary School Graduate	256	24.4	Highschool Graduate	357	34.0
Highschool Graduate	280	26.7	University Graduate	230	21.9
University Graduate	177	16.8			
Employment Status			Family Type		
Unemployed	942	89.7	Elementary	834	79.4
Employed	108	10.3	Extended	216	20.6
Spouse's Profession			Income Level		
Officer	179	17.0	450 ₺ And Below	47	4.5
Employee	414	39.4	450-1150 ₺	230	21.9
Self-Employment	298	28.4	1150-2400 ₺	584	55.6
Others	159	15.1	2400-4700 ₺	189	18.0
Living Place					
Province	657	62.6			
District	244	23.2			
Village	149	14.2			

When the obstetric characteristics of the pregnant women, included in the scope the research, were examined, it was found that 31.1% of the pregnant women had become pregnant for the first time, 79.% of the pregnant women had become pregnant intentionally and conspiratorially, 77.3% had no problems in their current pregnancy, 89.1% had received regular antenatal care. The preconceptional care receiving ratio in the pregnant women, included in the scope the research, was determined as 17.3% (Table 2).

Table 2. Distribution of pregnant women by obstetric characteristics (N=1050)

Obstetric Characteristics	n	%
Total number of Pregnancies		
1	327	31.1
2	270	25.7
3	216	20.6
4 and above	237	22.6
Current Pregnancy Trimester		
First Trimester	680	64.8
Second Trimester	210	20.0
Third Trimester	160	15.2
Regular AC Receiving Status		
Yes	Yes	89.1
No	No	10.9
Preconceptional Care Receiving Status		
Yes	182	17.3
No	868	82.7
Mode of Previous Deliveries		
Nulliparous	373	35.6
Vaginal Delivery	370	35.2
Cesarean Delivery	248	23.6
Both Vaginal and Cesarean Delivery	59	5.6
Desired Pregnancy Status		
Desired and Planned Pregnancy	835	79.5
Desired and Unplanned Pregnancy	98	9.3
Undesired Pregnancy	117	11.2
Having Trouble in Pregnancy		
Yes	238	22.7
No	812	77.3
Preconceptional Care was Received from (n=182)		
Family Health Center	14	7.7
State/University Hospital	136	74.7
Private Hospital	32	17.6

It was determined that 17.3% (182 persons) of those pregnant women, included in the scope of the study, used preconceptional care service in prepregnancy period. Two studies were found, conducted to determine the preconceptional care receiving rates of the women in Turkey. In a study conducted by Arslan and Özkan with 142 women in the west of Turkey, it was found that 2.8% of the women were found to receive preconceptional care; in a study conducted by Yılmaz et.al (2015) with 296 pregnant women in the same region, the preconceptional counseling receiving rate was found as 34% and preconceptional examination rate as 38%. Although there has recently been an increase in the preconceptional care receiving rates of women, care receiving rates are still very low. The lowness in preconceptional care receiving rates are thought due to the fact that it is not known by women in Turkey how and where the preconceptional care-counseling services are provided, that the importance of the service couldn't be appreciated enough, the services provided in this area are not standardized and organized, and couples still do not have enough

fertility awareness. Ensuring that children to be born will be healthy dates to the 1930s in Turkey. The couples to be married in accordance with Turkish Civil Code are obliged to obtain a "medical report" (marriage report) showing that they do not have any disease that will pose an obstacle to marry. To get this report, couples are scanned for AIDS, hepatitis B and hepatitis C and genetic diseases (especially for thalassemia), and a general examination is carried out. According to the result of the report, syphilis, leprosy, tuberculosis, gonorrhea patients in the acute phase, and mental patients are forbidden to marry before being recovered. But these scans are carried out during the application for official marriage, that is, individuals without civil marriage can have a child without being scanned. According to the 2016 Turkey Statistical Institute data, 1.1% of the married persons in Turkey still don't have a civil marriage (Turkey Statistical Institute, 2016) Furthermore, "premarital counseling", which started in 2002, is actually a part of prepregnancy care. However, there are some deficiencies in offering this consultancy service (Baysoy and Özkan, 2012:77). When some factors that may affect preconceptional care receiving were compared taking the pregnant women's preconceptional care receiving status into consideration, it was found that the difference between the groups receiving and not receiving preconceptional care was found statistically significant in terms of the factors such as pregnant women's age, educational level, status of employment in a wage-earning job, spouses' educational levels, living place, families' economic condition, number of pregnancies, wish to become pregnant, regular antenatal care receiving status ($p<0.05$) (Table 3).

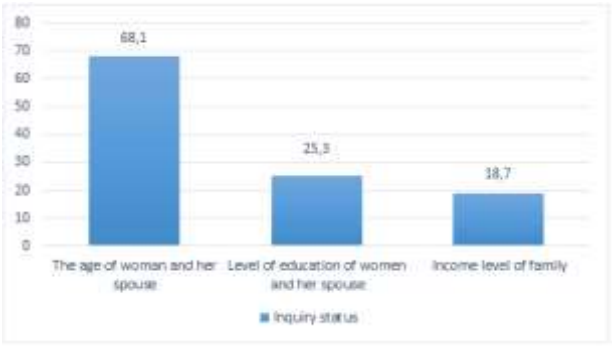
When some factors that may affect preconceptional care receiving were compared taking the pregnant women's preconceptional care receiving status into consideration, it was found that those factors such as pregnant women's age, status of employment in a wage-earning job, self and spouses' educational levels, living place, families' economic condition, number of pregnancies, wish to become pregnant, regular antenatal care receiving status, were determined to affect preconceptional care receiving, and that those pregnant women who are in the age range of 25-29 years old, employed, university graduate, living in the city center, have high income level, became pregnant for the first time, intentionally and conspiratorially became pregnant, receiving regular prepregnancy care, were receiving more preconceptional care than other pregnants. Similar to the study findings, according to TDHS 2013 data, it was found that there is a relationship between utilizing other services provided for reproductive health, including antenatal, childbirth, postnatal care services, and many variables such as females' age, level of education, living place, household's level of welfare, number of birthing, and that those pregnant women, at a young age, with a high level of education and whose household's level of welfare is high, living in the city, and whose number of pregnancy-birthing is low, were more utilizing from these services (Hacettepe University Institute of Population Studies, 2014). Considering that individuals with mentioned characteristics are more conscious, have a high awareness of health, and easier for them to access to services in general, their utilization rate of the services expectedly is high.

Table 3. Comparison of some factors that can affect preeconceptive care receiving, according to pregnant women's preconceptional care receiving status (N=1050)

Characteristics	Preconceptional Care Receiving Status				Test and P Value
	Received (n=182)		Not Received (n=868)		
	n	%	n	%	
Age					
Aged 24 And Below	38	20.9	281	32.4	X^2=25.127 P=0.000
Aged Between 25-29	77	42.3	247	28.5	
Aged Between 30-34	47	25.8	169	19.5	
Aged 35 And Older	20	11.0	171	19.7	
Educational Level					
Illiterate	-	-	48	5.5	X^2=59.485 P=0.000
Primary School Graduate	30	16.5	259	29.8	
Secondary School Graduate	32	17.6	224	25.8	
High School Graduate	61	33.5	219	25.2	
University Graduate	59	32.4	118	13.6	
Employment Status					
Unemployed	147	80.8	795	91.6	X^2=19.090 P=0.000
Employed	35	19.2	73	8.4	
Spouse's Age					
Aged 24 And Below	15	8.2	70	8.1	X^2=2.496 P=0.645
Aged Between 25-29	58	31.9	238	27.4	
Aged Between 30-34	51	28.0	257	29.6	
Aged Between 35-39	36	19.8	167	19.2	
Aged 40 And Older	22	12.1	136	15.7	
Spouse's Educational Level					
Primary School Graduate	21	11.5	181	20.9	X^2=42.133 P=0.000
Secondary School Graduate	35	19.2	226	26.0	
Highschool Graduate	54	29.7	303	34.9	
University Graduate	72	39.6	158	18.2	
Income Level					
450 ₺ and below	-	-	47	5.4	X^2=52.945 P=0.000
450-1150 ₺	41	22.5	189	21.8	
1150-2400 ₺	64	35.2	507	58.4	
2400-4700 ₺	77	42.3	125	14.4	
Living Place					
Province	128	70.3	529	60.9	X^2=6.568 P=0.037
District	37	20.3	207	23.8	
Village	17	9.3	132	15.2	
Family Type					
Elementary	146	80.2	688	79.3	X^2=0.084 P=0.0840
Extended	36	19.8	180	20.7	
Total Number of Pregnancies					
1	66	36.3	261	30.1	X^2=13.737 P=0.003
2	59	32.4	211	24.3	
3	31	17.0	185	21.3	
4 and Above	26	14.3	211	24.3	
Desired Pregnancy Status					
Desired and Planned Pregnancy	172	94.5	663	76.4	X^2=30.373 P=0.000
Desired and Unplanned Pregnancy	5	2.7	93	10.7	
Undesired Pregnancy	5	2.7	112	12.9	
Regular Antenatal Care Receiving Status					
Yes	176	96.7	760	87.6	X^2=13.003 P=0.000
No	6	3.3	108	12.4	

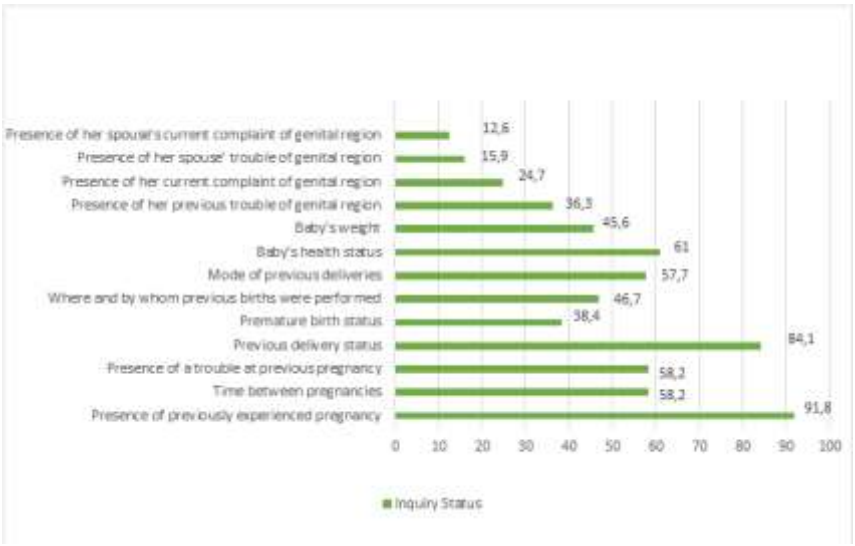
Abbreviation: X^2= Chi-square Test

When the quality of the care received was examined according to the information provided by the pregnant women receiving preconceptional care. Following issues were determined in respect to the risk assessment component, which is one of the components of the preconceptional care. The pregnant women and their spouses' ages were utmost questioned in the assessment of socio-demographic risks (68.1%) (Graph 1).



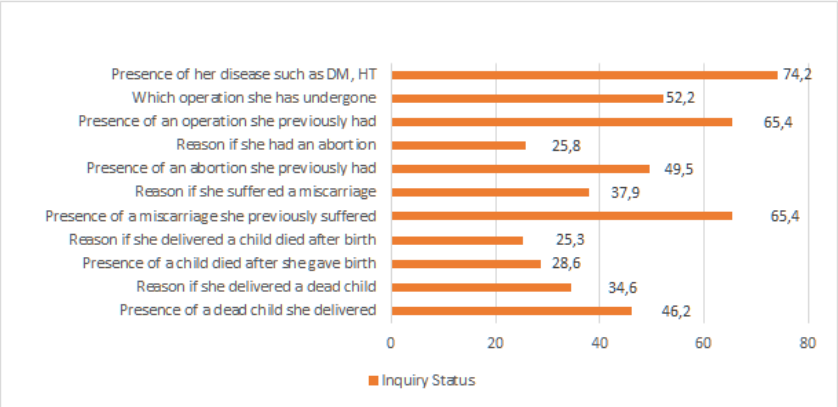
Graph 1. Assessment of socio-economic risk factors

Previous pregnancy (91.8%) and childbearing statuses (84.1%) were questioned in the assessment of risks of the reproductive system (Graph 2).



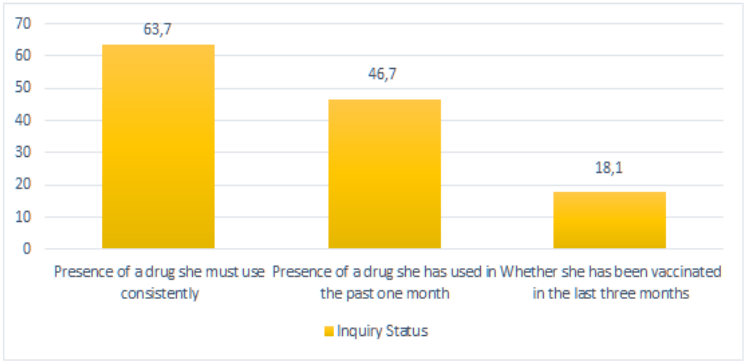
Graph 2. Assessment of risk factors related to the reproductive system

The presence of a systemic disease such as DM, HT was utmost questioned (74.2%) in the assessment of medical and surgical risks (Graph 3).



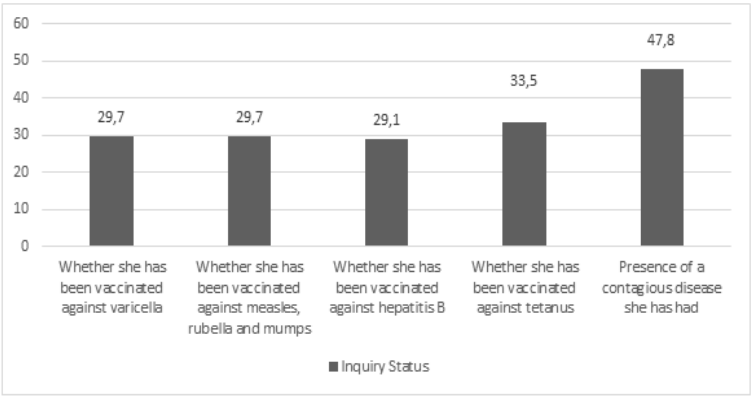
Graph 3. Assessment of medical and surgical risk factors

The presence of a drug (63.7%), which had to be constantly used, was questioned in the assessment of teratogenic drug use (Graph 4).



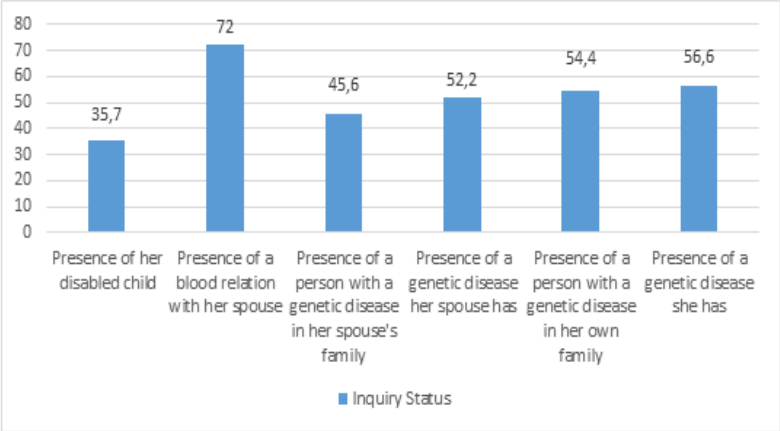
Graph 4. Assessment of drug utilization that can be teratogenetic

The presence of a contagious disease (47.8%) and vaccinate against tetanus statuses (33.5%) were utmost questioned in the assessment of infectious diseases and immunization statuses (Graph 5).



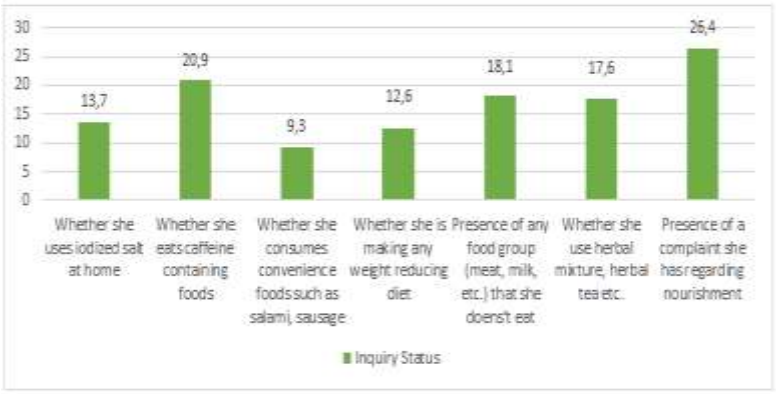
Graph 5. Assessment of infectious diseases and immunization status

The pregnant women's blood relations with their spouses (72%) were questioned in the assessment of genetic disease risk (Graph 6).



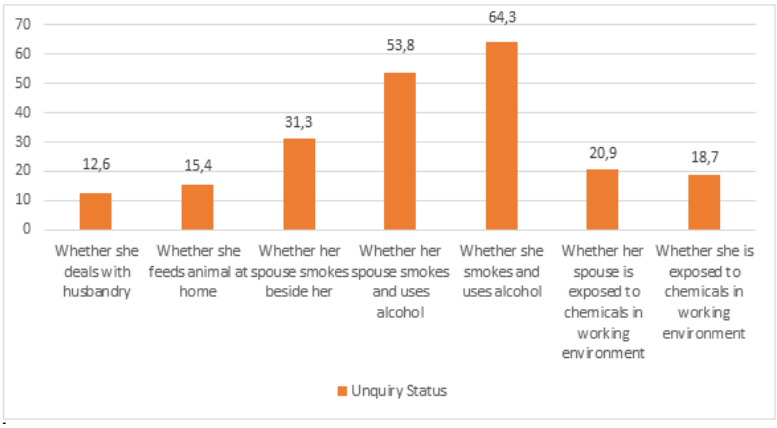
Graph 6. Assessment of genetic disease risk

The presence of a complaint about nourishment was utmost questioned (26.4%) in the assessment of nutritional risks (Graph 7).



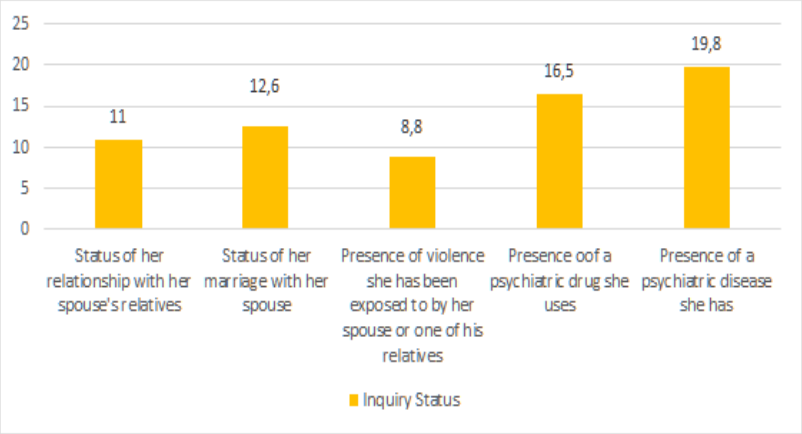
Graph 7. Assessment of nutritional risks

The pregnant women's smoking and using alcohol statuses were questioned (64.3%) in the assessment of drug addiction and environmental risks (Graph 8).



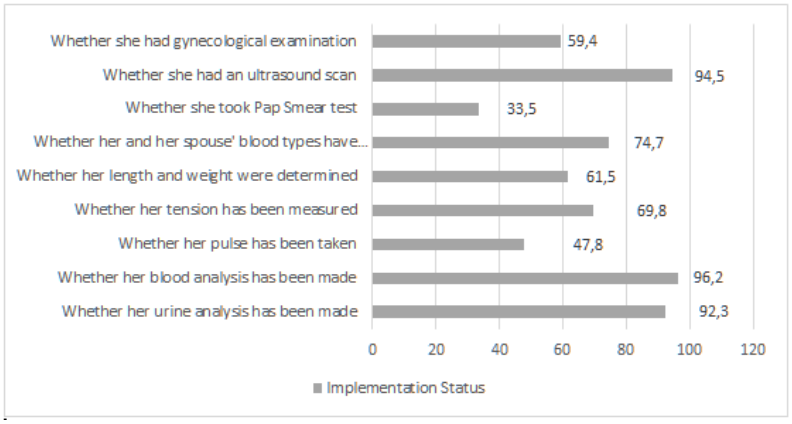
Graph 8. Assessment of drug abuse and environmental risks

The presence of a psychiatric disease was utmost questioned (19.8%) in the assessment of psycho-socio-cultural anxiety and risks (Graph 9).



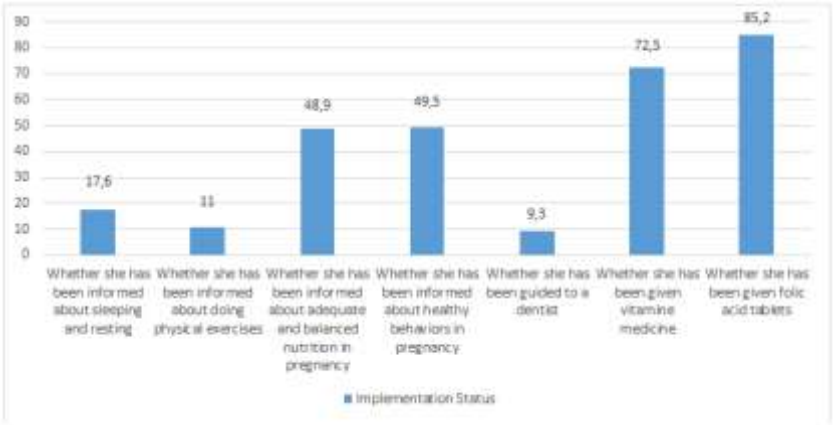
Graph 9. Assessment of psycho-socio-cultural anxieties and risks

The most commonly used tests for assessing the risks associated with physical examination and laboratory findings were blood analysis (96.2%), urine analysis (92.3%) and having an ultrasound scan (94.5%) (Graph 10).



Graph 10. Assessment of physical examination and laboratory findings related rsiks

In the prepregnancy health promotion component, which is another component of the preconceptional care; folic acid tablets (85.2%) and vitamin medicines (72.5%) were determined to be utmost given (Graph 11).



Graph 11. Information of practices for the improvement of prepregnancy health

In the light of the findings of the quality of preconceptional care received by some of the pregnant women, included in the scope of the study, it was determined that in the risk assessment component, which is one of the components of the preconceptional care; women and her spouse's age, prepregnancy and prebirthing status, presence of her systemic disease such as Diabetes, Hypertension; presence of a drug she must use consistently; presence of a contagious disease she has; whether she has been vaccinated against tetanus; presence of a blood relation with her spouse; presence of a complaint she has regarding nourishment; whether she smokes and uses alcohol; presence of a psychiatric disease she has, were utmost questioned, and blood analysis, urine analysis and having an ultrasound scan were among the most commonly performed preconceptional applications. Folic acid tablets and vitamin medicines were found to be utmost given in the prepregnancy health promotion component, which is another component of preconceptional care.

The topic of what should be included in a prepregnancy care program has been shaped, having been discussed in different countries for many years, and has been applied in the light of national/universal data. At least 14 attempts, providing improvement in the outcome of pregnancy when applied before or early periods of pregnancy, were identified in the report published by the CDC in 2006 (Johnson, et al., 2006:1). These are folic acid supplement, rubella vaccine, HIV/AIDS scanning and treatment, hepatitis B vaccination, diabetes control, obesity control, hypothyroidism management, STD scanning and management, alcohol and smoking cessation, and avoidance of teratogenic drugs. In the process of the United States' working on the subject and of identy a eveidence-based content, described the clinical components of prepregnancy care in 2008, summarized the scientific reasons and evidences for taking these components into account, and determined what should be included in a prepregnancy care package (Atrash, et al., 2008:259; Jack, et al., 2008:266). According to the report of the United States, it is possible to summarize the issues that need to be included in the scope of prepregnancy care, under 10 titles. While the first nine items constitute the basis of the assessment that should be made for every female at the age of fertility, the last item aims general assessment of male's health. Improvement of health in general manner, and reduction of risks (realization of the principles, including to reach to ideal weight through healthy eating and increasing physical activity, which are considered as the fundamental requirements of health, and avoid

addictive substances, especially tobacco products. The determination of the supplements and/or nutritional supplements to be used, if necessary) (Moos, et al., 2008:156; Gardiner, et al., 2008:345; Floyd, et al., 2008:333). The discussion of fertility plans, providing counseling for family planning, and questioning of the narrative of fertility (Stubblefield et al., 2008:373)

- The prevention of infections/treatment (Coonrod, et al., 2008a:290)
- Immunization (Coonrod, et al., 2008b:296)
- The assessment of and appropriate intervention of existing medical conditions (Dunlop, et al., 2008:310)
- Taking family narrative and genetic narrative (Solomon, Jack and Feero, 2008:340)
- Minimizing the adverse effects caused by workplace where future mother / father works or environment they live (McDiarmid, Gardiner and Jack, 2008:357)
- The determination of drug use (prescription+non-prescription) (Dunlop, et al., 2008:310)
- The identification of psychosocial conditions, and special conditions such as disability (Klerman, et al., 2008:362, Frieder, et al., 2008:328, Ruhl and Moran, 2008:384)
- The assessment of general health levels of future fathers, provide general counseling service on the protection/development of health, and provide private counseling service on the role of the father in terms of maternal and child health during the gestation period (Frey, et al., 2008:389).

Some practices, considered as high evidence-based in evidence-based studies, and recommended for prepregnancy period, are as follows; giving folic acid 3 months ago from pregnancy, giving vitamins and mineral supplementary to pregnants in need, being vaccinated of infant in the preprepregnancy period, against the diseases that can be teratogenetic for infant when undergone during pregnancy, and assessment of genetic diseases (Baysoy and Özkan, 2012:77; Arslan and Özkan, 2005:65; Başgöl and Oskay, 2012:1524; Freda, et al., 2006:43). Undoubtedly, the scope of prepregnancy care is very broad. When looked from the viewpoint of raising awareness of individuals and accordingly of the society, almost all the discussed topics should be included in the prepregnancy education/counseling services that will be provided inTurkey. However, some issues regarding the characteristics of country people should be concentrated on. Taking the characteristics of country people, a narrative form for prepregnancy care was prepared in 2012 by Baysoy and Özkan (2012), in accordance with the literature. Particular emphasis has been placed on inquiry questions for oral-dental health problems due to the widespread oral-dental problems in the country and the adverse effects of periodontitis for pregnancy; for spouse's tendency to commit violence against wife since violence against women is common in Turkey; for toxoplasma scanning due to the widespread of husbandry/animal feed at home; for the importance of the healthy eating, folic acid, iron, calcium, iodine intake and the use of iodized salt, for active-passive smoking due to extensive cigarette smoking. When looked in the line of relevant literature, and of the characteristics of country people, regarding what should be included in the scope of a prepregnancy care program, it can be said that the quality of preconceptional care received by the women, included in the scope of the study is intermediate.

6. CONCLUSION AND RECOMMENDATIONS

It was determined that preconceptional care receiving rate was considerably low in the pregnant women included in the scope of the study, and the quality of the care received was intermediate. In line with these results, it is proposed to create a national health program regarding the content of preconception care, and by whom and where and how this care will be provided in Turkey. Until such a program is created, healthcare providers working in the area of maternal and child health should continue to provide preconceptional care and counseling services in the line of the forms included in the literature, to women patiens at fertile age and their spouses, especially to those who plan to have children, applied to themselves for any reason. In order to extend preconceptional care and counseling services; the comprehensive projects at the national level should be carried out, and preconceptional care and counseling services should be provided at every stage of the health care system, and ensured to be transmitted to the whole of the target group.

ACKNOWLEDGEMENTS

We greatfull for our participants.

NOTICE

We confirm that we do not take any support for funding. There is no conflict of interest between any person or any institution.

NOTICE

This study was presented as an oral presentation in the 25th World Congress on Controversies in Obstetrics, Gynecology and Infertility (COGI) on November 30 - December 02, 2017 in Wien/Austria.

REFERENCES

- Arslan, H., and Özkan, A., (2005). Evaluation of Women Preconceptional Period. Medical Bulletin of Zeynep Kamil, 36(2):65-71.
- Atrash, H., Jack, B.W., and Johnson, K., (2008). Preconception Care: A 2008 Update. Current Opinion in Obstetrics and Gynecology, 20(6), 581-9. doi: 10.1097/GCO.0b013e328317a27c
- Başgöl, Ş., and Oskay, Ü., (2012). Evidence-Based Practices in Preconception Period and Pregnancy. International Journal of Human Sciences, 9, 1524-1534.
- Baysoy, N.G. and Özkan, S., (2012). Preconception Care: A Public Health Perspective. Gazi Medical Journal, 23, 77-90.
- Coonrod, D.V., Jack, B.W., Boggess, K.A., Long, R., Conry, J.A., Cox, S.N., Cefalo R, Hunter, K.D., Pizzica, A., and Dunlop, A.L., (2008b). The Clinical Content of Preconception Care: Immunizations as Part Of Preconception Care. American Journal of Obstetrics and Gynecology, 199(6 Suppl 2), 290-5. doi: 10.1016/j.ajog.2008.08.061.
- Coonrod, D.V., Jack, B.W., Stubblefield, P.G., Hollier, L.M., Boggess, K.A., Cefalo, R., Cox, S.N., Dunlop, A.L., Hunter, K.D., Prasad, M.R., Lu, M.C., Conry, J.A., Gibbs, R.S., and Hogan, V.K., (2008a). The Clinical Content of Preconception Care: Infectious Diseases in Preconception Care. American Journal of Obstetrics and Gynecology, 199(6 Suppl 2), 296-309. doi: 10.1016/j.ajog.2008.08.062.

- Coşkun, A., (2011). The Place and Importance of Preconception Care and Counseling in Women's Lives. Journal of Education and Research in Nursing, 8, 8-15.
- De Weerd, S., Van der Bij, A.K., Cikot, R.J., Braspenning, J.C., Braat, D.D., and Steegers, E.A., (2002). Preconception Care: A Screening Tool for Health Assessment and Risk Detection. Preventive Medicine, 34, 505-11. doi: 10.1006/pmed.2002.1009
- Douglas Wilson, R., and Genetics Committee, (2011). Genetic Considerations for A Woman's Pre-Conception Evaluation. Journal of Obstetrics and Gynaecology Canada, 33(1), 57-64. doi:10.1016/S1701-2163(16)34774-0.
- Dunlop, A.L., Jack, B.W., Bottalico, J.N., Lu, M.C., James, A., Shellhaas, C.S., Hallstrom, L.H., Solomon, B.D., Feero, W.G., Menard, M.K., and Prasad, M.R., (2008). The Clinical Content Of Preconception Care: Women With Chronic Medical Conditions. American Journal of Obstetrics and Gynecology, 199(6 Suppl 2), S310–S327. doi:10.1016/j.ajog.2008.08.031.
- Floyd, R.L., Jack, B.W., Cefalo, R., Atrash, H., Mahoney, J., Herron, A., Husten, C., and Sokol, R.J., (2008). The Clinical Content of Preconception Care: Alcohol, Tobacco and Illicit Drug Exposures. American Journal of Obstetrics and Gynecology, 199(6 Suppl 2), 333-9. doi: 10.1016/j.ajog.2008.09.018.
- Freda, M.C., Moos, M.K., and Curtis, M., (2006). The History of Preconception Care: Evolving Guidelines and Standards. Maternal and Child Health Jounal, 10:43-52. doi:10.1007/s10995-006-0087-x
- Frey, K.A., Navarro, S.M., Kotelchuck, M., and Lu, M.C., (2008). The Clinical Content of Preconception Care: Preconception Care For Men. American Journal of Obstetrics and Gynecology, 199(6 Suppl 2), 389-95. doi: 10.1016/j.ajog.2008.10.024.
- Frieder, A., Dunlop, A.L., Culpepper, L., and Bernstein, P.S., (2008). The Clinical Content of Preconception Care: Women with Psychiatric Conditions. American Journal of Obstetrics and Gynecology, 199(6 Suppl 2), 328-32. doi: 10.1016/j.ajog.2008.09.001.
- Gardiner, P.M, Nelson, L., Shellhaas, C.S., Dunlop, A.L., Long, R., Andrist, S., and Jack, B.W., (2008). The Clinical Content of Preconception Care: Nutrition and Dietary Supplements. American Journal of Obstetrics and Gynecology, 199(6 Suppl 2), 345-56. doi: 10.1016/j.ajog.2008.10.049.
- Gökdemir, F. (2015). Development of Preconceptiónal Knowledge and Atidues Scale. Atatürk University, Health Sciences Institute, Master's thesis, Erzurum.
- Hacettepe University Institute of Population Studies, (2014. 2013 Turkey Demographic and Health Survey. Hacettepe University Institute of Population Studies, T.C. Ministry of Development and TUBITAK, Ankara, Turkey.
- Jack, B.W., Atrash, H., Coonrod, D.V., Moos, M.K., O'Donnell, J., and Johnson, K., (2008) The Clinical Content of Preconception Care: An Overview and Preparation of This Supplement. American Journal of Obstetrics and Gynecology, 199(6 Suppl 2), 266-79. doi: 10.1016/j.ajog.2008.07.067.
- Johnson, K., Posner, S.F., Biermann, J., Cordero, J.F., Atrash, H.K., Parker, C.S., Boutlet, S., and Curtis, M.G., (2006). Recommendations to Improve Preconception Health and Health Care United States. A report of the CDC/ATSDR Preconception Care Work Group and the Select Panel on Preconception Care. MMWR Recomm Rep., 21,55(RR-6):1-23.

- Klerman, L.V., Jack, B.W., Coonrod, D.V., Lu, M.C., Fry-Johnson, Y.W., and Johnson, K., (2008). The Clinical Content of Preconception Care: Care of Psychosocial Stressors. American Journal of Obstetrics and Gynecology, 199(6 Suppl 2), 362-6. doi: 10.1016/j.ajog.2008.08.042.
- McDiarmid, M.A., Gardiner, P.M., and Jack, B.W., (2008). The Clinical Content of Preconception Care: Environmental Exposures. American Journal of Obstetrics and Gynecology, 199(6 Suppl 2), 357-61. doi: 10.1016/j.ajog.2008.10.044.
- Moos, M.K., Dunlop, A.L., Jack, B.W., Nelson, L., Coonrod, D.V., Long, R., Boggess, K., and Gardiner, P.M., (2008). Healthier Women, Healthier Reproductive Outcomes: Recommendations For The Routine Care of All Women of Reproductive Age. American Journal of Obstetrics and Gynecology, 199(6 Suppl 2), 280-9. doi: 10.1016/j.ajog.2008.08.060.
- Poels, M., Koster, M.P., Boeije, H.R., Franx, A., and Van Stel, H.F., (2016). Why Do Women Not Use Preconception Care? A Systematic Review On Barriers and Facilitators. Obstetrical Gynecological Survey, 71(10), 603-612. doi: 10.1097/OGX.0000000000000360.
- Reeve, M.E., Charafeddine, L., Zhong, N., Padilla, C.D., Yunis, K., El Rafei, R., Alamiddine, K., Zhao, X., Jiang, X., and Howson, C.P., (2014). Preconception Health Assessment in China, Lebanon and The Philippines: Applicability to Other Countries. Maternal and Child Health Journal, 18(5), 1066-74. doi: 10.1007/s10995-013-1334-6.
- Ruhl, C., and Moran, B., (2008). The Clinical Content of Preconception Care: Preconception Care for Special Populations. American Journal of Obstetrics and Gynecology, 199 (6 Suppl 2), 384-8. doi: 10.1016/j.ajog.2008.09.019.
- Solomon, B.D., Jack, B.W., and Feero, W.G., (2008). The Clinical Content of Preconception Care: Genetics and Genomics. American Journal of Obstetrics and Gynecology, 199(6 Suppl 2), 340-4. doi: 10.1016/j.ajog.2008.09.870.
- Stubblefield, P.G., Coonrod, D.V., Reddy, U.M., Sayegh, R., Nicholson, W., Rychlik, D.F., and Jack, B.W., (2008). The Clinical Content of Preconception Care: Reproductive History. American Journal of Obstetrics and Gynecology, 199(6 Suppl 2), S373-83. doi: 10.1016/j.ajog.2008.10.048.
- Temel, S., Van Voorst, S.F., Jack, B.W., Denkta, S., and Steegers, E.A., (2014). Evidence-Based Preconceptional Lifestyle Interventions. Epidemiol Rev 36, 19-30.
- Toivonen, K.I., Oinonen, K.A., and Duchene, K.M., (2017). Preconception Health Behaviours: A Scoping Review. Preventive Medicine, 96, 1-15. doi: 10.1016/j.ypmed.2016.11.022
- Turkey Statistical Institute, (2016). News Bulletin, Family Structure Survey.
- Tyden, T., (2016). Why is Preconception Health and Care Important? Upsala Journal Of Medical Sciences, 121(4), 207.doi.org/10.1080/03009734.2016.1211776
- World Health Organization, (2012). Meeting to Develop A Global Consensus on Preconception Care to Reduce Maternal and Childhood Mortality and Morbidity; World Health Organization Headquarters, Geneva, 6-7 February 2012: Meeting Report 2013. http://apps.who.int/iris/bitstream/10665/78067/1/9789241505000_eng.pdf

- Yılmaz, T., Dinç, H., and Demirgöz Bal, M. (2015). Practices carried out by Pregnant Women to Improve Fetal Health. Journal of Academic Research in Nursing, 1(1), 21-29.