

Health Research in Vegan Women

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Abstract. *Study Objectives:* This planned research aimed to identify the conditions for women's health in women who prefer vegan diets. *Method:* The study consists of vegan women and the sample consists of a total of 150 women who agreed to participate in the study. The data was collected through a questionnaire consisting of 34 questions. Associations and vegan women were reached out via social media. *Results:* The average age of the participants was 28.96 ± 8.50 and 33.3% were married. The average year in which women continue to eat vegan is 3.29 ± 5.25 . 62% of vegan women stated that their menstrual periods were painless, 87.3% stated that their menstrual periods were regular, and 75.3% stated that they did not have any gynecological diseases. The most common complaints in vegan women are stress and anxiety (27.1%), continuous discharge (27.1), depression (25), polycystic ovary syndrome (20.8), urinary tract infection (20.8), and fibroids (12.5). 18% of vegan women had been diagnosed with anemia, of which 18.8% used anemia treatment. *Conclusion:* It was found that vegan women did not have many complaints in terms of gynecology while existing complaints were similar or even lower in terms of disease rates seen in the total population. The study group's high level of education and awareness and regular health checkups are among the factors affecting the results. The low vegan diet averages of the women covered in the study and the fact that a greater number of women were out of reach show the limitations of the study.

Key words: Vegan diet, Woman health, Vegetarian

Introduction

The word vegetarian is derived from a Latin word called 'vegetus', meaning fresh (1). Vegetarianism is a widely used diet choice. It is a non-personal diet that is accepted for cultural or religious reasons and is preferred because of health benefits or concerns about animal protection (2). Vegetarianism includes many dietary options. Those who do not consume animal-derived foods such as meat, poultry, fish but consume eggs and dairy products are called ovo-lacto-vegetarian and those who consume only milk and dairy products and do not consume any other animal-derived foods are called lacto-vegetarians. Vegans, on the other hand, do not consume any food of animal origin for any reason. Other than red meat, fish, and poultry, vegans do

not consume eggs, milk, and its products, honey, eggs, ready-made foods with whey added, and margarines with milk added. Their diet is mainly on vegetables, fruits, cereals, seeds, legumes, and nuts and peanuts (2). The reason for this diet is that vegans believe that animals should never be used for humans (3).

Although the world's vegetarian-vegan diet rates vary, Australia and America have 5%, Brazil and Germany 8-9%, Canada, Norway and China 4%, India 40% (80% in Gujarat), France, New Zealand, and Spain have 2% vegan populations (4). In Turkey, the rate is not known as there is no study on the subject.

Vegetarian diets are rich in fiber, magnesium, Fe³⁺, folic acid, vitamins C and E, omega-6, polyunsaturated fatty acids, phytochemicals, and antioxidants, but they are also lower in cholesterol, total fat content

and saturated fatty acids, sodium, Fe²⁺, zinc, vitamin A, B12 and D11, and especially omega-3 polyunsaturated fatty acids. According to the results of seven clinics and 32 meta-analysis studies, vegetarian diets have been shown to cause low blood pressure (5). Also in terms of the health of this type of diet; it has also been found to have many advantages including low risk of ischemic heart disease, type 2 diabetes, hypertension, and obesity (6,7). In 2015, the International Agency for Research on Cancer within the World Health Organization stated that red meat and processed meats are in the class of carcinogenic agents (8). The risk of developing cancer is lower for vegans and vegetarians because they consume more cereals, dried legumes, nuts, walnuts, vegetables, and fruits. However, the most important point to be considered here is an adequate and balanced diet (9-11). Although studies have been reported to be beneficial for health, anemia, vitamin B-12 deficiency, and osteoporosis, which develop due to inadequate intake of various nutrients, are an important concern (12-14). While in other types of vegetarianism, protein deficiency is not experienced very much, vegans may experience serious health problems if they do not have a planned and balanced diet. Vegans need to consume soybeans, which are a source of protein, as well as iron, B-12, calcium, vitamin D, and zinc preparations to avoid these problems (15).

The need for iron and vitamin B-12, which are particularly important in women's health, is known to increase even more in pregnant and nursing women. Studies have shown deficiencies in vitamin B-12 concentration in pregnant and nursing vegetarian mothers (13,16). The babies of vegan mothers with B-12 vitamin deficiency may also have developmental and neurological symptoms (17).

Vegan and vegetarian mothers are said to breast-feed their children longer than non-vegetarian mothers. If these mothers have insufficient vitamin B-12 milk concentrations, children are at risk until they start eating appropriate supplemental diets (18). In another study, it was stated that lacto-ovo vegetarianism should be preferred instead of veganism in order to balance lipid levels in the blood in menopausal women (8). Although it is not yet clear, a vegetarian diet also reduces the risk of breast cancer. The frequent intake of phytoestrogen, especially in the frequently consumed

soybean, has a protective effect against breast cancer. In addition, vegetarians have a lower risk of breast cancer due to the delay in menarche and low estrogen levels caused by early menopause (19,20). A study of Buddhist nuns found that even though people who were vegans during their lives had lower calcium intake than non-vegans, there was no difference in bone density between them. A similar study found that Asian vegetarian women had a higher risk of bone fracture because they had less protein and calcium intake than those who did not (21,22). Studies on vegan women are inadequate. Although there are associations that recommend a vegan diet, there are also those who do not recommend it. This planned research aimed to determine the conditions for women's health in women who prefer vegan diets.

Materials and Methods

Type of the Study

This is a descriptive and cross-sectional study.

Sample of the Research

The sample consists of vegan women who accepted to participate in the study voluntarily and meeting the inclusion criteria between 15.01.2018-15.04.2018. The participants were reached via social media, through vegan restaurants, and associations. The research was completed with a total of 150 vegans.

Among the inclusion criteria: a minimum of one year, being vegan, being over 18, speaking Turkish, having no cognitive problems, and voluntarily participating in the study. After the women were informed about the study, the study was carried out with those accepting to participate.

Research Ethical Principles

Ethics committee permission was obtained to conduct the study. Ethics committee permission was obtained from xxx University Scientific Research and Publication Ethics Committee. (Approval Date:11.03.2019 No:95674917-108.99 E.9740)

Data Collection Tools

The questionnaire form consists of questions created by researchers questioning women's health. It consists of a total of 34 questions that address the obstetric story and some women's health problems with socio-demographic features.

Data Analysis and Interpretation

The data obtained as a result of the research were evaluated with the SPSS-22 program, error controls, tables, and statistical analyzes were made. Number and percentage distribution were used in statistical evaluations and average-standard deviation was used in continuous data.

Results

The mean age of the participants is 28.96 ± 8.50 (min=18, max=61). Some socio-demographic

characteristics of vegan women who participated in the study were given in Table 1.

59.3% of vegan women are single and 83.4% are university graduates/students. 49.3% of the participants work, 97.7% have social security. 54% of the participants' incomes are equal to their expenses, 30.2% are students and 11.3% are employed in the private sector and 24.3% are employed as civil servants. As a result of the study of family structures, 62% had a core family structure and 85.3% lived in the provincial center (Table 1).

33.3% of the women who participated in the study were married and the average year of marriage was 7.58 ± 7 (min=1 max=31). The average year in which participants continued to eat vegan was 3.29 ± 5.25 (min=4 months max=44). An examination of the obstetric history of vegan women surveyed is included in Table 2.

51.4% of vegan women have experienced pregnancy, and 70.2% of them have planned pregnancy. The pregnancy of six vegan women is risky (twin pregnancy, preeclampsia, cervical failure, etc...). During pregnancy, 34.2% of vegan women took iron

Table 1. Distribution of some socio-demographic characteristics of the participants.

Marital status	n	%	Income-expense status	n	%
Married	50	33.3	Income less than expense	31	20.7
Single	89	59.3	Income equal to expense	81	54.0
Divorced	11	7.3	Income is more than expense	38	25.3
Education	n	%	Professional status	n	%
Elementary middle school	2	1.1	Not working	8	5.3
High school	11	7.3	Officer	36	24.3
University	124	81.3	Worker	12	8.2
Master	8	5.2	Self-employment	30	20.1
Postgraduate	5	3.1	Private sector	17	11.3
			Student	46	30.2
			Retired	1	0.6
Working status	n	%	Place of residence	n	%
Yes	76	50.7	Province	128	85.3
No	74	49.3	District	22	14.7
Social security	n	%	Lifestyle	n	%
Retirement fund	31	20.7	Elementary family	93	62.0
Social fund	78	52.0	Extended family	2	1.3
BAĞ-KUR	7	4.6	Broken family	12	7.5
Private health insurance	24	16.0	Alone	20	13.1
	10	6.7	Dorm	3	2.0
			Home mate	20	13.1

Table 2. Examination of obstetric histories of women

Number of children	n	%	Planned pregnancy	n	%
None	40	55.5	Yes	32	70.2
1	19	26.4	No	14	29.8
2	11	15.3			
3	2	2.8			
Number of births	n	%	Number of pregnancies	n	%
None	38	54.3	Yok	34	48.6
1	21	30.0	1	20	28.5
2	9	12.8	2	11	15.7
3	2	2.9	3 and above	5	7.2
Having pregnancy with treatment	n	%	Treatment	n	%
Yes	4	9.1	Test tube	3	75.0
No	40	90.9	Vaccination	1	25.0
Number of curettages	n	%	Birth Week	n	%
Yok	58	84.1	37. before week	4	11.4
1		11.6	38. week	6	17.2
2	8	2.9	39. week	8	22.8
3 and above	2	1.4	40-42. week	17	48.6
	1				
Risky pregnancy status	n	%	Birth type	n	%
Yes	6	14.6	Cesarean	19	54.3
No	35	85.4	Vaginal delivery	14	40.0
			Intervention delivery	2	5.7

medication, 60.5% took folic acid, 44.7% took vitamin B12, 23.7% took vitamin D and 18.4% took calcium supplements. 91.4% of vegans who gave birth breastfed their baby and 84.8% stated that their milk was sufficient. Vegan mothers breastfed their babies for an average of 17.60±10.63 (min=1 max=48) months. A comparison of some health status of the women participating in the study is given in table 3.

75.3% of vegan women do not have any gynecological disease. 87.3% of women have regular menstrual periods and 62% have painless periods. Common complaints in vegan women are stress and anxiety (16.6%), continuous vaginal discharge (16.6%), depression (15.4%), polycystic ovary syndrome (12.8%), urinary tract infection (12.8%), and myoma (7.6%).

18.8% of the vegan women who participated in the survey were diagnosed with anemia and among the women diagnosed with anemia, 18,8% used the treatment. The average duration of the use of anemia treatment is 11.14±28.04 months.

When asked how women feel after they start eating vegan, five women stated that the severe menstrual

period had gone away one year after starting to eat vegan. Four women stated that menstruation had been regulated, five women's premenstrual period complaints have passed, and three women's anemia status has improved.

Discussion and Conclusion

The mean age of vegan women who participated in the study is 28.96. Vegan women have generally high levels of education, 81.3% of whom have graduated from university or are studying. About half of the women are employed (50.7%). According to the Turkey Demographic and Health Survey (TDHS) 2013 data, 30.9% of women overall in Turkey had high school and higher education (23). The study shows that vegan women have a high educational status.

33.3% of the participants are married and the mean marriage year is approximately 7.5 years. The average year in which women continue to eat vegan is about three years. About half of vegan women (54.4%)

Table 3. A comparison of some health conditions of participants

Have you been diagnosed with anemia?	n	%	Gynecology	n	%
Yes	27	18.0	Urinary tract infection	10	12.8
No	123	82.0	Polycystic ovary	10	12.8
Is your period regular?	n	%	Myoma	6	7.6
Yes	131	87.3	Intermediate bleeding	1	1.3
No	19	12.7	Continuous vaginal discharge	13	16.6
Is your period painful?	n	%	Urinary incontinence	1	1.3
Yes	57	38	Constipation	4	5.2
No	93	62	Pelvic pain	4	5.2
Do you have any gynecological diseases?	n	%	Stress and anxiety	13	16.6
Yes	37	24.7	Depression	12	15.4
No	113	75.3	Fibroids	1	1.3
			Vaginal fungus	1	1.3
			Genital wart	1	1.3
			Endometriosis	1	1.3

have experienced pregnancy, and 70.2% of them have planned pregnancy. During pregnancy, 34.2% of vegan women took iron medication, 60.5% took folic acid, 44.7% took vitamin B12, 23.7% took vitamin D and 18.4% took calcium supplements. 91.4% of vegans who gave birth breastfed their baby and 84.8% stated that their milk was sufficient. Vegan women breastfed their babies for an average of 18 months. According to the Turkey Demographic and Health Survey results, 96% of normal-fed women breastfed their babies and often continued for 17 months (23). According to associations or studies, there are different approaches for pregnancy and lactation periods. German Nutrition Society recommends an anti-vegan diet for pregnant and nursing women, infants, children, and adolescents (14). However, a report published by the American Nutrition Association reported that well-planned vegetarian diets are healthy for infants, children, adolescents, and pregnant and lactating women (24). The study shows that almost all vegan-fed women can comfortably breastfeed their babies. Study results show similarities with normally fed women.

Among vegan women in the study, menstrual irregularity was 12.7% and dysmenorrhea complaints were 38%. Studies have shown that dysmenorrhea occurs globally between 45-95% in women of reproductive age (25). This shows us that dysmenorrhea is less common among vegan women.

18% of the women in the study were diagnosed with anemia, and 18.8% of the women who received the diagnosis took treatment. The average duration

of taking anemia treatment is 11 months. Anemia is the most common micronutrient deficiency that more than 20% of women experience during their reproductive life (26). Anemia is a global health problem seen in low- and high-income countries with social and economic consequences. In 2011, the global prevalence of anemia was reported as 29% among non-pregnant women and 38% among pregnant women (27).

About three in four vegan women do not have any gynecological diseases. The most common complaints in vegan women are stress and anxiety, vaginal discharge, depression, polycystic ovary syndrome, urinary tract infection, and fibroids.

The results of the study showed that vegan women did not have many complaints in terms of gynecology and that the existing complaints were similar or even lower in terms of disease rates seen in the total population. The most important factor in this is that it is an informed group that they have regular health checks and high levels of education may be among the factors affecting the results. The low vegan year average of the women covered in the study and the lack of reach for more women show the limitations of the study.

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