

## Türkiye'deki Kadınların Vajinal Duş Uygulamaları<sup>1</sup>

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### ÖZET

**Giriş:** Vajinal duş kadınların hijyenik ya da tedavi beklentisiyle vajen içine sıvı vermeleridir.

**Amaç:** Vajinal duş uygulamasının nedenleri ve bu uygulama ile ilişkili faktörleri araştırmaktır. **Desen:** Kesitsel ve tanımlayıcı bir çalışma.

**Araştırmanın Yeri:** Sağlık Bakanlığı Ege Doğumevinin polikliniğinde yürütülmüştür. **Katılımcılar:** Araştırma için geliştirilen anket 1600 kadına uygulanmıştır.

**Yöntem:** Araştırma verileri üç aylık sürede polikliniğe gelen kadınlardan toplandı. Ankette sosyo-demografik faktörlerle ilişkili altı çoktan seçmeli soru, vajinal duş yapıp yapmadıkları, evet diye cevaplayanlara vajinal duş uygulama sıklığı, süresi, nedenleri, en sık kullanılan ürün tipi, bu uygulamaya niçin başladığı ve vajinal duş hakkında eğitim alıp almadığını içeren sorular yer almaktadır. Ki-kare ve lojistik regresyon analizleri kullanılmıştır.

**Bulgular:** Kadınların yaklaşık olarak %47.2'si (n=755) vajinal duş yapmaktadır. Vajinal duş uygulayan kadınların %98.7'sinin "temiz hissetmek" için vajinal duş yaptığı, %92.3'ünün vajinal duşu "cinsel ilişki sonrası", yaklaşık %60.0'mın "sadece su" kullandığı, %90.1'inin "parmaklarını haznenin içine sokarak" yıkadığı, %81.5'inin vajinal duş hakkındaki öneriyi "aile üyelerinden" aldığı saptanmıştır. Kırk yaş ve üzerindeki kadınların diğer yaş gruplarına, okur-yazar olmayan kadınların, lise ve yüksekokul mezunu olanlara, vajinal duş hakkında eğitim almayanların eğitim alanlara oranla daha çok vajinal duş uyguladıkları saptanmıştır.

**Sonuç:** Vajinal duş, yararlı olduğuna inanan kadınlar tarafından yaygın bir şekilde kullanılmaktadır. Dolayısıyla, önceliğin eğitim programları yoluyla kadınların vajinal duş hakkındaki inançlarını değiştirmeye yönünde olması gerekmektedir.

**Anahtar Kelimeler:** Vajinal Duş, Kadın Sağlığı, Hemşirelik

### Vaginal Douching Practices of Women in Turkey

**Background:** Vaginal douching involves introduction of liquid into the women's vagina for perceived hygienic or therapeutic purposes.

**Objectives:** To investigate the reasons of vaginal douche application and factors related to this practice.

**Design:** This is a cross-sectional and descriptive survey.

**Settings:** It was conducted in the outpatient clinic of Aegean Maternity Hospital of the Ministry of Health in Izmir, Turkey.

**Participants:** A questionnaire developed for this study was completed by 1600 women.

**Methods:** The interviews took place over a three month period in the out patient clinic. The questionnaire included six questions related to socio-demographic factors. Women were then asked whether or not they douched. Those who answered "yes" were further asked 12 questions including the frequency, duration, reasons for the douche, type of product most frequently used, why they initiated this practice and whether or not they had received education about douching. Chi-square test and Logistic regression analysis was used.

**Results:** About 47.2% (n=755) of the participants used vaginal douche. Of this, 98.7% used it for cleanliness, about 60% applied "water only", and 81.5% reported that suggestion to use vaginal douche was made by their "families". The application of vaginal douche is more common among women 40 years or older and is used more widely by women less education than those well-educated.

**Conclusion:** Vaginal douche is widely used by women who believed it's beneficial. Hence, initiatives should be directed at changing women's beliefs through training programmes aimed at changing their belief towards vaginal douche.

**Key Words :** Vaginal Douche, Women's Health, Nursing

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## INTRODUCTION

Vaginal douching involves introduction of liquid into the women's vagina for perceived hygienic or therapeutic purposes (Funkhouser, Hayes & Vermund, 2002). Prevalence rates of vaginal douching vary considerably from country to country and region to region. According to data from the National Survey of Family Growth reported in 1988, 37% of American women aged 15-44 years douched at least once a week (Abma, Chandra, Mosher, Peterson & Piccinino, 1997). Another survey by the same authors in 1995 reported the rate of douching for American women was 27%. Vaginal douching by Turkish women was investigated in several studies with small sample sizes, with the rate of douching as 63.2% by Caliskan, Cöl, Akdur, Yavuzdemir and Yavuz (1996), 58% by Karaer, Boylu and Avsar (2005), 50.2% by Caliskan, Subası and Sarisen (2006), 54% by Kukulu (2006) and 61.5% by Ege, Timur, Zincir, Egri and Reeder (2007).

Vaginal douching disrupts the acidic environment of the vagina and therefore affects reproductive health. Vaginal flora is rich in aerobic bacteria, especially lactobacilli. Survival of vaginal bacteria depends on the vaginal pH. Glycogen released from the cells of the vagina is

converted to lactic acid by lactobacilli which produce hydrogen peroxide. Thus, the vaginal pH becomes acidic (3.8-4.2) (Cottrell, 2002; Martino & Vermund, 2002). This acidic pH is a defense mechanism which protects the vagina against infections. Solutions used for vaginal douching destroy the acidic environment of the vagina, decrease the quality and the quantity of lactobacilli in the vaginal flora and cause these bacilli to be replaced by pathogenic microorganisms (Abma et al. 1997; American College of Obstetricians and Gynecologists [ACOG], 1996; Merchant, Oh & Klerman, 1999).

Vaginal infections often result from douching with bacterial vaginosis being most common. In addition to producing an odorous vaginal discharge, bacterial vaginosis has been associated with endometritis, vaginal infections, pelvic inflammatory disease and cervical cancer and complications following invasive gynecologic procedures (Baird, Weinberg, Voight & Daling, 1996; Gardner et al. 1991; Scholes et al. 1998). Negative obstetric results of vaginal douching include ectopic pregnancy, preterm labor, low birth weight and infertility (Fiscella, Franks, Kendrick & Bruce, 1998; Kendrick, Atrash, Strauss, Gargiullo & Ahn, 1997).

Cultural and religious beliefs play a significant role in vaginal douching (Braunstein & Van de Wijgert, 2003). Vaginal douching is associated with socio-cultural values derived from beliefs about sexuality, personal hygiene, health and disease (Braunstein & Van de Wijgert, 2003; Vermund, Sarr & Murphy 2001). Studies exploring the contributing factors for vaginal douching are scarce. Literature review revealed only five studies on the reasons and contributing factors for vaginal douching in Turkey and all were conducted in Central Anatolia, Southeastern Anatolia and Mediterranean Region. There are no studies about the prevalence and reasons for douching in the Aegean Region in Turkey. This area of Turkey differs considerably from Central and Southeastern Anatolia, with people having higher levels of education and socioeconomic conditions and a higher standard of health. Generally, the western area of Turkey is considered less traditional than other areas where previous research on this topic has been conducted. Since vaginal douching is often considered a traditional practice affected by cultural characteristics, studies should be conducted in other regions of the country so that nurses use data as they provide health education to women. The purpose of this descriptive

study was to explore reasons for vaginal douching and contributing factors among women in Western Turkey.

### ***Review of the literature***

Studies on vaginal douching conducted so far show that douching starts early in life, as early as age 17. Douching to feel clean was a commonly reported reason in several studies. Caliskan et al. (1996) in a Turkish study, found 84.1% of women douched to feel clean, while reports from the US ranged from 89.6% by Koblin et al. (2002), 78.3% by Oh, Funkhouser, Simpson, Brown & Merchant (2003), 43.2% by Ness et al. (2003) to 44% by Zhang et al. (2004).

Cultural elements and religious beliefs which cause women to consider their bodies dirty after sexual intercourse and menstruation play a role in the practice of vaginal douching (Vermund et al., 2001). In fact, Caliskan et al. (1996) reported 68.3%, Kukulcu (2006) 56.8%, Caliskan et al. (2006) 24.2% Ege et al. (2007) 7.7% of the women they surveyed douche for religious reasons.

Other reasons for vaginal douching include eliminating vaginal discharge, itching and odor, removing menstrual blood, preventing or treating sexually transmitted infections and other vaginal infections (Caliskan et al., 2006; Cottrell, 2005;

Kukulu, 2006; Ness et al., 2003; Oh et al., 2003). Women use various products to douche, including water only, water and soap, water and vinegar, or another commercial antiseptic solution such as iodine (Caliskan et al. 1996; Caliskan et al. 2006; Cottrell, 2005; Kukulu, 2006; Ness et al. 2003; Oh et al. 2003).

According to Islam, women must have an ablution after sexual intercourse and menstruation. In fact, it is written in the holy book of Islam, the Qur'an, that one should take a bath and get cleansed after sexual intercourse (University of Southern California, Al MAEDA, 2006). Therefore, the women in Islamic countries believe that they are dirty, especially after sexual intercourse and during menstruation (Guler, 1987). Ablution means to wash the body thoroughly. It has been noted that first the genital organs are washed and then the whole body is washed thoroughly (<http://www.usc.edu/dept/MSA/quran/005.qmt.html>).

Researchers found that age, education, ethnic origin and socio-economic status affect the practice vaginal douching (Abma et al. 1997). Adolescent women have been found to douche more frequently than women who are older (Abma et al. 1997; Merchant et al. 1999; Oh et al. 2003) as do

women with low educational levels compared to those with high education (Abma et al. 1997; Cottrell, 2005; Rosenberg, Phillips & Holmes, 1991). Similarly, women with low socio-economic status are reported to douche more often than those with high socio-economic status (Abma et al. 1997; Cottrell, 2005) and women married for a long period of time more than those married for a short period of time (Abma et al. 1997).

## METHODS

### *Study Design*

This is a cross-sectional descriptive study .

### *Participants and Setting*

The study was conducted in an outpatient clinic at the Aegean Maternity Hospital of the Ministry of Health in the Aegean region of Turkey between February and April 2005. There are three gynecology clinics in the hospital. 70 patients are examined in each clinic daily. One of these clinics was randomly chosen for conducting the study. Women aged 18 years or more and who were non-virgins were invited to participate in this study. We restricted our study to these women who had been or were sexually active since it is a cultural taboo for women who are not sexually active to do anything with the vagina for protecting the

hymen. All eligible women were informed about the study at the time of a visit to the clinic and all those who consented were enrolled in the study. A total of 1600 women agreed to participate in this study. They were asked socio-demographic questions and whether or not they used vaginal douching. The 755 of the 1600 women used vaginal douching were then interviewed.

### ***Procedures***

The interviews took place over a three month period in the clinic at the time of a regular clinic visit. At the end of the interview, the women were informed about the harmful effects of vaginal douching. Data were collected with a questionnaire developed by the researchers based on relevant literature. The content validity of the questionnaire was validate by expert opinion of three professor of obstetrics. The questionnaire was pilot tested by ten women.. The questionnaire was administered by face-to-face interview. The questionnaire included six multiple-choice questions related to socio-demographic factors. Women were then asked whether or not they douched. Those who answered “yes” were further asked 12 questions including frequency, duration, reasons, type of product most frequently used, why they initiated this

practice and whether or not they had received education about douching.

### ***Ethical Approval***

Approval for this study was obtained from the ethical committees of the Maternity and Gynecology Hospital and of the Dokuz Eylül University School of Nursing Ethical Committee. All women included in the study gave informed consent.

### ***Data Analysis***

Data were analyzed with Statistical Package for Social Sciences (SPSS) 11.0 for Windows. Chi-square test was used to determine the relationship between vaginal douching practice and age, marital status, educational level, employment status, longest place of residence, and education about douching. Logistic regression analysis was used to determine the relationship between the dependent variable, vaginal douching and three variables that were significantly associated with vaginal douching: age, educational level, and previous education about douching.

## **RESULTS**

The mean age of the women was 36.9  $\pm$  10.5 years. Of all the women, 29.4% were between 20 and 29 years old, 94.8% were married, 58.2% were primary school graduates, 82.8% were unemployed, 67.9% longest place of residence was a city and

64.9% had no prior education about vaginal douching. All of the women were Muslim.

Sexually active 1600 women were surveyed with follow up results from 755 women (47,2%) who reported douching. The women aged over 40 years douched more frequently than the younger women ( $p<.005$ ). Illiterate women also douched

more frequently than those with formal education ( $p<.005$ ). There was no significant correlation between vaginal douching and income, employment status, marital status and the longest place of residence ( $p>.005$ ), but there was a significant difference between vaginal douching and previous education about douching ( $p<.005$ ).

**Table 1. Socio-demographic Features and Association with Vaginal Douching**

	Douchers		Non-douchers		Total		$\chi^2$ ; P Value
	n	%	N	%	n	%	
<b>Age</b>							
20-29 years*	214	44.3	269	55.7	483	100.0	$\chi^2=27.62$
30-30 years	189	41.1	271	58.9	460	100.0	SD= 3
40-49 years	225	49.8	227	50.2	452	100.0	P= .00
50 years or over	127	61.9	78	38.1	205	100.0	
<b>Marital Status</b>							$\chi^2= 1.0$
Married	720	47.5	796	52.5	1516	100.0	SD= 1
Divorced/widowed	35	41.6	49	58.3	84	100.0	P= .29
<b>Educational Level</b>							
Illiterate**	80	66.1	41	33.9	121	100.0	$\chi^2=36.48$
Literate***	45	55.6	36	44.4	81	100.0	SD= 4
Primary school graduates	452	48.5	479	51.5	931	100.0	P=.00
Secondary school graduates	73	40.6	107	59.4	180	100.0	
High school/ university	105	36.6	182	63.4	287	100.0	
<b>Employment Status</b>							$\chi^2= 3.84$
Employed	115	41.8	160	58.2	275	100.0	SD= 1
Unemployed	640	48.3	685	51.7	1325	100.0	P=.05
<b>Longest place of residence</b>							$\chi^2= 0.63$
City	505	46.5	581	53.5	1086	100.0	SD= 1
Small town/village	250	48.6	264	51.4	514	100.0	P=.42
<b>Education about douching</b>							$\chi^2=19.99$
Yes	130	23.2	431	76.8	561	100.0	SD= 1
No	625	60.2	414	39.8	1039	100.0	P=.00
<b>Total</b>	755	47.2	845	52.8	1600	100.0	

\* Seventeen women aged less than 19 years were included in the age group of 20-29 years.

\*\* Cannot read or write

\*\*\* Can only read and write, no formal education

The most common reason for 755 women who douched was to feel good and

fresh (98.7%), followed second by religious beliefs of women (94.8%). (Table 2).

**Table 2.** Reasons for Vaginal Douching

Reasons for Vaginal Douching	n *	%
To feel good and fresh	745	98.7
Religious beliefs	716	94.8
To remove menstrual blood	566	75.0
To prevent odor	326	43.2
To eliminate discharge	322	42.6
To remove microorganisms	303	40.1
To prevent pregnancy	266	35.2
To prevent itching and irritation	191	25.3
To please spouse	102	13.5
Habitual	34	4.5

\* Some women had more than one reason.

The majority (92.3%) of the women douched after sexual intercourse. The frequency of douching was one to nine times

a week for 62.8% of the women. The most common solution for douching was water only for 59.2% (Table 3).

**Table 3.** Timing, Frequency and Solutions Used in Vaginal Douching

Vaginal Douching	n *	%
<b>When</b>		
After sexual intercourse	697	92.3
When one wants to feel fresh	576	76.3
After menstruation	557	73.8
Before going to the doctor	500	66.2
After bathing	491	65.0
When there is odor	320	42.4
When there is discharge	308	40.8
After urination and defecation	261	34.6
During menstruation	232	30.7
When there is itching	179	23.7
Before sexual intercourse	165	21.9

<b>Frequency</b>		
Occasionally	16	2.1
1-9 times a week	474	62.8
10-19 times a week	10	1.3
20-29 times a week	23	3.1
40-49 times a week	112	14.8
50 times a week or more	68	9.0
<b>Solutions used</b>		
Water only	447	59.2
Water and soap	319	42.3
Shampoo	78	10.3
Bath gel for genital organs	27	3.6
Shower gel	10	1.3
Antiseptic solution / cologne	6	0.8
Water with vinegar	2	0.3

\* Some women had more than one answer

Most women received information about douching from other family members (81.5%), while 23.4% were given information by friends. Only 5.9% of women reported receiving information from health staff. Thirty percent of women stated they did not know how they learned the practice.

We performed logistic regression analysis to determine the strength of the

relationship between these variables and the practice of vaginal douching and all were significant, age ( $p=.004$ ), educational level ( $p=.009$ ) and education about douching ( $p=.000$ ). Women aged 40 years or over, illiterate (can not read or write) women, and women without education about douching were 1.3, 1.7 and 4.8 times more likely to douche than the others respectively.

**Table 4.** Logistic Regression Analysis of Variables that Affect Vaginal Douching

Variables	B	p	O.R.	95% CI
Age (Age 40 ↓ =0; Age 40 and ↑=1)	0.318	.004	1.374	1.104-1.709
Educational level (Other groups=0; Illiterate=1)	0.565	.009	1.760	1.154-2.683
Education about vaginal douching (Received=0; Not received=1)	1.578	.000	4.846	3.837-6.119



## DISCUSSION

Almost half of the women (47.2%) in this research douched. This percentage varied between 50.2-63.2% in other studies conducted in Turkey. The region where this study was conducted was in Izmir province, which is in western Turkey, while the other studies were conducted in provinces in central and eastern Turkey. Izmir is more developed socio-economically than Central and Eastern Anatolia (TDHS-2003) which may have led to the lower rate of vaginal douching.

Older (over 40 years), illiterate, and unemployed women may douche more frequently because they are not aware of the hazards of vaginal douching. As educational level increases and Turkish women benefit more from the media (television, newspapers and magazines) which provide education regarding the hazards of vaginal douching, this may change. A higher level of education also influences how women perceive their health and bodies. The rate of douching by high school and university graduates was low. It may be that they may have been exposed to more information about douching and so be well aware of the disadvantages of douching.

We found the most common reason for vaginal douching was to feel good and fresh (98.7%). It has been reported by

other researchers that the rate of women douching for personal cleanliness ranged from 43.2% to 89.6% (Cottrell, 2005; Caliskan et al. 1996; Caliskan et al. 2006; Ege et al. 2007; Gazmararian et al. 2001; Iannocchione, 2004; Karaer et al. 2005; Koblin et al. 2002; Ness et al. 2003; Oh et al. 2003; Zhang et al. 2004). Vaginal douching is common in cultures where women consider their own bodies, menstruation and sexual intercourse to be dirty. The belief that vaginal douching is an important part of female hygiene and must be performed especially after menstruation and sexual intercourse causes women to douche habitually (Braunstein & Van de Wijgert, 2003).

Another common reason for vaginal douching was religion. In fact, 94.8% of those who the women douched did so for religious reasons. Consistent with this finding, Caliskan et al. (1996) found that 68.3% of women and Caliskan et al. (2006) 24.2% of women and Kukulcu (2006) 56.8% of women used vaginal douching for religious reasons. Ablutions only require that the outside of the genital organs be washed. This suggests that women simply mis-understand what ablutions mean.

The women douched before going to the physician, too. In fact, 66.2% of the women reported douching before physical

examinations. Oh et al. (2003) also found that women douche before going to the physician, though the rate of those women was much lower than those found in the our study. In Turkey, doctors tell women who want to have a gynecological examination to have a period and get cleansed before the examination. Although the physicians mean “the ending of the period” with the expression “get cleansed”, some women misunderstand it and have an ablution and vaginal douching (Caliskan et al. 2006).

Less common reasons for douching were to rid oneself vaginal odor and discharge and to stop itching and irritation. Almost half (43.2%) of the women who douched did so to eliminate vaginal odor. Our finding is similar to other studies, where the rate douching to eliminate vaginal odor ranged from 3.4% to 48.2% (Caliskan et al. 2006; Ege et al. 2007; Koblin et al. 2002; Kukul, 2006; Ness et al. 2003; Oh et al. 2003; Zhang et al. 2004). The rate of women douching to remove vaginal discharge was 42.6% in our study, which is higher, 6.4%-34% than other studies. (Dallabetta et al. 1995; Caliskan et al. 2006; Koblin et al. 2002; Ness et al. 2003; Oh et al. 2003; Zhang et al. 2004) as was douching to stop itching and irritation, 25.3% compared to a range

of 11%-13.4% (Oh et al. 2003; Zhang et al. 2004).

Another reason for vaginal douching was to prevent pregnancy, with 35.2% of the women reporting they douched for this reason. By contrast, the rate of women douching for prevention of pregnancy in other countries was quite low (0.9%-42.9%) (Caliskan et al. 1996; Caliskan et al. 2006; Ege et al. 2007; Koblin et al. 2002; Kukul, 2006; Ness et al. 2003; Oh et al. 2003). It is reported that 28.5% of women in Turkey do not use modern methods for family planning (TDHS–2003) leading some women to use douching as a family planning method.

Unlike the studies reported from other countries, we found women douche after urination and defecation as well (34.6%). This percentage was found to be 20.2% (Caliskan et al. 1996) and 29.5% (Caliskan et al. 2006). Women should perform an ablution each time they urinate and defecate according to Quran (<http://www.usc.edu/dept/MSA/quran/005.qmt.html>). The habit of washing the perineum after urination and defecation likely increases the frequency of vaginal douching.

About 14% of women (13.5%) douched because their spouses wanted them to do so. There have been other studies with similar findings (Caliskan et

al. 1996; Oh et al. 2003). It is known that vaginal douching is associated with sexual roles of women and their relationships with their spouses (Braunstein & Van de Wijgert 2003). Men who believe that the female body is dirty may ask their spouses to have vaginal douching before sexual intercourse to avoid any discomfort for themselves due to vaginal odor or discharge.

As for the frequency of vaginal douching, 62.8% of the women douched 1-9 times a week. This is a higher rate than reported in other studies, where the frequency of douching varied. Koblin et al (2002) reported that 46.1% of the women in America douched 2-4 times a month, while Ness et al. (2003) reported only monthly douching by 51.1% of respondents. Caliskan et al (1996) reported that 49.4% of the Turkish women they surveyed women douched at least once a week. Kukulu (2006) reported that 28.9% of the women douched once a week. In another study it is reported that %24.6 of women douched at least once a day (Caliskan et al., 2006). As noted above, Turkish women are likely to douche each time they go to the toilet, leading to an increased frequency. Before Islamic women pray, they are also required to perform an ablution.

More than half of the women who douched used only water (59.2%) or water with soap (42.3%) for vaginal douching. These findings are similar to those in previous studies (Caliskan et al. 1996; Caliskan et al. 2006; Dempa et al. 2005; Ege et al. 2007; Kukulu, 2006). However, studies from Germany and the USA revealed that women preferred water with vinegar or commercial solutions (Ness et al. 2003; Oh et al. 2003; Stock et al. 1973; Zhang et al. 2004). Vaginal douching is most common among women with low socio-economic status so they may prefer water or water and soap together, which are not costly.

There was no significant difference between vaginal douching and employment, longest place of residence and marital status ( $p>.005$ ). However, other studies have shown that prevalence of vaginal douching was higher among women with low socio-economic status (Aral et al. 1992; Ege et al. 2007; Funkhouser et al. 2002; Kendrick et al. 1997; Koblin et al. 2002; Vermund et al. 2001). Socio-economic status reflects not only income but also education, cultural and religious factors.

### ***Implications for Nursing Practice***

The results of this study emphasize the role of cultural and religious beliefs in vaginal douching. Unlike studies reported

from other countries, we found that religious beliefs were the reason for douching for 94% of women. Therefore, nurses need to consider the influence of these beliefs as they offer education about the harmful effects of vaginal douching. This study also revealed that most of the women receive information about vaginal douching from their family members. Midwives and nurses should be aware of this and offer education about douching and its negative effects to all women. It may be that health staff also have some inaccurate beliefs, leading to the need for accurate information about the harmful effects of douching on women's health.

Illiterate women (can not read or write), those aged over 40 years and women without previous education about douching douche most frequently. Therefore, they should be considered at higher risk for negative effects of douching and given priority for education. As vaginal douching seems deeply imbedded in the belief system of many women, it may be difficult to change. Nurses should learn and practice various approaches and educational models directed towards changing this behavior. Outcome evaluations should be conducted to determine the effectiveness of such programs.

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