

# SOME HYGIENE BEHAVIOURS AND GENITAL INFECTION COMPLAINTS AMONG 15-49 AGED WOMEN IN A SUBURBAN AREA OF ISTANBUL

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## ABSTRACT

**Objective:** Genital hygiene is the major component of women's health and is very important for the protection of reproductive health. In this study, it was aimed to determine personal-genital hygiene behaviours, and genital infection complaints of women living in a suburban area of Istanbul.

**Material and Method:** This cross-sectional, descriptive study was held in a suburban area in Istanbul in May 2007 with 117 15-49 aged women. Demographic characteristics, handwashing behaviours, toilette hygiene behaviours, menstrual hygiene behaviours and genital infection complaints of women interrogated according questionnaires.

**Results:** Most (99%) of the women were using water and soap while washing hands. In 34% of the participants were washing their hands in more than 14 seconds. The rate of toilette paper usage after each toilette was 84%. The

rate of using always hygienic pads was 47% among the women. Eighty four percent of the women were washing their genital area while having their menstruation and 61% were having a bath during the menstruation. The majority of the participants (97%) reported that they were washing their hands after changing pads. It was found that 59% of the women had at least one of the genital infection complaints in the last year. The rate of women who described a genital pathologic flow in the course of interview was 50%. There was positive correlation between age and pathologic secretion (Spearman's Rho: 0.29, p: 0.006) and there was statistically significant relation with toilette paper usage and genital pathologic flow complaints ( $\chi^2$ :8.49; df:2, p: 0.01).

**Conclusion:** High percentage of workgroup should be more attention to the personal and menstrual hygiene.

**Key Words:** Personal hygiene, menstrual hygiene, genital infection, women health, Istanbul. *Nobel Med* 2011; 7(2): 96-100

# İSTANBUL'DA BANLİYÖDE YAŞAYAN 15-49 YAŞINDAKİ KADINLARDA HİJYEN ALIŞKANLIKLARI VE GENİTAL İNFEKSİYON ŞİKAYETLERİ

## ABSTRACT

**Amaç:** Genital hijyen kadın sağlığının önemli bir parçası olup, üreme sağlığının korunması için de oldukça önemlidir. Bu çalışmada, İstanbul'da banliyöde yaşayan kadınlar arasında kişisel ve genital hijyen davranışlarının ve kadınların genital infeksiyon şikayetlerinin belirlenmesi amaçlandı.

**Materyal ve Metod:** Kesitsel-tanımlayıcı tipteki bu çalışmaya İstanbul'da 2007 yılı Mayıs ayında banliyöde yaşayan 15-49 yaş arası 117 kadın dahil edildi. Demografik özellikler, el yıkama alışkanlıkları, tuvalet hijyeni alışkanlıkları, menstrüel hijyen davranışları ve genital infeksiyon şikayetleri uygulanan anket formu ile incelendi.

**Bulgular:** Kadınların çoğunluğu (%99) ellerini yıkar-ken su ve sabun kullandıklarını bildirdi. Katılımcıların

%34'ü ellerini 14 saniyeden daha fazla sürede yıkadıklarını belirtti. Her tuvalet sonrasında tuvalet kağıdı kullanma oranı %84 idi. Kadınlar arasında hijyenik ped kullanma oranı %47 idi. Kadınların %84'ü genital bölgelerini menstruasyon sonrasında yıkadıklarını, %61'i ise menstruasyon sırasında banyo yaptıklarını bildirdi. Bireylerin çoğu (%97) petlerini değiştirdikten sonra ellerini yıkadıklarını bildirdi. Kadınların %59'unun yılda en az bir kez genital infeksiyon şikayeti yaşadıkları tespit edildi. Görüşme sırasında patolojik genital akıntısı olduğunu belirten kadınların oranı %50 idi. Yaş ve patolojik akıntı arasında pozitif yönlü korelasyon olduğu bulundu (Spearman's Rho: 0,29, p: 0,006). Tuvalet kağıdı kullanımı ile genital patolojik akıntı şikayetleri arasında istatistiksel olarak anlamlı bir ilişki bulundu ( $\chi^2:8,49$ ;  $df:2$ ,  $p:0,01$ ).

**Sonuç:** Çalışma grubumuzun önemli bir bölümünün kişisel ve menstrüel hijyene daha fazla dikkat etmesi gereklidir.

**Anahtar Kelimeler:** Kişisel hijyen, menstrüel hijyen, genital infeksiyon, kadın sağlığı, İstanbul. *Nobel Med 2011; 7(2): 96-100*

## INTRODUCTION

The term "hygiene" which is derived from *Hygieia*, the Greek goddess of health, cleanliness and sanitation, refers to practices associated with ensuring good health and cleanliness.<sup>1</sup> Genital hygiene is the major component of women's health and is very important for the protection of reproductive health.<sup>2</sup> The genital area should be kept clean but excessive cleaning procedures which could disturb the vaginal flora should be avoided. Women must be aware that a normal vaginal secretions are jelly-like and odourless.<sup>3-5</sup> Taking a bath frequently is a general rule for personal hygiene. During the menstrual period, personal and genital hygiene and taking bath should not be neglected. Some rules should be paid attention while using pads during the menstrual period; pads should be hygienic, colourless and odourless, they should be changed frequently and used pads should be thrown away properly.<sup>2,6</sup> Hands should be washed using water and soap before and after the toilette and before and after changing pads.<sup>7</sup> Contamination of the genital area with microorganisms can occur by contact of a person's own hand. Too much cleaning of the genital area or disinfectants, perfumes can disturb the vaginal flora leading to the colonisation of one or more pathogens and infections can occur. First signs of a vaginal infection are usually changes in the quantity, colour and odour of vaginal secretions.<sup>3-5</sup> As hygiene is a very important component of women's health, our

aim in this study was to interrogate the personal and menstrual hygiene behaviours and genital infection complaints of women living in a suburban area in Istanbul, Turkey.

## MATERIAL and METHOD

This cross-sectional, descriptive study was held in a suburban area in Istanbul (Kucukcekmece District, Sahintepesi Region) in May 2007. Seventh grade female students' families (their mothers and sisters) of Zihni Kucuk Primary School created the study population. The school mentioned above had a total seven 7<sup>th</sup> grade students. Four classes, with a total of 128 female students were selected randomly and each student was given a questionnaire for their 15-49 aged female family members. Students were told to fill the questionnaires at home and bring them back to school and hand them to their class teacher in one week. The response rate was 90.7% (n:117).

## RESULTS

The mean age of participants was 29.21±9.65. 88% (n:103) of them were housewives, 12% (n:14) were students. 88.9% (n:104) of the women were primary school graduates, 8.5% (n:10) had no education at all, and 2.6% (n:3) were high school graduates; 73.5% (n:86) was married, and% 26.5 (n:31) was single. The hand washing status of the women is shown in Table →

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Table 1: Handwashing behaviour of women		
	n	%
<b>Number of hand washing per day</b>		
0 - 5	38	32.8
6 - 10	39	33.3
11 and over	40	34.2
Total	117	100
<b>Hand washing time (second)</b>		
0 - 14	77	65.8
15 - 20	6	5.1
21 and over	34	29.1
Total	117	100
<b>Type of soap</b>		
Liquid soap	82	70.1
Rigid soap	34	29.0
Only water	1	0.9
Total	117	100
<b>Handrying tool</b>		
Fabric towel	110	94.0
Paper towel	5	4.3
Nothing	2	1.7
Total	117	100

Table 2: Toilette hygiene behaviour of women		
	n	%
<b>Toilette paper usage after toilette</b>		
After each urination and/or defecation	98	83.8
Only after defecation	7	6.0
Doesn't use toilette paper	5	4.2
Fabric use	7	6.0
Total	117	100
<b>Water use after the toilette</b>		
No usage of water	6	5.1
Using tap of toilette without using hand	37	31.6
Using tap of toilette with using hand	61	52.1
Other	13	11.2
No answer	117	100
<b>Handwashing status after toilette</b>		
Each time	106	90.6
If hands are dirty	7	6.0
No handwashing	4	3.4
Total	117	100

1. 99.1% (n:117) of the respondents were using water and soap while washing hands. The hand washing times were as follows: 65.8% (n:77) were washing their hands in less than 15 seconds, and 34.2% (n:40) more than 14 seconds for washing hands. Cleaning the inside of the nails was the most attention paid part while washing hands (76.9%, n:90). This was followed by fingers distance and palm (62.4, n:73), (63.2%, n:74), dorsum of the hand (53.8%, n:63)

and wrist (55.6%, n:65). The rate of women who were paying attention to all of these steps was 47.0% (n:55). The toilette hygiene behaviours of participants is shown in Table 2. The results showed that 52.1% (n:61) of the women were first washing their genital area with water using their hands and then dried up with toilette paper, 31.6% (n:37) were washing their genital area with water but were not using hands and dried up with toilette paper, 5.1% (n:6) were cleaning up without using water. The rate of toilette paper usage after each toilette was 83.8% (n: 98).

The genital hygiene behaviours of women during their menstruation is shown in Table 3. While 47.0% (n:55) of the women were using only hygienic pads, 35.9% (n:42) were using pads and/or fabric material, and 9.4% (n:11) were using only fabric. 83.8% (n:98) of the women were washing their genital area while having their menstruation. The rate of women who were having a bath during the menstruation was 60.7% (n:71); and 44.4% (n:52) stated to bath more frequently at those periods according to menstruation free days. 94% (n:110) were having a bath at the end of the period.

The rate of women who were throwing away their used pads in a proper way was 50.4% (n:59); and 96.6% (n=113) were washing their hands after changing pads. 86.3% (n:101) believed that they would get a genital infection if they did not wash their genital region during menstruation. 77.8% (n:91) of the women stated that they had a vaginal flow. Female genital complaints is shown in Table 4. The rate of women who described a pathologic secretion was 50.4% (n=59) among the participants who answered this question. The main complaints other than vaginal flow are vaginal odor (52.1%, n:61) and vaginal pruritus (44.4% n:52). 59% (n:69) of the women had at least one of these complaints. There was significant relation between other genital infection complaints and pathologic secretion ( $\chi^2:5.44$ ;  $p:0.02$ ). There was significant relation between vaginal flow (pathologic secretion) and personal hygiene behaviours ( $p<0.05$ ). Pathologic secretion was statistically significant higher to who use toilette paper only after defecation and doesn't use toilette paper than who use toilette paper after each toilette ( $\chi^2:8.49$ ;  $df:2$ ,  $p:0.01$ ). There was positive correlation between age and pathologic secretion, when the age increased pathologic secretion complaint increased too (Spearman's Rho: 0.29,  $p:0.006$ ). Pathologic secretion in the married group was 52.3% (n:45), and in the single group was 45.2% (n:14); but the difference doesn't be statistically significant ( $\chi^2:0.46$ ;  $p:0.49$ ). In the group who the hand washing times per day was less than 15 second, pathologic secretion was higher (53.3%, n:21) than the group who hand washing times per day was more and →

equal than 15 (48.1%, n:38); but the difference doesn't be statistically significant ( $\chi^2:0.53$ ; p:0.47). The pathological discharge was more in the group who wash their hands after the toilet 48.1% (n: 51), then the group who not wash 72.7% (n: 8) respectively, but the difference does not be statistically significant ( $\chi^2:2.42$ , p: 0.12). The pathological discharge was too low in the group who used pet during those menstrual period 47.3% (n: 26), then who doesn't use pet 53.2% (n: 33), but the difference does not be statistically significant ( $\chi^2:0.41$ , p: 0.52).

## DISCUSSION

The suggested time for washing hands by CDC and WHO is 15-20 seconds.<sup>7</sup> In a study held in a suburban area in Ankara, Turkey, only 12.8% of the women were washing their hands both before and after the toilette, and 86.4% were washing hands only after the toilette. In the same study 32.8% of the women were using fabric material during the menstruation, 26.6% were not having a shower while having menstruation and 72.8% had a vaginal flow complaint in the past.<sup>8</sup> In the study which was held in Ankara, the appropriate time for washing hands was taken as 2 minutes, and the rate of women using this time was only 24.4%. In our study, women who were washing hands for about 20 seconds (according to CDC) were 50.7%.

It is suggested not to clean the genital area with hands. Genital infection is shown to be seen 4.75 times more frequent in women who clean their genital area with their hands compared to the control group.<sup>8</sup> Women who use this method however should give special importance to their hand hygiene and should dry up with toilette paper afterwards. Using clothes for cleansing after urination and/or defecation constitute a high risk for infection. Besides, washing the genital area more than once a day or using different commercial products may increase risk for infection by disturbing the genital flora and is therefore not suggested by the International Society for the Study of Vulvovaginal Disease.<sup>9</sup> In literature there is knowledge that the majority of women experience a genital infection at least once in their life.<sup>10</sup> Therefore it is very important especially for women to provide genital, hand and body hygiene to maintain a healthy body.<sup>11</sup> Before the cleaning of the perinea, hands must be purified from microorganisms. Otherwise the perinea can be infected even if toilette paper is used. In a study it is shown that women who wash their hands before the toilette suffer less from vaginitis compared to the group who do not.<sup>8</sup> The risk of a genital infection among women who wash their hands only after the toilette (or when needed) is 1.45 times higher. In our study the majority of women were washing their hands after the toilette, but as this is accepted to be a routine behaviour by

Table 3: Menstrual hygiene behaviour of women		
	n	%
Type of pad used during menstruation		
Hygienic pad	55	47.0
Fabric	11	9.4
Hygienic pad and/or fabric	42	35.9
Others*	4	3.4
No answer	5	4.3
Total	117	100
* Paper napkin, cotton, fabric napkin, towel		
Washing genital region during menstruation		
Yes	98	83.8
No	11	9.4
No answer	8	6.8
Total	117	100

Table 4: Genital complaints of women		
Discharge	n	%
Yes	91	77.8
No	26	22.2
Total	117	100.00
Type of discharge		
Clear, odourless*	32	27.4
Yellow, bad odour**	42	35.9
Gray, Fish like odour**	2	1.7
White, cheese like**	14	12.00
Bloody**	1	0.9
Total	91	100.00
Other complaints		
Odour	61	52.1
Pruritis	52	44.4
Eritheama	19	16.2
Ulcer	13	11.1
Wart	9	7.7
Mass	8	6.8
*Non pathologic discharge **Pathologic discharge		

most of the people. Therefore this finding might not reflect the reality. Still, the pathological discharge was more in the group who wash their hands after the toilet 48.1% (n:51), then the group who not wash 72.7% (n:8) respectively, but the difference does not be statistically significant ( $\chi^2:2.42$ , p: 0.12).

In a study held on primary school students in Sivas, Turkey, it is shown that 15.1% of the female students are not taking a bath during their menstruation.<sup>12</sup> In this study the rate of women who were not taking a bath during the menstruation was 28.1%. In a study which was performed at a nursing school in Denizli, Turkey, it is shown that 86.9% of the nursery students believed that women should not take a bath during the menstruation.<sup>11</sup> However, while taking a shower →

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during menstrual period is necessary to ensure genital hygiene and body hygiene.

In a study among primary school students in Sivas, Turkey, it was found that 15.1% of the female students were using reusable cloths during their menstruation.<sup>12</sup> In this study 34.3% (n:46) of the women were using pads or cloth, and 8.2% were using reusable clothes. The pathological discharge was too low in the group who use pet during those menstrual period 47.3% (n:26), then who not use pet 53.2% (n:33), but the difference does not be statistically significant ( $\chi^2$ :0.41, p:0.52). According to a study in Erzurum, Turkey by Arikan and friends, the rate of female high school students who were taking a bath during their menstruation was 68.8%. In the same study the rate of hygienic pad usage was 91.4% which is quite higher than the rate in our study (34.3%). In the same study of Arikan, the rate of women who were throwing the used pads away in a proper way was 71% and the rate of students who were washing hands both before and after changing pads was 68.3%.<sup>14</sup> In our study the rate of women who were throwing away their used pads in a proper way was only 50%. Hand washing behaviour after changing pads was 94.8%. In Egypt in a study by El-Gilany and friends, 66.8% of girls between the ages 14 and 18 were using hygienic pads, 15.9% were using reusable clothe, and 12% were using old clothes and did not use the same again. According to El-Gilany's study the main determinant for using hygienic pads was the presence of mass media tools at home. In the same study, the rate of women who were taking a bath while

having menstruation was 70.9%.<sup>15</sup> In a study in North India by Singh, which was held on 1205 women, in most of who were at a low or middle socio-cultural level, the rate of hygienic pad usage was only 0.4%.<sup>16</sup> Again in a study in India by Drakshayani, nearly all of the female students were using old cloth pieces for their menstruation.<sup>17</sup> Czerwinski and friends (California) showed that only some of the women are washing hands before changing their pads.<sup>18</sup>

In Saudi Arabia it is found that two third of the women are avoiding from some foods, drinks, activities, bathing and perineal washing during their menstruation.<sup>19</sup> In some cultures the subject 'menstruation' is still a taboo an therefore problems related to this biologic event are not easily solved.<sup>20</sup> As seen in all of these studies, hygienic behaviours are influenced by cultural elements in both positive and negative ways.

As a result, in this study working groups should be more attention to personal and genital hygiene because in the group who not paid attention to personal and genital hygiene, genital infection complaints were found to be more according to those who paid attention. This study showed that personal and genital genital hygiene is highlights importance in terms of women's health. It is obvious that women need to be educated about genital and personal hygiene behaviours. This study has given us a clue about the hygiene behaviours of women living in a suburban area in Istanbul. We are thinking that more studies and interventions must be made to improve women's health and avoid genital infections.

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