

# Predictors of Anxiety and Depression Among Women With Vaginal Bleeding Referred to Gynecology Clinic During Hajj 2011

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**Background:** One of the most important complications for women during hajj trip is menstruation and most commonly spotting, which is the second important problem. This complication would cause some problems in performing religious rites as the main purpose of the trip and on the other hand, it would lead to psychologic complications for women. Controlling psychologic complications of women during and after hajj is necessary.

**Objectives:** The purpose of this study was to investigate predictors of anxiety and depression among the women with vaginal bleeding who were referred to Iranian clinic in Mecca and Medina in hajj 2011.

**Patients and Methods:** In this cross-sectional study, 110 women with vaginal bleeding who were referred to gynecology clinic were enrolled. The Samples were selected by easy way method from all referrals on Tuesdays during hajj (October and November 2011). To evaluate the anxiety and depression signs, Hospital Anxiety and Depression Scale (HADS) questionnaire was employed. The analyses were performed using SPSS 17.0 through parametric methods.

**Results:** Predictors of anxiety were observed in 22 women (20%). Moreover, 34 women (30.9%) were diagnosed from normal to abnormal, 3 (2.72%) had depression signs, and 22 (20%) showed symptoms of borderline symptoms of depression.

**Conclusions:** Considering the high frequency of anxiety disorder among women with vaginal bleeding in hajj, gynecological consultation seems essential for women during Hajj.

**Keywords:** Anxiety; Depression; Vaginal Bleeding

## 1. Background

Today, women constitute about half the pilgrims in hajj and many of them are in reproductive age with regular menstrual period (1). One of the most important complications of these women during hajj trip is controlling their menstruation to perform rites. Spotting is the second most important problem (2). During menstruation, women are permissible for enter into the state of ihram and do everything that other pilgrim's do, except for the tawaf and praying; nevertheless, this delay to perform rites of Masjid Alharram and entrance to it can provide some psychologic problems for them (3). To solve this problem, most of the female pilgrims postpone their monthly bleeding via arbitrary taking hormonal pills or choose other contraception methods, which leads to abnormal vaginal bleeding and morbid complications such as periphery or cerebral vascular accidents. This situation also can cause some other psychologic problems (3).

## 2. Objectives

The purpose of this study was to investigate predictors of anxiety and depression among the women with vaginal bleeding who were referred to Iranian clinic in Mecca and Medina during hajj 2011.

## 3. Patients and Methods

In this pilot analytical cross-sectional study, 110 women with vaginal bleeding (from spotting to obvious bleeding), who were referred to the outpatient gynecology clinic of Iranian Hospital of Mecca and Medina, were recruited. The samples were selected by easy way method from all referrals on Tuesdays during hajj (October and November 2011). According to hospital statistics, during the Hajj of 2010, 150 people were admitted on Tuesday and a sample size of 108 was calculated according to Morgan. Patients who were 18 to 54 years old and married for at least 12 months were included. The patients with any history of psychiatric illness or any other diseases other than gynecologic problems were excluded. Informed consent was obtained from each patient and the patients were assured that their personal information would be kept confidential. The study was approved by the Ethics Committee of Hajj and Pilgrimage Health Research Center, Tehran, Iran, in August 2011. The participants were selected randomly. To evaluate the anxiety and depression symptoms, Hospital Anxiety and Depression Scale (HADS) questionnaire was used. The HADS is a well-documented instrument for assessing symptoms of anxiety and depression in patients with somatic diseases. The regional

ethics review committee approved the study. HADS questionnaire is routinely applied for the evaluation of anxiety and depression; according to the published articles, its use by researchers has been quadrupled over the between 1996 and 2002 (4). HADS was validated for application in the Iranian population by Janssens et al. in 2003 (5). Symptoms of anxiety and depression were assessed using the translated version of HADS, which was previously validated for the Iranian population. The HADS contains 14 items and two subscales: anxiety and depression (6). Each item is scored from zero to three, giving maximal scores of 21 for anxiety and depression. Scores of  $\geq 11$  on either subscale are considered a significant case of psychologic morbidity (7). These cutoffs in HADS have been reported to be approximately 85% sensitive and 88% specific in the general population (8).

The analyses were performed using SPSS 17.0 for Windows (SPSS Inc., Chicago, IL, USA). Qualitative variables were defined with relative frequency and tables of frequency, and quantitative variables with mean and standard deviation. The Kolmogorov-Smirnov test was used to check for normality of data and showed that data on the HADS questionnaire were normally distributed. Thus, parametric tests were used for comparative statistics. The association between variables was determined by Pearson's correlation analysis. P value  $< 0.05$  was set as statistical significance.

#### 4. Results

The mean age of patients was  $34.5 \pm 5.6$  years (range, 17-45). Among all subjects, 96 (87.27%) were married, 9 (8.1%) were widow, 2 (1.8%) were divorced, and 3 (3.3%) were single. With regard to educational status, 30 women (33%) were illiterate, 27 (29.7%) were at elementary level, 20 (18.18%) had secondary education, 21 (19.09%) had diploma, and 12 (10.9%) had university education. Predictors of Anxiety were observed in 22 women (20%). Moreover, 34 patients (30.1%) were diagnosed from normal to abnormal, 3 (2.72%) had depression signs, and 22 (20%) showed borderline symptoms of depression. Correlation between demographic data and anxiety and depression scores only showed a positive correlations between age and anxiety symptoms ( $r = 0.395$ ,  $P = 0.003$ ).

**Table 1.** Frequency of Signs of Anxiety and Depression Among Women With Vaginal Bleeding Referred to Gynecology Clinic During Hajj 2011<sup>a</sup>

| Variable   | Normal     | Normal to Abnormal | Psychologic Sign |
|------------|------------|--------------------|------------------|
| Anxiety    | 54 (49.9)  | 34 (30.1)          | 22 (20)          |
| Depression | 85 (77.28) | 22 (20)            | 3 (2.72)         |

<sup>a</sup> Data are presented as No. (%).

#### 5. Discussion

This study is the first study on this topic and showed that predictors of Anxiety were observed in 20% to 50%

of women with vaginal bleeding during hajj; this percentage was higher than the prevalence of anxiety disorder in the general population (14.6%). The prevalence of depression was 3.8% for the whole country, which was the same as that of our study. In addition, 21% of people in Iran are affected by depression, which is consistent with the rate in our patients (9). Although several studies have reported the incidence of some mental disorder during Hajj (10), few studies specifically examined the signs and symptoms of mental illness and its associated problems during this pilgrimage of its kind. Considering the cross-sectional nature of this study, we could not draw a causal relationship between anxiety and depressive symptoms with vaginal bleeding during hajj. However, as a warning, health officials must consider this pilgrimage in their plans. Normal and abnormal vaginal bleeding does not prevent performing Hajj and it might only be a few days delay in performing rites. Nonetheless, this situation causes anxiety in women and might cause depression in long-term. Women should visit a gynecologist few weeks before travel and they should not consume pills without consulting a doctor and only based on guides of friends and. Lack of information about this simple problem might impose adverse consequences to the pilgrims. Many side effects might result from taking these pills.

There was small sample size and we could not recruit patients from different groups of pilgrims; hence, the results should be interpreted cautiously. In addition, we could only use HADS questionnaire in assessing our patients while psychiatric professionals might provide more accurate information about psychiatric disorders by face-to-face interviews. Moreover, there was no control group. In this study, only an association between age and anxiety was observed. Several studies showed that aging is more compatible with the environment (11). However, according to our results, stress becomes greater with increase in age. There were no correlation between demographics data and anxiety and depression scores. Considering the high frequency of anxiety disorder among women with vaginal bleeding, providing gynecologic consultation to women seems essential.

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#### Authors' Contributions

Study concept, design, and administrative, technical, and material support: Seyed Ali Riaz; acquisition of data and drafting the manuscript: Maryam Ahmadi; critical revision of the manuscript for important intellectual content: statistical analysis, interpretation of data, and study supervision: Sayyed Mostafa Mortazavi.

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