Dicle Tıp Derg / Dicle Med J Cilt/Vol 37, No 1, 8-15

ORIGINAL RESEARCH / ÖZGÜN ARAŞTIRMA

Sociodemographic characteristics and frequency of psychiatric disorders in Turkish pilgrims attending psychiatric outpatient clinics during Hajj

Hac süresince psikiyatri polikliniğine başvuran Türk hacılarında sosyodemografik özellikler ve psikiyatrik hastalıkların sıklığı

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Geliş Tarihi / Received: 06.07.2009, Kabul Tarihi / Accepted: 29.07.2009

ABSTRACT

Objectives: The psychiatric problems of pilgrims from non-Arabic speaking countries have not been investigated sufficiently. The aim of this study was to investigate the frequency of psychiatric disorders and socio-demographic characteristics of Turkish pilgrims in psychiatry department of Turkish Mecca Hospital.

Methods: A detailed psychiatric interview was performed on 294 Turkish Pilgrims who attended the outpatient clinic of the psychiatric unit at the Turkish hospital in Mecca, Saudi Arabia, during 2008 Hajj period. Information was collected by using a semi-structured form and the patients' diagnoses were done according to the DSM-IV-TR criteria.

Results: The study group consisted of 175 women (59.5 %) and 119 men (40.5 %) with the mean age of 53.0±13 years. A total of 71 % patients had not traveled abroad previously, and 60% had received a former psychiatric treatment. The commonest disorders were found as depression (26.5%), adjustment disorder with anxiety (16.3%) and panic disorder (14%) in the patients. Anxiety disorders alone or co-morbid with any other psychiatric disorder were found in 49% of the patients. Nine percent of the patients had symptoms of acute psychosis, schizophrenia, dementia or mania which could prevent pilgrims from performing Hajj rituals. Suicide attempt, alcohol and illicit drug use were not detected.

Conclusions: Previous psychiatric admission and absence of any foreign travel experience were common among Turkish pilgrims who had sought psychiatric help during the Hajj. Psychiatric disorders seems to be related with older age, low educational level, and having previous medical and psychiatric problems.

Key Words: Mecca, Hajj (pilgrimage), Turkish pilgrims, psychiatric disorders, frequency

ÖZET

Amaç: Arapça konuşmayan ülkelerden gelen hacıların psikiyatrik sorunları yeterince incelenmemiştir. Bu çalışmanın amacı Mekke Türk Hastanesine başvuran hacılarda rastlanan psikiyatrik bozuklukların sıklığını ve hastaların sosyodemografik özelliklerini araştırmaktır.

Gereç ve yöntem: Suudi Arabistan'daki Mekke kentinde bulunan Mekke Türk Hastanesi psikiyatri polikliniğine başvuran 294 hasta ile psikiyatrik açıdan detaylı görüşme yapıldı. Hasta bilgileri yarı yapılandırılmış bir form yardımıyla elde edildi ve tanılar DSM-IV-TR kriterlerine göre kondu.

Bulgular: Hastalar toplam 175 kadın (%59.5), 119 erkekten (%40.5) oluştu ve yaş ortalaması 53.0±13 yıl idi. Hastaların yaklaşık %71'i daha önce hiç yurtdışına çıkmamıştı ve %60'ı daha önce en az bir kez psikiyatrik tedavi görmüştü. Hastalarda saptanan en yaygın bozukluklar şunlardı; depresyon (%26.5), anksiyeteli uyum bozukluğu (%16.3), panik bozukluk (%14). Hastaların %49'unda tek başına ya da komorbidite şeklinde herhangi bir anksiyete bozukluğu bulunmaktaydı. Hastaların %9'una akut psikoz, şizofreni, demans ya da mani tanısı kondu ki, bu tablolar hacıların hac gereklerini yerine getirmesine engel olabilir özellikte idi. İntihar girişimi, alkol ve madde kullanımı herhangi bir hastada saptanmadı.

Sonuç: Hac sürecinde psikiyatrik yardım arayan Türk hacıları arasında daha önce psikiyatrik tedavi görme ve yurt dışında bulunmama öyküsü yaygındı. Psikiyatrik bozukluklar ileri yaş, düşük eğitim düzeyi ve daha önce fiziksel ve psikiyatrik bir problemi olma ile yakından ilişkili bulundu.

Anahtar kelimeler: Mekke, Hac, Türk hacılar, psikiyatrik bozukluklar, sıklık

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INTRODUCTION

Hajj is one of the obligatory worships of Islam. Muslims with a good health and sufficient financial status have to visit Mecca at least once in their lifetime. Approximately, three million pilgrims visited Mecca for Hajj in 2008. Due to the large demand for Hajj from all around the world, Saudi Government implemented a quota based on the total population of each country in order to limit the number of pilgrims and to ensure a safe and healthy Hajj service. For example, during 2008 season, 772.660 people (male: 47%, female: 53%) applied for Hajj in Turkey; however, only 100.000 of them could be selected for Hajj by drawing of lots[1]. It has been estimated that Turkish Religious Affair's Mecca Hospital (TMH) served nearly 130.000 Turkish pilgrims, 100.000 of whom were from Turkey and 30.000 from European countries. A small number of them came from other areas of the world.

Turkish pilgrim convoys containing 200-300 pilgrim candidates, start their journey by airlines from different cities of Turkey and end at Jiddah or Medina airports. They then take ground transportation reach to Mecca. The accommodation period of Turkish Hajj convoys in Mecca and Medina varies from 15 to 50 days and this program is determined several months before the Hajj period. Eight or nine days of this period are spent in Medina and the remaining duration is spent in Mecca.

TMH management and health workers change yearly. The healthcare team in 2008 consisted of 463 health workers. Fifty four of all workers were specialist physicians. Primary healthcare were offered to Turkish pilgrims at 21 different locations near their accommodations. Patients who need specialist care were transferred to the main hospital that serves comprehensive health care in a building located in Aziziah district of Mecca in Kingdom of Saudi Arabia. The hospital with 120-bed capacity was in-service for two months each year during Hajj season. The hospital operated on 24 hours a day basis and served totally free for Turkish pilgrims including examinations, laboratory work-up, medicines and hospitalization[2].

Hajj and health

Million of Muslims move together while performing daily prayers, such as Salat, Tawaf and Sa'yi around the Ka'aba. Being with three million people at Arafat, Muzdalifa and Mina, and the necessity of mass transportations within limited time cause extra discomfort to some pilgrims. Respiratory infections, which can be easily transmitted from one to another, are the most frequently encountered diseases during Hajj[3,4]. The weather condition of Mecca is drier, hotter and sunnier than all regions of Turkey. Such climate is an important risk factor for heat stroke, heat exhaustion, sleep disorders, nephrolithiasis and metabolic disorders[5-8].

Various studies have been conducted to document physical health problems encountered in Hajj[9-11]. However, only one previous study[12] examined psychiatric disorders of pilgrims. In this study, 48% of 92 patients were citizens of Saudi Arabia, 17% was from other Arab Countries, and 35% of them was from non-Arabic speaking countries. The male to female ratio was 50/42 and their mean age was 43±17 years. In the study of Masood et al.[12], the prevalence of insomnia, depression, and adjustment disorders have been reported as 58%, %18 and 7%, respectively.

According to the archives of TMH 953 patients were examined at the department of psychiatry within the two-month period in 2007 hajj season.[13] Approximately 15% of them were repetitive applications. Therefore, 810 different patients were examined at psychiatry outpatient clinic (810 / 130.000 = 0.6%). This ratio is considerably low, while compared with prevalence of psychiatric disorders in general population. For example in the multi-center and multi-national ICPE study, the lifetime prevalence and monthly prevalence of major depression were reported as 6.3% and 3.1% respectively in Turkey.[14] The life time prevalence of some psychiatric disorders was reported as follows: Schizophrenia 1-1.5%, bipolar disorder 1%, panic disorder 1.5-4%, and generalized anxiety disorder 3-8%[15].

It is not clear that how many pilgrims with psychiatric complaints other than psychosis admitted to primary healthcare centers of TMH. Thus, the proportion of the psychiatric referrals to main hospital is also unknown. Some causes of low healthcare utilization among Turkish pilgrims may be as follows: unawareness of the existence of psychiatric services, bringing adequate amount of medicines from Turkey, fear of stigmatization, disregard or neglect of symptoms, etc.

Turkish pilgrims and stress sources

Accomplishment of the pilgrimage is usually accepted both as a source of excitement and happiness; on the other hand, it may be also a source of stress for some Turkish pilgrims. To the best of our knowledge, there is no study examining the sources of stress in Turkish pilgrims. According to the previous available limited data on this topic and our experience and observations the following items may be expected as possible sources of stress in Turkish pilgrims:

- Most of the Turkish pilgrims are over mid-ages[16], therefore, it can be expected that some physical health problems frequently seen in the elderly can arise among them. It is obvious that physical illnesses make daily life unbearable and may be an important source of stress[17].

- Most of the Turkish pilgrims cannot speak Arabic or English language, therefore they are unable to express their feelings and ideas in such an international environment. Such kind of incapability raises the feelings of loneliness in a foreign land[18].

- Most of the Turkish pilgrims had no or little international experience prior to the Hajj. This may provoke the fears of being lost or injured in the crowd and asking for help in emergency conditions.

- The majority of pilgrims usually must stay in the same hotel rooms with 3-7 persons randomly selected by the Hajj organization. They are usually foreign to each other before Hajj. The life style differences among them may result some misunderstandings.

- The sleeping and eating habits of pilgrims may change during Hajj season due to the limited facilities at their residences. It is known that change in sleeping and eating habits may be related to psychological problems[19].

- Women in Turkey generally perform their 5 times daily prayers (Salat) inside their homes. However, during Hajj, they usually feel responsible to perform their prayers collectively in a large crowd around the Ka'aba.

- Everyday after the performance of daily prayers, funeral prayers are performed near the Ka'aba. Sometimes 10-15 corpses are brought to the Ka'aba. Sometimes faces and feet of those corpses may not be covered properly and pilgrims can see them easily. However, in Turkey, women generally do not attend funeral prayers. Therefore, most of the Turkish pilgrims, especially female pilgrims witness an intense series of funeral prayers and often participate in them for the first time in their life.

- Most of the pilgrims leave their family and friends first time in their life and live separated over a month of period. Some of them may become homesick for a few days or weeks, and miss them. Moreover, some pilgrims report fears from dying before returning to their home, family and friends[20].

Aims

There has been no previous study to investigate the health problems of Turkish pilgrims, including their psychiatric disorders. Furthermore, we could not find any study about the psychiatric disorders of pilgrims from non-Arabic speaking countries such as Indonesia, Pakistan and Nigeria etc. in PubMed search. Therefore, we aimed to investigate the psychiatric disorders of Turkish pilgrims during 2008 Hajj period. We investigated the socio-demographic characteristics of psychiatric patients, type of their psychiatric disorders and predisposing factors.

MATERIALS AND METHODS

This study was carried out at the psychiatry department of TMH, in Saudi Arabia. All patients were Turkish citizens who were in the holy lands for a limited time. From November 20 to December 20, 2008, a detailed psychiatric interview was performed with 294 patients who attended the psychiatric outpatient clinic. A systematic random sampling method was used to select for research interview, only patients who received an odd numbered registration card.

The majority of patients admitted to the hospital were accompanied by their relatives or friends from the same convoy. After giving brief information about the study, the necessary data of the patients were collected via using semi-structured information form prepared by the investigator. The patients were diagnosed according to the DSM-IV-TR[21] criteria. All the patients gave informed consent.

Statistical analysis: Data were analyzed by SPSS version 10.0 program. Frequency and percentages of socio-demographical characteristics and psychiatric disorders were determined. For the comparison of continuous variables Student's-t test and

Mann-Whitney U test were used where appropriate. Chi-square test was used when comparing categorical data of the patients. The relationships between variables were determined by Pearson's correlation analysis. A *p* value less than 0.05 was accepted significant.

RESULTS

Socio-demographical characteristics of the patients

The patients consisted of 175 women (59.5 %) and 119 men (40.5 %). The mean age of male patients was 54±14 years and of female patients was 52±12 years. There was no significant gender difference in age (p>0.05). The monthly income of patients ranged from 80 to 8000 Turkish Liras (approximately 50 - 5000 $) with the mean of 1364±1190 Turkish Liras. Most (n=160) had attained primary school level of education (5 years). The educational level of women was lower than men (t=6.671, p<0.001). The mean number of siblings was 5.6±2.5 among the patients. The mean number of children was 3.8±2.3 among married patient's. Detailed information about socio-demographical characteristics of the patients is shown in Table 1.

Table 1. Socio-demographic characteristics of the patients.

		Number	%
Age range, yrs (Mean±SD)	19-83 (52.9 ±12.8)		
Gender	Female	175	59.5
	Male	119	40.5
Marital status	Married	258	87.7
	Widowed/divorced	27	9.2
	Bachelor	9	3.1
Job / work	House wife	156	53.0
	Retired	46	15.6
	Farmer	28	9.5
	Officer	23	7.8
	Employee	20	6.8
	Tradesman	18	6.1
	Student	3	1.0
Educational level	Illiterate	66	22.4
	Primary school	160	54.4
	Secondary school	12	4.1
	High school	34	11.6
	University	22	7.5

Axis-I diagnoses

The most frequently reported symptoms were discomfort and insomnia (Table 2). The commonest disorders were: depression (26.5%), adjustment disorder with anxiety (16.3%) and panic disorder (14%) among the patients. At least one anxiety disorder was found as a single diagnosis or as co-morbidity in 145 patients (49%). Dementia and psychotic disorders such as schizophrenia, acute psychosis and mania, which can be obstacles to perform Hajj rituals properly, were found in 9% of the patients. Current Axis-I diagnostic categories and previous psychiatric admission rates of these patients are given in Table 3. Specific Axis-I psychiatric diagnoses of the patients are given separately in Table 4. The gender distribution showed significant difference between diagnostic groups (p=0.020). For example, anxiety-adjustment disorders were more frequently observed in females (41% vs. 34%, p=0.05), while sleep disturbances were more frequent in males (16% vs. 8%, p=0.04). Addiction to alcohol or illicit drugs was not observed. However, 14% of the patients were smoking and 65% of these smokers were male (p=0.001).

Table 2. The most common complaints of the patients.

Symptoms	N	%
Discomfort	206	70.0
Insomnia	162	55.1
Anorexia	103	35.0
Whining	89	30.3
Fatigue	83	28.2
Anxiety – agitation	73	24.8
Dizziness	52	17.7
To have a quick temper	44	15.0
Fear of death	39	13.2
Tremor	36	12.2
Dullness	35	11.9
Palpitation	33	11.2
Anhedonia	30	10.2
Feelings of guilt	24	8.1
Dyspnea	20	6.8

Table 3. Axis-1 diagnostic groups of the patients and their previous application ratio to psychiatric clinics in Turkey before Hajj (n=294)

Axis 1 diagnostic groups	Number, (%)	Received psychiatric aid prior to Hajj, %
Anxiety or adjustment disorders with anxiety	113 (38.4)	56.3
Anxiety + Mood disorders	21 (7.1)	70.0
Mood disorders	65 (22.1)	70.9
Sleep disorders	33 (11.2)	38.7
Somatoform disorders	23 (7.8)	52.2
Psychotic or demensive disorders	16 (5.4)	81.3
Plural or different group comorbitidies or other disorders	23 (7.8)	65.2

Table 4. Axis-1 diagnoses of the patients

Axis-1 diagnosis	Number	%
Patients with single diagnosis	241	82.0
Patients with two or more diagnoses, comorbidity	53	18.0
Depression	78	26.5
Dysthymic disorder	13	4.4
Bipolar disorder	5	1.7
Adjustment disorder with anxiety	48	16.3
Panic disorder	41	13.9
Generalized anxiety disorder	38	12.9
Obsessive-compulsive disorder	13	4.4
Specific phobia	11	3.7
Acute stress disorder or Post-traumatic stress disorder	5	1.7
Social phobia	2	
Primary insomnia	29	9.9
Nightmare disorder	3	1.0
Obstructive sleep apnea	2	
Primary hypersomnia	1	
Sleep-related bruxism	1	
Conversion disorder	18	6.1
Undifferentiated somatoform disorder	12	4.1
Somatization disorder	5	1.7
Hypochondriasis	1	
Dementia	9	3.1
Schizophrenia	6	2.0
Acute psychotic disorder	5	1.7
Delirium	1	
Acute mourning	3	1.0
Dissociative disorder	1	
Intermittent explosive disorder	2	

Table 5. Data on journey status of the patients (n=294)

	n	%
Previously traveled by plane	118	40.1
Previously been abroad	86	29.2
Previously been Saudi Arabia	33	11.2
Previously performed Hajj	25	8.5
Previously performed Umra*	21	7.1

*Umra is considered as mini hajj and performed in everytime except the hajj days.

Twenty-four patients (8.2%) had a history of previous suicide attempt. However, no suicide attempts were recorded in hospitals' data bases both in emergency room and the psychiatry outpatient clinic. Patients having a previous suicide attempt had significantly more frequent hospital visits in Turkey than patients with no history of suicide attempt (p=0.009).

Sixty percent of patients have received some kind of psychiatric treatment over the past 10 years. Among total study group, 43.5% of patients had at least one physical disease that necessitated receiving continuous remedies such as hypertension, diabetes, respiratory tract infections or chronic obstructive pulmonary disease.

Journey and accommodation data of the patients

Seventy-one percent of our patients had never been to abroad prior to Hajj, and 60% had never traveled by plane (66% of women and 50% of men). The mean duration of stay in Mecca and Medina among patients was 42.3±8.3 days (ranging from 15 to 50 days). The vast majority of the patients shared a hotel room with 1-6 other pilgrims. The mean number of pilgrims sharing the same room was 4.7±1.6. Detailed information related to travel characteristics of the patients is given in Table 5.

Older pilgrims had lower educational level (r=-0.442, p<0.001). There were negative correlations between the number of pilgrims sharing the same room and their education years (r=-0.200, p=0.002), and monthly income (r=-0.143, p=0.057). There were positive correlations between the number of pilgrims sharing the same room and convoy's duration of stay (r=0.195, p=0.003).

DISCUSSION

Complaints and Axis-I diagnoses

The most frequent symptoms encountered in our patients were discomfort and insomnia. For this reason we frequently used anxiolitics and sedative antidepressants. In the study of Masood et al.12, insomnia was found in 58% of the patients which is close to our findings. In that study, behavioral disturbances were reported in 65% and mood disorders in 63% of the patients.

In the present study, anxiety disorders as a form of sole diagnosis or as a comorbidity were found in 49% of the patients. The most frequent diagnoses were depression, adjustment disorder with anxiety and panic disorder (27%, 16% and 14%, respectively). Masood et al.[12] conducted a study in Mecca and found the prevalence of depression and adjustment disorders as 18% and 7%, respectively among 92 psychiatric patients. Their results were lower than ours. This difference may be related to younger age, indigenous origins of the patients and male preponderance of Masood et al.'s study group.[12] The mean age of our study group was approximately 10 years higher than Masood et al.'s study group12, and the majority of our patients were women.

Among our psychiatric categories that we have described above, dementia and psychotic group was the group visiting a psychiatry clinic at least once during the last 10 years. This ratio was 81% among this group. This may indicate, if a stricken brain when forced to adapt new situations and environments may produce new symptoms. Therefore, the illness may relapse or doses of previously used medicines may be insufficient at the new condition. The patients with primary sleep disturbances show somewhat difference from other psychiatric categories. Majority (61%) of them sought psychiatric aid for the first time in their life. The problem rose at new location, and the majority of them were male. Despite studies that reported that sleep disturbances were more frequent among women in old age groups[22,23], our study showed that sleep disturbances were slightly more frequent in males. This finding needs further investigation. In line with previous studies in literature we found that anxiety and adjustment disorders were more frequent in women[24,25].

The majority of our patients (60%) had a previous history of psychiatric treatment in Turkey. This situation is parallel to study results suggesting that psychiatric disorders can relapse or be more severe in stressful situations[26,27]. Some previous studies reported interactions between physical and psychological disorders[28,29]. The presence of physical illness negatively affects the pilgrims' quality of life and concentration on Hajj or daily rituals. Physical illness make psychiatric problems more evident, as 44% of our patients had some physical illness.

Suicide attempts and harmful habits

A total of 8% of patients had a history of previous one or more suicide attempts. In accordance with previous studies, we found significant relationship between suicide attempt and psychiatric disorders[30,31], and detected previous psychiatric problems in the majority of our patients. However, it is an interesting that during two months of Hajj period, no suicide attempt was observed among our psychiatric outpatient clinic patients. We think the age factor may be one of the explanations of this result. Suicide attempts are usually seen among young adults in Turkish society[32].

According to an investigation, performed by Statistical Institute of Turkey[33], 27.4% of general Turkish population over 15 years of age smoke every day. This proportion was 43.8% in males and 11.6% in females. In many studies smoking, alcohol and illicit drug use have been reported at as very high among patients with psychiatric disorders[34,35]. However in our study, we found no alcohol or drug use in any patient. Smoking was found in 14% of the patients (2/3 of them were male) and this ratio was very lower than the ratio of general Turkish population. This may be related with religiousness, because Islam insistently forbids detrimental behaviors such as smoking, alcohol and illicit drug use[36].

Gender, foreigner anxiety, environment

The majority of our patients were house wives over 50 years old who came to Hajj with their husbands. Most of the pilgrims had an educational level of 5 years period primary school, and 22% of them were illiterate with no formal education. This ratio is close to educational level of elderly Turkish people[37]. Being in Mecca could give a feeling of gratitude and happiness and an opportunity for vacation

for Turkish pilgrims (for example Turkish women spend most of their daily lives within home to tackle with housekeeping, cooking, childcare and other responsibilities, thus, Hajj may be a period of being away from those duties). On the other hand, Hajj with such a large number of pilgrims in a limited area can be a very important source of stress and other psychiatric conditions.

The fact that 71% of our patients had never been abroad and 89% of them visited Saudi Arabia for the first time in their lives may contribute to the development of travel and new environment anxiety.20 Nevertheless, Mecca is not a completely new surrounding for most Turkish pilgrims. They are with other fellow Turkish citizens in their convoys and their convoy employees are always there to help them, Turkish is spoken in Hotels, and goods and services from Turkey can be found in stores near to their accommodations. They can frequently encounter other pilgrims from Turkey around the Ka'aba and on the streets. Despite all of these supporting factors, psychopathology can emerge in some Turkish pilgrims.

Prolongation of the duration of stay abroad and hotels

Prolongation of staying period in Mecca and Medina seem to be a distressing factor that predisposes the patients to psychiatric disorders. Homeland aspiration and sharing the same room with others may result in anxiety. Most elderly pilgrims with low education prefer cheap rooms. Additionally, their problem solving capacity may be very limited. On the other hand, temperamental differences, excessive heat, the lack of fresh air and noisy hotel rooms may negatively affect the sleep quality. Pilgrims belonging to convoys having shorter stay in Mecca have opportunity to accommodate in the hotels near the Ka'aba. Rooms in these hotels are more comfortable and as a result more expensive with limited resident not more than two people in the same room. Thus, as the number of pilgrims staying in the same room and duration of stay in Mecca increase, hotel prices may decrease. Also, hotels that are far away from the Ka'aba offer cheaper rooms. The number of pilgrims in these cheap rooms is usually around 5 to 7. Due to suspension of bus services between Ka'aba and hotels during a few days before and after scarification festival, transportation to the Ka'aba becomes very difficult. Thus, most of the pilgrims have no option to travel between Ka'aba and their hotels other than walking a long way.

In conclusion, previous psychiatric admission and absence of any foreign travel experience were common among Turkish pilgrims who had sought psychiatric help during the Hajj period. Anxiety disorders and depression were the commonest disorders among the admissions. Psychiatric disorders during Hajj period seems to be related with older age, low educational level, and having previous medical and psychiatric problems. Our study is the first which examined the psychiatric disorders among non-Arabic speaking pilgrims. Further studies are needed to identify and treat psychological distress and mental disorders in non-Arabic speaking pilgrims and to take precautions accordingly in the future Hajj seasons.

Acknowledgment

The author thanks to the colleagues for their help in data collection in the outpatient clinic.

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