Psychiatric and socioenvironmental characteristics of Bahraini suicide cases

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الخصائص النفسية والبيئية والاجتماعية لحالات الانتحار في البحرين

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الخلاصـة: لا تتوافر دراسة منهجية للخصائص لدى ضحايا الانتحار في البلدان العربية. وقد أجرى الباحثون مقابلات موجَّهة بالاستمارات لعائلات 29 من حالات الانتحار في البحرين في المدة من 1996 حتى 2005؛ وقام بالمقابلات في بيوت العائلات عامل اجتماعي. كما تفحص الباحثون الملفات الطبية والنفسية لاستكمال المعطيات، ووجدوا أن أكثر ضحايا الانتحار هم من الذكور الشباب العازبين أو المطلقين العاطلين عن العمل وذوي مستوى تعليمي منخفض مقارنة بعامة السكان. وقد كان لدى غالبية الضحايا اضطرابات نفسية مزمنة، وهي في معظم الحالات الفصام والاكتئاب وتعاطي مواد الإدمان. أما أهم الأخطار البيئية الجديرة بالذكر والتي تم الإبلاغ عنها فهي مشكلات عائلية، وقصة عائلية لسلوك انتحاري، ومشكلات مالية أو مشكلات في العلاقات. ويختلف مرتسم الأخطار السريرية (الإكلينيكية) الاجتماعية والديموغرافية في البحرين عما هو عليه في البلدان المتطورة والنامية الأخرى.

ABSTRACT The characteristics of suicide victims have not been studied systematically in Arab countries. A questionnaire-guided interview of families of 29 Bahraini suicide cases from 1996 to 2005 was conducted in their homes by a social worker. Medical and psychiatric files were examined to complete the data. More suicide victims were male, young, single or divorced, unemployed and with a low education level compared with the general population. The majority of victims had chronic mental disorders, mainly schizophrenia, depression and substance abuse. The most notable environmental risks were reported to be family problems, family history of suicidal behaviour, and financial and relationship problems. The sociodemographic and clinical risk profile in Bahrain differs from other developed and developing countries.

Caractéristiques psychiatriques et socio-environnementales des cas de suicide à Bahreïn

RÉSUMÉ Les caractéristiques des victimes de suicide n'ont pas été étudiées de façon systématique dans les pays arabes. Une enquête a été menée auprès des familles de 29 cas de suicide à Bahreïn de 1996 à 2005, sous la forme d'un entretien par questionnaire réalisé à domicile par un travailleur social. Les dossiers médicaux et psychiatriques ont été examinés afin de compléter les données. Les personnes suicidées étaient surtout des hommes, jeunes, célibataires ou divorcés, chômeurs et ayant un niveau d'instruction plus faible que celui de la population générale. La plupart avaient des troubles mentaux chroniques et souffraient principalement de schizophrénie, de dépression et de toxicomanie. D'après les données disponibles, les risques environnementaux les plus importants étaient les problèmes familiaux, les antécédents familiaux de comportement suicidaire et les problèmes financiers et relationnels. Le profil de risque sociodémographique et clinique à Bahreïn n'est pas le même que dans les autres pays développés et en développement.

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Introduction

A debate exists over the relative importance of psychosocial and psychiatric factors in explaining suicidal behaviour [*1*]. Most psychological autopsy and record studies of adults are limited in their inquiry into psychiatric risk factors despite the notion that environment has an impact on suicidal behaviour. In addition, most of the prospective studies that have investigated risk factors for suicide are performed on hospitalized inpatients, the results of which may not necessarily be generalizable to the total population [*2,3*].

Several studies have been conducted to identify psychiatric or clinical risk factors of suicide among people with psychiatric conditions. These studies have shown that the majority of those who committed suicide had significant psychiatric problems including mood disorders such as schizophrenia, substance abuse or dependence and personality disorder. High-risk groups were male, unemployed, single or divorced [*4–6*]. Studies that focused on identifying psychosocial risk factors among youth gave more attention to stressful events. The studies mostly lacked a comparison group [*7*].

Despite the fact that suicide is viewed as a public health problem globally, it remains understudied and under-researched in countries of the Eastern Mediterranean Region, especially the Gulf States including Bahrain. Data on suicide in Arab countries are scarce. In Bahrain, the World Health Organization reported a low suicide rate of 3.1 per 100 000 for the year 1987–88 with no cases among the elderly, those below 15 years and females [*5*].

This report used health records and family interviews to describe the socioenvironmental and psychiatric characteristics of all Bahraini subjects who committed suicide from 1996 to 2005 in Bahrain. An earlier report described the national prevalence and the characteristics of suicide in Bahrain [*8*].

Methods

The study included all cases of completed suicide by Bahrainis for the period 1996–2005 recorded by the Directorate of Criminal Investigation at the Ministry of Interior. Of the 304 suicides, 31 were of Bahraini nationality. An earlier report of this study was published focusing on items such as age, sex, nationality, method and motives of suicide [*9*].

A special form was designed to collect information on psychosocial risk factors and was completed for 29 of the 31 Bahraini subjects (2 cases were excluded because they were suspected to be homicides). The form collected information on the following: demographic data (age, sex, education level, marital status, occupation and living situation); suicide act (the relation of the informant to the deceased, date of suicide, presence of suicide note and method used); physical and mental disorders (presence and types of physical and mental disorder, treatment received and if medication was used as a method to end life, previous suicide attempts, use of alcohol or drugs and family history of completed suicide); criminal history (type, frequency and dates of criminal acts); and recent stressful events (presence of significant events such as financial, relationship and family problems).

Two senior social workers visited the homes of all suicide victims, where they interviewed an adult family member, mostly mothers or wives, and completed the form. The medical and psychiatric files were reviewed to obtain missed information or data that could not be accurately obtained in the interviews. The main reason for examining the psychiatric files was to validate the pres-

ence of mental disorders using axis 1 and 2 of the *International statistical classification of diseases and related health problems*, version 10, and the *Diagnostic and statistical manual of mental disorders, version IV* [*10,11*]. The forms were checked manually for completeness.

Results

Sociodemographic characteristics

The demographic characteristics of the suicide victims and the general population aged 18 years and above in Bahrain [*9*] are presented in Table 1. The suicide victims were younger compared with the general population (93.1% under 45 years versus 75.8%) and more likely to be male (male:female ratio 13.5:1). Among those who committed suicide, the percentage of single and divorced people (51.7% and 6.9%) was higher than the general population (39.4% and 2.1%), while the percentage who were widowed was similar (3.4% versus 3.2%). Regarding education level of suicide victims, the percentage with primary education (51.7%) was higher than the general population (12.3%), while the general population had higher rates of secondary school and college education. A higher rate of unemployment was found among suicide victims (37.9%) compared with the

Table 1 **Demographic characteristics of suicide victims and the general population aged 18 years and older in Bahrain**

Variable	Suicide victims (n = 29)		General population[a]
	No.	%	%
Age (years)			
< 30	14	48.3	43.7
30–44	13	44.8	32.1
45–59	2	6.9	15.0
≥ 60	0	0.0	8.9
Sex			
Male	27	93.1	50.9
Female	2	6.9	49.1
Marital status			
Single	15	51.7	39.4
Married	11	37.9	55.4
Divorced	2	6.9	2.1
Widowed	1	3.4	3.2
Education level			
Grade 1–6	15	51.7	12.3
Grade 7–12	11	37.9	54.8
University	2	6.9	11.0
Postgraduate	1	3.4	3.2
Employment			
Unemployed	11	37.9	15.0

[a]*Source: [9].*

published figure of 15% for unemployment among the general population [12].

Psychiatric and psychosocial risks

The psychiatric and psychosocial risks are presented in Table 2. Examination of the medical records of suicide victims showed that none had been diagnosed with an acute physical illness prior to their suicide and few had a chronic illness (6.9%). However, more than half the suicide cases had a documented psychiatric disorder (51.7%), with a predominance of schizophrenia (24.1%), depression (13.9%) and substance abuse (10.3%). The majority of those with a psychiatric diagnosis (8 cases out of 15, 53%) had had the illness for more than 5 years. Almost one-third (31.0%) of the sample were reported to have used alcohol and drugs but none were registered as patients. Three of the victims (10.3%) were known to have made previous suicide attempts and another 3 (10.3%) had a history of suicide among first-degree relatives.

The most prevalent stressful events among suicide victims was believed by the informants to be family problems (44.8%), followed by financial difficulties (27.6%) and relationship problems (24.1%). About one-third of the victims were reported to have had a history of involvement with crime.

None of the victims left a note. The suicide was discovered mostly by a family member (74%) or friends (10%). Postmortem examination was performed in 1 case only.

Table 2 **Psychiatric and psychosocial characteristics of suicide victims in Bahrain**

Variable	Suicide victims (*n* = 29) No.	%
Psychiatric illness diagnosed	15	51.7
Schizophrenia	7	24.1
Mood disorder	4	13.9
Personality disorder	1	3.4
Substance abuse	3	10.3
Duration of treatment for psychiatric illness (years)		
< 1	2	6.9
1–3	3	10.3
3–5	2	6.9
> 5	8	27.6
History of alcohol/drug use (not treated)	9	31.0
Previous suicide attempt	3	10.3
Family history of suicide in first degree relative	3	10.3
Stressful life events suffered		
Family problems	13	44.8
Financial problems	8	27.6
Relationship problems	7	24.1
Involvement with crime/legal problems	9	31.0

Discussion

Suicide among Bahraini subjects was more prevalent among young males and decreased with advancing age. This is in contrast with the typical suicide completer in developed countries being an elderly male [*13,14*]. The age distribution was somewhat similar to several reports from developing countries which showed increasing involvement of younger people. The absence of suicide in the elderly (> 60 years) needs to be investigated. It is a known fact that the elderly in Bahrain still constitute a respected, well cared for group, but at the same time, suicide by taking their own medicine might be missed or ignored by the certifying physician or family members. Our data showed a greater difference with regard to sex distribution in comparison to both developed and developing countries [*15–17*]. Suicide among females was very low (6.9%). There are typically 2 to 3 male suicides for every female suicide in developed countries but there are increasing rates of female suicides in some developing Asian countries [*15,16*].

Being single or divorced has been reported to be risk factors for suicide [*18*]. The significance of marital status as a risk factor in Bahrain seems to be similar to that observed in developed countries but different from countries such as India and China, where marital status was not predictive of suicide [*19,20*].

A number of studies have been conducted in developed countries which found an association between unemployment and increased rates of suicide [*4,21*]. In our study, unemployed suicide victims were more than double the percentage of employed people in the community. Low socioeconomic status as judged by occupation and level of education has been found to be a risk factor for suicide in both developed and developing countries [*19*]. The finding of our study was similar, as the majority of the subjects were educated only as far as high school and more than one-third were unemployed.

Studies from developed countries have consistently found mental illness to increase the risk of suicide [*22–24*] and an association between mental illness and suicide has been suggested in studies in developing countries [*25,26*]. The problem in developing countries lies in the poor availability of mental health services and hence underdiagnosis of mental health problems. In Bahrain, more than half of the victims had received a psychiatric diagnosis and were attending mental health services. Those who were diagnosed with schizophrenia, mood disorder and substance abuse for a period of 5 years or more constituted a risk group for suicide. Judging from the details of family interviews, more victims might have been diagnosed with mental disorders if they had been in contact with mental health professionals. Furthermore, as high as one-third (31.0%) of cases were using alcohol or drugs, although the degree or extent of the dependency could not be ascertained. The same also applies to the high percentage of victims who had a history of criminal involvement (31.0%). All this gives support to the widely accepted view (from developed and developing countries) that mental illness is a risk factor for suicide. In this study, history of a previous suicide attempt was found in 10.3% of cases. This provides support to the existing knowledge that comes from studies from different parts of the world [*27,28*].

Studies from developing and developed countries are alike in incriminating stressful events such as family and financial problems as risk factors for suicide [*26,29*]. Similar findings concerning stressful events were obtained in our study but their exact role in the causation of suicide could not be verified due to the nature of a retrospective study that depends on family members as

a source of information. In addition, the absence of a control group makes it difficult to verify the significance of these events in relation to suicide. Judging from the high reported prevalence of stressful events, we conclude that people coming from families with multiple problems seem to be at higher risk of suicide.

It seems that writing a note before suicide is not part of the culture in Bahrain, perhaps because most of the victims had a low education level or perhaps to avoid guilt and embarrassment to family members. Most of the victims were young and single and living with their family, who were generally the persons who reported the incident. Postmortem examination is very rarely done in Bahrain for several reasons but mainly due to the relatives' resistance to disfiguring the body of the loved one. This is one area where efforts should be enforced if we want to have an accurate prevalence rate of suicide.

Our study suffers from several limitations. As the information was mostly gathered from a family member, the accuracy of the information may be questioned. Also the number of Bahraini suicide cases is underestimated, especially for females and the elderly, for several reasons. Suicides that occur at home or those that could be mistaken for accidents are not vigorously investigated. Moreover postmortem examination is performed only if there is a suspicion raised by a family member about the cause of death or to avoid legal implications. Other limitations include those related to the retrospective nature of the study, lack of population norms for certain psychosocial factors and the small sample size.

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