

ORIGINAL

Early Recognition and Prevention of Attempted Suicide in Primary Health Care

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ABSTRACT

This study was carried out to identify the risk factors in suicide attempts. Case records of 150 patients who, in one year, attempted suicide in the State of Bahrain, were reviewed. It was revealed that 60% had seen their family physician in the six month period preceding the attempt. Higher risk was identified in young unmarried women, and in those suffering from psychogenic illnesses as well as acute and chronic physical diseases. Eighty percent of the cases had used drugs for the attempt.

Suicide has been with us as long as has humanity, and yet our understanding of this complex phenomenon is fragmentary¹. The decision to commit suicide usually does not take place suddenly. Patients pass through a pre-decision stage before the

attempt, during which they frequently try to seek medical advice. Studies of suicidal patients indicate that 70 – 80% of those in western cultures who commit suicide visit a primary care physician with some physical and / or psychogenic complaints within 6 months prior to their attempt²⁻⁶. During the pre-decision stage patients communicate their suicidal intent to others and will usually confide in a physician if asked^{7,8}. This high incidence of contact with pre-suicidal patients makes suicide a clinical problem and provides the physician with an opportunity for preventing it. A study by the Los Angeles Suicide Prevention Centre revealed that, of thousands of persons seeking help at the centre, less than 2% actually committed suicide during a ten-year period⁹.

This study, which is the first of its kind in Bahrain and probably in the whole Arabian Gulf region, aims at identifying the risk factors involved in suicide attempts. It is the hope of the investigators to alert the primary care physician to recognise these warning symptoms of hidden intention for self destruction and to help him plan a prevention strategy.

METHODS

The police suicide register was used to obtain data on all suicide attempts in Bahrain during a one year period (January 1st to December 31st 1981). It revealed that during this period 150 persons attempted suicide.

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The medical records of the Accident and Emergency Department (A/E) at Salmaniya Medical Centre for the selected cases were reviewed for information on the suicide attempts. Controls, one for each case, were selected from among the patients visiting A/E for reasons other than suicide attempts. They were matched for month of A/E visit, age, sex and catchment area of their primary health care centre.

Of the 150 registered attempts, 9 were successful and they were excluded from the study together with another 33 of the sample population, because of failure of trace their records. Information on the number of visits and the presenting symptoms during the six-month period prior to the suicide attempt was collected for all 108 selected cases and controls.

Analysis was done using simple as well as 2 x 2 frequency tabulation. A matched pair analysis was utilised for comparing symptoms between cases and controls. The Chi-squared (X) test was used to test statistical significance.

RESULTS

Out of the 141 cases identified initially, who except for two, were all first attempters, 56 (40%) were males and 85 (60%) were females. This shows a significantly higher proportion of females attempting suicide when compared with the general population of Bahrain which consists of 58% males and 42% females¹⁰. ($z = 4.5$, $P < 0.001$).

Females attempting suicide were found to be significantly younger than males, their mean age being 22 years with a standard deviation of 7.4 years, compared to that of males which is 26.4 years with a standard deviation of 8.8 years. ($z = 3.1$, $0.001 < P < 0.002$).

The age range for the cases was between 14 and 58 years. The highest rate of attempted suicide was found in the age groups 15 – 19 years and 20 – 24 years (129.9 and 84.3 / 100,000 population, respectively). These rates were found to be significantly higher than the rates for the other age groups (Table 1). The lowest rate was for children 14 years and younger. The rate for people older than 24 years was not significantly different from other age groups.

Table 1
Attempted Suicide Rates in the State of Bahrain
By Age Group in 1981

GROUP	CASES	POPULATION	RATE/100,000	RELATIVE RISK	95% CONFIDENCE LIMITS
<15	6	115462	5.2	0.09	(0.047-0.174)*
15-19	46	35410	129.4	4.32	(3.123-5.956)*
20-24	35	41543	84.3	2.46	(1.698-3.557)*
25-29	20	44168	45.3	1.15	(0.715-1.841)
30-34	6	31185	19.2	0.45	(0.205-1.011)
35+	28	83030	33.7	0.80	(0.529-1.208)
TOTAL	141	350798	40.2		

*Significant at $P < 0.05$ Level

It was found that unmarried* people had a significantly higher incidence of attempted suicide than those who were married. Seventy percent of cases and 39% of controls were found to be unmarried. ($X^2 = 18.2$, $P < 0.005$)

Of 108 cases studied, 65 (60%) had visited a health centre during the six-month period prior to the attempt compared with 81 (75%) of controls (Table 2). Controls were found to have visited the health centres more frequently with an average number of visits during that period being 2.0 with a standard deviation of 1.8, while the average number of visits for cases was 1.2 with a standard deviation of 1.4. The difference was significant ($z = 3.3$, $P < 0.001$).

*Unmarried includes single, divorced and widowed.

Table 2

THE SEX DISTRIBUTION OF CASES AND
MATCHED CONTROLS
BY LAST VISIT TO THE ATTEMPT

Last visit to Health Centre	CASE						CONTROLS					
	Males		Females		Total		Males		Females		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
Within one week	2	6.2	10	13.2	12	11.1	6	18.7	23	30.3	29	26.8
One week to one month	4	12.5	15	19.7	19	17.5	2	6.2	12	14.5	14	12.9
Two months to three months	4	12.5	13	17.1	17	15.7	6	18.7	20	26.3	26	24.1
Four months to six months	7	21.9	10	13.2	17	15.7	5	15.6	7	9.2	12	11.1
Total visits during six months	17	53.1	48	53.2	65	60	19	59.4	62	80.3	81	75

Eighty percent of cases used drugs as a method for the attempt. Benzodiazepines (Lorazepam and diazepam 30.4%) and analgesics (paracetamol and aspirin - 26.9%) were the most commonly used drugs (Table 3).

Table 4 shows the presenting symptoms of cases and their matched controls during the six-month period prior to the attempt. Depression, headache and bodyache were found to be significantly more frequent in cases than in controls ($P < 0.008$; $0.003 < P < 0.005$; $0.014 < P < 0.025$, respectively) (Table 5).

The 33 excluded cases had an age distribution which was significantly different from the cases in the study ($X^2 = 48.7$, $P < 0.005$). The age distribution of males and females in the group was significantly different ($X^2 = 16.9$, $0.004 < P < 0.007$ and $X^2 = 31.9$, $P < 0.0005$, respectively) (Table 6).

There were 9 cases of completed suicide, 5 of whom were females and 4 males. Their average age was 23.4 years, and the most common method used was immolation 77.8% (7 cases).

Table 3

**THE DISTRIBUTION OF ATTEMPTED
SUICIDES BY METHOD USED**

Drug	No. of patients	Percentage
Tranquillisers (Lorazepam - Diazepam)	43	30.4
Analgesics	38	26.9
Other Drugs	28	20.0
Domestic chemicals (Gas, Kerosene, Detergent, Insecticide)	18	12.8
Unknown	14	9.9
Total	141	100.0

Table 4

**Distribution of Major Presenting
Symptoms / Diagnoses*
Cases and Controls in the 6 Months
Prior to the Suicide Attempt**

Symptoms	Cases	Control
Headache	13	7
Bodyache	11	4
Abdominal pain	9	7
Sore throat	7	12
Depression	7	-
Giddiness	6	5
Epigastric pain and Heart burn	6	-
Anxiety	4	-
Insomnia	4	-
Drug Abuse	4	-
Trauma	3	7
Fever	3	6
Skin problem	3	8
Joint pain	3	-
Dysmenorrhea	3	4
Palpitations	3	4
Cough	3	7
Alcohol Abuse	2	-
Personality Disorder	2	-
Social problems	2	-
Schizophrenia	2	-
Visual problem	2	9
Ear ache	2	5

*The presenting symptoms were based on medical notes of family physicians at health centres.

**Table 5
Matched Pair Analysis for Headache,
Bodyache and Depression**

Cases	Controls	
	Present	Absent
DEPRESSION		
Present	-	7
Absent	-	101
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2		
X = 7.0	Relative Risk = 15	P < 0.008
1		
<hr/>		
HEADACHE		
Present	10	26
Absent	9	62
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2		
X = 8.3	RELATIVE RISK = 2.9	0.003 < P < 0.005
1		
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BODYACHE		
Present	5	23
Absent	10	70
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2		
X = 5.1	RELATIVE RISK = 2.3	0.014, < P < 0.025
1		

Table 6

Included and Excluded Cases by Age and Sex

Age	Included		MALES Excluded	
	No	%	No	%
014 15	1	3.1	0	0.0
15-19	11	34.4	0	0.0
20-24	9	28.1	4	16.7
25-29	3	9.4	7	29.2
30-34	2	6.3	1	4.2
35 +	6	18.8	12	50.0
Total	32	110.0	24	100.0
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2				
X = 17.0			P < 0.005	
5				
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FEMALES				
< 15	5	6.6	0	0.0
15-19	35	46.1	0	0.0
20-24	21	27.6	1	11.1
25-29	8	10.5	2	22.2
30-34	3	3.9	0	0.0
35 +	4	5.3	6	66.7
Total	76	100.0	9	100.0
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2				
X = 31.2			P < 0.005	
5				

DISCUSSION

Islam is the religion of 85% of the population of Bahrain¹⁰. The Islamic religion forbids suicide and considers it to be a mortal sin because suicide usurps God's dominion over man's life and death. Islamic religion and the extended family with strong family ties may be reasons why the rate of attempted suicide in Bahrain is very low (0.04%) compared to, for example, the State of New York where the rate is around 1%^{1,11}. Religious and social stigmata, which probably are reasons of why some cases are not reported, also contribute to the low reported rate in Bahrain.

Attempted suicide is a problem of growing importance. It is often an expression of interpersonal stress or an indicator of a potentially treatable psychological condition, especially among young females. Most studies reveal that attempted suicide is more common among females^{4,5}. This may be more applicable to this region where society is male dominated, and in the absence of other outlets for expressing emotional problems, these stresses are more likely to be translated into somatic complaints and hatred for life¹².

While some studies revealed that the average age of people attempting suicide was 35 years¹³ this study shows that suicide in Bahrain usually occurs at a much younger age (23.9 years), with the highest rate being for those who are 15-24 years old. However, as reported in most other studies, attempted suicide was more common among the unmarried.

Sixty percent of the cases visited the Health Centres within six-months prior to the attempt (29.7%, within one month) seeking some kind of help. The other 40% may not have visited the Health Centres because their problems could have been acute which may have resulted in impulsive acts leading to the suicide attempt. These attempts can be seen as a plea for help, a gesture or an effort to manipulate the environment. If it is ignored, it may lead to more serious and lethal self destructive behaviour^{3,14,15,16}. Most patients (80%) attempt suicide by ingesting drugs¹⁷. This fact should alert the treating physician to the problem of prescription, lest it be misused by people in their suicide attempts. If drugs are to be prescribed, sublethal doses only should be issued at any time.

This study identifies characteristics which alert physicians to suspect those patients who are at high risk of suicide. Those at highest risk appear to be women aged 15-24 who are unmarried and those who have vague complaints of bodyache, headache and depression. This study also confirms the findings that headache and bodyache are common somatic manifestations of hidden psychiatric illnesses^{18,19} which are associated with a higher incidence of suicide attempts compared to the general population¹⁸. Depression was also found to be significantly more common in cases than in controls ($P < 0.008$).

On the basis of these characteristics, family physicians, by understanding their patients' physical, psychological and social conditions, have a unique opportunity for the early recognition and possible prevention of suicide. Since family physicians usually have overburdened schedules, they should arrange to see higher-risk patients by appointments at specified times. These patients should also have free access to these physicians through the telephone to communicate their feelings at any time. The family physician should investigate whether the patients have experienced any feeling of hopelessness or have had suicidal ideas or plans. Studies indicate that this inquiry will not introduce the thought of suicide into the mind of a patient who has not already had the idea³. With the development of a strong physician-patient relationship, a family physician should be in a position to play an effective role as a primary agent in suicide prevention.

CONCLUSION

The primary care physician has a unique opportunity for early recognition of attempted suicides. In 60% of our cases, the patients had attended a Health Centre trying to find a solution which was less painful and not lethal, prior to the attempt. Higher risk was identified in unmarried young women and in those suffering from psychogenic illnesses.

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