

CAUSES OF DELIBERATE SELF-HARM AMONG PATIENTS ATTENDING THE ACCIDENT AND EMERGENCY DEPARTMENT AT KING HUSSEIN MEDICAL CENTER

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ABSTRACT

Objective: To examine the causes and methods used for deliberate self-harm among a group of patients in Jordan.

Methods: Sixty two patients with deliberate self-harm attending the Accident and Emergency Department at King Hussein Medical Centre for a one-year period, from 1st September 2003 to 31st August 2004 were assessed using a semi-structured interview including demographic data, methods used for deliberate self-harm, precipitating factors and psychosocial assessment.

Results: During the one-year study period, 62 cases presented to Accident and Emergency at King Hussein Medical Centre with deliberate self-harm. The results showed that 53% of 62 subjects were single and the female to male ratio was 4:1. The peak age group was 25 to 29 years of age. The majority of the cases were housewives, students, and unemployed. The main precipitating factors for deliberate self-harm were family violence, marital disharmony, and financial problems. The most frequent method of deliberate self-harm was drug overdose (68%, $n=42$) with paracetamol being the most common drug used. Nearly half of the deliberate self-harm cases (42%, $n=26$) were admitted to general medical ward and 39% ($n=24$) had a history of a previous attempt.

Conclusion: The data illustrate that family violence represents the main precipitating factor of deliberate self-harm and the most frequent method used of deliberate self-harm was drug overdose, of which paracetamol is the most commonly used drug.

Key words: Deliberate self-harm, Drug overdose, Parasuicide.

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Introduction

Terms such as 'deliberate self-poisoning', 'parasuicide' and 'deliberate self-harm' were used to describe episodes of intentional self-harm that may or may not have been motivated by a desire to end life.⁽¹⁾ Deliberate self-harm (DSH) is defined as an act in which an individual deliberately initiates a non-habitual behaviour that, without the intervention

from others, may cause lasting self-harm.⁽²⁾ Following DSH there is a significant and persistent risk of suicide, which varies markedly between genders and age groups.⁽³⁾

In the past 45 years, suicide rates have increased by 60% in some countries and it is now one of the three leading causes of death among those aged 15-34 years worldwide.⁽⁴⁾ Suicide risk among self-harm

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patients is hundreds of times higher than in general population.⁽⁵⁾ Literature indicates that parasuicide rates for Asian females aged 18–24 has increased, suggesting that females may be coming under more stress due to gender role expectations, individuation and culture conflict which may be contributing to attempts at self-harm.⁽⁶⁾ On the other hand, people of Caribbean origin have been shown to have a lower risk of suicidal behaviour than British whites.⁽⁷⁾ A recent Iraqi study has showed that the rate of self poisoning was 8.8 per 1000 of total emergency cases and the male to female ratio was 1: 2.2⁽⁸⁾ which indicates that DSH is not uncommon in this part of the world and that it is more common among females. Similar trends have been reported in Egypt.⁽⁹⁾ In Saudi Arabia, the act is predominantly the activity of young females, and deliberate self-poisoning by analgesics and psychotropic drugs was the commonest method used.⁽¹⁰⁾ Self-inflicted burning by kerosene is common, traditional, and dramatic way of attempting suicide by females in Jordan.⁽¹¹⁾ Daradkeh studied the impact of national and religious events on the rate of parasuicide in Jordan and found that significantly fewer parasuicide were reported during Ramadan than the month preceding it and the month that follows Ramadan.⁽¹²⁾

In DSH episodes, women reported more life events than men. Family and interpersonal problems were most commonly reported. The reasons why people engage in DSH tend to be complex and multiple.⁽¹³⁾ The immediate precipitants that people cite for harming themselves are well described and tend predominantly to involve interpersonal conflict and loss.⁽¹³⁾ In 50 international population-based surveys it has been reported that 10–50% of women experience intimate male partner violence and that physical violence is accompanied by psychological abuse.⁽¹⁴⁾ Women abused by a partner or by other perpetrators are more likely to suffer from depression, anxiety, PTSD, headache, gynaecological and sexual problems, eating and digestive disorders, infections, musculoskeletal disorders and chronic pain and they are more likely to attempt suicide, to abuse alcohol and legal and illegal drugs.⁽¹⁵⁾

Reduction in the risk of suicide following DSH must be a key element in national suicide prevention strategies as the controlling the availability of medicine and the detoxification of domestic gas in the past have been demonstrated to be effective in reducing suicide rates.⁽³⁾ Information on risk groups, precipitating factors and methods of DSH in Jordan is essential in order to devise context specific preventive measures.

Methods

This study was carried out in the Accident and Emergency (A&E) Department in King Hussein Medical Centre (KHMC). Approximately 1.6 million Jordanians, including military servicemen and their families, are covered by health insurance and benefit from medical services provided by the KHMC. Al-Hussein Hospital (1973) is the oldest of the five hospitals in the KHMC with a capacity of 583 beds. It is one of the busiest hospitals in the country. Annual admissions exceed 25,000 patients.

All cases of self-poisoning or deliberate self-harm that attended the A&E Department in KHMC during the period from 1st September 2003 to 31st August 2004 were assessed. A psychiatrist and a family doctor interviewed each patient individually using a semi-structured interview that included the demographic characteristics, methods used for DSH, precipitating factors and their educational level. Additionally, all patients received full psychosocial assessment. Psychiatric diagnoses were assigned according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).

The exclusion criteria included accidental drug overdose, drug reactions, recreational drug abuse and other forms of ingestion of substances given by traditional healers.

Results

The total number of cases with DSH presenting over the study period were 62 cases, seventy-one percent were female ($n=44$), and 29% were males ($n=18$). Fifty-five percent ($n=24$) of the female were single, 36% ($n=16$) were married, 4.5% ($n=2$) were divorced and the other 4.5% ($n=2$) were engaged. Fifty percent of the men ($n=9$) were single, 44% ($n=8$) were married and 6% ($n=1$) were divorced. Forty-five percent of subjects ($n=28$) were given psychiatric diagnoses. Seventeen percent ($n=11$) of the total sample was diagnosed with adjustment disorder, 13% ($n=8$) had major depressive disorder, 10% ($n=6$) had personality disorder and 5% ($n=3$) had a history of alcohol and/or drug abuse.

The data were reviewed by age of the patient with the results summarized by decade. Sixty percent ($n=37$) of the cases were 20 to 30 years of age, 26% ($n=16$) were below 20 years of age and 15% ($n=9$) were above 30 years. The mean age of the entire group was 23.5 years ($SD=6.86$) with a range of 12–56 years. Seventy-four percent ($n=46$) of the cases had a post-secondary education, 18% ($n=11$) had a secondary education while only 8% ($n=5$) of the cases had a primary school education.

Table I. Percentage of patients by age and precipitating factors

Precipitating factors	<20 years old	20-30 years old	>30 years old	Total	
				Pts.	%
Family violence	9	20	5	34	54.8
Marital disharmony	1	6	1	8	12.9
Financial problems	2	5	1	8	12.9
Work stressors	1	4	0	5	8.1
Bereavement	3	1	0	4	6.5
Chronic illness	0	1	2	3	4.8

Table II. Distribution of patients by methods used for self-harm, gender and age

Methods of self-harm	Male age/year			Female age/year			Total	
	<20	20-30	>30	<20	20-30	>30	Pts.	%
Analgesics	2	6	1	6	12	3	30	48.4
Non-medical	1	4	0	4	7	1	17	27.4
Psychotropic drugs	0	2	1	2	5	2	12	19.4
Others	0	0	1	1	1	0	3	4.8

Table III. Distribution of patients by methods of self-harm and gender

Methods of self-harm	Gender		Total	
	Male	Female	No. pts.	%
Diclofenac Sodium	1	3	4	6.45
Paracetamol	5	10	15	24.2
Ibuprofen	3	6	9	14.49
Aspirin	0	2	2	3.23
Tricycles antidepressant	1	1	2	3.23
Benzodiazepines	1	5	6	9.68
Antiepileptics	1	1	2	3.23
SSRI's	0	2	2	3.23
Household Detergent	0	7	7	11.3
Organophosphorus	1	1	2	3.23
Bullet injury	4	0	4	6.45
Burn	0	4	4	6.45
Others	1	2	3	4.83
Total	18	44	62	100

Table IV. Outcomes from Accident and Emergency Department

Outcomes	No. of Pts.	%
Psychiatric follow-up arranged by A&E staff	11	17.7
Admitted to psychiatric ward	6	9.7
Admitted to general ward	26	41.9
No follow-up required	8	12.9
Admitted to burn unit	4	6.5
Declined admission	7	11.3
Total	62	100

When the employment status of the total sample was examined the unemployed (39%, $n=24$), the students (27%, $n=17$) and the housewives (19%, $n=12$) comprised the majority of the cases 85% ($n=53$) indicating a higher vulnerability for DSH in these groups. The main precipitating factor for DSH as reported by the patients in this study was family violence (55%, $n=34$), which included physical and psychosexual abuse often involving the spouse. Other precipitating factors reported included marital

disharmony (13%, $n=8$), financial problems (13%, $n=8$), work stressors (8%, $n=5$), bereavement (7%, $n=4$) and chronic illness (5%, $n=3$) (see Table I).

Methods used for DSH were varied. Forty-eight percent ($n=30$) of the cases had overdosed with analgesics, 27% ($n=17$) had used non-medicinal agents, 19% ($n=12$) had used psychotropic drugs and 5% ($n=3$) had used Antidiabetic agents (see Table II). Among those who used analgesics for DSH paracetamol was the most commonly ingested drug

(50%, $n=15$), the next most commonly used analgesic was ibuprofen (30%, $n=9$). Diclofenac sodium and aspirin were also used up to a lesser extent. 19.4% ($n=12$) of cases, which used psychotropic drugs, had a history of psychiatric illness. The majority (50%, $n=6$) used benzodiazepines such as diazepam. Tricyclic antidepressants, antiepileptic, and SSRIs were also used. Between those cases who has used non-medicinal agents the majority (41%, $n=7$) had ingested household detergent and a minority (12%, $n=2$) had ingested organophosphorus solvents, four male cases (24%) had self-inflicted bullet injuries and another four female cases (24%) had burned themselves (see Table III).

The outcomes from the accident and emergency department were as follows: 42% ($n=26$) were hospitalized in the general medical wards; 6% ($n=4$) were females and admitted to Burn Unit at Royal Rehabilitation Centre, two of them died soon after admission; 10% ($n=6$) were admitted to the psychiatric ward and another 18% ($n=11$) were referred to psychiatric clinics for follow up (see Table IV). The most common complaint was abdominal pain 54% ($n=33$), 23% ($n=20$) were unconscious upon arrival at A&E. Nine of the 62 patients (15%) had previously attempted DSH.

Discussion

This paper presents data concerning the demographics, precipitating factors, substances and methods used for deliberate self-harm in Jordan. In this study 71% of cases were women. The preponderance of women in the present sample is consistent with a typical worldwide pattern.⁽¹⁶⁾ Males have been shown to use more lethal methods of DSH, but women, on the other hand, more commonly take an overdose of drugs or a poison.

Most of our sample reported that the emotional precipitants of their behaviour were triggered by family violence, marital disharmony, and financial problems. Women during family conflicts are often exposed to physical and psychological abuse during their lifetime. Abused women are more likely to suffer from psychological sequelae of domestic violence. The present data suggest that being a housewife is another risk factor for DSH. Although no direct link has been shown between unemployment and DSH, unemployment may have been an important factor in the present study.

An estimated 40-50% of people who commit DSH are thought to have made previous attempts.⁽¹⁾ Fifteen percent of the sample from the present study had inflicted DSH more than once. The most common method of self-poisoning in this study was

by analgesics such as paracetamol. Most of the cases reaching A & E departments complained of abdominal pain; some arrived unconscious.

The methods used for DSH reflect their availability, as there are no regulations to limit their accessibility in Jordan. The frequent overdose of paracetamol seems to be significant. In the UK, the introductions of new regulations that limit the availability of paracetamol have substantially reduced its use for DSH.⁽¹⁷⁾ Besides analgesics, the predominant tendency was to use non-medicinal agents such as household detergents, insecticide, and pesticides. This pattern is consistent with reports emerging from non-industrialized countries. Suicide by burning, although generally uncommon in England and Wales, is common in South Asian women.⁽¹⁸⁾ In this study, DSH by burn constituted 6% of cases, which were all females.

In much of the world, suicide is stigmatized and in some countries, may even constitute a criminal offence punishable by law.⁽¹⁶⁾ DSH in developing countries may more likely go unreported and many victims never reach medical attention, being construed as accidents to avoid social stigma. Strategies for suicide prevention should include accurate monitoring of health service contacts due to self-harm.⁽¹⁹⁾

Conclusion

Deliberate Self-Harm presents a significant public health problem and a cost burden on the health care system. Family violence, marital disharmony and financial problems present the main precipitating factors of DSH. This study revealed that the methods of choice for DSH in Jordan were ingestion of pharmaceutical and non-pharmaceutical toxins with paracetamol being the most commonly used drug. Restricting the availability of the means for DSH has been shown to be an effective measure in preventing suicide by controlling the environment. This encompasses a variety of strategies, such as gun control and controlling the availability of medicine.

Recommendation

Because of the increasing risk of suicide following DSH, all patients with DSH attending the A&E department should be referred for psychiatric assessment. Accident and Emergency staff needs to be aware of the possible association between DSH and domestic violence. Routine screening for abuse and violence is an essential part of history taking.

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