Relapse among substance-abuse patients in Riyadh, Saudi Arabia

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الانتكاس بين متعاطي المخدرات في الرياض، المملكة العربية السعودية

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خلاصـة: تعاطي المخدرات مشكلة بدأ الاهتمام بها مؤخراً في المملكة العربية السعودية. وقد تمت دراسـة العوامل الاجتماعية والديموغرافية المرتبطة بمعدلات التعاطي والانتكاس لـدى عيِّنـة مـن مرضى مستشفى الأمل بالرياض عام 1998. وقد تبيَّن أن العمر الأوسط للمرضى كان 29.5 سنة، ومتوسـط مـدة التعاطي كان 9.5 سنة. وكانت العوامل المرتبطة بدرجة إحصائيـة جوهريـة بتكـرُّر دخـول المستشفى هـي العمر والبطالة وضغوط الأقران، فضلاً عن الضغوط العائليـة والاجتماعيـة. وبدراسـة عوامـل التكـهُّن بانتكـاس المرضي تبيَّن أن البطالة والضغوط الاجتماعية كانت أبرزها إحصائياً. ويلـزم إجراء مزيـد مـن الدراسـات على الصعيد الوطني لتوثيق العوامل المؤدية لبداية التعاطي ومواصلتـه، وللمسـاعدة في اتخـاذ تدابيـر العـلاج والتأهيل.

ABSTRACT Substance abuse is a recently acknowledged problem in Saudi Arabia. Sociodemographic correlates of substance abuse and relapse rates of a sample of inpatients at Al-Amal Hospital in Riyadh in 1998 were studied. The mean age of patients was 29.5 years with a mean duration of abuse of 9.5 years. Age, unemployment, peer pressure and family and social stresses were factors that showed statistically significant associations with repeat admissions. The most significant predictors of a patient's relapse were unemployment and social stresses. More nationwide studies are needed to document factors leading to the initiation and continuation of substance abuse and to help treatment and rehabilitative measures.

La rechute chez les toxicomanes à Riyad (Arabie saoudite)
RESUME La toxicomanie est un problème qui a été reconnu récemment en Arabie saoudite. Les corrélations sociodémographiques de la toxicomanie et des taux de rechute ont été étudiées dans un échantillon de patients hospitalisés à l'hôpital Al-Amal à Riyad en 1998. L'âge moyen des patients était de 29,5 ans et la durée moyenne de la toxicomanie était de 9,5 ans. L'âge, le chômage, la pression des pairs, les tensions familiales et sociales étaient des facteurs qui indiquaient une association statistiquement significative avec des hospitalisations répétées. Les facteurs prédictifs les plus importants de rechute d'un patient étaient le chômage et les tensions sociales. D'autres études au niveau national sont nécessaires pour analyser les facteurs qui mènent à la toxicomanie et à sa poursuite et contribuer au traitement et aux mesures de réadaptation.

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Introduction

Substance abuse is a recently acknowledged problem in Saudi Arabia. The first hospital to open exclusively for the treatment of substance abuse was Al-Amal Hospital in Riyadh in 1987. This has been followed by three additional hospitals serving different parts of the country [1].

In 1996 the number of substance-abuse patients who were admitted for treatment and rehabilitation in these hospitals was 18 321 [2]. There is usually a high rate of relapse among these patients [3]. The percentage of patients admitted to Al-Amal Hospital for the first time in 1996 was 36.3% of the total admitted that year (3105), i.e. 63.7% were relapse patients [3]. In the Eastern Province of Saudi Arabia, data on substance abuse indicate that the mean number of hospital admissions was 3.19 and that 44% of substance abusers were admitted more than twice [4]. This paper examines sociodemographic characteristics of a sample of substance-abuse patients to determine factors affecting relapse.

Subjects and methods

A cross-sectional study was conducted in Al-Amal Hospital in Riyadh during March 1998. The hospital admits only male substance abusers aged 20 years or older and has a total capacity of 285 beds. In March 1998 there were 180 inpatients.

A two-part questionnaire was designed. The first part was used to collect demographic variables of the patients, e.g. age, education, marital status, employment, income and number of siblings. The second part of the questionnaire gathered the history of the patient's substance abuse: age at starting substance abuse, people involved at the start of abuse, reactions of the patient and his family, and number of previous admissions. The nature of the substance abused was verified by the treating physician. Although all patients could read and write, the social workers at Al-Amal Hospital cooperated in distributing and collecting the questionnaires.

Data were analysed using *StatPac Gold* statistical package and significance tests were performed. Stepwise logistic regression analysis was used to calculate determinants of repeat admissions or relapses. Regression coefficients were used to determine predictors of relapse.

Results

While 160 patients responded in part to the questionnaire, the response rate was not uniform for all questions. The ages of the patients ranged from 20 years to over 60 years and the mean age was 29.5 years. Approximately 79% were 20–39 years of age. The mean age at first exposure was 19 years and the range was 10–32 years.

Of the 160 patients, 47% had 12 years of schooling and 34% were university educated. About 45% were employed at the time of admission and, of these, 51% had been employed for more than 5 years at the same job. In all, 79% owned a house and 51% of the patients came from families with fewer than six children. Of the married patients (88.8%), 92.5% had married before they started abusing substances and 68% had fewer than three children. Of the inpatients, 63% had discussed their addiction problems with their families. While 50% of the patients came to the hospital by themselves, 34% came with a family member, usually a father or brother. Smokers constituted 48.1% of the total sample.

Among 151 patients, substance abuse started as a result of either peer pressure (68.2%), social problems (27.8%) or the pressure of family problems (25.2%). The pressures of marriage were responsible for 9.9%, while job-related problems and health problems were responsible for 9.9% and 7.9%, respectively.

Of the 160 patients, approximately 32% were admitted for the first time, 23.1% for the second time, 22.5% for the third time and 22.5% for the fourth time or more. The mean number of admissions was 2.27 ± 1.17.

Alcohol was used by 23.75% of the patients, sedatives by 23.12%, heroin by 18.75%, hashish (cannabis) by 10.63% and glue-sniffing by 9.38%. The remaining 14.38% used a combination of two or more substances (Table 1). The duration of abuse for all the patients ranged from 1 year to 50 years while the mean duration was 9.5 ± 6.6 years.

Table 1 Type and duration of substance abuse among inpatients

Substance	Patients abusing		Mean ± s duration of abuse (years)
	No.	%	
Alcohol	38	23.75	12.18 ± 9.23
Sedatives	37	23.12	7.45 ± 6.26
Heroin	30	18.75	8.55 ± 4.35
Hashish	17	10.63	10.75 ± 5.29
Volatile substances (glue-sniffing)	15	9.38	7.73 ± 3.43
Hashish and sedatives	10	6.25	11.50 ± 9.86
Multiple drug use (> 2)	13	8.13	10.60 ± 3.55
Total	160	100	9.50 ± 6.62

s = standard deviation

The number of admissions significantly increased among older patients ($P < 0.02$) and unemployed patients ($P < 0.05$) and in the presence of peer pressure ($P < 0.03$). It also significantly increased among those with family problems ($P < 0.01$) or those under social stress ($P < 0.001$) (Table 2). Factors such as smoking, marital status, marital problems and job-related problems, however, were not significantly associated with the number of admissions (Table 2).

Table 3 shows the result of stepwise multiple regression to determine the predictor variables of a patient's relapse. Social problems or pressures were the most significant predictors of a high number of admissions or relapse, followed by unemployment.

Discussion

The inpatients of March 1998 were similar in number and demographic variables to Al-Amal patients admitted between 1996 and 1997 [3]. The standard profile of the patients was of a young, educated, married and unemployed male. The mean age of the patients (29.5 years) was similar to that found by researchers in other parts of the country [4–6]. It is, however, younger than a sample from Kuwait [7].

The mean duration of drug abuse among our patients was 9.5 ± 6.6 years which was longer than that found for a sample from the Eastern Province (6.6 years) [4]. The longest duration of abuse was for alcohol and sedatives followed by heroin, then hashish (cannabis). As in other countries, alcohol was found to be the most frequently abused substance [8–12]. Nevertheless the proportion of heroin abusers in this study (18.75%) was less than that found among drug-abuse patients in Jeddah (43.5%) [6]. This is probably due to drug

Table 2 **Factors affecting admissions of inpatients**

Factor	Number of admissions										χ^2, *P*-value
	1		**2**		**3**		**> 3**		**Total**		
	No.	%	No.	%	No.	%	No.	%	No.	%	
Age (years)											
20–	24	48.9	12	24.5	5	10.2	8	16.3	49	33.6	
30–	14	21.2	20	30.3	15	22.7	17	25.8	66	45.2	
40+	9	29.0	5	16.1	7	22.6	10	32.3	31	21.2	
Total	47	32.2	37	25.3	27	18.5	35	23.9	146		22.906, 0.02
Employment											
Employed	27	44.3	15	24.6	10	16.4	9	14.8	61	45.2	
Unemployed	19	25.7	19	25.7	12	16.2	24	32.4	74	54.8	
Total	46	34.1	34	25.2	22	16.3	33	24.4	135		7.681, 0.05
Peer pressure											
Present	29	28.2	24	23.3	19	18.4	31	30.1	103	68.2	
Absent	22	45.8	13	27.1	8	16.7	5	10.4	48	31.8	
Total	51	33.8	37	24.5	27	17.9	36	23.8	151		8.597, 0.03
Family stresses											
Present	5	13.2	14	36.8	9	23.7	10	26.3	38	25.2	
Absent	46	40.7	23	20.4	18	15.9	26	23.0	113	74.8	
Total	51	33.8	37	24.5	27	17.9	36	23.8	151		10.632, 0.01
Social stresses											
Present	8	19.0	5	11.9	9	21.4	20	47.6	42	27.8	
Absent	43	39.4	32	29.4	18	16.5	16	14.7	109	72.2	
Total	51	33.8	37	24.5	27	17.9	36	23.8	151		21.7131, 0.0001
Smoking											
Smoker	31	40.2	16	20.8	12	15.6	18	23.4	77	48.1	
Non-smoker	20	24.1	21	25.3	24	28.9	18	21.7	83	51.9	
Total	51	31.8	37	23.1	36	22.5	36	22.5	160		6.83, 0.0774
Marital status											
Married	44	30.9	31	21.8	34	23.9	33	23.2	142	88.7	
Unmarried	7	38.9	6	33.3	2	11.1	3	16.7	18	11.3	
Total	51	31.8	37	23.1	36	22.5	36	22.5	160		1.78, 0.617
Job-related problems											
Present	4	26.7	6	40.0	3	20.0	2	13.3	15	9.9	
Absent	47	34.6	31	22.8	24	17.6	34	25.0	136	90.1	
Total	51	33.8	37	24.5	27	17.9	36	23.8	151		2.694, 0.4412
Marital problems											
Present	6	40.0	5	33.3	1	6.7	3	20.0	15	9.9	
Absent	45	33.1	32	23.5	26	19.1	33	24.3	136	90.1	
Total	51	33.8	37	24.5	27	17.9	36	23.8	151		1.995, 0.5734
Health problems											
Present	5	41.7	5	41.7	2	16.6	0	0	12	7.9	
Absent	46	33.1	32	23.0	25	17.9	36	25.8	139	92.1	
Total	51	33.8	37	24.5	27	17.9	36	23.8	151		4.9262, 0.1773

Table 3 **Prediction of admissions by stepwise multiple regression**

Variable	Coefficient	β	F-ratio	Probability	Standard error
Unemployment	−0.5097	−0.2126	4.0299	0.0484	0.2539
Social stresses	0.8827	0.3455	10.6455	0.0017	0.2705
Constant	2.2077		53.6434	0	0.3014

availability. The use of more than one drug (14.38% among our patients) is similar to that found in Jeddah (14.6%) [6].

A significant association between unemployment and substance abuse has been found in other studies in Saudi Arabia [4–6] and other parts of the world [13–18]. Similarly, peer pressure, which significantly affected the continuation of substance abuse and readmission, has also been found to be a significant factor in many studies [4–6]. Initiation of substance abuse was not related to age, education or employment.

Relapse among our patients was high. Over 60% had been admitted more than once and about 23% had been admitted more than three times. This high relapse rate is comparable with the figures for Al-Amal in 1997 [1].

Variables affecting the relapse rate were older age, unemployment, peer pressure and family and social stresses. Social stresses and unemployment were the most significant predictors of relapse. Many studies have documented the association between job loss and substance abuse [13–18].

Islam prohibits the use of alcohol and narcotic drugs. However, due to increased exposure to international media via television and satellite, young people may find adapting to the restrictions and demands of Saudi society difficult. Frequent travel and the increased expansion of a consumer market, coupled with a steady reduction in per capita income during the past decade may play a role in increasing the general frustrations of the younger generation. It was not clear, however, whether unemployment was a cause or a result of the problem of substance abuse in our sample. A follow-up study of substance-abuse patients would help define the sociological and psychological factors involved in the problem.

Because Al-Amal Hospital admits only males over 20 years, our patients were entirely of this population. Female and younger substance abusers are directed to a psychiatric rehabilitation hospital. Other studies have documented a small percentage (2.7%) of female abusers in parts of Saudi Arabia [6], a finding that is consistent with the nature of the society and the limited mobility of women.

National studies are needed to document both the psychological and social factors that play a role in the start of substance abuse and the relapse of patients, particularly as the importance and magnitude of the drug problem in our society is increasingly recognized. Furthermore, Saudis should be encouraged to work in this field and to apply innovative and culturally acceptable measures to control and prevent the drug problem. Community rehabilitation will be a challenging part of planning and managing of a substance-abuse control programme.

Acknowledgements

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