

# Current substance use in patients with gastric cancer in Southern Iran

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## ABSTRACT

**Background:** Psychiatric disorders may affect patients suffering from cancer and substance use disorders.

**Objective:** This study was undertaken to evaluate the prevalence of tobacco and opioid use in patients with gastric cancer in Shiraz, Fars Province and Southern Iran.

**Materials and Methods:** In a hospital survey of 177 gastric cancer patients aged 24 years and more, a semistructured-interview was performed based on SDM-IV criteria during the year 2003.

**Results:** The mean age of the patients was 58.13 (SD=14.03) years. Among the subjects, 50.9% (90) were tobacco dependent (61.5% men and 29.4% women,  $P < 0.001$ ), while 10 (5.7%) were opioid-dependent (7.3% men and 1.9% women,  $P=0.16$ ). Tobacco and opioid-dependency were not significantly related to age groups, economical or occupational status. Mean ages of tobacco and opioid-dependants were not significantly different from nondependants.

**Conclusions:** Tobacco and opioid dependency were common problems among gastric cancer patients. This report provides useful information for health planning. Men were at greater risk than women. Treatment programs should focus on all age-groups, all occupations and all income-levels.

**KEY WORDS:** Gastric cancer, opioid dependence, substance use, tobacco dependence

## INTRODUCTION

Substance dependence is a psychiatric disorder.<sup>[1,2]</sup> Harmful substance use is related to the pattern of substance use. Heavy substance users are at greater risk, however, other patterns of substance use also produce harmful, individual and social consequences. Psychiatric disorders affect a significant portion of the patient population, especially patients with cancer diseases and substance-use disorders such as tobacco, opium or alcohol abuse are among the most common mental ones.<sup>[3]</sup> Alcohol use causes more years of potential life lost through disability and death than tobacco. In developed nations, a decrease in alcohol use can be observed, but in developing ones, it is still increasing.<sup>[4]</sup>

Before 1978 in Iran, the majority of research studies on substance abuse were confined to registered opioid addicts in clinical settings and there were no studies of young or other nonregistered users. From these limited sources it appeared that, although opium had always been the most widely abused drug in Iran, the pattern of drug use had changed in the period of the rapid growth of cities, population movement and the general economic changes, which

characterized the decade prior to 1978. Opioids, hallucinogens and hypnotics were all reported as drugs of abuse among the clinical population studies. Alcohol use also increased substantially in the later years before 1978.<sup>[5]</sup> In 1979, the National Iranian Society for the rehabilitation of the disabled ceased to be in charge of drug treatment in our country and made alcohol a prime target and provided a new national campaign against drug abuse too. During the early months of 1980, the campaign became much stricter with extensive use of the death penalty for drug trafficking. Two studies indicated the nature of this problem. Dalvand *et al* interviewed 200 newly registered addicted individuals at the rehabilitation center in Shiraz, Southern Iran<sup>[6]</sup> and Agahi and Spencer<sup>[7]</sup> studied a sample of the adolescents in Isfahan. These indicated that after 1979, the clinics were serving a broader social range of addicted individuals than before and that action by the authorities was bringing many recently addicted individuals to clinics. Heroin use predominated among those who were urban residents, whereas the villagers attending the clinics were more likely to be opium users. One aspect of the pattern of drug use, which seems to have remained stable in Iran for many years is the age of initiation. Nearly

80% of the samples, whether recent or long stabilized users, had commenced regular drug use in their 20s or later. This is in contrast to many western studies which indicated an earlier onset of regular use.<sup>[8,9]</sup> It was mentioned that nicotine dependency was a psychiatric disorder.<sup>[1]</sup> Life-time prevalence rates of nicotine/tobacco dependence were reported as 20% and 24% of total community populations.<sup>[9,10]</sup> Life-time prevalence rates of nicotine dependence in Hong Kong were reported as 27% in male and 1% in female community population<sup>[11]</sup> and in Shanghai 39% and 2%, respectively.<sup>[11]</sup>

Nicotine dependence was more prevalent in males,<sup>[12-15]</sup> low-income<sup>[10]</sup> and less-educated population.<sup>[10,11]</sup> Over the last two decades, there have been few systematic studies on tobacco use conducted in Iran and the official press announcements on the extent and success of the campaign have been part of the available information. A survey conducted on general population in Shiraz indicated that 26% of males and 3.8% of females were cigarette smokers.<sup>[13]</sup>

Little has been known about prevalence of tobacco and opioid-dependence in cancer patients in Iran. As far as we know, this is one of the first studies conducted in Shiraz, Iran. This study attempts to identify the prevalence of opioid and tobacco dependence and also to investigate the epidemiological characteristics of opioid and tobacco dependants among patients with gastric cancer in Shiraz, Southern Iran, with a population of 1,500,000.

**MATERIALS AND METHODS**

One hundred and seventyseven consecutive gastric cancer patients, aged 24 years and more, from teaching hospitals affiliated to Shiraz University of Medical Sciences entered our study. Assessment of tobacco and opioid dependency was done by using a semi structured interview based on DSM-IV criteria.<sup>[14]</sup> Informed consent was obtained from all participants and an explanation of the study and an assurance of confidentiality were given too. The items selected for use in the study were based on DSM-IV criteria. Interviews were conducted in the hospitals. The semi structured interview included questions on age, gender, marital, occupational and economical status and current tobacco and opioid use. Categories of occupation included: housewife, government employee, unskilled worker, unemployed and self-employed, Economical status was categorized at very low, low, medium and high, according to the official average income of Iranians.

Statistical analyses included both descriptive statistics and inference statistical procedures. Data analysis performed using SPSS software (Version Chicago, IL). Chi-square was used to test for differences in frequencies and t-test was used to test for differences in means. These were two-sided with significance set at  $P < 0.05$ .

**RESULTS**

Mean age of the total sample (177) was  $58.13 \pm 14.03$  years (age range=24 to 84 years). Seventy percent (124) were men (Mean age= $60.12 \pm 13.13$  years) and 30% (53) were women (mean age= $53.47 \pm 15.06$  years) and there were significant differences in mean ages ( $t=2.95$ ,  $df=175$ ,  $P=0.004$ ) [Table 1].

The tobacco dependants were younger ( $58 \pm 12.83$  years) than the tobacco nondependants ( $58.31 \pm 15.50$  years) ( $t=0.15$ ,  $df=175$ ,  $P=0.885$ ), but the opioid-dependants were older ( $61.80 \pm 13.90$  years) than the opioid-nondependants ( $57.91 \pm 14.05$  years) ( $t=0.85$ ,  $df=175$ ,  $P=0.396$ ) [Table 1].

Of the total study population, 10 (5.65%) were opioid dependant (7.3% of men and 1.9% of women) ( $X^2=2.01$ ,  $df=1$ ,  $P=0.150$ ) and 90 (50.85%) were tobacco-dependant (61.5% of men and 29.4% of women) ( $X^2=14.81$ ,  $df=1$ ,  $P=0.000$ ). Opioid dependence was not significantly related to gender, occupational and economical status and age-groups. Tobacco dependence was not significantly related to occupational and economical status and age-groups. There were significant differences between sex and tobacco dependence ( $X^2=14.81$ ,  $df=1$ ,  $P=0.000$ ).

Table 2 summarizes the frequency distributions of sex, age range, marital status, income, tobacco and opioid-dependants.

**DISCUSSION**

A possible limitation of this survey and many other epidemiological studies of substance use, are under-reporting. Opioid-use is widely considered to be harmful, but in addition, in Iran there are legal penalties. Accordingly, some subjects may have denied dependency and the true prevalence of opioid-use disorders in gastric cancer patients is probably higher than has been revealed. It should also be mentioned that this research was confined to Shiraz in Fars province, Southern Iran and care must therefore be taken not to generalize these findings for the full Iranian patients population.

Fault could perhaps be found with our categorization of occupations and income, however, the chosen categories best-suited the population under consideration.

**Table 1: Mean age and standard deviation by sex, tobacco dependants and opioid-dependants**

	Mean	SD	t	df	Significance
Male	60.12	13.13	2.95	175	0.004
Female	53.47	15.06	-	-	-
Tobacco dependants	58.00	12.83	-	-	-
Tobacco nondependants	58.31	15.50	0.15	175	0.885
Opioid- dependants	61.80	13.90	-	-	-
Opioid nondependants	57.91	14.05	0.85	175	0.396

SD - Standard deviation

**Table 2: Frequency distribution of age, sex, tobacco dependants, opioid-dependants, income and occupation in gastric cancer patient**

		Number	Percent
Sex	Male	124	70.1
	Female	53	29.9
Age	<35	11	6.2
	35-44	22	12.4
	45-54	40	22.6
	55-64	36	20.3
	65-74	44	24.9
	75+	24	13.6
Mean= 58.13 yr, minimum=24, maximum=84, SD= 14.03			
Income	High	6	3.4
	Medium	60	34.3
	Low	16	9.1
Tobacco	Very low	93	53.1
	Dependent	90	52
Opioid	Nondependent	87	48
	Dependent	10	5.6
Occupation	Nondependent	167	94.4
	Self-employed	17	9.6
	Governmentemployed	22	12.4
Marital status	Unskilled worker	69	39
	Housewife	69	39
	Married	169	95.5
	Single	5	2.8
	Widow	3	1.7

Another limitation was that our work provided no causal inference. This was the nature of epidemiological studies. However, the present work was one of the first scientific ones of opioid and tobacco dependency to be performed in our province. It may serve as a basis for prevention and treatment strategies and future studies may provide valuable outcome information.

Our study revealed a high total prevalence for having used tobacco (50.9%) and to a less degree for opioid (5.7%). This important information would draw attention to the magnitude of the problem in patients with gastric cancer. As mentioned, this information would influence the planning of prevention and treatment strategies.

Our study identified that males were at greater risk of both tobacco and opioid dependency, which would assist in focusing strategies. This difference in contrast with studies conducted in western countries showed that lifetime substance use did not vary significantly by sex.<sup>[16-20]</sup> It should be noted that in Iran, it is socially damaging for women to smoke tobacco, drink alcohol or take other illegal drugs and this is the probable explanation of the difference. Income did not influence tobacco or opioid- seeking behavior. Housewives also reported lower prevalence, but this presumably was confounded by gender rather than a function of occupation. There was a slightly higher reported prevalence of substance dependency among the self-employed, but the value of this observation was doubtful. These findings might have been confounded by age or other factors. All that we can say from these findings is that substance use is not limited to any particular occupation. On the contrary, these

results suggested that substance use extended across all occupations.

As with the occupations, substance dependency was spread across the income spectrum. Similarities were to be expected, of course, as occupation and income were interconnected.

Tobacco and opioid dependency are common in gastric cancer patients (and probably the whole of cancer patients). Both are significantly greater in males. They are not a function of age groups and both are found across the occupational and income spectrums. Dependency extended across all age-groups and treatment programs needed to be available for all. These results should be considered in planning of preventive and therapeutic programs for gastric cancer patients in Iran.

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