

Pattern of Alcoholism in the General Hospital, Kuala Lumpur

K.I. Saroja, MRCPsych*

O. Kyaw, FRANZCP**

* Department of Psychiatry, Faculty of Medicine, Universiti Kebangsaan Malaysia, Jalan Raja Muda, 50300 Kuala Lumpur

** Community Psychiatrist, Darwin and East Arnhem Regions, Australia

Summary

This study establishes the prevalence rate for alcoholism among the inpatients of the General Hospital, Kuala Lumpur, as 11%, but as 25% among the drinking population. It also describes the demographic profile of the alcoholic as compared to the non-alcoholic drinker and the non-drinker, and suggests that certain vulnerability factors could contribute to the development of alcoholism. A trend noted is also the changing racial trends in the use of alcohol.

Key words: Prevalence, alcoholism, profile.

Introduction

The actual prevalence of alcoholism and alcohol-related disorders in the Malaysian community is unknown, since there have been no studies done to estimate this. However, the Consumers Association of Malaysia¹ estimates there to be 200,000 alcoholics in this country, of which 65% are Indian, 25% are Chinese and 9% are Malays. In 1988, the Consumers Bulletin reported a total of 80 deaths from drinking adulterated alcohol in the last 11 years². No community is totally free from the consumption of alcohol and alcohol-related disorders, although the Malays, comprising 53% of the population, being Muslims and having strong religious taboos, are much less affected compared to the Indians and Chinese^{3,4}.

Early hospital-based studies indicate that the Indians, who form 10% of the population, have a much higher rate for a diagnosis of alcoholism as compared to the other races, and a study⁴ done in 1980 at the General Hospital, Kuala Lumpur, showed a rate of 82.4% for Chinese and 4% for Malays over a period of 4 years, 1975-1978. A similar study by Dass³ reported ethnic findings very similar to the above and commented on the relative infrequency of the diagnosis of alcoholism, i.e., only 2% of the total psychiatric admissions.

These early studies also commented on the fact that there was underrepresentation of Chinese in the hospital population and overrepresentation of Indians and Malays⁵, the Chinese possibly preferring private medical care.

The aim of this study was, therefore, to estimate the prevalence of alcoholism and alcohol-related disorders in an inpatient hospital population and to describe the demographic data of the drinking population.

Methodology

This was a cross-sectional descriptive study of all inpatients in the orthopaedic, surgical and medical wards of the General Hospital, Kuala Lumpur — over a period of 3 months. Consent was obtained from all the subjects before the interview was conducted.

A Health System Questionnaire, which included questions on demographic data and general health, e.g., smoking, diet, exercises, past and present health, to exclude the emphasis on alcoholism, was designed. Since questions directed to alcoholism would be considered sensitive by strongly religious Muslims who might then refuse to cooperate, only the "CAGE"⁶ questions were incorporated into the questionnaire and translated into the local languages, i.e., Malay, Tamil and Mandarin, after being back-translated into English. The "CAGE" is a 4 question screening set to identify excessive drinkers among Malaysian inpatients — and is an acronym for "cut down", "annoyed", "guilty" and "eye-opener" (see Box). The validity and reliability of the "CAGE" has been published^{7,8,9}.

The inclusion criteria for the study population included all inpatients 16 years and above who had been admitted for more than 24 hours on the particular days in which the study was carried out. The unconscious, those with fluctuating levels of consciousness, the very ill and those with severe language difficulties — although reassessed later by using information from relatives and medical notes — were omitted from the main study. All the wards in each unit were screened unit by unit, which took a period of 3 months.

Two medical students screened almost all the 621 inpatient sample after a trial period during which their interrater reliability was improved⁹. They were supervised regularly by a colleague (S.A.), whose only other task was to screen out all cases with at least 1 positive "CAGE" answer and to select randomly 10% of the "CAGE" negatives and to give them to the author for a DSM III-R¹⁰ diagnostic interview. The author, besides doing a diagnostic interview, also administered 2 questions on quantity-frequency (Consumption Index)¹¹, i.e.:

- "Over the last week the week before the admission, or the week before you fell ill:
- during the time you were drinking, how many days in a week did you usually drink?
 - during the time you were drinking, how much did you drink in a week (in units)?"¹²

Units:

- 1 unit - 1/2 pint of beer (1 mug)
- 1 wine glass of wine
- 1 measure of whisky, brandy or local illicit liquor
- 1 sherry glass of sherry or fortified wines
- 1 mug of toddy or local 'tonic' wines

CAGE

1. During the time you were drinking, have you ever felt you ought to cut down on your own?
2. Have people annoyed you by criticising your drinking?
3. Have you ever felt bad or guilty about your drinking?
4. Have you ever had a first drink in the morning to steady your nerves? ("eye-opener")

Results

The prevalence of alcohol abusers/dependents, as detected by the author, was 10% (52/535). All of the 14 detected as alcohol abusers and dependents by other sources were included in the category of the 86 omitted, due to incomplete questionnaires. The total prevalence, therefore, would be 10.6% (66/621). The estimated prevalence of alcohol abusers and dependents in the "omitted" or "incomplete questionnaire group" was 16% (14/86). Only 264 (i.e., 52%) patients consumed alcohol and the prevalence of abusers and dependents in this drinking population was 25%. The prevalence rates are shown in Table I. In the context of this study, all those who had ever used alcohol were considered drinkers.

Table II shows that, although the Indians formed the largest group with alcohol dependence and abuse, there were more Chinese who drank alcohol compared to the Indians.

Although the Malays formed the lowest percentage of drinkers, they contributed to 20% of the total with alcohol abuse and dependence, which is similar to the contribution from the Chinese. In fact, the Chinese abusers/dependents formed 14% of the Chinese drinkers, the Indians 36% of the Indian drinkers and the Malays 20%.

Although no female alcohol abuser/dependents were detected in this study, 14% of the total drinkers were female (Table III).

The mean age of abusers and dependents was about 10 years older than that of the drinkers (Table IV).

Discussion and Conclusion

The prevalence of alcohol abuse/dependence at the General Hospital was 11%, which is comparable to studies elsewhere^{13,14,15,16} which quote a prevalence of 10% to 30%. It is significant that the prevalence in the drinking group, which comprises almost half the total sample, is 25%, as this indicates that the non-drinking population, mainly the Muslims, have diluted the rates for the hospital population.

Table I
Prevalence rates of alcohol abusers/dependents

	Number	Total population	%	Confidence interval
Alcohol abusers/dependents (diagnosis by author using DSM III-R criteria)	52	535	9.72	12.9 - 7.35
Total no of alcohol abusers/dependents	66	621	10.62	12.97 - 8.27
Estimated alcohol abusers/dependents in the omitted group	14	86	16.27	24.07 - 8.47
Alcohol abusers/dependents in the drinking population	66	264	25.0	30.2 - 19.8

Table II
Alcohol abusers/dependents, drinker and non-drinkers by race

	Abusers/dependents		Drinkers		Non-drinkers		Total
	n=66	(12%)	n=198	(36%)	n=284	52%)	548 (100%)
Chinese	13	(20)	78	(40)	60	(21)	152 (28)
Indian	35	(53)	60	(30)	62	(22)	157 (28)
Malay	13	(20)	52	(26)	154	(54)	219 (40)
Others*	5	(7)	7	(4)	8	(3)	20 (4)

Chi square= $p < 0.04$

Missing frequency=73 (insufficient information)

*Refers to Eurasians and other minority groups.

%Percentages of total population (n=548).

By speciality, the medical unit had the most number of abusers and dependents, i.e., 6% of the total, compared to 2.5% in the orthopaedic and 3.5% in the surgical units. The medical unit had also the most number of drinkers, i.e., 15% of the total population as compared to 8% in the orthopaedic ward and 12% in the surgical wards. The higher concentration in the medical units could reflect the higher prevalence of medical complications of alcohol abuse and dependence as compared to surgical and orthopaedic complications.

The Indians formed the highest group of abusers and dependents and this replicates studies done by earlier workers^{3,4} among hospital inpatients. However, a new trend that these figures show is the increasing number of Chinese and Malay abusers/dependents and drinkers. Earlier studies^{3,4} were retrospectively inspected case notes which accepted diagnoses made by the then doctors in charge, while in this study the diagnoses were made 'blindly' by the author and revalidated, again 'blindly' by another psychiatrist (O.K.)^{8,9}. It is possible that the earlier studies could have reported lower than actual prevalence due to under-diagnosing by doctors in charge. Considering that the Chinese have been reported to prefer private medical services⁵, they form the largest number of drinkers, i.e., compared to the Indians and Malays who are actually overrepresented in non-fee paying hospitals⁵. What is interesting is that, although there were more Chinese drinkers than Indians, significantly more Indians were abusers/dependents (53% of the total) in this hospital study. The other possibility is that the Indians were more vulnerable to the toxic effects of the alcohol they consumed, which is more often the cheaper, adulterated variety¹⁷. It is a surprising finding that the Malays, being Muslims, formed 26% of the drinkers and 20% of the abusers and dependents. This could illustrate a disturbing trend in the increasing use of alcohol among the Malays when compared to the earlier studies^{3,4}, although these earlier studies were methodologically different. Although in this 3 month prevalence study no female abusers/dependents were identified, it is not justifiable to conclude that female alcoholics were absent. Female inpatient rates at the General Hospital are generally lower than for the males⁵, primarily because of the women's need to be at home to take care of the family, being less exposed to accidents and mishaps at work and on the road

Table III
Alcohol abusers/dependents, drinkers and non-drinkers by sex.

Sex	Alcohol abusers and dependents	Drinkers	Non-drinkers	Total
Male	66 (100%)	170 (86%)	176 (62%)	412 (75%)
Female	0 (0)	27 (14%)	109 (38%)	139 (25%)
Total	66 (100%)	197 (100%)	285 (100%)	548 (100%)

Chi square= $p < 0.001$

Missing frequency=73 (insufficient information)

Table IV
Characteristics of age among the alcohol abusers/dependents, drinkers and non-drinkers

	Abusers/dependents n=66 (12.025%)	Drinkers n=198 (36.06%)	Non-drinkers n=285 (51.91%)	Total 549 (100%)
Mean age	54	45	42	44
Standard deviation	11	17	18	17
Range	24 - 82	16 - 83	16 - 83	16 - 83
Median	54	46	40	44

Missing frequency=72 (insufficient information)

and usually seeking early treatment from more indigenously accepted healers. Therefore, this female sample may not reflect the reference population.

This distribution of the abusers/dependents shows a higher preponderance of the skilled and lower occupational classes, which corresponds with the distribution for the drinkers and non-drinkers as well. The higher social classes were underrepresented primarily because they sought treatment at other private centres and so this finding does not suggest that alcoholism is low in these groups here.

Contrary to trends elsewhere¹⁸, a high proportion of abusers and dependents remained married, while a relatively higher percentage in the drinkers and non-drinkers were never married or separated. It is likely that factors like social stigma against divorce and the alcoholics still being breadwinners (only 21% of them were unemployed), would have kept the marriages together.

The abusers and dependents were significantly much older than the drinkers and non-drinkers. The abusers and dependents had a median age of 54, compared to 44 for drinkers and 40 for non-drinkers, which is significant. This illustrates the duration of time it takes for a drinker to graduate to an abuser/dependent, which is also affected by various other contributory factors, e.g., physical illness and other factors leading to poor health in old age.

This study shows that a higher percentage of abusers/dependents (16%) consume adulterated alcohol compared to 2% of drinkers. In terms of mean units of consumption per week, while abusers dependents consume 43 units of beer and 51 units of spirits they consume significantly lower amounts of adulterated liquor, i.e., 37 units per week. The drinkers, however, consumed per week, 5 units of beer, 6 units of spirits and 2 units of toddy. An assumption is that lower quantities of adulterated alcohol could contribute to alcohol abuse/dependence when compared to beer, toddy and spirits. Factors which could contribute to this include the alcohol factors, i.e., the additives or congeners in the alcohol said to be sometimes medicinal but often harmful if industrial spirits, e.g., methyl alcohol, are added to give a more potent brew. Besides this, other factors contributing to alcohol abuse/dependence include socio-economic status affecting diet and nutritional factors, other superimposed infections and even genetic factors that tip some drinkers into alcohol abuse/dependence.

There have been no studies done in the community to estimate the prevalence of alcoholism and its distribution among the races. This study suggests that Indians could be at higher risk for developing abuse/dependence and research needs to be done to identify the contributory factors. The alcohol factor is clearly an important issue, as suggested by this study, and has wide-ranging social and economic implications.

Although excessive drinking of spirits, wine and beer is not to be condoned, it is clear that adulterated alcohol produces more harm in even lesser quantities.

Acknowledgement

My gratitude to Professor Richard Heller, Professor Richard Morrice (Newcastle, Australia), Dr Ohn Khyew (Alice Springs, Australia), the Ministry of Health for permission to conduct this study and Cik Zurita Abu Kassim for secretarial assistance.

References

1. Consumers Association of Penang-Bulletin-Alcohol — A National Hazard.
2. Utusan Pengguna (Consumers Bulletin), Feb 1988.
3. Buchrich N, Haq S M, George S. *Int J Addiction* 1980;2 : 16.
4. Dass D. *Br J of Addictions* 1979;76 : 191.
5. Tan ES, Wagner NN (eds). *Psychiatry in Malaysia*. Kuala Lumpur: University of Malaysia Press, 1971.
6. Mayfield D, McLeod G, Hall P. The CAGE Questionnaire: Validation of a new alcoholism screening instrument. *Am J Psychiatry* 1974;131 : 1121.
7. An Investigation into Alcohol Related Admissions in the General Hospital. Dissertation by author accepted for the Masters in Clinical Epidemiology, Newcastle, Australia.
8. Saroja KI. Drinking guidelines for Malaysian males. *Asean J Psychiatry* 1992;2(1) : 43-5.
9. Saroja KI. Quantity Frequency versus "CAGE" in the Detection of Alcoholism. *Australia and NZ J Psychiatry* 1992;26 : 493-501.
10. DSM III: Diagnostic and Statistical Manual III of Mental Disorders (3rd ed). Washington DC, 1980.
11. Cahalan D, Cisin IH, Crossly HM. *American Drinking Practices*. (monograph No 6) Rutgers Centre for Alcohol Studies. New Brunswick, NJ, 1969.
12. Royal College of Psychiatrists. *Alcohol and Alcoholism*. London: Tavistock, 1979.
13. Moore RA. The prevalence of alcoholism in a community general hospital. *Am J Psychiatry* 1971;128 : 638-9.
14. Jariwalla AG, Adams PH, Hore BD. Alcohol and acute general medical admissions to hospital. *Health Trends* 1979;11 : 95-7.
15. Burns T, Batey R. Alcohol Consumption by Routine Admissions to a Sydney Teaching Hospital. *Aust Drugs Alcohol Rev* 1986;5 : 267-71.
16. Persson J, Magnusson PH. Prevalence of excessive or problem drinkers among patients attending somatic outpatient clinics: a study of alcohol related medical care. *Br Med J* 1987;295 : 467-72.
17. Chemistry Department of Malaysia -List of intoxicants that have been analysed - Paper k/1/87 (special) 0003.
18. *Essentials of Post graduate Psychiatry. Alcoholism*. In: Hill P, Murray R, Thorley A (eds). *Alcoholism* (2nd ed). Grune & Stratton Ltd, 1985 : 315.