[*Industrial Psychiatry Journal* (1989): (2), 1, 5]

Addiction and Industry

Alan De Sousa, *M.D., D.P.M., Ph.D.*
Hon. Prof. and Head, Department of Psychiatry,
J.J. Hospital and Grant Medical College, Bombay, India.

(Guest Lecture at the Third National Conference of Industrial Psychiatry, Ranchi, 29th Dec. 1988)

Alcoholism and Drug Dependence are on the increase in industry. A survey of a number of larger industries in Bombay showed that the better paid the industrial workers, the greater the chances of his resorting to alcohol and drugs, and it was discovered that 50-60% of the salaries of these industrial workers were spent on alcohol and drugs, while more than 70% of the industrial workers admitted taking alcohol or drugs at one time or the other. Statistics of this type may not necessarily give a true idea of the state of affairs, or the factors that contribute to Addiction in Industry, but there are eye-openers to the fact that industry is being undermined and inroaded by Addiction, which is responsible for Absenteeism, Physical Illness and Mental Illness, Inefficiency and Poor work output in industry.

Addiction puts a heavy toll on the industrial workers and above all on Industry. The World Health Organisation realised the heavy burden Addiction is placing of the physical and psychological functioning of individuals and has advised that efforts to combat Addiction should be instituted and campaigns against Addiction to Alcohol and Drugs should be combined, so that efforts and money may not be unnecessarily wasted, as it must be realised that those individuals who are addicted to Drugs today may be addicted to Alcohol tomorrow and vice versa. A number of surveys of Alcohol and Drug consumption among industrial workers are available and are worthy of mention.

Much of the data available with regard to use of Alcohol and Drug among industrial worker comes from North India (*vide Table 1*). Though the use of Alcohol and Drugs as well as Addiction is rampant in other parts of Indian especially Western India, most industries are reticent to divulge data, even if available, for fear of publication which may throw their industry in a bad light. Manoeuvres such as these only serves to increase the problem for want of the utilisation of suitable measures to prevent and root out the problem when it exists. Thus it may be interesting to note that the Employees State Insurance Scheme in Bombay though catering for more than 2 million industrial workers has no special centre for the treatment of Alcohol and Drug Addiction. It is true that these problems need measures to be instituted at the government level to control production and sale of Alcohol and Drugs as well as to mount ways and means for the prevention and cure of Addiction.

Table 1: Alcohol use among Industrial Workers

Investigator	Year	Sample	Area	Prevalence rate	Remarks
Gangarade *et al.*	1978	4000	Delhi	9.96	At least one a week
P.S. Gargi	1985	1605	Amritsar	54.4 12.0	In last 1 year ever used.

Our experience has been that our Government in keeping with the directive of the World Health Organisation are taking cognisance of the increasing menace of different forms of Addiction, the measures that are being instituted show that they have failed to understand the problems. Thus the production of alcoholic beverages in the country has increased more than 200 times during the last 20 years, the use of alcoholic beverages has increased out of proportion its use in industry, indicating that the nation has moved towards alcohol with a big bang. The availability of a drug like Heroin in our country has increased thirty folds in the last 15 years. The Commission appointed by

the Government of India in 1978 failed to take cognisance of the fact that Heroin had become available in a big way in our country which has led to the present Heroin holocaust. Governments continue to feel impotent with regard to handling these problems and accordingly it is essential that small units will have to handle the problem of addiction with their limited resources. The industrial unit is positively posited to handle this problem and we shall now discuss suggestions in this arena.

In each industrial unit, it is essential to conduct a survey to understand the extent of the Alcohol and Drug Addiction in that particular Unit. This survey should form part of a general health survey as it does not cause suspicion, ensures the co-operation of the entire family, and helps to bring the different family members closer to the researcher carrying out the survey. The Social Worker or Health Visitor is best suited as for such a survey, which should be short and obtain data ss detailed in *Table 2*.

Table 2: The tell-tale signs of Addiction in Industry are as follows:

1. Slowness in work and inefficiency,
2. Absenteeism without good cause,
3. Sleepiness and clumsiness,
4. Getting angry, irritable and cheeky easily,
5. Refusing to give in and demanding behaviour,
6. Not attending to the requirements of the family,
7. Repeated physical illness with "minor" complaints,
8. Mental illness which has a direct bearing with Addiction,
9. Poor interpersonal, inter-colleague and boss subordinate relationships,
10. Frequently coming late for work without a good excuse,
11. Moral, ethical and social deterioration,
12. Heavy unexplained debts.

Having obtained this data the next assault will be to call for particular industrial workers who from the data obtained show evidence of physical or psychological illness or any other evidence which are pointers to Alcohol or Drug Addiction as detailed earlier. They should undergo a through physical and psychological assessment, which should be supported by appropriate laboratory tests. The laboratory tests are detailed in *Table 3*. The psychological tests are detailed in *Table 4*. After these assessments, the extent of the problem of Addiction in industrial workers and the extent of damage done by alcohol or drugs would be known. The psychodynamics in some of those cases would also be clear. Industrial workers who still deny they are taking Alcohol or Drugs would have to undergo (Serum) Alcohol or Drug Estimation at the appropriate time, together with ancillary tests, which are confirmatory evidence.

Table 3: Management of the Alcoholic State
1. Assessment of:
Physical functioning by means of a through Physical examination, followed by:

a. C.B.C. and E.S.R. estimation
b. Urine (Routine) examination
c. Fasting blood sugar estimation
d. Blood urea estimation
e. Serum cholesterol estimation
f. Serum creatinine estimation
g. Serum amalyse estimation
h. Liver function tests:
   i. SGOT
   ii. SGPT
   iii. Serum bilirubin
   iv. Serum proteins
i. ECG
j. X-ray chest
k. EEG
l. Any other investigations deemed necessary.

Next comes the most difficult part of the programme, which is one of Motivation. The family and the industrial worker will have to be taken into confidence and explained that Addiction is a problem that can affect any individual and the idea of therapy is to assist the industrial worker to shed his problem and that nothing will be used against him and he has nothing to fear. In this manner his motivation will be assured and he will submit for treatment.

Denial may not only be at the level of the industrial worker but also at the level of the employer. Thus the survey attempted by the Directors of the large industry among industries in Britain and reported Glatt (1957) revealed that problem drinking among industrial workers was denied by Managers and Directors. The advanced alcoholic is generally totally incapacitated or is found out early and fired because of absenteeism, inefficiency, etc., but the less advanced one continues to attend work with fits and starts, and to be inefficient and serve as a burden to industry. The wastage in terms of lost man-power hours, faulty decision making, loss of efficiency and production,

Table 4: Psychological functioning by a thorough psychiatric examination, following if necessary by:
i. The Rorschach test
ii. The Bender Gestalf test
iii. The Thematic Apperception Test
iv. The M.M.P.I.

The management of Alcohol withdrawal is as follows:
1. Tranquillisers:
   Diazepam - 10-20 mg orally daily.

2. Hypnotics
   a. Flurazepam - 15-30 mg orally at bed time,
      or
      Nitrazepam - 10-20 mg orally at bed time.
   b. Amitriptyline - 25-75 mg orally at bed time.

3. Antiepileptics
   Diphenylhydantion 100 mg orally 3 times a day.

4. Nutrients and Correctiveness:
   a. Dextrose (5%) - 2000 cc. I.V.
   b. Vitamins - B-complex group orally and intramuscularly.
   c. Electrolytes
   d. Liv.52 - 2 tablets 3 times a day.
   e. Inj. Vitamin K-1 Ampoule intramuscularly for 3 days.
   f. Other medications as required.

5. Antibiotics – to prevent infection.

6. Psychotherapy – to improve motivation and explore personality configuration.

The Management of Drug Withdrawal should be as follows:
1. Hospitalisation in a secure institution with adequate safeguards.

2. Complete withdrawal of the drug.

3. Tranquillisers:
   Tablet Trihexyphenithyl 2 mg, three times a day.
   If required –
   Capsule Doxepin 25-75 mg three times a day.

4. Hypnotic –
   Tablet Amitriptyline 50-75 mg at bedtime.
   Capsule Flurazepam 15-30 mg at bedtime.
   If the patient is severely hallucinated during the withdrawal, give a barbiturate preparation at bedtime but for no longer than a week.

5. Antiepileptics –
   Capsule Diphenylhydantion 100-200 mg three times a day is very useful to prevent convulsion spasms, irritability, restlessness, etc.

6. Antibiotics should be given to prevent chest infection. Any patient suffering from Pulmonary Tuberculosis should be adequately treated.

7. Antacids, cough expectorants analgesics etc., may be necessary to reduce particular symptoms.

8. Nutrients and Vitamins should be given in plenty depending on the patients, individual requirement, about 2000 of Injection IV Dextrose 5% is essential for the first ten days to assist nutrition.

9. Psychotherapy for the patient and his family members should be started early and continued even after the withdrawal phase.

The utility of organisations like the Alcoholics Anonymous. Al Anon, Narcotics Anonymous should not be forgotten and efforts made to utilise and principles of these organisations for implementing Follow-up Therapy in an industrial unit. The Follow-up Therapy for Alcoholism in an industrial unit consists of:

1. Individual Psychotherapy with the patient, his wife and family members.

2. Group Psychotherapy with other alcoholics and the wives of alcoholics separately.

3. Monitoring of Disulfiram Therapy through careful supervision of administration and estimation of serum levels. For the persistent drop-outs Disulfiram implants are advised.

4. Policing of the alcoholic and even alcoholic prisons are at times useful.

5. Alcoholics Anonymous programming where available may be useful but this form of therapy cannot be used on its own.

psychological and physical absenteeism, accidents to the self and others, loss of years of training all contribute a mammoth loss to industry. Braine, B. (1980) reported that the estimated annual loss to industry in this fashion in the U.K. was £350 million. No estimates are available in India, as the effects of Alcohol and Drug Addiction are not sufficiently appreciated, but in time this realisation would be clear. Before an alcoholic loses his job it must be realised that he continues to work well below his potential for at least 10 years. Alcoholics and drug addicts are generally covered up by their managers, their colleagues and their families for fear of them losing their jobs.

Hawker *et al.,* (1967) conducted a survey of Alcoholism in industry in Britain through the questionnaire enquiry and found that 3.54 men per 1000 and 0-0.9 women for 1000 were alcoholic. Blacklaws (1980) estimated that fourteen per cent of industrial managers in an industrial establishment in Glasgow were alcoholic which was much higher than an expected incidence of Alcoholism of four per cent at the higher levels of industry. In India, it has now become a status symbol of indulge in alcohol and it would be expected that as an individual climbs the ladder and earns more, indulgence in alcohol (which could lead to Alcoholism) becomes the order of the day. Top level executives and managers in industry who are ambitious, hard working, up-and-coming, worry immensely and seel the need for a relaxant and alcohol serves as a social, interpersonal and business lubricant and these individuals learn to drink heavily to reduce social pressures. Thus working in particular positions in an industry becomes an occupational hazard. These individuals nevertheless having a good stable previous work record, a good stable personality and good social stability do very well with treatment. Trice (1969) estimated that there was an annual loss of twenty two working days in the U.S.A. by the industrial worker due to their excessive drinking compared to an absence of six to ten days absence by the average worker. The annual cost of problem drinking to the industry in the U.S.A. is estimated at one billion dollars. In India this cost must be in the region of many million rupees though still unestimated. Nevertheless this problem has to be faced in a particular way for good results.

The follow-up therapy of Drug Addiction is similar to that of Alcoholism. The only substitutes are perhaps the utilisation of Naltrexone (Trexan) in oral dosage of 50 mg daily in cases of Heroin (Brown Sugar). Dependence to serve as an antidote against Heroin, Narcotics Anonymous programming should be used in all cases of narcotic addiction, in addition to similar measures as used in Alcoholism. It is indeed a good plan to use the 'medical clinic' of an industrial unit to ensure compliance with the regular medication of Disulfiram or Naltrexone, and this system of policing ensures that the alcoholic or drug addict realises the commitment of the medical personnel and comes forward with his own commitment, and the commitment of the family members is ensured as well.

Addiction to alcohol and drugs is a problem, which is by no means easy to handle and medical officers and paramedical personnel need to be on the look-up for the early and late signs of Alcoholism and Drug Addiction as detailed in *Table 3* and *4* respectively.

The Management of Addiction in Industry is thus a tremendous task which calls for a multi pronged approach where a number of individuals medical, paramedical and administrative, do their bit to ensure sobriety. The team approach is what pays dividends and a massive alert has to be mounted to prevent the erring industrial worker returning to his old ways. Policing does help as the addict thus finds himself engulfed by individuals who are all interested in the common good and are out to do their outmost to bring out an improvement and see that the addict stays far from his habit. If programmes of this type are planned, excellent results can be obtained but they call for much labour and perseverance. It is only through that labour can results be obtained.

REFERENCES

1. BLACKLAWS, A.F. (1980) in Alcohol Problems in Employment, eds. Hore, B.D. and Plant, M.A. , London Croom Helin.

2. BRAINE, B. (1980) EVENING STANDARD, 14th OCTOBER.

3. GANGRADE, K.D. and GUPTA, K. (1978). "A Study of Drug use among Industrial Workers". A Project Report of the Delhi School of Social Workers, University of Delhi, New Delhi.

4. GARGI, P.S. (1985. Personal Communication (from Amritsar).

5. GLATT, M.M. (1957), BRIT. J. ADDICT, 54, 21.

6. HAWKER, A. *et al.,* (1967) Med. Offr. 118, 313.

7. TRICE, H.M. (1969) in Alcoholism in Industry, New York, Christopher D. Smithers Foundation.