PROFILE OF HEROIN ADDICTS IN NAGALAND, INDIA

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Abstract. A total of 395 drug addicts from Nagaland, India during 1992-1993 were studied. Of these, 331 (83.8%) were primary abusers of heroin. Mean age of the group was 21.8 years ± SD 3.84. Of these 5.2% were females. The majority were unmarried (92.1%) and 52% had completed 10 years of schooling. Drug-related school dropout rate was 72.8%. Unemployment was predominant (90.3%) in the group, of which most were never employed. Christianity was the main religion (90.9%) of the group. The mean age at first use of heroin was 17.6 years ± SD 3.68. The mean duration of dependence on heroin was 4.4 years ± SD 2.8. Heroin was injected by 80.9% subjects. Friends were the main source of introduction. Concurrent use of tranquilizers and codeine containing cough syrups was prevalent in the event of a short supply of heroin. The involvement of young, unemployed, unmarried persons in heroin addiction; widespread prevalence of the injection route and needle sharing; chronicity of heroin dependence; paucity of specialized treatment avenues and proximity to the Golden Triangle facilitating illicit traffic, have contributed to emergence of heroin addiction as a major public health problem in Nagaland.

INTRODUCTION

Heroin is the major primary drug of abuse in Southeast Asia. A WHO study (Hughes *et al*, 1980) showed that 85% of a Bangkok sample, 93% of a Penang sample and 83% of a Rangoon sample were prime abusers of heroin. Because of illegal opium production in the Golden Triangle, Southeast Asian countries have become a haven for heroin addicts. In India also, drug dependence is fast emerging as a public health problem and heroin is the prime culprit. Sarkar *et al* (1991), Shastri and Kolhatkar (1989), Wairagkar and Wahab (1993) reported the problem of heroin addiction and described the patterns. The Northeastern States of India are at more risk because of proximity to the Golden Triangle. Sarkar *et al* (1991), reported that Manipur, the state neighboring Nagaland, was estimated to have about 15,000 intravenous drug users (IVDUs) in a population of 1.8 million. With involvement of the younger population and predominance of the intravenous route, these addicts have become a high risk group for HIV/AIDS infection and other diseases.

In light of the above studies, the present study was undertaken in Nagaland of India, with the objective of studying the pattern of heroin addiction in the state.

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MATERIALS AND METHOD

Study area

The study was undertaken in the state of Nagaland which is part of northeast region of India. The state has an international boundary with Myanmar in the east, is bounded by Assam in the northwest, Arunachal Pradesh in the east and Manipur in the south. The state is a hilly region with a geographical area of 16,579 km^2. Total population of Nagaland is approximately 12 million, which is about 0.14% India's population (Luhadia, 1991). Sixteen major tribes with many subtribes inhabit the state with their own distinctive dialects and customs. Christianity is the major religion of 80% of the population, followed by Hinduism and Islam.

Methods

The drug abuse monitoring study was done with the collaborative centers in Nagaland. Three Government organizations and two non-governmental

organizations (NGOs) which were working in the field of drug addiction, either as de-addiction centers or as counseling centers, participated in this study. Collaborative centers located at Dimapur, Kohima, Mokokchung and Tuengsang covered almost the whole state geographically. Addicts reporting for treatment/counseling to these centers, during the period of one year from October 1992 to November 1993, were registered for the study. A proforma adopted from an Indian Council of Medical Research, all India Institute Medical Sciences study was used as an instrument for uniform registration. The data items included were on identification, demographic characteristics and drug abuse patterns.

During the study period, 395 addicts were registered, out of which 331 (83.8%) were primary abusers of heroin. These addicts constituted the study group for further analysis.

RESULTS

The study group varied from 11 years to 40 years of age with mean age 21.8 ± SD 3.84 years. The age group 16-25 years was the high risk group (84.3%). Only 1.2% were above age of 30 years (Table 1). Males dominated the study distribution with only 5.2% females. Of these 92.1% were unmarried, 7.5% were married, 0.4% were divorced. Christianity was the main religion (90.9%), followed by Hinduism (8.2%) and Islam (0.3%).

Only 1.5% of the subjects were illiterate. Those completing 10 years of schooling (52%) constituted a majority. The group included 2.1% graduates/professionals. The school drop-out rate was 75.8%, of which 96% was attributed to heroin addiction.

The majority (90.3%) were unemployed, of which 95% had never been employed.

The mean age of first using heroin was 17.6 years ± SD 3.68 and 82.2% had their first experience of heroin before 20 years of age. Only 2.4% had their first heroin experience after the age of 25 years; 0.9% had their first experience before 11 years of age (Table 2).

Three-fourths of the addicts were dependent on heroin for more than 2 years. The mean duration of dependence was 4.4 years ± SD 2.8 (Table 3).

Heroin, known as "No. 4" locally, was administered by the intravenous route by the majority (80.9%). Other routes being used were inhalation (16.9%), smoking (1.5%) and intra-muscular injection (0.6%). In the case of non-availability of syringes, use of ink droppers was reported for pushing the drug. Needle sharing was a widespread phenomenon, often in isolated dirty locations. A

Table 1

Age distribution of current users.

Age groups (Years)	Frequency n = 331	%
11-15	3	0.9
16-20	130	39.3
21-25	149	45.0
26-30	45	13.6
31-35	2	0.6
36-40	2	0.6

Table 2

Age at first use of heroin.

Age groups (Years)	Frequency n = 331	%
6-10	3	0.9
11-15	89	26.9
16-20	180	54.4
21-25	51	15.4
26-30	8	2.4

Table 3

Duration of dependence on heroin.

Duration (Years)	Frequency n = 331	%
< 1	29	8.8
- 2	46	13.9
- 3	48	14.5
- 4	60	18.1
- 5	39	11.8
- 6 and more	97	29.3
Notknown	12	3.6

majority (98.1%) abused the drug several times a day.

Over-the-counter codeine-containing cough syrups and tranquilizers were other drugs commonly used by heroin addicts, in case of short supply of the primary drug of abuse. Otherwise, concurrent use of other drugs by heroin addicts was less frequent. Although alcohol was known to be widely used, nobody reported it as a drug of abuse.

Peers of similar educational and employment status seemed to have more influence on the person with regard to introduction to heroin. In females, this peer influence was non-significant.

Self-reporting was a minority phenomenon (14.5%). The role of family, friends and NGOs were instrumental in bringing most persons to the treatment or counseling centers. At these centers 88.5% of the subjects were reporting for the first time, only 11.5% were on follow-up visits.

DISCUSSION

The addicts in Nagaland were younger as compared to other studies (Hughes *et al*, 1980; Fraser and Leighton, 1984; Sarkar *et al*, 1991). Only 1.2% of subjects were above 30 years in contrast to a Madurai study (Venkoba Rao *et al*, 1978). Of course this may be corroborated with higher unmarried and unemployed status in this group. Unemployment may have contributed to high school dropout rate and a low level of educational attainment. The younger group becomes the highest risk group for development of morbidity because of the potential long duration of dependence on heroin which ensues. The lower frequency of female addicts was comparable to other Indian studies (Venkoba Rao *et al*, 1978; Sarkar *et al*, 1991). This lesser frequency of females might be due to lack of peer group influence as compared to males and less chances to interact with others. Alternatively a lower rate of reporting to the treatment center might be the reason for this feature.

Christian predominance in our study seemed to be because of the population structure of Nagaland where 80% of the general population profess this religion (Luhadia, 1991). The higher drug-related school drop-out rate was in agreement with Fraser and Leighton (1984). The high drop-out rate might be due to the young age of addicts and their financial status, as most were without any earning source. This ultimately leads to a financial crisis in the family and increased criminality to provide funds for heroin purchase.

The dominance of the intravenous route was comparable with the findings of Sarkar *et al* (1991), but was in contrast with studies in Madurai, South India by Venkoba Rao *et al* (1978), who reported predominance or foil inhalation.

Concurrent use of other drugs was relatively less reported in our study. However, over-the-counter codeine-containing cough syrups were the most common drugs being used as substitutes, in case of short supply of heroin (Wairagkar *et al*, 1994). This might be another form of drug addiction to be tackled in the future.

Paucity of specialized treatment centers, unavailability of specific detoxification methods and a low level of self-reporting have increased the role of family, friends and NGOs for counseling the addicts.

Thus, the involvement of younger, uneducated, unemployed, unmarried persons in heroin addiction; widespread prevalence of the intravenous route and needle sharing; chronicity of heroin dependence; paucity of specialized treatment avenues and proximity to the Golden Triangle have contributed to the emergence of heroin addiction as a public health problem in Nagaland. Further epidemiologic studies are necessary to explore the natural history of heroin addiction in this region.

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