

HIGH-RISK BEHAVIOURS AND CONCOMITANT MEDICAL ILLNESSES AMONG PATIENTS AT METHADONE MAINTENANCE THERAPY CLINIC, HOSPITAL TENGKU AMPUAN AFZAN, MALAYSIA

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ABSTRACT

Background: High prevalence of high-risk behaviours and concurrent medical illnesses among opioid drug users would influence the outcome of Methadone Maintenance Programme. It would also require a special medical attention to contain these issues. Objectives: This study explored patients' characteristics and their high-risk behaviours in order to understand more about opioid dependent users in Malaysia.

Methods: A total of 172 patient case notes at Methadone Clinic Hospital Tengku Ampuan Afzan (HTAA) were retrieved for relevant data.

Results: Many of the patients were engaged in high-risk behaviours such as needle sharing, unsafe sex and criminal activities. A large number of the subjects had contracted blood-borne diseases such as HIV and hepatitis infections.

Conclusions: Education on the issue of medical and psychosocial complications related to high risk behaviours is essential. Medical professionals dealing with this group have to pay attention and update their knowledge on the medical issue.

Keywords: Methadone therapy, opioid dependence, high-risk behaviours.

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BACKGROUND

Chronic opiate dependence is a real menace to the Malaysian society and a threat to the mission of human capital development. The associated complications, such as HIV infections, hepatitis infections, escalating crime rates, psychosocial disabilities and drug-related psychiatric disorders, are serious medical and social problem.¹ Over two-thirds of HIV/AIDS cases in Malaysia were injecting drug users particularly heroin use.²

In Malaysia, the Methadone Maintenance Therapy (MMT) programme to treat opioid dependence was started in mid 2005. Now it has become a national programme and one of the government's strategies to combat this problem. The Ministry of Health Malaysia has directed that methadone be a heavily regulated medicine to prevent potential negative implications.³

The Methadone Maintenance Therapy (MMT) at the psychiatric clinic in the Department of Psychiatry, Hospital Tengku Ampuan Afzan was established in early 2007. Two years into the programme, we conducted an evaluation of its strengths and weaknesses in order to improve our service delivery. The outcomes of this study may also reflect positive effects of MMT programme in Malaysia in fighting the social-related problems of opioid dependence. However, the evaluation can only be done retrospectively as the same authors are also embarked on another on-going prospective study to evaluate the effectiveness of the MMT programme.

METHODS

This was a retrospective review of case records over 2 years (January 2007 to December 2008). The study was

approved by the internal review board of International Islamic University and the Ethics Committee of Hospital Tengku Ampuan Afzan, Pahang.

The Opiate Treatment Index (OTI), a structured interview designed to provide a measure of the effectiveness of drug treatments, was assessed in all patients in the MMT programme. The OTI measures 6 treatment outcomes: drug use, HIV risk-taking behaviour, social functioning, criminality, health status and psychological functioning.⁴ OTI has been used as the main tool of assessment in the MMT programme in Malaysia. In this study, we only used the first 4 selected components of the instrument. Administration of OTI was only done once during the enrolment of the subjects in the MMT programme.

The specific objectives of the study were to determine: (1) the pluralities of substance abuse; (2) the pattern of high-risk behaviours of patients attending Methadone Maintenance Treatment; and (3) the compliance rate and (4) the common doses of methadone used.

RESULTS

Table 1 shows three-quarters of the registered patients were aged between 21 and 40 years (ages ranged from 22-57 years, median 35 years). Only 3 out of 172 patients were females. About 97% of them were Malays and 98% were Muslims. Two-thirds of them were single. The majority of the patients (70.1%) were employed at the time of treatment initiation; most of them were blue collar workers. Of those who were employed, 62% indicated difficulty in securing a job.

Table 2 shows the pattern of substance misuse. Almost all of them used heroin. However, significant proportions were using other psychoactive substances: morphine 26%, benzodiazepines 23%, cannabis 42% and *ketum* leaf 19%. Two-thirds of the patient started psychoactive substance abuse at a very early life (13 to 20 years old) and the mean duration of abuse was 14 years. Half of them started to abuse drugs due to curiosity on the substance. About one in ten patients had family history of substance abuse. One-third of them had been admitted at least 3 times to rehabilitation centres.

As shown in Table 3, almost all patients were hepatitis C positive while a quarter of them were HIV positive. Most of them (90%) were intravenous drug users (IVDU), with 23% of them reported sharing needles at least once in the last one month of the enrolment. However, 46% of the patients cleaned the needles before re-using them. Four-fifths of the patients were not sexually active and 2.8% had multiple sexual partners. Among those who were sexually active,

77% never used a condom, 6% practiced anal sex during the last 1 month prior to their enrolment.

Almost all of respondents were engaged in property crimes (92%) and a few were involved in other criminal activities in a month prior to their enrolment to the programme. Nevertheless the crime-related figures may not reflect the actual situation due to substantial missing data (17%). The low percentage of involvement in crime may also be questioned because a total of 109 out of 145 patients (75%) had been in prison before. The most likely reasons for imprisonment were drug-related crimes; 30% of them had been in prison three or more times.

The initial starting dose of methadone was 25-30 mg in 76% of respondents; the maintenance dose was 35-50 mg in 65% of respondents. Two years after the commencement of MMT clinic, we found the retaining rate to the programme was 63%.

DISCUSSION

Patients enrolled in the Methadone Maintenance Programme (MMT) at the Department of Psychiatry, Hospital Tengku Ampuan Afzan, had similar characteristics to patients in other MMT centres in Malaysia such as in the University Malaya Medical Centre (UMMC).⁵ We found that both UMMC and our sites had patients who were mostly Malays, males and educated only up to secondary school level. In both centres most of the patients were employed and they were either self-employed or running a business.^{5,6} Seventy-three percent of the patients in HTAA were aged between 21 and 40 years old, while 82% of the patients at UMMC were below the age of 49 years. Majority (67%) of the subjects at HTAA were, however, single (as compared to less than half (48%) in UMMC).⁵

Previous studies have proven that patients on MMT retained their jobs and have improved overall performance.⁷ Therefore, as most of the patients (64%) were employed, ensuring quality service and improving the MMT programme of this programme may help them to retain their jobs. On the other hand, 62% of those who were unemployed stated that they had difficulty in securing a job. One of the possible reasons that we could postulate to contribution to high unemployment rate is due to the society's stigma against this group.

There are a few lessons we could learn by looking at the patterns of substance misuse. Drugs such as methamphetamine, benzodiazepines and *ketum* leaf were popular among this population as about a quarter of them were abusing these types of substance. *Ketum* leaf, an indigenous psychoactive plant (scientific name *Mitragyna*

Table 1. Demographic characteristics of patients in the MMT programme

| Characteristics | Number* (%) |
|------------------------------------|-------------|
| Age (years) | |
| 21-30 | 44 (25.6) |
| 31-40 | 82 (47.7) |
| 41-50 | 37 (21.5) |
| 51-60 | 9 (5.2) |
| Race | |
| Malay | 167 (97.1) |
| Chinese | 5 (2.9) |
| Religion | |
| Muslim | 168 (97.7) |
| Buddhist | 3 (1.7) |
| Others | 1 (0.6) |
| Marital status | |
| Single | 111 (67.3) |
| Married | 48 (29.1) |
| Divorced/widowed | 6 (3.6) |
| Educational Level | |
| No formal education/primary school | 18 (10.7) |
| Form 3 secondary school | 50 (29.8) |
| Form 5 secondary school | 95 (56.6) |
| College/graduate | 5 (3.0) |
| Employment Status | |
| Employed | 110 (70.1) |
| Unemployed | 47 (29.9) |
| Types of occupation | |
| Professional/technical/managerial | 1 (1.0) |
| Agricultural/fishery/forestry | 4 (3.8) |
| Military/police/fireman | 1 (1.0) |
| Factory worker | 12 (11.5) |
| Clerical/sales | 7 (6.7) |
| Service | 12 (11.5) |
| Own a business | 29 (27.9) |
| Others | 38 (36.5) |
| Reasons for unemployment | |
| Unable to work | 5 (19.2) |
| Unable to get a job | 16 (61.5) |
| Not applicable | 3 (11.5) |
| Housewife | 1 (3.8) |
| Student | 1 (3.8) |

*Total is variable for each subgroup due to missing data

Table 2. Pattern of substance abuse

| Characteristics | Number* (%) |
|--|-------------|
| Types of drug abuse** | |
| Heroin | 157 (96.9) |
| Morphine | 43 (26.5) |
| Cannabis | 68 (42.0) |
| Methamphetamine | 42 (25.9) |
| Benzodiazepines | 37 (22.8) |
| Codeine | 31 (19.1) |
| Glue sniffing | 4 (2.5) |
| Lysergic acid diethylamide (LSD) | 9 (5.6) |
| Ketum leaf | 30 (18.5) |
| Starting age of drug abuse | |
| 13-20 | 108 (66.7) |
| 21-30 | 50 (30.9) |
| 31-40 | 4 (2.4) |
| Reasons for drug abuse | |
| Peer influence | 58 (37.2) |
| Curiosity | 77 (49.4) |
| Stress | 17 (10.9) |
| Family problem | 4 (2.5) |
| Family history of drug abuse | |
| Yes | 19 (13.8) |
| No | 119 (86.2) |
| Source of referral | |
| National Anti-Drug Agency*** | 4 (2.6) |
| Walk-in | 89 (56.7) |
| Friend | 33 (21.0) |
| Non-governmental Organisation | 31 (19.7) |
| Admission to rehabilitation centres | |
| Never | 65 (45.1) |
| 1-2 | 38 (26.4) |
| 3-6 | 41 (28.5) |

*Total is variable for each subgroup due to missing data

**Some patients abused more than one drug

*** National Anti-Drug Agency is known as Agensi Anti-Dadah Kebangsaan (AADK) in Malay

Table 3. Health status and patterns of high-risk behaviours among drug users

| Characteristics | Number* (%) |
|---|-------------|
| Health Status | |
| Healthy | 10 (6.9) |
| Sick | 134 (93.1) |
| Hepatitis B positive | 4 (2.3) |
| Hepatitis C positive | 165 (95.9) |
| HIV positive | 40 (23.3) |
| Pattern of injection intravenous drug users | |
| 1. In the last month how many times did you inject drugs | |
| Never | 9 (6.3) |
| Once or more than once a week | 19 (13.2) |
| Everyday | 116 (80.5) |
| 2. How many times in the last month did you use someone else's needle? | |
| Never | 111 (77.1) |
| 1-2 times | 15 (10.4) |
| 3 or more times | 18 (12.5) |
| 3. How often in the last month have you cleaned your needles before re-using them? | |
| Never re-use | 35 (24.3) |
| Every time | 66 (45.8) |
| Often or rarely | 38 (26.4) |
| Never | 5 (3.5) |
| Sexual behaviours | |
| 1. How many people have you had sex with in the last month? | |
| None | 117 (81.8) |
| 1 | 22 (15.4) |
| 2 or more people | 4 (2.8) |
| 2. How often have you used condoms in the last month? | |
| No regular partner/no penetrative sex | 93 (65.5) |
| Every time | 6 (4.2) |
| Often | 1 (0.7) |
| Sometimes | 4 (2.8) |
| Never | 38 (26.8) |
| 3. How many times did you have anal sex in the last month? | |
| Never | 135 (94.4) |
| Once or 2 times | 6 (4.2) |
| 3 times or more | 2 (1.4) |
| Criminal activities | |
| 1. How many times in the last month have you committed a property crime? | |
| Never | 131 (91.6) |
| Less than once a week | 12 (8.4) |
| 2. How many times in the last month have you sold drugs to someone? | |
| Never | 136 (95.1) |
| Once or less a week | 4 (2.8) |
| Daily | 3 (2.1) |
| 3. How many times in the last month have you committed a fraud? | |
| Never | 142 (99.3) |
| Less than once a week | 1 (0.7) |
| 4. How many times in the last month have you engaged in a violent crime? | |
| Never | 141 (98.6) |
| Once a week | 2 (1.4) |
| 5. How many times have you been to prison? | |
| Never | 36 (24.8) |
| 1 - 3 times | 81 (55.9) |
| 4 - 11 times | 28 (19.4) |

*Total is variable for each subgroup due to missing data

speciosa) is popular in the east coast region of Peninsular Malaysia and South Thailand. It contains mitragynine which is an alkaloid psychoactive ingredient and produces stimulant, sedative and euphoric effects. These effects are similar to the effects of cannabis.⁸

The majority of patients started substance abuse in their teenage or young adult years. A total of 108 subjects (63%) started substance abuse before the age of 20 years and 39 subjects (23%) started during their early twenties. This indicated that teenagers and young adults are vulnerable groups and we need to focus our primary preventive efforts at a very early age. This can be done by concerting our efforts to educate the school children about the danger of drug abuse.

In terms of health, most of the patients were not well but we were unable to define or determine the causes of their illnesses. Nevertheless, almost all of them were hepatitis C positive while only 2% were hepatitis B positive. A substantial amount (23%) of the respondents was HIV positive.

High-risk behaviours such as sexual practice, needle sharing and criminal activities were also important factors. The majority (67%) of the subjects were single, and this may be the reason that 68% of them never had sex a month prior to the survey. Only 2.4% had multiple sex partners. A total of 4.7% practised anal sex within a month prior to their enrolment. There may have been more patients involved in deviant sexual practices and they may have refused to disclose this information (missing data in 17% of respondents).

The other high-risk behaviour was intravenous drug use. A total of 83% of the subjects had drug injected into their body in the last one month prior to their enrolment. Needle sharing was very common among this group and about 20% of the patients who shared a needle either used the needle after someone used it or another person used the needle after the patient used it. This figure is however low as compared to a study in Kelantan, 84% of drug users shared their injecting equipment.⁹ There was, however, an awareness about the importance of cleaning needles before reusing as 45% of the respondents cleaned their needles before reusing. Although a small percentage of them admitted to any criminal activities, previous records revealed that more than half of them had been imprisoned in the past. We conclude that this group practiced high-risk behaviours such as needle sharing, unprotected and deviant sexual activities and criminal activities. Based on all this facts, this clearly reflected the urgency to stress the

importance of healthcare and medical intervention to contain their concurrent medical illnesses. Continuous education to address the risk of transmission among this group and their partners is a real need. A study in the past suggested that education on risk-taking behaviours through the media remains an essential approach.¹⁰

This study recorded that majority of the patients required dose of methadone between 30 to 50 mg per day. However in UMMC the dose required was lower. It was ranging from 10 mg a day to the maximum of 45 mg a day after 3 months in the programme at UMMC.¹¹ The highest reported dose of methadone was 580 mg per day, while in the UK most of the patients only needed doses of less than 50 mg per day to reduce withdrawal symptoms.¹²

In this study, we could not conclude that the MMT programme at HTAA is effective in combating the negative implications of opioid dependence. However other studies have shown that there is strong evidence of methadone's effectiveness in reducing illicit drug use, crime rates, HIV transmission and mortality.^{13,14} A prospective study is essential to evaluate this issue.

There are some limitations in this study as it was a retrospective review of the patients' case notes. Hence it was subjected to recall bias or incomplete data. However in this study we found that most of the required data were available.

CONCLUSION

As these drug users practised high-risk behaviours such as needle sharing, using unclean needles and engaging in unprotected sexual activities, education and addressing these issues through media and public forum are important. We may also focus the education effort by using small group discussion targeting the IVDU community.

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Research Digest

GPs in Penang need more education about the concept of bioequivalence

Chua GN, Hassali MA, Shafie AA, Awaisu A. A survey exploring knowledge and perceptions of general practitioners towards the use of generic medicines in the northern state of Malaysia. Health Policy 2009 [no volume and page numbers yet]

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In this questionnaire survey of GPs in Penang, the authors found that the majority of respondents actively prescribed generic medicines. However, these GPs still have concerns regarding the reliability and quality of such products. Their knowledge about the concept of bioequivalence appeared to be suboptimal.

Bed sharing between mothers and infants is less common among the Chinese

Tan KL. Bed sharing among mother-infant pairs in Klang district, Peninsular Malaysia and its relationship to breast-feeding. J Dev Behav Pediatr. 2009;30(5):420-25.

Affiliation of first author: Department of Community Medicine, International Medical University

This was a cross-sectional study involving 682 mother-infant pairs with infants up to 6 months attending government clinics in Klang district, Peninsular Malaysia. The prevalence of bed sharing was 73.5% (Malays 83.4%, Chinese 38.3%, Indians 78.0%). Bed sharing was associated with breast feeding.