Original Article

Profile of Clients Attending a Methadone Clinic

Sabrina Anne Jacob[1], Fauziah Mohammed[2], Mohamed Azmi Ahmad Hassali[3]

[1] *School of Pharmacy, Monash University Malaysia, Jalan Lagoon Selatan, 46150 Bandar Sunway, Selangor, Malaysia*

[2] *Department of Psychiatry and Mental Health, Hospital Tengku Ampuan Rahimah, Jalan Langat, 41200 Klang, Selangor Malaysia*

[3] *School of Pharmaceutical Sciences, University Science Malaysia, 11800 Minden, Penang Malaysia*

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Abstract

***Background*: Client characteristics provide useful information for designing programs that target individuals with risk factors for substance use and for determining client retention. Therefore, this study examined the profiles of clients attending a methadone clinic.**

***Methods:* A cross-sectional analysis of clients of a methadone clinic was conducted through a survey to obtain a profile of methadone clients.**

***Results:* Of the 51 patients who responded (response rate: 66.2%), the mean (SD) age at which they started substance use was 19.8 (5.1) years. Friends were cited as the most regular source of drugs (82.4%), and heroin was the most commonly used drug (98%). Daily substance use was reported by 72.5% of the respondents; 23.5% admitted to having stolen money to purchase drugs; 92.2% tried quitting substance use on their own and 98% stated that the main reason for registering at the clinic was that they wanted to stop their drug dependence. Approximately 60% of clients were receiving methadone doses of less than 60 mg/day.**

***Conclusion:* Heroin is still the most popular drug of abuse and most clients still receive methadone doses below the recommended level, despite evidence of poor patient retention rates associated with these low doses.**

Keywords: *methadone, profile, substance use, patient appointments, Malaysia*

Introduction

Patient characteristics have been found to have important implications for the utilisation of services provided by methadone clinics (1). Studies have shown that treatment outcomes reflect the unique combination and interaction of patient and program characteristics (2,3). Therefore, it is imperative to obtain a profile of this patient subset to determine how patient characteristics affect or influence their utilisation of or response to the treatment and services provided. This information can then be used to make programmatic modifications to optimize each individual's treatment outcome (2,3). In addition, client profiles provide a database enabling the identification of target groups for health programs. Examining the demographic patterns of those who are most likely to abuse drugs, practitioners can design and conduct programs aimed at the target demographic. A similar approach has been applied to other diseases such as cardiovascular disease and diabetes (4–6).

According to a study in The Lancet, of the 15.9 million injection drug users (IDUs) throughout the world, approximately 3 million are HIV-positive (7). In Malaysia, according to the most recent data obtained from the National Anti-Drug Agency, a total of 126 153 drug users were recorded in the period of 2000–2008, with an average of 14 017 new drug users every year (8). In addition, according to the Ministry of Health's (MOH) statistics, 55 534 of the 180 000 detected IDUs were infected with HIV in December 2006 (9).

In 2005, the MOH started its methadone maintenance therapy (MMT) program in an effort to curb HIV transmission among intravenous drug users (IVDUs) in Malaysia (10,11). While

MMT has faced numerous protests and criticism by various parties claiming that it encourages crime, several studies have found that, on the contrary, it not only reduces the risk of HIV but also decreases criminal activities by IVDUs. The World Health Organization (WHO) observed that MMT reduces heroin use, associated deaths, HIV-risk behaviours as well as criminal activity. It has also been found to be associated with a reduced frequency of injections, reduced number of patients who injected drugs and improved employment situations (3,12–17).

However, methadone clinics have experienced low patient retention rates, with studies showing drop-out rates as high as 50% in the first month (18,19). High drop-out rates result not only in reduced treatment effectiveness but also in the under utilisation of resources and equipment, as well as a subsequent increase in crime rates and the risk of HIV infection and transmission (18,20). Hence, a high retention rate is key to a successful MMT program and is associated with better outcomes (18). Thus, if we can identify the client characteristics associated with attrition, we can pay more attention to these clients to ensure their continued attendance at the clinic. Moreover, special programs can be designed that are targeted at this subset of patients to prevent their drop-out (18,21).

This study was conducted to obtain a profile of the clients currently receiving treatment at the methadone clinic of a tertiary care hospital in Malaysia, as well as to determine these clients' satisfaction with the program itself and the services provided at the clinic. This paper presents data on clients' profile at this clinic.

Materials and Methods

Study Design

This study was a cross-sectional survey of clients registered at the methadone clinic of a tertiary care hospital in Malaysia. Ethics approval was obtained from the Medical Research Ethics Committee of Malaysia. All active clients currently attending the methadone clinic were included in the study. The following were excluded from the sample: (1) clients who had been transferred to other facilities; (2) clients who had stopped attending voluntarily and were no longer receiving treatment at the clinic; (3) clients who had absconded; (4) clients whose privileges had been terminated due to breaking clinic rules and regulations and (5) clients who had been irregular in attending follow-up appointments at the clinic.

All active clients in the clinic were approached and asked if they were interested in participating in the survey. Those who fulfilled the inclusion and exclusion criteria and agreed to participate were asked to read and sign informed consent forms. The study coincided with methadone dispensation so that patients were not required to make an additional visit to the clinic. Clients were asked to complete a 109-item self-report survey form designed specifically for this study. To guarantee anonymity and prevent bias, clients were instructed not to mention their personal information, such as name, identification card number or any other details, on the form. Researchers were available to explain any difficult terms or questions to the clients. After completing the form, respondents were asked to place it in the box provided, which was then collected by the research staff. Clinic staff did not have any access to the completed survey forms.

Study Instrument

The survey form is a 109-item anonymous self-report survey designed specifically for this study. It was developed by researchers and contained information gathered from previous literature reviews and interviews with the methadone clinic staff (2,3,22). The survey form consisted of several sections, namely, basic demographics, medical information, substance use and criminal history, evaluation of the treatment program, and history of service utilisation. To check for face and content validity, the survey form underwent a three-round Delphi iteration, involving healthcare professionals from the Psychiatry Department of the same hospital. The survey form was also pilot-tested on 10 clients attending the methadone clinic to assess their comprehension of the survey and the time taken to complete it. Data from these 10 clients were included in the final analysis. The survey form took approximately 30–45 minutes to complete and was available in both Bahasa Malaysia and English.

Data analysis

Data were presented using descriptive statistics and all analyses were performed using SPSS 18.

Results

Client demographics

Of the 77 active clients, 24 were unable to read and write and two refused to participate without giving any reason, leaving a total of 51 respondents (response rate: 66.2%). The youngest patient was 26 years of age and the oldest was

64. Most patients (60%) had started abusing drugs before the age of 20; one patient reported starting as early as age 13. Approximately 15% of patients had abused drugs over a period of 20 years. HIV (7.8%) and Hepatitis B/C (17.6%) were the most commonly reported comorbid infectious diseases, while anxiety was the most commonly reported psychiatric disease (11.8%). None of the patients with a comorbid psychiatric disease were receiving any treatment at the time of the survey (Table 1).

History of abuse (non-drug related)

Three patients reported abuse by a family member or friend during their childhood; of these, only two confided in family members and the other did not seek any form of treatment. Of the two patients who were abused by unknown people during their childhood, one sought help from a counsellor while the other did not seek any form of treatment (Table 2).

History of substance use

With regard to reasons for substance use, among those who selected 'Others', one patient indicated 'increase their income' while one stated 'constant cravings' as the reason (Table 3). More than 60% of clients had a history of imprisonment, with the main reasons being drug-related (84.4%) and robbery/theft (43.8%). Among the clients with a history of imprisonment, 75% had gone to prison fewer than 5 times, whereas four patients (12.5%) had been imprisoned more than 10 times.

The methadone clinic

Table 4 shows that the predominant reason why clients came to the methadone clinic was their desire to stop abusing drugs. Nearly 80% of clients found out about the clinic through family members and friends who are drug addicts; while approximately 30% obtained information from the National Anti-Drug Agency (NADA), reading materials, the prison, the psychiatric clinic, television in the health clinic, or a partner. Approximately 65% of patients were satisfied with their current methadone dose; of these, 2 patients were receiving doses of less than 20 mg/d, 7 were receiving between 21 and 40 mg/d, 11 were receiving between 41 and 60 mg/d, 9 were receiving between 61 and 80 mg/d and 4 were receiving between 81 and 100 mg/d. Of those who were not satisfied with the current methadone dose, 90% preferred a lower dose. A substantial amount of patients (62.8%) also preferred 'take-away doses' over 'mobile clinics' (7.8%) and 'take-home doses' (35.3%).

Discussion

Client demographics

A male preponderance is a common finding in studies of clients at methadone clinics (23–30), and men have also been found to have a higher likelihood of dropping out of the program (18,31,32). In addition, the majority of clients were between 30 and 50 years of age, i.e. a socially and economically productive age group (23,33,34). This highlights the importance of ensuring adequate and effective treatment as well as patient retention, considering the impact on population growth as well as economic stability of the country (32).

Our findings were similar to those reported in the National Anti-Drug Agency's 2012 report, as well as several other studies conducted in Malaysia, where the majority of patients were of Malay ethnicity (24,28,29,34,35). This could simply be a reflection of the racial distribution in this country where Malays make up more than 60% of the population (36).

More than 70% of clients had received secondary education, whereas only one client in the sample had received tertiary education. This finding is again similar to the results of other studies conducted in Malaysia; the primary explanation could be that most clients started abusing drugs in their teenage years, causing them to drop out of school (24,26,28,30,35,37). Ezat et al., in a study assessing the compliance of 288 clients with MMT, found that younger clients tend to be more frequently noncompliant with treatment (28). Older clients, on the other hand, are more keen to rid themselves of the habit as most of them are married and have greater responsibilities (29). Given the early onset of substance abuse, preventive programs should begin early and target teenagers to prevent continuous use and, as a result, a higher risk of contracting diseases such as HIV (32).

Having a spouse or partner was significantly associated with longer patient retention rates (25). This result is consistent with those of previous studies, which found that clients who had never married were more likely to drop out of the program (18,32). More than 60% of our clients were married, but closer attention should be paid to retaining unmarried clients.

Psychiatric comorbidity was a common observation in this subset of patients (18,24,26). In a study by Baharuddin et al., involving 108 clients attending the drug clinic at Kuala Lumpur Hospital, more than 40% of patients were depressed. None of the clients in our study

Table 1: Demographic characteristics

Characteristics	Number of patients (%)
Gender	
Male	45 (88.2)
Female	4 (7.8)
Missing	2 (3.9)
Race	
Malay	41 (80.4)
Chinese	4 (7.8)
Indian	4 (7.8)
Other	2 (3.9)
Mean (SD†) age in years	39.8 (8.9)
Age groups	
< 30 years old	4 (7.8)
31–39 years old	18 (35.3)
40–49 years old	11 (21.6)
50–59 years old	6 (11.8)
> 60 years old	1 (2.0)
Missing	11 (21.6)
Mean (SD†) number of years in Methadone Clinic	2.2 (1.1)
Mean (SD†) age started substance use in years	19.8 (5.1)
Mean (SD†) duration of substance use in years	17.3 (7.4)
Marital status	
Married	33 (64.7)
Single	14 (27.5)
In a relationship	3 (5.9)
Missing	1 (2.0)
Education	
Secondary	37 (72.5)
Primary	5 (9.8)
College	4 (7.8)
No education	3 (5.9)
University	1 (2.0)
Postgraduate	0 (0.0)
Missing	1 (2.0)
Work	
Employed	40 (51.0)
Unemployed	2 (3.9)
Retired	1 (2.0)
Other	1 (2.0)
Student	0 (0.0)
Missing	7 (2.0)

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(Table 1 continued)

Individual monthly income	
RM0	5 (9.8)
< RM500	12 (23.5)
RM500 – 1000	13 (25.5)
RM1001 – RM1500	14 (27.5)
RM1501 – RM2000	4 (7.8)
> RM2000	0 (0.0)
Missing	3 (5.9)
Family monthly income	
RM0	2 (3.9)
< RM500	5 (9.8)
RM500 – 1000	8 (15.7)
RM1001–RM1500	9 (17.6)
RM1501 – RM2000	7 (13.7)
> RM2000	9 (17.6)
Missing	11 (21.6)
Comorbid psychiatric diseases	
Anxiety	6 (11.8)
Obsessive compulsive disorder	5 (9.8)
Panic disorder	5 (9.8)
Depression	4 (7.8)
Schizophrenia	1 (2.0)
Smokers	
Yes	46 (90.2)
Quit	2 (3.9)
No	1 (2.0)
Missing	2 (3.9)
Alcohol drinkers	
No	21 (41.2)
Yes	16 (31.4)
Missing	14 (27.5)

† SD = standard deviation.

were receiving any psychiatric care at the time, and this is worrying because the combination of mood disorders with drug use could increase the risk of suicide (35). Thus, proper diagnosis and treatment are certainly imperative.

Borisova et al. (20), found a relationship between race and clinic attendance, with African Americans showing lower attendance levels than Caucasians. No study on the influence of race on retention rates in Malaysia has been conducted; this needs to be addressed in future studies.

History of substance use

The main drug of abuse among our clients was heroin, which was used by nearly all the clients (98.0%). This was followed by cannabis (49.0%), benzodiazepines (35.3%), amphetamine-type stimulants (ATS) (35.3%) and morphine (31.4%). In a 2012 study by the NADA, heroin was the most commonly abused drug in Malaysia (48.18%) (24). However, the rate of abuse of other drugs differed from that in our population, as the NADA found morphine to be the second most

Table 2: History of abuse (Non-drug related)

	Number (%) of patients
Abuse by family/friend	
No	41 (80.4)
Yes	3 (5.9)
Missing	7 (13.7)
Type of abuse by family/friend	
Sexual	2 (3.9)
Physical	1 (2.0)
Missing	7 (13.7)
Abuse by unknown person	
No	35 (68.6)
Yes	2 (3.9)
Missing	14 (27.5)
Type of abuse by unknown person	
Sexual	1 (2.0)
Physical	1 (2.0)
Missing	14 (27.5)

Table 3: History of substance use

	Number (%) of patients
Method drugs were obtained	
Friends	42 (82.4)
Pusher	1 (2.0)
Family members	14 (27.5)
Missing	1 (2.0)
Drugs of abuse	
Heroin	50 (98.0)
Cannabis (“Ganja”)	25 (49.0)
Benzodiazepine	18 (35.3)
Amphetamine-type stimulants (ATS)	18 (35.3)
Morphine	16 (31.4)
Codeine	13 (25.5)
Gum	9 (17.7)
Lysergic acid diethylamide (LSD)	2 (3.9)
Others (Cocaine)	1 (2.0)
Frequency of substance use	
Daily	37 (72.5)
More than once daily	11 (21.6)
Once in 2 weeks	2 (3.9)
Twice a week	1 (2.0)
Once a week	0 (0.0)
Once a month	0 (0.0)

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(Table 3 continued)

Reasons for abuse	
Out of curiosity	24 (47.1)
Influenced by friends	24 (47.1)
Stress	10 (19.6)
For fun	10 (19.6)
Tricked into trying	2 (3.9)
Others	2 (3.9)
Influenced by family members	1 (2.0)
For health reasons	1 (2.0)
Forced	0 (0.0)
Method of taking drugs	
Oral	29 (56.9)
Inhalation	24 (47.1)
Intravenous (IV)	22 (43.1)
Family members who are also drug addicts	
Siblings	8 (15.7)
Cousin	5 (9.8)
Father	2 (3.9)
Uncle	2 (3.9)
Aunt	1 (2.0)
Nephew	1 (2.0)
Mother	0 (0.0)
How drug was purchased	
Used own money	47 (92.2)
Borrowed money from family members	15(29.4)
Stole money	12 (23.5)
Borrowed money from friends	8 (15.7)
Incidents of overdose	
Yes	26 (51.0)
No	19 (37.3)
Missing	6 (11.8)
Number of times overdosed	
More than twice	17 (65.4)
Twice	8 (30.8)
Once	4 (15.4)
Missing	6 (23.1)
Frequency of admission to drug rehabilitation centre	
Never	26 (51.0)
< 5 times	20 (39.2)
5 times or more	0 (0.0)
Missing	5 (9.8)
Tried to quit taking drugs on own	
Yes	47 (92.2)
No	1 (2.0)
Missing	3 (5.9)

Table 4: Methadone clinic

	Number (%) of patients
Reasons for registering at Methadone Clinic	
Personally want to stop drug dependence	50 (98.0)
Influenced by family members	22 (43.1)
Free methadone	18 (35.3)
Influenced by friends	15 (29.4)
Cannot afford drugs outside	9 (17.7)
Forced by family members	3 (5.9)
Forced by friends	2 (3.9)
Forced by police	1 (2.0)
How clients found out about Methadone Clinic	
Family members/friends who are addicts	40 (78.4)
National Anti-drug Agency (NADA)	7 (13.7)
Other	7 (13.7)
Family members/friends who are not addicts	5 (9.8)
Non-governmental organizations (NGOs)	4 (7.8)
Police	3 (5.9)
Referred from National Syringe Exchange Program	1 (2.0)
Missing	1 (2.0)
Number of times relapsed after joining Methadone Clinic	
Once	17 (33.3)
More than twice	13 (25.5)
Never	10 (19.6)
Twice	9 (17.6)
Missing	2 (3.9)
Current methadone dose	
< 20 mg/day	2 (3.9)
21–40 mg/day	13 (25.5)
41–60 mg/day	15 (29.4)
61–80 mg/day	10 (19.6)
81–100 mg/day	7 (13.7)
101–120 mg/day	2 (3.9)
121–140 mg/day	0 (0.0)
Missing	2 (3.9)

commonly abused drug (31.38%), followed by marijuana ('ganja') (11.97%), methamphetamine ('syabu') (7.79%) and ecstasy (< 1%) (24). These results also substantially differ from those reported in other countries. Boys et al. (38), who studied drug use among young people in the United Kingdom (UK), found that cannabis had the highest prevalence (96.2%), followed by amphetamine sulphate (51.6%), cocaine (50.5%), ecstasy (48.6%), lysergic acid diethylamide (LSD) (25%), and heroin (12.6%). The authors suggested that the high rate of cocaine use could be related to the focus on ecstasy prevention in the UK. In a study of 24 adults in the United States (US), the most commonly used drug was cocaine (46%), followed by heroin/opiates (38%), alcohol (13%)

and hallucinogens (4%) (18).

Heroin has been the main drug of abuse in Malaysia since the 1970s with a steady rise in use each year (24,30,39,40). More than 80% of clients had been imprisoned because of drug-related crimes, which is not surprising since addicts commonly commit crimes to obtain resources to purchase drugs (12). Thus, perhaps current prevention programs should be revamped and there should be an increased focus on the development of more effective prevention programs that target substance use, specifically heroin, similar to those provided in the UK for ecstasy (38).

Nearly 50% of clients claimed that they started abusing drugs due to the influence of friends, and more than 80% obtained drugs from their friends. Studies assessing the reasons for substance use have consistently found that friends play a substantial role in introducing people to drug use (24, 38, 41, 42). Indeed, the average age at which our clients started abusing drugs was around their mid-teens to mid-twenties, an age when people often exhibit little capacity to resist the influence of peers (43).

Thus, as mentioned earlier, education and prevention programs could especially seek to address the impact of friends and peers (38). More specifically, these programs could be held in schools and colleges where the pressure to fit in and 'belong' is usually the strongest, often leading students to begin smoking or drinking alcohol. These programs can encourage friends to disapprove drug use by peers, a method that has been shown to protect adolescents from drug use (41). Social networks such as Twitter and Facebook should also be utilised, as is currently done by the Substance Abuse and Mental Health Services Administration (SAMHSA) in the US (44). Current efforts worldwide have focused on reducing the availability of drugs, an approach that has proven unsuccessful and ineffective as there are several sources from where these youths can obtain drugs. A more effective method, therefore, would be to create alternative healthy ways for young people to obtain pleasure such as enjoyable after-school programs (41).

The methadone clinic

It is encouraging to note that a vast majority of clients registered at the clinic because they personally wanted to stop their drug dependence. Moreover, almost 50% emphasised the influence of family members, thereby highlighting the importance of social support in the rehabilitation of these patients.

With regard to methadone dosage, the recommended minimum dose required to achieve the optimum therapeutic effect of methadone is 60 mg/d, but in our study more than 50% of patients were receiving doses below that, which is similar to the results of a national panel study conducted in the US (45–47). Not only does appropriate methadone dosing ensure patient safety and successful treatment outcomes but it also has significant influence on client retention rates (32,48). Even though more than 60% of our clients were satisfied with their current dose, higher daily maintenance doses (specifically, greater than 60 mg/d) have been shown to be associated with longer treatment duration (19). When compared with those on lower doses, patients on higher doses have been shown to stay in treatment longer, use less heroin and other drugs and have a lower incidence of HIV infection. In fact, some patients need even higher doses for fully effective treatment (49).

An observational study of 351 patients in the UK receiving methadone maintenance compared with those receiving methadone dose reduction reported the following retention rates: 88% vs 86% at one month, 71% vs 58% at two months, 62% vs. 50% at one year and 42% vs 30% at 2 years (50). A more recent study in Indonesia found that clients with doses greater than 60 mg/d were significantly more likely to be retained in MMT, supporting the results of similar previous studies (27). In a six-month follow-up study of 64 clients on MMT in Malaysia, higher doses resulted in significantly better retention rates ($P < 0.0001$) and a reduction in re-injecting behaviour ($P < 0.001$). 80% of those who were retained in treatment were on a dose of 80 mg/d or more. The authors postulated that a daily dose of 80 mg will offer a probability of 0.8 that the patient will be retained in treatment. The high number of clients in our study who responded that they were happy with their current dose could be explained by their fear of repercussions such as being kicked out of the program. It is highly recommended that clinics review their clients' methadone doses thoroughly and change them appropriately to reduce the number of client drop-out in the future.

Remaining in treatment for a sufficient period of time is vital for effective treatment (35). Studies conducted in Malaysia have also shown that MMT programs are associated with improved health-related quality of life, particularly among those who remained in treatment for six months or more (29,30). However, most studies involving the Malaysian population have reported dismal

retention rates (32). Hence, high-priority efforts should be undertaken to address factors that have been shown to impact retention rates such as low methadone doses and lack of social and economic support.

One limitation of this study was the use of closed-ended questions, which might have limited patients' responses, even though they were given the option of selecting 'Others' and then explaining in further details. Furthermore, the sample size was small and the response rate was affected by language barriers, as most clients had either very poor comprehension of English or Bahasa Malaysia, could speak only in their own mother tongue (often Tamil or Chinese), or were illiterate. These considerations could limit the generality of these findings. The relatively homogenous population, especially in terms of race and gender, also did not allow the use of proper inferential statistics.

Conclusion

In conclusion, heroin is still the most popular drug of abuse and friends have been cited as a major influence in substance abuse. In addition, a majority of clients were still receiving methadone doses below the recommended level, despite evidence regarding the risk of poor patient retention associated with these low doses. Data obtained from this study can be used within the healthcare system to design targeted programs that can engage clients, ensure client satisfaction and increase retention rates. Data can also be used by governmental organisations in targeting prevention programs toward individuals who are vulnerable to substance abuse. A prospective, multi-centre study should be undertaken in Malaysia as it would be more effective in assessing factors related to retention rates in MMT programs.

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Conflict of interest

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Correspondence

Dr Sabrina Anne Jacob
B Pharm (Hons) (USM), MClin Pharm (USM), PhD Clinical Pharmacy (USM)
School of Pharmacy
Monash University Malaysia
Jalan Lagoon Selatan
46150 Bandar Sunway
Selangor, Malaysia
Tel: +6016-288 1425
Fax: +603-5514 6364
Email: sabyj@hotmail.com

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