

Methadone Maintenance Therapy: Malaysian public awareness

Roz Azinur Che Lamin*, Nursyuhadah Othman,
Mohd Izani Othman

Faculty of Pharmacy,
Universiti Teknologi MARA, Bertam Campus, 13200 Kepala Batas, Penang, Malaysia.

roz.azinur@ppinang.uitm.edu.my

Abstract

Methadone maintenance therapy (MMT) was first introduced in 2005 by the Ministry of Health, Malaysia as a therapy to enhance drug addicts' quality of life. This study is to access the public awareness and behavior towards MMT program whereby a self administered questionnaire was distributed to the respondents in a public hospital. The data obtained were analyzed using SPSS version 16. The finding shows that only 23.9% of respondents are aware of this program and majority of the respondents suggested continuous improvement on MMT program. In conclusion, the low awareness level of MMT program amongst public in Malaysia is might be due to limited campaigns and information.

Keywords: Methadone maintenance therapy, Malaysia, drug addict, awareness.

eISSN 2514-7528 © 2018. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., UK. This is an open-access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>). Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

DOI: <https://doi.org/10.21834/jabs.v4i15.57>

1.0 Introduction

Methadone is a synthetic narcotic, used to relieve severe pain and mostly function as a substitution therapy to opiates dependents. Methadone has been proven to reduce the intensity of withdrawal syndrome and craving for opiates, prevent the side effects of opiates addictions and reduce risky behaviors for infections related to sharing needles (MOH, 2005). The risk of sharing drug injection can expose direct blood contact and it is particularly an efficient mean of transmitting the virus such as HIV and hepatitis (Mohamad, 2010, Ramli *et al.* 2012). Methadone is able to help the drug abstiners to improve their quality of life and reduces drug related crimes (Joseph *et al.* 2000).

Many countries have implemented MMT and it was first implemented in Malaysia in October 2005 by Ministry of Health, Malaysia (MOH, 2005). MMT program plays the role of preventing drug abstiners from taking the illicit drug by joining this program voluntarily. Previous report stated that the drug abuse abstiners relapse rates were high with almost 70% to 90% of them tend to relapse within the first year following discharge from National Anti Drugs Agency (NADA) institutional treatment and rehabilitation programs (Mahmud *et al.* 2006).

2.0 Literature Review

Methadone maintenance therapy (MMT) program has shown positive outcomes to the participants in the district of Tampin, Negeri Sembilan (Ramli *et al.* 2012). MMT associated psychosocial programs to drug addicts to ensure the fullest potential in improving their quality of life (Nizam 2010). Participants' compliance with MMT program might help themselves from relapse as well as overcoming other health disorders such as depression, anxiety and psychiatric disorder. This will then lead the participants to achieve a good quality of life.

In Malaysia, there are several institutions responsible for organizing the MMT program such as government and private hospitals, clinics, community drug rehabilitation centers and prisons. In order to improve their number of drug addict abstiners, MOH has come out with the MMT operational documents such as policy, guidelines and training modules to help the rehabilitation amongst the drug addicts (Naziah, 2011). Even though the targeted group has improved statistically, the public awareness of the better living and caution with the MMT program is still remain uncertain. The purpose of this study is to assess the level of awareness on MMT program among public in Malaysia.

3.0 Methodology

This was a cross-sectional study conducted at one hospital in Selangor, Malaysia. The visitors at the Out Patient Pharmacy Department (OPD) were randomly selected as population study. Based on this estimated proportion, with an alpha of 0.05 and 95% confidence interval, 384 subjects would be required. A total of 285 volunteers participated in

this study by answering questionnaire. There are two parts of the questionnaires, part one consists of demographic questions and part two consists of MMT awareness assessment.

4.0 Results and Discussion

The distribution of the respondents' socio demography and the response outcomes are shown in Table 1. The total numbers of female respondents were 166 and male respondents were 119. Table 1 also shows that 51.6% of respondents were Malays, 19.0% and 27.4% were Chinese and Indians respectively while 2.1% represented other ethnics

Out of 285 respondents, only 68 respondents (23.9%) claimed that they were aware of MMT program because most of them have health education background and have worked in health industries previously. The highest response that are aware of MMT program was at the age range of 20 to 29 years old. Comparison among gender awareness level was almost equal between males and females (i.e. 11.2% and 12.6% respectively).

In this hospital, there were several methods of addressing the MMT information to the public. The highest viewed or accessible information channel was through television (44.1%). Television, in this contact was a local video of MMT campaign presentation by pharmacy department unit, which was more user friendly and could be watched by the visitors at this department. Besides that, information about MMT program was also published periodically in local newspapers and internet to convey the information regarding MMT. From our findings, the second highest accessible media was the newspapers (38.2%) followed by the internet (17.6%).

Table 1: Socio-demographic characteristics of the respondents and their responses.

Factor	Number of response to MMT program				Mean \pm sd
	Yes	(%)	No	(%)	
Age					
<20	1	0.4%	11	3.9%	37.6 \pm 9.96
20-29	29	10.2%	33	11.6%	
30-39	19	6.7%	82	28.8%	
40-49	15	5.3%	64	22.5%	
>49	4	1.4%	27	9.5%	
Sex					
Male	32	11.2%	87	30.5%	
Female	36	12.6%	130	45.6%	
Ethnic					
Malay	39	13.7%	108	37.9%	
Chinese	9	3.2%	45	15.8%	
Indian	18	6.3%	60	21.1%	
Others	2	0.7	4	1.4%	
Education/working background					
Health related	45	15.8%	22	7.7%	
Non-health related	23	8.1%	194	68.1%	
MMT information channel					

Television (internal video)	30	44.1%
Internet	12	17.6%
Newspaper	26	38.2%
Magazine	0	0%

(Source: Roz Azinur C.L 2013)

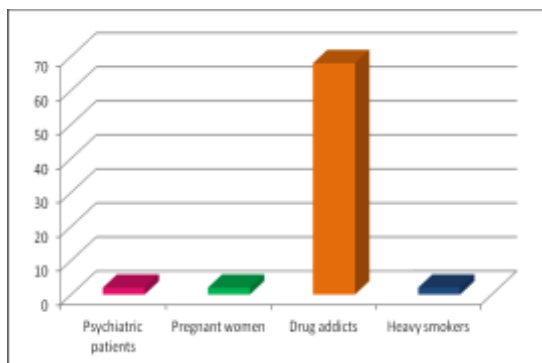


Figure 1. Assessment of respondents on methadone maintenance program therapy target group
(Source: Roz Azinur C.L 2013)

The knowledge of these 68 respondents was then further assessed into part 2 i.e. the MMT program questionnaire. Figure 1 shows that all 68 respondents were aware of the target group of MMT program i.e. the drug addicts. However, there were few respondents who misunderstood the purpose of this program such as for psychiatric disorder, pregnant women and cigarette addiction treatment. Meanwhile, there were studies on psychiatric disorder prevalence amongst drug addicts or MMT participants (Callaly *et al.* 2001; Milby *et al.* 1996). Methadone is also indicated as medically safe and non-sedating for pregnant women addicted to opiates (Joseph *et. al* 2000). Nevertheless, the main purpose of MMT in Malaysia is not for treating psychiatric disorder, opiates dependent pregnant women or cigarette addiction.

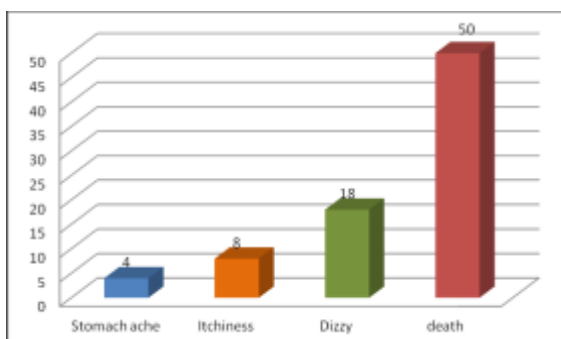


Figure 2. Side effects of the methadone poisoning to the children
(Source: Roz Azinur C.L 2013)

Methadone safe doses up to 120 mg/day have been proven, with no serious side effects when used as indicated (Peles *et al.* 2007; Novick *et al.* 1993). Regardless of the route of administration, methadone can produce a wide spectrum of side effects. Breathing difficulties were marginally more often reported by MMT than heroin injection therapy patients, MMT patients complained more often about muscle twitches in legs immediately after opiate administration than heroin injection therapy patients (Dürsteler-MacFarland *et al.* 2010). Many countries such as America, Australia and Switzerland where the methadone was introduced for maintenance of opiate treatment, the users have been observed to have methadone-related fatalities (Barrett *et al.* 1996; Caplehorn & Drummer 1994; Harp & Fryc, 1995).

Methadone has very extreme side effects to children compare to adults (Harpes *et al.* 1995). As the respondents were asked about the side effects of methadone to children, most of them knew that methadone is very harmful. Figure 2 shows that 50 respondents were aware that methadone poisoning could bring death to children. This study indicated that MMT awareness level of the public as well as methadone harmfulness awareness is low. Therefore, more efforts must be taken by the respective ministries (i.e. Ministry of Health, Ministry of Women, Family and Community Development, Ministry of Education), government agencies as well as non-government agencies to educate Malaysians of the advantages of MMT in order to enhance quality of life. The importance of drug storage must also be emphasized since improper storage and careless handling of methadone might cause adverse events especially to the children.

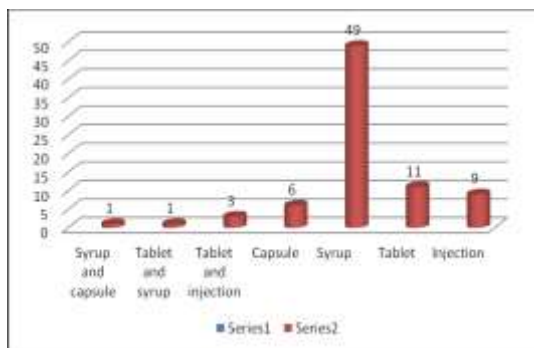


Figure 3. Forms of methadone available in Malaysia
(Source: Roz Azinur C.L 2013)

Methadone is available in various forms like pill, sublingual tablet, syrup, intravenous injection and also in two different formulations designed for the patients to consume. Figure 3 shows that a total of 49 respondents were aware that the actual form of the existing MMT therapy is in the syrup form and need to be taken orally. In Malaysia, methadone consumption instruction is by oral syrup form, which served the purpose in reducing the transmission of infectious diseases associated with illicit drug injection, such as hepatitis and HIV (MOH, 2005). According to Robinson *et al.* (2000), methadone injecting phenomenon is crucial

because there is considerable health related dangers associated with injecting it.

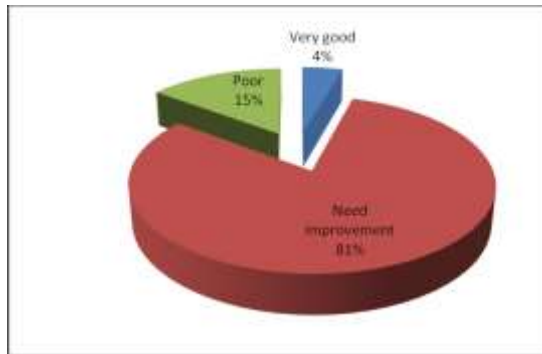


Figure 4. The level of methadone maintenance therapy approach in Malaysia.
(Source: Roz Azinur C.L 2013)

From our findings, media campaigns on MMT program were very limited. Studies by Palmgreen et al. (2001) showed that media campaigns alone can have significant effects on public behaviors. It was clear that the television remained as the major device for disseminating messages directed at preventing drug abuse and other unhealthy behaviors (Schilling & McAllister, 1990). Currently, the internal campaign has been carried out by the pharmacy department or hospital by using a video player. Based on Figure 15% of the respondents that aware of MMT said that there was a lot of lacking on the MMT public awareness program. Majority of the respondents (81%) have suggested to the responsible agencies to improve the current system to be more informative and comprehensible. Another 4% of respondents were satisfied with the current approach of MMT program exposure.

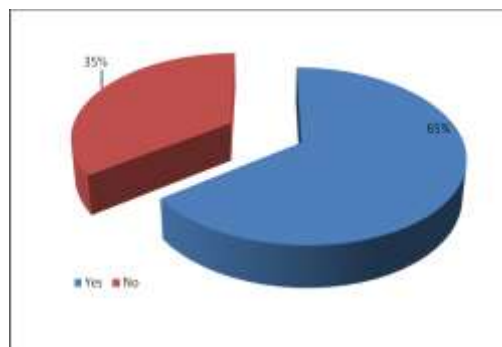


Figure 5. Public opinion of methadone advantages
(Source: Roz Azinur C.L 2013)

MMT is one of the current programs in this country to control the widely drug addiction menace (Sharifa Ezat *et al.* 2009). Although the MMT has been implemented in Malaysia

since 2005, the benefits of this program is still indistinct amongst the public. MMT reduces injection drug use and is effective in reducing illicit heroin use, HIV risk behaviors, HIV and other harms associated with illicit opiate or heroin use (Matthew & Dennis 2005). Other important benefits of MMT include controlling symptoms of drug abstinence, reduce narcotic cravings and despairing effects of illicit opiate use, reducing the risk for HIV and hepatitis transmission (MOH, 2005). Apart from reducing illicit opiate abuser, MMT can improve personal quality of life and well being in social community and lead to drug related crimes deceleration (MOH 2005). Based on Figure 5, this study reveals that 65% of respondents have no ideas on the MMT roles and benefits to drug abuse abstainers and public in Malaysia compared to 36% of respondents who are aware of the importance of this program. Misunderstanding of the MMT purposes and advantages amongst public remains common.

5.0 Conclusion

Generally, public awareness level of MMT program in Malaysian hospital is low. Among the contributing factors to the lack of MMT public awareness are less publicity, information source abilities and public behaviors towards seeking information on the importance of MMT. Continuous MMT awareness programs and efforts to widen the program promotions are the important instruments to motivate the public to support this program. The purpose of MMT is to reduce the risks of infections and criminal activities. The public should be educated to change their attitude towards this program since certain people might think only the family and the surrounding community of the drug addicts should know about MMT program.

Acknowledgement

The authors are grateful to MARA Technology University (UiTM) for providing financial support to conduct this research. Acknowledge these who funded your study.

References

- Barrett, D.H., Luk, A.J., Parrish, R.G. & T.S. Jones. (1996). An investigation of medical examiner cases in which methadone was detected, Harris County, Texas, 1987–1992. *J. Foren. Sci.* 41,442–448.
- Callaly T, Trauer T, Munro L., & Whelan G. (2001). Prevalence of psychiatric disorder in a methadone maintenance population. *Aust N Z J Psychiatry.*35,5,601-5.
- Caplehorn, J.R.M. & Drummer, O.H. (1999). Mortality associated with New South Wales methadone programs in 1994: lives lost and saved. *Med. J. Austr.* 170, 104–109.
- Dürsteler-MacFarland, K. M., Fischer, D. A., S. Mueller., Schmid,O., Moldovanyi, A., & Wiesbeck, G. A. (2010). Symptom complaints of patients prescribed either oral methadone or injectable heroin. *Journal of Substance Abuse Treatment*, 38, 328–337.
- Harpe, R. La. & O. Fryc. (1995). Fatalities associated with methadone administration in the Geneva canton (1987–1993). *Arch. Kriminol.* 196, 24–29.

Joseph, H., Standliff, S., & Langrod, J.(2000). Methadone maintenance treatment (MMT): a review of historical and clinical issue.Mt Sinai J. Med, 67,347-364.

Matthew, J.C., & Dennis, D. (2005). Retention in publicly funded methadone maintenance treatment in two western states. The Journal of Behavioral Health Services and Research, 32(1), 43-60.

Milby, J.B., Sims, M.K., Khuder, S., Schumacher, J.E., Huggins N., McLellan, A.T , Woody, G., & Haas, N.(1996). Psychiatric comorbidity: prevalence in methadone maintenance treatment. Am J Drug Alcohol Abuse. 22,1,:95-107.

Ministry of Health, Malaysia (MOH). (2005). National policy and standard operating procedure for methadone maintenance therapy (First edition).

Mohamad, N., Abu Bakar, N.H., Musa, N., Nazila, T., & Ismail, R. (2010). Better retention of Malaysian opiate dependents treated with high dose methadone in MMT. Harm Reduction Journal, 7, 30.

Nizam, B (2010) Quality of Life in Methadone Maintenance Therapy in the District of Tampin, Negeri Sembilan, Malaysia.http://intra.hukm.ukm.my/kppk/pubhealthcollo.org_2010/community_participation_in_promoting_environmental_health/quality%20of%20life%20in%20methadone%20maintenance%20therapy.pdf

Novick, D. M., Richman, B. L., Friedman, J. M., Friedman, J. E., Fried, C.,Wilson, J. P., Townley, A., & Kreek, M. J. (1993). The medical status of methadone maintenance patients in treatment for 11–18 years. Drug and Alcohol Dependence, 33, 235–245.

Palmgreen, P., Donohew, L., Lorch, E.P., Hoyle, R.H. & Stephenson, M.T. (2001). Television Campaigns and Adolescent Marijuana Use: Tests of Sensation Seeking Targeting. American Journal of Public Health, 91, 2, 292-296.

Peles, E., Bodner, G., Kreek, M. J., Rados, V., & Adelson, M. (2007). Corrected-QT intervals as related to methadone dose and serum level in methadone maintenance treatment (MMT) patients: A cross-sectional study. Addiction, 102, 289–300.

Ramli, M., Ahmad Zafri, A.B., & Umeed, A.K. (2012). Two-year outcomes of MMT at clinics in Malaysia. Asia-Pacific Journal of Public Health, 24(5), 820-832.

Robinson, G.M., Kemp, R., Lee, C. and Cranston, D. (2000) Patients in methadone maintenance treatment who inject methadone syrup: a preliminary study. Drug and Alcohol Review, 19, 447-450.

Roz Azinur, C.L, Nursyuhadah, O & Che Noriah, O. (2013). Behavioral Study On Methadone Maintenance Therapy Awareness Amongst Public In Malaysian Hospital. Procedia - Social and Behavioral Sciences 101 (2013) 159–169.

Sharifah Ezat, W.P., Noor Azimah, H., Rushidi, R., Raminder, K., & Ruhani, I. (2009). Compliance towards methadone maintenance therapy and its associated factors in Selangor Primary Care Center and Kuala Lumpur Hospital. Med. J. Malaysia, March vol. 64, 65-70.