UNIVERSITI PUTRA MALAYSIA

RISK FACTORS OF DRUG ABUSE AMONG MALAY MALES FELDA SETTLERS IN JERANTUT, PAHANG

AMIR FAISAL BIN MOHD KHAIRI

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By

AMIR FAISAL BIN MOHD KHAIRI

Dissertation Submitted to the Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia In Fulfilment of the Requirements for the Degree of Master of Public Health

August 2017

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August 2017

Chairmam : Associate Professor Dr. Hejar Binti Abdul
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Background: Globally, it is estimated that 246 million people had ever used illicit drugs. In Malaysia, drug abuse cases were on the rise, causing significant health and social problems for the people who use them, their families and communities. National Anti-Drug Agency (NADA) reported that 96.2% of drug abuse cases in Malaysia were among males. Jerantut, Pahang has the highest prevalence of registered drug abuse cases compared to other areas in the country and 70.3% of them are from FELDA settlements. Drug abuse places a heavy burden on public health systems in terms of treatment, care, prevention and their health consequences.

Objective: To determine factors associated with drug abuse among Malay males FELDA settlers in Jerantut, Pahang.

Methodology: A population based unmatched case control study was conducted in FELDA settlements in Jerantut, Pahang. Cases were defined as confirmed male drug abuser aged 18 to 60 years old. Controls defined as those who had never used any drugs in their lifetime. A total of 180 cases were selected randomly from NADA list, 180 controls were selected randomly from FELDA name list. A self-administered questionnaire was used in this study. Multiple logistic regression analysis was performed using SPSS 22.0. The final model was adjusted for age groups, marital status, education level, employment status, monthly income, smoking status, alcohol consumption, peer influence, self-esteem, family structures and religious scale. All statistical tests were two-sided and a p-value of less than 0.05 was considered as statistically significant.

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Results: Response rate for case is 180 (89.1%) and 180 (90.0%) for the controls. The final model has a good fit. The highest risk of drug abuse was in age group 20 to 29 years compared to age group 40 to 49 years (aOR=6.93, 95% CI=1.61, 29.83). Those who completed only until primary school had more risk of drug abuse compared to those in tertiary level of education (aOR=11.36, 95% CI=1.78, 72.55). Cigarette smoking had higher risk of drug abuse compared to non-smoker (aOR=10.56, 95% CI=3.14, 35.56). A person who had consumed alcohol had higher risk of drug abuse compared to those who had never consumed alcohol (aOR=9.14, 95% CI=3.75, 22.27). Low self-esteem increases risk of drug abuse compared to normal self-esteem individual (aOR=7.34, 95% CI=3.66, 14.72). High resistance to peer influence was a protective factor for drug abuse (aOR=0.31, 95% CI=0.16, 0.62). Individuals with family members involved in drug abuse had higher risk of being a drug abuse compared to those who had none drug abuse in the family (aOR=4.28, 95% CI=1.80, 10.17).

Conclusion: The risk factors associated with drug abuse are those who had only completed primary education level, smoking, alcohol consumption, low self-esteem, young age, and having family members' involvement in drug abuse. High resistance to peer influence was a protective factor for drug abuse.

Keywords: Drug Abuse, Risk factor, Malay male, FELDA, Jerantut

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Abstrak disertasi yang dikemukakan kepada Jabatan Kesihatan Komuniti, Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Sarjana Kesihatan Awam

FAKTOR RISIKO PENYALAHGUNAAN DADAH DI KALANGAN LELAKI MELAYU PENEMPATAN FELDA DI JERANTUT, PAHANG

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Latar Belakang: Secara global, dianggarkan 246 juta individu berumur antara 15 hingga 64 tahun pernah menyalahgunakan dadah. Di Malaysia, terdapat peningkatan kes penyalahgunaan dadah yang menyebabkan masalah kesihatan dan sosial bagi individu, keluarga dan masyarakat. Agensi Anti-Dadah Kebangsaan (AADK) melaporkan 96.2% penyalahguna dadah adalah di kalangan lelaki. Jerantut, Pahang merekodkan penyalahgunaan dadah tertinggi berbanding daerah lain di Pahang dan 70.3% daripadanya adalah dari penempatan FELDA. Penyalahgunaan dadah adalah beban kepada kerajaan dari segi rawatan kesihatan, penjagaan dan pencegahan dadah.

Objektif: Menentukan faktor risiko penyalahgunaan dadah di kalangan peneroka lelaki Melayu FELDA di Jerantut, Pahang.

Metodologi: Kajian komuniti *'unmatched case control'* dijalankan di penempatan FELDA di Jerantut, Pahang. *'Case'* ditakrifkan sebagai individu berumur 18 hingga 60 tahun yang disahkan menyalahgunakan dadah. *'Control'* ditakrifkan sebagai individu yang tidak pernah menyalahgunakan dadah. Seramai 180 *'cases'* dipilih secara rawak dari senarai nama AADK manakala 180 *'controls'* dipilih secara rawak dari senarai FELDA. Analisis '*multiple logistic regression'* dijalankan menggunakan SPSS 22.0. Model akhir diselaraskan untuk kumpulan umur, status perkahwinan, tahap pendidikan, status pekerjaan, pendapatan bulanan, status merokok, penggunaan alkohol, pengaruh rakan sebaya, harga diri, struktur keluarga dan skala agama. Semua ujian statistik adalah '*two-sided'* dan nilai p kurang dari 0.05 dianggap sebagai signifikan secara statistik.

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Keputusan: Kadar respon untuk '*case'* adalah 180 (89.1%) dan 180 (90.0%) untuk '*controls'*. Model akhir menunjukkan *'good fit'*. Risiko tertinggi penyalahgunaan dadah adalah kumpulan umur 20-29 tahun berbanding kumpulan umur 40 hingga 49 tahun (aOR=6.93, 95% CI=1.61, 29.83). Individu yang hanya menamatkan pendidikan di tahap sekolah rendah mempunyai lebih risiko penyalahgunaan dadah berbanding pengajian tinggi (aOR=11.36, 95% CI=1.78, 72.55). Merokok mempunyai risiko yang lebih tinggi untuk menyalahgunakan dadah berbanding bukan perokok (aOR=10.56, 95% CI=3.14, 35.56). Individu yang mengambil alkohol mempunyai risiko yang lebih tinggi berbanding mereka yang tidak mengambil alkohol (aOR=9.14, 95% CI=3.75, 22.27). Harga diri yang rendah meningkatkan risiko penyalahgunaan dadah (aOR=7.34, 95% CI=3.66, 14.72). Rintangan tinggi terhadap pengaruh rakan sebaya adalah faktor pelindung penyalahgunaan dadah (aOR=0.31, 95% CI=0.16, 0.62). Individu yang mempunyai ahli keluarga yang terlibat dalam penyalahgunaan dadah mempunyai risiko yang lebih tinggi untuk menyalahgunakan dadah (aOR=4.28, 95% CI=1.80, 10.17).

Kesimpulan: Faktor risiko penyalahgunaan dadah adalah tahap pendidikan yang rendah, merokok, pengambilan alkohol, harga diri yang rendah, usia muda dan mempunyai ahli keluarga yang terlibat dalam penyalahgunaan dadah. Rintangan tinggi terhadap pengaruh rakan sebaya adalah faktor pelindung penyalahgunaan dadah.

Kata kunci: Penyalahgunaan dadah, Faktor risiko, Lelaki Melayu, FELDA, Jerantut

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I certify that a dissertation Examination Committee has met on 1st August 2018 to conduct the final examination of Amir Faisal Bin Mohd Khairi on his dissertation entitled Risk Factors of Drug Abuse Among Malay Males FELDA Settlers in Jerantut, Pahang in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Master of Public Health.

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Declaration by Members of Supervisory Committee

This is to confirm that:

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LIST OF ABBREVIATIONS

ATS	Amphetamine-type Stimulants
FELDA	Federal Land Development Authority
FGV	FELDA Global Ventures Holdings Berhad
HIV	Human Immunodeficiency Virus
IVDU	Intravenous Drug User
MMT	Methadone Maintenance Therapy
MOH	Ministry of Health
NADA	National Anti-Drugs Agency
NHMS	National Health & Morbidity Survey
NSEP	Needle Syringe Exchange Programmes
OR	Odds Ratio
PWID	People/Person with Injected Drugs
SPSS	Statistical Package for the Social Science
UNODC	United Nations Office on Drugs and Crime
WHO	World Health Organization

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CHAPTER 1

INTRODUCTION

1.1 Background

World Health Organization (WHO) defined substance abuse as harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs that can lead to dependence syndrome, which is a cluster of behavioural, cognitive and physiological phenomenon that develops after repeated substance use. Despite harmful consequences, drug abusers still had strong desire and persistence in its use (WHO, 2016). Globally, it was estimated that a total of 246 million people, or one out of 20 people aged between 15 and 64 years, had ever used illicit drugs in 2013. One in 10 drug users was a problem drug user that suffered from drug use disorder or drug dependence. In other words, almost 27 million people in this world were problem drug users and 12.19 million of those problem drug users injected drugs (World Drug Report, 2015).

In recent years, there had been increasing trend in numbers of cases of drug abuse in Malaysia. From the most recent information from Malaysian's National Anti-drugs Agency (NADA), almost 30,844 cases were registered in year 2016, which demonstrated an increasing trend from the year 2015 and 2014 which reported 26,668 and 21,777 cases, respectively. In 2016, NADA reported that the most common drugs of abuse were Opiates (53.5%), Methamphetamine (31.8%), Amphetamine-type stimulants (10.7%) and 'ganja' (3.9%) (NADA, 2016). Drugs could disrupt the functions of the brain, causing interruption in conversation, work performance and destruction behaviour (Bonell, Sorhaindo, Allen, Strange, Wiggins *et al*, 2010). Apart from socioeconomic and security threats to the community, drug abuse poses major risk in spreading blood borne viruses such as HIV, Hepatitis B, and Hepatitis C (Degenhardt & Hall, 2012).

Risk factor is any attribute, characteristic or exposure of an individual that will increase the likelihood of drug abuse. The important risk factors associated with drug abuse were smoking, ethnicity, age, education level, alcohol consumption and religiosity (Zain, Rampal S. & Rampal L., 2007). Drug abuse will place a heavy burden on public health systems in term of treatment, care and prevention of disorder and their health consequences. Worldwide, reported that only one out of six drug abuser had access to treatment, as many countries had a large shortfall in the provision of services (World Drug Report, 2015).

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1.2 Problem Statement

Drug abuse is one of the major social problems in Federal Land Development Authority (FELDA) settlements. It had been reported through mass media but, information gathered regarding this issue through scientific researchers was limited. FELDA is a Malaysian government agency, established in 1956 for the development of land and relocation with the objective of poverty eradication through cultivation of oil palm and rubber (FELDA, 2014). The largest FELDA settlements in Malaysia are in Pahang. Jerantut is the largest district in Pahang consists of 10 FELDA settlements under its administrative area which are FELDA Jengka 8-9, Padang Piol, Sungai Retang, Sungai Tekam, Sungai Tekam Utara and Kota Gelanggi 1-4 (FELDA, 2014). Jerantut had the highest prevalence of registered drug abuser (0.23%) compared to other areas in Pahang (NADA, 2015). Majority of drug abuser (96.2%) were male and local NADA Jerantut data for 2016 shows that the total number of registered drug abuser is 910 people in which 640 people (70.3%) are from FELDA settlements (unpublished raw data).

With increasing numbers of drug abuse, cases of criminal activities such as burglary, robbery, motorcycle thefts and shoplifting rise in FELDA settlements as involvement in criminal activities were ways to support their drugs use habit (Hisham, Kamaruddin & Nordin, 2010). This problem was also invariably highlighted in High Carbon Stock FELDA case study 2015, pointing out that drug abuse was acting as a serious constraint to FELDA, especially in achieving its social goals and objectives (Khor, Saravanamuttu & Augustin, 2015).

Drug-related unemployment, absenteeism and injury will lead to incapacitation and imprisonment which serve to reduction in productivity (Compton, Thomas, Stinson & Grant, 2007). Hence, this study was done to determine the risk factors of drug abuse among Malay male FELDA settlers in Jerantut, Pahang.

1.3 Significance of Study

In Malaysia, there were only few studies that had been published to determine risk factors associated with drug abuse especially in specific rural or settlements area. Furthermore, no similar studies had been done in FELDA settlements in Jerantut, Pahang. This study will provide clearer understanding of the risk factors and predictors of drug abuse among Malay male FELDA settlers. This study also will contribute to advancement of knowledge regarding drug abuse issue and provide insight on the drug abuse activities and its risk factors in FELDA settlements. Information gathered regarding drug abuse issues in FELDA may help to contribute to future intervention programs by community, FELDA organization, National Anti-Drug Agency (NADA) and Ministry of Health (MOH) to further control and prevent drug abuse in FELDA. Hopefully it will be a useful reference for similar studies that can be done in future.

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1.4 Research Question

What are the risk factors of drug abuse among Malay male FELDA settlers in Jerantut, Pahang ?

1.5 Objective

Objectives in this study were divided into general objective and specific objectives.

1.5.1 General Objective

The aim of this study was to determine risk factors of drug abuse among Malay male FELDA settlers in Jerantut, Pahang.

1.5.2 Specific Objective

1.5.2.1 To describe socio-demographic characteristics (age, education level, marital status, employment, monthly income) of drug abuser and non-drug abuser in FELDA settlements.

1.5.2.2 To describe peer influence, family structure, family members' involvement in drug abuse, smoking, alcohol consumption, self-esteem and religiosity scale of drug abuser and non-drug abuser in FELDA settlements.

1.5.2.3 To determine the association between socio-demographic factors (age, education level, marital status, employment, monthly income), peer influence, family structure, family members' involvement in drug abuse, smoking, alcohol consumption, self-esteem and religiosity associated with drug abuse in FELDA settlements.

1.5.2.4 To determine the risk factors of drug abuse in FELDA settlements.

1.6 Hypothesis

The research hypothesis is:

There is a significant association between socio-demographic characteristics (age, education level, marital status, employment, and monthly income), smoking, alcohol consumption, peer influence, self-esteem, family structure, family members' involvement in drug abuse, religiosity and drug abuse.

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