



UNIVERSITI PUTRA MALAYSIA

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

AMIR FAISAL BIN MOHD KHAIRI

FPSK(M) 2017 21



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

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

All material contained within the dissertation, including without limitation text, logos, icons, photographs and all other artwork is copyright material of Universiti Putra Malaysia unless otherwise stated. Use may be made of any material contained within the dissertation for non-commercial purposes from the copyright holder. Commercial use of material may only be made with the express, prior, written permission of Universiti Putra Malaysia.

Copyright © Universiti Putra Malaysia



Abstract of dissertation presented to the Department of Community Health,
Universiti Putra Malaysia in fulfillment of the requirement for the
Degree of Master of Public Health

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

By

AMIR FAISAL BIN MOHD KHAIRI

August 2017

**Chairman : Associate Professor Dr. Hejar Binti Abdul
Faculty : Rahman Medicine and Health Sciences**

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.

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

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

Oleh

AMIR FAISAL BIN MOHD KHAIRI

Ogos 2017

**Pengerusi : Profesor Madya Dr. Hejar Binti Abdul
Fakulti : Rahman Perubatan & Sains Kesihatan**

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.

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

ACKNOWLEDGEMENTS

I would like to take this opportunity to thank Associate Professor Dr. Hejar Binti Abdul Rahman, main supervisor of my dissertation, for her time, advice, support and consistent guidance throughout the study.

My sincere gratitude and appreciation is also extended to Dr. Sri Ganesh A/L Muthiah, my co-supervisor for his willingness to share his time, constructive suggestion, valuable advice and guidance that challenged me to meet his expectations.

I would like to express my deepest appreciation to YBhg. Dato' Dr Abd. Halim Bin Mohd Hussin, Director General, National Anti-Drugs Agency, Ministry of Home Affairs for permission to carry out the study. My thanks are also due to Mr. Rizal Bin Tawil, Director, National Anti-Drug Agency Jerantut, for assistance during the data collection.

I wish to express my deepest gratitude to Majlis Belia FELDA Malaysia (MBFM) Jerantut for permission to carry out study in FELDA locality.

I appreciate the respondents who participated in this study for your kindness and cooperation during data collection period.

A special thanks to my wife, Dr Munazieraa Binti Ab Aziz and my little cutie pies, Adam Aziz & Adib Aziz for their continuous prayers, patience and sacrifices that made this research meaningful and possible.

Last but not least, I would like to offer my warmest thanks to my family, colleagues and UPM lecturers for your helpful guidance.

Thank you for the constant encouragement, understanding and support throughout my life and this MPH journey.

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.

Members of the Thesis Examination Committee were as follows:

Dr. Salmiah Binti Md. Said

B.Med.Sc. (UKM), MD (UKM), M. Education (UKM), M. Community Medicine (Epidemiology & Biostatistic) (UKM)

Senior Lecturer

Department of Community Health

Faculty of Medicine and Health Sciences

Universiti Putra Malaysia

(Chairman)

Professor Dato' Dr. Lye Munn Sann

MBBS (Mal), MPH (Tulane), DrPH (Tulane), FAMM

Professor (Medical)

Department of Community Health

Faculty of Medicine and Health Sciences

Universiti Putra Malaysia

(Internal Examiner)

Associate Professor Dr. Farizah Binti Mohd Hairi

MBBS (UM), Msc (Wales), MPH (UM), D.Sc. (Public Health) (Erasmus Universiteit Rotterdam)

Senior Lecturer

Department of Social and Preventive Medicine

Faculty of Medicine

University of Malaya

(External Examiner)

**Professor Dato' Dr. Abdul Jalil Nordin, DSIS
MD (UKM), MMed (Radiology) (UM)**

Professor and Dean

Faculty of Medicine and Health Sciences

Universiti Putra Malaysia

Date:

This dissertation was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Master of Public Health. The members of the Supervisory Committee were as follows:

**Associate Professor Dr. Hejar Binti Abdul Rahman
MD (UKM), M. Community Health (UKM)**

Associate Professor
Department of Community Health
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
(Chairman)

**Dr. Sri Ganesh A/L Muthiah
MBBS (AIMST), MPH (UPM), DrPH (UPM)**

Senior Lecturer
Department of Community Health
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
(Member)

**Professor Dato' Dr. Abdul Jalil Nordin, DSIS
MD (UKM), MMed (Radiology) (UM)**

Professor and Dean
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia

Date:

Declaration by graduate student

I hereby confirm that:

- this dissertation is my original work;
- quotations, illustrations and citations have been duly referenced;
- this dissertation has not been submitted previously or concurrently for any other degree at any other institutions;
- intellectual property from the dissertation and copyright of dissertation are fully-owned by Universiti Putra Malaysia, as according to the Universiti Putra Malaysia (Research) Rules 2012;
- written permission must be obtained from supervisor and the office of Deputy Vice-Chancellor (Research and Innovation) before dissertation is published (in the form of written, printed or in electronic form) including books, journals, modules, proceedings, popular writings, seminar papers, manuscripts, posters, reports, lecture notes, learning modules or any other materials as stated in the Universiti Putra Malaysia (Research) Rules 2012;
- there is no plagiarism or data falsification/fabrication in the dissertation, and scholarly integrity is upheld as according to the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) and the Universiti Putra Malaysia (Research) Rules 2012. The dissertation has undergone plagiarism detection software.

Signature: _____ Date: _____

Name and Matric No.: Amir Faisal Bin Mohd Khairi, GS46489

Declaration by Members of Supervisory Committee

This is to confirm that:

- the research conducted and the writing of this dissertation was under our supervision;
- supervision responsibilities as stated in the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) are adhered to.

Signature: _____

Name of Chairman of Supervisory Committee:
Associate Prof. Dr. Hejar Binti Abdul Rahman
MD (UKM), M. Community Health (UKM)

Signature: _____

Name of Member of Supervisory Committee:
Dr. Sri Ganesh A/L Muthiah
MBBS (AIMST), MPH (UPM), DrPH (UPM)

TABLE OF CONTENTS

	Page
ABSTRACT	i
ABSTRAK	iii
ACKNOWLEDGEMENTS	v
APPROVAL	vi
DECLARATION	viii
LIST OF TABLES	xiii
LIST OF FIGURES	xiv
LIST OF APPENDICES	xv
LIST OF ABBREVIATIONS	xvi
CHAPTER	
1 INTRODUCTION	1
1.1 Background	1
1.2 Problem Statement	2
1.3 Significance of Study	2
1.4 Research Question	2
1.5 Objective	3
1.5.1 General Objective	3
1.5.2 Specific Objective	3
1.6 Hypothesis	3
2 LITERATURE REVIEW	4
2.1 Definition of Drug Abuse	4
2.2 History of FELDA	5
2.3 Social Issues in FELDA	5
2.4 Epidemiology of Drug Abuse	5
2.4.1 Global	5
2.4.2 Malaysia	6
2.5 Patterns of Drug Abuse	7
2.6 Factors associated with Drug Abuse	7
2.6.1 Sociodemographic Factors	7
2.6.2 Peer Influence	8
2.6.3 Family Structure	8
2.6.4 Self-esteem	9
2.6.5 Cigarette Smoking & Alcohol	9
2.6.6 Importance of Religion	10
2.7 Drug Abuse & Health Consequences	10
2.8 Treatments & Rehabilitation of Drug Abuse	11
2.9 Laws Related to Drug Abuse	12
2.10 Conceptual Framework	12
3 MATERIALS AND METHOD	14
3.1 Study Location	14
3.2 Study Design	15
3.3 Sampling	15
3.3.1 Study Population	15

3.3.2	Inclusion Criteria	15
3.3.3	Exclusion Criteria	16
3.3.4	Sampling Frame	16
3.3.5	Sampling Unit	16
3.3.6	Sampling Size	16
3.3.7	Sampling Technique (Method)	18
3.4	Variables	19
3.4.1	Dependent Variables	19
3.4.2	Independent Variables	19
3.5	Data Collection Process	19
3.6	Study Instrument	19
3.7	Quality Control of Study Instrument	21
3.7.1	Content Validity	21
3.7.2	Face Validity	21
3.7.3	Reliability	21
3.8	Ethical Considerations	21
3.9	Data Analysis	22
3.10	Operational Definitions	22
4	RESULTS	24
4.1	Response Rate	24
4.2	Characteristics of Respondents	26
4.2.1	Peer Influence Scale	28
4.2.2	Self-esteem Scale	28
4.2.3	Family Structures	28
4.2.4	Religious Scale	29
4.2.5	Additional information on cases	30
4.3	Association between Socio-demographic and Drug Abuse	30
4.3.1	Association between Peer Influence and Drug Abuse	32
4.3.2	Association between Self Esteem and Drug Abuse	32
4.3.3	Association between Family Structures and Drug Abuse	32
4.3.4	Association between Religious Scale and Drug Abuse	33
4.4	Predictors of Drug Abuse	34
5	DISCUSSION	38
5.1	Introduction	38
5.2	Age and Drug Abuse	38
5.3	Marital Status and Drug abuse	39
5.4	Education Level and Drug Abuse	39
5.5	Employment Status and Drug Abuse	39
5.6	Monthly Income and Drug Abuse	40
5.7	Smoking and Drug Abuse	40
5.8	Alcohol and Drug Abuse	40
5.9	Peer Influence and Drug Abuse	41
5.10	Self-esteem and Drug Abuse	41
5.11	Family Structures and Drug Abuse	41

5.12	Religion and Drug Abuse	42
6	CONCLUSION	43
6.1	Conclusion	43
6.2	Strengths of study	43
6.3	Limitations of study	43
6.4	Study Implications & Recommendations	44
	REFERENCES	46
	APPENDICES	51
	BIODATA OF STUDENT	70



LIST OF TABLES

Table		Page
2.1	Distribution of drug abuser by region in Pahang, Malaysia	7
3.1	Table for sample size	18
4.1	Socio-demographic characteristics of cases and controls	27
4.2	Resistance to peer influence scale of cases and controls	28
4.3	Self-esteem scale of cases and controls	28
4.4	Family structures of cases and controls	29
4.5	Degree of agreement on the importance of religion of case and controls	30
4.6	Crude association between age, marital status, education level, employment status, monthly income, smoking, ever consumed Alcohol and drug abuse	31
4.7	Crude association between peer influence and drug abuse	32
4.8	Crude association between self-esteem and drug abuse	32
4.9	Crude association between family structures and drug abuse	33
4.10	Crude association between degrees of agreement on importance of religion and drug abuse	34
4.11	Predictors of drug abuse (adjusted for age, marital status, education level, employment status, monthly income, smoking status, alcohol consumption, peer influence, self-esteem, family structures and religious scale)	36

LIST OF FIGURES

Figure		Page
2.1	Conceptual framework of the study	13
3.1	Geographical location of the study	14
4.1	Flowchart of cases	24
4.2	Flowchart of controls	25



LIST OF APPENDICES

Appendix		Page
A	Questionnaire	51
B	Participant Information Sheet and Informed Consent Form	58
C	Approval Letter from Ethics Committee for Research Involving Human Subjects Universiti Putra Malaysia (JKEUPM)	62
D	Registration Letter from National Medical Research Register, Ministry of Health Malaysia	65
E	Approval Letter from National Anti-Drugs Agency, Ministry of Home Affairs	66
F	Terms & Conditions of Research in National Anti-Drugs Agency, Ministry of Home Affairs facilities	68

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

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).

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.

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.

REFERENCES

- Alavi, H.R. (2011). The role of self-esteem in tendency towards drugs, theft and prostitution. *Addict Health*. 3(3-4), 119-124.
- Arkes, J. (2013). The temporal effects of parental divorce on youth substance abuse. *Substance Use Misuse*. 48(3), 290-7.
- Arnsten, J.H., Demas, P.A., Grant, R.W., Gourevitch, M.N., Farzadegan, H., Howard, A.A. (2002). Impact of active drug use on antiretroviral therapy adherence and viral suppression in hiv-infected drug users. *J. Gen. Intern. Med*. 17,377-381.
- Bahr, S.J., Hoffmann, J.P., Yang, X. (2005). Parental and peer influences on the risk of adolescent drug use. *J Prim Prev*, 26, 529-551.
- Blascovich, J., Tomaka, J., John, P.R., Phillip, R.S., Lawrence, S.L. (1991). Measures of personality and social psychological attitudes. Academic Press. 115-160
- Bonell, C.P., Sorhaindo, A.M., Allen, E.E., Strange, V.J., Wiggins, M. Fletcher, A. Oakley, A.R.A., Bond, L.M., Flay, B.R., Patton, G.C., Rhodes, T. (2010). Pilot multi-method trial of a school-ethos intervention to reduce substance use: building hypotheses about upstream pathways to prevention. *Journal of Adolescent Health*, 47(6), 555-563.
- Centre for Disease Control and Prevention [CDC]. (2016). Retrieved Oct 11, 2016, from <http://www.cdc.gov/hiv/risk/substanceuse.html>.
- Center for Disease Control and Prevention [CDC]. (2010). Morbidity and Mortality Weekly Report 59: Youth Risk Behavior Surveillance. Retrieved Nov 12, 2016 from <https://www.cdc.gov/mmwr/pdf/ss/ss5905.pdf>.
- Chen, C.Y., Storr, C.L., Anthony, J.C. (2009). Early-onset drug use and risk for drug dependence problems. *Addictive Behaviors*, 34(3), 319-322.
- Compton, W.M., Thomas, Y.F., Stinson, F.S., Grant, B.F. (2007). Prevalence, correlates, disability and comorbidity of DSM-IV drug abuse and dependence in the United States: Results from national epidemiologic survey on alcohol and related conditions. *Archives of General Psychiatry*. 64(5), 566-576.
- Cynthia, S.T., Ho, T.W., Carmen H.M., Alice Y.L. (2014). Multi-dimensional self-esteem and substance use among Chinese adolescents. *Substance Abuse Treat Prev Policy*. 9, 42.
- Dahl, R.E. (2004). Adolescent brain development: A period of vulnerabilities and opportunities. *Annals of the New York Academy of Sciences*, 1-22
- Degenhardt, L., Hall, W. (2012). Extent of illicit drug use and dependence, and their contribution to the global burden of disease. *Lancet*, 379 (9810):55-70.
- Department of Statistics Malaysia [DOSM]. (2015). Population. Retrieved November 1, 2016 from https://www.dosm.gov.my/v1/index.php?r=column/cthree&menu_id=TXM2WGhTNmVRN2ppUII5Ui95WG1TQT09.
- Devaney, M.L., Reid, G., Baldwin, S. (2007). Prevalence of illicit drug use in Asia and the Pacific. *PubMed*, 26 (1), 97-102.
- Diagnostic and Statistical Manual of Mental Disorders, 5th Edition [DSM-5]. (2013). Substance-Related and Addictive Disorders. American Psychiatric Publishing.

- Ennett, S.T., Bauman, K.E., Hussong, A., Faris, R., Foshee, V.A., Cai, L. (2006). The peer context of adolescent substance use: Findings from social network analysis. *Journal of Research on Adolescence*. 16, 159–186.
- Fauziah, I., Mohamad, M.S., Chong, S.T., Manaf, A.A. (2012). Substance abuse and aggressive behaviour among adolescent. *Asian Social Science*, 8(9), 92-97.
- Federal Land Development Authority [FELDA]. (2014). Lembaga Kemajuan Tanah Persekutuan. Retrieved October 11, 2016 from <http://felda.net.my/index.php/felda/mengenai-felda>.
- Ferigolo, M., Stein, A.T., Fuchs, F.D., Barros, H.M. (2009). Influence of depression and early adverse experiences on illicit drug dependence: a case-control study. *Rev Bras Psiquiatr*. 31(2), 106-13.
- Gomes, F.C., Andrade, A.G., Izbicki, R., Almeida, A.M., Oliveira, L.G. (2013). Religion as a protective factor against drug use among Brazilian university students: a national survey. *Revista Brasileira de Psiquiatria*. 35(1).
- Hanna E.Z., Yi, H.Y., Dufour, M.C., Whitmore, C.C. (2001). The relationship of early-onset regular smoking to alcohol use, depression, illicit drug use and other risky behaviour during early adolescence: results from the youth supplement to the third national health and nutrition examination survey. *Journal of Substance Abuse*, 13, 265-282.
- Hensing, G. (2012). The health consequences of alcohol and drug abuse. *Scandinavian Journal of Public Health*. 40 (9), 211-228.
- Hemovich, V., Lac, A., Crano, W.D. (2011). Understanding early-onset drug and alcohol outcomes among youth: the role of family structure, social factors and interpersonal perceptions of use. *Psychol Health Med*, 16(3), 249-267.
- Hisham, N.A, Kamaruddin, Z., Nordin, S. (2010). Social problems and its relationship with family institution in FELDA settlements: the local perspectives. *European Journal of Social Sciences*, 14 (3).
- Kamarudin, A.R. (2007). The misuse of drugs in Malaysia: past and present. *Journal Anti Dadah Malaysia*. 1, 1-24
- Kendler, S.K., Ohlsson, H., Sundquist K., Sundquist J. (2013). Within-family environmental transmission of drug abuse: A Swedish national study. *JAMA Psychiatry*. 70(2), 235-242.
- Kenna, G.A, Lewis, D.C. (2008). Risk factors for alcohol and other drug use by healthcare professionals. *Substance Abuse Treat Prev Policy*. 3;3
- Khor, Y., Saravanamuttu, J., Augustin, D. (2015). Consulting study 12: The FELDA case study. *The High Carbon Stock Science Study*. Retrieved Nov 6, 2016 from http://www.simedarcy.com/sustainability/clients/simedarcy_sustainability/assets
- Kokkevi, A.E., Arapaki, A.A., Richardson, C., Florescu, S., Kuzman, M., Stergar, E. (2007). Further investigation of psychological and environment correlates of substance use in adolescence in six European countries. *Drug Alcohol Depend*, 88, 308-312.
- Koob, G.F., Volkow, N.D. (2010). Neurocircuitry of addiction. *Neuropsychopharmacology*. 35(1). 217-38

- Korhonen, T., Huizink, A.C., Dick, D.M., Pulkkinen, L., Rose, R.J., Kaprio, J. (2008). Role of individual, peer and family factors in the use of cannabis and other illicit drugs: A longitudinal analysis among Finnish adolescent twins. *Drug Alcohol Depend.* 97(1-2), 33-43.
- Lai, S., Lai, H., Page, J.B., McCoy, C.B. (2000). The association between cigarette smoking and drug abuse in United States. *Journal of Addictive Diseases*, 19(4), 11-24.
- Long, C., DeBeck, K., Feng, C., Montaner, J., Wood, E., Kerr, T. (2014). Income level and drug related harm among people who use injection drugs in a Canadian setting. *International Journal of Drug Policy.* 25(3), 458-64.
- Longitudinal Study of Young People in England [LSYPE] (2004). Department for Education (DfE). Retrieved Dec 4, 2016 from <https://www.education.gov.uk/ilsype/workspaces/public/wiki/LSYPE>
- Lopes, C.S., Sichieri R. (2002). A case-control study on alcohol and psychiatric disorders as risk factors for drug abuse pattern. *Cad. Saude Publica.* (18)6.
- Maristela, F., Stein, A.T., Fuchs, F.D., Barros, H.M.T. (2009). Influence of depression and early adverse experiences on illicit drug dependence: a case-control study. *Rev Bras Psiquiat.* 31(2);106-13
- Maryam, M., Sharareh, E., Mahmoud, K., Maneli, S., Ali, N., Ahmad, H. (2016). The impact of social structures on deviant behaviors: the study of 402 high risk street drug users in Iran. *Journal of Addiction.* Volume 2016, article ID: 6891751.
- Massard, J.L. (1988). Are Malaysian land settlers (new) peasants? Anthropological observation of a nascent community. Retrieved Oct 26, 2016 from <http://archive.unu.edu/unupress/unupbooks/80636e/80636E0g.html>
- Merline, A.C., O'Malley, P.M., Schulenberg, J.E., Bachman, J.G., Johnston, L.D. (2004). Substance use among adults 35 years of age: prevalence, adulthood predictors, and impact of adolescent substance use. *American Journal of Public Health.* 94:96–102.
- Miller, L., Davies, M., Greenwald, S. (2000). Religiosity and Substance use and abuse among Adolescents in the national comorbidity survey. *Journal of the American Academy of Child & Adolescent Psychiatry*, 9, 1190-1197.
- Morello, P., Perez, A., Pena, L., Braun, S.N., Cattano, C.K., Thrashes, J.F., Sargent, J., Mejia, R. (2017). Risk factors associated with tobacco, alcohol and drug use among adolescents attending secondary school in three cities from Argentina. *Arch Argent Pediatr.* 115(2), 155-168.
- Myers, M.G., Kelly, J. (2006). Cigarettes smoking among adolescents with alcohol and other drug use problems. *Alcohol Research & Health.* 29, 221–227.
- National Anti-Drugs Agency [NADA]. (2015). Maklumat Dadah 2015. Retrieved Nov 12, 2016 from <http://www.adk.gov.my/web/quest/dadah>.
- National Health & Morbidity Survey [NHMS]. (2015). Report on smoking status among Malaysian adults. Retrieved Oct 20, 2016 from <http://www.iku.gov.my/images/IKU/Document/REPORT/NHMS2015-VolumeV.pdf>.
- National Institute on Drug Abuse [NIDA]. (2016). The science of drug abuse and addiction: The basics. Retrieved Oct 23, 2016 from

<http://www.drugabuse.gov/publications/media-guide/science-drug-abuse-addiction-basics>

- National Strategic Plan for Ending AIDS 2016-2030[NSPEA]. (2015). Ministry of Health Malaysia, Putrajaya. HIV/STI Section, Disease Control Division, Ministry of Health
- Ojo, M.A., Akintoyese, O., Adenibuyan, P., Adegbohun, A.A., Abiri, K. (2013). Relationship between poor self esteem and adolescent substance use. *National Institute on Drug Abuse*. Retrieved on 4 May 2017 at <https://www.drugabuse.gov/international/relationship-between-poor-self-esteem-adolescent-substance-use>.
- Richardson, C.G., Kwon, J.K., Ratner, P.A. (2013). Self-esteem and the initiation of substance use among adolescents. *Can J Public Health*. 104 (1), 60-63
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Sanchez, Z.M., Opaleye, E.S., Chaves, T.V., Noto, A.R., Nappo, S.A. (2011). God forbid or mom disapproves? Religious beliefs that prevent drug use among youth. *Journal of Adolescent Research*. 26 (5).
- Schlesselman, J.J. (1982). *Case Control Studies. Design, Conduct, Analysis*. Oxford: University Press.
- Scorzelli, J.F. (2009). Has Malaysia's drug rehabilitation effort been effective? *Int J Psychosoc Rehabil*. 13(2), 21-4
- Scott, M., Noh, S., Brands, B., Hamilton, H., Gastaldo, D., Wright, M.G.M., Cumsille, F., Khenti, A. (2015). Influence of peers, family relationships, spirituality and entertainment on drug use by students at a university in Manabi, Ecuador. *Texto Contexto-enferm*. 24, 154-160.
- Snyder, A. R., McLaughlin, D.K., Findeis, J. (2006). Household composition and poverty among female-headed households with children: Differences by race and residence. *Rural Sociology*, 71, 597–624.
- Stein, J.A, Leslie, M.B., Nyamathi, A. (2002). Relative contributions of parent substance use and childhood maltreatment to chronic homelessness, depression, and substance abuse problems among homeless women: mediating roles of self-esteem and abuse in adulthood. *Child Abuse & Neglect*, 26, 1011-1027.
- Steinberg, L., Monahan, K.C. (2007). Age differences in resistance to peer influence. *Dev Psychol*. 43(6), 1531-1543
- Sumter, S.R., Bokhorst, C.L., Steinberg, L., Westenberg, P.M. (2008). The developmental pattern of resistance to peer influence in adolescence: will the teenager ever be able to resist? *Journal of Adolescence*. 32(4), 1009-21.
- Tavares, B.F., Beria, J.U., Mauricio, S.L. (2004). Factors associated with drug use among adolescent students in southern Brazil. *Revista de Saude Publica*. 38 (6).
- Tesfaye, G., Derese, A., Hambisa, M.T. (2014). Substance use and associated factors among university students in Ethiopia: a cross-sectional study. *Journal of Addiction*. volume 2014, article ID: 969837.
- Trzesniewski, K.H., Donnellan, M.B., Moffitt, T.E., Robins, R.W., Poulton, R., Caspi, A. (2006). Low self-esteem during adolescence predicts poor health, criminal behavior and limited economic prospects during adulthood. *Dev Psychol*. 42(2), 381-90.

- United Nations of Office on Drugs and Crime [UNODC]. (2016). Information about drugs.. Retrieved November 21, 2016 from <https://www.unodc.org/unodc/en/illicit-drugs/definitions/>.
- Vicknasingam, B., Narayanan. S., Navaratnam, V. (2009). Prevalence rates and risk factors for Hepatitis C among drug users not in treatment in Malaysia. *Drug and Alcohol Review*, 28, 447-454.
- Visher, C.A., Knight, C.R., Chalfin, A., Roman, J.K. (2009). The impact of marital and relationship status on social outcomes for returning prisoners. ASPE Office of The Assistant Secretary for Planning and Evaluation. US Department of Health & Human Services. Retrieved on 14 May 2017 at <https://aspe.hhs.gov/basic-report/impact-marital-and-relationship-status-social-outcomes-returning-prisoners>.
- Wilson, M., Joe, G., Kevin, P., Matthew, S. (2014). Unemployment and substance outcomes in the United States 2002-2010. *Drug Alcohol Depend.* Sep 1, 350-353.
- Wongtongkam, N., Ward R.P., Day, A., Winefield, A.H. (2014). The influence of protective and risk factors in individual, peer and school domain on Thai adolescents' alcohol and illicit drug use: a survey. *Addictive Behaviors*, 39(10), 1447-51.
- World Drug Report. (2017). United Nations Office on Drugs and Crime [UNODC]. Retrieved Oct 9, 2016 from <https://www.unodc.org/unodc/en/data-and-analysis/WDR-2007.html>.
- World Drug Report. (2015). United Nations Office on Drugs and Crime [UNODC]. Retrieved Oct 9, 2016 from https://www.unodc.org/documents/wdr2015/World_Drug_Report_2015.pdf.
- World Health Organization [WHO]. (2016). Adolescent Development. Retrieved October 13, 2016 from http://www.who.int/maternal_child_adolescent/topics/adolescence/dev/en/.
- World Health Organization [WHO]. (2016). Management of Substance Abuse. Retrieved October 16, 2016 from http://www.who.int/substance_abuse/facts/en/.
- World Health Organization [WHO]. (2009) . Global Health Risks ; mortality and burden of disease attributable to selected major risks. Retrieved October 16, 2016 from http://www.who.int/healthinfo/global_burden_disease/GlobalHealthRisks_report_full.pdf.
- Zain, A.M, Rampal, S., Rampal L.(2007). A case control study on risk factors associated with drug addiction amongst Malaysian males. *Malaysian Journal of Medicine and Health Sciences*, 3(2), 17-27.