



**UNIVERSITI PUTRA MALAYSIA**

**KNOWLEDGE, ATTITUDE AND PRACTICES RELATED TO HUMAN  
IMMUNODEFICIENCY VIRUS AND ACQUIRED IMMUNODEFICIENCY  
SYNDROME AMONG STUDENTS IN UNIVERSITI PUTRA MALAYSIA**

**ROZINA RAHNAMA**

**FPSK(M) 2009 1**



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**MASTER OF SCIENCE  
UNIVERSITI PUTRA MALAYSIA**

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**KNOWLEDGE, ATTITUDE AND PRACTICES RELATED TO HIV/AIDS  
AMONG STUDENTS IN UNIVERSITI PUTRA MALAYSIA**

**By**

**ROZINA RAHNAMA**

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in  
Fulfillment of the Requirements for the Degree of Master of Science**

**January 2009**



**Dedicated**

**To**

**This thesis dedicated to my beloved husband, Mehran (Akbar) Deghani Ghahfarokhi, to my dear daughter Artonis, my dear mother Mahvash Gharibi and my deceased father Majid Rahnama that I owe them all of success in my life.**



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirements for the degree of Master of Science

**KNOWLEDGE, ATTITUDE AND PRACTICES RELATED TO HIV/AIDS  
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By

**ROZINA RAHNAMA**

**2009**

**Chairman: Professor Lekhraj Rampal, MBBS, MPH, DrPH, FAMM**

**Faculty: Medicine and Health Sciences**

The aim of this study was to determine the level of knowledge, attitude and practices related to HIV/AIDS among the students in UPM and to determine the relationship between their knowledge, attitudes and practices. A cross-sectional study design which employed two stage simple random sampling technique proportionate to size was used to select the sample. The list of all 23,202 students of UPM served as the sampling frame. The sample size was 1920. The data was collected from 10<sup>th</sup> of August to 31<sup>st</sup> of October 2007 using a structured pre-tested questionnaire. The response rate was 92.3 % in which, out of 1773 respondents, 57.3% were female, 52.5% were Malays and 58.2% were Muslims.

The overall mean knowledge scores of the respondents was 20.11 out of the maximum score of 34 while the mean attitude scores was 24.09 out of the maximum score of 35,



and the mean practice scores of the respondents was 4.14 out of the maximum score of 7. The results of the GLM (General Linear Model) and Post Hoc Test showed that knowledge of the respondents on HIV/AIDS was significantly associated with age ( $p = 0.001$ ), sex ( $p = 0.004$ ), educational level ( $p = 0.04$ ), faculty or institute ( $p = 0.001$ ), religion ( $p = 0.008$ ), mother's occupation ( $p = 0.045$ ), mother's educational level ( $p = 0.039$ ) and family income ( $p = 0.001$ ). The results also showed that the attitude of respondents on HIV/AIDS was significantly associated with faculty or institute ( $p = 0.001$ ), father's occupation ( $p = 0.028$ ) and the practice of the respondents with regards to HIV/AIDS was significantly associated with sex ( $p = 0.001$ ), faculty or institute ( $p = 0.001$ ) and marital status ( $p = 0.009$ ).

The results show that there was a significant but weak and positive relationship between the total knowledge scores and the total attitude scores of the respondents ( $r = 0.24$ ,  $p = 0.001$ ). There was also a significant but weak and negative relationship between the total knowledge scores and the total practice scores of the respondents ( $r = -0.059$ ,  $p = 0.021$ ).

In conclusion, this study showed that the level of knowledge about HIV/AIDS among UPM students is unsatisfactory. The respondents seem to have favorable attitude on the prevention of HIV/AIDS. There was a low level of condom use (29.8 %) and voluntary HIV testing (13.48 %). However, 97.8 % of the respondents do not have multiple partners. The practice scores for Malaysian students were significantly higher than the international students. It is recommended that an educational program on HIV/AIDS prevention is to be implemented to remove some weaknesses such as the low level of knowledge, low level of condom use and voluntary HIV testing.

**Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains**

**PENGETAHUAN, SIKAP DAN AMALAN BERKAITAN HIV/AIDS  
DIKALANGAN PELAJAR-PELAJAR DI UNIVERSITI PUTRA MALAYSIA**

**Oleh**

**ROZINA RAHNAMA**

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**Pengerusi: Professor Lekhraj Rampal, MBBS, MPH, DrPH, FAMM**

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Tujuan kajian ini dijalankan adalah untuk mengenalpasti tahap pengetahuan, sikap dan amalan terhadap HIV/AIDS di kalangan pelajar UPM dan untuk mengenalpasti hubungan di antara pengetahuan, sikap amalan. Kajian keratan rentas telah digunakan. Dua tahap teknik pensampelan rawak setara dengan saiz telah digunakan untuk memilih sampel. Senarai pelajar UPM sebanyak 23,202 telah dijadikan sebagai bingkai sampel. Jumlah populasi untuk kajian ini ialah 23,202. Saiz sampel adalah 1920. Data telah dikumpulkan bermula 10 Ogos hingga 31 Oktober 2007 menggunakan pra ujian soal selidik berstruktur. Purata respon adalah 92.3 %. Dari 1773 responden, 57.3 % adalah wanita, 52.5 % adalah Melayu dan 58.2 % adalah Muslim.

Jumlah purata skor pengetahuan responden adalah 20.11 dari skor maksimum sebanyak 34, purata skor sikap adalah 24.09 dari skor maksimum sebanyak 35 dan purata skor amalan adalah 4.14 dari skor maksimum sebanyak 7. Keputusan GLM (General Linear



Model) dan ujian *Post Hoc* menunjukkan pengetahuan responden terhadap HIV/AIDS mempunyai perkaitan yang signifikan pada umur ( $p = 0.001$ ), jantina ( $p = 0.004$ ), tahap pendidikan ( $p = 0.037$ ), fakulti atau institut ( $p = 0.001$ ), agama ( $p = 0.008$ ), pekerjaan ibu ( $p = 0.045$ ), tahap pendidikan ibu ( $p = 0.039$ ) dan pendapatan keluarga ( $p = 0.001$ ). Hasil kajian juga menunjukkan bahawa sikap responden terhadap HIV/AIDS mempunyai perkaitan yang signifikan dengan fakulti atau institut ( $p = 0.001$ ), dan pekerjaan bapa ( $p = 0.028$ ). Selain daripada itu, sikap responden terhadap HIV/AIDS mempunyai perkaitan yang signifikan dengan jantina ( $p = 0.001$ ), fakulti atau institut ( $p = 0.001$ ) dan status perkahwinan ( $p = 0.009$ ).

Hasil kajian menunjukkan hubungan signifikan yang positif tetapi lemah di antara jumlah skor pengetahuan dan jumlah skor sikap responden ( $r = 0.242$ ,  $p = 0.001$ ). Ia juga menunjukkan hubungan signifikan yang negative tetapi lemah di antara jumlah skor pengetahuan dan jumlah skor amalan responden ( $r = 0.059$ ,  $p = 0.021$ ).

Kesimpulannya, kajian ini menunjukkan tahap pengetahuan terhadap HIV/AIDS di kalangan pelajar UPM adalah tidak memuaskan. Responden kelihatan seperti mempunyai sikap yang dikehendaki dalam mencegah penyakit ini. Tetapi terdapat penggunaan kondom yang rendah (29.8 %) begitu juga dengan ujian HIV (13.48 %). Walaubagaimanapun, 97.8 % responden tidak mempunyai banyak pasangan. Skor amalan dikalangan warganegara Malaysia juga signifikan dan tinggi berbanding pelajar asing. Program pendidikan mengenai cara-cara menghindari HIV/AIDS perlu dijalankan untuk mengatasi kelemahan seperti rendah tahap pengetahuan, rendah penggunaan kondom dan ujian HIV.



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***Rozina Rahnama***



I certify that a Thesis Examination Committee has met on 6 January 2009 to conduct the final examination of Rozina Rahnama on her thesis entitled “Knowledge, Attitude and Practices Related to HIV/AIDS Among Students in Universiti Putra Malaysia” 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 Science.

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## **DECLARATION**

I hereby declare that the thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UPM or other institutions.

---

**ROZINA RAHNAMA**

Date:



# TABLE OF CONTENTS

	<b>Page</b>
<b>DEDICATION</b>	iii
<b>ABSTRACT</b>	iv
<b>ABSTRAK</b>	vi
<b>ACKNOWLEDGEMENTS</b>	viii
<b>APPROVAL</b>	xi
<b>DECLARATION</b>	xiii
<b>LIST OF TABLES</b>	xvii
<b>LIST OF FIGURES</b>	xx
<b>LIST OF ABBREVIATIONS</b>	xxi
<b>CHAPTER</b>	
<b>1 INTRODUCTION</b>	
1.1 Background	1
1.2 Objectives	8
1.3 Research Hypothesis	9
1.4 Conceptual Framework	10
<b>2 LITERATURE REVIEW</b>	
2.1 History of HIV/AIDS	12
2.2 HIV/AIDS Terminology	12
2.3 Microbiology of HIV	13
2.4 Epidemiology of HIV/AIDS	14
2.4.1 Global Situation of HIV/AIDS	14
2.4.2 Local situation of HIV/AIDS	16
2.5 Transmissions of HIV	19
2.5.1 Failure of transmission of HIV	20
2.6 Signs and Symptoms of HIV/AIDS	21
2.7 Diagnosis of HIV/AIDS	21
2.8 Treatment of HIV/AIDS	22
2.8.1 Cure of HIV/AIDS	22
2.9 Prevention of HIV/AIDS	23
2.10 HIV/AIDS and STDs (Sexually Transmitted Diseases)	24
2.11 Youth and HIV/AIDS	24
2.12 Knowledge and concern on HIV/AIDS	25
2.13 Myths about HIV/AIDS	30
2.14 Attitude towards HIV/AIDS	30
2.15 Health Promotion and HIV/AIDS	33



2.16	Practices towards HIV/AIDS	34
2.17	Evaluation of health education program	39
2.18	Gender and HIV/AIDS	41
2.19	Women and HIV/AIDS	43
2.20	Culture and HIV/AIDS	44
2.21	Stigma and HIV/AIDS	45
2.22	Implication of HIV/AIDS	46

### **3 MATERIALS AND METHODS**

3.1	Study Location	50
3.2	Study Design	50
3.3	Sample Size, Study Population and Sampling Method	51
3.3.1	Sample Size	51
3.3.1.1	Calculation of Sample Size	51
3.3.2	Study population	52
3.3.3	Sample Frame	52
3.3.4	Sampling Method	53
3.4	Ethical Issue and Consent	54
3.5	Instruments	55
3.5.1	Demographic	55
3.5.2	General Information on knowledge, and attitude and Practice on HIV/AIDS	55
	Knowledge on HIV/AIDS	55
	Attitude on HIV/AIDS	56
	Practice on HIV/AIDS	56
3.6	Validity and Reliability of the Questionnaire	56
3.6.1	Pre Testing	56
3.6.1.1	Pre-Testing Results	57
3.6.2	Reliability	58
3.6.3	Content Validity	59
3.7	Data Collection	59
3.8	Analysis of Data	60
3.9	Glossary of terms	61

### **4 RESULTS**

4.1	Response Rate	64
4.2	Demographic Distribution of Respondents	64
4.2.1	Sex	68
4.2.2	Age	68
4.2.3	Ethnicity	69





4.2.4	Students Educational Level	69
4.3	Knowledge on HIV/AIDS	70
4.4	Attitude towards HIV/AIDS	86
4.5	Practices towards HIV/AIDS	98
4.6	Knowledge on HIV/AIDS and Socio-Demographic Factors	111
4.7	Attitude towards HIV/AIDS and Socio-Demographic Factors	112
4.8	Practices towards HIV/AIDS and Socio-Demographic Factors	113
4.9	Correlation between Knowledge, Attitude and Practice score	113
<b>5</b>	<b>DISCUSSION</b>	
5.1	Response Rate	116
5.2	Knowledge on HIV/AIDS	117
5.3	Attitude towards HIV/AIDS	120
5.4	Practices towards HIV/AIDS	122
5.5	Knowledge, Attitude and Practices on HIV/AIDS and associated Factors among Students in UPM	125
5.6	Relationship between HIV/AIDS knowledge, attitude and practice and Attitude	126
5.7	Significant of the Study	127
<b>6</b>	<b>SUMMARY AND CONCLUSION</b>	
6.1	Summary and Conclusion	128
6.2	Limitations and Strengths of the Study	129
6.3	Recommendations	130
	<b>REFERENCES</b>	133
	<b>APPENDICES</b>	146
	<b>BIODATA OF THE STUDENT</b>	159



## LIST OF TABLE

<b>Table</b>		<b>Page</b>
3.1	Expected Sample Size	53
3.2	Sample Size Estimation Procedure from the Selected Faculties and institutes	54
3.3	Pre Testing Reliability Test Result (N = 20)	57
3.4	Reliability Test Result after the Study Survey (N= 1773)	58
4.1	Response Rates According to Faculties and Institute	64
4.2	Demographic Description of the Respondents	65
4.3	Distribution of Respondents from Faculties by Sex	68
4.4	Age Group of Students by Sex	69
4.5	Education Levels of Students by Sex	70
4.6	Item Analysis of Respondents Knowledge towards HIV/AIDS	71
4.7	Distribution of Students' Mean Knowledge Scores by Sex	74
4.8	Distribution of Students' Mean Knowledge Scores by Age Groups	75
4.9	Distribution of Students' Mean Knowledge Scores by Nationality	76
4.10	Distribution of Students' Mean Knowledge Scores by Residence	76
4.11	Distribution of Students' Mean Knowledge Scores by Ethnic Groups	77
4.12	Distribution of Students' Mean Knowledge Scores by Religion	78
4.13	Distribution of Students' Mean Knowledge Scores by Marital Status	79
4.14	Distribution of Students' Mean Knowledge Scores by Educational Level	80
4.15	Distribution of Students' Mean Knowledge Scores by Faculty/ Institute	81
4.16	Distribution of Students' Mean Knowledge Scores by Employed Status	81
4.17	Distribution of Students' Mean Knowledge Scores by Occupation	82
4.18	Distribution of Students' Mean Knowledge Scores by Father's Occupation of Respondents	82
4.19	Distribution of Students' Mean Knowledge Scores by Mother's Occupation of Respondents	83
4.20	Distribution of Students' Mean Knowledge Scores by Father's Educational Level of Respondents	84
4.21	Distribution of Students' Mean Knowledge Scores by Mother's Educational Level of Respondents	84
4.22	Distribution of Students' Mean Knowledge Scores by Family Income of Respondents	85
4.23	Attitude regarding HIV/AIDS	86
4.24	Distribution of Students' Mean Attitude Scores by Sex	88
4.25	Distribution of Students' Mean Attitude Scores by Age Groups	89



4.26	Distribution of Students' Mean Attitude Scores by Nationality	89
4.27	Distribution of Students' Mean Attitude Scores by Residence	90
4.28	Distribution of Students' Mean Attitude Scores by Ethnic Groups	90
4.29	Distribution of Students' Mean Attitude Scores by Religion	91
4.30	Distribution of Students' Mean Attitude Scores by Marital Status	91
4.31	Distribution of Students' Mean Attitude Scores by Educational Level	92
4.32	Distribution of Students' Mean Attitude Scores by Faculty/Institute	93
4.33	Distribution of Students' Mean Attitude Scores by Employed Status	94
4.34	Distribution of Students' Mean Attitude Scores by Occupation	94
4.35	Distribution of Students' Mean Attitude Scores by Father's Occupation of Respondents	95
4.36	Distribution of Students' Mean Attitude Scores by Mother's Occupation of Respondents	95
4.37	Distribution of Students' Mean Attitude Scores by Father's Educational Level of Respondents	96
4.38	Distribution of Students' Mean Attitude Scores by Mother's Educational Level of Respondents	97
4.39	Distribution of Students' Mean Attitude Scores by Family Income of Respondents	98
4.40	Practice regarding HIV/AIDS	99
4.41	Distribution of Students' Mean Practice Scores by Sex	100
4.42	Distribution of Students' Mean Practice Scores by Age Groups	101
4.43	Distribution of Students' Mean Practice Scores by Nationality	102
4.44	Distribution of Students' Mean Practice Scores by Residence	102
4.45	Distribution of Students' Mean Practice Scores by Ethnic Groups	103
4.46	Distribution of Students' Mean Practice Scores by Religion	104
4.47	Distribution of Students' Mean Practice Scores by Marital Status	104
4.48	Distribution of Students' Mean Practice Scores by Educational Level	105
4.49	Distribution of Students' Mean Practice Scores by Faculty/Institute	106
4.50	Distribution of Students' Mean Practice Scores by Employed Status	106
4.51	Distribution of Students' Mean Practice Scores by Occupation	107
4.52	Distribution of Students' Mean Practice Scores by Father's Occupation of Respondents	107
4.53	Distribution of Students' Mean Practice Scores by Mother's Occupation of Respondents	108
4.54	Distribution of Students' Mean Practice Scores by Father's Educational Level of Respondents	109
4.55	Distribution of Students' Mean Practice Scores by Mother's Educational Level of Respondents	110
4.56	Distribution of Students' Mean Practice Scores by Family Income of Respondents	111



4.57	General Linear Model Analysis Showing Factors Associated with Knowledge on HIV/AIDS	112
4.58	General Linear Model Analysis Showing Factors Associated with Attitude towards HIV/AIDS	112
4.59	General Linear Model Analysis Showing Factors Associated with Practice towards HIV/AIDS	113



## LIST OF FIGURE

<b>Figure</b>	<b>Page</b>
1.1 Conceptual Framework of Knowledge, Attitude and Practice on HIV/AIDS among Students in UPM	10
4.1 Distribution of Total Knowledge Score	73
4.2 Distribution of Total Attitude Score	87
4.3 Distribution of Total Practice Score	100



## **LIST OF ABBREVIATION**

AIDS	Acquired Immune Deficiency Syndrome
CDC	Centers for Disease Control and Prevention
HIV	Human Immunodeficiency Virus
IDUs	Injecting Drug Users
KAP	Knowledge, Attitude and Practice
MOH	Ministry of Health
MOE	Ministry of Education
N	Number of individuals who responded
NPFDB	National Population and Family Development Board
NGOs	Non-Governmental Organizations
PLWHAs	People Living with HIV/AIDS
STD	Sexually Transmitted Diseases
STIs	Sexually Transmitted Infections
UNICEF	United Nations Children's Emergency Fund
UNESCO	United Nations Educational, Scientific and Cultural Organization
UPM	Universiti Putra Malaysia
US	United States of America
UNGASS	United Nations General Assembly Special Session on HIV/AIDS
UNAIDS	United Nations Joint Program on HIV/AIDS
WHO	The World Health Organization



## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Background**

Acquired Immunodeficiency Syndrome (AIDS) is one of the most complex global health problems in the 21<sup>st</sup> century (Ayranci, 2005). AIDS and Human Immunodeficiency Virus infection (HIV) are the world's most urgent public health challenge. The disease has emerged and been considered as a threat for society for the last three decades and caused significant morbidity and mortality in human societies throughout the world (World Health Organization, 2004). There is no treatment or cure in sight; the disease continues to spread at a disturbing rate (Tumer and Unal, 2000).

AIDS is the last stage in a progression of diseases resulting from infection with a virus known as HIV. It is a serious condition that weakens the body's immune system, which includes a number of unusual and severe infections, cancers, debilitating illnesses and affecting the central nervous system (The Health Center Network, 2001).

HIV infection and AIDS affect physical, mental, emotional, social and spiritual dimensions of human life. HIV and AIDS reduce the life expectancy of infected persons, increasing the number of orphaned children, creating turbulence in health care systems, and contributing to economic insecurity, potentially leading to political instability (Sowell, 2004).



HIV and AIDS have claimed many lives over the years and continue to involve varying societies. It has been estimated that more than 25 million people have died of AIDS since 1981 when AIDS was first diagnosed (United Nations Joint Program on HIV/AIDS / WHO, 2007).

As of November 2008, 33.0 million people were infected with HIV/AIDS worldwide (UNAIDS/ WHO, 2008). Statistics show that more than 6,000 people become infected with HIV every day in the world. In 2007, AIDS caused the deaths of an estimated 2.1 million people including 1.7 million adults and 330,000 children under the 15 years of age. Around two and a half million adults and children have become infected with HIV (UNAIDS/WHO, 2007). Young people aged 15 to 24 year accounted for 45% of all new HIV infections worldwide. Sub-Saharan Africa is the most heavily affected by HIV/AIDS, with the Caribbean region ranking second (Fitzpatrick *et al.*, 2004). In Asia, Vietnam is a country in which the estimated number of people living with HIV has more than doubled between 2000 and 2005, and Indonesia has the fastest growing epidemic. Also, Cambodia is a country with the highest national HIV prevalence rate (UNAIDS/WHO, 2008).

In Malaysia by the end of September 2008, the incidence of HIV infection had increased from three cases in 1986 to 83,527 cases in 2008. The cumulative total number of AIDS death was 12,245 until 2007 and 14,317 AIDS cases (Ministry of Health Malaysia, September 2008). Out of 83,527, majority (84.5 %) were male. There is an increasing rate among the ages between 13 to 49 years old. The prevalence is the highest among Malays as compared to other ethnic groups. In Malaysia, the main mode of transmission





is intravenous drug use (55.4%) and heterosexual (27.4%) (Ministry Of Health Malaysia, 2008). However, detail information on the 27.4% who had heterosexual transmission is not available. The HIV/AIDS epidemic in Malaysia has emerged as an important health problem since the first HIV case was detected in 1986.

The trend among adolescents and young adults towards high-risk behavior coupled with insufficient education are the primary reasons for the increase in transmission of HIV (UNAIDS, 2006). A worrisome aspect of this epidemic is that HIV/AIDS affects Malaysians in their prime productive years. Malaysia's young people are assets in the development of the country, and this epidemic result in a drain on human resources in this most economically-productive portion of the population (UNFPA, 2005).

Malaysia is a moderate Islamic country with the majority of Muslim Malays and other ethnicities such as Chinese and Indian. Like many Islamic societies, some issues which are related to sex and sexually transmitted infections are considered as taboo and sensitive, and therefore are not discussed openly in the society (Yoo *et al.*, 2005; Mahat and Scoloveno, 2006). Despite the domination of conservative and traditional values in Malaysia, adolescents are engaging in some behaviors like unsafe sexual intercourse (Huang, 1999). The incidence of adolescents engaging in sexual intercourse also increases with age. What is more alarming is that most sexual encounters are unsafe, with no protection against STI and unwanted pregnancy. There is no doubt that young people are at greater risk of acquiring sexually transmitted infections (STIs), particularly HIV/AIDS, than other age groups.