UNIVERSITI PUTRA MALAYSIA

FACTORS ASSOCIATED WITH HUMAN IMMUNODEFICIENCY VIRUS STIGMA (HIV) AMONG HEALTH CARE WORKERS IN HULU LANGAT, SELANGOR

NATALIA BINTI CHE ISHAK

FPSK(M) 2017 31

FACTORS ASSOCIATED WITH HUMAN IMMUNODEFICIENCY VIRUS STIGMA (HIV) AMONG HEALTH CARE WORKERS IN HULU LANGAT, SELANGOR

By

NATALIA BINTI CHE ISHAK

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

August 2017

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

FACTORS ASSOCIATED WITH HUMAN IMMUNODEFICIENCY VIRUS (HIV) STIGMA AMONG HEALTH CARE WORKERS IN HULU LANGAT, SELANGOR

By

NATALIA BINTI CHE ISHAK

August 2017

Chairman : Dr. Hayati Binti Kadir@Shahar
Faculty : Medicine and Health Sciences

Introduction: Globally, stigma towards people living with HIV will cause less effectiveness towards HIV prevention, testing and treatment. In the health facilities setting, this problem is a very serious barrier to access the health care. The stigma towards HIV was significantly predicted by several factors such as personal perception, behaviour and environment.

Objective: The objectives of this study are to determine the factors associated with HIV stigma and the predictors among health care workers in Hulu Langat, Selangor, Malaysia.

Methodology: This cross sectional study was carried out among health care workers in Hulu Langat, Selangor, Malaysia. The sample size involved 413 respondents. Study population consisted of all the health care workers from all the health clinics in Hulu Langat Health District Office. Simple random sampling was applied, whereby professional group and supporting group one staff in Hulu Langat Health Clinics was selected randomly using random number generator. Comprehensive Questionnaire: Self administered questionnaire based on Stigma Index Tool was used. All data were analysed using IBM Statistical Package for Social Science (SPSS) version 22 involving descriptive, chi square and Multiple Logistic Regression analysis.

Result/Conclusion: The response rate was 81.6%. The level of HIV stigmatising behaviour among the health care workers in Hulu Langat, Selangor was 54.5%. Out of seven factors, three of them had a significant association with level of HIV stigmatising behaviour which were age (p =

0.038), current job status (p = 0.014) and personal perception (p = 0.001). The key findings from the analysis were that the personal perception of healthcare workers predicted their stigmatising behaviour (R2= 0.078, p < 0.05). There was, however, no significant relationship between environmental factors and stigmatising behaviour as well as between personal perception and environmental factors. The social change implications may be to reduce stigma among healthcare workers toward people living with HIV and in turn increase the willingness of healthcare workers to engage with people living with HIV and provide quality service to them.

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

MENGUKUR STIGMA *HUMAN IMMUNODEFICIENCY VIRUS* (HIV) DI KALANGAN KAKITANGAN KESIHATAN DI HULU LANGAT, SELANGOR

Oleh

NATALIA BINTI CHE ISHAK

Ogos 2017

Pengerusi : Dr. Hayati Binti Kadir@Shahar
Fakulti : Fakulti Perubatan Dan Sains Kesihatan

Pendahuluan: Di peringkat global, stigma terhadap orang yang hidup dengan HIV/AIDS akan menyebabkan kurangnya keberkesanan terhadap pencegahan, ujian dan rawatan HIV. Di fasiliti kesihatan, masalah ini adalah halangan yang sangat serius terhadap akses terhadap penjagaan kesihatan. Stigma terhadap HIV secara signifikan telah diramalkan oleh beberapa faktor seperti faktor-faktor peribadi, persekitaran dan tingkah laku.

Objektif: Objektif kajian ini adalah untuk mengukur dan meramalkan faktor-faktor yang berkaitan dengan stigma HIV di kalangan kakitangan kesihatan yang bekerja di Hulu Langat, Selangor, Malaysia.

Methodologi: Kajian irisan lintang ini dijalankan terhadap populasi kajian yang terdiri daripada semua kakitangan kesihatan di semua klinik kesihatan di Pejabat Daerah Hulu Langat melibatkan 413 responden. Persampelan rawak mudah digunakan, di mana kumpulan profesional dan kumpulan kakitangan sokongan satu di Klinik Kesihatan Hulu Langat telah dipilih secara rawak menggunakan penjana nombor rawak. Soal selidik yang menyeluruh: Borang soal-selidik yang diisi sendiri adalah berdasarkan borang soal-selidik Pengukur Stigma Indeks telah digunakan. Semua data yang diperolehi dianalisa menggunakan *IBM Statistical Package for Social Science (SPSS)* versi 22 meliputi analisis diskriptif, *chi square* dan *Multiple Logistic Regression*.

Keputusan/Kesimpulan: Kadar respon adalah sebanyak 81.6%. Terdapat stigma HIV di kalangan kakitangan kesihatan di Hulu Langat, Selangor, 54.5%. Daripada tujuh faktor, tiga daripada faktor berkenaan mempunyai perkaitan yang signifikan dengan tahap kelakuan stigma HIV iaitu umur (p = 0.038), status kerja semasa (p = 0.014) dan persepsi peribadi (p = 0.001). Persepsi

peribadi kakitangan kesihatan meramalkan tingkah laku mereka dalam stigma HIV ($R2 = 0.078$, $p < 0.05$). Tiada hubungan yang signifikan antara faktor persekitaran dan tingkah laku stigma serta antara persepsi peribadi dan faktor persekitaran. Implikasi perubahan sosial mengurangkan stigma di kalangan kakitangan kesihatan, meningkatkan kesediaan mereka melibatkan diri dan memberikan perkhidmatan yang berkualiti terhadap orang-orang yang hidup dengan HIV.

ACKNOWLEDGEMENTS

First and foremost, I would like to thank Allah for giving me the opportunity to carry out this research project, and strength and courage to overcome all the obstacles and problems I have encountered during this research project.

I would like to thank my supervisor Dr Hayati Bt. Kadir@Shahar and Dr Rosliza Bt. Abdul Manaf for helping and guiding me throughout the research. Without them, this research project would not be successfully accomplished. I am also grateful to my module coordinator, Assc. Prof. Dr Hejar Bt. Abd. Rahman and other lectures for facilitating and assisting me in my research.

I am also very grateful to HIV/STI Sector Ministry of Health Malaysia, Hulu Langat District Office and all Hulu Langat Health Clinics staff for giving me the permission to conduct my research in all Hulu Langat Health Clinics. I also wish to show my appreciation to the medical staffs that willing to help me throughout the research.

Lastly, I want to express my gratitude and a special thank you to my mother, Sa'yah Binti Mat Nor, my husband, Khairil Annuar Bin Abdul Kadir and my kids, Muhammad Rasyad, Awatif Batrisya, Mumtaz Insyirah and Muhammad Aryan for their continuous support, patience, sacrifice and pray during this research and make it successful.

I certify that a Dissertation Examination Committee has met on 2nd August 2017 to conduct the final examination of Natalia Binti Che Ishak on her dissertation entitled "Factors Associated With Human Immunodeficiency Virus (HIV) Stigma Among HealthCare Workers In Hulu Langat, Selangor" 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 Dissertation Examination Committee were as follows:

Dato' Dr. Faisal Ibrahim
MBBS (Cairo), MPH (Philippines), MPHM (Mahidol)
Associate Professor
Department of Community Health
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
(Chairman)

Dr. Muhamad Hanafiah Juni
MD (UKM), MPH (UM), MSc (London School of Economic)
Associate Professor
Department of Community Health
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
(Internal Examiner)

Dr. Hematram Yadav
MBBS (Kerala, India), MPH (UM), MBA (Boston), MRSH, FAMM
Professor
Department of Community Medicine
Faculty of Medicine
MAHSA University
(External Examiner)

Professor Dato' Dr. Abdul Jalil Nordin, DSIS
MD (UKM), M.Med (Radiology)(UM)
Professor and Dean
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia

Date:

This dissertation was submitted to Department of Community Health, Faculty of Medicine and Health Sciences, 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:

Dr. Hayati Kadir@Shahar
MBBchBAO (Ireland), M.Community Health (Epidemiology & Biostatistics) (UKM)
Senior Medical Lecturer
Department of Community Health
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia

Dr. Rosliza Abdul Manaf
MBBS (UM), M. Community Medicine (Family Health) (UKM), PhD (Octago)
Senior Medical Lecturer
Department of Community Health
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia

_____

Professor Dato' Dr. Abdul Jalil Nordin, DSIS
MD (UKM), M.Med (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 thesis has undergone plagiarism detection software.

Signature: _____ Date: _____

Name and Matric No: Natalia Binti Che Ishak, GS 46745

Declaration by Memberships of Supervisory Committee

This is confirming 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:

Signature:_____
Name of Member of Supervisory Committee

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ARV	Antiretroviral
FSW	Female Sex Worker
HIV	Human Immunodeficiency Virus
IBBS	Integrated Bio-Behavioural Surveillance
KPs	Key Populations
MAC	Malaysian AIDS Council
MDGs	Millennium Development Goals
MOH	Ministry of Health
MSM	Man Having Sex with Man
NAR	National AIDS Registry
NGO	Non-Government Organization
NSEP	Needle and Syringe Exchange Programme
NSP	National Strategic Plan on HIV/AIDS
NSPEA	National Strategic Plan on Endings AIDS
PLHIV	People Living with HIV
PMTCT	Prevention of Mother-to-Child Transmission
PWID	Injecting Drug Use/User
SPACE	Stigma Free Spaces in Medical Scenarios
SRH	Sexual Reproductive Health
STI	Sexually Transmitted Infection
TG	Transgender
UNAIDS	United Nations Programme on HIV/AIDS
WHO	World Health Organization

CHAPTER 1

INTRODUCTION

1.1 Background

In Malaysia, Human Immunodeficiency Virus (HIV) or Acquired Immune Deficiency Syndrome (AIDS) was initially diagnosed in 1986. It has become, the serious health and development challenges for the country's since it was reported (Ngadiman et al., 2015a). Generally, the new HIV/AIDS infections around the world have registered a drop of 35% since 2000. Similarly, death from AIDS has also shown a decrease of 42% since 2004 (United Nations Programme on HIV/AIDS (UNAIDS), 2014). However, the HIV/AIDS epidemic is still seen as a major challenge in some countries and among key populations where access activities for the prevention of HIV/AIDS and behaviour change interventions, such as harm reduction programme is limited. The prevalence of HIV among the general public was less than 5% and Malaysia were categorised by the World Health Organization (WHO) as a country with concentrated epidemic. Malaysia has managed to bring down the rate of new HIV infection from 22 cases for every 100,000 of the population in 2010 to 10.9 per 100,000 populations in 2015. This target has surpassed the target country for the Millennium Development Goals (MDGs) for disease HIV/AIDS (Ngadiman et al., 2014). The incidence of HIV infection in Malaysia in particular remains among the high risk groups which are drug users who share injection, female sex workers, the transgender sex workers and men who have sex with men (Ngadiman et al., 2015a). In line with the National Strategic Plan (National Strategic Plan Ending AIDS 2016-2030), it is the hope of the Government that by 2030, 95% of those at risk for getting HIV/AIDS in Malaysia will know the status of their disease, and of the total, 95% will be given treatment and thus 95% of the total will enjoy the benefits of "viral suppression" (Ngadiman, Suleiman, & Chandrasekaran, 2015b).

HIV-related stigma by healthcare workers compromises the delivery of quality care in patients, involving adhering to treatments and sustaining their overall management of health. Stigma is among the main hindrance to HIV anticipation, treatment, care and support. Stigma challenge HIV aversion endeavours by making individuals reluctant to look for HIV data, administrations and modalities to decrease the danger of contamination and to receive more secure practices for expect that these activities raise question about their HIV status. Dread of stigma, which can likewise be identified with dread of savagery, debilitates individuals living with HIV from uncovering their status even to relatives and sexual accomplices, therefore undermines their capacity and readiness to get to and stick to treatment. Stigma debilitates the capacity of people and groups to shield themselves from HIV and to remain solid on the off chance that they are living with HIV. HIV related stigma alludes to the pessimistic convictions, emotions and mentalities towards individuals living with HIV, bunches related with individuals living with HIV and other key

populations at higher danger of HIV infection. People who living with HIV (PLHIV) that is closely associated to key populations (KPs) such as people who inject drugs (PWID), men who have sex with men (MSM), female sex workers (FSW) and transgender (TG) tend to experience stigma and discrimination due to their HIV status (United Nations Programme on HIV/AIDS (UNAIDS), 2014). HIV-related stigma among healthcare workers is rather high, despite the fact that the staffs are more educated and knowledgeable about HIV and AIDS than the family and community (Ngadiman et al., 2015b).

Meanwhile, there was a study done in Singapore noted that the healthcare workers thought precise convictions concerning transmission of HIV by means of sex and needle sharing yet a critical extent additionally verbalized sureness in transmission through regular social contact (Bishop, Oh, & Swee, 2000). The healthcare workers knew about all inclusive precautionary measures while treating people with HIV/AIDS yet had a tendency to be excessively mindful in low or no hazard circumstances (Bishop et al., 2000). A huge extent of the healthcare providers showed unobtrusive or no information or involvement with AIDS related conditions and most of them trusted that most medicinal services experts are ill-equipped to administer to individual with HIV/AIDS (Bishop et al., 2000). Further, there was confirmation of noteworthy belittling and dread of treating individual with HIV/AIDS, both of which were altogether and contrarily related with exactness of convictions about HIV transmission and all inclusive safeguards (Bishop et al., 2000).

Currently, there is no evidence of HIV-related stigma reported at healthcare settings in Malaysia, therefore the information regarding the forms of stigmatising attitudes among healthcare workers are very limited and not documented. However, a proxy estimate of stigma attitudes and knowledge was assessed among medical students in Universiti Putra Malaysia (UPM) in year 2012 (Chew & Cheong, 2013). The study was done to decide the components related with learning on HIV/AIDS and stigma towards PLHIV among therapeutic understudies as they are future specialists who are prepared to treat all sort of illnesses incorporating individuals living with HIV/AIDS without partiality. Medical teaching is one of the proficient trainings that intend to transform a layman into an expert. Revolution in hypothetical points of view and showing methodologies are flourishing in medicinal instruction keeping in mind the end goal to deliver future specialists who are familiar and capable as well as carry on professionally. A recently graduated specialist is very quickly utilized to be a house officer in this nation. From the very beginning in the health facility, they are relied upon to assistant all patients who are conceded under their care and supervision. In this way, their expert conduct with the patient strikes affect and choose the course of the illness, treatment adherence and guess of the patient, particularly persistent with genuine and alarming conditions, for example, human immunodeficiency infection (HIV) and acquired immune deficiency syndrome (AIDS). From the examination it was reasoned that restorative understudies in preclinical years were having criticizing state of mind towards mandatory measures contrasted with the clinical years that had all the more deriding mentality in being less comfortable with PLHIV (Chew & Cheong, 2013).

This study may perhaps help the country to venture and estimate the trend of stigma which is vital for better planning of providing care and treatment services among people living with HIV without biases. The result should also be habitually conducted as a formal surveillance system to adequately supervise the trends and compare the findings annually. Hence, the objective of this study is to determine the level of stigma among healthcare workers towards people living with HIV.

United Nations Programme on HIV/AIDS (UNAIDS) also announced in the mid-term audits, more than 33% of nations in the district recognized the need to execute or additionally grow the projects to diminish disgrace identified with HIV and key populations in healthcare settings (United Nations Programme on HIV/AIDS (UNAIDS), 2013). Advance around there has been moderate in any case the significance of the interface between healthcare providers and key populations in the reaction. Activities performed by the nations, for example, China, Malaysia and India to instruct the healthcare providers on HIV, disgrace and patients' rights and additionally to build up the inward and outside grievances components and referral to legitimate administrations are vital (UNAIDS, 2013). The activities should be executed at scale and fused economically over the well-being segment in all nations. Apparatuses and frameworks for routine checking of HIV-related disgrace in health services settings, as of now being created in Thailand can be taken after and are required in different nations over the area (UNAIDS, 2013).

1.2 Problem Statement

Availability and accessibility of antiretroviral (ARV) in Malaysia since 1990 resulted in more people living with HIV are able to live longer and it was witnessed by the increased of the cumulative numbers of PLHIV since 2012, 79,452 PLHIV until end of 2016, 93,089 PLHIV (Ngadiman et al., 2015b). Better treatment led to decrease the number of AIDS related death in the past year and also led to increase demand for services for people living with HIV (Ngadiman et al., 2015a). There for, increase the burden on health system and the workloads of healthcare in HIV service organisations.

HIV-related stigma especially among the healthcare workers will prevents people living with HIV from coming forward for testing, for prevention and for treatment services. It is important to reduce HIV stigma among health care workers in order to improve HIV prevention, care, treatment, services and the potential to fuel the spread of HIV towards achieving Ending AIDS by 2030 (Ngadiman et al., 2015a).

Based on the 2016 National AIDS Registry (NAR) of Malaysia, there were 981 of HIV cases in Selangor and 298 of the cases were from Hulu Langat District. Besides that, Hulu Langat has three methadone clinics. Therefore, Hulu Langat healthcare workers have to deal a lot with HIV patients. Non-stigmatising

services are important to ensure a good and effective treatment and management being delivered to the HIV patients (Dawson Amoah, 2015).
Integrated Bio-Behavioural Surveillance (IBBS) involving Stigma Index assessment among KPs was done in Malaysia in 2014. The study observed high level of internalized or enacted stigma among KPs in Malaysia (Ngadiman et al., 2014). However, there is no evidence of HIV-related stigma study reported at healthcare settings in Malaysia. Since there is no published study in Malaysia discussing about factors associated with HIV-related stigma among health care workers, therefore, it is important that a better understanding of the stigma and factors associated with HIV-related stigma is made and interventions to deal with HIV-related stigma can be developed. Hopefully the findings of this research will help to understand the stigmatising behaviour among healthcare workers which can be use in the interventions programmes to combat the issue of stigmatisation.

1.3 Research Questions

RQ1: What is the level of HIV stigmatising behaviour among the healthcare workers?

RQ2: Do the socio-demographics factors (age and gender) and working experience factors (current job status, year working in healthcare and working experience with PLHIV) of the healthcare workers influence HIV stigmatising behaviour among healthcare workers?

RQ3 : Do the personal perception (opinions of healthcare workers of people living with HIV, worry or fear contracting HIV and willingness to treat key population) of the healthcare workers influence HIV stigmatising behaviour among healthcare workers?

RQ4: Do the environment factors (health facilities policies in HIV management or support, infection control guidelines or supplies and stigma & discrimination policies) influence the personal perception of the healthcare workers in relation to the tendency to stigmatise people living with HIV?

RQ5: Do the environment factors (health facilities policies in HIV management or support, infection control guidelines or supplies and stigma & discrimination policies) influence the HIV stigmatising behaviour among healthcare workers?

1.4 Objective of the Study

1.4.1 General Objective

To determine the level of HIV stigmatising behaviour among healthcare workers and identify the factors associated with it among healthcare workers in Hulu Langat, Selangor.

1.4.2 Specific Objectives

i. To determine the level of HIV stigmatising behaviour among healthcare workers.
ii. To determine the socio-demographic factors (age, gender), working experience (current job status, year working in healthcare and working experience with PLHIV), personal perception and environmental factors among the healthcare workers.
iii. To determine the association between socio-demographic factors (age and gender), working experience factors (current job status, year working in healthcare and working experience with PLHIV), personal perception (opinions of healthcare workers of people living with HIV, worry or fear contracting HIV and willingness to treat key population) and environmental factors (health facilities policies in HIV management or support, infection control guidelines or supplies and stigma & discrimination policies) with HIV stigmatising behaviour among healthcare workers.
iv. To determine the association between environmental factors (health facilities policies in HIV management or support, infection control guidelines or supplies and stigma & discrimination policies) with personal perception.
v. To determine the predictors of HIV stigmatising behaviour among health care workers.

1.5 Hypothesis

Ha1. There is a significant association between socio-demographics factors (age and gender) and working experience factors (current job status, year working in healthcare and working experience with PLHIV) with HIV stigmatising behaviour among healthcare workers.

Ha2: There is a significant association between personal perception (opinions of healthcare workers of people living with HIV, worry or fear contracting HIV and willingness to treat key population) with HIV stigmatising behaviour among healthcare workers.

Ha3: There is a significant association between environmental factors (health facilities policies in HIV management or support, infection control guidelines or supplies and stigma & discrimination policies) with HIV stigmatising behaviour among healthcare workers.

Ha4: There is a significant association between environmental factors (health facilities policies in HIV management or support, infection control guidelines or supplies and stigma & discrimination policies) with personal perception among healthcare workers.

Ha5: There are significant predictors with HIV stigmatising behaviour among healthcare workers.

REFERENCES

Ahmed, A., Kaplan, M., Symington, A., & Kismodi, E. (2011). Criminalising consensual sexual behaviour in the context of HIV: Consequences, evidence, and leadership. *Global Public Health*, *6*(sup3), S357–S369. https://doi.org/10.1080/17441692.2011.623136

Andrewin, A., & Chien, L.-Y. (2008). Stigmatization of patients with HIV/AIDS among doctors and nurses in Belize. *AIDS Patient Care and STDs*, *22*(11), 897–906. https://doi.org/10.1089/apc.2007.0219

Bektas, H. A., & Kulakac, O. (2007). Knowledge and attitudes of nursing students toward patients living with HIV/AIDS (PLHIV): a Turkish perspective. *AIDS Care*, *19*(7), 888–94. https://doi.org/10.1080/09540120701203352

Bishop, G. D., Oh, H. M. L., & Swee, H. Y. (2000). Attitudes and beliefs of Singapore health care professionals concerning HIV/AIDS. *Singapore Medical Journal*, *41*(2), 55–63.

Bogart, L. M., Cowgill, B. O., Kennedy, D., Ryan, G., Murphy, D. A., Elijah, J., & Schuster, M. A. (2008). HIV-related stigma among people with HIV and their families: A qualitative analysis. *AIDS and Behavior*, *12*(2), 244–254. https://doi.org/10.1007/s10461-007-9231-x

Cai, G., Moji, K., Honda, S., Wu, X., & Zhang, K. (2007). Inequality and unwillingness to care for people living with HIV/AIDS: a survey of medical professionals in Southeast China. *AIDS Patient Care and STDs*, *21*(8), 593–601. https://doi.org/10.1089/apc.2006.0162

Chávez, J. J., Morales, M., Sala, A., Puig, M., Deliz, L., Castro, E., … Zorrilla, C. (2011). HIV / AIDS : A focus group study. *Interamerican Journal of Psychology*, *45*(3), 331–338. Retrieved from https://journal.sipsych.org/index.php/IJP/article/viewFile/163/pdf

Chew, B. H., & Cheong, A. T. (2013). Assessing HIV/AIDS knowledge and stigmatizing attitudes among medical students in Universiti Putra Malaysia. *Medical Journal of Malaysia*, *68*(1), 24–29.

Choy, K. K., Rene, T. J., & Khan, S. A. (2013). Beliefs and Attitudes of Medical Students from Public and Private Universities in Malaysia towards Individuals with HIV/AIDS. *Scientific World Journal*, *2013*. https://doi.org/10.1155/2013/462826

Cianelli, R., Ferrer, L., Norr, K. F., McCreary, L., Irarrázabal, L., Bernales, M., & Miner, S. (2011). Stigma Related to HIV among Community Health Workers in Chile. *Stigma Research and Action*, *1*(1), 3–10. https://doi.org/10.5463/sra.v1i1.11

Dawson Amoah, C. G. (2015). *Determinants of HIV Stigma Among Healthcare Workers in Ghana*. Walden University, Ghana. Retrieved from http://scholarworks.waldenu.edu/dissertations

Dlamini, P. S., Wantland, D., Makoae, L. N., Chirwa, M., Kohi, T. W., Greeff, M., … Holzemer, W. L. (2009). HIV stigma and missed medications in HIV-positive people in five African countries. *AIDS Patient Care and STDs*, *23*(5), 377–87. https://doi.org/10.1089/apc.2008.0164

Doka, P. J. S., Danjin, M., & Dongs, I. S. (2017). ORIGINAL ARTICLE HIV / AIDS – related Stigma and Discrimination among Health care Providers in a Tertiary Health Facility. *J Med Sci*, *37*(2), 44–49. https://doi.org/10.4103/jmedsci.jmedsci

Dowshen, N., Binns, H. J., & Garofalo, R. (2009). Experiences of HIV-Related Stigma Among Young Men Who Have Sex with Men Experiences of HIV-Related Stigma Among Young Men Who Have Sex with Men. *AIDS Patient Care and STDs*, *23*(5), 371–376. https://doi.org/10.1089/apc.2008.0256

Ekstrand, M. L., Ramakrishna, J., Bharat, S., & Heylen, E. (2013). Prevalence and drivers of HIV stigma among health providers in urban India: implications for interventions. *Journal of the International AIDS Society*, *16*(3 Suppl 2), 1–12. https://doi.org/10.7448/IAS.16.3.18717

Feyissa, G. T., Abebe, L., Girma, E., & Woldie, M. (2012). Stigma and discrimination against people living with HIV by healthcare providers, Southwest Ethiopia. *BMC Public Health*, *12*, 522. https://doi.org/http://dx.doi.org/10.1186/1471-2458-12-522

Goffman, E. (1963). Erving Goffman. “Stigma and Social Identity.” Stigma: Notes on the Management of Spoiled Identity. Prentice-Hall, 1963. Prentice Hall.

Gorases, L. H., Marjorie, K., & Marcus, G. (2013). HIV / AIDS Related Workplace Stress and Fear among Nurses : Experiences in Windhoek. *Journal of Medicine and Medical Science Research*, *2*(8), 90–96.

Gray, A. J. (2002). Stigma in psychiatry. *Journal of the Royal Society of Medicine*, *95*, 72–76. https://doi.org/10.1258/jrsm.95.2.72

Hosmer, D., & Lemeshow, S. (2000). *Applied Logistic Regression* (2nd Edition). John Wiley & Sons; Wiley InterScience, New York. https://doi.org/10.1002/0471722146

Hossain, M. B., & Kippax, S. (2010). HIV-related discriminatory attitudes of healthcare workers in Bangladesh. *Journal of Health, Population and Nutrition*, *28*(2), 199–207. https://doi.org/10.3329/jhpn.v28i2.4892

Jain, A., Carr, D., & Nyblade, L. (2015). Measuring HIV stigma and discrimination among health faciltiy staff: standardized questionnaire user guide, (June), 1–24. Retrieved from http://www.healthpolicyproject.com

Jin, H., Earnshaw, V. A., Wickersham, J. A., Kamarulzaman, A., Desai, M. M., John, J., & Altice, F. L. (2014). An assessment of health-care students' attitudes toward patients with or at high risk for HIV: implications for education and cultural competency. *AIDS Care*, *26*(10), 1223–1228. https://doi.org/10.1080/09540121.2014.894616.

Li, L., Wu, Z., Liang, L. J., Lin, C., Guan, J., Jia, M., … Yan, Z. (2013). Reducing HIV-related stigma in health care settings: A randomized controlled trial in China. *American Journal of Public Health*, *103*(2), 286–292. https://doi.org/10.2105/AJPH.2012.300854

Li, L., Wu, Z., Wu, S., Zhaoc, Y. U., Jia, M., & Yan, Z. (2007). HIV-Related Stigma in Health Care Settings : A Survey of Service Providers in China. *AIDS PATIENT CARE and STDs*, *21*(10), 753–762. https://doi.org/10.1089/apc.2006.0219

Lwanga, S. K., & Lemeshow, S. (1991). *Sample Size Determination in Health Studies*. Geneva: World Health Organization.

Neilands, T. B., Padilla, M., Diaz, N. V., & Madera, S. L. R. (2016). The role of emotions in the reduction of HIV/AIDS stigma among physicians in training. *AIDS Care*, *28*(3), 376–383. https://doi.org/10.1080/09540121.2015.1090537.

Ngadiman, S., Suleiman, A., Md Taib, S., Abdul Rahman, H. I., Chandrasekaran, S., Rahman, R., … Kurusamy, T. (2015a). *Ending AIDS in Malaysia*. Retrieved from http://www.moh.gov.my/images/gallery/Report/Ending AIDS in 2020 (Final_271115)_printed version.pdf

Ngadiman, S., Suleiman, A., & Chandrasekaran, S. (2015b). *Global AIDS Response Progress Report*. Retrieved from http://www.moh.gov.my/images/gallery/Report/Malaysia GARPR 2016_Final.pdf

Ngadiman, S., Suleiman, A., Md Taib, S., Yuswan, F., Ahmad Hafad, F. A., Ellan, P., … Hairudin, M. (2014). *GLOBAL AIDS RESPONSE*. Retrieved from http://www.aidsdatahub.org/sites/default/files/publication/Malaysia_narrative_report_2015_0.pdf

Nyblade, L., Jain, A., Benkirane, M., Li, L., Lohiniva, A.-L., McLean, R., … Thomas, W. (2013). A brief , standardized tool for measuring HIV-related stigma among health facility staff : results of field testing in China , Dominica ,. *Journal of The International AIDS Society*, *16*(Suppl 2), 1–11. https://doi.org/org/10.7448/IAS.16.3.18718

Ouzouni, C., & Konstantinos, N. (2012). HIV/AIDS knowledge, attitudes and behaviours of student nurses. *Health Science Journal*, *6*(1), 129–150. Retrieved from http://www.hsj.gr/medicine/hiv--aids-knowledge-attitudes-and-behaviours-of-student-nurses.php?aid=5302

Rogers, S. J., Tureski, K., Cushnie, A., Brown, A., Bailey, A., & Palmer, Q. (2014). Layered stigma among health-care and social service providers toward key affected populations in Jamaica and the Bahamas. *AIDS Care*, *26*(5), 538–546. https://doi.org/10.1080/09540121.2013.844762

Salih, M. H., Tessema, G. A., Cherkos, E. A., Ferede, A. J., & Anlay, D. Z. (2017). Stigma towards People Living on HIV / AIDS and Associated Factors among Nurses ' Working in Amhara Region Referral Hospitals , Northwest Ethiopia : A Cross-Sectional Study. *Advances in Nursing*, *2017*, 1–8. https://doi.org/https://doi.org/10.1155/2017/6792735

Sayles, J. N., Hays, R. D., Sarkisian, C. A., Mahajan, A. P., Spritzer, K. L., & Cunningham, W. E. (2008). Development and psychometric assessment of a multidimensional measure of internalized HIV stigma in a sample of HIV-positive adults. *AIDS and Behavior*, *12*(5), 748–758. https://doi.org/10.1007/s10461-008-9375-3

Sengupta, S., Banks, B., Jonas, D., Miles, S. M., & Smith, G. C. (2011). HIV interventions to reduce HIV/AIDS Stigma : A systemic review. *National Institutes of Health*, *15*(6), 1075–1087. https://doi.org/10.1007/s10461-010-9847-0

United Nations Programme on HIV/AIDS (UNAIDS). (2013). *HIV in Asia and the Pacific*. Retrieved from http://www.unaids.org/sites/default/files/media_asset/2013_HIV-Asia-Pacific_en_0.pdf

United Nations Programme on HIV/AIDS (UNAIDS). (2014). Reduction of stigma and discrimination. Retrieved from http://www.unaids.org/sites/default/files/media_asset/2014unaidsguidancenote_stigma_en.pdf

Visser, M. J., Makin, J. D., Alain, V., Sikkema, K. J., & Forsyth, B. W. C. (2009). HIV/AIDS STIGMA IN A SOUTH AFRICAN COMMUNITY. *AIDS Care*, *21*(2), 197–206. https://doi.org/10.1080/09540120801932157.

Vorasane, S., Jimba, M., Kikuchi, K., Yasuoka, J., Nanishi, K., Durham, J., & Sychareun, V. (2017). An investigation of stigmatizing attitudes towards people living with HIV/AIDS by doctors and nurses in Vientiane, Lao PDR. *BMC Health Services Research*, *17*(1), 125. https://doi.org/10.1186/s12913-017-2068-8

Waluyo, A., Culbert, G. J., Levy, J., & Norr, K. (2015). understanding hiv related stigma among indonesian nurses. *J Assoc Nurses AIDS Care*, *26*(1), 69–80. https://doi.org/10.1016/j.jana.2014.03.001

Zarei, N., Joulaei, H., Darabi, E., & Fararouei, M. (2015). Original Article Stigmatized Attitude of Healthcare Providers : A Barrier for Delivering Health Services to HIV Positive Patients. *Int J Community Based Nurs Midwifery*, *3*(4), 292–300. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4591575/