UNIVERSITI PUTRA MALAYSIA

COMMUNICATION CORRELATES OF HIV-RELATED SELF-STIGMA AMONG INDIVIDUALS AT HIGHER RISK OF HIV EXPOSURE IN MALAYSIA

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FBMK 2015 43

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By

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Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfillment of the Requirements for the degree of Doctor of Philosophy

April 2015

Abstract of thesis presented to the Senate of Universiti Putra Malaysia, in fulfillment of the requirement for the degree of Doctor of Philosophy

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April 2015

Chairman: Professor Ezhar Bin Tamam, PhD
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Stigma is a negative label or stereotype about a particular group or an individual who is discredited, isolated, abused or discriminated against. A person stigmatized with HIV is generally excluded or isolated from the society because of the grave infectious disease that he or she has, or is thought to have, but others do not have. HIV-related stigma has been identified as the most important barrier to response against HIV. Although a large volume of research paid attention to HIV-related stigma, little is known about HIV-related self-stigma among individuals at higher risk of HIV exposure namely female sex workers (FSWs), injecting drug users (IDUs), men who have sex with men (MSM) and transgender individuals (TGs).

This study was conducted to determine the correlates of HIV-related self-stigma (HRSS) by utilizing the theory of planned behavior (TPB), a generic theory about human intention and behavior, as the conceptual framework of the analysis. Based on the relevant past studies and informed by this theory, HIV knowledge, age, attitude (towards HIV and people living with HIV), perceived social support, and self-esteem were selected as the potential predictors of HRSS. A self-administered close-ended questionnaire was used to collect the data from 369 individuals at higher risk of HIV exposure (134 FSWs, 95 IDUs, 82 MSM, and 58 TGs). The study used a combination of snowball and respondent-driven sampling methods to approach 456 individuals yielded a response rate of 80.9%.

The results revealed that respondents received HIV information frequently from the Internet, television, friends, and newspaper, respectively. Newspaper was rated the most useful source of HIV information followed by television, the Internet and friends. The majority of respondents have a good knowledge of HIV, high self-esteem, favorable attitudes towards both HIV, and people living with HIV. However, attitudes towards HIV were more favorable than attitudes towards people living with HIV. The respondents perceived good social support from a special person, followed by friends and family members.

A significant but negative relationship of HIV knowledge, age, attitudes towards HIV, attitudes towards people living with HIV, and perceived social support with HIV-related self-stigma was found. This study also showed that the relationship between self-esteem and HIV-related self-stigma was not statistically significant. The relationship between HIV knowledge and HIV-related self-stigma was mediated by attitudes towards HIV. However, it was attitudes towards people living with HIV where not found to mediate the relationship between HIV knowledge and HIV-related self-stigma.

The results also revealed that age, attitudes towards people living with HIV, perceived social support and attitudes towards HIV collectively explain 20% of the variance in HIV-related self-stigma. Thus, this study advances the understanding by clarifying the relative contribution of these four variables in the variance of HIV-related self-stigma. The findings also emphasize that relying only on increasing HIV knowledge, rather than paying attention to social factors such as social support from different sources such as family members and friends, may not be successful in reducing HIV-related self-stigma.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi sebahagian keperluan untuk ijazah Doktor Falsafah

HUBUNG KAIT KOMUNIKASI MENGENAI STIGMA-DIRI BERKAITAN HIV DALAM KALANGAN INDIVIDU BERRISIKO TINGGI YANG TERDEDAH KEPADA HIV DI MALAYSIA

Oleh

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Stigma berkaitan HIV telah dikenalpasti sebagai halangan yang paling penting untuk member tindak balas terhadap HIV. Pada kebiasaannya, individu yang mempunyai stigma-diri berkaitan HIV dipinggirkan dari masyarakat kerana penyakit yang digeruni itu. Stigma-diri didapati sebagai penghalang yang penting terhadap tindak balas kepada HIV. Walaupun jumlah yang besar daripada penyelidikan menumpukan kepada stigma berkaitan HIV, namun masih kurang yang diketahui mengenai kajian yang berkaitan dengan stigma diri berkaitan HIV dalam kalangan individu yang berisiko tinggi untuk terdedah kepada HIV saperti pekerja seks wanita (FSWs), penagih dadah melalui suntikan (IDUs), lelaki yang mempunyai hubungan seks dengan lelaki (MSM) dan individu *transgender* (TGs).

Dengan menggunakan Teori Tingkah Laku Terancang (TPB), kajian ini dijalankan untuk mengenalpasti hubungan diantara stigma-diri berkitan HIV (HRSS) pengetahuan mengenai HIV, umur, sikap terhadap HIV, sikap terhadap orang yang hidup dengan HIV, perpesi terhadap sokongan sosial, dan harga kendiri dengan stigma terhadap HIV. Berdasarkan kajian lepas dan sorotan literatur mengenai teori ini, adalah didapati bahawa pengetahuan mengenai HIV, umur, sikap (terhadap HIV dan individu yang tinggal dengan pengidap HIV), persepsi sokongan sosial, dan harga kendiri adalah berpotensi untuk menyumbang kepada (HRSS). Soal selidik tertutup yang ditadbirkan sendiri telah digunakan untuk mengumpul data daripada 369 individu yang berisiko tinggi terdedah HIV (134 FSWs, 95 IDU, 82 MSM, dan 58 TGS). Kajian ini menggunakan gabungan kaedah persampelan *"snow ball"* dan "*respondent driven*" untuk mendekati 456 individu menghasilkan kadar respons sebanyak 80.9%.

Dapatan kajian menunjukkan responden kerap menerima maklumat melalui Internet, televisyen, rakan-rakan, dan akhbar. Adalah didapati akhbar sebagai sumber maklumat HIV yang plaing berguna dan diikuti televisyen, Internet dan rakan-rakan. Dapatan kajian menunjukkan responden mempunyai pengetahuan mengenai HIV yang baik, harga kendiri yang tinggi dan sikap yang positif terhadap HIV serta sikap yang positif terhadap orang yang hidup dengan HIV. Responden juga mempunyai persepsi yang

baik terhadap sokongan sosial yang baik daripada orang yang istimewa, diikuti oleh rakan-rakan dan ahli keluarga.

Keputusan analisis korelasi bivariat menunjukkan terdapat hubungan negatif yang signifikan diantara pengetahuan HIV, umur, sikap terhadap HIV, sikap terhadap orang yang hidup dengan HIV, persepsi terhadap sokongan sosial, dan harga kendiri yang berkaitan dengan stigma terhadap HIV. Kajian ini menunjukkan terdapat hubungan yang tidak signifikan diantara harga kendiri dan stigma terhadap HIV.

Kajian ini juga dijalankan untuk mengenalpasti kesan pengantara diantara sikap terhadap HIV dan sikap terhadap orang yang hidup dengan HIV. Kajian ini menunjukkan bahawa sikap terhadap HIV adalah pengantara diantara pengetahuan mengenai HIV dengan stigma terhadap HIV. Walau bagaimanapun sikap terhadap orang yang hidup dengan HIV tidak menjadi pengantara penghubung.

Dapatan kajian juga membuktikan bahawa umur, sikap terhadap individu yang hidup dengan HIV, persepsi mengenai sokongan social dan sikap terhadap HIV secara keseluruhannya menerangkan varian 20% berkaitan stigma-diri mengenai HIV. Justeru, menunjukkan kepentingan umur, sikap terhadap individu yang hidup dengan HIV, persepsi mengenai sokongan social dan sikap terhadap HIV mengurangkan stigma-diri mengenai HIV. Kajian juga menunjukkan bahawa penekanan untuk meningkatkan pengetahuan mengenai HIV semata-mata tidak memberikan kejayaan dalam mengurangkan stigma-diri mengenai HIV. Malahan perhatian juga harus diberikan kepada faktor sosial daripada pelbagai sumber saperti ahli keluarga dan rakan-rakan.

ACKNOWLEDGEMENTS

First and above all, I praise Allah, the entirely merciful and the especially merciful, for providing me this opportunity and granting me the capability to proceed successfully. This thesis appears in its current form due to the assistance and guidance of several people who I would therefore like to offer my sincere thanks to them.

First and foremost, I would like to express my sincere gratitude to the chairman of the supervisory committee, Prof. Dr. Ezhar Tamam for his continuous support, patience, motivation, enthusiasm, and immense knowledge. His guidance helped me in all the time of research and writing of this thesis. I could not have imagined having a better supervisor for my Ph.D. study.

Besides the chairman of the supervisory committee, I would like to thank the rest of my thesis committee: Associate Prof. Dr. Jusang Bolong and Dr. Hamisah Zahara Hasan who have supported me throughout my thesis with their patience and knowledge.

Last but not least, I would like to thank my friends and family members who were always there to cheer me up and stand by me through the good and bad times.

I certify that a Thesis Examination Committee has met on 13 April 2015 to conduct the final examination of Davood Mehrabi on his thesis entitled "Communication Correlates of HIV-related Self-stigma among Individuals at Higher Risk of HIV Exposure in 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 Doctor of Philosophy.

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This is to confirm that:

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

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HIV	Human Immunodeficiency Virus
AIDS	Acquired Immune Deficiency Syndrome
UNGASS	United Nations General Assembly Special Session
MOH	Malaysia Ministry of Health
IDUs	Injecting Drug Users
FSWs	Female Sex Workers
TGs	Transgender Individuals
MSM	Men Who Have Sex With Men
PLWH	People Living With HIV
WHO	World Health Organization
NSP	National Strategic Plan
UN	United Nations
USAID	United States Agency for International Development
ART	Antiretroviral Therapy
TPB	Theory of Planned Behavior
PBC	Perceived Behavior Control
TRA	Theory of Reasoned Action
RDS	Respondent Driven Sampling

CHAPTER 1

INTRODUCTION

This chapter provides contextual information of the study on HIV-related stigma in Malaysia. It begins with a brief overview of Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) history worldwide and a history of HIV and AIDS in the study country. Then it discusses HIV-related stigma, the statement of research problem and this leads to general and specific objectives of the study. Following from these, the significance of the study with regards to theoretical, practical and methodological implications is discussed. Finally, the scope of the study is explained.

Background of the Study

AIDS that is caused by HIV was first recognized among homosexual men in the United States in 1981. Afterwards, HIV outbreaks continue across the entire world. In the early 1980s, Asian countries remained relatively unaffected by the virus. But by the early 1990s, HIV outbreaks had emerged in several Asian countries too. According to United Nations General Assembly Special Session (UNGASS) in 2008, HIV was spreading rapidly in many areas of Asia, which caused worry and the situation in most developing countries is still alarming. According to the latest report of Malaysia Ministry of Health (MOH) (2010) around 4.7 million people are living with HIV in Asia and approximately 440,000 become infected each year.

Injecting drugs, paid sex and sex between men are three main transmission routes. Each country in the region faces a different situation. For example, injecting drugs is a major driving factor in the spread of HIV throughout Asia, notably in Malaysia. As HIV infections are still largely concentrated among individuals at higher risk of HIV exposure in Asia (UNGASS, 2008), they are expected to result in increasing HIV prevalence and nearly 10 million Asians will be affected, if prevention efforts are not expanded or fully implemented (MOH, 2011).

In Malaysia, HIV is the most common notifiable communicable disease after tuberculosis (Zulkifli, Huang, Low & Wong, 2007). Since 1986, when the first HIV cases were diagnosed, yearly reports of confirmed cases of HIV as well as AIDS have been increasing. By the end of 1990, the cumulative numbers of HIV-positive were 992 (Huang Mary & Mohd Nasir Mohd Taib, 2007). These numbers increased year by year, so that up to the end of year 2013, 101,672 people have been diagnosed with the virus. Even though, new reports (e.g. Malaysia AIDS Council & PT Foundation Annual Report, 2013) show a drop in new HIV infection in the country, rise in new cases of HIV infection among sex workers warrants immediate actions for mitigation of HIV transmission among sex workers and other individuals at higher risk of HIV exposure.

According to Malaysia AIDS Council and PT Foundation Annual Report (2011), female sex workers (FSWs), injecting drug users (IDUs), men who have sex with men (MSM), and transgender individuals (TGs) comprised the largest proportion of HIV-positive people in the country. Sexual transmission (hetero, homo, and bisexual collectively) comprised the biggest proportion of new HIV cases (55%), followed by injecting drugs (38%), others (5%), and mother to child (2%) in 2011. According to Malaysia Ministry of Health (MOH) (2012), there are about 170,000 IDUs in the

country. As of 2011, about 65,032 cases were infected from sharing needles, and out of this about 9,141 had passed away, bringing the total HIV-positive among IDUs about 55,891. The number of female sex workers (FSWs) and transgender individuals (TGs) estimated to be 40,000 and 20,000 respectively that collectively account 0.6% of the 94,841 cases reported thus far. There are an estimated 173,000 MSM in the country. As of December 2011 there were 2,406 MSM HIV-positive out of 94,841 people living with HIV (PLWH). The World Health Organization (WHO) (2012) reported that there is a steep increase in HIV prevalence among MSM.

The current HIV epidemic in the country indicates that the virus has the potential to escalate into a major and costly epidemic that will affect the social and economic base of the country (Huang Mary & Mohd Nasir Mohd Taib, 2007). The burden of HIV epidemic is understood to have spread initially through the population of injecting drug users, then moved to networks between sex workers and clients. More recently, it has been observed to be spreading among men who have sex with men (WHO, 2012). The continued spread of HIV particularly among sex workers concerns the government. Based on a recent HIV estimation and projection modelling conducted by the Ministry of Health, there is a consensus among experts that HIV is predicted to spread increasingly through sexual transmission (MOH, 2011).

In past ten years, HIV transmission through the drug-injecting route made up 70-80% of all new reported HIV cases in the country. Compared to ten years ago when drug-injecting was the major mode of transmission, sexual transmission (hetero, homo and bisexual collectively) also continues to increase transmission in terms of the number of new HIV cases. In 2011, for every four cases of HIV reported in IDUs, six others were reported due to sexual transmission (Malaysia AIDS Council Annual Report & PT Foundation, 2011). In 2013, more than 70% of all new HIV cases were sexually transmitted. Because of these increasing rates, the National Strategic Plan (NSP) on HIV and AIDS 2011-2015 laid the foundation to control the spread of HIV among individuals at higher risk of HIV exposure (MOH, 2011).

NSP on HIV and AIDS 2011 - 2015 provides a common ground and emphasis on an integrated and comprehensive approach addressing the needs for prevention, treatment, care and support. This plan paid particular attention to individuals at higher risk of HIV exposure. Under the plan, decreasing stigma, increasing general awareness and knowledge of HIV through media, focused communication, and integration into community-based HIV education messages are among the main objectives (MOH, 2011).

HIV-Related Stigma

HIV-related stigma is not restricted to a particular place. The United Nations (UN) secretary-general, Ban Ki-moon, stated:

> Stigma remains the single most important barrier to public action. It is a main reason why too many people are afraid to see a doctor to determine whether they have the disease, or to seek treatment if so. It helps make AIDS the silent killer, because people fear the social disgrace of speaking about it, or taking easily available precautions. Stigma is a chief reason why the AIDS epidemic continues to devastate societies around the world (Asia Pacific Regional Analysis, 2011. p. 10).

HIV-related stigma is among the main barriers that hinders HIV preventive efforts and affects national development in Malaysia (Tee & Huang, 2009). Nelson Mandela (2002) stated "many people suffering from AIDS and not killed by disease itself are killed by the stigma surrounding everybody who has HIV and/or AIDS" (as cited in Lapinski & Nwulu, 2008). Due to HIV-related stigma many people living with HIV (PLWH) do not dare to reveal themselves to the public (Huang Mary & Mohd Nasir Mohd Taib, 2007). In this regard, the declaration of commitment on HIV and AIDS in 2001 affirms that reducing stigma against people living with HIV and individuals at risk of HIV exposure is essential to respond to HIV and AIDS pandemic (Asia Pacific Regional Analysis, 2011).

HIV-related stigma has been investigated for more than two decades. The first study, was published in the late 1980s, primarily focused on the extent to which the general public stigmatize HIV-positive people (Pleck, O'Donnell, O'Donnell & Snarey, 1988). This pattern continued for two decades. Until about the turn of the century, the pattern was dominant in HIV stigma studies and only a few of studies examined how PLWH experience stigma. Two decades of research clearly shows that studies on HIV-related stigma mainly focused on the general public rather than PLWH. As the epidemic evolved, studies shifted from the general public to PLWH who could spread the virus to HIV-negative individuals through risky behavior (Earnshaw & Chaudoir, 2009). However, individuals at higher risk of HIV exposure such as FSWs, IDUs, MSM and TGs are often neglected in self-stigma studies (Toan et al., 2012; Tomaszewski, 2012).

Female sex workers, injecting drug users, men who have sex with men, transgender individuals, and PLWH are the primary targets of HIV-related stigma (USAID, 2006). However, perceived or actual occurrence of stigma against PLWH among the general public and healthcare workers has improved compared to two decades ago (MOH, 2012), self-stigma as another dimension of stigma has received less attention. Nevertheless, self-stigma acts as an obstacle to use HIV healthcare services (MOH, 2011) and prevent people to go for voluntary counselling and testing (Choi et al, 2010; Huang Mary & Mohd Nasir Mohd Taib, 2007; Seedat, Liu, Xu, Sun & Dumenci, 2014; Zelaya et al., 2008).

Problem Statement and Research Questions

Since the HIV epidemic emerged in 1981, it has become one of the most stigmatized medical conditions of our time and is prevalent worldwide (French, Greeff, Watson & Doak, 2015; Li et al., 2009b; Zelaya et al., 2012). In Malaysia, HIV-related self-stigma was reported to be prevalent (Wong, 2013) and has been identified as a major obstacle to take action against HIV (Malaysia AIDS Council & Malaysia AIDS Foundation, 2013). The response to the issue started as far back as in 2001 when the "Code of Practice on the Prevention and Management of HIV/AIDS in the Workplace" was launched (Tee & Huang, 2009). Since then, decreasing stigma and increase general awareness and knowledge of HIV have been among the main objectives of the national healthcare agenda (MOH, 2011). HIV-related stigma as the single biggest threat to effective HIV response remains a formidable stumbling block to respond to HIV. This condition prevents infected people and those who are practicing high risk behaviors from being tested, stops them from accessing health and social care services, hinders their attainment of care and treatment, discourages them from HIV counselling, and deters them from adopting preventative behaviours.

Despite a strong need to reduce HIV-related stigma, HIV research on stigma and its literature in Malaysia is limited and underdeveloped. While there are studies on public stigma towards PLWH (e.g. Tee & Huang, 2009; Wong 2013; Wong & Nur Syuhada, 2011), to the best knowledge of the author, HIV-related self-stigma was only investigated by Wong (2013), who ask the Malaysian general public "How concerned are you about being stigmatized or discriminated against if tested positive for HIV?" and "If you have HIV/AIDS, will you consider distancing yourself from society"?

HIV-related self-stigma as a major challenge in HIV response (Singh, 2011) plays an important role among individuals at higher risk of HIV exposure to use HIV care services (Choi et al., 2010). Considering the limited literature, not much is known about it (MOH, 2007). Because individuals at higher risk of HIV exposure are likely to become infected with the virus (MOH, 2012; Stangl et al. 2010; Zelaya et al., 2008), studying the issue among the individuals is crucial. Self-stigma among the individuals can have profound effects on scaling up universal access as well as on health outcomes and quality of life of them. As these individuals may face more severe negative responses in health-care setting, monitoring the issue of self-stigma among them seems more important than over PLWH (WHO, 2012).

HIV-related stigma has been studied from various perspectives. Many studies focused on the role of HIV knowledge (Ni & Htet, 2012; Kanter et al., 2011; Sood, Shefner-Rogers & Sengupta, 2006) and/or attitudes towards HIV (e.g. Maimaiti et al., 2010; Njie-Carr, 2009). Some studies have investigated the relationship between social support, and HIV-related self-stigma (e.g. Gonzalez et al., 2004; Logie & Gadalla, 2009; Mahalakshmy, Permarajan & Hamide, 2010). Self-esteem is another variable that has rarely been investigated (e.g. Kang, Rapkin & DeAlmeida 2006; Link et al., 2001; Wright, Gronfein & Owens 2000). Despite past efforts, understanding the correlates of HIV-related self-stigma is not yet at a satisfactory level.

The lack of adequate understanding of HIV-related self-stigma impedes the progress of prevention progress and acts as a barrier against other policies such as reducing new HIV infection by 50% by the end of 2015. In reaching the strategy's goals, efforts must start with challenging barriers that impede access to HIV prevention (MOH, 2011). These barriers include HIV-related self-stigma. Paving the way to reach the strategy's goal, a better understanding of research on HIV-related self-stigma is needed to inform potential prevention programs and policies (Williams, 2014).

The theory of planned behavior (TPB) is a promising theoretical framework for understanding and predicting self-stigma (Molla, Astrom & Berhane, 2007). The theory has been extensively used in health behavioral studies (e.g. Deacon, 2006; Povey et al., 2000; Wang, 2009). According to the TPB, behavioral intention is directly affected by attitude, subjective norm and perceived behavioral control (PBC) (Ajzen, 1991). Intention is a function of attitude, reflecting a favorable or unfavorable evaluation of the particular behavior and subjective norm, referring to the perceived social pressure to perform the behavior, as well as perceived behavioral control, referring to the ease or difficulty of doing a particular behavior. Drawing on the above arguments and the literature, the following research questions were posed.

1 – What is the main source of HIV information among individuals at higher risk of HIV exposure and how they rate the usefulness of received information?

2 – What is the nature of relationships of HIV knowledge, age, attitudes towards HIV, attitudes towards PLWH, perceived social support and self-esteem with HIV-related self-stigma among individuals at higher risk of HIV exposure?

3 – Would there still be a meaningful correlation between HIV knowledge and HIV-related self-stigma after controlling for attitudes towards HIV and attitudes towards PLWH?

4 – How much of the variance in HIV-related self-stigma can be explained by HIV knowledge, age, attitudes towards HIV, attitudes towards PLWH, perceived social support and self-esteem?

Objectives of the Study

General objective

The general objective of this study is to examine HIV-related self-stigma and its communication correlates among individuals at higher risk of HIV exposure in Malaysia.

Specific objectives

1 - To identify the main source(s) of HIV information for individuals at higher risk of HIV exposure and examine how they rate usefulness of received information.

2 - To ascertain the level of HIV knowledge, attitudes towards HIV, attitudes towards PLWH, perceived social support, self-esteem and HIV-related self-stigma among individuals at higher risk of HIV exposure.

3 - To test hypothesized relationships of HIV knowledge, age, attitudes towards HIV, attitudes towards PLWH, perceived social support, and self-esteem with HIV-related self-stigma.

4 - To test hypothesized mediation effects of attitudes towards HIV and attitudes towards PLWH in the relationship between HIV knowledge and HIV-related self-stigma.

5 - To find out how much of the variance in HIV-related self-stigma can be explained by HIV knowledge, age, attitudes towards HIV, attitudes towards PLWH, perceived social support and self-esteem.

Significance of the Study

Effective HIV prevention programs are dependent on an understanding of factors that influence HIV-related stigma, based on careful research of target populations. This study examined the relationships of HIV knowledge, age, attitudes towards HIV, attitudes towards PLWH, perceived social support, self-esteem, and self-stigma among individuals at higher risk of HIV exposure. Investigating the role of these factors within the theoretical framework of the TPB to determine approximate variance of each factor towards HIV-related self-stigma provides theoretical, practical and methodological implications of this study.

In terms of theoretical significance, this study is among the first ones using the TPB model to understand and explain HIV-related self-stigma among individuals at higher risk of HIV exposure. The study measured the variance of several factors that may contribute to HIV-related self-stigma. These factors are HIV knowledge, age, attitudes towards HIV, attitudes towards PLWH, perceived social support, and self-esteem.

Most prior studies related to HIV-related stigma seek to define stigma as construct, rather than to understand drivers of stigma based on a particular model. Conversely, the current study used the TPB to determine the drivers of self-stigma. The findings of this study sought how much of the variance can be explained by using the TPB as a framework for understanding about HIV-related self-stigma. The statistically significant relationship of HIV knowledge, age, attitudes towards HIV, attitudes towards PLWH, perceived social support, and self-esteem with self-stigma might indicate the applicability of the TPB to explore the drivers of stigma.

Globally, healthcare service providers are failing to access certain individuals at higher risk of HIV exposure to use the services (Hirnschall, 2014). To date, most of HIV prevention programs have focused on increasing HIV knowledge rather than paying attention to other variables, such as social support, attitudes towards HIV, attitudes towards PLWH, and self-esteem. The results of this study had some practical implications for the policy makers to find out how the abovementioned variables may generate an effective approach to reduce HIV-related self-stigma.

Understanding of the factors that influence HIV-related self-stigma guides successful stigma reduction campaigns. The results of this study suggest two possible practical implications to reduce HIV-related self-stigma. One of the remedial measures is paying attention to correlated variables to HIV-related self-stigma. Each variable may have different a weight to explain HIV-related self-stigma. Second, knowing about the differences among the four subgroups (FSWs, IDUs, MSM and TGs) can help HIV policy makers to design a proper stigma reduction campaign according to each subgroup's needs.

In terms of methodological implication, this study combined two sampling methods. Snowball and respondents driven sampling (RDS) methods were used in the study. The two sampling methods allowed the researcher to recruit more respondents. By using RDS, sampling work shifted from the researcher to respondents who are recruited by acquaintances, so sampling proceeded more quickly. This sampling strategy worked well to reach more individuals in each subgroup. Thus, it demonstrates its applicability of the strategy for future research. In addition, the amount of variance explained by this quantitative survey research reflects the capability to replicate the same research design or a combination of various research designs (triangulation).

Scope of the Study

In this cross-sectional study, the main objective was to examine HIV-related self-stigma and its correlates among individuals at higher risk of HIV exposure. This study is quantitative and self-administered questionnaires were used as instrument for data collection. As Williams (2014) argued more quantitative studies of stigma and its correlations are needed both to health services utilizations and to HIV outcomes directly. The location of this study is limited to Klang Valley in Malaysia. Four subgroups of individuals at higher risk of HIV exposure, namely female sex workers,

injecting drug users, men who have sex with men, and transgender individuals, participated in the study. It needs to be noted that individuals at higher risk of HIV exposure are not limited to the four subgroups of individuals participated in the study. Prisoners and migrant workers are among other individuals at higher risk of HIV exposure who were not included. The findings of the study, therefore, cannot be generalized beyond the studied population.

The questionnaire of the study was adopted from past research studies and modified based on this study's objectives. The questions were checkbox type. Therefore, the respondents were not able to give additional information, if they desire to do so. Due to this, a lot of contextual information may be missed. The information gained by closed-ended questions allows the researcher to categorize respondents into groups based on the options they have selected. The findings of this study should be interpreted carefully taking into consideration the method of data collection, population and location of the study.

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