

# **UNIVERSITI PUTRA MALAYSIA**

EFFECTIVENESS OF A RANDOMIZED CONTROLLED HIV-RISK -REDUCTION PROGRAM FIELD TRIAL WITH STUDENTS AT AHMADU BELLO UNIVERSITY, ZARIA, NIGERIA

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FPSK(p) 2010 2

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By

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

December 2010

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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December 2010

Chairman: Professor Rampal Lekhraj, PhD

Faculty: Medicine and Health Sciences

Human immunodeficiency virus/Acquired immune deficiency syndrome (HIV-AIDS) has become the most important infectious disease pandemic of this millennium. Nigeria with over 2.9 million people living with HIV (PLHIV) is at risk of increased burden and transmission of HIV. The country has the second largest burden of HIV infection in the world with young people at the center of the epidemic. The present study aims to evaluate the effectiveness of a peer-led HIV-STI intervention program framed on the Information-Motivation-Behavioral skills model among undergraduate students at Ahmadu Bello University, Zaria in northern Nigeria. We utilized a randomized controlled field trial design to investigate the impact of an HIV-STI intervention program on participants' HIV- and STI-related knowledge, sexual risk behaviors, attitudes towards HIV and STI prevention, and disentanglement of stigma. Participants were randomized to either the intervention group or the control group. An 8-hour integrated HIV-STI prevention program comprising of four structured modules was

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developed and delivered to the intervention group, while the control group received another 8-hour program on career development. Both programs were delivered by trained peers. Two-way repeated measure ANOVA was applied to assess the effectiveness of the intervention. The outcome measures were assessed at baseline, immediately post-intervention, at 3 months and 6 months post-intervention.

Respondents in the intervention arm showed significant improvements in HIV-related and STI knowledge, sexual risk behaviors and attitudes towards HIV-STI prevention. Conversely, there was no difference in tolerance towards PLHIV assessed using the stigma scale. There were significant main effects for group [F = 155.94, p= < 0.001,  $\eta^2$ = 0.401]; time [F = 248.35, p= < 0.001,  $\eta^2$ = 0.516] and group x time interaction [F = 162.96, p= < 0.001,  $\eta^2$ = 0.412] for HIV-related knowledge. Similarly, the main effects for group, time, and group x time interaction for STI knowledge, sexual risk behaviors, and attitudes were also significant. Thepeer-led HIV-STI intervention program developed was effective in improving knowledge and attitudes towards HIV prevention and reducing sexual risk behaviors among Nigerian university students. Abstrak tesis yang dikemukakan kepada senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

## EFEKTIFITAS PENURUNAN A TERKAWAL SECARA RAWAK TRIAL PRO GRAM HIV-RISIKO-DILAPANGAN DENGAN MAHASISWA UNIVERSITI, ZARIA, AHMADU BELLO, NIGERIA

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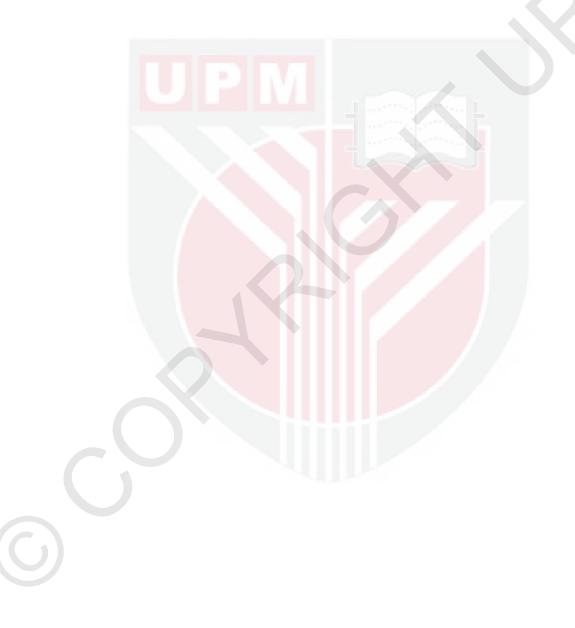
Virus kurang daya tahan penyakit/ sindrom kurang daya tahan penyakit (HIV-AIDS) telah menjadi satu pandemik penyakit berjangkit yang penting pada milenium/zaman ini.Nigeria yang mempunyai lebih dari 2.9 juta orang yang hidup dengan HIV (PLHIV), adalah berisiko untuk peningkatan beban dan transmisi penyakit tersebut.Negara ini mempunyai beban penyakit yang kedua terbesar di dunia dengan golongan remaja di tengah-tengah epidemik ini. Kajian ini bertujuan untuk menilai keberkesanan sebuah program intervensi bimbingan rakan sebaya yang dirangka berdasarkan model kemahiran "Information-Motivation-Behavioral skills" di kalangan mahasiswa Universiti Ahmadu Bello, Zaria yang terletak di daerah utara Nigeria. Kami menggunakan sebuah rekaan ujian lapangan rawak terkawal untuk mengkaji kesan sebuah program intervensi HIV-STI ke atas pengetahuan berkaitan HIV-STI, tingkah laku seksual yang berisiko, sikap terhadap pencegahan jangkitan HIV dan STI, dan pembebasan/ penguraian stigma. Peserta telah dibahagikan secara rawak kepada

kumpulan intervensi atau kawalan. Sebuah program pencegahan HIV-STI bersepadu 8 jam yang terdiri daripada empat modul berstruktur telah dibangunkan dan diberi kepada kumpulan intervensi, sedangkan kumpulan kawalan pula telah menerima sebuah program pembangunan kerjaya selama 8 jam. Kedua-dua program telah disampaikan oleh rakan sebaya yang terlatih. Ukuran berulang dua-hala ANOVA telah digunakan untuk menilai keberkesanan intervensi tersebut. Hasil tindakan dinilai pada waktu sebelum intervensi, sejurus selepas intervensi, selepas 3 bulan dan selepas 6 bulan. Responden di dalam kumpulan intervensi telah menunjukkan penambahbaikan yang signifikan di dalam pengetahuan berkaitan HIV dan STI, tingkah laku seksual berisiko dan sikap terhadap pencegahan HIV-STI. Sebaliknya, tiada perbezaan yang signifikan di dalam toleransi terhadap PLHIV apabila dinilai menggunakan skala stigma. Terdapat kesan utama yang signifikan bagi kumpulan [F = 155.94, p= < 0.001,  $\eta^2 = 0.401$ ]; masa  $[F = 248.35, p = < 0.001, \eta^2 = 0.516]$  dan kumpulan x masa interksi  $[F = 162.96, p = < 0.001, \eta^2 = 0.516]$ 0.001,  $\eta^2 = 0.412$ ] bagi pengetahuan berkaitan HIV. Kesan utama bagi kumpulan, masa dan kumpulan x masa interaksi untuk pengetahuan STI, tingkah laku seksual berisiko, dan sikap juga didapati signifikan. Program pencegahan HIV-STI bimbingan rakan sebaya yang telah dibangunkan adalah berkesan dalam meningkatkan pengetahuan dan sikap terhadap pencegahan HIV serta mengurangkan tingkah laku seksual berisiko di kalangan mahasiswa Nigeria.

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# **DEDICATION**

To my family and friends, without whose support and care I wouldn't have realized my dreams in life. Indeed, they make sure they are always there to do the needful!



## ACKNOWLEDGEMENTS

All praises are due to Allah, the Lord of the Universe and all its surrounding systems, by whose grace and blessings we are able to realize our dreams. His peace and blessings are bestowed upon the noble prophet and the best of all creations, Muhammad, his pure progeny, his righteous companions and all those who follow their footsteps with sincerity up to the last day.

I would like to begin with the expression of my sincere feelings of gratitude and appreciations to my supervisors: Prof. Dr. Rampal Lekhraj, Prof. Dr. Kabiru Sabitu, Assoc. Prof. Dr. Hejar AbdulRahman, Assoc. Prof. Dr. Bahaman AbuSamah, and Dr. Auwal Ibrahim Ibrahim Yola. I am greatly indebted to you all for your guidance, support and concern both academically and otherwise. I am short of expressions to show enough appreciation to my Advisor and my mentor, Prof. Dr. Rampal Lekhraj, but I have to say that, my progenies and I would forever remember him, for his academic support, constructive criticisms, generosity, patience, forgiveness, guidance, and counseling. He has been an inspiring and amiable fellow that created the greatest impression in me. Thank you.

I wish to also acknowledge with thanks the constructive criticism and guidance of my  $2^{nd}$  co – supervisor, Prof. Dr. Kabiru Sabitu. He had always been there, especially when the research methodology logistics during the project implementation went wrong. To the Head of Community Medicine Department at ABU Zaria, Dr. Idris Sulaiman, I say thank so much for your tremendous support whenever I knocked on your door.

I would like to acknowledge with; thanks very much indeed, to all those who were directly or indirectly involved in the realization of my fulfilled dream. There are some particularly unforgettable and specific names of Mallan Nasiru El-Rufa'i, Hussaini Dikko, Dr. Sharmili Vidyaran, Assoc. Prof. Dr. Mirnalini Kandiah, Dr. Samaila Bawa, Dr. Salisu Garba, Dr. Mustapha Abubakar, Dr. Muhammad Ajiya, AbdulAziz Ibrahim, Dr Ibrahim Anka, Br Hani Hamad, Dr Abdulakarim Sabo Muhammad, Dr. Iqbal Hamza, Frazana Amin, Aqil Muhammad Daher, Maryam Jamshidian Tehrani, Dr. Usman Gwarzo, Dr. Tukur Ismail, Dr. Aminu Kaoje, Dr. Sanjay Rampal, Dr. Ng Chu Wan, Phram Abubakar Muhammad Amali and Malam Nasir Tsafe. Thank you all for the technical, typographical, moral-support and or financial assistance, which you have had or been rendering to me.

This thesis would definitely have been incomplete without acknowledging all the special efforts, moral support, and hospitality rendered by Dr. Ahmed Awaisu. My sincere appreciation.

It is noteworthy to acknowledge the support of the community residents of the Department of community of Medicine, Ahmadu Bello University for their unquantifiable support, namely; Dr. Lawal Ahmad Kuki, Dr. Anthony Friday Shamang and Dr. Bashir Saidu Sulaiman. Thank you. The efforts of the peer facilitators are also highly appreciated. My other brothers from Nigeria at UPM thank you for been there for me.

It would be an incomplete acknowledgement without expressing my sincere appreciations and gratitude to family and well – wishers for their support and encouragement throughout the pursuit of study in Malaysia. Only Allah can reward those that deserve mention here. Thank you! Thank you!! Thank you!!!

Lastly, I would like to appreciate the academic talents and knowledge of all public health lecturers at UPM, UM and ABU. It is indeed a precious investment to have contact with you.

I am grateful to Allah and I thank you all.

# **Approval Sheet 1**

This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of **Doctor of Philosophy**. The members of the Supervisory Committee were as follows:

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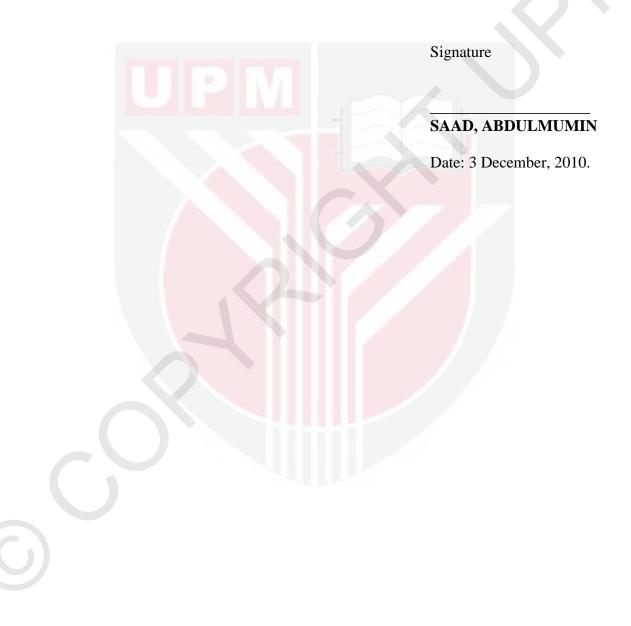
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Professor and Dean School of Graduate Studies Universiti Putra Malaysia

Date :

# **DECLARATION**

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



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