

RELATIONSHIP BETWEEN PSYCHOSOCIAL AND ENVIRONMENTAL FACTORS AND PREVENTIVE HEALTH BEHAVIOR PRACTICES IN JIGAWA STATE, NIGERIA

HALADU HARUNA KAUGAMA

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By

HALADU HARUNA KAUGAMA

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

September 2012

DEDICATION

This work is dedicated to the entire family of Sarki Jibo Kaugama, and to the memories of my parents and my colleagues (both academics and non-academics) at Jigawa State College of Education, Gumel



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

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Chairman: Associate Professor Khairuddin Bin Idris, PhD

Faculty: Institute of Social Science Studies

This study was designed to investigate the relationship between psychosocial and environmental factors and preventive health behavior practices in Jigawa state, Nigeria. The study examined these factors because of their influence on human behavior in relation to healthy decision making especially on how to avoid contracting HIV/AIDS. In this regard, a hypothesized conceptual model was developed to determine the relation of these factors and their level of variation in predicting preventive health decision. In this study the relationship of seven factors with level of influence on preventive health were examined. These factors are; HIV knowledge, self-efficacy, parent and peer influence, social support, cultural practices, radio program and government policy. In order to attain this objective a descriptive and cross sectional survey method was designed and utilized. The data were collected from 384 respondents who were randomly selected from twelve local government areas in the study area. Descriptive analysis, Pearson product- moment correlation, and Structural equation modeling were employed to analyze the data

using Amos and SPSS software. Social cognitive theory framework and Social cognitive theory of mass communication were used to develop a model of relationship between psychological, social and environmental factors and preventive health behavior

From the results of this study social support factor had the highest standardized regression weight (β = .274, p= 0.000), thus it had a highest significant contribution in predicting the preventive health behavior. The study also revealed that there is a significant relationship between environmental variables (culture practices, radio program and government policy) (β = .251, .262, & .216), The findings also indicated that the structural equation model indices shows that the model has good fit and further analysis revealed that those variables in the hypothesized model explained 68% of variance in preventive health behavior practices.

In conclusion, and based on the result of this study it could be recommended that application of cultural perspective approach guided by proper government legislation should be adequately taken into account once it comes to designing, planning and implementation of policies regarding preventive health behavior promotion.

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

HUBUNGAN ANTARA FAKTOR-FAKTOR PSIKOSOSIAL DAN ALAM SEKITAR DAN AMALAN PENCEGAHAN GELAGAT KESIHATAN DINEGERI JIGAWA, NIGERIA

Oleh

HALADU HARUNA KAUGAMA

September 2012

Pengerusi: Profesor Madya Khairuddin Bin Idris, PhD

Fakulti: Institut Pengajian Sains Sosial

Kajian ini telah direka untuk mengkaji hubungan antara faktor psikososial dan alam sekitar, dan amalan pencegahan tingkah laku perihal kesihatan dinegeri Jigawa, Nigeria. Kajian ini mengkaji faktor ini kerana pengaruh mereka ke atas tingkah laku manusia berkenaan membuat keputusan yang sihat terutama tentang cara mengelakkan daripada dijangkiti HIV/AIDS. Dalam hal ini, model konsep hipotesis telah dibangunkan untuk menentukan hubungan faktor ini dan tahap perubahan dalam meramalkan keputusan kesihatan pencegahan. Dalam kajian ini, hubungan tujuh faktor dengan tahap pengaruh ke atas kesihatan pencegahan telah diperiksa Faktor ini adalah; pengetahuan HIV, keberkesanan diri, ibu bapa dan pengaruh rakan sebaya, sokongan sosial, amalan budaya, programradio dan dasar kerajaan. Dalam usaha mencapai matlamat ini kaedah tinjauan deskriptif keratan rentas telah direka dan digunakan. Data dikumpul daripada 384 responden yang dipilih secara rawak daripada dua belas kawasan tempatan kerajaan dalam kawasankajian. Analisis

deskriptif, ujian, korelasi Pearson, dan model persamaan struktur telah digunakan untuk menganalisis data menggunakan Amos dan perisian SPSS. Teori kognitif sosial rangka kerja dan teori sosial kognitif komunikasi massa telah digunakan untuk membangunkan model hubungan antara faktor-faktor psikologi, sosial dan alam sekitar dan pencegahan tingkah laku rawa.

Dari hasil kajian ini faktor sosial mempunyai berat regresi seragam tertinggi (β = 0.274, p = 0.000) dan oleh itu ia mempunyai sumbangan penting tertinggi dalam meramalkan tingkah laku kesihatan pencegahan. Kajian ini juga menunjukkan bahawa terdapat hubungan yang signifikan antara pembolehubah alam sekitar (budaya, radio program dan dasar kerajaan) (β = 0.251, .262 & .216), Dapatan juga menunjukkan bahawa model struktur indeks persamaan menunjukkan bahawa model mempunyai kepadanan yang baik dan analisis selanjutnya mendedahkan bahawa pembolehubah dalam model hipotesis menjelaskan 68% varians dalam amalan tingkah laku pencegahan kesihatan.

Kesimpulan berdasarkan hasil kajian ini boleh mengesyorkan bahawa penggunaan pendekatan perspektif budaya, dipandu oleh undang-undang kerajaan yang betul perlu secukupnya diambil kira dalam perancangan reka bentuk, dan pelaksanaan dasar mengenai kesihatan pencegahan promosi tingkah laku

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I certify that an Examination Committee has met on 24th September, 2012 to conduct the final examination of **Haladu Haruna Kaugama** on his degree thesis entitled "The Relationship between Psychosocial and Environmental Factors and Preventive Health Behavior Practices in Jigawa State, Nigeria" in accordance with 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 Degree of Doctor Philosophy.

Members of the Examination Committee were as follows:

Haslinda Abdullahi, PhD

Senior Lecturer Faculty of Human Ecology Universiti Putra Malaysia (Chairman)

Bahaman Abu Samah, PhD

Associate Professor Faculty of Educational Studies Universiti Putra Malaysia (Internal Examiner)

Zoharah binti Omar, PhD

Senior Lecturer
Faculty of Educational Studies
Universiti Putra Malaysia
(Internal Examiner)

Kalmorat Intaratat, PhD

Associate Professor Thammathirat Open University Thailand (External Examiner)

SEOW HENG FONG, PhD

Professor and Deputy Dean School of Graduates Studies Universiti Putra Malaysia

Date:

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

Khairuddin Bin Idris PhD

Associate Professor Faculty of Educational Studies Universiti Putra Malaysia (Chairman)

Jamilah Othman, PhD

Senior Lecturer
Faculty of Educational Studies
Universiti Putra Malaysia
(Member

Jegak Uli Anak PhD

Professor
Faculty of Defense Studies and Management
National Defense University of Malaysia
(Member)

BUJANG BIN KIM HUAT, PhD

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 Universiti Putra Malaysia or at any other institution.

HALADU HARUNA KAUGAMA

Date: 24 September 2012

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LIST OF ABBRIVIATIONS

| 1 | HIV | Human Immunodeficiency virus |
|-----|--------|---|
| 2 | AIDS | Acquired Immune Deficiency Syndrome |
| 3 | WHO | World Health Organization |
| 4 | UNAIDS | Joint United Nations Program On HIV/AIDS |
| 5 | FAO | Food and Agricultural Organizations |
| 6 | NACA | National Action Committee on AIDS |
| 7 | UNGASS | United Nations General Assembly Special Session |
| 8 | DFID | Department for International Development |
| 9 | USAID | United States Agency for International Development |
| 10 | SFH | Society for Family Health |
| 11 | FHI | Family Health International |
| 12 | BCC | Behavior Change Communication |
| 13 | JISACA | Jigawa State Agency for the Control of AIDS |
| 14 | KABP | Knowledge, Attitute, Belief and Practices |
| 15 | SCT | Social Cognitive Theory |
| 17 | U.S | United States |
| 18 | CDC | Centre for Disease Control |
| 19 | ART | Anti-Retroviral Therapy |
| 20 | HEAP | HIV/AIDS Emergency Action Plan |
| 21 | MDGS | Millennium Development Goals |
| 22 | UN | United Nations |
| 23 | JHU | John Hopkins University |
| 24 | STI | Sexually Transmitted Infections |
| 25 | FGM | Female Genital Mutilation |
| 26 | PLWHA | People Living With HIV/AIDS |
| 27 | UNICEF | United Nations Children Fund |
| 28 | CCP | Cnetre for Communication Program |
| 29 | DF | Diffusion of Innovation |
| 30 | TRA | Theory of Reasoned Action |
| 31 | PBT | Problem Behavior Theory |
| 32 | SLT | Social Learning Thoery |
| 33 | NPC | National Population Commission |
| 34 | MSPSS | Multidimensional Scale of Percieved Social Support |
| 35 | SSBQ | Safe Sex Behavior Questionnaire |
| 36 | SPSS | Statistical Packages for Social Sciences |
| 37 | MLR | Multiple Linear Regression |
| 38 | EDA | Exploratory Data Analysis |
| 39 | ND | National Diploma |
| 40 | NCE | National Certificate of Education |
| 41 | PHB | Preventive Health Behavior |
| 42 | VIF | Variance Inflation Factors |
| 43 | PERFAR | U.S. President's Emergency Plan for AIDS Relief |
| т.Э | | 0.5. I resident a Linergency I fail for AIDS Reflet |

CHAPTER ONE

Introduction

This chapter presents and discusses the background of the study, problem statement, objectives of study, research hypothesis, scope of the study, significance of study, limitation of study, and finally definition of terms which are used in this study.

1.1 Background of the Study

It is evidently clear that Human Immunodeficiency Virus (HIV) epidemic is one of the major development challenge and human tragedy that faces global society more especially developing countries (WHO, 2008). Since 1981 when the first case of HIV was diagnosed, HIV has taken the lives of more than 34 million people worldwide (UNAIDS, 2011). The disease is no longer just a health issue but socio-economic issues as HIV/AIDS related illness are significantly contributing to the loss of lives, an increase health care cost, depletion of household's assets and resource base as well as serious food insecurity (FAO, 2004).

The global AIDS epidemic summary of 2009 reported that there is an increasing evidence of HIV/AIDS risk among key population like; commercial sex workers, migrant laborers and drug users in diverse countries worldwide. However the overall growth of the global AIDS epidemic appears to have stabilized. There were an estimated 2.6 million people who became newly infected with HIV. This is nearly 19% fewer than the 3.1 million infections in 1999 and 21% fewer than 3.2 million infections in 1997 (UNAIDS Global report, 2010)

Sub-Saharan Africa remains the region most heavily affected by HIV/AIDS. In 2009 an estimated 1.8 million people became infected, considerably lower than the estimated 2.2 million people newly infected with HIV in 2001(UNAIDS Global report, 2010). In most countries the HIV epidemic is associated to behaviors that expose individuals to the risk of contracting the disease. The leading route or key drivers to HIV risk behaviors include; personal risk perception, multiple concurrent sexual partnership, intense transaction and inter-generational sex, ineffective and inefficient services for sexually transmitted infections, intravenous drug use, samesex intercourse, denial, stigma, discrimination and general inadequate access to and poor quality of health care services (HIV fact sheet,2008; NACA,2009; UNAIDS,2010).

Consequently sexual behaviors among the general population became the focus in the fight against the deadly disease. The global concern about this disease is that, up to date there is no effective method for cure or treatment and the disease has a long incubation period (10 years or more); infected persons may go on infecting others for years before they are discovered to be HIV positive. This shows that an infected person can sentence many of his partners and acquaintance to the death penalty (Badri, 1997).

Therefore, there is an urgent need to intensify HIV prevention efforts in both size and scale to halt growing infection rates and sustain the gains that have already been made (UNAIDS global report, 2006). It is for this reason that the Global HIV Prevention Working Group was inaugurated in 2002 by Bill and Melinda Gates

Foundation and the Henry Kaiser Family Foundation as a necessary step towards reinforcing the fact that HIV prevention still remains the most effective strategy towards addressing the global AIDS pandemic

Subsequently, the global community at the XVII International Conference on HIV/AIDS in Toronto Canada in August 2006 resolved to intensify and accelerate prevention. Thus, at the end of the conference member countries adopted, launched and embarked on HIV prevention campaign targeted at increasing people's knowledge about sexual transmission hoping to overcome the misconceptions and total behavioral changes toward safer sex behaviors, because promotion of safer sex is the only way to mitigate the spread and menace of HIV/AIDS. This campaign was planned to utilize the services of mass-media organization as an institution appropriately for information dissemination since mass-media campaign for health promotion has been proven to be effective channel for information dissemination on health related issues such as; family planning, cancer, smoking, alcohol drinking, and drug abuse. Several researches showed that media is effective in changing knowledge, attitudes, misconception and general behaviors of human being (Faith, and Lee, 1997; Kofi, 2005; Surunchi, Corime, Rogers, and Senguta, 2005)

As a result, a number of countries across the world have instituted special committees and work groups to mainstream and rejuvenate HIV prevention efforts. UNAIDS describes this as "uniting for HIV prevention' with others who share this goal – including civil society, treatment activists, the private sector and governments to call for the global community to mobilize an alliance for intensifying HIV prevention(UNAIDS, 2006).

Majority of the progress report on prevention revealed success in mitigating and reducing the incidence of new infection and its impact. For instance the epidemic in East Africa have declined and stabilized in countries such as Tanzania, Uganda, Kenya and Rwanda. Also in West and Central Africa, the disease prevalence rate has decreased to less than two percent in almost twelve countries in 2009. These counties includes Benin, Burkina Faso, DR Congo, Gambia, Ghana, Guinea, Mali, Liberia, Niger, Senegal, Mauritania, and Sierra Leone(UNGASS, 2009; UNAIDS, 2010)

In Nigeria, HIV/AIDS prevention efforts can be traced back to 1998. However this effort recorded very poor result due to some implementation weakness, administrative inadequacy, psychosocial, and environmental peculiarities (National Action Committee on AIDS, 2001). Therefore the federal government in 2003 in collaboration with its development partners (DFID, USAIDS, SFH, and FHI), State government, local government's authority, and civil society organizations relaunched its preventive campaign against HIV through various mass media organizations such as radio, televisions, billboards, pamphlets, newspapers, and traditional town carries.

This re-new effort is known as Behavioral Change Communication (BCC) program. The program is aimed at promoting, sustaining and maintaining individual positive and preventive healthy behavior (National Behavior Change Communication Strategy policy, 2003). However some state governments starts these programs around 2008-2009, for example Jigawa HIV preventive effort was given serious attention in the late 2009, with the launching of HIV prevention campaign through

state owned AM and FM radio stations. This program was pursued with seriousness and commitment because the prevalence rate of the disease in the state is increasing from 0.6% in 1985 to 1.8% in the year 2009 (HSS, 2009)

Therefore, the main purpose of this study was to investigate various factors especially psychological, social and environmental that influences human behavior in relation to healthy decision making and safer sex behavior practices so as to avoid contracting HIV/AIDS in Jigawa state, Nigeria

1.2 Problem Statement

Despite the growing concern regarding the importance of promoting preventive health behavior practices in order to prevent HIV on a large scale(Flay, DiTesco and Schegel, 1980; Agha, 2003; UNAIDS, 2004; Benefo, 2005; Public Health Encyclopedia, 2010) still HIV prevention services reach only one in ten people especially those at risk(UNAIDS Global report, 2006) for example in 21 African countries, more than 60% of young people have either never heard of HIV or have one misconception about the disease and how it is spread while many continue to belief that HIV is something that happens to people who are immoral and social deviant(UNAIDS, 2006; WHO, 2008; National Action Committee on AIDS, 2009). These have serious consequences on the effort to curtail the menace of this disease and it risen prevalence both at regional, national, state and local level which among others include losing skill labor resources, loss of agricultural productivity especially in less developed countries, increase in the number of orphans and widows

(Beaudoin, 2007; Food and Agricultural Organization, 2004; Parker, 2004; Dutta-Bergman, 2005; Schiavo, 2010).

Health psychology had maintained applied focus on the role of preventive health practices in development and serious diseases such as HIV, Cancer, Diabetes, High blood pressure etc (Smith. Orleans and Jenkins. 2004). Accordingly, Airhinhenbuwar (2000)notes that the determinants of these behaviors have been a focus of theory, research and practices in the field. However, Melkote, Muppidin, and Goswani (2000) observed that current theories and models such as Social Cognitive Theory, Health Belief Model, Theory of Planned Behavior and many others do not clearly articulate the importance of culture nor do they recognize the impact of government policy on behavior change which in turn impact preventive health behavior outcome. In particular, Social cognitive theory does not address the issue of cultural practices and government policy influence on the behavior. The existing theories focused on social network, family, cognitive, self-efficacy, knowledge, etc.

This study therefore addresses the question of whether a successful combination of both cultural practices and government policy within the existing variables in Social Cognitive Theory to predict positive preventive health behavior for HIV prevention in Jigawa state Nigeria. HIV prevention has been selected due to increase prevalence in the state and it causal relationship with human behavior. As such investigation of the relationship between psychological factors (HIV knowledge and self-efficacy), social factors (parent, peer and social support), and environmental factors (culture

practices, radio program and government policy) can contribute to the theory of human behavior and provide additional insights of the relationship in preventive health behavior model. In order to advance the theory it is necessary to develop alternative hypothesis that investigate the relationship and interaction effects. The relationship between psychological, social and environmental factors may have a positive impact on Preventive health behavior.

The following questions provide detail on the issues that was address by this study.

- a) Is there a significant relationship between psychological factors with preventive health behavior?
- b) Is there a significant relationship between social factors with preventive health behavior?
- c) Is there a significant relationship between environmental factors with preventive health behavior?
- d) Does the hypothesized structural model fit the data?

1.3 Objectives of the Research

1.3.1 Main Objective:

The main objective of this study was to study the relationship between independent variables (HIV knowledge, self-efficacy, parent and peer influence, social support, cultural practices, radio program and government policy) and dependent variable (preventive health behavior). Also to develop a structural model comprises of HIV knowledge, self-efficacy, parent and peer influence, social support, cultural practice,

radio program and government policy and preventive health behavior for the people of Jigawa state in HIV prevention.

1.3.2 Specific objectives

Specifically, this study addresses the following research objectives.

- To ascertain the level of perception of independent variables(HIV knowledge, self-efficacy, parent and peer influence, social support, cultural practices, radio program and government policy) and dependent variable(preventive health behavior) among respondents.
- 2 To determine the relationship between the independent variables (HIV knowledge, self-efficacy, parent and peer influence, social support, cultural practices, radio program and government policy) and dependent variable (preventive health behavior)
- To determine how much the level of variation of the dependent variable (Preventive health behavior) can be explained by the independent variables (HIV knowledge, self-efficacy, parent and peers influence, social support, radio program, cultural practices and government policy).
- 4 To develop a model of preventive health behavior practices in HIV prevention among people of Jigawa state.

1.4 Research Hypotheses

The current study was guided by the following hypotheses, in line with the statement of problem, objectives of the study, empirical studies, theoretical foundations, and the focus of the study identified in Chapter 1 and 2. In this study, the following research alternative hypotheses were tested:

H₁: There is a significant relationship between HIV knowledge and preventive health behavior.

H₂: There is a significant relationship between self-efficacy and preventive health behavior.

H₃: There is a significant relation between parent and peer influence and preventive health behavior.

H₄: There is a significant relation between social support and preventive health behavior

H₅: There is a significant relation between cultural practices and preventive health behavior

H₆: There is a significant relation between radio program and preventive health behavior

H₇: There is a significant relation between government policy and preventive health behavior

H₈: The hypothesized model of preventive health behavior practices fits the respondent's data.

1.5 The Significance of the Study

This study provided data and contributed to the general knowledge concerning preventive health behavior and HIV prevention programs. This study would fill the

gap in the body of knowledge pertaining to the preventive behavior in preventing HIV/AIDS and establishing valid and reliable criteria for evaluation of HIV prevention program and also makes several important contributions to the literature pertaining to the preventive health behavior studies

The data from the present study then could be use to help policy makers and other stakeholders in developing programs and activities for preventive behavior aimed at reducing the prevalence of HIV in the state. Thus, the current study contributes to the body of knowledge on preventive health behavior, safe sex practices and HIV prevention as well as adding to what is already known about the role of radio in behavioral change in some states in the country

The result of the study will serve as an avenue to help Jigawa State AIDS Control Agency (JISACA) and other stakeholders working on preventive health behavior for HIV and AIDS prevention to double their effort and concern, to reframe, scrap or intensify the existing preventive behavior campaign and other related radio programs that are targeted to prevent HIV in the state. It is also hoped that the findings of this study would enhances the potential for creative and innovative radio program that brought behavioral change and impact the individual behaviors to stimulate people to practice safe sex behaviors.

The finding of this study is believed to be widely beneficial through conferences, seminar and publication in journals. Secondly, the study's contribution to knowledge is to build and promote a better theoretical understanding and recognition of the variables influencing preventive health behavior. This study yields an additional

insight into these relationships, which are expected to contribute further towards the future development of this line of research, particularly in Jigawa state. It is hoped that the result of the study will contribute significantly towards the theoretical advancements in preventive health behavior in the future.

In conclusion, this study provided useful recommendations to state government to enhance preventive behavior among people in Jigawa state. Moreover, findings of this research would be beneficial to various groups that are directly or indirectly involved in HIV/AIDS prevention activities, preventive health behavior, safe sex practices, and health education. The findings generated recommendation to further improve the existing framework in preventive health behavior.

1.6 The Scope of the Study

The study was conducted in Jigawa state North Western Nigeria. This study focused on psychological, social, and environmental factors influencing prevention and general health behavior in twenty four selected communities from twelve local government areas of the state.

In each local government area two communities are selected and a total of twenty households have been randomly selected from each community. Also the finding of the study may only be used to generalize the population of Jigawa state. The sample size of the study is not adequate to represent the population of Nigeria. Therefore, the generalization of the research findings takes precaution to generalize the findings to larger society. Lastly, the study only investigated HIV knowledge, self-efficacy, parent and peer influence, social support, culture, radio program government policies as factors influencing preventive health behavior

1.6.1 Limitation of the Study

The aim of this study is to make contribution to knowledge both in theory and in practice in the field of preventive health behavior and the use of radio education program to prevent HIV/AIDS. However, the study has some limitations.

This study is highly restricted to Jigawa state, thus could not cover other neighboring states and is conducted in twelve local government areas. This study is cross sectional research not longitudinal study. There are other variables that were not investigated in this study because of time, budget constraints and method limitation. Lack of single theory and an existing framework on preventive health behavior in the state, is another limitation.

1.7Operational Definitions of Terms

The following are some frequently used terms in this study and their operational definitions, as well as how they are applied in this research.

- 1 Demographic variables. This refers to individual characteristics of respondents in this study which includes; gender, age in years, marital status, educational level, occupation and the residential area
- **2 HIV Knowledge** .This is the individual respondent level of information and awareness about HIV/ AIDS. This includes before and after they are exposure to any form of information for example at clinic, posters, radio, newspapers, billboard, counseling centre, etc. The scope of the awareness should comprise the understanding of the transmission, symptoms, and preventive methods

- 3 Self-efficacy. This is the belief of the respondent that he/she has confidence and ability to organize and execute certain particular tasks or behavior that is necessary in order to be able to produce a given attainment. In this study self-efficacy is concerned with the ability of the respondent to perform some self-reported behavior such as abstinence, being faithful to one partner, condom use, HIV testing, ability to avoid unsafe sexual practices so that to avoid contracting HIV/AIDS.
- 4 Social Networks. This comprises of the nature of interpersonal relationships and interactions of the respondent in their community. It involved the extent to which this interaction has influenced his/her actions, belief, behavior and decision making particularly as regard to HIV/AIDS preventive behavior. This study basically is concerned with the influence of Parent and Peer on the issue of sexuality and preventive behavior
- 5 Social Support. Social support is the physical and emotional comfort given to an individual by their family, friends, co-workers and others. Since all human being are part of a community of people who love and care for us, and value and think well of us especially as regards to HIV prevention, care and support.
- 6 Cultural Practices. Culture this encompassing race, ethnicity, and social norms and values obviously it includes a wider range of factors, such as familial roles, knowledge, beliefs, communication patterns, affective lifestyles, and values regarding a sense of personal control, individualism, collectivism, spirituality, and religiosity. These are the learned behaviors, or ideas which are shared among respondent in the society. Cultural practices that engender HIV infections are the focus of this study such as customary

- beliefs like; wife inheritance, wife exchange, stigma, denial, discrimination, and social norms against use of condo
- Government Policy These are government policy statement, regulations or commitment that guides decisions of individuals in the community to achieve certain rational outcome(s) and enhance positive health and prevent illness. In this study policy is aimed at tailoring the behavior of people in the study is to prevent HIV. Policies include programs spending, availability and access to information on counseling, testing and preventive programs.
- **Radio Program.** This is electronic device which transmit and receive information through waves, service availability included the most famous radio focused on musical entertainment, talk, news, sports, public announcement and drama which are mainly aimed at HIV/AIDS education program for prevention. In this study the program broadcasted by AM and FM radio stations in Jigawa were considered. The programs are "Garin muna fata" and "Ya take ne?"
- 9 Preventive Health Behavior. This is refers to the actions or activities undertaken by an individual which interact with other social, environmental and institutional system for the purpose of preventing or detecting the onset of a preventable illness in this context HIV/AIDS. For the purpose of this study preventive health behavior was used interchangeably with safe sex practices, preventive behavior, preventive health, and safe sex behavior

interview and focus group discussion may explore more data and contribute to the derivation of a theory which can be tested using a qualitative approach

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2. Further research should be conducted in other local government areas in the state to validate the findings of this study, and a more in-depth study should be done by incorporating other variables such as attitude toward people living with HIV/AIDS, stigma/discriminations, and denial to enhance the identification of factors affecting people's preventive health behavior in the state. Other variables could be added for their possible influence on safer sex behaviors, such as cultural, norms, religion, sexual self-efficacy, and participation in formal groups, because present results showed a weak relationship between self -efficacy, culture and preventive health behaviors, a different instrument that may be more culturally sensitive to Jigawa state people could be used to ask participants about their sexual self-efficacy, cultural practices and safer sex behaviors.

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BIODATA OF STUDENT

Haladu Haruna Kaugama was born on the 1^{sth} of March 1966, in Kaugama Town Kaugama local government area. He grew up and completed his primary education at the Kaugama Central Primary School and secondary education at the Government Teachers' College Malam Madori. He was very active in curricular and co-curricular activities during his secondary education where he was appointed as the House Prefect, captain college basketball team, member Muslim student society

In 1987, he got admission into 4 terms pre-degree program at Bayero University Kano and upon successful completion of the program he was offered admission into degree program in the same University from 1988 to 1991 to read B.sc Economics under Kano state scholarship board. Soon after that, he proceeded to one year compulsory National Youth Service in River state from 1991 to 1992. He started his teaching career at Jigawa state college of education, Gumel in February 1993.

After serving for two years went back to Bayero University in 1995 and started his Masters of Science degree in Economic and graduated in mid-1999. His areas of interest are rural development, labor economics, development economics, HIV/AIDS, poverty eradication and sustainable development. Haladu is married since the year 2000 and was blessed with a son and three daughters the smallest was born in January, 2012 in Malaysia. Haladu currently pursuing his PhD program in Community Education and Development under the supervision of Associate Professor, Khairuddin B. Idris, in Universiti Putra Malaysia

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