Socio-economic and demographic factors associated with level of stigma towards people living with HIV/AIDS in Botswana.

Nametso Maswabi[1] and Enock Ngome[1, 2]

Affiliation:

[1]Department of Population Studies, University of Botswana; [2]Demography and Population Studies Programme, University of the Witwatersrand

Correspondence: onametso@gmail.com

ABSTRACT

Background: HIV and AIDS remains a huge health challenge in Botswana. One of the HIV prevention strategies in the fight against the HIV pandemic is to reduce stigma towards HIV and AIDS. Discrimination against people living with HIV/AIDS (PLWHA) hinders progress towards the fight against HIV/AIDS as it is regarded as a negative behaviour with negative reproductive health consequences (Okechukwu, 2007). Despite this, stigma towards PLWHA in Botswana is still prevalent and unabated. The objective of this study is to investigate the socioeconomic and demographic factors associated with stigmatization of PLWHA in Botswana.

Methods: The data source for this study is the fourth Botswana AIDS Impact Survey (BAIS IV) conducted in 2012 (BIAS IV). The sample for this study constituted a total of 7099 respondents aged 15 to 64 years who have ever heard of HIV/AIDS and have responded to questions on stigma towards PLWHA. The main outcome for the study is he level of stigma with three categories (No Stigma, Moderate Stigma and High Stigma). Descriptive, bivariate and a total of four multinomial logistic regression models were used to examine the association between socioeconomic and demographic factors, and stigmatization towards PLWHA.

Results: Almost two thirds of respondents had some form of stigma towards PLWHA (64.5%) of which 5.3% had high stigma. Having high stigma was associated with being 15 to 24 years (Odds Ratio (OR), 1.9) and being male (OR, 1.9). Respondents with primary or less education were more likely to have high stigma as compared to their counterparts with tertiary education (OR, 2.6). Respondents with no knowledge about HIV/AIDS were more likely to have high stigma as compared to those with comprehensive HIV/AIDS knowledge (OR, 30.9).

Conclusions and Policy Implications: The results show that the level of HIV/AIDS knowledge was the most influential factor associated with stigmatization towards PLWHA. However, age, sex and level of education also seem to influence the level of stigma against PLWHA. HIV/AIDS knowledge needs to be intensified to reduce the level of stigma towards PLWHA which forms part of the HIV prevention strategies.

INTRODUCTION

HIV/AIDS continues to be a global concern affecting millions of people worldwide. By the year 2013, approximately 35 million people were estimated to be living with HIV/AIDS, of which 70% were found to be living in Africa alone (WHO 2007). This figure alone indicates that the African continent is the hardest hit by HIV/AIDS epidemic. In respect to the country of Botswana, HIV/AIDS has also greatly impacted the country, with the national HIV/AIDS prevalence rates of 18.5 percent (BAIS 2012).

Despite the overwhelming amount of information that has been provided about HIV/AIDS within workplaces, hospitals and schools, stigmatization against PLWHA is still evident to this day. There is a need to eliminate stigma within our society, reason being it is a very negative behaviour that has endless negative consequences. Stigma negatively affects HIV prevention, if an individual's HIV status is known, it might result in that individual losing their job and being rejected by the community. Because of stigma, HIV infected individuals may be embarrassed to be found/seen carrying drugs around, which may prevent an individual from commencing treatment (Okechukwu 2007).

The country of Botswana committed itself to achieving the Millennium Development Goals by the year 2015. However, until stigma towards PLWHA is under control, the goals will not be achieved. Stigma hinders the efforts Botswana has been making to promote HIV testing. HIV testing is a pre requisite for meeting the Millennium development goals. For this reason, factors that hinder HIV testing such as stigma ought to be eliminated.

This research seeks to find ways of reducing if not illuminate stigmatization of PLWHA by determining the levels of stigma within the country, examining socioeconomic and demographic factors that are associated with stigmatization of PLWHA and lastly suggesting recommendations that will reduce the level of stigma in Botswana. In order to do this, secondary data from The Botswana AIDS Impact Survey IV (2013) is going to be used. The participants of the Botswana AIDS impact survey were asked multiple questions which enable us to analyse and assess the types of stigma, the level of stigma as well as the prevalence of stigma towards PLWHA within the country.

Discrimination of PLWHA is an unacceptable behaviour, such behaviours is like cancer in the bones, it ought to be eliminated as it has very serious negative consequences upon nations, communities, families and individuals. Goffman (1963) defined stigma as significantly discrediting attributes possessed by a person with an undesired difference. HIV/AIDS related stigma can also be defined as a process of devaluation of people who have been found living with HIV/AIDS (UNAIDS 2013).

The UNAIDS study went on to reveal that women are more likely to be stigmatised than men because of believes and perception about the promiscuity of women as well as opinions of how women became infected with the virus.

Different types of stigma have been found across different countries and have been categorised into physical stigma, social stigma, verbal stigma and institutional stigma. Cases of social stigma were evident when PLWHA were excluded from social and community gatherings and events. Verbal stigma occurs when people found to be living with HIV/AIDS are openly blamed, pointed fingers at, insulted or given any other form of negative treatment which is directly aimed at them. Institutional stigma occurs when people within the same institution are treated

differently as a result of their HIV/AIDS status (Ogen 2003).

Stigma has also been found to be the greatest barrier to public action. The reason a lot of people are afraid to seek medical attention is because of the fear of stigma (Ki-Moon 2008). For this reason, AIDS is a silent killer because people fear seeking help to determine whether or not they have the disease, resulting in deaths that could have been easily avoided by attaining medical care.

HIV/AIDS is influenced by stigma and denial as well as negative attitudes of people towards those living with HIV/AIDS. People that had not tested for HIV/AIDS were associated more with negative attitudes towards those living with HIV/AIDS (Rakgoasi 2007).

METHODS

STUDY AREA AND DATA SOURCES

The following chapter explains the methods used as an attempt to explain the sources of data, the sample design, Variables, data analysis as well as the limitations of the study.

In the year 2013 a research known as the Botswana AIDS Impact Survey IV was conducted. Data from this research is being used to conduct this current research, implying that this research is based on secondary data. The study covered people aged between the ages of 10 and 64 years. This study took into account the knowledge of people about HIV/AIDS, the socioeconomic and demographic factors that are associated with HIV/AIDS and the attitudes of people towards those living with HIV/AIDS

VARIABLE MEASUREMENT

Dependent Variables (outcome)

-The level of stigma

In an attempt to measure the level of stigma, a composite variable that firstly measures the level of HIV/AIDS knowledge amongst respondents was established by summing the scores of 6 questions that respondents responded to. For questions "Would you ever share a meal with a person you knew or suspected had HIV/AIDS?", "If a member of your family became sick with HIV/AIDS would you be willing to care for him or her in your household?", "If your housekeeper, Nanny or anybody looking after your child has HIV but is not sick, would you allow him or her to continue working or assisting with baby sitting in your house?", "If a teacher has HIV but is not sick, should s/he be allowed to continue teaching in school?" and "If you knew that a shopkeeper or food seller had HIV or AIDS, would you buy vegetables from them?", the value 0 was given the response "YES" while the value1was assigned to the response "NO". For the question "If a member of your family got infected with HIV, would you want it to remain secret?" the value 1 was assigned to the response "YES" while the value 0 was assigned to the response "NO". After summing the scores, all respondents that were found to have a score of 0 were said to have No stigma, those who had between 1 and 3 were said to have Moderate Stigma while those who had a score between 4 and 6 were said to have High stigma.

Independent Variables

Demographic variables:

-Age of the respondent
-Sex of the respondent
-Marital status
-Place of Residence.

Socio-economic variables:

-The highest level of education attained
-Employment status
-Religious affiliation

-Level of HIV/AIDS knowledge: A composite variable called The Level of HIV/AIDS Knowledge was created by summing the scores of the questions that each individual answered. For the questions "Is it possible for a healthy looking person to have HIV?", "Can people reduce their chances of getting HIV/AIDS by using a condom correctly every time they have sex?", "Can people reduce their chances of getting HIV/AIDS by having only one uninfected sex partners who has no other partners?" and "Can HIV/AIDS be transmitted from a mother to a child", the value 1 was assigned to the response "YES" while the value 0 was assigned to the response "NO" and "DON'T KNOW." The response "DON'T KNOW" was added to the same category of those who had responded "NO" because both responses indicate lack of knowledge. Those that responded "YES" to the above questions indicated a certain degree of knowledge about HIV/AIDS, hence the value 1.

For the questions "Do you think that a person can get infected with HIV through mosquito bites?", "Can a person get infected with HIV by sharing a meal with a person who has HIV/AIDS?" and "Can people get HIV because of witchcraft?" the value 1 was assigned to the response "NO" while the value 0 was assigned to the response "YES" and "DON'T KNOW". In this case, the response "YES" indicated lack of knowledge while the response "NO" indicates a degree of knowledge.
After, the scores to the questions were summed, and all respondents who had a score ranging from 0 to 3 were said to not be knowledgeable about HIV/AIDS, those who scored ranging from 4 to 6 were said to be moderately knowledgeable about HIV/AIDS while those who had a score of 7 were said to be highly knowledgeable about HIV/AIDS.

Variables operationalization

-Age of the respondent: it is measured in the number of completed years of the respondent
-Sex of the respondent: it is a dichotomous variable, being male and female.
-Marital status: it is divided into three categories being married, never married and ever married. The never married category is made up of respondents who are single and cohabiting while the ever married category is made up of those who are separated, divorced and widowed.
-Place of Residence: it is made up of Cities and Town, urban villages and rural areas.
-The highest level of education attained: it can either be Primary and below, secondary levels or higher levels of education. Those with primary and below levels of education include those who have no formal education. The secondary levels of education category comprises of those who have junior levels of education and/or senior levels of education. Those with higher levels of education are those who have attained higher than senior secondary levels of education.
-Employment status: the employment status is made up of those who are employed, unemployed and pensioners.
-Religious affiliation: this category is made up of Christians, non-Christians and the non-religious
-Level of HIV/AIDS knowledge: it is made up of those who are not knowledgeable, moderately knowledgeable and those who are highly knowledgeable

Statistical Analysis

Logistic regression permits the testing of the level of significance while holding a certain variable constant. All variables that have been used in the Models are categorical. The association between socioeconomic and demographic factors associated with stigmatization of PLWHA was established using the Multinomial

Logistic regression. Multinomial Logistic regression was selected because it allows for the comparison of the three possible categories which measure the level of stigma, these categories are No stigma, Moderate stigma and High stigma. The general formula for Logistic regression is denoted by:

$$\text{LnPi} / (1\text{-Pi}) = \beta o + \sum \beta k \, XKi$$

Where:

- Pi represents the probability of the ith term having stigma towards PLWHA
- XKi is the array of independent variables
- βo is the baseline constant
- β is the corresponding vector of unknown coefficients of regression

In order to measure the best fit of the model, the -2Log Likelihood of the models were used.

Upon computing the level of stigma, four models where used. The first model (model 1) is known as a univariate model. It looks at all variables associated with stigma towards PLWHA independently, that is the age of respondent, sex of respondent, highest level of education, employment status, main religious affiliation, place of residence as well as the level of HIV/AIDS knowledge independently.

The second model (model 2) is known as the demographic model. It measures the levels of stigma according to demographic variables. The demographic variables are age of respondent, sex of respondent as well as place of residence.

The third model (model 3) is known as the socioeconomic model. It measures the levels of stigma according to socioeconomic characteristics of respondents. They are the highest level of education of the respondent, employment status, main religious affiliation and the level of HIV/AIDS knowledge of the respondent.

The fourth model (model 4) measures the level of stigma looking at all variables dependently. The variables are age, sex, highest level of education, employment status, main religious affiliation, place of residence as well as the level of HIV/AIDS knowledge

RESULTS

TABLE 1: PERCENTAGE DISTRIBUTION OF RESPONDENTS WHO REPORTED HAVING EVER HEARD OF HIV/AIDS BY BACKGROUND CHARACTERISTICS

	Frequency	Percentage
AGE		
15-24	2070	29.1
25-44	3575	50.4
45-64	1454	20.5
SEX		
Male	3216	45.3
Female	3883	54.7
EDUCATION		
Primary and below	1899	26.7
Secondary	3750	52.8
Higher	1460	20.5

RELIGION		
Christian	6150	86.8
Non-Christian	288	4.1
Non-Religious	641	9.1
MARITAL STATUS		
Married	1349	19.0
Never married	5498	77.4
Ever married	252	3.6
PLACE OF RESIDENCE		
Cities and Towns	2727	38.4
Urban Villages	1820	25.6
Rural	2552	35.9
LEVEL OF HIV KNOWLEDGE		
Not knowledgeable	358	5.0
Moderately knowledgeable	3986	56.1
Highly knowledgeable	2755	38.8
EMPLOYMENT		
Employed	4118	58.0
Unemployed	2248	31.6
Pensioner	733	10.3
TOTAL	**7099**	**100**

A total of 8332 respondents reported to have ever heard of HIV/AIDS in their entire lifetime, of which 7099 reported to be aged 15 years and older. Table one shows that of the 7099 respondents, 50.4% were aged 25-44 years while 29.1% were aged 15-24 years. 54.7% of the respondents were females while 45.3% of them were males. Most respondents had attained secondary levels of education, with 52.8% of them having secondary education as their highest level of education.

86.8% of the respondents reported to be Christians, while the non-religious made up 9.1% of the respondents. Those who reported to be non-Christians made up 4.1% of the respondents. 77.4% of the respondents reported to having never been married, while 19.0% and 3.6% of them reported to have been married and ever married respectfully. 38.4% of the respondents were found to be living within cities and towns while those living in rural areas were found to constitute 35.9% of the respondents, those living in urban villages were found to make up 25.6% of respondents. A large proportion of the respondents were found to have Moderate knowledge about HIV/AIDS, with 56.1% found to have moderate level of HIV knowledge,, 38.8% of them were found to be highly knowledgeable while 5.0% was found to have No knowledge about HIV/AIDS. Lastly 58.0% of the respondents were employed while 31.6% were unemployed, pensioners constituted 10.3% of the respondents.

BIVARIATE ANALYSIS

TABLE 2: PERCENTAGE DISTRIBUTION OF RESPONDENTS WHO REPORTED HAVING EVER HEARD OF HIV/AIDS BY SELECTED CHARACTERISTICS

	LEVELS OF STIGMA			
	NO STIGMA	**LOW STIGMA**	**HIGH STIGMA**	**TOTAL**
AGE	NO. (%)	NO. (%)	NO. (%)	NO. (%)
15-24	688 33.2	1245 60.1	137 6.6	2070 100
25-44	1432 40.1	2010 56.2	133 3.7	3575 100
45-64	468 32.2	877 60.3	109 7.5	1454 100
Chi-square: 67.295	DF:4	Sig.value: .000		
SEX				
Male	1123 34.9	1863 57.9	230 7.2	3216 100
Female	1465 37.7	2269 58.4	149 3.8	3883 100
Chi-square: 40.083	DF:2	Sig.value: .000		
LEVEL OF EDUCATION				
Primary and below	569 30.1	1136 60.1	184 9.7	1899 100
Secondary	1425 38.0	2160 57.6	165 4.4	3750 100
Higher	594 40.7	836 57.3	30 2.1	1460 100
Chi-square: 136.317	DF:4	Sig.value: .000		
EMPLOYMENT STATUS				
Employed	1576 38.3	2341 56.8	201 4.9	4118 100
Unemployed	758 33.7	1369 60.9	121 5.4	2248 100
Pensioner	254 34.7	422 57.6	57 7.8	733 100
Chi-square: 22.932	DF:4	Sig.value: .000		
RELIGION				
Christian	2251 36.6	3601 58.6	298 4.8	6150 100
Non-Christian	95 30.8	181 58.8	32 10.4	288 100
Non-religious	242 37.8	350 54.6	49 7.6	641 100
Chi-square: 28.469	DF:4	Sig.value: .000		
PLACE OF RESIDENCE				
Cities and towns	1073 39.3	1564 57.4	90 3.3	2727 100
Urban villages	642 35.3	1087 59.7	91 5.0	1820 100
Rural	873 34.2	1481 58.0	198 7.8	2552 100
Chi-square: 61.169	DF:4	Sig.value: .000		
LEVELS OF HIV/AIDS KNOWLEDGE				
Not knowledgeable	57 15.9	213 59.5	88 24.6	358 100
Moderately knowledgeable	1299 32.6	2434 61.1	253 6.3	3986 100
Highly knowledgeable	1232 44.7	1485 53.9	38 1.4	2755 100
Chi-square: 460.539	DF:4	Sig.value: .000		
MARITAL STATUS				
Married	501 37.1	795 58.8	53 3.9	1349 100
Never married	2002 36.4	3188 58.0	308 5.6	5498 100
Ever married	85 33.7	149 59.1	18 7.1	252 100
Chi-square: 8.167	DF:4	Sig.value:0.86		
TOTAL	2588 36.5	4132 58.2	379 5.3	7099 100

Table two shows that the levels of stigma differ significantly by the Age of respondents, Sex, Level of Education, Employment status, Religion, Place of Residence and Levels of HIV/AIDS knowledge.

Among people aged 15-24 years, 33.2% of them had no Stigma towards PLWHA as compared to 40.1% and 32.2 % of those aged 25-44 and 45-64 respectfully. 60.3% of the respondents aged 45-64 years had low stigma as compared to 56.2 and 60.1% of respondents aged 25-44 years and 15-24 years respectfully. Of the respondents aged 45-64 years, 7.5% of them had high stigma towards PLWHA as compared to 3.7% and 6.6% of respondents aged 25-44 and 15-24 respectfully.

Amongst the sex group, 37.7% of females were found to have no stigma as compared to 34.9% of males. 58.4% of females had low stigma while 7.2% of males have high stigma. 40.7% of respondents with higher levels of education had no stigma, as compared to 38.0% and 30.1% of respondents with Secondary levels and Primary & below levels of Education respectfully. Of the respondents who had attained Primary and below levels of education, 60.1% of them had moderate levels of stigma while 9.7% of them had high stigma. Only 2.1% of respondents with higher levels of education had high stigma.

In regard to the employment status of the respondents, 38.3 % of the employed respondents were found to have no stigma as compared to 33.7% and 34.7% of respondents who were unemployed and pensioners respectfully. 7.8% of pensioners were found to have high levels of stigma as compared to 5.4% and 4.9% of respondents who were unemployed and the employed respectfully.

Of the Christian respondents, 36.6% of them were found with no stigma as compared to 30.8% and 37.8% of the non-Christians and non-religious respectfully. 10.4% of the non-Christians were found to have high levels of stigma while 58.8% of the Non-Christian respondents were found to have moderate stigma.

Of the respondents who were found to be living in Cities and Towns, 39.3% of them were found to have no stigma as compared to 35.3% and 34.2% of respondents living in urban villages and Rural areas respectfully. Furthermore, 59.7% of the respondents living within urban villages were found to have moderate levels of stigma while 7.8% of respondents living in rural areas had high stigma.

Of the respondents that were highly knowledgeable about HIV/AIDS, 44.7% of them had no stigma towards PLWHA as compared to 32.6% and 15.9% of the respondents who were moderately knowledgeable and Not knowledgeable respectfully. Of the respondents that were moderately knowledgeable about HIV/AIDS, 61.1% of them were found to moderate stigma while 24.6% of those who were not knowledgeable had high stigma.

Of the married respondents, 37.1 of them were found to have no stigma as compared to 36.4% and 33.7% of the never married and ever married respondents respectfully. The ever married respondents had the highest levels of respondents with

moderate stigma (59.1%) while 7.1% of them had high stigma

MULTINOMIAL LOGISTIC REGRESSION

Background characteristics		**Model 1 (Univariate)**				**Model 2 (DEMOGRAPHIC)**			
		Moderate Stigma		High Stigma		Moderate stigma		High stigma	
		Odds Ratio	95% CI	Odds Ratio	95% CI	Odds Ratio	95% CI	Odds Ratio	95% CI
Age	15 to 24 years	0.966	0.835-1.117	0.855	0.648-1.129	0.975	0.842-1.129	0.924	0.697-1.124
	25 to 44 years	0.749	0.657-0.854	0.399	0.303-0.524	0.761***	0.667-0.869	0.445***	0.337-0587
	45 to 64 years	1		1		1		1	
Sex	Male	1.071	0.970-1.183	2.014	1.616-2.510	1.073	0.972-1.186	2.026***	1.623-2.530
	Female	1		1		1		1	
Education	None/Primary	1.419	1.226-1.641	6.403	4.280-9.577				
	Secondary	1.077	0.951-1.220	2.293	1.536-3.422				
	Tertiary	1		1					
Employment	Employed	0.894	0.756-1.058	0.568	0.412-0.785				
	Unemployed	1.087	0.909-1.300	0.711	0.504-1.005				
	Pensioner	1		1					
religion	Christian	1.106	0.931-1.314	0.654	0.470-0.909				
	Non-Christian	1.317	0.978-1.774	1.664	1.004-2.756				
	Non-Religious	1		1					
Residence	Cities and Towns	0.859	0.767-0.963	0.370	0.284-0.482	0.883	0.787-0.991	0.399***	0.306-0.522
	Urban villages	0.998	0.878-1.135	0.625	0.478-0.817	1.009	0.887-1.148	0.653***	0.498-0.856
	Rural	1		1	1	1		1	
Levels of HIV/AIDS knowledge	Not knowledgeable	3.100	2.292-4.193	50.054	31.473-79.603				
	Moderately knowledgeable	1.555	1.405-1.720	6.314	4.451-8.959				
	Highly knowledgeable	1		1					
Constant						0.632		-1.497	
-2 Log Likelihood						223.715			

*** = p<0.001

Background characteristics		**Model 3 (socio economic variables)**				**Model 4 (all variables)**			
		Moderate Stigma		High Stigma		Moderate Stigma		High Stigma	
		Odds Ratio	95% CI	Odds Ratio	95% CI	Odds Ratio	95% CI	Odds Ratio	95% CI
Age	15 to 24 years					1.096	0.912-1.316	1.915***	1.321-2.775
	25 to 44 years					0.884	0.761-1.026	0.857	0.624-1.177
	45 to 64 years					1		1	
Sex	Male					1.068	0.963-1.185	1.896***	1.496-2.402
	Female					1		1	
Education	None/Primary	1.149	0.977 1.346	2.746***	1.800-4.188	1.118	0.943-1.325	2.648***	1.687-4.157
	Secondary	0.969	0.849 1.103	1.6350	1.084-2.465	0.943	0.826-1.078	1.402	0.921-2.134
	Tertiary	1		1		1		1	
Employment	Employed	0.929	0.782 1.103	0.734	0.522-1.032	0.951	0.797-1.135	0.711	0.498-1.014
	Unemployed	1.180	0.983 1.416	1.102	0.763-1.592	1.120	0.929-1.351	0814	0.574 1.232
	Pensioner	1		1		1		1	
religion	Christian	1.174	0.986 1.398	0.889	0.628-1.257	1.178	0.987-1.407	1.012	0.710-1.442
	Non-Christian	1.290	0.955 1.743	1.524	0.896-2.594	1.281	0.948-1.731	1.510	0.884-2.579
	Non-Religious	1		1		1		1	
Residence	Cities and Towns					0.994	0.880-1.124	0.763	0.570-1.022
	Urban villages					1.087	0.952-1.241	1.003	0.753-1.337
	Rural					1		1	
Levels of HIV/AIDS knowledge	Not knowledgeable	2.941***	2.158- 4.009	33.632***	20.699-54.647	2.914 ***	2.135-3.979	30.852 ***	18.847-50.504
	Moderately knowledgeable	1.529 ***	1.376-1.697	5.329***	3.735-7.603	1.529***	1.376-1.699	5.226***	3.656-7.468
	Highly knowledgeable	1		1		1		1	
Constant		0.008		-3.582		0.598		-1.817	
-2 Log Likelihood		1055.527				2555.748			

*** = p<0.001

Model one shows that male respondents were 2.014 likely to exhibit high stigma levels as compared to their counterparts who are 1.071 likely to exhibit Moderate levels of stigma. Respondents who had none/primary levels of education were 6.403 likely to have high levels of stigma as compared to their counterparts who are 1.419 likely to have moderate levels of stigma. Respondent who had attained secondary levels of education were 2.293 likely to exhibit high stigma as compared to their counterparts who are 1.077 likely to exhibit moderate levels of stigma.

Respondents who were found to be unemployed were 1.120 likely to exhibit moderate levels of stigma as compared to their counterparts who are 1.175 likely to have high levels of stigma. The most interesting finding from this model would have to be from the relationship between the level of HIV/AIDS knowledge and the levels of stigma. Respondents who had no knowledge about HIV/AIDS were 50.054 likely to have high levels of stigma as compared to their counterparts who were just 3.100 likely to have moderate levels of stigma. Respondents who were moderately knowledgeable about HIV/AIDS were six times likely to exhibit high levels of stigma (6.314) as compared to their counterparts who were 1.555 likely to have moderate levels of stigma.

Model two shows a significant relationship between respondents aged 25-44 years and the level of stigma (0.000). Respondents age 25-44 years were 0.761 less likely to have moderate levels of stigma as compared to their counterparts who are 0.455 likely to have high stigma. Males were found to be twice as likely (2.026) to have high levels of stigma as compared to their counterparts who are 1.073 likely to have moderate levels of stigma. There was a significant relationship between the sex of the respondent and the level of stigma (0.000).

Model three shows a significant relationship between the levels of education and the levels of stigma (0.000). Respondents with none/primary levels of education were 1.149 likely to be found with Moderate stigma as compared to their counterparts who are 2.746 likely to have High levels of stigma. Among Christians, respondents were found to be 1.174 likely to have moderate levels of stigma as compared to their counterparts who were 0.889 likely to have high levels of stigma. The relationship between the level of HIV/AIDS and the level of stigma is quite intriguing. Not only was the level of significance high (0.000), but the odds ratio were quite high. The odds of a respondent who was not knowledgeable about HIV/AIDS having high stigma are quite high (33.632), as compared to their counterparts who are 2.941 likely to exhibit moderate levels of stigma. Respondents who were moderately knowledgeable about HIV/AIDS were 5.329 likely to have high levels of stigma as compared to their counterparts who were 1.528 likely to have moderate levels of stigma.

Model four shows a significant relationship between the age of the respondent and the level of stigma towards PLWHA (0.000). Respondents aged 15-24years were found to be 1.915 likely to exhibit high levels of stigma as compared to their counterparts who are 1.096 likely to have moderate levels of stigma. The odds of a male having high stigma are 1.896 more than that of having moderate levels of stigma which are 1.068. There is great significance between the sex of the respondents and the levels of stigma (0.000). The odds of a having high stigma while having none/primary levels of education is 2.648 more, while those of having moderate stigma are 1.118. Respondents who had attained secondary levels of education were 1.402 likely to have high levels of stigma as compared to their counterparts who were 0.943 less likely to have moderate levels of stigma. Once more, the relationship between the level of HIV/AIDS knowledge and the level of stigma was found to be quite interesting. Firstly, there is a significant

relationship between the level of HIV/AIDS knowledge and the level of stigma. Respondents who were found to not be knowledgeable about HIV/AIDS were 30.852 likely to exhibit high levels of stigma as compared to their counterparts who are 2.914 likely to have moderate levels of stigma. Furthermore, those that had moderate knowledge about HIV/AIDS had 2.914 odds of having high stigma as compared to their counterparts who were 1.529 likely to have moderate stigma.

It should be noted that the marital status of respondents was excluded from the all the models during computation because there was no significant relationship between the marital status of respondents and the level of stigma towards PLWHA during the bivariate analysis.

DISCUSSIONS

The objective of this research is to find out the socioeconomic and demographic factors associated with Stigmatization of PLWHA in Botswana. Stigma towards PLWHA negatively affects prevention of the virus, which is undesirable. In the attempt to determine socioeconomic and demographic factors associated with stigmatization of PLWHA in Botswana, it was found that people in the older age groups are most likely to have stigma towards PLWHA. This is consistent with an earlier hypothesis that people in the older age groups are most likely to have stigma towards PLWHA.

A study that was carried out in Vietnam by Karolinska Institute (2011) had consistent findings with the results of this report. It found that people who were less educated as well as people who were living in rural areas were more likely to have stigma towards PLWHA. This is because people who are less educated have very little if not no knowledge about HIV/AIDS. For his reason, they may have stigma towards PLWHA because they fear the virus and have no understanding of the modes of transmission. Furthermore, people found to Christians such as Muslims were more likely to have stigma towards PLWHA. Kafuko further explained that this is because there are some religious teachings that promote stigma

be living in rural areas are often not receiving the same quality of education as people living in cities and towns. Furthermore, people living in villages are to some extent still cultural people, which influences their negative and misinformed believes about HIV/AIDS.

In December 1998, a woman named Gugu Dhlamini who hails from a township near the city of Durban in South Africa was stoned to death by her neighbors after speaking openly about her status on World AIDS Day, this was reported by The Associated Press (1998). This is evidence that indeed people living in rural areas are more likely to have higher levels of stigma towards PLWHA.

However, our analysis vary with other findings outside Botswana, the study carried out by the Karolinska Institute in Vietnam found that women are more likely than men to have stigma towards PLWHA than men. Our findings indicated that men in Botswana are more likely to have stigma towards PLWHA than women, our study also found a significant relationship between the sex of the respondent and the level of stigma. The simple explanation for this could be that women in Botswana are the ones responsible for caregiving in homes, they are the ones who would normally take care of sick relatives and family, even if they are infected with HIV/AIDS. Their acts of caregiving to the sick could be the reason their levels of stigma is lower than that of men as they come into contact with patients of HIV/AIDS, hence have gotten over fears and believes that come with HIV/AIDS.

In regard to the main religious affiliation of the respondent, the study found that there is no significant difference between the level of stigma of Christians and non-Christians. However, they were both found to be more likely to have stigma towards PLWHA. The findings of a study carried out by (Kafuko, 2009) indicated that religious people, ie Christians and non-

towards PLWHA. It is assumed that people with HIV/AIDS have many sexual partners since the virus is transmitted sexually. Another reason is that some people believe that because God does not allow fornication, then people who have HIV/AIDS have been punished by God.

The findings of this study have also shown that people who are unemployed as compared to the employed and pensioners are most likely to have higher levels of stigma towards PLWHA. This could be due to the fact that a vast majority of people with higher levels of education are employed due to the demand for their skills and education, while those with lower levels of education constitute a majority of unemployed respondents

The most important finding of this study has to be the significance of the level of HIV/AIDS knowledge among respondents. There was a significant relationship between the level of HIV/AIDS knowledge and the level of stigma. Our findings show that people who don't have any knowledge about HIV/AIDS have the highest chances of having stigma towards PLWHA than those with a certain degree of knowledge. It is most probable that this is due to fears, misconception, mentalities and believes that people have about HIV/AIDS, which clearly shows how important education about HIV/AIDS is to the public. Because people with higher levels of HIV/AIDS knowledge have slimmer chances of having stigma towards PLWHA, it is mandatory to educate the public about HIV/AIDS in order to combat stigma within the country.

LIMITATIONS

The methods used in the assessment of the stigma towards people living with HIV/AIDS are of concern. Firstly, the study excluded people aged below 10 years and above 64 years old which imply that the finding of this research may not apply to other populations. Secondly, people are not always comfortable talking about HIV/AIDS, as well as disclosing information about how they respond or treat HIV positive people, which may affect the results of the outcome. Furthermore, secondary data was used to conduct this research, which limited the research to the given variables which were not directly aimed at measuring the levels of st**igma.**

REFERENCES

Okechukwu K. (2007). The Impact of Stigma in the Prevention of HIV/AIDS

Fauci A. (2003). HIV and AIDS: 20 years of science; Nature Medicine

Monjok E et al (2009). HIV/AIDS Related Stigma and Discrimination in Nigeria: Review of Research Studies and future directions for Prevention Strategies; African Journal of Reproductive Health

UNAIDS Report (2013). HIV in Asia and the Pacific; Switzerland

Goffman E (1963). Stigma: Notes on the Management of a Spoiled Identity. New York: Simon and Schuster.

Parker R, P Aggleton (2002). HIV/AIDS-related Stigma and Discrimination: A Conceptual Framework and an Agenda for Action; Horizons Program

Ogden J, L Nyblade (2003). Common at its Core: HIV-Related Stigma across Contexts

O9Ki-Moon B (2008). The Stigma Factor; the Washington Times

Rakgoasi D (2007). Does HIV Testing Improve Attitudes of People Living with and Affected by HIV/AIDS; University of Witwatersrand Johannesburg

Karolinska Institute (2011). HIV-related stigma in Vietnam: Implications for the prevention and control of HIV in concentrated epidemic settings

The Associated Press (1998). HIV Positive SAfrican Woman Murdered.

Kafuko A. (2009). Knowledge, attitudes and attitudes related to HIV/AIDS; Stigma and discrimination among people living with HIV, care takers of HIV plus children and religious leaders, Kampala.