HIV/AIDS KNOWLEDGE, ATTITUDES AND PRACTICES AMONG WOMEN IN SOUTH SUDAN BASED ON MULTIPLE INDICATOR CLUSTER SURVEY, 2010

Boumkouth Sir Mach

College of Public Health Sciences, Chulalongkorn University, Bangkok, 10330, Thailand

ABSTRACT:

Background: Knowledge, attitudes and practices are basic foundations of prevention and control of Acquired immune deficiency syndrome (AIDS) disease. The aim of this study was to assess Human Immune Virus (HIV)/AIDS knowledge, attitudes and practices and factors associated among women at reproductive age in South Sudan.

Methods: This study was a secondary data analysis based on the South Sudan multiple indictor cluster survey (MICS)of 2010 for South Sudan, data from 9069 women of 15-49 years were used. Descriptive statistics, chi-square and binary Logistic regression were used to assess factors associated with practices and then more analysis was performed to assess factors associated with knowledge and attitudes.

Results: Nearly half (46.0%) of respondents had never ever heard about AIDS disease, and misconception about transmission routes were reported. Majority of respondents were having low level of HIV/AIDS knowledge (63.1%) and negative attitude (72.4%), and risky sexual behavior (96.3%). Factors associated with practices were residence area, education level, wealth index, and attitudes. Participants who live in urban were 1.6 time likely to have safe practices more than who live in rural (OR = 1.6). Those who attended secondary school were 4.4 time likely to have safe practices (OR = 4.4), and who were at richest wealth index level were 1.9 time likely to practice safe practices than who had poorest wealth index (OR = 1.9). Participants with positive attitudes were 1.8 time likely to have safe practice more than who have negative attitudes (OR =1.8). Factors associated with knowledge were; residence area, education, wealth index and attitudes. Respondents who were living in urban area (OR=1.3), attended school (OR= 1.3), having wealth index richest level (OR = 1.5) and positive attitudes (1.5) were more likely to have correct information about HIV/AIDS transmission routes and prevention methods. P-value <.01. Attitudes associated with residence area (OR = 1.5), education (OR =3.1), wealth index (OR = 2.5), and knowledge (OR = 1.5). Participants who live in urban, attended school, having wealth index richest level, and moderate/high HIV/AIDS knowledge level were likely to have positive attitudes toward people living with HIV.

Conclusion: Majority of study group were having low knowledge of HIV/AIDS, and negative attitude and risky practices. Therefore, reinforcement and expanding of HIV/AIDS prevention and control policies are needed at community level.

Keywords: HIV/AIDS; Knowledge; Attitudes; Practices; Women; South Sudan

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INTRODUCTION

Since the first case of acquired immune deficiency syndrome (AIDS) recognized in United States of America 1981, it had spread all over the world affected both gender and all age. Today AIDS has been report among top ten killer diseases in all regions [1]. AIDS had claimed many levies in Africa

* *Correspondence to: Boumkouth Sir Mach*
E-mail: bumkuth90@gmail.com

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region since first case reported in 1983 by Europeans clinicians among Africa patients. The first report to World Health Organization (WHO) indicated that 25% among 263052 cases were from 47 Africa Countries, by then HIV/AIDS cases continued to increase from time to time in Africa, in 1989 the statistic of WHO shown 16% of the cumulative total cases were from Africa [2]. In 2015, reported cases showed more than thirty-five million people were living with HIV, estimated 1.1 to 1.3 died from AIDS in the same year, and new infection cases were estimated (1.8 – 2.4) million worldwide. These figures shows that HIV/AIDS is pandemic disease [3].

In recent years Sub-Saharan Africa remained the most affected region with high HIV infection prevalence comparison with other world regions and the most cases are among young people aged 15-49 years, it had been reported that among people living with HIV in 2015 in Africa 17% was female age 15-24 years and 33% was female age 25 and above [4].

The prevalence of HIV infection in South Sudan in 2015 estimated 2.5% (1.6% -3.4%) among adult aged 15-49 years. South Sudan HIV/AID prevalence was drawn from routine antenatal reports from all sentinel sites across the Country. Therefore, assessment of knowledge, attitude and practice level and factors associated among women is corner stone for reinforcement of existing prevention and control intervention and programs policies [5]. In low-income Countries particularly in Africa women who living in both rural and urban areas are faced with many challenges in life that include work schedule, limited financial resources to support the family, and male domination that limits mobility, empowerment, and control over their sexuality. These situations make women in Africa in general and South Sudan in particular vulnerable to sexual violence and expose their lives at risk of HIV infection. Studying KAP among women will create approaches to address HIV/AIDS and equip women with information on transmission methods and prevention which will play a great role in disease prevention in general population and among most vulnerable groups [6].

Having knowledge or basic correct information about HIV/AIDs is a primary step and precursor to attitudes and practices change. Therefore assessing women knowledge , attitudes and practices towards HIV/AIDS is a corner stone for prevention intervention strategies among women in general population [7]. What are HIV/AIDS KAP levels and factors associated among women aged 15-49 years in South Sudan?

There is no study conducted before to assess factors associated with KAP among women in South Sudan. The objective of this study was to assess level of knowledge, attitudes and practices and factors associated among women in South Sudan based on multiple indicator cluster survey data for 2010.

The finding of this study will help South Sudan national HIV/AIDS program to evaluate its prevention interventions and reinforce new strategies and activities among women as vulnerable group.

METHODS

Data source

The variables of this study were obtained from Multiple Indicator Cluster Survey (MICS) that conducted in 2010 in South Sudan by National Bureau of Statistic and Ministry of Health under support of UNICEF. All MICS are cross-sectional studies and targeted different indicators from respondents across the Countries. South Sudan MICS composed of three datasets that give information on household, children under five years old, and women aged 15-49 years. This study used data from women dataset, data from 9056 women were analyzed [8].

Measures: Independent variables were socio-demographic; residence, age, education level, marital status, wealth index, and knowledge and, attitude. Residence area was categorized into rural and urban, and age dichotomized into two < 30 and ≥ 30 years, education was grouped into no school, primary, secondary, and adult education, wealth index was categorized into poorest, second, middle, fourth and richest. Wealth index was used as a proxy variable to describe *economic status* of the household. Knowledge was having 9 questions, and attitudes 4 questions. In both knowledge and attitude correct answer was given 1 and incorrect was given 0 score.

Knowledge level were classified into low for those who score below 50% and moderate for those respondents scored 51-74% and high for who scored 75 and above. Attitude was classified into negative and positive, those who scored below average were considered as having negative attitude and who scored average and above considered as having positive attitude.

Table 1 Number and percentage of correct answers of 4882 of respondents on HIV/AIDS knowledge

	Correct answers	
	No	**%**
(Can people reduce their chance of getting the AIDS virus by having one uninfected sex partner who has no other sex partners)?(Yes)	3,375	69.1
(Can people get the AIDS virus because of witchcraft or other supernatural means)?(No)	3,777	77.4
(Can people reduce their chance of getting the AIDS virus by using a condom correctly every time they have sex)?(Yes)	2,001	41.0
(Can people get the AIDS virus from Mosquito bites)?(No)	2,650	54.3
(Can people get the AIDS virus by sharing food with a person who has AIDS)?(No)	3,273	67.0
(Is it possible for a healthy-looking person to have the AIDS virus)?(Yes)	2,413	49.4
(Can the virus that cause AIDS be transmitted from mother to her baby during pregnancy)?(Yes)	2,060	42.2
(Can the virus that cause AIDS be transmitted from mother to her baby during delivery?(Yes)	2,993	61.3
(Can the virus that cause AIDS be transmitted from mother to her baby by breastfeeding)?(Yes)	2,865	58.7

On other hand the percentage of participants who were not willing to take care for person who had AIDS disease was 33.3%

Table 2 Number and percentage of correct answers of 4882 respondents on attitudes toward people living with HIV/AIDS

	Correct answers	
	No	**%**
(In your opinion, if a female teacher has the AIDS virus but is not sick, should be allowed to continue teaching in school)?(Yes)	1,706	34.9
(Would you buy fresh vegetables from shopkeeper or vendor if you knew that this person had the AIDS virus)?(Yes)	1,708	35.0
(If a member of your family got infected with the AIDS virus, would you want it to remain a secret)? (Yes)	1,593	32.6
(If a member of your family became sick with AIDS, would you be willing to care for her or him in your own household)?(Yes)	3,256	66.7

Dependent variables

Practice was identified as dependent variable and was categorized into two level risky and safe. Risky practice were for respondents who scored below median and safe for those who scored median and above median. Practices questions were three and median was 0.33.

Data analysis

Descriptive statistic was used to give overview image of knowledge, attitude and practice among study group. Inferential statistic such as chi-square and binary logistic regression was performed to assess factors associated with practice, and knowledge and attitudes. All significant independent variables in chi-square analysis were used in binary logistic regression analysis. Confidence interval was at 95% and significant level was 0.05. SPSS version 17.0 was used for analysis process. Ethical approval code CAO No. 093/2017 was obtained from the Research Ethics Committee Involving Human Research Subject Group of Chulalongkorn University.

RESULTS

The mean age of study group was 34 years (SD±1.712), and about one-third were below age 30 years. The majority of participants were living in rural areas (73.1%), and 80.9% of them were married, and majority had ever never attended school. Nearly half 46.0% had never ever heard about AIDS.

Table1 contained the number and percentage of correct answers of respondents who had heard about AIDS. Regarding to their incorrect answers, 30.9% said that people cannot reduce their chance of getting human immunodeficiency virus (HIV) even if they have one faithful uninfected partner, and 22.6% reported that people can get AIDS virus through witchcraft or other supernatural means, and 59.0% said condom cannot protect people from getting HIV, and 45.7% answered that individual can get AIDS virus from mosquito bites. 33% of respondents reported that people can get HIV by sharing food with person with AIDS disease. In their response on HIV transmission from mother to child, 57.8% reported that HIV cannot be transmitted from

Table 3 Number and percentage of 4882 respondents on condom use

	No		%	
	Yes	**No**	**Yes**	**No**
Did you used condom during first sexual intercourse?	98	4,784	2.0	98.0
Did you used condom at last sexual intercourse?	102	4,780	2.1	97.9
Did you used condom in last 12 months all partners?	25	4,857	0.5	99.5

Table 4 Binary logistic regression of factors associated with practices toward HIV/AIDS among 4882 participants

	Model	
	OR	**95% CI**
Residence area		
Ural	1	1
Urban area	1.6	(1.12 - 2.17)
Age (years)		
< 30	1	1
≥ 30	0.64	(0.45 - 0.89)
Education		
No school	1	1
Primary	1.9	(1.3 - 2.8)
Secondary	4.4	(2.8 - 7.0)
Adult education	5.3	(1.4 - 19.4)
Marital status		
Married	1	1
Former married	1.33	(0.84 - 2.1)
Single	0.43	(0.25 - 0.73)
Wealth index		
Poorest	1	1
Second	1.2	(0.47 - 3.2)
Middle	1.6	(0.61 - 3.5)
Fourth	1.7	(0.77 - 4.0)
Richest	1.9	(0.85 - 4.3)
Knowledge level		
Low	1	1
High/Moderate	1.1	(0.85 - 4.5)
Attitudes level		
Negative	1	1
Positive	1.8	(1.3 - 2.5)
	$X^2 = 143.9$, $p<0.01$	

mother to her child during pregnancy, and 38.7% said cannot transmitted during delivery, and 41.3 % revealed that AIDS virus cannot transmitted during breastfeeding.

Table 2 showed participants correct answers on attitudes toward people living with HIV/AIDS. 64.1% rejected female teacher to teach or to continue teaching at school, and 65% were not willing to buy fresh vegetable from shopkeeper or bender if they knew he or she had HIV/AIDS. Sixty-six point four said they would make it secret if one of their family member became sick with AIDS or they will not share such information with any one.

Table 3 described condom use among 4882 participants in which 98% of them never used condom on their first sexual intercourse, and 97.9% didn't used condom in last sexual, and 99.5% said they didn't used condom in last 12 months. The overall knowledge level shows that 63.1% of participants had low level of knowledge regarding transmission routes and preventions methods. In response to attitude question participant's overall attitude shows that 72.4% at negative attitude level. Majority of 4882 participants expressed risky practices (96.3%) and participants with safe practices 4.8% were having low level of HIV/AIDS knowledge, and 6.8% were having positive attitudes toward people living with HIV/AIDS (Table not shown).

Table 4 described association between

Table 5 Binary logistic regression of factors associated with knowledge toward HIV/AIDS among 4882 participants

	Model	
	OR	**95% CI**
Residence area		
Rural	1	1
Urban	1.3	(1.1 - 1.4)
Age (years)		
< 30	1	1
≥ 30	0.86	(0.76 - 0.96)
Education level		
No school	1	1
Primary	1.3	(1.2 - 1.5)
Secondary	1.1	(0.89 - 1.5)
Adult education	2.6	(1.1 - 6.9)
Marital status		
Married	1	1
Former married	0.99	(0.80 - 1.22)
Single	0.9	(0.74 - 1.1)
Wealth index		
Poorest	1	1
Second	1.2	(0.94 - 1.6)
Middle	1.3	(1.0 - 1.7)
Fourth	1.4	(1.1 - 1.8)
Richest	1.5	(1.2 - 2.0)
Practices		
Risky	1	1
Safe	1.1	(0.83 - 1.6)
Attitudes		
Negative	1	1
Positive	1.5	(1.3 - 1.7)
	$X^2 = 162.2$, p =<.01	

independent variables and practice. Analysis shown that participants who were living in urban area were 1.6 time likely practicing safe practice than those who live in rural areas. OR = 1.6 95% CI (1.12 - 2.17). Participants aged 30 and above were lower to use condom during sex intercourse than who aged below 30 years. Respondents who attended secondary school were 4.4 time likely to use condom during sexual intercourse more than those who never went to school [OR = 4.4, 95% CI =2.8- 7.0]. Former married participants were 1.4 time likely to use condom then married and single women [OR = 1.4, 95% CI (0.84 -2.1]. Those who had wealth index level fourth and richest were likely to use condom more than those who had poor wealth index level [OR = 1.7, 95% CI = 0.77 – 4.0], 1.9, 95% CI = [0.85 – 4.3]. Level of knowledge was not associated with safe practices. Participants with positive attitudes toward people living with HIV were 1.8 time likely to used condom during sex activity [OR = 1.8, 95% CI =1.3-2.5].

Table 5 explored factors associated with knowledge toward HIV/AIDS among study group. Factors associated with knowledge were; residence, education, wealth index and attitudes. Participants who were living in urban were 1.3 time likely to have basic correct information more than who live in rural areas [OR = 1.3, 95% CI = 1.1-1.4] Participants who attended primary school were 1.3 likely to have correct information on HIV/AIDS more than those who never attend school [OR = 1.3, 95% CI =1.2 – 1.5]. Respondents with good income were 1.5 time likely to have high or moderate knowledge about HIV transmission route and prevention methods more than those who have less income. Study group with positive attitude were 1.5 time likely to have correct information about HIV transmission route and prevention methods than those with negative attitudes [OR = 1.5, 95% CI =1.3 -1.7].

Table 6 described factors associated with attitude among study group. Factors associated with attitudes were residence areas, educational level, former married, wealth index, practices and knowledge level. Participants who were living in urban were 1.5 time likely to have positive attitude

Table 6 Binary logistic regression of factors associated with attitudes toward HIV/AIDS among 4882 participants

	Model	
	OR	**95% C.I**
Residential area		
Rural	1	1
Urban	1.5	(1.3 -1.7)
Age (years)		
< 30	1	1
≥ 30	1.1	(0.9 - 1.2)
Education		
No school	1	1
Primary	1.7	(1.4 - 1.9)
Secondary	3.1	(2.4 - 4.0)
Adult education	1.6	(0.6 - 4.2)
Marital status		
Married	1	1
Former married	1.4	(1.1 - 1.8)
Single	1	(0.8 - 1.2)
Wealth index		
Poorest	1	1
Second	1.4	(1.0 - 2.0)
Middle	2	(1.5 - 2.7)
Fourth	2.2	(1.7 - 3.0)
Richest	2.5	(1.9 - 3.4)
Practice		
Risky	1	1
Safe	1.8	(1.3 - 2.5)
Knowledge level		
Low	1	1
High/Medium	1.5	(1.3 - 1.7)
	$X^2 = 421.3$, p=<.01	

toward people living with HIV more than who live in rural areas [OR = 1.5, 95% CI =1.3 – 1.7]. Women who attend secondary school were 3.1 time likely to have positive attitude toward people living with HIV than those who never attend school [OR = 3.1, 95% CI = (2.4 – 4.0]. Former married women were 1.4 time likely to have positive attitudes toward people living with HIV more than those with negative attitudes [OR = 1.4, 95% CI =1.1 -1.8]. Participants who were having good income were 2.5 time likely to have positive attitudes toward individual living with HIV more than those with low income [OR = 2.5, 95% CI =1.0 – 3.4]. Women with safe practices were 1.8 time likely to have positive attitudes toward people living with HIV/AIDS [OR = 1.8, 95% 1.3 – 2.5]. Those with high and moderate knowledge level among study group were 1.5 time likely to express positive attitudes toward people living with HIV [OR = 1.5, 95% CI =1.3 – 1.7].

DISCUSSION

This study aimed to describe knowledge, attitudes and practices levels toward HIV/AIDS and to assess factors associated with KAP among South Sudanese women based the UNICEF MICS (multiple indicator cluster survey) of 2010 for South Sudan.

The study revealed that 46.0% of respondents never heard about AIDS disease. This finding is lower than outcome of study by Thanavnh, et al. [9] on KAP among male secondary school student in Lao Democratic Republic, in which all study group heard ever about AIDS disease. Another study on KAP among secondary student in Cameroon by Essomba, et al. [10] reported that all respondents were aware of HIV/AIDS. This outcome shows the effect of long civil war that affected South Sudan for more than three decades on health system and other social services [11].

This research reported that 63.1% of respondents had a low level of knowledge regarding HIV/AIDS, and 31.8% had medium and 5.1% had high regarding HIV/AIDS. Comparing these findings with study in Cameroon by Essombo, et al.

among student at secondary school where he reported that 62.1% of participants had a high level of knowledge and 3.4 % had a low level of knowledge of HIV/AIDS. Knowledge levels outcome of this study is lower from what Essombo found in his study. This indicated inadequate health promotion services in rural areas where the majority of respondents live, also it indicated lack of community based health education intervention programs. Misconception about transmission routes and prevention methods were reported where 45.7% of respondents said that people can get HIV from mosquito bites, and 33% said people can get AIDS virus through sharing food with person who had HIV/AIDS, and 59% said condom cannot prevent HIV. These misconception findings higher than the result reported by Van Huy, et al. [12] on the study among women in Vietnam which indicated that 30.5% of participants said that people can get HIV from mosquito bite, and only 10% said condom cannot prevent HIV. However, these misconceptions might put general population at risk of HIV infection, especially women due to many challenges they faced at daily basis particularly in Africa where women faced limited financial resources to support their families and male domination. Therefore, reinforcing health promotion program will equip women with information about HIV/AIDS prevention and transmission routes that will enable them to protect their lives and those around them. These findings might have relationship with residence area because 73.1% of participants from survey were from rural where there is an inadequate education and health services. People in rural areas have rare chance to get information through media and sometime in not common to speak about HIV/AIDS in those residence areas. Moreover, social context in some communities might not allow women to discuss information about sensitive issue such as sexual topic. Low level of knowledge regarding HIV/AIDS can be attributed to education level as in this study 72% of participants never attended school. The same assumption was showed in study on knowledge, attitude and practices toward HIV/AIDS in general population in South Africa by Peltzer, Matseke, Mzolo, and Majaja [13] in which they found female with formal education, employed, and living in urban had high level scores of HIV/AIDS knowledge. Participants in this study have expressed a high level negative attitudes (72.4%) toward people living with HIV/AIDS, where 64.1% of them rejected to accept female teacher who had AIDS, and 65% were not willing to buy vegetables from shopkeeper who had AIDS, and 64.4% said they will not tell anybody if one of their family got HIV/AIDS fearing stigma from their surroundings, 66.7% expressed their willingness to take care for individuals living with HIV/AIDS. Similar finding was reported by Hassan and Wahsheh [14]. In their study in Jordon in 2008 where 97% of respondents refused to take care for HIV/AIDS patients, and total score of negative attitudes toward people living with HIV/AIDS were 84.3%. Another study in Iraq by Shokoohi, et al. [15] reported negative attitudes toward people living will HIV/AIDS with percentage of 52 %. Negative attitudes of participants in this study were less particularly item related to patients care than what was reported by Hassan in Jordon, these differences can be attributed to social bond of South Sudanese where families take care for their family members. In other hand attitudes findings of this study lower than outcome of study by Navaratna, et al. [16] in general population in Sri Lanka, 2015 where majority of study group reported positive attitudes towards individuals living with HIV/AIDS. These reports on Attitudes of this study could mean that people living with AIDS virus in South Sudan are stigmatized or might face discrimination, and it may lead those people (people living with HIV) not to seek health services such as screening tests or treatments for fearing their status might be disclose to others. Therefore, health promotion at community level is important to educate people about HIV/AIDS which will lead to decrease of negative attitude level, and it will protect general population from HIV risks and will encourage individuals to know their HIV status, if people knew their status will lead to strengthen prevention strategies such as ARV-related and behavioral intervention [17]. In this study 98% of 4882 respondents did not use condom in their first sexual intercourse, and 97.9 % did not use condom in their last sexual activity. Meanwhile 5% of them use condom in last 12 months. Compering this result with previous studies it has been reported by Odu, et al., [18] in his study in Nigeria among general population that 58.2% had more than one partner, and 62% said they always use condom during sexual intercourse with others partners. Another study in Nigeria by Ayoola, et al. [19] reported that 65.9% use condom during sexual activity with their partners [19]. In addition study in Ethiopia among high school student indicated that 58.8% of

participants practice sexual activity by using condom and they believe that condom use is only way to prevent HIV infection [20]. Another study in Zimbabwe by Terry, Mhloyi, Masvaure, and Adlis [21] reported that 60% of study group used condom in last 6 months in their sexual intercourse.

Peltzer, Matseke, Mzolo, and Majaja [13] found in their study among general population in South Africa that 74.9% of participants didn't use condom during sexual intercourse with their regular sex partners. In another comparison researcher Marston and King [22] found in his study in Pakistan that only 9.8% reported had used condom in last 12 months before survey started. In other hand the use of condom was very low among respondents in this study than previous studies. It can be suggested that reason was because married woman cannot use condom with their spouses or it related to lack of awareness toward sexual transmitted diseases either due to man domination toward women or social beliefs that prevent women from discussing sex related issues.

Significant associations were drawn from this study between independent and dependents variables. First association has been seen between practices and urban residence, education level, and former married women, wealth index level, and attitudes positive level. These variables were statistically significant in both models expect age was not significant. This show that women who live in urban, area, and having education level either primary or secondary with wealth level from second to richest, and having positive attitudes were more likely to practice safe practices. Similar result was reported by Stulhofer, et al. [23] in their study in Croatia on knowledge, attitudes and practices toward HIV/AIDS among y women in general population where education, living area (urban) and age associated with condom use in which they said women with education, and age below 30 years, and living in urban were using condom during sexual intercourse more than who with no education and living in rural area.

Another study by Kerrigan, et al. [24] in Dominican Republic among sex workers revealed that age significantly associated with condom use where he found that those age 25 and below where more likely to use condom in all sexual intercourse with their clients more than older women. In addition study by Lagarde, et al. [25] in four cities in Africa among general population reported that education was significantly associated with education in which female with high level of education were using condom during sex activity with their partners. In this study result can be suggested that health promotion, education and media communication means are more located in urban more than rural area especially in low-income countries. Therefore, it will be good government expand services in rural areas particularly health promotion services. Second significant associations were reported between knowledge and wealth index, practices, Residential areas, Education level, wealth index levels, and attitudes level toward HIV/AIDS. Similar report it had been reported by Siziya, Muula, and Rudatsikira [26] in their study on MICS data in Malawi where they revealed that wealth index and residential area were statistically significant associated with knowledge among women age 15-49 years. Other research on MICS in Vietnam also reported association between knowledge education, wealth index, and living areas [12]. Also study in Bolivia by Teran Calderon, et al. [27] among women found that education, residential area associated with knowledge where they reported that those never attend school and live in rural, and low income were have low knowledge level toward HIV/AIDS. Educated women can get a better job with good income, and their education status lead them to access information about HIV/AIDS, also can raise level of their knowledge toward other sexual transmitted diseases. Education can encourage women to care for their health as future investment. Other reason lead women residing in rural with less knowledge level may be the HIV/AIDS counseling services are inadequate in those areas or implementing process facing some difficulties. Therefore, this might put women in rural areas at high risk of HIV infection.

Another highlighted association was between attitudes and residential area, educational level, wealth index level, practices, and knowledge level, in which study revealed that women living in rural areas, never attend school, having poorest wealth index, and low level of knowledge toward HIV/AIDS were likely to have negative attitudes toward people living with HIV/AIDS than those who live in urban, attended school, and having high or moderate level of knowledge toward HIV/AIDS. Previous studies reported the same result, for example study in United States by Pulerwitz, Amaro, De Jong, Gortmaker, and Rudd [28] found that women with high education, income and living in urban were having positive attitudes toward

HIV/ADS and using condom during sexual intercourse more than those who live in rural with low income and low education. Also study by Van Huy, et al., [12] in Vietnam among women age 15-49 year found that wealth index of respondents and their living area plus education level were significantly associated with attitudes toward HIV/AIDs and individuals living the disease. Positive attitudes toward AIDS might play a great role in prevention and control of the disease in general population by reducing stigma toward people living with HIV/AIDS which will allow them to report to HIV voluntary testing centers for screening and to receive treatment services, also will encourage people in general to know their HIV status.

There was no study conducted before to asses level of HIV/AIDS knowledge, attitudes and practices and factors associated among women aged 15-45 years in general population in South Sudan. However, a major limitations of this study were cases with missing values and its cross sectional type.

This study drawn some implications, for instance the result can be seen as a beginning point for research in South Sudan in area of knowledge, attitudes and practices toward HIV/AIDS, also it gives basic image on what women at reproductive age know about HIV/AIDS. Finding can be used as a baseline for any intervention program on knowledge, attitudes and practices at community.

RECOMMENDATIONS

The findings of this study will contribute to the understanding the nature of HIV/AIDS knowledge, attitudes and practices among South Sudanese women. Reinforcing and expanding HIV/AIDS policies, to include all group in general population especially women in child bearing age in South Sudan. This result also will inform national, regional and international partners to act now to fight HIV/AIDS in sub-Sahara Africa in general and South Sudan in particular. Further study in general population among both man and woman needed to describe KAP variances and to understand what men and know about HIV/AIDS in their broader issues.

CONCLUSION

This study shows that the level of knowledge regarding HIV/AIDS among study group was low and misconception about transmission route and prevention methods was reported. Majority of participants were having negative attitudes toward people living with HIV/AIDs and risky sexual behavior. Notable significant associations were seen between residence area, education level, marital status, wealth index, knowledge and attitudes with practices.

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