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THE ASSOCIATION BETWEEN HIV AND AIDS KNOWLEDGE AND UPTAKE OF HIV TESTING AMONG SEXUALLY ACTIVE YOUNG POPULATION AGE 15-24 IN DISTRICT MERAUKE, PAPUA PROVINCE, INDONESIA

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ABSTRACT

Background: This study examine relationship between HIV and AIDS knowledge as one of milestone to uptake HIV testing. Knowledge was first step as response to HIV prevention. Young population was the vulnerable group who were in stage of exploring sexual experience and had less awareness of personal risk.

Aims: The aim of this study is to determine the distribution of HIV and AIDS knowledge and to know its association with response to HIV testing among young population who have had sex in the last 12 months preceding the survey.

Method: Data set were obtained from Multiple Indicator Cluster Survey (MICS) 2011. Respondents consist of 119 young women and 56 young men age 15-24 years old who lived in Merauke administrative area. Comprehensive HIV and AIDS knowledge was measured from at least gave 6 correct answers from 7 questions. Data output are analyzed by cross-tabulation to describe socio demographic, HIV and AIDS knowledge and HIV testing and bivariat analysis to know their correlation.

Results: HIV and AIDS knowledge was in low level (28%). Respondent who have been tested in last 12 months preceding the survey have tiny participant (10,3%). Women, higher education, non-Papua ethnicity, and wealth status were all positively associated with having comprehensive knowledge. And only wealth status significantly associated with HIV testing. Substantively, young people who had comprehensive knowledge are more likely to uptake HIV testing, but in this paper it didn't significantly proved.

Conclusion: HIV and AIDS knowledge among young population in Merauke was very poor status and it significantly impact to lack of uptake in HIV testing. To know HIV status, there are many approaches to drive people and knowledge is one of milestone to start. The uptake of HIV testing were more likely has done among young population who had good knowledge about HIV and AIDS.

Keywords: HIV and AIDS, HIV and AIDS knowledge, HIV testing, young population, Merauke, Papua

INTRODUCTION

Papua Provinces has different characteristic from other society in another province which is located in the east of Indonesia. The race are different with majority of population and the ethnicity was vary. Merauke District was the farthest area that reach from capital city. This district located in the border of Papua New Guinea in the East, and Arafura Ocean in the south and

west . This area was become one of transmigration destination in Population Distribution Program when The Second President of Indonesiawas officiate.

Data from Directorate General CDC and Environment Health, Ministry of Health year 2014 shows that Papua has the highest case prevalence both in HIV (566 per 100,000) and AIDS (359 per 100,000) when compare to National level which has HIV prevalence 63 per 100,000 and AIDS prevalence 23 per 100,000. That caused many attention from any sources. Cited from its final report (2013) MICS is an international household survey program developed by UNICEF. MICS provides information on the situation of children and women, and other key indicator to monitor MDGs progress. This survey in 2011 was select Merauke society, one of district in Papua Province, as their respondent to study. This paper was select MDG indicator number 6.3 that examine the relationship between HIV knowledge as milestone step for HIV prevention and uptake of HIV testing.

The analysis study (Crum et al., 2006) showed that with the advent of effective HIV testing and treatment options over 2 decades, more person living with HIV are experiencing reduced mortality and morbidity. However, to get that benefits, people should know their HIV status early in the course of their infection. An estimated (Marks, Crepaz, Senterfitt, & Jassen, 2005, p. 450) shows that 20% to 25% of HIV-positive individuals are unaware of their status and may contribute to approximately 50% of all new cases. Based on Guidance Report from UNICEF (2013), young age can be define as key population because of their behaviors or vulnerable situations that increase their risk such as: penetrative vaginal or anal sex without a condom with multiple partners; injecting drugs with non-sterile equipment that has been shared; living on the streets; and sexual abuse or exploitation. The aim of this study is to determine the distribution of HIV and AIDS knowledge and to know its association with response to HIV testing among young population who have had sex in the last 12 months preceding the survey.

METHODS

Population study was select young population age 15-24 years who have had sex in the last 12 months preceding the survey in Merauke, Papua Province, Indonesia. MICS survey use probability proportional to size for sampling method and collect data using questionnaire instrument. This study select the criteria of sampling those who are District Merauke citizen age 15-24 years and have had sex in the last 12 months preceding the survey, and eliminate respondent with missing data. After sort the criteria, there are 119 women and 56 men whose data will be examined.

Data output are analyzed by cross-tabulation to describe socio demographic factor, HIV and AIDS knowledge and HIV testing, and bivariat analysis using chi square to know their correlation. Comprehensive HIV knowledge define as gave 6 correct answer from 7 questions (adapt from MICS indicator). HIV testing are measured from have been tested in last 12 months regardless the result.

RESULTS

Based on table , most of respondent are women (68%) age 20-24 years (76%). Distribution area are balance both urban and rural area of District Merauke. Seventy three percent of respondent have married status with under secondary level of education. Ethnicity mostly non Papua (69,1%), and wealth majority was middle to fourth (49,7%).

Table 1. Distribution of socio demography of population study (N=175)

Variables	N	%
Sex		
man	56	32.0
women	119	68.0
Age		
15-19	42	24.0
20-24	133	76.0
Area		
urban	95	54.3
rural	80	45.7
Marital Status		
ever married	129	73.7
never married	46	26.3
Education Level		
higher	21	12.0
<= secondary	154	88.0
Ethnicity		
papua	54	30.9
non papua	121	69.1
Wealth index quintile		
richest	47	26.9
middle to fourth	87	49.7
poorest to second	41	23.4

HIV and AIDS knowledge

HIV and AIDS knowledge in this study measure by giving 3 groups of question with total 7 question. Comprehensive knowledge is giving to those who gave 6 correct answer, instead classified by don't have comprehensive knowledge. Distribution of HIV and AIDS knowledge are shown in table below. Based on table 2, majority of respondent (72%) don't have comprehensive knowledge of HIV and AIDS.

Table 2. Distribution of HIV and AIDS knowledge

Variables	N	%
Know of the two main ways of HIV prevention		
Doesn't know	95	54.3
Know	80	45.7
Know that a healthy looking person can have the AIDS virus		
Doesn't know	44	25.1
Know	131	74.9
Reject the two most common misconceptions		
Doesn't know	64	36.6
Know	111	63.4
Comprehensive knowledge		
No	126	72.0
Yes	49	28.0

Uptake of HIV testing

Table 3. Distribution of HIV testing (N=175)

Variables	N	%
Take HIV Test in last 12 months		
No	157	89.7
Yes	18	10.3

As shown in table 3 above, 89.7% of respondent who have had sex in last 12 months didn't do HIV testing in the same time as well.

This analysis using chi square to know odd ratio between two variables. This study investigate correlation between socio demographic factor and comprehensive knowledge; correlation between socio-demographic factors and uptake of HIV testing; and correlation between comprehensive knowledge and uptake of HIV testing.

Table 4. Correlation between socio-demographic factors and comprehensive knowledge

Variables			Comprehensive Knowledge		Total	x ²	P-value	OR
			Yes	No				
sex	man	count	6	50	56	12,206	0,000*	0,212
		%	10,7%	89,3%	100,0%			
	women	count	43	76	119			
		%	36,1%	63,90%	100,0%			
total		count	49	126	175	0,481	0,488	0,753
		%	28,0%	72,0%	100,0%			
age	15-19	count	10	32	42	0,658	0,417	1,318
		%	23,8%	76,2%	100,0%			
	20-24	count	39	94	133			
		%	29,3%	70,70%	100,0%			
total		count	49	126	175	0,658	0,417	1,318
		%	28,0%	72,0%	100,0%			
area	urban	count	29	66	95	3,484	0,062	2,213
		%	30,5%	69,5%	100,0%			
	rural	count	20	60	80			
		%	25,0%	75,0%	100,0%			
total		count	49	126	175	3,484	0,062	2,213
		%	28,0%	72,0%	100,0%			
marital status	ever married	count	41	88	129	13,607	0,000*	5,236
		%	31,8%	68,2%	100,0%			
	never married	count	8	38	46			
		%	17,4%	82,6%	100,0%			
total		count	49	126	175	13,607	0,000*	5,236
		%	28,0%	72,0%	100,0%			
education level	higher	count	13	8	21	6,735	0,009*	0,339
		%	61,9%	38,1%	100,0%			
	<= secondary	count	36	118	154			
		%	23,4%	76,6%	100,0%			
total		count	49	126	175	6,735	0,009*	0,339
		%	28,0%	72,0%	100,0%			
ethnicity	papua	count	8	46	54	8,848	0,012*	
		%	14,8%	85,2%	100,0%			
	non papua	count	41	80	121			
		%	33,9%	66,1%	100,0%			
total		count	49	126	175	8,848	0,012*	
		%	28,0%	72,0%	100,0%			
wealth index quintile	richest	count	16	31	47	8,848	0,012*	
		%	34,0%	66,0%	100,0%			
	middle to fourth	count	29	58	87			
		%	33,3%	66,7%	100,0%			
	poorest to second	count	4	37	41			
		%	9,8%	90,2%	100,0%			
total		count	49	126	175			
		%	28,0%	72,0%	100,0%			

*significant using chi-square test p<0,05

Based on analysis in table 4, factor that significant marked by star sign ($p < 0,05$). HIV and AIDS comprehensive knowledge are in low level (36,1% for women and 10,7% for men). Women are 5 times more likely have comprehensive knowledge than man ($p = 0,000$). Education level and ethnicity also influencing knowledge status ($p = 0,000$ and $p = 0,009$), person who have higher education level are 5 times more likely to have comprehensive knowledge than under secondary level of education, and non-Papua ethnicity have 3 times more likely to have comprehensive knowledge than Papua ethnicity. Wealth status among three degree are influence the comprehensive knowledge ($p = 0,012$).

There were still many misconceptions about HIV and AIDS. This misconception mostly occur in mode of transmission questions. Young population in this study still assume that HIV can be transmitted by mosquito bites, supernatural means, and sharing food with someone with AIDS

Table 5. Correlation between socio-demographic factors and uptake of HIV testing

Variables			Take HIV testing		Total	χ^2	P-value	OR
			Yes	No				
sex	man	count	3	53	56	2,168	0,141	0,392
		%	5,4%	94,6%	100,0%			
	women	count	15	104	119			
		%	12,6%	87,4%	100,0%			
total		count	18	157	175	0,592	0,442	0,605
		%	10,3%	89,7%	100,0%			
age	15-19	count	3	39	42	0,377	0,539	1,366
		%	7,1%	92,9%	100,0%			
	20-24	count	15	118	133			
		%	11,3%	88,7%	100,0%			
total		count	18	157	175	0,171	0,679	1,278
		%	10,3%	89,7%	100,0%			
area	urban	count	11	84	95	0,015	0,902	0,908
		%	11,6%	88,4%	100,0%			
	rural	count	7	73	80			
		%	8,8%	91,2%	100,0%			
total		count	18	157	175	3,667	0,056	0,252
		%	10,3%	89,7%	100,0%			
marital status	ever married	count	14	115	129	88,535	0,014*	
		%	10,9%	89,1%	100,0%			
	never married	count	4	42	46			
		%	8,7%	91,3%	100,0%			
total		count	18	157	175			
		%	10,3%	89,7%	100,0%			
education level	higher	count	2	19	21			
		%	61,9%	9,5%	90,5%			
	<= secondary	count	16	138	154			
		%	23,4%	10,4%	89,6%			
total		count	18	157	175			
		%	10,3%	89,7%	100,0%			
ethnicity	papua	count	2	52	54			
		%	3,7%	96,3%	100,0%			
	non papua	count	16	105	121			
		%	13,2%	86,8%	100,0%			
total		count	18	157	175			
		%	10,3%	89,7%	100,0%			
wealth index quintile	richest	count	10	37	47			
		%	21,3%	78,7%	100,0%			
	middle	count	6	81	87			
		%	6,9%	93,1%	100,0%			
	poorest	count	2	39	41			
		%	4,9%	95,1%	100,0%			
total		count	18	157	175			
		%	10,3%	89,7%	100,0%			

*significant using chi-square test $p < 0,05$

Table 5 above shows only wealth index quintile factor was significant for uptake of HIV testing ($p=0,014$) and other factors was not significantly correlate.

Table 6. Correlation between comprehensive knowledge and uptake of HIV testing

Variables		Take HIV testing		Total	χ^2	P-value	OR
		Yes	No				
comprehensive knowledge	yes	count	6	43	0,283	0,595	1,326
		%	12,2%	87,8%			
no		count	12	114			
		%	9,5%	90,5%			
total		count	18	157			
		%	10,3%	89,7%			

Finding for correlation between HIV and AIDS knowledge and uptake of HIV testing in table 6 above shows that there was not significant correlation. People with comprehensive knowledge has low participation ($n=6$) for uptake of HIV testing rather than doesn't have comprehensive knowledge ($n=12$).

DISCUSSION

Knowledge was first step as response to HIV prevention. Study (Berkley-Patton et al., 2012) reveal that prior to controlling for intervention exposure, HIV knowledge was a significant predictor for lifetime HIV testing. This study reveals only 28% sample has comprehensive HIV and AIDS knowledge and 10,3% sample uptake of HIV testing in same time they have had sex along 12 months preceding the survey.

Sex, education level, ethnicity, and wealth index quintile are significantly influencing young population having comprehensive HIV knowledge. Study in China (Yuan et al., 2012) reveal that age, gender, education, ethnicity, marital status, and income showed that having a greater HIV knowledge and significantly associated with greater willingness to participate in HIV testing.

Adolescent and young adults is part of a highly vulnerable group for HIV infection. Ironically, even though many surveys found that the general knowledge of HIV was high among them, but they indicate a high underestimation of personal risk (Fennie&Laas, 2014, p. 6035). Data in this study shows that young population in District Merauke have low participation of self-awareness as worse as their knowledge about HIV and AIDS whereas 26,3% of them have had sex outside marriage.

The uptake of HIV testing were more likely has done among young population who had good knowledge about HIV and AIDS. But this study finding shows not significantly association between comprehensive HIV knowledge and its influence to uptake of HIV testing among young population.

Even though finding in this study show negative relation, but substantively HIV knowledge was one of factor related to uptake of HIV testing. Finding from study (Berkley-Patton et al., 2012) suggest expanding HIV awareness and screening education should be critical component of HIV testing promotion efforts, because HIV knowledge alone may not be powerful enough to increase uptake of HIV testing behavior.

As describe earlier, this finding was not significantly proved between comprehensive knowledge and uptake of HIV testing. It can be caused by lack of number of sampling. At beginning of study was mention that missing data was eliminate for analysis, and we select the criteria which eligible of this topic. So that number of data decrease from 365 to 175 respondents. Besides that, this

study doesn't examine other factor influencing HIV testing such number of partner, to whom they have sex with, condom use, and know the place for HIV testing.

CONCLUSION

HIV and AIDS knowledge was in low level (36,1% for women and 10,7% for men). The disparity in comprehensive knowledge by gender was exist where women had more knowledge 5 times than men ($p=0,000$). Other significant finding reveal that respondent with higher education had more knowledge 5,2 times than secondary level ($p=0,000$), non-Papua ethnicity had 3 times comprehensive knowledge than Papua ethnicity ($p=0,009$), and wealth status show significant disparity of comprehensive knowledge and HIV testing between the richest, the middle, and the poorest ($p=0,012$ and $p=0,014$). Respondent who have been tested in last 12 months preceding the survey have tiny participant (12,6% for women and 5,4% for men) or only 10,3% ($n=18$) from whole respondent. Substantively, young people who had comprehensive knowledge are more likely to uptake HIV testing, but in this paperit didn't significantly proved.

HIV and AIDS knowledge among young population in Merauke was very poor status and it significantly impact to lack of uptake in HIV testing. This rigors should alarming for related institution for build progressive program objected to young population against HIV transmission.

Engaging young population in high HIV prevalence area with big effort may be good public health strategy that could have a significant impact on increasing HIV knowledge and increasing HIV testing practices for other population.

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