'AIDS WON'T INFECT YOU FROM BUYING VEGETABLE': UNMARRIED YOUTH PERCEPTION TOWARD SHOPKEEPERS LIVING WITH HIV/AIDS: FINDINGS FROM INDONESIA DEMOGRAPHIC AND HEALTH SURVEY 2012

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ABSTRACT:

Introduction: Perception toward persons living with HIV-Aids (PLWHA) reflects stigmatization and discrimination against HIV infected persons in the population. The number of new HIV infection among Indonesian youth is three times higher than middle age population. Youth in Indonesia should be given priority in terms of understanding their perception that may inhibit them from accessing to HIV/AIDS information, care and treatment. This study aimed, therefore, to find out about youth perception toward PLWHA, specifically in youth's agreement to buy vegetables from PLWHA.

Methods: The total number of 16,551 never married youth from the Indonesian Demographic and Health Survey (IDHS) 2012 special module on Adolescent Reproductive Health (ARH) was studied. The question on 'would buy fresh vegetables from shopkeeper who had the AIDS virus is used to measure the perception of respondents regarding stigma on HIV/AIDS infection. Binary Logistic regression was employed to identify factors that might influence youth perception toward PLWHA.

Results: Older youth still want to buy vegetable from shopkeeper who got infected with AIDS virus comparing to younger youth. Male youth said it doesn't matter for them to buy vegetable from shopkeeper who had AIDS virus. Besides that, youth who lived in Java, Bali and Nusa Tenggara region were more open with the existence of AIDS person followed with various AIDS information that they can access from mass media, professional institution, and friends/relatives. Youth showed positive perception toward PLWHA since they have knowledge regarding HIV/AIDS.

Conclusion: This study suggests that youth with contact with various media will be easier to get HIV/AIDS information and having more knowledge in HIV/AIDS. Besides that, living in well developed areas make youth more understanding about HIV/AIDS and reducing stigma on PLWHA. Programs should be designed based on youth characteristics that can be applied in all regions to increase positive perception toward PLWHA.

Keywords: Never married youth, People living with HIV/AIDS (PLWHA), HIV/AIDS knowledge, Media accessibility, Indonesia

DOI: 10.14456/jhr.2015.9 *Received: September 2014; Accepted: November 2014*

INTRODUCTION

Growing awareness of AIDS infection, better treatment and antiretroviral therapy for infected people successfully reduced the number of new HIV infection and AIDS related death globally [1]. Concerning with the young population as next generation, number of youth living with HIV in South and Southeast Asia also decreased from the last decade [2]. However, number of new HIV infection among Indonesian youth is three times higher than middle age population [3]. This situation placed Indonesian youth in the second highest epidemic of AIDS in young age population in Southeast Asia.

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Cite this article as: Fatimah AA, Isarabhakdi P. 'AIDS won't infect you from buying vegetable': unmarried youth perception toward shopkeepers living with HIV/AIDS: findings from Indonesia demographic and health survey 2012. J Health Res. 2015; 29(3): 219-25.

Table 1 Frequency and percentage distribution of socio-demographic characteristics of the respondents

Characteristics	Total (N=16,551)	
	Frequency	%
Age (years)		
15	2,126	12.85
16	2,397	14.48
17	2,309	13.95
18	1,933	11.68
19	1,774	10.72
20	1,606	9.70
21	1,355	8.19
22	1,182	7.14
23	977	5.90
24	892	5.39
Sex		
Male	8,901	53.78
Female	7,650	46.22
Education level		
Less than secondary	903	5.46
Some Secondary	7,906	47.77
Higher than secondary	7,742	46.78
Working status		
Not working and currently not attend school	3,733	22.55
Currently attend school only	7,861	47.50
Working only	3,521	21.27
Working and currently attend school	1,436	8.68
Region of residence		
Java, Bali & Nusa Tenggara	6,213	37.54
Sumatera	4,881	29.49
Kalimantan	1,461	8.83
Sulawesi	2,409	14.56
Maluku & Papua	1,587	9.59

Barriers in collecting the real condition of HIV/AIDS epidemic mostly related with the limitation in accessing HIV services due to the stigma and discrimination [4]. In many cases, people who live with HIV/AIDS (PLWHA) are afraid to disclose their HIV status because feeling afraid of being rejected and discriminated.

Education is an institution which believed can mediate for comprehensive education for HIV/AIDS information [5-7]. Even so, the school curriculum in Indonesia is not specific in discussing HIV/AIDS matter, and in some case youth were given interpretation of the information differently which can effect youth perception about PLWHA [5]. It is needed to provide HIV/AIDS information which can be access from mass media, professional institution, and friends/relatives with the right information related to HIV/AIDS [6-12]. Proper AIDS information and HIV/AIDS knowledge can create positive perception toward PLWHA. Indonesian youth must get priority in AIDS prevention by giving more information and increase their knowledge related behavior, so that they can prevent themselves from risk behavior and HIV infection [13]. Besides that, giving health education and information for youth is one of great effort, because of during youth development they can start to think critically and develop rational thinking that beneficial for them and for others [14]. Formal operational in youth cognitive development can give reflective response with involve logical reason in their lives [15]. Abstract thinking to analyze the situation in order to answering phenomena needs several sources to develop personal thinking about themselves [16], self as the society, personal factors in cognitive form, affective, and biological events.

Based on background mentioned above, it is important to measure youth perception on specific condition in PLWHA. The aimed of this study is to measure the relationship between youth's perception of agreeing to buy vegetables from PLWHA and socio-demographic characteristics, HIV/AIDS knowledge, and sources of information.

METHODS

The study uses secondary data from Indonesia Demographic and Health Survey (IDHS) 2012 special module for Adolescent Reproductive Health.

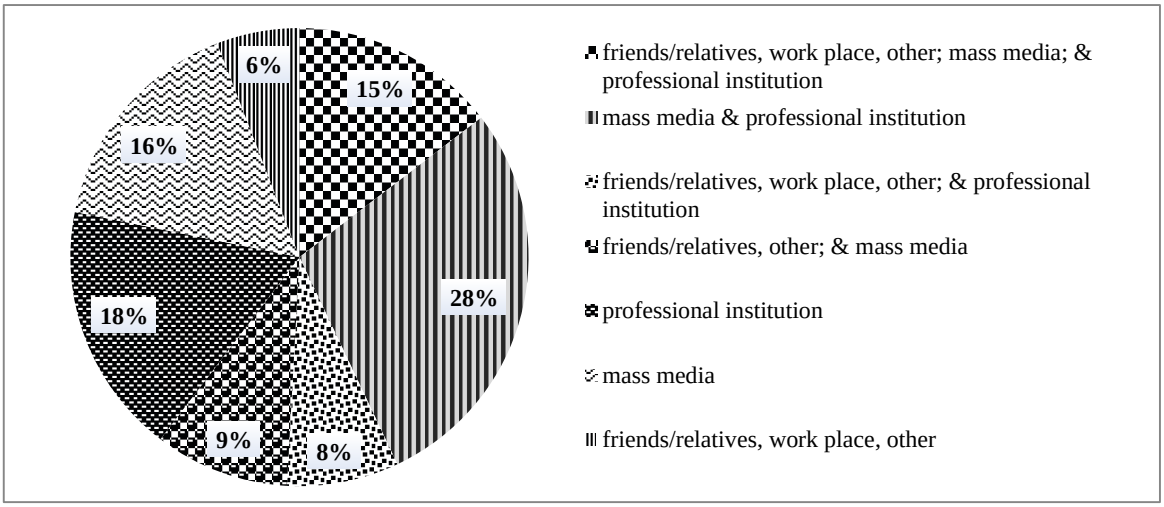


Figure 1 Sources of HIV/AIDS information

The respondents were never married youth aged 15-24, and the study sample was specified only for youth who gives answers that related with HIV/AIDS questions. The total of sample size is 16,551 never married youth; which contain 8,901 males and 7,650 females.

The proposition that is used to assess youth's perception toward PLWHA is "willingness to buy fresh vegetables from a shopkeeper if they knew that the person had the AIDS virus". Agreeing with this proposition is used a proxy of youth's positive perception toward PLWHA. The socio-demographic characteristics (age, sex, education, working status, region of residence), source of HIV/AIDS information, and HIV/AIDS knowledge are tested for their significant relationship with the perception.

For ethical consideration, the data was accessed with permission from DHS website, and also permission letter from Indonesian Government that allows the use of data. Besides that, this study is approved by the IRB-IPSR to conduct the study.

Univariate analysis is used to describe basic socio-demographic characteristics, source of AIDS information, and knowledge that related with HIV/AIDS of youth. Multivariate analysis with binary logistic regression also applied to examine the relationship between dependent variable and independent variables, while controlling for other variables.

RESULTS

Among 16,551 respondents, approximately 64% youth are in young age group (15-19 years). There are more males than females (53.8% and 46.2%, respectively). Almost half of respondents have some secondary school (47.8%), and almost half (47.5%) are currently attending school and not working (Table 1). The distribution of sample size showed that majority of respondent live in Java, Bali and Nusa Tenggara region (37.5%); followed by respondents who live in Sumatera region (29.5%); Sulawesi region (14.6%); and the rest are distributed in Kalimantan region (8.8%), and Maluku and Papua region (9.6%) (Table 1).

Source of HIV/AIDS information in this study is identified as multiple sources; with the three largest sources were from mass media and professional institution (28.4%); professional institution (17.8%); and mass media (16.0%) (Figure1).

Knowledge related to HIV/AIDS knowledge in this study is measured by summing up correct answers based on 12 items of HIV/AIDS knowledge[1]. The range of scores of knowledge about HIV/AIDS of respondents is from 0 point for no HIV/AIDS knowledge to the highest 12 point for right answer in all HIV/AIDS knowledge questions. Mean score of HIV/AIDS knowledge is 7.20 with standard deviation is 2.30. The majority of respondents has good knowledge and can give 5 to 8 right answers (57%). There are 13% of respondents

[1] Reducing the chance to getting the AIDS virus by having just one uninfected sex partner who has no other sex partners; people will not get AIDS virus from mosquito bites; people can reduce chance of getting the AIDS virus by using a condom every time they have sex; people can't get AIDS virus by sharing food with a person who has AIDS; people cannot get the AIDS virus because of witchcraft or other supernatural means; people can get the AIDS virus by sharing unsterilized needle or syringe; it is possible for a healthy looking person to have the AIDS virus; virus that cause AIDS can be transmitted from a mother to baby during pregnancy, during delivery, and by breastfeeding; to identify person who was infected HIV/AIDS from blood test; and know about HIV/AIDS test voluntarily preceding also known as VCT, which stands for Voluntary Counseling and Testing

Table 2 Odds ratio from binary logistic model of factors related to AIDS perception on would buy fresh vegetables from shopkeeper who had AIDS virus

Independent variables	Odds ratio	S.E.
Age	1.062***	0.010
Sex (ref: female)		
Male	1.203***	0.053
Education level (ref: less than secondary)		
Some Secondary	0.971	0.089
Higher than secondary	0.996	0.090
Working status (ref: not school and not working)		
Currently attend school only	1.060	0.052
Working only	1.094	0.068
Working and currently attend school	0.990	0.077
Region of residence (ref: Java, Bali & Nusa Tenggara)		
Sumatera	0.870***	0.038
Kalimantan	0.996	0.064
Sulawesi	0.747***	0.042
Maluku & Papua	0.907	0.057
Source of HIV/AIDS information (ref: friends/relatives, work place, other)		
Mass media	1.143	0.107
Professional institution	1.204	0.115
Friends/relatives, work place, other & Mass media	1.180	0.117
Friends/relatives, work place, other & Professional institution	1.113	0.117
Mass media & Professional institution	1.296**	0.118
Friends/relatives, work place, other; Mass media; & Professional institution	1.323**	0.127
HIV/AIDS knowledge	1.241***	0.011
Cons.	0.020	0.004
N	16551	
Pseudo R^2	5.20%	

**p<.05 ; ***p<.001

who have little knowledge are those who cannot give any right answer up to 4 right answers.

Regarding perception toward PLWHA in terms of agree to buy fresh vegetables from shopkeeper who were infected with HIV, it is found that 31.2% of respondents reported that they agreed and 68.8% do not agree to buy fresh vegetables from shopkeepers who were HIV/infected.

Binary logistic regression technique was employed for multivariate analysis to examine the relationship between perceptions on willingness to buy fresh vegetables from HIV infected shopkeeper and socio-demographic characteristics, source of AIDS information, and AIDS knowledge.

Variables that show significant association with perception toward PLWHA on proposition of willingness to buy fresh vegetables from shopkeeper or vendor who get AIDS virus are age, sex, and region of residence; while level of education and working status do not show any significant association. The results show that as age increases, it is likely to increase the odds of having positive perception toward PLWHA about would buy fresh vegetables from shopkeeper or vendor who get AIDS virus, when controlling other variables.

Male youth respondent are 1.2 times as likely as females to say would buy fresh vegetables from shopkeeper or vendor who get AIDS virus, when controlling other variables. For region of residence, significant association is found on respondents who lived in Sumatera and Sulawesi region. Approximately 13% of youth who live in Sumatra region, and 25% for those live in Sulawesi region are less likely to buy fresh vegetables from shopkeeper or vendor who get AIDS virus, comparing with youth who live in Java, Bali, and Nusa Tenggara region, while controlling for other variables.

Significant effect from source of HIV/AIDS information show that when the information was given by mass media and professional institution; and from multiple sources (friends/relatives, work place, mass media, and professional institution), youth who received information from mass media and professional institution are 1.30 times to be willing to buy fresh vegetables from shopkeeper who get AIDS virus, as likely as youth who received HIV/AIDS information from friends, relatives, and work place. Information from friends/relatives, work place, mass media, and professional institution are 1.32 times to be willing to buy fresh vegetable from shopkeeper who get AIDS virus, than youth who received HIV/AIDS information from friends, relatives, and work place, while controlling another variables.

HIV/AIDS knowledge of youth is found to be statistically associated with perception on

willingness to buy fresh vegetables from shopkeeper or vendor who get AIDS virus. Each unit increase of HIV/AIDS knowledge is likely to increase the odds of willingness to buy fresh vegetable from shopkeeper or vendor who get AIDS virus by 1.24 times, while keeping other variables constant, and this relationship is statistically significant at $\rho<0.001$.

From variables that included in the study; socio-demographic, source of AIDS information, and AIDS knowledge variables can only explain 5.2% on youth perception on their agreement to buy fresh vegetables from PLWHA (Pseudo R^2=5.20%), Table 2.

DISCUSSION

Age of youth is found to have significant effect on perception toward PLWHA. The older they are, the more positive perception they have. The awareness on HIV/AIDS condition increases by youth age. This finding may be explained that youth in older age group may have more opportunity to get more information about HIV/AIDS. Their learned experience makes them have better knowledge and more concern about HIV/AIDS people [10].

Older youth was more likely to have positive perception toward PLWHA, which also mentioned in previous study about older youth were more likely to have better understanding toward AIDS situation [10], and it influence in decreased the negative perception toward PLWHA. It also explained that older youth has better ability to understand the AIDS situation around them along with more life experience and information that they got than younger youth, which will built youth perception and the way they give their opinion [17].

As for the sex of respondent, results indicate that sex is a significant predictor in perception toward PLWHA. Male are more likely to say that they would buy fresh vegetables from vendor who is infected with HIV than female. It may happen since commonly in Indonesia culture, the person who got to buy vegetable or fruits or other foods and did bargaining in the market is more likely to be female than male. Therefore, male may perceive that they may not have chance to get close to shopkeepers or vendors who are HIV infected.

Place of residence in this study is found to be a strong predictor in youth positive perceptions toward PLWHA. Youth who live in well-developed region, like in Java, Bali, and Nusa Tenggara region have positive perception toward PLWHA compared to those who live in less developed regions such as Kalimantan, Maluku, and Papua region. It may also because almost half of Indonesian population lives in Java and Bali region, and health facilities and health professional are concentrated in these areas. There are still many places in Sumatera and Sulawesi region with lack of infrastructure development, which makes difficult for accessing health facilities and update information related with health issues, such as HIV/AIDS information.

Sources of HIV/AIDS information that youth identify in the study have influence on perception toward PLWHA. Youth who have heard about HIV/AIDS information from multiple sources such as mass media and health professional are more likely to have positive perception than those who know HIV/AIDS from relative and friends. Mass media gives more option for youth to choose source of HIV/AIDS information, such as television, radio, pamphlet, brochures [18], and internet. Together with professional institution, information which been accessed from mass media can be asked further thru professional institutions. Since the mass media was available as one-way communication, the existences of professional institution in giving feedback toward information that already accessed. There is possibility that negative perception on youth who get AIDS information from friends or relatives because of they didn't get appropriate AIDS information from their friends and relatives, since all AIDS information could be at the same level.

Professional institution is also considered a trusted source for accurate information, and youth give trust toward the information that they give. Religious leaders were believed as the institution that have more knowledge [12] about community situation and have responsibility for many people lives, including teaching people to adopt health behavior [11]. With the right information, youth have better understanding that HIV virus is not transmitted by buying vegetables from shopkeeper who had AIDS virus.

Knowledge related to HIV/AIDS that youth had been gathering from several sources of AIDS information may result in youth with better HIV/AIDS knowledge have positive perception toward PLWHA. HIV/AIDS knowledge will help youth to make perception about the condition that happen around them, to give interpretation to the observable social situation, and to create their positive perception toward PLWHA [17].

Higher HIV/AIDS knowledge was associated with higher perception toward PLWHA. Youth who have HIV/AIDS knowledge will have positive perception on AIDS condition [16]. Better HIV/AIDS knowledge influence youth perception and contribute to their behavior. Response toward

the condition of AIDS epidemic was varied by youth understanding about AIDS transmission, because the fear feeling to get infected with HIV virus.

The HIV/AIDS knowledge leads to improvement in positive attitude toward PLWHA, where HIV/AIDS knowledge for youth generally can be accessed by formal institution like in school, community meeting, and health provider; and also from informal way like mass media.

It is interesting that education and working status do not have significant relationship with perception toward PLWHA among youth in this study, where there is no statistical significant association with youth perception toward PLWHA in propositions would buy vegetables from AIDS vendor. This finding is supported by previous study where education does not give any effect on perception and prejudice toward PLWHA [19]. Education does not have any specific effect in people interaction with people who were selling vegetables and had AIDS virus. Another possible reason is that people do not need special education for buying vegetables because it was the common daily activity.

Working status didn't give any effect in perception towards PLWHA. In this situation, occupation didn't give any effect on perception and prejudice toward PLWHA [19] since working status don't showed any specific interaction within PLWHA which may rise any perception to other people in their daily life interaction. Working status of youth could be in informal sector, job without special skills, or it also can be said as labor worker, such as farmer and child labor. Other possible reason was because there still limited outreach for Reproductive Health information for youths who were not attending school.

CONCLUSIONS

Over all perception toward PLWHA of youth is found to be at low level. Only one-third of youth who reported that they would buy vegetables from a shopkeeper or vendor who are HIV infected. The significant factors that determine this perception are age, gender, region of residence, knowledge of HIV/AIDS, and sources of information about HIV/AIDS.

Youth with HIV/AIDS knowledge said that they don't mind buying vegetables even the seller have HIV. Youth have AIDS related information when they can access it from multiple sources, for example, from mass media, friends/relatives, and from professional institution. Significant socio-demographic factors that found to be important predictors are age, sex, and region of residence.

Limitation in this study found in the questions that used to measure AIDS knowledge, which not too specific for comprehensive knowledge. Besides that, youth's perception of agreeing to buy vegetables from PLWHA only asked without further explanation to figure out some reasons for agree or disagree answer.

RECOMMENDATION

For policy and intervention programs, this study suggested that the materials of HIV/AIDS knowledge should be more comprehensive, including perception toward PLWHA. The HIV/AIDS knowledge for never married youth should be given in formal sector, such as applied it as formal curriculum in school, following with extra-curriculum and student guidance. Besides that, reachable HIV/AIDS knowledge and accessibility of HIV/AIDS information should be improved, especially for youth who are out of school and stay in remote areas. The programs of AIDS education should be initiated and accessed by all youth to increase the youth understanding regard the life condition of PLWHA.

For further study, it suggested to explore more information related perception toward PLWHA by qualitative approach. Besides that, future studies need to clarify more detail on specific kind of source of HIV/AIDS information, so it can contribute for policy maker to increase the availability of source of AIDS information.

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