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KAP Study of HIV/AIDS among Health Care Workers in Bandung

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Abstract:
Background: The number of cases of HIV/AIDS in Bandung is highest compared to other cities in West Java. The further deficiency of knowledge, attitude, and practice (KAP) of HIV/AIDS make society afraid of HIV/AIDS. Lack of knowledge and practice of HIV/AIDS will make people scare about HIV/AIDS infection. Directly they will have negative perception that made negative attitude toward HIV/AIDS. Later, negative attitude will create stigma. Health care workers who use to treat patient are at risk of infection. Thus this research is about KAP of HIV/AIDS among health care workers in Bandung.
Method: This research is a cross-sectional research. Health care workers in Bandung are chosen to be the population and sample in this research. The subjects are taken from Dr. Hasan Sadikin General Hospital, Al Islam Hospital, Advent Hospital, Kebonjati Hospital and Puskesmas by cluster random sampling. Sample size: n=384 (CI 95%, za=1.96).
Result: The respondents have good (>80%) knowledge and practice about HIV/AIDS. However, they have negative attitude toward HIV/AIDS. 82.29% respondents would not hire someone they know to be HIV-positive to work at the clinic. Discrimination is shown. On the other hand, 95.31% respondents strongly agree or agree that patients with AIDS have the right to the same quality of care as any other patients.
Conclusion: Health care workers in Bandung have good knowledge and practice of HIV/AIDS but have negative attitude toward HIV/AIDS. Health care workers in Bandung have stigma toward HIV/AIDS.

Keywords: HIV, AIDS, Knowledge, Attitude, Practice, Stigma

INTRODUCTION

In the year of 2015, 6205 people are suffering for AIDS in West Java. The cumulative number of HIV in West Jawa is 4154 people in 2015. The cumulative number of AIDS is 736 people in the same year. Most of the AIDS-infected people are aged between 20 to 29 years old which is 47.1%. The second highest percentage belongs to group age from 30 to 39 years old which is 35.6%. The third belongs to 40 to 49 years old group which is 7.9%. The lowest rank belongs to group age bigger than 60 years old. Bandung still has the highest ranking compare to other cities in 2015 which is 746 people.[1]

Since 1991, reports of occupationally acquired HIV in health care workers have been recorded by the National HIV Surveillance System following a standardized case investigation protocol. Health care workers are defined as all paid and unpaid persons working in health care settings with the potential for exposure to infectious materials for examples blood, tissue, and specific body fluids or even contaminated medical supplies, equipment, or environmental surfaces. Health care workers can include but are not limited to physicians, nurses, dental personnel, laboratory personnel, students and trainees, and persons not directly involved in patients care for examples housekeeping, security, and volunteer personnel.[2]

In 1987, CDC recommended the use of "universal precautions", which became a part of "standard precautions" in 1995, to prevent occupational HIV exposures. Since 1996, occupational post-exposure prophylaxis with antiretrovirals to prevent infection has been recommended. A health care worker should immediately report an exposure event to a supervisor or facility-designated person in accordance with the institution's infection control procedures. The serostatus of the source patient and of the exposed health care worker should be documented at the time of the exposure and, exposed health care workers should be counseled on risk and offered post-exposure prophylaxis as appropriate. During 1985-2013, 58 confirmed and 150 possible cases of occupationally acquired HIV infection among health care workers were reported to CDC. Among the 58 confirmed cases, the routes of exposure resulting in percutaneous puncture or cut (49 cases), mucocutaneous exposure (5 cases), both percutaneous and mucocutaneous exposure (2 cases), and unknown (2 cases).[2]

Proper implementation of standard precautions for examples use of safety devices and barriers such as gloves and goggles in order to minimizes exposure risk. For examples Occupational Safety and Health Administration's blood borne pathogens standard, medical devices engineered for sharps protection such as needleless systems, or used devices such as syringes or other sharp instruments should be disposed of in sharps containers. Health care workers should immediately wash hand and other skin surfaces after contact with blood or body fluids. When occupational exposures do occur, post-exposure prophylaxis is recommended.[2]

RA Journal of Applied Research
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www.rajournals.in

Based on Knowledge on Modes of HIV Transmission and Attitude related to Working with People Living with HIV among Health Care Trainees in Malaysia, it stated that poor HIV knowledge and attitude among health care personnel were reported to compromise the care of people living with HIV (PLWH). This has been shown to arrest the success of HIV preventive, care and support measures in general. The results showed those common misconceptions about HIV particularly with regards to HIV transmission via social contacts and other modes of transmission. Up to 50% still have fears and discriminatory attitudes in relation to HIV.[3] This may be due to HIV is a disease that cannot be cure.

Infection control is the measures practiced by health care workers in hospitals to lower down the transmission and acquisition of infection. The infectious agents are transmitted through air, water, and contact. Serious health problems are arose which caused increasing in number of morbidity, mortality, and cost every year. Prevention and control are needed to minimize the risk of transmission of infectious disease. Unfortunately, less infection prevention trainings are provided by hospitals.[4]

Based on observation on-site waste collection method in health care facility in Bahirdar city administration 2012, approximately 65% of units in each health care facilities use safety box. While, around 14% of units in each health care facilities use plastic pail without cover, around 10% use plastic pail with cover and around 5% use non standard container. Additionally, only 53% of their health care workers practice the using of single disposable injection materials, none recapping of needles, not leaving needles on stopper of vials and avoiding unsafe disposal of needles after use. Nearly half of them are having unsafe injection practices.[4] Thus, knowledge, attitude, and practice are importance in preventing the spreading of HIV/AIDS infection.

METHOD

This research is a cross-sectional research. Health care workers in Bandung are chosen to be the population and sample in this research due to highest ranking of HIV/AIDS in 2015 compared to other cities. The subjects are taken from Dr. Hasan Sadikin General Hospital, Al Islam Hospital, Advent Hospital, Kebonjati Hospital and Puskesmas. Each hospital is picked by random first. Then in each hospital, sample is taken from 4 department based on doctor, dentist, nurse, and midwife.

Sample size[5-8]: $n = Z\alpha^2 Pq / d^2$ at 95% confidence interval, where: $Z\alpha = 1.96$; P = prevalence (taken as 50% since there is no similar study in the area), q= 1-P, d = marginal error (taken as 5%). n=384. Cluster random sampling is used in this research. Questionnaire is used to collect the data. Validation is done and Cronbach alpha>0.7. Microsoft excel is used for analyzing.

-Inclusion criteria: All the health care workers in Bandung. Their similarity is having the risk of HIV/AIDS infection.

-Exclusion criteria: The health care workers that unable to answer the questionnaire probably. This is included those who have mental illness or severe stress where they are unable to answer the questions in the questionnaire rationally by self-admitting.

Table 1: The variables, operational definition, method, and scale of measurement[6-10]

Variables	Operational definition	Method	Scale of measurement
Age	The age of health care worker when they are filling in the questionnaire.	<20 years 20-29 years 30-39 years 40-49 years 50+ years	Numerical
Gender	The gender of health care worker that filled in the questionnaire.	Male Female	Categorical
Occupation	The occupation of health	Doctor	Categorical

RA Journal of Applied Research
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www.rajournals.in

	care worker that filled in the questionnaire.	Dentist Nurse Midwife	
Work experience	The working experience of health care worker that filled in the questionnaire.	0-5 years 6-10 years 10+ years	Numerical
Educational level	The study level of health care workers that filled in the questionnaires.	Certificate Diploma First degree Masters degree Specialist	Categorical
Knowledge	The virological facts-HIV causation, transmission of HIV, and PrEP and PEP	Good >80% Fair 70-79% Poor <69%	Categorical
Attitude	The blame for infection, fear of infection, desire for separation, and sympathy and equality of care.	Positive Negative	Categorical
Practice	The proctective practice that done in daily practices.	Good >80% Fair 70-79% Poor <69%	Categorical

PrEP: Pre-exposure prophylaxis, PEP: Post-exposure prophylaxis

Table 2: Stigma points, by response and type of statement[10]

Type of statement	Strongly Agree	Agree	Disagree	Strongly disagree
Positive statement	0	1	2	3
Negative statement	3	2	1	0

RA Journal of Applied Research
||Volume||3||Issue||01||Pages-822-833||Jan-2017|| ISSN (e): 2394-6709
www.rajournals.in

RESULT

Table 3: Age, Gender, Occupation, Work experience, and Educational level of Health Care Workers in Bandung

VARIABLE	Frequency (n)	PERCENTAGE (%)
AGE		
<20	0	0
20-29	175	45.57
30-39	106	27.60
40-49	78	20.31
50+	25	6.51
Total	384	100
GENDER		
Male	80	20.83
Female	304	79.17
Total	384	100
OCCUPATION		
Doctor	29	7.55
Dentist	14	3.65
Nurse	269	70.05
Midwife	72	18.75
Total	384	100
VARIABLE	Frequency (n)	PERCENTAGE (%)
WORK EXPERIENCE (YEARS)		
0-5	140	36.46
6-10	95	24.74
>10	149	38.80
Total	384	100
EDUCATIONAL LEVEL		
Certificate	1	0.26
Diploma	255	66.41
S1	111	28.91
S2	6	1.56
S3	0	0
Specialist	9	2.34
Consultant	2	0.52
Total	384	100

RA Journal of Applied Research
||Volume||3||Issue||01||Pages-822-833||Jan-2017|| ISSN (e): 2394-6709
www.rajournals.in

Table 4: Knowledge of HIV/AIDS among Health Care Workers in Bandung

KNOWLEDGE	TRUE		FALSE		SUM	
	NUMBER (n)	PERCENTAGE (%)	NUMBER (n)	PERCENTAGE (%)	NUMBER (n)	PERCENTAGE (%)
Virological facts-HIV causation						
1. HIV is the virus that causes AIDS	362	94.27	22	5.73	384	100
2. The later stage of HIV is known as AIDS	365	95.05	19	4.95	384	100
Transmission of HIV						
1. Vaginal sex	381	99.22	3	0.78	384	100
2. Oral sex	320	83.33	64	16.67	384	100
3. Anal sex	359	93.49	25	6.51	384	100
4. Receiving untested blood	378	98.44	6	1.56	384	100
5. Accidental needle stick injury	374	97.4	10	2.6	384	100
6. From HIV positive mother to child during delivery	357	92.97	27	7.03	384	100
7. Exposure to infected blood when taking care of patients	337	87.76	47	12.24	384	100
8. Breast feeding	337	87.76	47	12.24	384	100
PrEP						
1. HIV-PrEP is effective in preventing HIV transmission	207	53.91	177	46.09	384	100
PEP						
1. HIV-PEP is effective in preventing HIV transmission	179	46.61	205	53.39	384	100
2. Within 72 hours PEP should be commenced after an exposure	248	64.58	136	35.42	384	100

RA Journal of Applied Research
||Volume||3||Issue||01||Pages-822-833||Jan-2017|| ISSN (e): 2394-6709
www.rajournals.in

Table 5: Attitude of HIV/AIDS among Health Care Workers in Bandung

ATTITUDE	STRONGLY AGREE		AGREE		DISAGREE		STRONGLY DISAGREE		SUM	
	NUMBER (n)	PERCENTAGE (%)	NUMBER (n)	PERCENTAGE (%)	NUMBER (n)	PERCENTAGE (%)	NUMBER (n)	PERCENTAGE (%)	NUMBER (n)	PERCENTAGE (%)
Blame for infection										
1.Most people with AIDS have only themselves to blame	36	9.38	93	24.22	213	55.47	42	10.93	384	100
2.Most people with AIDS deserve what they get	41	10.68	84	21.88	228	59.38	31	8.06	384	100
3.Children who get AIDS from their mothers are more deserving of treatment than people who get AIDS by sexual promiscuity	94	24.48	130	33.85	136	35.42	24	6.25	384	100
4.People who get AIDS through a blood transfusion are more deserving of treatment than people who get AIDS through sexual promiscuity	64	16.67	122	31.77	170	44.27	28	7.29	384	100
5.You have little sympathy for people who get AIDS through sexual promiscuity	29	7.55	169	44.01	146	38.02	40	10.42	384	100
6.Most likely, men who are HIV-positive are	107	27.86	188	48.96	78	20.31	11	2.87	384	100

RA Journal of Applied Research
||Volume||3||Issue||01||Pages-822-833||Jan-2017|| ISSN (e): 2394-6709
www.rajournals.in

promiscuous and deserve what they get										
7.People who have many sexual partners deserve to get AIDS	128	33.33	186	48.44	57	14.84	13	3.39	384	100
8.HIV-positive women should not have children	46	11.98	96	25	197	51.3	45	11.72	384	100
9.You feel more sympathetic of people who get AIDS from a blood transfusion than those who get it from prostitution	89	23.24	195	50.91	86	22.19	14	3.66	384	100
10.If a women becomes HIV-positive, she has only herself to blame	9	2.34	63	16.41	259	67.45	53	13.8	384	100
Fearin of fection										
1.If assigned to patients with AIDS, you worry of putting your friends and family at risk of contracting the disease	65	16.93	163	42.45	134	34.9	22	5.72	384	100
2.You worry about getting AIDS from social contact with someone (i.e., sharing food)	28	7.29	115	29.95	204	53.13	37	9.63	384	100
3.You worry about getting AIDS from one of your HIV-positive patients	59	15.36	199	51.82	114	29.69	12	3.13	384	100

RA Journal of Applied Research
||Volume||3||Issue||01||Pages-822-833||Jan-2017|| ISSN (e): 2394-6709
www.rajournals.in

4.You would be worried about your child getting AIDS if his/her teacher had AIDS	39	10.16	126	32.81	195	50.78	24	6.25	384	100
5.If people know you take care of HIV/AIDS patients, they will stigmatize you	15	3.9	36	9.38	267	69.53	66	17.19	384	100
Desire for separation										
1.If you found out that a friend had AIDS, you would not maintain the friendship	7	1.82	25	6.51	263	68.49	89	23.18	384	100
2.You would hire someone you know to be HIV-positive to work at the clinic	7	1.82	61	15.89	272	70.83	44	11.46	384	100
3.You would work with colleagues who you know are HIV-positive	39	10.16	200	52.08	133	34.64	12	3.12	384	100
4.People with HIV should be isolated from the rest of the community	8	2.08	23	5.99	246	64.06	107	27.87	384	100
5.Patients who are HIV infected should not be put in room with other patients	33	8.59	99	25.78	216	56.25	36	9.38	384	100
6.Young children should be removed from the home if one of the parents is HIV-positive	9	2.34	37	9.64	273	71.09	65	16.93	384	100

RA Journal of Applied Research
||Volume||3||Issue||01||Pages-822-833||Jan-2017|| ISSN (e): 2394-6709
www.rajournals.in

Sympathy and equality of care										
1.Patients with AIDS have the right to the same quality of care as any other patient	155	40.36	211	54.95	18	4.69	0	0	384	100
2.It is especially important to work with patients with AIDS in a caring manner	41	10.68	146	38.02	183	47.66	14	3.64	384	100
3.Patients with AIDS should be treated with the same respect as any other patient	136	35.42	220	57.29	27	7.03	1	0.26	384	100
4.You are sympathetic towards the misery that people with AIDS experience	98	25.52	261	67.97	25	6.51	0	0	384	100
5.You would like to make life easier to person living with HIV/AIDS	91	23.7	261	67.97	28	7.29	4	1.04	384	100
6.You would do everything you could to give the best possible care to person living with HIV/AIDS	99	25.78	251	65.36	33	8.59	1	0.27	384	100

Table 6: Practice of HIV/AIDS of Health Care Workers in Bandung

PRACTICE	TRUE		FALSE		SUM	
	NUMBER (n)	PERCENTAGE (%)	NUMBER (n)	PERCENTAGE (%)	NUMBER (n)	PERCENTAGE (%)
Protective practice						
1. Wearing gloves	380	98.96	4	1.04	384	100

RA Journal of Applied Research
||Volume||3||Issue||01||Pages-822-833||Jan-2017|| ISSN (e): 2394-6709
www.rajournals.in

2.	Hand washing	379	98.7	5	1.3	384	100
3.	Wearing aprons	272	70.83	112	29.17	384	100
4.	Using goggles	259	67.45	125	32.55	384	100
5.	Wearing mask	339	88.28	45	11.72	384	100
6.	Needle recapping	330	85.94	54	14.06	384	100
7.	Wiping blood spills	359	93.49	25	6.51	384	100
8.	Covering broken skin	372	96.88	12	3.12	384	100
9.	Putting used needle in sharps container	362	94.27	22	5.73	384	100
10.	Mandatory testing of all patient before surgery	347	90.36	37	9.64	384	100

DISCUSSION

Most of the subjects are between the age of 20-29 (45.57%) while the category >50 years old has the least subjects. 224 females are more than males in this research. The type of occupation is mostly covered by nurse, followed by midwife, doctor and dentistry. This might because of the proportion in health care sector. 140 respondents are working for 0-5 years, 95 respondents are working for 6-10 years, and 149
respondents are working for more than 10 years. Most of the respondents had graduated from diploma (255 respondents) and followed by S1 (111 respondents) while others do not show significant.

Knowledge, attitude, and practice of HIV/AIDS are talked about how well a person understand about HIV/AIDS, how a person will respond to HIV-infected person, and how a person will does when contact with HIV-infected person especially for health care workers. The people with higher level of knowledge, attitude, and practice of HIV/AIDS will have lower stigmatization toward HIV-infected people. This is because they are more understanding. Sometimes, not all the people that infected by HIV are through active sexual activities. Some of them are infected through womb, blood transfusion, infected syringe or needle stick injury, or drug-abuse.[11]

Overall, the knowledge of HIV/AIDS among health care workers in Bandung is good. However, around half of the health care workers do not know about PrEP and PEP. Only 207 (53.91%) respondents answered PrEP is effective in preventing HIV transmission. Less than half that is 179 (46.61%) respondents answered PEP is effective in preventing HIV transmission. 261 (87%) health workers in Lagos University Teaching Hospital believed HIV PEP reduce the likelihood of HIV transmission after occupational exposure.[12] If compare to health care workers in Lagos University Teaching Hospital, the awareness of PEP among health care workers in Bandung that collected showed lesser awareness. 248 (64.58%) respondents answered PEP should be given within 72 hours after an exposure. Other questions answered correctly more than 80% respondents. Although the respondents showed less awareness about PrEP and PEP, but health care workers in Bandung still have good knowledge about the basic of HIV/AIDS.

55.47% respondents disagreed most people with AIDS should blame themselves. 59.38% respondents disagreed most people with AIDS deserve what they get. 24.48% respondents strongly agree and 33.85% respondents agree children who get AIDS from their mothers are more deserving of treatment than people who get AIDS by sexual promiscuity. 67.45% and 13.8% respondents disagree and strongly disagree a women becomes HIV-positive should blame herself. These are happen same phenomena in HIV/AIDS infection through blood transfusion. More than 70% respondents give more sympathetic to people who infected HIV/AIDS through blood transfusion. 27.86% and 48.96% respondents strongly agree and agree that men who are HIV-positive are promiscuous deserve what they get. Another question showed 33.33% and 48.44% respondents strongly agree and agree that people who have many sexual partners deserve to get AIDS. So, respondents had given more sympathy and empathy to child, women, and accidently HIV/AIDS infection rather than adult that sexually active.

RA Journal of Applied Research
||Volume||3||Issue||01||Pages-822-833||Jan-2017|| ISSN (e): 2394-6709
www.rajournals.in

Furthermore, 63.02% respondents out of 384 respondents agree that HIV-women might have children. A research showed women enrollment in HIV cases in Hassan Sadikin hospital in Bandung showed increasing from 2007 to 2012, that is from 22.2% (24/108) to 39.9% (129/323) and mostly are pregnant mothers. This might due to sex abuse or sex activities without protection. [13] This directly would increase the risk of HIV/AIDS transmission from mother to son or daughter when the baby still inside the womb. Here, the preconception and contraceptive care for women that infected by HIV/AIDS play a big role in decreasing the number of HIV/AIDS cases.

59.83% respondents worry of putting their friends and family at risk if assigned to patients with AIDS. 67.18% respondents worry about getting AIDS from HIV/AIDS-infected patients. 82.29% respondents would not hire someone they know to be HIV-positive to work at the clinic. Discrimination is shown. On the other hand, 95.31% respondents strongly agree or agree that patients with AIDS have the right to the same quality of care as any other patients.92.71% respondents would like to respect AIDS patients as other patients. More than 90% respondents sympathetic and would like to make AIDS infected people life easier and do the best care to them. For the practice, majority of the respondents have good practice in their daily life. More than 90% 8 out of 10 practices respondents would protect themselves by doing proper precautions such as wearing gloves, hand washing, or others had been done every day.

The health care support is important in the health care workers-to-patient relationship. The health care workers should show their good attitude or behavior toward HIV/AIDS-infected people. The health care workers are needed to respect patients' right as priority. Patient-centered communication can always help to improve health outcomes. The sharing of decision making between health care workers and patients is the basis to the practice of medicine.[14]

Health behavior changing in the society can help to prevent the spreading of HIV/AIDS. This is because HIV/AIDS is spreading from one to another mainly due to human behavior that related to sexuality and drug abuse. At the same time, society is very useful in spreading the risk behavior and raising the awareness in order to reduce social stigma toward HIV/AIDS-infected people. Behavior will directly or indirectly affect one's action. Awareness will make one thinks twice before taking action.[15]

Many factors can influence the outcome of health. Different levels in society play a role in constituting a person health behavior. Health behavior may be influenced by the individual, interpersonal, institutional, community, and policy levels. Several models of behavior can influence a person behavior or thinking toward health. These are including models of individual health behavior, models of interpersonal health behavior, and community and group models of health behavior change.[14]

Knowledge, attitude, and practice of HIV/AIDS are playing their roles in preventing the increasing in the number of HIV/AIDS annually. Thus, health care workers are needed to know about knowledge, attitude, and practice of HIV/AIDS.

CONCLUSION

As a conclusion, health care workers in Bandung have good knowledge and practice of HIV/AIDS but have negative attitude toward HIV/AIDS. Health care workers in Bandung have stigma toward HIV/AIDS.

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