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Nursing

RELATED FACTORS OF HIV/AIDS PREVALENCE: AN APPLICATION OF MODEL IN INDONESIA

Indah Jayani	Universitas Kadiri, Jl. Selomangleng No. 1 Kota Kediri 64115, Indonesia
Fatma S. Ruffaida*	Universitas Kadiri, Jl. Selomangleng No. 1 Kota Kediri 64115, Indonesia *Corresponding Author

ABSTRACT The objective of this study was to determine factors related to HIV/AIDS prevalence among adults in Kediri, East Java Province, Indonesia. A cross-sectional design was used in this study. Face-to-face interview with questionnaires were used to collect the data. The proportional stratifed sampling was used to select the participants. The participants were 116 adults from six former prostitution complex, in Kediri, East Java Province, Indonesia. Data were analyzed using descriptive statistic and chi-square test. The results of the study showed that knowledge, attitude, culture, health care services, and social support were related with HIV/AIDS prevalence among adults in Kediri, East Java Province, Indonesia ($x^2 = 5.72$, $p < .05$; $x^2 = 35.84$, $p < .001$; $x^2 = 35.84$, $p < .001$; $x^2 = 24,50$, $p < .001$; $x^2 = 24,50$, $p < .001$, respectively). Based on these findings, health workers and related social services continue to improve services by providing continuous education to the community about how to prevent and transmit HIV / AIDS, conduct assistance, monitor bio, psycho, socio-spiritual to change maladaptive attitude to positive and enhance values and culture that could increase the risk of HIV/AIDS.

KEYWORDS : HIV/AIDS, prevalence, factors

1. Introduction

The problem of HIV / AIDS is an iceberg phenomenon because the number of cases certainly does not reflect the real problem. The impact of government policy to close a number of localization reaps positive and negative views from various aspects. In the Kediri area, most of the prostitution complexes had been legally closed but sexual activity did not stop. The indication was the fact that many new cases of HIV / AIDS had been found. The increasing numbers were often found in adults, especially drug users, sex workers, and their customers (Ministry of Health Republic of Indonesia, 2016).

The report of Ministry of Health Republic of Indonesia in 2016 showed that the number of cumulative cases of HIV/AIDS in Indonesia from 1987 to June 30 2015 was 291,465. The number consisted of 208,909 HIV and 82,556 AIDS with 14,234 deaths. East Java ranks second with HIV/AIDS incidence was 44,006. In Kediri, the number of HIV/AIDS cases tends to increase from year to year. While from 2012 to September 2016 there were 811 people with HIV/AIDS (Komisi Penanggulangan AIDS Daerah Kota Kediri, 2016).

In Indonesia, there were certain populations which were the focus of attention in efforts to improve health services. The Kediri City AIDS Commission directs to high-risk populations. Vulnerable groups are those who because of the scope of work, the environment, low resilience and family welfare, health status, are vulnerable to HIV transmission (Ministry of Health Republic of Indonesia, 2017). The first vulnerable groups were people with high mobility (especially men), women, teenagers, street children, poor families, pregnant women, and people who undergo blood transfusions. Whereas the second was those at risk of contracting people who are at high risk behavior (changing sex partners without condoms, using syringes alternately), sex workers (men, women and transgender) and their customersa. The third group was infected groups were members of the community who had been infected with HIV/AIDS. These three groups were key populations that determine the success of prevention and treatment programs, thus they need to take an active role in HIV and AIDS prevention (KPA Nasional, 2010).

According to the literatures discussed above, gaps in factors related to of HIV/AIDS prevalence among adults in Kediri, East Java Province, Indonesia were identified. First, despite various activities provided by Ministry of Health Republic of Indonesia, the new cases of HIV/AIDS is still high. Second, the findings about factors related of HIV/AIDS prevalence among adults in Kediri, East Java Province, Indonesia were still inconsistent. Therefore, this study was conducted to examine of HIV/AIDS prevalence among adults in Kediri, East Java Province, Indonesia. The findings from this study would be useful for health care providers including nurses and social workers to use as supporting information to increase quality of life among adults with HIV/AIDS.

2. MATERIAL AND METHODS

2.1 Design, setting, and Sample

A cross-sectional design was used in this study. The proportional stratifed sampling was used to select the participants. The participants were 116 adults from former prostitution complex, in Kediri, East Java Province, Indonesia.

2.2 Data Collection

Data collection was conducted in six former prostitution complex, in Kediri, East Java Province, Indonesia. The data in this study was collected by using face-to-face interview with seven questionnaires; including socio-demographic questionnaire, knowledge, attitude, value, culture, health care services, and social support. The questionnaires were tested for content validity and reliability. Content validity was tested by three experts including an expert in medical surgical nursing, family and community health nursing, and research methodology. Three experts were asked to rate the clarity and relevance of the questionnaires using Content Validity Index Items (CVI-I). Based on the results of CVI-I, the items were valid. Subsequently, the reliability was tested using Cronbach's alpha coefficient. The questionnaires were tested with 30 adults in another former prostitution complex that was not included in the study. The results were ranged from 0.78 - 0.87.

2.3 Data Analysis

Data was analyzed by using both descriptive statistics and inferential statistics. Descriptive statistics was calculated to identify the characteristics of each variable including number, percentages, and mean. In addition, chi-square was used in this study.

2.4 Ethical Approval

The study was approved by the Health Research Ethics Committee, Faculty of Public Health, Airlangga University (No : 429-KEPK).

3. RESULTS

3.1 Characteristics of Participants

The data revealed that the majority (82.8%) of the participants was female. Regarding age of the participants, more than half of participants (88.8%) were 20 – 35 years old with an average age 31.39 years old. With regard to education level, more than half (73.3%) of the participants had middle education level. In terms of occupation, more than half (50.9%) of the participants was an employee. The details of characteristics of participants were showed in Table 1.

Table 1. Proportion of characteristics of participants ($n=116$)

Variables	Frequency	Percentage
Gender		
Male	20	17.2
Female	96	82.8
Age (years)		
18 - 20	4	3.4

20 – 40	103	88.8
41 - 60	9	7.8
Education level		
Low	28	24.1
Middle	85	73.3
High	3	2.6
Occupation		
Housewife	15	12.9
Employee	59	50.9
Businessman	29	25.0
Others	13	11.2

3.2 Knowledge
Table 2. Descriptive statistics of knowledge (n=116)

Knowledge	Frequency	Percentage
Good	93	80.2
Poor	23	19.8
Total	116	100.0

According to table 2, the results showed that more than half (80.2%) of the participants had a good knowledge.

3.3 Attitude
Table 3. Descriptive statistics of attitude (n=116)

Attitude	Frequency	Percentage
Good	94	81.0
Poor	22	19.0
Total	116	100.0

According to table 3, the results showed that more than half (81.0%) of the participants had a good attitude.

3.4 Value
Table 4. Descriptive statistics of value (n=116)

Value	Frequency	Percentage
Good	114	98.3
Poor	2	1.7
Total	116	100.0

According to table 4, the results showed that the majority (98.3%) of the participants had a good value.

3.5 Culture
Table 5. Descriptive statistics of culture (n=116)

Culture	Frequency	Percentage
Good	94	81.0
Poor	22	19.0
Total	116	100.0

According to table 5, the results showed that more than half (81.0%) of the participants had a good culture.

3.6 Healthcare Services
Table 6. Descriptive statistics of healthcare services (n=116)

Healthcare services	Frequency	Percentage
Good	100	86.2
Poor	16	13.8
Total	116	100.0

According to table 6, the results showed that more than half (86.2%) of the participants had a good healthcare services.

3.7 Social Support
Table 7. Descriptive statistics of social support (n=116)

Social Support	Frequency	Percentage
Good	100	86.2
Poor	16	13.8
Total	116	100.0

According to table 7, the results showed that more than half (86.2%) of the participants had a good social support.

3.8 The Relationship between Knowledge, Attitude, Value, Culture, Healthcare services, Social Support, and Prevalence of HIV/AIDS

Table 8. The relationship between Knowledge, Attitude, Value, Culture, Healthcare services, Social Support, and Prevalence of HIV/AIDS (n=116)

Variables	HIV/AIDS		x^2	Phi	p-value
	Presence f (%)	Absence f (%)			
Knowledge			5.72	-0.22	0.017
Good	35 (37.6)	58 (62.4)			
Poor	15 (65.2)	8 (34.8)			
Attitude			35.84	-0.56	0.000
Good	28 (29.8)	66 (70.2)			
Poor	22 (100.0)	0 (0.0)			
Value			2.69	-0.15	0.101
Good	48 (42.1)	66 (57.9)			
Poor	2 (100.0)	0 (0.0)			
Culture			35.84	-0.56	0.000
Good	28 (29.8)	66 (70.2)			
Poor	22 (100.0)	0 (0.0)			
Healthcare services			24.50	-0.46	0.000
Good	34 (34.0)	66 (66.0)			
Poor	16 (100.0)	0 (0.0)			
Social support			24.50	-0.46	0.000
Good	34 (34.0)	66 (66.0)			
Poor	16 (100.0)	0 (0.0)			

Table 8 showed that knowledge was related with prevalence of HIV/AIDS among adults ($x^2 = 5.72$, $p < .05$). However, the strength of the relationship was negatively weak (Phi = 0.22). Adults with poor knowledge had higher prevalence compared to the other group. Next, attitude was related with prevalence of HIV/AIDS among adults ($x^2 = 35.84$, $p < .001$). The strength of the relationship was negatively moderate (Phi = 0.56). Adults with poor attitude had higher prevalence compared to the other group. Further, value was not related with prevalence of HIV/AIDS among adults. Regarding to culture, table 7 showed that culture was related with prevalence of HIV/AIDS among adults ($x^2 = 35.84$, $p < .001$). The strength of the relationship was negatively moderate (Phi = 0.56). Adults with poor culture had higher prevalence compared to the other group. Table 7 also showed that healthcare services was related with prevalence of HIV/AIDS among adults ($x^2 = 24,50$, $p < .001$). The strength of the relationship was negatively moderate (Phi = 0.46). Adults with poor healthcare services had higher prevalence compared to the other group. According to table7, social support was related with prevalence of HIV/AIDS among adults ($x^2 = 24,50$, $p < .001$). The strength of the relationship was negatively moderate (Phi = 0.46). Adults with poor social support had higher prevalence compared to the other group.

4. DISCUSSION
Knowledge was related with prevalence of HIV/AIDS among adults. The possible explanation was that the educational level of respondents was middle level. Thus, the adults with poor knowledge had higher prevalence compared to the other group. The results were consistent with previous study that showed that low knowledge related to have the potential to risk HIV/AIDS (Meizhen, L. et al., 2015).

Attitude was related with prevalence of HIV/AIDS among adults. The possible explanation was that the accordance with the theory that one of the dominant factors that determines a positive attitude was based on educational and knowledge background. Acceptance of new behavior or adoption of behavior through a process that was based on knowledge, awareness and positive attitudes, then the behavior will be long lasting rather than behavior that is not based on knowledge. Knowledge or cognitive was a very important domain in shaping one's actions in this case the knowledge covered in the cognitive domain (Notoadmojo, 2007).

Value was not related with prevalence of HIV/AIDS among adults. According to researchers, value was the basic principle of humanity as a form of good hope for him who is influenced by his group. According to Horrocks, value was something that allows individuals or social groups to make decisions about what they want to achieve or as something needed. Dynamically, values were learned from social products and were slowly internalized by individuals and accepted as shared property with the group.

Culture was related with prevalence of HIV/AIDS among adults. The possible explanation was that culture was a habit shared by a group of people and passed down from generation to generation. Elements of

culture are formed from various elements, including political systems, religion, customs, buildings, works of art, languages. Culture was an integral part of human beings so that it could be considered as genetic inheritance. According to research conducted by Susilowati (2009), one of the factors that influence the incidence of HIV / AIDS was culture / ethnicity. Other studies show that risk is influenced by perceptions of cultural masculinity (Fields et al., 2012), the presence or absence of socially supportive relationships (Lauby et al., 2011). Other supporting research was ethnic men with black races at risk of HIV AIDS risk behavior (Jeffrey A. et.al, 2013).

5. CONCLUSION

The aimed of this study was to determine factors related of HIV/AIDS prevalence among adults in Kediri, East Java Province, Indonesia. This study used variables as the factors related of HIV/AIDS prevalence among adults, which included knowledge, attitude, value, culture, healthcare services, and social support. The results of the study showed that knowledge, attitude, culture, healthcare services, and social support were related with HIV/AIDS prevalence among adults in Kediri, East Java Province, Indonesia.

6. CONFLICT OF INTEREST

The authors declare no conflicts of interest.

7. ACKNOWLEDGEMENT

REFERENCES

1. Adisasmito, W. 2010. Sistem Kesehatan. Jakarta : PT RajaGrafindo Persada
2. Adrian D.Smith, Placide Tabsoba, Norbert Peshu, Eduard J. Sanders, Harold W Jaffe. (2009). Men who have sex with men and HIV/AIDS in sub-Saharan Africa. Lancet 2009;374:416-22. DOI:10.1016/s0140-6736(09)61118-1.
3. Arikunto, Suharsimi. 2006. Prosedur Penelitian Suatu Pendekatan Praktek. Jakarta: PT. Rineka Cipta
4. Arikunto, Suharsimi. 2009. Prosedur Penelitian Suatu Pendekatan Praktek. Jakarta: PT. Rineka Cipta
5. Brashers, Valentina L. 2005. Aplikasi Klinis Patofisiologi Pemeriksaan & Manajemen. Edisi 2. Jakarta : EGC
6. Berkman Lisa F, Kawachi Ichiro, (2000). Social epidemiologi, New York, Madison Aveneu, Oxford University Press
7. Castelnuovo, B., E, Chiesa., S.Rusconi., F.Adorni., M.Bonggiovanni., S.Melzi., P.Cicconi., F.Tordato., L.Meroni., T.Bini., A.d'Arminio Monforte. (2003). Declining Incidence of AIDS and Increasing Prevalence Among AIDS Patient in Italy. Eur J Clin Microbiol Infect Dis. 22:663-669. DOI 10.1007/s10096-003-1038-8.
8. Centers for Disease Control and Prevention. 2009. Guidelines for Prevention and Treatment of Opportunistic Infection in HIV-Infection in HIV Infected Adults and Adolescents. MMWR. [Diakses tanggal 15 November 2016]
9. Brunner & Suddarth. 2002. Keperawatan Medikal Bedah Vol. 3. Jakarta: EGC
10. Databoks, Katadata Indonesia (2016). di asean-kasus-baru-terinfeksi-hiv-indonesia-tertinggi http://databoks.katadata.co.id/datapublishement/2016/11/30 diakses 10 Mei 2017.
11. Depkes RI. 2012. Pengendalian penyakit dan penyehatan lingkungan. Jakarta : Ditjen Kemenkes RI
12. Dinkes Jatim. 2012. Program pengendalian penyakit menular di Jawa Timur. Surabaya : Dinkes Jatim
13. Dinkes Jatim 2013. Profil Kesehatan Provinsi Jawa Timur Tahun 2012. Surabaya: Dinas Kesehatan Provinsi Jawa Timur
14. Dinkes Kota Kediri, 2017. Profil Kesehatan Kota Kediri Tahun 2017.
15. Fields, E. L, Bogart, L., M., Smith, K., C., Malebranche, D.J., Ellen, J., & Schuster, M. A.(2012). HIV Risk and perceptions of masculinity among young Black men who have sex with men. Journal of Adolescent Health, 50, 296-303.
16. Jambak, Nur'ainun dkk. 2016. Faktor-faktor yang mempengaruhi perubahan perilaku pasien HIV/AIDS. Jurnal Human Care vol.1 no. 2
17. Kementerian Kesehatan RI. 2014. Situasi dan Analisis HIV AIDS. Pusat Data dan Informasi : Jakarta. Diakses tanggal 11 Mei 2017 dari http://www.depkes.go.id/resources/downlo ad/pusdatin/infodatin/Infodatin%20AIDS. pdf.
18. KPA Nasional. 2010. Strategi Dan Rencana Aksi Nasional Penanggulangan HIV Dan AIDS Tahun 2010 – 2014. Jakarta: Komisi Penanggulangan AIDS Nasional.
19. Kowalak, Jennifer P dkk. 2011. Buku Ajar Patofisiologi. Edisi Bahasa Indonesia Renata
20. Komalasari dkk. Jakarta : EGC
21. Lauby, J., L., Marks, G., Bingham, T., Liu, K., L., Liau, A., Stueve, A., & Millet, G.a. (2011). Having supportive social relationship is associated with reduced risk of unrecognized HIV infection among Black and Latino men who have sex with men. AIDS and Behavior, doi:10.1007/s10461-011-00023
22. Mansjoer, Arif. (2009). Kapita selekta kedokteran. Edisi ketiga, jilid 1 cetakan ke sepuluh. Jakarta : media Aesculapius.
23. Meizhan. Liao, Mei Wang, Xingjie Shen, Pengxiang Huang, Xingguang Yang, Lianzheng Hao, Catherine Cox, Pingsheng Wu, Xlarorun Tao, Dianmin Kang, Yujiang Jia. (2015). Bisexual Behaviors, HIV Knowledge, and Stigmatizing/Discriminatory Attitudes among Men Who Have Sex with Men. PLOS One 10(6):e0130866. Doi:101371/journal pone. 0130866.
24. Nasronudin. 2007. HIV & AIDS Pendekatan Biologi Molekuler, Klinis, dan Sosial. Surabaya : Airlangga University Press
25. Notoatmodjo, Soekidjo. 2003. Promosi Kesehatan dan Perilaku Kesehatan. Jakarta : Rineka Cipta
26. Notoatmodjo, Soekidjo. 2005. Metode Penelitian Kesehatan. Rineka Cipta, Jakarta
27. Notoatmodjo, Soekidjo. 2010. Promosi Kesehatan Teori & Aplikasi.Jakarta : Rineka Cipta
28. Notoatmodjo, Soekidjo. 2007. Promosi Kesehatan dan Ilmu Perilaku. Jakarta : Rineka Cipta
29. Notoatmodjo,Soekidjo. 2012. Promosi Kesehatan dan Perilaku Kesehatan.Jakarta : Rineka Cipta
30. Nursalam. 2008. Konsep dan Penerapan Metodelogi Penelitian Ilmu Keperawatan. Jakarta : Salemba Medika
31. Olatunji Joshua A. & Chris T. 2015. Determinants of human immunodeficiency virus (HIV) infection in Nigeria: A Synthesis of the literature. Journal of AIDS and HIV Research vol. 7(9), pp. 117-129.
32. Potter dan Perry. 2006. Fundamental Keperawatan. EGC : Jakarta
33. Prejean, J., Song, R., Hernandez, a., Ziebell, R., Green, T., Walker, F., et al. (2011). Estimated HIV incidence in the United States, 2006-2009. PloS One, 6., e17502. Doi:10.137/journal.pone.0017502
34. Price, Sylvia A dan Lorraine M Wilson. 2005. Patofisiologi Konsep Klinis Proses-Proses
35. Penyakit. Edisi 6 Volume. Jakarta : EGC
36. Smeltzer dan Bare. 2002. Keperawatan Medikal Bedah. Volume 1. EGC, Jakarta, hal. 119-120
37. Sugiono. 2011. Statistik Untuk Penelitian. Bandung : Alfabeta
38. Tjokroprawito, Askandar dkk. 2007. Ilmu Penyakit Dalam. Surabaya : Airlangga University Press
39. Widyasari, Dian Inggit. 2009. Faktor-faktor yang berhubungan dengan perilaku suspect HIV-AIDS. Malang : Balai Kesehatan Paru
40. Yunihastuti E, Djauzi S, Djoerban Z. 2005. Infeksi Oportunistik pada AIDS. Jakarta : Balai Penerbit FKUI