



HIV/AIDS Transmission in the “Z Generation” Perspective

Rokhani^{1(✉)} and Akhmad Mustofa²

¹ Faculty of Public Health, Muhammadiyah Semarang University, Semarang, Indonesia
rokhani@unimus.co.id

² Faculty of Health Sciences, Muhammadiyah Semarang University, Semarang, Indonesia

Abstract. Introduction, the global data shows HIV/AIDS infected in the young group, more than 1,4 million the young group infected with this disease, ages more than 15 years old. The highest number of HIV/AIDS in the young period was caused by risky sexual behavior and lack of knowledge, attitude, and practice. This research aims to know the perception of the Z generation as a part of the young period. The method of this research uses a qualitative research design with the generation as an informant, with HBM (Health Believe Model) as a construct theory to explore the Z generation perceived to relate the HIV/AIDS transmission, the informant selected by purposive sampling with inclusion criteria such as the ages in the Z generations (born in years 1996 to 2010). The data will be analyzed with Miles and Huberman. The result shows the Z generation has a perceived susceptibility to HIV/AIDS diseases, and they perceived the seriousness if they got the disease, and they have perceived benefits if they can prevent this disease. However, they have several barriers to prevention activities, such as they did not have role model, they have perception there are few materials relate to prevention HIV/AIDS and they have self-efficacy to do HIV/AIDS prevention. Need to complete the facility to access the information in the school and university to give information related to HIV/AIDS prevention.

Keywords: Transmission · HIV/AIDS · Z Generation

1 Introduction

The global data on HIV/AIDS show high numbers, in 2020 many people were infected with these diseases. 37,7 million people suffering and 1,5 million are new cases, and 680 thousand people die from diseases related to HIV/AIDS. HIV is primarily infected in the young period more than 1,4 million aged over 15 are infected [1].

Indonesia has a similar situation, the trend of HIV/AIDS diseases increased year to year in the young period. 40,4% in the ages of 25 to 49 years old, 18,3% in the ages of 15 to 24 years old, and the Z generation included in that period [2]. The Central Java Province one of the Indonesian provinces had the highest cases of HIV/AIDS in 2020 with a total accumulation is 21.578 cases [3]. And Semarang Municipalities as a Capital of Central Java Province had the highest number, with new cases is 560 people infected

with these diseases and most of them in the young period with the ages from 11 years old to 50 years old [4].

The highest number of HIV/AIDS infections was caused by risky sexual behavior done by themselves, some research gives a recommendation that the prevention of HIV/AIDS in the young period is more effective if they have the ability to avoid this disease and they have good knowledge and positive perceptions related to the HIV/AIDS [5].

Another problem of young age they did not have sufficient knowledge, attitudes, and practice related to HIV/AIDS prevention. They have a perception of using a condom when sexual activities insult their partners [6]. Lack of knowledge about the diseases decreased perceived susceptibility and seriousness. Knowledge is an external factor to increase seriousness [7].

The disease perception is related to the disease's prevention [8]. Perceived susceptibility, perceived seriousness, and perceived barriers exist in the young group but the conditions are still low and insufficient only 52,5% in the young group have good perceptions, and the others still with the wrong perception related to HIV/AIDS [9].

The Health Believe Model gives a suitable model to explore individual perceptions, such as perceived susceptibility, perceived seriousness, perceived benefits, perceived barriers, perceived cost, cues to action, and self-efficacy. These models are helpful for exploring the perception of the Z generation [10].

2 Method

The qualitative research method used a grounded theory approach to reveal some phenomena in society related to HIV/AIDS diseases among the young group. This phenomenon was revealed using the Health Believe Model approach by disclosing various perceptions such as vulnerability, seriousness, benefits, barriers, cost, cues to action, and self-efficacy [11].

The subject of this study was selected by purposive sampling with inclusion criteria according to the research objectives. The inclusion criteria are young people belonging to the Z generation with the characteristic born in 1996 and 2010 and currently old was 12 years old to 26 years old [12] The key informants of this research were young people who study at Semarang Muhammadiyah University in health sciences and non-health sciences. The key informants are the students who are already known and they are the first people who will indicate the existence and willingness of the key informants and indicating support informants who will serve as the main informants.

The supporting informants are the people who have information related to the main informants, they come from the circle of the primary informants such as parents and other family members, students' advisors, lecturers, the director program, and the dean of faculty [13].

The data collection process uses an in-depth interview method with a question guide and also using an observation sheet, secondary data will conduct with literature studies in the library to complement primary data. In the covid-19 situation, our research complies with health protocol [14] Sometimes the situation doesn't allow direct data retrieval, the

data will be conducted by video call, telephone, or using social media platforms such as Google Forms.

Validity and reliability of the data are exactly needed for qualitative research and these processes aim to assess the quality of the data until data reaches saturation, for validity and reliability using triangulation, and an extension of the research. The interactives model from Miles and Huberman analyzed the data [15] the research stages were conducted through data collection, reduction, displaying of the data, and drawing to know the conclusion and data verification.

3 Result

3.1 Perceived Susceptibility

Some students have a good awareness of their potential to get HIV/AIDS disease. Some informants have perceived that they will likely get HIV/AIDS.

“In my opinion, everyone has a chance to get HIV because this disease has a role of transmitted by risky sexual activity, the body liquid contaminated of the virus will exit and enter the body partners via sexual intercourse”

The other informants mention that they have no probability to gets HIV/AIDS because they have healthy behavior but, they couldn't explain how to avoid this disease”.

“I haven't probability to get this disease, because I have a healthy activity and I didn't know how to avoid this disease but I believe if we manage our healthy behavior we stay away from the diseases.

3.2 Perceived Severity

The perception of students about HIV/AIDS transmission is equal to the end of the world, they can't imagine that people who got this disease will get stigma and discrimination, and it is a hurting situation for them.

“I think what if someone who gets this disease can't continue their life, they got stigmatization, discriminations and their family will disappoint with them”

The other participants have a perception of the serious impact of these diseases, they mention that people who get HIV/AIDS, will lose their immune systems and dangerous diseases.

“I think someone who got the HIV/AIDS disease has problems with their system immune and is easy to get the disease.”

3.3 Perceived Treat of Disease

Many of the Z generations gave their responses about contracting HIV/AIDS in the future if that condition was accrued, they wouldn't have a future,

considering HIV/AIDS diseases would significantly interfere with their activities.

“I thought in the future somebody could be infected with HIV/AIDS including me, and what if happened, maybe my life will end, I had not a bright future anymore, and maybe I will die after getting this disease.”

Z generation knows the social impact if they got transmitted the disease, they fear that their parents will reject them, and their social relationships with their friends will be broken and get stigma and discrimination.

“I'm afraid if I get infected with HIV disease, my parents will be disappointed and could kick me out, and my friends will stay away. As far as I know, stigma and discrimination against this disease still exist in society”

3.4 Cues to Action

Some Z Generation reports are unknown exactly about HIV/AIDS. They didn't clearly describe that disease, they mention that HIV/AIDS is an infectious disease caused by a virus, but they didn't explain what a virus causes HIV/AIDS.

“I know HIV/AIDS is an infectious disease caused by a virus, but I forgot about the virus”

“As far I know this disease is caused by the virus and have a mode of transmission by sexual activity and injecting drug user”

Mostly Z generation heard about HIV/AIDS from an internet source and most of the media distribute in December during the World AIDS Day session, from the media they learn about HIV/AIDS disease, HIV/AIDS transmission, a risk factors for getting the disease, and other information they got from courses in the university, television, social media, and electronic media.

“In December most HIV/AIDS information spread on the Internet, maybe relate to HIV/AIDS days”

“I got the HIV/AIDS information in the course because in my major we have a health reproductive course and in the reproductive health topic we discussed HIV/AIDS disease”.

A few pieces of information about HIV/AIDS in the community, some distributed in special sessions such as the world HIV/AIDS day every December, other sources depend on social media users and the internet users, in the school, they don't have any curricula for guide the students to understand the HIV/AIDS transmitted disease.

“I got the health education of HIV/AIDS from social media such as Facebook, tweeter, and Instagram, from flyers distribution in that social media especially in December related to the World HIV/AIDS Day”

Knowledge of HIV/AIDS disease among informants was at an alarming stage. They couldn't describe HIV/AIDS disease, how it could be transmitted, the consequences of getting it, how to prevent it, and how to treat it. All of that information can't explain by almost informants.

"I know this disease is an infective disease and spread by sexual activity, but I didn't know what virus caused this disease."

"As far as I know this disease is dangerous and everyone has changed to get this disease, this disease is spread by sexual activity at young ages."

3.5 Self-efficacy

Students described their ability to avoid this disease, and some of their beliefs in the future that they can avoid it and do some positive behavior. But another informant has a lack of belief to avoid it, they describe in the future if they have sexual partners with HIV/AIDS infection and maybe they can get this disease.

"In the future, I can avoid HIV/AIDS because I have positive and healthy behavior, and I think with healthy and positive behavior we can prevent this disease."

"I can't be infected with this disease because my family didn't have that disease"

"I think, in the future, this disease has probably come to me, maybe I got this disease from my husband or friends from our risky behavior might be doing in the future"

3.6 Likely Hood to Actions

Participants, especially those who did not have sufficient knowledge of HIV/AIDS, they have lack perception of this disease, and they didn't want to meet with PLWHA (People Live With HIV/AIDS) and others with little more good information about the disease, they take some action to avoid the disease in the future with positive and healthy behavior.

"If I meet people with HIV/AIDS maybe I didn't want to join them, because I am afraid that the diseases will be transmitted to me"

"Our job is to manage ourselves to avoid this disease, we maintain our behavior, didn't risky behavior such as risky sexual behavior, Injecting drug user and other behavior HIV/AIDS caused."

Some participants discussed their principle related to the HIV/AIDS-transmitted disease, they mention their understanding to avoid the disease and did not avoid people with HIV/AIDS.

"We need to give clear information to the community and we didn't need to avoid the people with HIV/AIDS but we need to avoid the disease with positive and healthy behavior"

3.7 Perceived Benefit Versus Perceived Barriers Many Students Described Barriers to Knowing the

HIV/AIDS. Some information they got from the internet, social media, and others resources, mainly the information on HIV/AIDS they got related to the HIV/AIDS World Days Agenda. Some of them told there are few resources and information to get that material and they didn't know how to reach the information related to HIV/AIDS.

“As far as we know, there is little information about HIV/AIDS, mostly the information we found in the HIV/AIDS world days in December, and we found it on the internet or social media”

“I think the information about HIV/AIDS is very important to us if we know about how to avoid the disease, how to prevent it, and how to find some help related to the disease”.

4 Discussion

Health Believe Models give some construct while the action recommendation depends on the individual's perception. The model focuses on perceived susceptibility and perceived severity. The individual will focus on the impact of illness, and how to avoid it from their life [16]. The Z generation has a problem with understanding HIV/AIDS, some of them thought that they haven't the probability to get HIV/AIDS. This condition will impact the future because the impact of illness comprises the mental representation of the illness itself.

Most of the Z generation didn't know the benefits if they had done preventive action to avoid HIV/AIDS such as healthy activity, a bright future, and raising success and opportunities to achieve a better future. A lack of knowledge causes these conditions, they need a strong understanding of the benefits if they can prevent HIV/AIDS [17].

The positive aspect of the Z generation is these groups can use the internet to raise HIV/AIDS information, with their knowledge have the potential to avoid the disease, and they have the perception to prevent it, with their susceptibility and severity perception. In general Z generation has high creativity and the ability to solve problems with their experiences, they have the endurance to learn and the speed and capacity to know technology because they grew up and were brought up by sophisticated technology [18].

The development of technology gives a challenge for the Z generation, internet connection, social media, free life, staying away from their parents, and liberty from the familiarized community, this group is categorized as a risky population and has to engage in risky sexual behavior and have a poor sense of vulnerability [19–24].

The Z generation knows well the benefit if they do preventive action relates to HIV/AIDS transmission, but the barriers were a challenge for them to develop activities, knowledge has a role to give self-efficacy for them. Some studies reported young who have well knowledge give some protection to do risky behavior related to HIV/AIDS transmission, the young group with risky sexual was less likely to have HIV/AIDS knowledge [25].

HIV/AIDS prevention program for the Z generation is related to their perception, they need a role model to give some behavior examples and a model, peer educator

as a model to give some inspiration for this group, another model was needed to clear explanation for them, teacher, and lecture have potential to be a model in the school and university, developing curricula for comprehensive prevention and action in the educational institution. Peer education is a process to give some education and information and communication from a well young trainer to give information and motivation for the young group, they have informal and educational activities with their peer over a period to develop their knowledge, attitudes, beliefs, and skill to have a positive response to protect them from HIV/AIDS transmission [26].

5 Conclusion

The Z generation is attractive, they have characteristic allow with technology and an easy-to-use internet, and social media is valuable part to give information related to HIV/AIDS prevention, need to develop facilities to increase their knowledge, attitude and practice to change their perceptions, and maintain their behavior to prevent HIV/AIDS in the future, and this condition would be starting from the families, school institution and government role needed to develop The healthy Z generation and in the future,1 this objectives would be realized with the positive perception of the Z generation.

Acknowledgments. I am grateful to all of those with whom I have had the pleasure to work during this and other related projects, especially for the Institute for Research and Community Service at The Muhammadiyah Semarang University as a founding institute for this research.

Authors Contributions. Developing the article and other aspects of this article were discussed by all of the authors, to prepare the article, develop data, analysis of data distributing the data allocation develop by all of the authors of this research.

References

1. UNAIDS, (2021), Fact Sheet – World AIDS Day 2021, Epidemiological Estimates, aidsinfo.unaids.org.
2. Indonesian Ministry of Health (MOH). (2020). HIV/AIDS and Sexual Transmitted Diseases in First Semester, Jakarta, Indonesian Ministry of Health.
3. Provincial District Health Office. Diseases Control Department. (2021). HIV/AIDS situation in Central Java Province. Semarang. Disease Control Department
4. Semarang Municipalities District Health Office, Indonesia. (2019). HIV Data Report. Semarang. Diseases Control and Prevention, Semarang. District Health Office of Semarang.
5. Arfan. Iskandar. Et al. (2015). The Risk Factor of HIV/AIDS Disease at Adolescents 14 until 24 Years Old. Pontianak. The Borneo Akcaya Research and Development Journal.
6. Hutahaen. H.S. Bona. 2017. Overview of Knowledge, Attitude, and Practice of Students, Behaviour Towards HIV/AIDS and People Live With HIV/AIDS (PLWHA). Jakarta. Mind Set Journal.
7. Miftah. Thoha, (2003). The implication of Element Organizational Behavior Concept. Jakarta: PT. Raja Grafindo Persada. 2003

8. Aaron, J.S. Condom “Contain Worms” and Cause HIV” in Tanzania: Negative Condom Beliefs Scale Development and Implications for HIV Prevention. *Social Science & Medicine*. 2012.
9. Agustin. Susanti. Erine, (2007), Perception of Adolescents in Coastal Area Against HIV/AIDS Disease in Tambaklorok, Tanjung Mas Villages, Nort Semarang, Indonesia, Nursing Science Study Program, Medical Faculty, Diponegoro University, Semarang.
10. Cahyani. Nur. T, Nirmalasari. N, (2021), The Corelation Between Perception and Behavior of Prevention of HIV/AIDS Transmission in Adolescent with Experience of Free Sex in Yogyakarta, Indonesia, with Experience Master Thesis, Universitas Jendral Achmad Yani, Yogyakarta
11. Apriliani. Aulia, Amelia. Rizki, Rusyidi. R. Arni. R, (2020), Perception of Adolescents about HIV/AIDS who join in Non- Government Organization with Community Based Approved in Makasar city, Indonesia (2020),
12. Glanz. Karen, Rimer. K. Barbara, Viswanath. K, (2008), Health Behavior and Health Education: Theory, Research, and Practice, 4th Edition, John & Sons, Inc. All right reserved.
13. Jose R, Narendran M, Bindu A, Beevi N, L M, Benny P V, (2020). Public perception and preparedness for the pandemic COVID-19: A Health Belief Model approach. *Clin Epidemiology Glob Heal* [Internet]. 2020;(June):1–6. Available from: <https://doi.org/10.1016/j.cegh.2020.06.009>.
14. Graeme Codrington, Sue Grant-Marshal, Penguin, (2004), Mind the Gap. Penguin Books.
15. Miles. B. Matthew. Huberman. A. Michael. Saldana. Johnny. *Qualitative Data Analysis: A Methods Sourcebook*. Third Edition. Arizona. Sage.
16. Hanger. S. Martin, Cameron. D. Linda, Hamilton. Kyra, Hankonen Nelli, Lintunen. Taru, *The Handbook of Behavior Change*, Cambridge University Press, 2020.
17. Katirayi. Leila, Akuno. Job, Kulukulu. Bright, Masaba. Rose, “When You Have a High Life, and You Like Sex, You Will be Afraid”: A Qualitative Evaluation of Adolescents’ Decision to Test for HIV in Zambia and Kenya Using the Health Belief Model. *BMC Public Health*, Katirayi et al (2021) 21:398, <https://doi.org/10.1186/s12889-021-10391>.
18. Right. Asrul, Farida, *Millennial Teacher for Z Generation*, Nokhtah Publishing, First Edition, 2022.
19. Global information and advice on HIV & AIDS. *Introduction to global AIDS epidemics*. 2010.
20. Avert. *Young people, HIV and AIDS; Global information and education on HIV and AIDS*. 2010.
21. Tilahun T HMM, Demissie A. Knowledge, attitude and practice on reproductive health problems among students of Jimma university and Jimma teachers’ college. *Journal of AIDS and HIV Research* 2007.
22. Ralph J DiClemente, Gina M. Wingood, Richard Crosby, Catlaine Sionean, Brenda K. Cobb, et al. Parental Monitoring: Association with Adolescents’ Risk Behaviors. *Pediatrics* is the official journal of the American Academy of Paediatrics. 2000.
23. Bettinger JA, Celentano DD, Curriero FC, Adler NE, Millstein SG, Ellen JM. Does parental involvement predict new sexually transmitted diseases in female adolescents? *Arch Pediatric Adolescent Med*. 2004;158(7):666–70.
24. Crosby RA, DiClemente RJ, Wingood GM, Lang DL, Harrington K. Infrequent parental monitoring predicts sexually transmitted infections among low-income African American female adolescents. *Arch Pediatric Adolescent Med*. 2003;157(2):169– 73.
25. Shamu. Simukai, Khupakonke. Sikhulile, Farirai. Thato, Slabbert. Jean, Chidarikire. Thato, Guloba. Geoffrey, Nkhwashu. Nkhensani, Knowledge, Attitudes, and Practice of Young Adults Towards HIV Prevention: An Analysis of Baseline Data from a Community-Based HIV Prevention Intervention Study in Two High HIV Burden Districts, South Africa. *BMC Public Health* (2020) 20:1249, <https://doi.org/10.1186/s12889-020-09356-3>.

26. UN Interagency Group on Young People's Health: Peer Education Training of Trainers Manual. New York: UNFPA/ UNICEF; 2003
27. Michielsen. Kristien, Beauclair. Roxanne, Delva. Wim, Roelens. Kristien, Rossem V. Ronan, Temmerman. Marleen, Effectiveness of a Peer- Led HIV Prevention Intervention in Secondary Schools in Rwanda: Results from a Non- Randomized Controlled Trial, BMC Public Health, 2012, 12;729, <http://www.biomedcentral.com/1471-2458/12/729>.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

