

HEALTH WORKERS' EXPERIENCE WITH NEEDLE STICK INJURY IN PATIENTS DIAGNOSED WITH HIV/AIDS IN JAKARTA

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ABSTRACT

Introduction. HIV/AIDS is a virus that attacks the human immune system. In this case, experience refers to an event felt by a needle-injected healthcare workers with a diagnosis of HIV/ AIDS. Experience is an expression of expectation from healthcare workers to healthcare workers who have not experienced the incidence of needle injecting patients with a diagnosis of HIV/ AIDS. Health worker's experience who had been pierced by a patient's needle (needle stick injury) would experience psychological effects such as anxiety, irritation, and guilty feelings. In this study, the participants, which are the healthcare workers, were expected to share information about their first experience when being injected with HIV/AIDS contaminated needle. This study aims to give a meaning in the experience of the healthcare workers who were injected with needle from patients with HIV/AIDS. **Method.** This study used qualitative method with a descriptive phenomenological approach by involving 5 participants, namely healthcare workers who had worked for more than 4 years. **Result.** The results were obtained by in-depth interviews and analyzed through the Collaizi method using the NVivo application. The results of the study found 3 (three) themes, the first theme is, Response and adaptation of needle injected HIV/ AIDS patients which generated several categories (psychological, spiritual and social responses) and (psychological, spiritual, and social adaptations). The second theme is the effect of having ARV therapy which causes both physical effects and psychological effects. The third theme is the precautionary measures of HIV/AIDS needle-injected, which consist of preventive and rehabilitative actions. **Conclusion:** Healthcare services have an obligation to provide support and motivation to healthcare workers who experienced the incidence of being injected by needle from patients with a diagnosis of HIV/AIDS.

Keywords: HIV/AIDS; Health Worker; Needle Stick Injury

INTRODUCTION

Occupational safety and health is an effort to protect workers and other people who enter the workplace from any possible dangers of work accidents. The aim of occupational safety and health is to prevent and reduce the risk of illness and accidents due to work to improve the level of health for workers, and thus, work ability is increased (Ivana et al at all, 2014). Law of the Republic of Indonesia Number 36 of 2009 regarding health states that occupational health efforts aim to protect workers and thus, they live healthy and are prevented from health problems and unfavorable effects

caused by work. Consequently, hospital management should implement safety and health efforts (K3) at the clinics.

The American Bureau of Labor statistics and the National Council of Insurance (2013) concluded that 6.8% of work accidents and occupational diseases occurred at every 100 hours in a hospital (Department of Public Health, 2018). The International Labor Organization (ILO) 2018 states that 2.78 million workers died due to work accidents and occupational diseases every year. Occupational illness deaths were around 2.4 million or 86.3% and more than 380,000 or 13.7% are caused by workplace

accidents. Thousand times or more non-fatal work accidents each year occurred. It was estimated that 374 million workers experienced accidents such as hit by hard objects or equipments in the work area, slipping, tripping, fallen by hard objects, or any working accidents that do not cause death compared to fatal work accidents every year. As the result, many workers have risk for the earning capacity of workers (Hämäläinen et al, 2017). Centers for Disease Control and Prevention (CDC)(2014) reported about health care workers who have been exposed to HIV in the workplace, showing that the risk of transmission from needle that infected with HIV was around 0.3% or 3 out of every 1000 health care workers (NCBI, 2018). The results of the National Safety Council report 2015 obtained that there were 2,947 hospital workers from 98 hospital suffered from puncture injury due to needles or needle stick injuries. In 2016, the CDC in the United States reported that every year, there were 722,000 cases of needles and sharp object injuries caused by ignoring the use of personal protective equipment.

Health workers involved in this research are health workers who work in hospitals not clinics or pharmacies or labs and perform medical actions such as blood sampling, infusion and others at risk of needling or needle stick injury (Sahara, 2011). The Department of Health of the Republic of Indonesia confirmed that 1.2 million workers died due to accidents and illness in the workplace (Department of Health of the Republic of Indonesia, 2016). The Ministry of Health of the Republic of Indonesia in 2010 revealed that there were 35 million health workers who were involved in the occupational safety accidents. Among them, 3 million health workers were exposed to blood pathogens, 2 million were exposed to the HBV virus, 0.9 million were exposed to HBC virus, and 170,000 were exposed to the HIV/AIDS virus

(Indonesian Ministry of Health, 2010). Furthermore, 70,000 or more than 90% of HIV and HBB cases occurred in developing countries, in which 8-12% are the hospital workers (Ministry of Health of the Republic of Indonesia, 2010).

Jeong, et al., (2016) reported that nurses who had been pierced by a patient's needle (needle stick injury) would experience psychological effects such as anxiety, irritation, and guilty feelings. Some of the nurses also acted as a first aid provider in the prevention of HIV/AIDS and reported incidents of the needle injury to the team at the Hospital. Jeong also reported that some health workers did not want to report or avoid reporting incidents of needle stick injuries and some of them, even, expected the absence of occurring problems and relied on religious beliefs. In this case, the did not report for any reasons and then prayed that it will not affect them (Jeong, et al., 2016). Therefore, based on the above data, the author was interested in discussing the experience of health workers who have had needle stick injuries in patients with HIV/AIDS.

METHOD

This research applied phenomenology method. Phenomenology attempts to describe the meaning of a phenomena. The credibility of the study was achieved by member checking and field notes. Meanwhile, the samples involved in this study were the health workers in hospital (physician and nurses) chosen by snowball sampling. In this case, five subjects had worked for more than 4 years and responded that they have experience with HIV/AIDS patients. Furthermore, a face-to-face unstructured interview with subjects was used to collect data. Most subjects talked effortlessly about their feeling in the clinical when they had experienced with HIV/AIDS patients. The interviews were transcribed by a professional transcriptionist. Each

transcription was compared to the tape recording for accuracy. This study was approved by Sint Carolus School of Health Sciences before collecting the data.

RESULT

This study describes about the Experience of Health Workers when being injected with needle from Patients with HIV/AIDS Diagnosis. The results of the analysis of the study revealed that there were three themes found from the experience of health workers who were injected by the needle of patients with HIV/AIDS diagnoses (Figure 1).

DISCUSSION

a. HIV/AIDS Needle Response and Adaptation

1) Psychological Aspect

In the psychological response, participants felt afraid, sad, guilty, ashamed, disappointed, denial, resigned, and alert. These following expressions were expressed by the participants during the interview.

"..... that was the first time I felt afraid of being infected by HIV" (P1)

"..... my thoughts were mixed up, I was sad and I cried" (P2)

"..... I felt guilty at that time, I asked myself why I am not being careful" (P5)

"..... and I was there between believing and not believing, because it has been 2 days of the post-surgery" (P4)

"..... I think yes, I have resigned to anything else that I can do..... if you have been injected, we just think that being cautious is important" (P2)"... what I feel was ashamed since my friends said that I am HIV-positive" (P2).

Psychological responses and psychological adaptations are positive and negative aspects. One of the expressions expressed by the participants is feeling afraid if she is infected with HIV.

This is stated in the study conducted by Erlina (2006) which described that health worker who injected the patients with HIV/AIDS felt afraid of contracting with HIV if they were injected by the needles

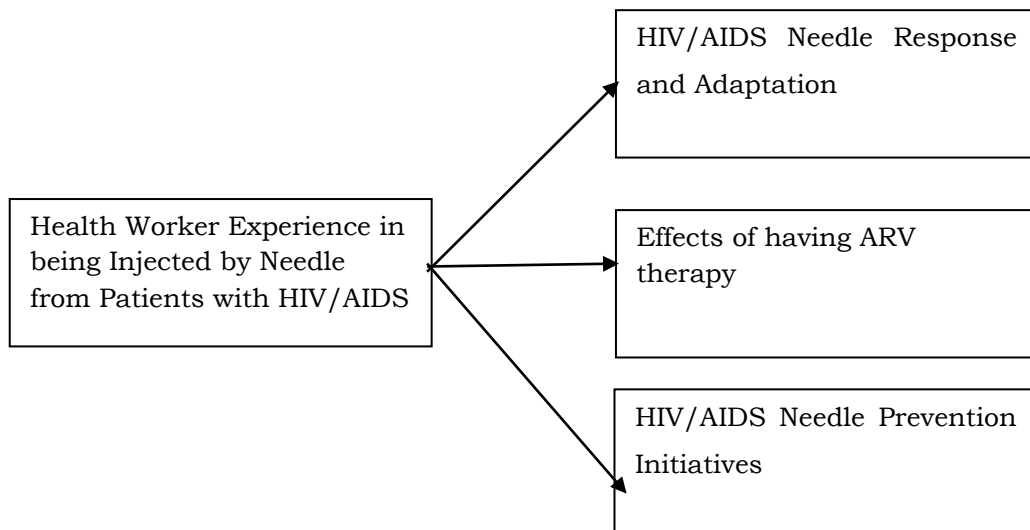


Figure 1. Model of Experiences of Health Workers in being injected by Needle from Patients with HIV/AIDS

Furthermore, a study which was done by Ibrahim (2014) revealed that health workers feel afraid of contracting HIV/AIDS due to their lack of knowledge in the treatment of using needle. This data were obtained from the results of interviews with health workers as the research participants.

2) **Spiritual Aspect**

Spiritual response is an expression performed by someone on the basis of faith and trust.

"..... I think God wants to know, how you feel about ARV?" (P1)

"..... after that incident I felt like I was going to die, I also had time to blame God why I was being injured"(P2) "..... want to do it again, this might be a test from the God for my life" (P5)

"..... when I found out that the patient was HIV positive, I was immediately shocked and immediately prayed" (P4)

The results of interviews with participants showed the existence of spiritual responses and adaptations expressed by participants during the interview. Participants expressed different spiritual responses. Positive and negative-spiritual responses and adaptations expressed by participants both are eagerness to die, and a belief that the incidence of being injured from the needle with HIV/AIDS is a test from God, blessings from God, and God's will. Moreover, Jeong et al. (2016) agreed that the participants expressed their spiritual responses. Jeong et al. (2016) stated that health workers who were injured by the needle from patients diagnosed with HIV/AIDS considered this incident as a test from God as exemplified above participant and they relied on their religious beliefs. This data were obtained from the expression of the participants who experienced of being injured with a needle from patients with diagnosed HIV/AIDS.

3) **Social Aspect**

After interviewing the participants, some of them revealed that they felt various social responses from their working environment. The expressions from the participants are as follows:

"..... a friend of mine said that I am positively infected by HIV-positive huh. I felt that I did not have any support from my friends.....(P1) when I was in the basement, I immediately locked myself, I was really ashamed of what people would say if they knew" (P2)

"... Talk from one mouth to another with my colleagues who were tired of hearing it too" (P3)

"..... I decided to stop working because of this incident" (P4)

Some participants felt both positive and negative-social response especially in their working environment, which is in the health care field. The results of interviews with participants indicated that the participants received negative responses from their working environment such as shame because many people talked about them and many of the participants' friends claimed that they were positively infected by HIV, and they did not get support from their friends in their working environment. Social responses expressed by the participants are in line with the research results carried out by Laras & Resdasari (2016) which revealed that health workers who handled HIV/AIDS patients felt excessive fear and pressure from their working environment. Therefore, health workers who experienced the needle injury incident from patients with HIV/AIDS will feel stressed and receive psychological impacts. Finally, it possibly affects their performance of providing nursing care.

4) Psychological Adaptation

During the interview, several participants expressed the psychological adaptation after experiencing a needle injury incident with patients diagnosed with HIV/AIDS.

"..... I had flashback to room C, why it happened like that because the patient brushed my hand away and touched my hand and touched my glove and then touched my finger" (P1)

"..... I am being sincere, yes you stabbed me with HIV patient's needle" (P1)

"... .. I continue to make this as a lesson for my life to be better" (P2)

"... because this is a part of my job as a doctor, it is a risk of being contracted, right?"(P3)

"... yes, I just think positively and encouraged myself" (P5)

The interview results revealed several key words expressed by the participants in psychological adaptation. In this case, they received the incident of being injured by the needle, considered the accident as a life lesson, received the accident as a risk of a health worker, and thought more positively at work. Some of the expression of the participants are in line with research result obtained by Villarinhol and Itayra (2015) who asserted that health workers who experienced the needle-injury incident from patients with HIV/AIDS will recognize that they are at risk of being exposed to injection needle care because it is part of their job. Furthermore, a research carried out by Villarinhol and Itayra (2015) showed that health workers who experienced the patient's needle injury will not ignore any expressions from others in order to stay motivated in the recovery process.

5) Spiritual Adaptation

In this section, the participants revealed their feeling of spiritual adaptation after experiencing the incident of being injured by the needle from a patient with a diagnosis of HIV/AIDS.

"..... I always contemplate it in terms of faith, I am not pretentious or whatsoever, but it strengthens me again that you are impaled by the will of God" (P1)

"..... I am grateful, so I am being more careful" "..... I always pray when I was not contracted" (P2).

The participants' Spiritual adaptations were revealed after they had experienced the needle injury incident from an HIV/AIDS patient. Several key words revealed that health workers argued that the incident of being injured by a needle from a patient with HIV/AIDS diagnosis is the God's will and a test from God. Furthermore, the reflector will recognize the incident by their faith and trust. The participants' expressions in this case are in line with the research result done by Jeong, et al. (2016) who stated that health workers who experience a needle injury incident will consider the incident using their faith and trust. Furthermore, they feel that what happened is a test from God and God's destiny.

6) Social adaptation

During the interview, the researcher found the participants' social adaptation responses as expressed by several participants.

"... do not look at people eyes that have been injured by the needle" (P1)

"..... I'm still lucky, my friends are still willingly supporting me" (P2)

"..... I just ignored it, because it is already part of the job" (P3)
"..... taking action according to the SOP, according to the existing procedures, because gloves are not made of iron" (P5).

The results of the interview revealed several keywords of the participants' social adaptation. This include, they obtained support from their closest colleagues, ignoring others' comments, and being obedience to the SOP. This finding is in line with the research result carried out by Amukugo, Shitokelwa, and Nuuyoma (2018) which revealed that after experiencing the needleinjury incident from patients with HIV/AIDS, health workers prioritized safety by taking action according to the SOP. Amukugo, Shitokelwa and Nuuyoma (2018) revealed that many health workers did not get support from their working environment. A research performed by Villarinhol and Itayra (2015) revealed similar patient's expression: receiving psychological support from working environment, closest colleagues, and family.

b. Effects of having ARV therapy

1) Physical Effects

During the interview, the participants revealed the effects of taking ARV therapy. The italicized words below are the keywords expressed by the participants:

"..... the third day, I felt so bad for canceling the night service because of nausea. I vomited and felt like everything turned to me" (P1)

"... the effects were amazing. I felt sleepy and nausea, ... until I was in the afternoon service. Thus, I was told to sleep" (P2)

"... The effect was dizziness. I was sick of it, so it was really hard for me during the night service. I was really sleepy at the night service" (P3)

"..... the side effects for taking the therapy were nausea,

vomiting, very weak body, and terrible sleepiness" (P4)

"..... I could not imagine the effect. How does the feeling of people taking ARV therapy everyday. When I took ARV, it immediately weakened my body, then I felt nauseous, dizzy, and finally I vomited" (P5).

The results of interviews revealed that after taking ARV therapy, the health workers felt the effects which disturbed their daily activities. The physical effects included nausea, vomiting, lost appetite, drowsiness, weakness of body, and dizziness. Such condition can interfere daily activities especially in the employment as health workers. A research from Puspasari, Wisaksana, and Ruslami (2018) discovered that 50.7% of the health workers experienced the effects of ARV therapy, such as nausea, dizziness, rashes, itching, vomiting, diarrhea, weak body, dry mouth, and anxiety. This finding is also in line with the effects of having antiretroviral therapy felt by the participants of this research. Likewise, a research by Anwar, Nugroho, and Wulandari (2018) revealed that the effects of antiretroviral therapy are nausea, vomiting, rashes/allergies, fever, dizziness. This is in line with the therapeutic effects felt by the participants of this research. However, the participants of this research did not mention several other therapeutic effects, such as rashes, fever, diarrhea, and dry mouth.

2) Pshycological Effects

The interview of this research revealed the psychical effects experienced by the participants. The key words in italics below are psychical effects expressed by the participants, they are:

"..... I felt that all those who have died have come to me, there was indeed a hallucination effect, too" (P1)

".....hallucination too".....(P1)
 Yes I had a hallucination"(P2) "...
 hallucinations too" (P4)
 "... there was hallucinations as
 well, I can't imagine what it was
 like" (P5).

The participants experienced a psychological effect. All the participants revealed that the psychological effect felt is the hallucination effect after taking ARV therapy. Such a finding is also presented in a study carried out by Sisyanhidi and Indarjo (2017) stating that the side effects of ARV therapy experienced by participants are physical side effects and interfering effects according to the perception of individuals after taking ARV therapy.

c. HIV/AIDS Needle Prevention Initiatives

1) Preventive

After conducting interviews with the participants, several preventive measures were found, including hand washing, main handling, and follow-up actions. These actions are expressed by the participants.

"..... I washed my hands and then I flowed, I am not sure about the time, it was around 15 minutes or 10 minutes. Then, I contacted the head of my guard and went straight to the emergency room I was further given 3 tablets of Imboost, and I took them all at once....." (P1)

"..... we immediately left the patient and I was asked to drain the injury with water stream without pushing it. After that, I went straight to the ER" (P2)

"..... after that, I opened my gloves and ran into the water and then washed my hands" (P3)

"..... I opened the gloves immediately, poured alcohol, Betadine and Nacl then flowed it" (P4)

"..... washed my hands with water, and my friends said to not

squeeze it... .. went straight to the emergency room', I was given three tablets of drugs, I forget what the name of the drug is" (P5)

".....Three months later I checked myself in the lab" (P1)

"..... then after one month I checked again, and the result was negative" (P2)

"..... I was asked to refer to S Hospital, three months later, I checked myself in the lab again" (P4).

Preventive measures were taken by the participants when they were injured by the needle from a patient with a diagnosis of HIV/AIDS. Preventive measures taken by the participants are washing hands (using water flow, not squeezed), main handling measures (referred to other hospitals, direct service such as the emergency room) and follow-up actions which is to be taken to take ARV therapy. Organization, I. L (2018) revealed that the precautionary measure taken after the exposure is a response system, which is reporting the incident to the nearest service, and taking immediate action namely washing hands to avoid the risk of contracting. Furthermore, the preventive actions disclosed in Organizational Research, I. L (2018) related to what was done by the participants during interviews are reporting the incidents and washing hands as a form of primary prevention after being injected by the needle.

2) Rehabilitative

After interviewing the participants, rehabilitative action were taken during the incident of being injured by the needle from the patients with HIV/AIDS. The rehabilitative actions taken are counseling, medication, and laboratory check.

"..... I was on VCT and my friends at the ER explained that I had to take prophylaxis 1 month

for ARV therapy ... I further checked myself with the ELISA, SGOT, SGPT and the titer labs" (P1)

"..... I was checked by ELISA and then the nurse came to give me a VCT at that time, I was advised to take ARVs at that time, so I took ARVs for 1 month" (P2)

"..... I asked for an ELISA check directly, then I was on VCT with the nurse, ... and I got the ARV for 1 month" (P3)

"..... The first treatment was the ELISA lab check, CD4 and CD8. I also obtained counseling as well as consultation so, yes ... I took the ARV for 1 month" (P4)

"..... I also checked myself with the ELISA lab to investigate if I was infected by the HIV. Then, a nurse gave me guidance including counseling. Yes, we usually call VCT. Then I was asked to take ARV for 1 month ..." (P5).

The participants also revealed the form of preventive measures taken when being injured by the needle from patients with a diagnosis of HIV/AIDS. The researchers found that the participants received rehabilitative actions from the hospital. They reported that the rehabilitative measures obtained were counseling (VCT counseling), treatment (prophylaxis with ARV therapy), and laboratory check (ELISA, SGOT, SGPT, CD4 and CD8). Organization, I. L (2018) revealed that there were some treatment measures obtained after being injured by a patient's needle. They received rehabilitative measures, such as voluntary counseling and testing (Voluntary Counseling and Testing - VCT) as well as prophylactic therapy, namely ARV therapy.

Organization, I. L (2018) also revealed that when a person experienced an HIV/AIDS needle injury, the main action taken is a

voluntary test which is HIV laboratory test. Sudiantara and Somia (2015) stated that health workers who have been injured by a patient's needle will take preventative measures for prophylactic treatment, such as ARV therapy. Furthermore, the study also revealed that health professionals who receive ARV therapy will be further checked again after 3 months of receiving ARV therapy. This is in line with the results of interviews conducted on the participants, where the participants revealed that after being injured by the patients' needle and after taking ARV therapy, participants did a laboratory check 1 month after taking ARV therapy and then re-checking it 3 months later after not taking ARV therapy. This was done to determine the final results of the treatment and treatment carried out after the needle injury of patients with HIV diagnoses.

During the interview with the participants, all participants revealed to take the action 1 month and 3 months post-treatment and having antiretroviral therapy provided by the health service where the health worker works. The participants revealed that after 1 month and 3 months of medical check, if the result was negative, the administration of antiretroviral therapy was stopped and no checks were made again to find out the results of HIV. The participants revealed that they carried out further HIV examinations within 1 year or more on the basis of their own volition, not from the recommendation of health authority in their office.

This study has two implications in nursing education. First, given opportunities for improvement in academic about how to take action after needle stick injury. Second, given insight for nurse about how to deal with the pshychological aspect.

This study has limitation in finding participants who experienced a needle stick injury in patients with HIV/AIDS.

CONCLUSION

This study found that health worker who take care of HIV/AIDS patient in Hospital had a lot of experience, including being injured by the needle. Health worker who had injury further experienced biological and psychological effect in their life. This can affect in their adaptation to taking care patient and doing blood procedure. Therefore, they need support from hospital, colleague, and other health workers.

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