



# Perception and practice of injection safety among nurses in federal teaching hospital, Ido-Ekiti

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## Abstract

This is a non- experimental descriptive study carried out to assess the perception and practice of injection safety among Nurses in Federal Teaching Hospital, Ido-Ekiti. The objective of the study is to assess the perception and level of practice of Nurses about injection safety and to identify the factors influencing the level of practice of injection safety among FETHI Nurses. The significance of the study is that it will reduce the risk of harming oneself as a Nurse and contacting blood borne pathogen. It will refresh the knowledge of nurses about injection safety practices which would improve the effectiveness and efficacy of injection administration among Nurses. it will reduce transmission of blood borne diseases and reduce complication following injection administration in the community.

97 respondents were chosen using total enumeration and a well-structured questionnaire was used as the instrument for data collection. The data collected was analyzed and findings represented in tables. The findings of this study revealed that the nurses sampled for this study had good perception towards injection safety 88.9%, good level of practice as regards injection safety, only 2% agreed that it is right to re-use a needle and syringe, also only 5% said it is right to bend needle from the syringe before disposal and major factors that are influencing the practice according to the nurses in FETHI were economic status of the patients, lack of enough sharp box, and insufficient supply of hospital equipment.

The hospital should endeavor to provide sharper box to all wards and units in the hospital. A team could be inaugurated to supervise and monitor the nurses' compliance to injection safety practice. Seminars could be organized for nurses to sensitize them more about injection safety practice. The government should subsidize the price of needle and syringe.

**Keywords:** HAI, HIV, WHO, FETHI nurses

## Introduction

Injectable methods are commonly used in health care settings for the prevention, diagnosis and treatment of various illnesses. In developing countries, World Health Organization (WHO) estimated 16 billion people to have been reported to receive injections for several reasons each year of which 90-95% are for therapeutic purposes and most of the materials used for these important medical procedures pose lot of hazards to the recipient, the health care providers or to the public living in the environment where the wastes are finally disposed (Miller, 2020) [11].

Globally, unsafe injections account for more than 25 million preventable new cases of blood borne infections such as hepatitis B virus, hepatitis C or HIV infections. There are about 250,000 estimated new cases of HIV infections per year as a result of the reuse of needles and syringes. In Africa, 250-500 people are newly infected with HIV each day as a result of unsafe blood transfusions and unsafe injection practice. To reduce the hazardous effects of unsafe injection practices on the populace, the World Health Organization introduced the concept of injection safety as "one that is administered using

appropriate equipment, does not harm the recipient, does not expose the provider to any avoidable risk and does not result in waste that is dangerous to other people in the community" (Drake, 2019) [7].

Individuals seek health care for preventive, curative or rehabilitative reasons. Diverse measures used in meeting the health needs of clients include nursing care, counseling, health information and health education, dietary care, physiotherapy and pharmacological care.

Health care workers in developed countries have been shown to improve their knowledge and practice of injection safety and hospital waste management over the decade, consistent practice of injection safety amongst them have been shown in several studies to protect the personnel from severe morbidity and mortality due to common occupational injuries. For instance, recapping the needles and disposing them safely into puncture resistance containers alone has been shown to reduce Hospital Acquired Infections (HAI) by almost 70%. On the contrary, the knowledge and compliance to safe injection practices in developing countries such as Nigeria is still sub-optimal.

## Statement of problem

It has been observed globally that 25million preventable new case of blood borne infections like HIV, hepatitis B, hepatitis C virus infections resulted from unsafe injections. Approximately 5% of HIV, 40% of hepatitis C and 32% of hepatitis B virus infections are caused by unsafe and unnecessary injections. This unnecessary injection has completely overtaken the real need; reaching proportion no longer based on rational medical practice thus making the widespread incidences of unsafe injections an important public health problem.

Nurses in the hospital, in the course of carrying out their duties are repeatedly exposed to this hazard, thus could be considered a potential source of infection to their co-health care providers, their patients and the public at large. Also unskilled practices such as recapping needles after use, manipulating of used needles, placing sharps in unexpected places e.g patients bed side, waste bins and on the floor, all contribute hazards following injection administration. This has prompted the researchers to find out or assess the perception and practice of injection safety among Nurses in Federal Teaching Hospital, Ido-Ekiti. (FETHI).

## Objectives of the Study

- To assess the perception of Nurses towards injection safety.
- To determine the level of practice of injection safety among Nurses in FETHI.
- To identify factors influencing the level of practice of injection safety among Nurses in FETHI.

## Research questions

- What is the Nurses perception about injection safety?
- What is the level of practices of injection safety among Nurses in FETHI?
- What are the factors influencing the level of practice of injection safety among FETHI Nurses?

## Scope of the study

The research was carried out among nurses in the Medical and Surgical Wards, Accident and Emergency Ward, Intensive Care Unit, Care and Support Ward, Orthopedic Ward, Paediatric Ward, Obstetrics and Gynaecology Ward in Federal Teaching Hospital, Ido- Ekiti.

## Literature review

### Conceptual review

#### Epidemiology of injection safety

Injection safety is defined by WHO as an injection that is administered using appropriate equipment, does no harm to the recipient, does not expose the provider to any avoidable risk and does not result in any waste that is dangerous to people. Since invention of the syringe in 1848, a new channel for pathogens to pass from one person to another was opened and over time while health workers found more conditions to treat and more medication to inject (Bellis, 2019) <sup>[4]</sup>. The awareness regarding blood borne pathogens and hygiene only came over 100 years after the invention (Bellis, 2019) <sup>[4]</sup>. Injection therapy

was first introduced to developing world population with the main campaigns against Yawa and Kala-azar in 1920s and became wide spread after Second World War following the introduction of Penicillin (Salman, 2022) <sup>[12]</sup>.

Although several studies have been conducted on perception and practice of injection safety measures, only those related to this study were reviewed. A study was carried out on the practice and perception of injection safety measures among nurses in two hospitals in Ibadan, Nigeria. The researchers used a sample size of 385 nurses and the study was comparative. The result revealed high knowledge level of injection safety measures (70.4%), and that the high level of knowledge was not translated to practice, that about half of them (50.4%) recently sustained sharp injury through intramuscular and subcutaneous injections.

In another study which centered on the perception of injection safety measures among in-service training nurses in hospitals in Owerri Senatorial Zone based on their gender; The result showed that most of the females had higher perception on injection safety measures than the males. There no significant influence between the level of perception of injection safety measures among the in-service training student nurses in Owerri Senatorial Zones based on their gender. This finding is in consonant with the earlier findings of the researchers who discovered in Lagos State Nigeria that female nurses had higher level of knowledge and perception on injection safety measures. Perception of injection safety measures among in-service training nurses in hospitals in Owerri senatorial zone based on their years of experiences; The result revealed that out of 26 students who had less than 5 years' experiences, few had moderate perception while some had low perception. Many of them had between 11 and 16 years' experiences and out of this number, majority had moderate perception while some had low perception. Out of 48 of them who had 17years and above experiences, majority had moderate perception while few had low perception.

## WHO strategy for the safe and appropriate use of injection worldwide

There are four (4) objectives of the WHO strategy for the safe and appropriate use of injections worldwide. They are;

1. Formulating national policies and plans for the safe and appropriate use of injections.
2. Ensuring quality and safety of injection equipment.
3. Facilitating equitable access to injection equipment.
4. Achieving appropriate, rational and cost effective use of injection.

To improve, establish and sustain safe injection practices, the WHO recommends the following measures;

- Use sterile injection equipment: this is the use of a new sterile syringe and needle from a sealed pack for each injection to be administered.
- Prevent contamination of injection equipment and medication: this is actualized by preparing each injection in a clean designed area where blood or body fluid contamination is unlikely to occur with multi-dose vials. All expired drugs must be discarded.

- Maintain the effectiveness and safety of the drug by following the product's specific recommendation for use, storage and handling and the use of diluents from the same manufacturer.
- Prevention of needle sticks injuries to the provider by anticipating and taking proper measure to prevent sudden movement by patient during injection administration. Do not recap after use.
- Prevent access to used needles; seal sharps box when it is filled to two-third of its capacity and transport to a secured area for proper disposal. Manage sharps waste in a safe and environment-friendly way to protect the community from unintentional and accidental exposure.
- Reduce administration of injections by encouraging patients to accept oral medication when possible. Injection should be given only when necessary.

### Empirical review

According to the World Health Organization's estimation, 5% of HIV infection, 32% of Hepatitis B infections and 40% of Hepatitis C infections result from unsafe medical injections in the developing countries (Hauri and Huntin, 2013) <sup>[9]</sup>.

In a survey of infection control practices to assess the risk of transmission of injection to patients from unsafe injection equipment, which was carried out at the Northwest province of Cameroon, it was gathered that 44% of health workers reported they reuse a needle and syringe on another patient, but 39% would reuse either the needle or the syringe (Mbah, 2021).

In a study by Ashish *et al.*, (2012) access injection practices in urban health centres of Surat city involving 40 Nurses as respondents, all of them that gloves should be worn during injection procedure but only 14 (35%) were actually wearing it. Around 65% of the participants felt that needle should not be recapped after giving injection but 50% were actually found to be recapping it. This study shows that there is a great disparity between knowledge and practice of health care workers regarding injection practices. Thus, efforts are needed to be done in this regard for the benefit of both health workers and patient.

In a descriptive study carried out at the University College Hospital, Ibadan Oyo State, Nigeria in 2013 on the perception and practice of injection safety among health care workers including Nurses, 385 respondents participated with their mean age being 37 years old and comprised mostly of females (92.5%). Their knowledge level was high, 70.4% knew that unsafe injection predisposes to blood-borne infection. 55.9% had correct information that two-handed recapping is not a safe injection practice while 84.4% claimed that contaminated sharps predispose the community to biohazards and 76.1% had the right perspective that used syringes and needles should be discarded in a sharp waste box. The findings of the study however indicate that this knowledge was not translated into practice.

### Theoretical framework

#### Abraham H. Maslow's hierarchy of needs

Abraham Maslow (1943) described the basic needs of all people as a progression from simple physical needs to more complex needs. He called this a hierarchy of needs. These needs are portrayed in the shape of a pyramid with the simple needs at the bottom and the complex needs at the top. Maslow's hierarchy of needs is a theory in psychology. He used the terms physiological, safety, belongingness and love, self-esteem, self-actualization and self-transcendence needs to describe the pattern that human motivations generally move through.

The most fundamental and basic four layers of the pyramid contain what Maslow called "deficiency needs": esteem, friendship and love, security (safety) and physical needs. If these "deficiency needs" are not met (with the exception of physical needs), there may not be a physical indication but the individual will feel anxious and tense. The human mind and brain are complex and have parallel processes running at the same time, thus many different motivations from various levels of Maslow's hierarchy can occur at any time but he focused on identifying the basic types of motivation and the order in which they can be met.

#### Maslow identify these needs as follows

##### Physiological needs

Physiological needs are the physical requirements for human survival. If these requirements are not met, the human body cannot function properly and will ultimately fail. Physiological needs include: Air, water, food, clothing and shelter.

##### Safety needs

Once a person's physiological needs are relatively satisfied, their safety needs take precedence and dominate behavior. In the absence of physical safety e.g. due to war and natural disaster, people may experience post-traumatic stress disorder. Safety and security needs include: Personal security, Emotional security, financial security, Health and well-being, Safety needs against accidents/illness and their adverse impacts.

##### Love and belonging

According to Maslow, human need to feel a sense of belonging and acceptance among their social groups, regardless of if these groups are large or small. Deficiencies within this level of Maslow's hierarchy may be due to hospitalization, neglect, etc. This can impact or affect the individual's ability to form and maintain emotionally significant relationships in general. Love and belonging needs include; friendship, intimacy or family.

##### Esteem

Esteem represents the typical human desire to be accepted and desired by others. All humans have a need to feel respected; this includes the need to have self-esteem and self-respect. These activities give the person a sense of contribution or

value. Maslow noted two versions of esteem needs, a lower version and higher version. The lower version of esteem is the need for respect from others. The higher version manifests itself as the need for self-respect. Deprivation of these needs may lead to an inferiority complex, weakness and helplessness.

### Self-actualization

This level of need refers to what a person's full potential is and the realization of that potential. Maslow describes this level as the desire to accomplish everything that one can, to become the most that one can be. Maslow believed that to understand this level of need, the person must not only achieve the previous needs but master them.

### Relevance of the theory to this study

For a study on the practice and perception of injection safety, a possible theory for use is Maslow's theory. This theory talks about the safety needs of humans (most especially the patients, care givers and community in this context) which have to be met to ensure that an orderly life is lived. Patients, caregivers and the community must be relatively free from harm resulting from injection administration or danger of being exposed to sharps waste. Failure to meet this safety need may lead to infection, consequent hospitalization, anxiety and even death. Injection safety guides against several transmissible illnesses, disability and injuries. Health safety and wellbeing have deeply showed the importance of injection safety in ensuring proper development, psychological and social wellbeing of individuals involved in injection administration i.e., caregivers, patients and members of the community. Unsafe injection can hinder an individual to attain higher level of needs. E.g. Hepatitis B or HIV/AIDS which can be acquired as a result of an unsafe injection practice can reduce an individual's lifespan; bring about social stigma and isolation which leads to a significant reduction in the individual's self-esteem and prevent him from actualizing his potentials. Hindered health safety of an individual may also affect his psychological and physiological wholeness with emotional stability.

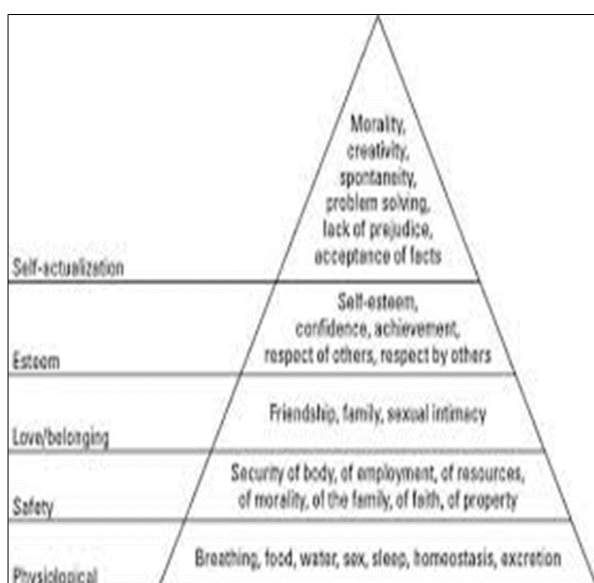


Fig 1: Abraham Maslow's Hierarchy of Needs

The pyramid above shows the basic needs for human survival as propounded by Abraham Maslow in 1943.

### Research methodology

This chapter discusses the method that was used in carrying out the research study. It includes research design, research setting, study population, instrument for data collection and method of data analysis.

### Research design

This study employed a non-experimental descriptive method to assess the perception and practice of injection safety among Nurses in Federal Teaching Hospital, Ido-Ekiti.

### Research setting

The setting is Federal Teaching Hospital, Ido-Ekiti, Ekiti State. It is a tertiary health care facility located in the northern part of Ekiti which serve as a referral centre for all other health institutions and covers about 374 kilometers squares. The hospital is situated at Alapo area Ido-Ekiti. Alapo is at the entrance of Ido community from Orin/Ora exit at ido/Osi local government area of Ekiti State. It was established in July 1998 as a metamorphosed General Hospital established in 1954. The hospital has 24 fully functional department comprising of 18 clinical departments and 5 supporting departments.

There are two main entrances to the hospital, one of the northern parts of the hospital and the other at the south-western part of the hospital. From the northern gate to the east is the community health department; behind this is the obstetrics and gynecology department. Adjacent to the obstetrics and gynecology department is the medical laboratory followed by the environmental unit then the administrative block.

Towards the west from the same gate is the General Out-Patient Department; at the front of this Family Medicine, adjacent to the General Out- Patient Department is the Renal Unit followed by Cardiac Unit, Male Medical and Male Surgical Wards, Main Theatre, Female Medical and Female Surgical Wards and Orthopedics Ward, beside the Male Medical Ward is the Intensive Care Unit.

At the southern part of the hospital are located the Emergency Pediatric Unit, Biomedical Unit, Mental Health Department, Physiotherapy Department. The second entrance to the hospital is at the southwest.

### Study population

This study was centered on the Nurses from Male Medical Ward, Female Medical Ward, Female Surgical Ward, Care and Support Ward, Obstetrics and Gynecology Ward in Federal Teaching Hospital, Ido- Ekiti. The total population of these nurses is 97.

### Instrument for data collection

The instrument used was a well-structured questionnaire which was designed by the researchers to access data from the respondent on the perception and practice of injection safety among Nurses in Federal Teaching Hospital, Ido-Ekiti.

The questionnaire was divided into four sections; section A:

demographic data, section B: perception about injection safety, section C: perception and practice of injection safety, section D: what unsafe injection practices are to be targeted for injection safety interventions among Nurses in FETHI.

**Method of data collection**

The questionnaire developed were used to collect necessary data from the respondents after due permission from the ethical committee of the Federal Teaching Hospital, Ido-Ekiti. Verbal consent was obtained from each wards' Chief Nursing Officer (CNO). Necessary explanations were made and collection was done immediately.

**Method of data analysis**

The data collected were analyzed using descriptive statistical method in form of percentage, frequency distribution tables.

**Ethical consideration**

A letter of permission was taken to the ethical committee of the Federal Teaching Hospital Ido-Ekiti for approval. The purpose of the research study was explained to the respondents in a friendly and calm manner after consents is gained. Confidentiality of the information and data collected were also guaranteed.

**Results**

This chapter presents the analysis of the data, which include answering of research questions and the explanation. The questionnaire was administered to ninety-seven (97) nurses working at Federal Teaching Hospital, Ido Ekiti. The results of the analysis were described using descriptive statistics such as frequency count, central tendency and measure of dispersion. The participants were selected using accidental sampling technique. Tables were used to present the data analysis that answered the research questions. A response rate of 100% (97) was achieved for the study as all the questionnaire were retrieved.

**Table 1:** Demographic data

Variables	Categories	Freq.	(%)
Age	21-30years	56	58.3
	31-40years	26	27.1
	41-50years	11	11.5
	51 and above	3	3.1
Mean±SD Age	31.438±8.154		
Religion	Christianity	92	94.8
	Islamic	5	5.2
	Others	Nil	Nil
Sex	Male	18	18.6
	Female	79	81.4
Education qualification	Diploma	21	22.1
	Degree	72	75.8
	MSc	1	1.1
	PhD	1	1.1
Years of working experience	1-10	70	72.2
	11-20	22	22.7
	21-30	3	3.1
	31 and above	2	2.0

N=97

The Table 4.1 presented the socio-demographic data of the nurses working in FETHI. Many 56(58.3%) of the nurses selected for the study were between 21-30years and between age 31-40years were 26 (27.1%) respondents and only 51years and above were 3 (3.1%). The mean age was 31.438±8.154. Majority 79 (81.4%) were females and the rest 18 (18.6%) were males. Also, majority 72 (75.8%) of the selected nurses had degree in nursing science while only 1 (1.1%) each had MSc and PhD in nursing science. More than half 92 (94.8%) were Christians while only 5 (5.2%) were Muslims. Those that had spent between 1-10years were 70 (72.2%), and 3 (3.1%) and 2 (2.0%) had spent 21-30years and 31years and above respectively.

**Research question 1:** What is the nurses' perception about injection safety?

**Table 2:** Perception about injection safety

Variables	SA	A	D	SD
Injection policies can improve the practice of injection safety in your health care facility.	73(73.0%)	25(25.05)	2(2.0%)	_____
A workshop on injection safety practices can improve Nurses knowledge on injection safety	67(67.0%)	32(32.0%)	1(1.0%)	_____
Gloves must be worn to during administration of injection	78(79.6%)	19(19.4%)	_____	1(1.0%)
Disposal of needles and syringe into the sharp box only is a safe injection practice.	69(69.7%)	16(16.2%)	13(13.1%)	1(1.0%)
Disposal of sharps used in the hospital has no effect on the community.	11(11.0%)	19(19.0%)	29(29.0%)	41(41.0%)
Summary	409(88.9%)		51(11.1%)	

N=97

Table 4.2 described perception of nurses about injection safety. Injection policies can improve the practice of injection safety in your health care facilities was ticked by majority 95(98%) of nurses. Workshop on injection safety practices can improve nurses' knowledge on injection safety item was agreed by 99(99%). Majority 97(99%) agreed that gloves must be worn during administration of injection. Majority 85(88.9%) said

'yes' to disposal of needles and syringe into sharp box only is a safe injection practice. However, few agreed 30(30%) that disposal of sharps used in the hospital has no effect on the community. The overall perception was good 88.9%.

**Research question 2:** What is the level of practices of injection safety among Nurses in FETHI?

**Table 3:** Practice of injection safety

Variables	Yes	No
It is right to bend needles before disposing into the sharp box?	5(5.0%)	95(95.0%)
Is it right to detach the needle from the syringe before disposal?	46(46.0%)	54(54.0%)
It is right to re-use a needle and syringe on another patient?	2(2.0%)	97(97.0%)
Is it safe to use contaminated needles and syringes to give injection?	6(6.1%)	93(93.9%)
Is not good to allow unskilled staff to administer injection?	67(68.4%)	31(31.6%)
It is right to draw the different medications in the same syringe?	12(12.0%)	88(88.0%)
It is necessary to use gauze to break the head of an ampule after filing the neck?	66(66.0%)	34(34.0%)
It is important to perform skin preparation before administering injection?	98(98.0%)	2(2.0%)
It right to administer injection under aseptic technique?	94(94.9%)	5(5.1%)

N=97

The level of practice of injection safety among nurses was depicted by Table 4.3. Only 5(5%) said needle must be bent before disposing them. Less than half 46(46.0%) of the selected nurse agreed that needles must be detach from the syringes before disposing them. Only 2(2.0%) nurses said that re-use of needle and syringe is not bad. Only 6(6.1%) nurses agreed that contaminated needles and syringe could be used to give injection. While majority 67(68.4%) agreed that unqualified staff should not be allowed to give injection. Breaking the head

of an ample should be done by using gauze, skin preparation is necessary before injection administration and injection should be administered under aseptic technique were endorsed by 66 (66.0%), 98(98.0%) and 94(94.9%) respectively. The summary revealed good practice of injection safety.

**Research question 3:** What are the factors influencing the level of practice of injection safety among FETHI Nurses?

**Table 4:** Factors influencing the practice of injection safety among nurses in FETHI

Variables	Yes	No
Inadequate patient's financial resources in purchasing enough needles and syringes needed by the nurse?	75(77.3%)	22(22.7%)
Lack of enough sharp boxes in the ward?	76(76.8%)	23(23.2%)
Nonchalant attitude of the Nurses?	57(57.6%)	42(42.4%)
Poor supervision by the Nursing manager?	59(59.0%)	41(41.0%)
Insufficient hospital supply of basic equipment needed to carry out safety injection practice	89(89.0%)	11(11.0%)

N=97

The Table 4.4 indicated the factors influencing the practice of injection safety among nurses in FETHI. Inability of the patients to purchase enough needles and syringes was identified to be one the reason for poor practice of injection safety among nurses 75(77.3%). Also, lack of enough sharp boxes in the wards was fingered by 76(76.8%) and nonchalant attitude of the nurses was ticked by 57(57.6%). Poor supervision by nursing managers attracted by 59(59.0%) nurses. And insufficient hospital supply of basic equipment needed to carry out safety injection practice was identified as a factor by 89(89.0%).

### Discussion of findings

This section presents the discussion of the results, summary, conclusion and recommendations which include answering of research questions. Data analysis was based on responses obtained from the questionnaire administered to ninety-seven nurses in FETH in Ido Ekiti.

The findings of this study revealed that the nurses sampled for this study had good perception towards injection safety 88.9%. The finding of this study on perception of injection safety disagreed with Mantel *et al*, (2013) <sup>[10]</sup> submission. Again, perception of injection safety measures among in-service training nurses in hospitals in Owerri senatorial zone based on their years of experiences; The result revealed that out of 26

students who had less than 5 years' experiences, few had moderate perception while some had low perception. Many of them had between 11 and 16 years' experiences and out of this number, majority had moderate perception while some had low perception.

Out of 48 of them who had 17years and above experiences, majority had moderate perception while few had low perception (Bolarinwa 2012) <sup>[3]</sup>.

The research found that the nurses selected in FETHI had good level of practice as regards injection safety, only 2% agreed that it is right to re-use a needle and syringe, also only 5% said it is right to bend needle from the syringe before disposal. However, in a study carried out by Gwayali *et al* (2012) <sup>[8]</sup> to assess the status of safe injection practices and knowledge of health workers in Western Nepal regarding injection safety, it was discovered that two handed recapping of needle was practiced in the health centers and only a few of them knew correct reasons for avoiding recapping. It showed that there is a wide gap between provider's knowledge and their practices. Major factors that are influencing the practice according to the nurses in FETHI were economic status of the patients, lack of sharp box, and insufficient hospital equipment.

### Implications of findings to nursing

It will reduce the risk of harming oneself as a Nurse and

contacting blood borne pathogen like HIV/AIDS, HBV, HCV and also bacteria pathogens. It will refresh the knowledge and improve injection safety practices among Nurses which would improve the effectiveness and efficacy of injection administration among Nurses.

### Limitations of the study

The researchers encountered some challenges in the course of carrying out this work. The workload of the nurses did not permit them to fill the questionnaire on time. The researchers have to monitor the respondents and make several follow up visits. However, all these problems encountered did not in any form affect the validity of the study.

### Summary

The research work was carried out with the aim to determine the perception and practice of injection safety among in FETH Ido Ekiti. The sampled nurses had good and positive perception 88.9% and they also had high level of injection safety practice. The research design was non-experimental descriptive in nature with sample size of 97 and sampling technique adopted was total enumeration. Major factors that are influencing the practice according to the nurses in FETHI were economic status of the patients, lack of sharp box, and insufficient hospital equipment.

### Conclusion

It can be concluded that the FETHI nurses have positive perception and high level of injection safety practice which are influenced by economic status of the patients. The hospital lacks enough sharp boxes and insufficient supply of hospital equipment.

### Recommendations

In view of the findings of the study the following are hereby recommended:

1. The hospital should endeavor to provide more sharp box to all wards and unit in the hospital.
2. A team should be inaugurated to supervise and monitor the nurses' compliance to injection safety practice.
3. Seminars and workshops should be organized for nurses to sensitize them more about injection safety practice.
4. The government should subsidize the price of hospital equipment especially syringe and needle.

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