Nurses' Knowledge towards Care of Patients With Acquired Immunodeficiency Syndrome in Singa Teaching Hospital,
Sinnar State, Sudan, (2016)

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B.Sc. in Nursing Sciences

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Nurses' Knowledge towards Care of Patients With Acquired Immunodeficiency Syndrome in Singa Teaching Hospital, Sinnar State, Sudan, (2016)

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Date: 19 / 2 / 2017
Nurses' Knowledge towards Care of Patients With Acquired Immunodeficiency Syndrome in Singa Teaching Hospital, Sinnar State, Sudan, (2016)

Namareg Hamed Mustafa Omer

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Date of Examination: 19 / 2 / 2017
الأية

بسم الله الرحمن الرحيم

قال تعالى:

(وَقَل اعْمَلُوا فَسَيَرَىَ اللهُ عَمَلَكُم وَرَسُولُهُ والمُؤمِنُونَ وسَتُرَدُّونَ إلى عَالِم الغيبِ والشَّهادةَ فِينَا نَكُونُم بِمَا كُنْتُم تَعْملُونَ)

صدق الله العظيم

سورة التوبة الآية (150)
Dedication

To:

my beloved my parents,
my brothers and my sisters who
gave all their best and supported me
and to my best friend
Acknowledgement

First of all thank to Allah for assistance, health that gave me to complete this work.

I wish to express my special appreciation to my supervisor Dr. Bothyna Bassyunie Essayed Etewa and Co-supervisor Dr. Ietimad Ibrahim Abd-Elrhman Kambal for unlimited help, criticism, and construction and university of Gezira faculty of applied medical sciences and post graduate studies.

To my colleagues in Singateachinghospital
Nurses' Knowledge regarding Care of patients With acquired immunodeficiency syndrome in Singa Teaching Hospital, Sinnar State, Sudan, (2016)

Namareg Hamed Mustafa Omer

Abstract

Acquired immunodeficiency syndrome is a serious and sometimes life-threatening disease caused by the human immunodeficiency virus. Role of nursing regarding care of patient with acquired immunodeficiency syndrome, Health education for the patient and the family, How to coexist with the disease, Psychological support for the patient and encourage him to continue treatment. Acquired immunodeficiency syndrome remains one of the leading causes of morbidity and mortality in community.

A descriptive hospital-based study was conducted aimed at assessing nurses' knowledge regarding care of patient with acquired immunodeficiency syndrome in Singa Teaching Hospital, Sinnar State, Sudan (2016). Sample size consisted of (60) nurses working in the hospital during the period from (June to December 2016). Data was collected using a questionnaire designed for the study. Data was analyzed using Statistical Package for Social Sciences (SPSS). The results revealed that 83.3% of the study sample responded with correct answers regarding the definition of Acquired immunodeficiency syndrome, and 58.3% of them responded correctly regarding diagnosis. 91.7% of the study sample responded with correct answers regarding mode of transmission of Acquired immunodeficiency syndrome, and 83.3% of them responded correctly regarding prevention. (16.7%, 25%, and 33.3%) of the study sample responded with correct answers regarding treatment, complication, and signs and symptoms of Acquired immunodeficiency syndrome respectively. (75%, 70%, 58.4%) of study sample responded with correct answers regarding nutrition, care of hyperthermia, and care of activity intolerance of Acquired immunodeficiency syndrome respectively. The study concluded that nurses' knowledge regarding care of patient with acquired immunodeficiency syndrome was inadequate. The study recommended that continuous training programme for nurses regarding care of patient with Acquired immunodeficiency syndrome should be done clinical guideline about Acquired immunodeficiency syndrome should be designed and available for nurses in the hospitals.
تعرف الممرضين والممرضات تجاه العناية بمريض الايدز في مستشفى سنجة التعليمي، ولاية سنار، السودان (2016).

نمارق حامد مصطفى عمر

ملخص الدراسة

متلازمة نقص المناعة المكتسبة هو مرض خطير، ويعتبر مهدد للحياة التي يسببها فيروس نقص المناعة البشرية. دور الممرض تجاه العناية بمريض الايدز التثقيف الصحي للمريض والأسرة، كيفيه التعايش مع المرض، الدعم النفسي للمريض وتشجيعه على مواصلة العلاج يعتبر الايدز واحد من الأسباب الرئيسية للإصابات والوفيات في المجتمع. أجريت هذه الدراسة الوصفية في مستشفى سنجة التعليمي، ولاية سنار، السودان (2016).

تتكون الدراسة من (60) ممرض وممرضة الذين يعملون بالمستشفى خلال الفترة من (يونيو حتى ديسمبر 2016). تم جمع البيانات باستخدام استمارة تم تصميمها للدراسة. ثم تحليل البيانات باستخدام برنامج الحزم الإحصائية للعلوم الاجتماعية (SPSS). كشفت النتائج عن 83.3% من عينة الدراسة كانت تعرف متلازمة نقص المناعة المكتسب، 58.3% اجابتهم صحيحة عن تشخيص متلازمة نقص المناعة المكتسب. 91.7% من عينة الدراسة كانت اجابتهم صحيحة عن طريق انتقال متلازمة نقص المناعة المكتسب 83.3% كانت اجابتهم صحيحة عن معلاج متلازمة نقص المناعة المكتسب (16.7%, 25% و 33.3%) من عينة الدراسة كانت اجابتهم صحيحة عن العلاج، مضاعفات، ظروف نقص المناعة المكتسب على التوالي. (75%, 70% و 83.4%) من عينة الدراسة كانت اجابتهم صحيحة عن الوعي بالوقاية في انتقال متلازمة نقص المناعة المكتسب على التوالي. خلصت الدراسة إلى أن معرفة الممرضين والممرضات عن رعاية المريض بمتلازمة نقص المناعة المكتسب غير كافية. اوصت الدراسة لعمل برامج تدريبية للممرضين والممرضات عن العناية بمريض الايدز وتصميم موجهات لهم عن مرض الايدز وتكون متاحة لهم في المستشفيات.
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### ABBREVIATIONS

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<td>AIDS</td>
<td>Acquired Immunodeficiency Syndrome</td>
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<td>STDs</td>
<td>Sexually Transmitted Diseases</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>IDU</td>
<td>Injection Drug Use</td>
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<td>PGL</td>
<td>Persistent Generalised Lymphadenopathy</td>
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<td>ZLE</td>
<td>zidovudin, lamivudine, efavirenz</td>
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<td>ZLN</td>
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<td>TLN</td>
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<td>TB</td>
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<td>WHO</td>
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<td>PITC</td>
<td>Provider Initiated Testing and Counseling</td>
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<td>QA</td>
<td>Quality Assurance</td>
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Chapter one
Introduction
1-Introduction:-

1-1Background:-
Acquired immunodeficiency syndrome is a serious and sometimes life-threatening disease caused by the human immunodeficiency and remains one of the leading causes of morbidity and mortality in Community. The first cases of acquired immunodeficiency syndrome (AIDS) were reported in the United States in the spring of 1981. By 1983 the human immunodeficiency virus (HIV) has spread to all continents. The universal precautions to prevent transmission of AIDS include hand washing before and after any procedure, gloves, mask-eye protection, gown, patient care equipment, and environmental control. (World AIDS Day, June 16, 2015.)

1-2Problem statement:-
Worldwide, AIDS is one of the major health problems throughout the world. Every year an estimated 1.2 million of these die. The present review provides updates regarding AIDS to help people protect this deadly problem. In the American context, AIDS score may be used as a good parameter for the early and rapid diagnosis of AIDS and that will guide the treatment plan. The universal precautions to prevent transmission of AIDS include hand washing before and after any procedure, gloves, mask-eye protection, gown, patient care equipment, and environmental control. In developed countries, Eastern Europe and Central Asia in 2013, AIDS-related deaths increased by 5%. In Eastern Europe alone, AIDS diagnoses have doubled in the past decade. The results of nurses' knowledge regarding AIDS disease 70% of the study sample responded with correct answers regarding the definition of Acquired Immunodeficiency Syndrome, and 63% of them responded correctly regarding diagnosis of Acquired Immunodeficiency Syndrome. 97.7% of the study sample responded with correct answers regarding mode of transmission of Acquired Immunodeficiency Syndrome and 70% of them responded correctly regarding prevention of Acquired Immunodeficiency Syndrome. It is recommended that continuous training program for nurses regarding care of patient with Acquired Immunodeficiency Syndrome (http://www.pepfar.gov). In developing countries, Sub-Saharan Africa has the most serious HIV and AIDS epidemic in the world. In 2013, an estimated 24.7 million
people were living with HIV. The results of nurses knowledge regarding AIDS disease 75% of the study sample responded with correct answers regarding the definition of Acquired immunodeficiency syndrome, and 60% of them responded correctly regarding diagnosis of Acquired immunodeficiency syndrome 81.7% of the study sample responded with correct answers regarding mode of transmission of Acquired immunodeficiency syndrome and 80% of them responded correctly regarding prevention of Acquired immunodeficiency syndrome (http://www.news-medical.net). In Soba University Hospital, Sudan. The results of nurses knowledge regarding AIDS disease 95% of the study sample responded with correct answers regarding the definition of Acquired immunodeficiency syndrome, and 80% of them responded correctly regarding diagnosis of Acquired immunodeficiency syndrome 91.7% of the study sample responded with correct answers regarding mode of transmission of Acquired immunodeficiency syndrome and 90% of them responded correctly regarding prevention of Acquired immunodeficiency syndrome. (80%, 70% and 78%) of the study sample responded with correct answers regarding treatment, complication, and signs and symptoms of Acquired immunodeficiency syndrome respectively). In conclusion AIDS remains a major cause morbidity and mortality especially in developing countries with low resource settings. (timejournals.org/tjmsrr©2013 Time Journals).

1-3Justification:-

Nursing staff in hospital should maintain a high level of knowledge about HIV/AIDS prevention and infection control measure as they are in close contact with high risk group with through measurement of knowledge.
1-4 Objectives:-

1-4-1 General objective:
-To study nurses' knowledge regarding care of patient with Acquired Immunodeficiency Syndrome in Singa Teaching Hospital Sinner State, Sudan, July to December 2016

1-4-2 Specific objectives:
- To assess nurses' knowledge regarding care of patient with Acquired Immunodeficiency Syndrome during the period of the study.
- To assess nurses' knowledge about universal percussion of nursing care of HIV patients.
- To identify demographic background of the participation.
-including biographical data information such as (definition- etiology- pathophysiology- symptoms and symptoms- causes- mode of transmission-diagnostics- progression- treatment- complication- prevention).
Chapter two

Literature review
2. Literature review

2.1 Definition of AIDS

Acquired immunodeficiency syndrome (AIDS) is a serious and sometimes life-threatening disease caused by the human immunodeficiency virus (HIV). An estimated 1.1 million Americans are infected with HIV, according to the Centers for Disease Control and Prevention. Approximately one-quarter of those infected are unaware of their status. HIV damages the immune system and destroys CD4 positive T cells. The purpose of these cells is to help coordinate your body’s ability to fight infections. As HIV progresses, your body's ability to fight infections decreases and you become more susceptible to a wide variety of infections and other diseases. According to National Institute of Allergy and Infectious Diseases, providers typically diagnose AIDS when an infected person develops one or more particular infections like pneumonia or tuberculosis, or when your T cell count drops to dangerously low levels (less than 200 cells per cubic millimeter of blood). (WHO, 2015)

2.3 Etiology:

The immune system is the body’s mechanism for protecting itself against the many harmful organisms which try to invade it, such as bacteria and viruses. It is a highly complex network of cells, tissues and organs, including blood cells. When an organism gets inside your body (for example, by breathing in the common cold virus), white blood cells that form part of your immune system go to investigate. These white blood cells come in two groups: one group organises the other, which in turn produces the antibodies to fight the problem. The cells that do the organising are called T-cells. Some of these have a protein on their surface, called CD4. We often refer to these as CD4 cells. HIV is dangerous because the virus destroys the very cells of your immune system that are supposed to be keeping you well: the CD4 cells. HIV attaches itself to a CD4 cell and enters it. It makes copies of itself inside the CD4 cell and then goes on to damage and destroy the cell. The new copies burst out of the CD4 cell and go off to
find more cells to invade. If the number of CD4 cells is reduced, the immune system has fewer cells to help it defend the body from other organisms. This means you are at greater risk of getting ill. The immune system does try to fight HIV infection. It produces antibodies to do this. But they’re not very effective without the CD4 cells to organise them (WHO. 2007).

2.4 Pathophysiology

HIV infection passes through a series of steps or stages before it turns into AIDS. These stages of infection as outlined in 1993 by the Centers for Disease Control and prevention are:

1. Seroconversion illness – this occurs in 1 to 6 weeks after acquiring the infection. The feeling is similar to a bout of flu.
2. Asymptomatic infection – After seroconversion, virus levels are low and replication continues slowly. CD4 and CD8 lymphocyte levels are normal. This stage has no symptoms and may persist for years together.
3. Persistent generalised lymphadenopathy (PGL) – The lymph nodes in these patients are swollen for three months or longer and not due to any other cause.
4. Symptomatic infection – This stage manifests with symptoms. In addition, there may be opportunistic infections. This collection of symptoms and signs is referred to as the AIDS-related complex and is regarded as a prodrome or precursor to AIDS.
5. AIDS – this stage is characterized by severe immunodeficiency. There are signs of life-threatening infections and unusual tumours. This stage is characterized by CD4 T-cell count below 200 cells/mm3.
6. There is a small group of patients who develop AIDS very slowly, or never at all. These patients are called nonprogressors. (WHO. 215 ).
Sings & symptoms of HIV :-

Common Early Signs and Symptoms:

In many cases it has been found out that the infected persons have no signs and symptoms for several years where as others experience flu like symptoms probably within 3 weeks after catching the virus. The symptoms caused due to the HIV virus lasts for about 4-6 weeks in normal cases however with proper medication, care and treatments this time frame reduces drastically.(WHO.2015).

- Fever
- Weight loss
- Malaise
- Headache
- Neuropathy
- Lymphadenopathey
- Mouth Sores
- Skin Rash and thrush
- Esophagus Sores
- Myalgia
- Liver And Spleen Enlargement
- Nausea
- Vomiting(WHO. 2015).
- Muscle aches and joint pain

Causes:-

HIV is a viral infection that can be transmitted through sexual contact, through blood or from mother to child during pregnancy, childbirth or breast-feeding. HIV destroys CD4 cells — a specific type of white blood cell that plays a large role in helping your body fight disease. Your immune system weakens as more CD4 cells are killed. You can have an HIV infection for years before it progresses to AIDS. People infected with HIV progress to AIDS when their CD4 count falls below 200 or they experience an AIDS-defining complication.(WHO.2015).
Mode of transmission

To become infected with HIV, infected blood, semen or vaginal secretions must enter your body. You can't become infected through ordinary contact — hugging, kissing, dancing or shaking hands — with someone who has HIV or AIDS. HIV can't be transmitted through the air, water or insect bites. You can become infected with HIV in several ways, including:

- By having sex. You may become infected if you have vaginal, anal or oral sex with an infected partner whose blood, semen or vaginal secretions enter your body. The virus can enter your body through mouth sores or small tears that sometimes develop in the rectum or vagina during sexual activity.

- From blood transfusions. In some cases, the virus may be transmitted through blood transfusions. American hospitals and blood banks now screen the blood supply for HIV antibodies, so this risk is very small.

- By sharing needles. HIV can be transmitted through needles and syringes contaminated with infected blood. Sharing intravenous drug paraphernalia puts you at high risk of HIV and other infectious diseases, such as hepatitis.

- During pregnancy or delivery or through breast-feeding. Infected mothers can infect their babies. But by receiving treatment for HIV infection during pregnancy, mothers significantly lower the risk to their babies. (WHO. November 2015).
**Diagnosis:**

HIV is most commonly diagnosed by testing your blood or saliva for antibodies to the virus. Unfortunately, it takes time for your body to develop these antibodies — usually up to 12 weeks. A newer type of test that checks for HIV antigen, a protein produced by the virus immediately after infection, can quickly confirm a diagnosis soon after infection. An earlier diagnosis may prompt people to take extra precautions to prevent transmission of the virus to others.

**a-Home test**

A Food and Drug Administration-approved home test is available. To do the test, you swab fluid from your upper and lower gums. If the test is positive, you need to see your doctor to confirm the diagnosis and discuss your treatment options. If the test is negative, it needs to be repeated in three months to confirm the results.

**b-CD4 count.** CD4 cells are a type of white blood cell that's specifically targeted and destroyed by HIV. Even if you have no symptoms, HIV infection progresses to AIDS when your CD4 count dips below 200.

**c-Viral load.** This test measures the amount of virus in your blood. Studies have shown that people with higher viral loads generally fare more poorly than do those with a lower viral load.

**d-Drug resistance.** This blood test determines whether the strain of HIV you have will be resistant to certain anti-HIV medications.

**e-Tests for complications**

Your doctor might also order lab tests to check for other infections or complications, including:

- Tuberculosis
- Hepatitis
- Toxoplasmosis
- Sexually transmitted infections
- Liver or kidney damage
- Urinary tract infection (WHO, 2013)
Progression

If you receive no treatment for your HIV infection, the disease typically progresses to AIDS in about 10 years. By the time AIDS develops, your immune system has been severely damaged, making you susceptible to opportunistic infections — diseases that wouldn't usually trouble a person with a healthy immune system.

The signs and symptoms of some of these infections may include:

- Soaking night sweats
- Recurring fever
- Chronic diarrhea
- Persistent white spots or unusual lesions on your tongue or in your mouth
- Persistent, unexplained fatigue
- Weight loss
- Skin rashes or bumps (Myth Busters 2016)

Treatments

There's no cure for HIV/AIDS, but a variety of drugs can be used in combination to control the virus. Each class of anti-HIV drugs blocks the virus in different ways. It's best to combine at least three drugs from two classes to avoid creating strains of HIV that are immune to single drugs.

- Seprine as prevention

  - zidovudine, lamivudine, efavirenz (1d)
  - zidovudine, lamivudine, nevirapine (4c)
  - tenofovir, lamivudine, nevirapine (1E) WHO. 2016.
Complications

HIV infection weakens your immune system, making you highly susceptible to numerous infections and certain types of cancers.

Infections common to HIV/AIDS

- **Tuberculosis** (TB). In resource-poor nations, TB is the most common opportunistic infection associated with HIV and a leading cause of death among people with AIDS.

- **Cytomegalovirus**. This common herpes virus is transmitted in body fluids such as saliva, blood, urine, semen and breast milk. A healthy immune system inactivates the virus, and it remains dormant in your body. If your immune system weakens, the virus resurfaces — causing damage to your eyes, digestive tract, lungs or other organs.

- **Candidiasis**. Candidiasis is a common HIV-related infection. It causes inflammation and a thick, white coating on the mucous membranes of your mouth, tongue, esophagus or vagina.

- **Cryptococcal meningitis**. Meningitis is an inflammation of the membranes and fluid surrounding your brain and spinal cord (meninges). Cryptococcal meningitis is a common central nervous system infection associated with HIV, caused by a fungus found in soil.

- **Toxoplasmosis**. This potentially deadly infection is caused by Toxoplasma gondii, a parasite spread primarily by cats. Infected cats pass the parasites in their stools, and the parasites may then spread to other animals and humans.

- **Cryptosporidiosis**. This infection is caused by an intestinal parasite that's commonly found in animals. You contract cryptosporidiosis when you ingest contaminated food or water. The parasite grows in your intestines and bile ducts, leading to severe, chronic diarrhea in people with AIDS.
Cancers common to HIV/AIDS

- **Kaposi's sarcoma.** A tumor of the blood vessel walls, this cancer is rare in people not infected with HIV, but common in HIV-positive people.

  Kaposi's sarcoma usually appears as pink, red or purple lesions on the skin and mouth. In people with darker skin, the lesions may look dark brown or black. Kaposi's sarcoma can also affect the internal organs, including the digestive tract and lungs.

- **Lymphomas.** This type of cancer originates in your white blood cells and usually first appears in your lymph nodes. The most common early sign is painless swelling of the lymph nodes in your neck, armpit or groin.

Other complications

- **Wasting syndrome.** Aggressive treatment regimens have reduced the number of cases of wasting syndrome, but it still affects many people with AIDS. It's defined as a loss of at least 10 percent of body weight, often accompanied by diarrhea, chronic weakness and fever.

- **Neurological complications.** Although AIDS doesn't appear to infect the nerve cells, it can cause neurological symptoms such as confusion, forgetfulness, depression, anxiety and difficulty walking. One of the most common neurological complications is AIDS dementia complex, which leads to behavioral changes and diminished mental functioning.

- **Kidney disease.** HIV-associated nephropathy is an inflammation of the tiny filters in your kidneys that remove excess fluid and wastes from your bloodstream and pass them to your urine. Because of a genetic predisposition, the risk of developing HIVAN is much higher in blacks. ("About HIV/AIDS", 2016).

Prevention

There's no vaccine to prevent HIV infection and no cure for AIDS. But it's possible to protect yourself and others from infection. That means educating yourself about HIV and avoiding any behavior that allows HIV-infected fluids — blood, semen, vaginal secretions and breast milk — into your body.
To help prevent the spread of HIV

- **Use a new condom every time you have sex.** If you don't know the HIV status of your partner, use a new condom every time you have anal or vaginal sex. Women can use a female condom.

  Use only water-based lubricants. Oil-based lubricants can weaken condoms and cause them to break. During oral sex use a nonlubricated, cut-open condom or a dental dam — a piece of medical-grade latex.

- **Consider the drug Truvada.** Use of the combination drug emtricitabine-tenofovir (Truvada) can reduce the risk of sexually transmitted HIV infection in those who are at high risk. Truvada is also used as an HIV treatment along with other medications.

  When used to help prevent HIV infection, Truvada is only appropriate if your doctor is certain you don't already have an HIV infection. Your doctor should also test for hepatitis B infection. If you have hepatitis B, your doctor should test your kidney function before prescribing Truvada.

  Truvada must be taken daily, exactly as prescribed. Truvada should only be used along with other prevention strategies, such as condom use every time you have sex, as it doesn't protect against other sexually transmitted infections, and it can't provide complete protection against HIV transmission. If you're interested in Truvada, talk with your doctor about the potential risks and benefits of the drug.

- **Tell your sexual partners if you have HIV.** It's important to tell anyone with whom you've had sex that you're HIV-positive. Your partners need to be tested and to receive medical care if they have the virus. They also need to know their HIV status so that they don't infect others.

- **Use a clean needle.** If you use a needle to inject drugs, make sure it's sterile and don't share it. Take advantage of needle-exchange programs in your community and consider seeking help for your drug use.

- **If you're pregnant, get medical care right away.** If you're HIV-positive, you may pass the infection to your baby. But if you receive treatment during pregnancy, you can cut your baby's risk significantly.
• **Consider male circumcision.** There's evidence that male circumcision can help reduce a man's risk of acquiring HIV. (WHO.2015)

**infection control in hospitals**

- Hospitals follow strict infection control guidelines to prevent the spread of HIV and other infections to patients, staff and visitors. This includes disposing of needles and syringes after one use, sterilising reusable instruments after every use, and the use of personal protective equipment such as gloves and eye protection during procedures involving blood and body fluids

- (WHO.2015)

**Nursing process:**

**Assessment**

**Subjective data:**
Ask the client about bowel habits and what causes of relive diarrheal assess for alcohol consumption since excessive alcohol in take.
Provide no nutrition ask the client whet activity causes fatigue and headache .

**Objective data:**
Assess the dite in tegraty including temperature moisture color vascularity texture lesions Assess stool specimens for ova and parasite

**Nursing diagnosis:**
1-Fluid volume deficient related to diarrhea
plan :
-To maintain normal fluid balance intern

**intervention :**
- check intake and output chart
- Increase fluid intake
- Encores to take enough fluid between the meals
- I V rehydration if need
2– Alter nutrition less than body requirement related to anorexia

Plan:
To maintain nutrition balance

Intervention:
- Provide attractive meals
- Encourage pt to eating
- Provide the prescribe diet usually high caloric – protein
- Administer supplemental vitamins and minerals as prescribed

3 – Altered body temperature more the normal related to disease

Plan:
To maintain normal body temp

Intervention:
- Assess body temp
- Good ventilation
- Advice pt to bathing
- Increase fluid intake
- Administer anti piratic as prescribed

4 – Activity intolerance related to decreased muscle mass

Plan:
The client will be to work activities

Intervention:
- Encourage patient to perform daily living activity
- Encourage patient do exercises
- Physiotherapy if need
Previous study:-

World wide
AIDS is one of the major health problems throughout the world. Every year an estimated 1·2 million of these die. The present review provides updates regarding Aids to help people to protect this deadly problem. In American context AIDS score may be used as a good parameter for the early and rapid diagnosis of AIDS and that will guide the treatment plan.,the universal percussion to prevent transmission of Aids hand washing before and after any procedure ,gloves,mask-eye protection ,gown ,patient care equipment, environmental control .

In developed countries Eastern Europe central Asia in
2013, AIDS-related deaths increased by 5%. In Eastern Europe alone, AIDS diagnoses have doubled in the past decade,.The results of nurses knowledge regarding AIDS disease 70% of the study sample responded with correct answers regarding the definition of Acquired immunodeficiency syndrome, and 63% of them responded correctly regarding diagnosis of Acquired immunodeficiency syndrome 97.7% of the study sample responded with correct answers regarding mode of transmission of Acquired immunodeficiency syndrome and70% of them responded correctly regarding prevention of Acquired immunodeficiency syndrome. It recommended that continuous training programme for nurses regarding care of patient with Acquired immunodeficiency syndrome(http://www.pepfar.gov).

In developing countries Sub-Saharan Africa
has the most serious HIV and AIDS epidemic in the world. In 2013, an estimated 24.7 million people were living with HIV, The results of nurses knowledge regarding AIDS disease 75% of the study sample responded with correct answers regarding the definition of Acquired immunodeficiency syndrome, and 60% of them responded correctly regarding diagnosis of Acquired immunodeficiency syndrome 81.7% of the study sample responded with correct answers regarding mode of transmission of Acquired immunodeficiency syndrome and80% of them responded correctly regarding prevention of Acquired immunodeficiency syndrome (http://www.news-medical.net).
In Sudan

in Soba University Hospital, Sudan. The results of nurses knowledge regarding AIDS disease 95% of the study sample responded with correct answers regarding the definition of Acquired immunodeficiency syndrome, and 80% of them responded correctly regarding diagnosis of Acquired immunodeficiency syndrome 91.7% of the study sample responded with correct answers regarding mode of transmission of Acquired immunodeficiency syndrome and 90% of them responded correctly regarding prevention of Acquired immunodeficiency syndrome. (80%, 70% and 78%) of the study sample responded with correct answers regarding treatment, complication, and signs and symptoms of Acquired immunodeficiency syndrome respectively). In conclusion AIDS remains a major cause morbidity and mortality especially in developing countries with low resource settings. (timejournals.org/tjmsrr©2013 Time Journals).
Chapter three

Materials and Methods
3. Materials and Methods

3.1 study design:
A descriptive hospital based study.

3.2 Study area:
The study was conducted in Sinnar state one of the central and smallest states in Sudan, it located at eastern south, surrounded with Algazeria state at the North, White Nile at the west, Blue Nile and South Sudan country at the South and Al-gadarief state and Ethiopia country at the East.

Table 3.1 Distribution of man power caring for the patients in SingaHospital.

<table>
<thead>
<tr>
<th>Type of health care provider</th>
<th>NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultants</td>
<td>10</td>
</tr>
<tr>
<td>Registrars</td>
<td>12</td>
</tr>
<tr>
<td>Medical officers</td>
<td>13</td>
</tr>
<tr>
<td>Sisters</td>
<td>10</td>
</tr>
<tr>
<td>Auxiliary nurses</td>
<td>50</td>
</tr>
<tr>
<td>Anesthesia technicians</td>
<td>05</td>
</tr>
<tr>
<td>Dieticians</td>
<td>06</td>
</tr>
<tr>
<td>Lab technicians</td>
<td>19</td>
</tr>
<tr>
<td>X-ray technicians</td>
<td>05</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>08</td>
</tr>
<tr>
<td>Total</td>
<td>148</td>
</tr>
</tbody>
</table>

Source: Statistical Department of the hospital 2015

3.3 Study population:
Nurses working in hospital during July to December 2016 were concluded in this study.

3.4 inclusion criteria:
all nurses working in hospital.

3.4.1 sample size:
all (60) of nurses working in the hospital included in the study during the period from July-December 2016 the interview questionnaire.
3.4.2 Sample technique:
- Official letters from Gezira university to the head manager and Matron of Singa Hospital for approval to collect the data.
- all (60) nurses working in nursery pediatric ,medicen, surgery and obstetric ward
- Explanation for the nurses about the study questionnaire.
- Questionnaire was distributed for each available nurse to fill within 25-30 minutes

3.5 Data collection tools:

Interview questionnaire:
Structured questionnaire was designed and utilized for two purposes as follows:
First: To find out the general characteristics of the study sample. It contained the basic data related to their general characteristics such as age, education, and years of experience.
Second: To assess nurses’ knowledge regarding care of patient with acquired immunodeficiency syndrome. It includes questions about definition of AIDS, causes, diagnosis, management, complication, and nursing intervention.

3.6 Data analysis:
This data was coded and processed, and transferred to computer coding, for the specific of this subject. It is interventional of AIDS care for nurses and analysis which include frequency, percentage, tables and figures software program: statistical package for social science (SPSS) was applied.
Chapter four

Results and discussion
Table 4.1: Distribution of the study sample according to their general characteristics

<table>
<thead>
<tr>
<th>Items</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ages</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-25</td>
<td>10</td>
<td>16.6%</td>
</tr>
<tr>
<td>26-30</td>
<td>35</td>
<td>58.4%</td>
</tr>
<tr>
<td>Above 30 years</td>
<td>15</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>60</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Receive educational programs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>10</td>
<td>16.7%</td>
</tr>
<tr>
<td>No</td>
<td>50</td>
<td>83.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>60</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Source of knowledge</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colleague</td>
<td>41</td>
<td>68.4%</td>
</tr>
<tr>
<td>Internet</td>
<td>10</td>
<td>16.6%</td>
</tr>
<tr>
<td>Others</td>
<td>09</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>60</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table (4.1) : This table showed that (58.4%) of the study sample at ages ranged between (26-30) years , (83.3%) of the study sample non Received educational programs and (68.4%) of them their Source of knowledge were Colleagues.
Gender:

Figure 4.1: Distribution of the study sample according to their gender.

Figure 4.1: this figure showed that (32%) of the study sample were males and (68%) of study sample were females.
Level of education:

Figure 4: Distribution of the study sample according to their level of education.

Figure 4: showed that (63.3%) of the study sample were diploma degree, followed by (15%) the level of education were bachelor.
Years of experiences:

Figure 4: 3 Distribution of the study sample according to their years of experience.
Figure 4: 3 showed that (45%) of the study sample their years of experience ranged between 1-5 years.
Table 4.2: Distribution of the study sample according to their Knowledge regarding, Definition and Etiology of AIDS

no=60

<table>
<thead>
<tr>
<th>Knowledge of nurses</th>
<th>Correct Answers</th>
<th>In Correct Answers</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO.</td>
<td>%</td>
<td>NO.</td>
</tr>
<tr>
<td>Definition of Aids</td>
<td>50</td>
<td>83.3%</td>
<td>10</td>
</tr>
<tr>
<td>Etiology</td>
<td>23</td>
<td>38.3%</td>
<td>37</td>
</tr>
</tbody>
</table>

Table (4.2): This table showed that (83.3%) of the study sample responded with correct answers regarding Definition of Aids.
Table 4.3: Distribution of the study sample according to their Knowledge regarding Signs & symptoms, Diagnosis, mode of transmission, Treatment of AIDS.

Table (4.3): This table showed that (83.3%) of the study sampleresponded incorrectly regarding treatment while only( 58.3%) of them known Diagnosis of AIDS.
Table 4.4 : Distribution of the study sample according to their Knowledge regarding Complications and Prevention of AIDS.

<table>
<thead>
<tr>
<th>Knowledge of nurses</th>
<th>Correct Answers</th>
<th>In Correct Answers</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO.</td>
<td>%</td>
<td>NO.</td>
</tr>
<tr>
<td>Complications</td>
<td>15</td>
<td>25%</td>
<td>45</td>
</tr>
<tr>
<td>Prevention</td>
<td>50</td>
<td>83.3%</td>
<td>10</td>
</tr>
</tbody>
</table>

Table (4.4) : This table showed that (83.3%) of the study sample responded with correct answers regarding Prevention while only (25%) of knew the Complications of AIDS.
Table 4.5: Distribution of the study sample according to their Knowledge regarding nutrition balance for patient with AIDS:

<table>
<thead>
<tr>
<th>With nutrition balance the nurses must be do</th>
<th>Correct Answers</th>
<th>Incorrect Answers</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO.</td>
<td>%</td>
<td>NO.</td>
</tr>
<tr>
<td>Provide attractive meals</td>
<td>30</td>
<td>50%</td>
<td>30</td>
</tr>
<tr>
<td>Encourage pt to eating</td>
<td>40</td>
<td>66.7%</td>
<td>20</td>
</tr>
<tr>
<td>Provide the prescribe diet usually high caloric – protein</td>
<td>20</td>
<td>33.3%</td>
<td>40</td>
</tr>
<tr>
<td>Administer supplemental vitamins and minerals as prescribed</td>
<td>45</td>
<td>75%</td>
<td>15</td>
</tr>
</tbody>
</table>

Table (4.5): This table showed that (50%) of the study sample answered correctly about the provision of attractive meals. And (66.7%) of them responded in correctly regarding provision of prescribed diet usually high caloric – protein.
Table 4.6: Distribution of the study sample according to their Knowledge regarding nursing care of hyperthermia.

<table>
<thead>
<tr>
<th>With hyperthermia the nurses must be do</th>
<th>Correct Answers</th>
<th>In Correct Answers</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO.</td>
<td>%</td>
<td>NO.</td>
</tr>
<tr>
<td>Assess body temp</td>
<td>32</td>
<td>53.3%</td>
<td>28</td>
</tr>
<tr>
<td>Good ventilation</td>
<td>42</td>
<td>70%</td>
<td>18</td>
</tr>
<tr>
<td>Advice for bathing</td>
<td>42</td>
<td>70%</td>
<td>18</td>
</tr>
<tr>
<td>Increase fluid intake</td>
<td>30</td>
<td>50%</td>
<td>30</td>
</tr>
<tr>
<td>Administer antipyretic as order</td>
<td>40</td>
<td>66.7%</td>
<td>20</td>
</tr>
</tbody>
</table>

Table (4.6): This table showed that (70%) of the study sample good ventilation and Advice patient to bathing correctly. And (66.7%) of them responded correctly regarding administer antipyretic as order.
Table 4.7 : Distribution of the study sample according to their Knowledge regarding Fluid volume deficit

<table>
<thead>
<tr>
<th>With Fluid volume deficit the nurses must be do</th>
<th>Correct Answers</th>
<th>In Correct Answers</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO.</td>
<td>%</td>
<td>NO.</td>
</tr>
<tr>
<td>check intake and output chart</td>
<td>25</td>
<td>41.6%</td>
<td>35</td>
</tr>
<tr>
<td>Increase fluid intake</td>
<td>20</td>
<td>33.3%</td>
<td>40</td>
</tr>
<tr>
<td>Encourage to take enough fluid between the meals</td>
<td>35</td>
<td>58.4%</td>
<td>25</td>
</tr>
<tr>
<td>I V rehydration if need</td>
<td>30</td>
<td>50%</td>
<td>30</td>
</tr>
</tbody>
</table>

Table (4.7) : This table shows that (58.4%) of the study sample Encourage to take enough fluid between meals correctly, and only (50%) of them responded correctly regarding I V rehydration if need.
Table 4.8 : Distribution of the study sample according to their Knowledge regarding Activity intolerance

<table>
<thead>
<tr>
<th>With Activity intolerance the nurses must be do</th>
<th>Correct Answers</th>
<th>In Correct Answers</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO.</td>
<td>%</td>
<td>NO.</td>
</tr>
<tr>
<td>Encourage patient to perform daily living activity</td>
<td>25</td>
<td>41.6%</td>
<td>35</td>
</tr>
<tr>
<td>Physiotherapy if need</td>
<td>20</td>
<td>33.3%</td>
<td>40</td>
</tr>
<tr>
<td>Encourage patient do exercises</td>
<td>35</td>
<td>58.4%</td>
<td>25</td>
</tr>
</tbody>
</table>

Table (4.8) : This table showed that (58.4%) of the study sample mentioned Encourage patient do exercises correctly. And only (41.6%) of them responded correctly regarding Encourage patient to perform daily living activity.
Discussion

Acquired immunodeficiency syndrome (AIDS) is a serious and sometimes life-threatening disease caused by the human immunodeficiency virus (HIV).

This study was conducted during the period from June to December 2016 in Singa Teaching Hospital to provide important information about the level of nurses' knowledge regarding AIDS. The results revealed that the study sample 68% were female. Regarding age group, 58.4% of the study sample were between 26 to 30 years, while 25% were above 30 years. 63.3% of the study sample had diploma of nursing and 15% had bachelor of nursing. Regarding years of experience, this table showed that 45% of the study sample were between 1 to 5 years. This study showed that the majority 68.4% of the study sample were from university and 16.6% from internet. Regarding nurses' knowledge, the study showed 83.3%, 38.3%, 33.3%, and 58.3% of nurses responded correctly regarding the definition, cause, signs, and symptoms of AIDS, respectively. Regarding complications, 25% of nurses responded correctly. This result illustrates lack of knowledge of nurses, which is supported by previous study by (Weber, M, Carlin, 2003) they stated that nurses have insufficient knowledge regarding the definition, causes, signs, and symptoms, diagnoses, and treatment of AIDS. 40%, 50% of nurses responded correctly regarding prevention and complication, respectively. This result is similar to the results of Triza, 2013) most nurses had insufficient knowledge about prevention and complication. Regarding nurses' care of Acquired Immunodeficiency Syndrome, 75% of nurses answered correctly about regarding nutrition balance. 66.7% of nurses correctly answered regarding care of hyperthermia. 58.4% of nurses correctly answered regarding care of fluid volume deficit. 58.4% of nurses correctly answered regarding knowledge of activity intolerance. This result is supported by previous study by (Bazzaro, N, Kirkwood, B, 2008) nurses inadequate knowledge regarding Acquired Immunodeficiency Syndrome.
Chapter five

Recommendation and conclusion
5-1 conclusion

- Based on the result this is most nurses knowledge is adequate especially regarding Treatment and complication of Aids.
- In adequate knowledge regarding Signs & symptoms.
- In adequate knowledge regarding diagnosis.
- In adequate knowledge regarding nursing care of nutrition balance.
- In adequate knowledge regarding nursing care of fluid volume deficit.
5-2 **Recommendation**

- Based on the result of this study the following recommendation were suggested:
- The ministry of health send of health provider to provide health education about AIDS program
- To promote screening test in all nursing hospital
- guideline for nursing care of AIDS should be available in the hospital.
References:


2- UNAIDS, WHO (December 2007)

3- "HIV/AIDS Fact sheet N°360". WHO. November 2015

4- "About HIV/AIDS". CDC. December 6, 2015


8- http://www.pepfar.gov

9- http://www.news-medical.net)
Appendix
Questionnaire to Knowledge Regarding nursing care of patient. With acquired immunodeficiency syndrome in Singa hospital, Sinner state, Sudan 2016

(A) personal data:
Age:
- 20-25 ( )
- 26-30 ( )
- above 30 ( )

Gender:
- Male ( )
- Female ( )

Level of education:
- Secondary ( )
- Technical diploma ( )
- Bachelor ( )

Years of experience:
- Less than one ( )
- 1-5 ( )
- 6-7 ( )
- Above than 10 ( )

Do you receive any educational programmer before:
- Yes ( )
- No ( )

Source of knowledge:
- Colleague ( )
- Internet ( )
- Other ( )

Knowledge about acquired immunodeficiency syndrome

AIDS definition:
- Acquired immunodeficiency syndrome ( )
- Damages the immune system and destroys CD4 positive T cells ( )

Etiology:
- Bacteria and viruses. It is a highly complex network of cells ( )
- Number of CD4 cells is reduced ( )

Sings and symptoms:
- Weight loss ( )
- Neuropathy ( )
- Lymphadenopathy ( )
- Mouth Sores And Thrush ( )
- Skin Rash ( )
Mode of transmission:

a. By having sex. (   )

b. From blood transfusions. (   )

c. By sharing needles. (   )

d. During pregnancy or delivery or through breast-feeding. (   )

Diagnosis:

a. home test (   )

b. CD4 count (   )

c. Viral load. (   )

d. Drug resistance. (   )

Treatment:

a. zidovudin, lamivudine, efavirenz (1d) (   )

b. zidovudin, lamivudine, nevirapine (4c) (   )

c. tenofavir, lamivudine, nevirapine (1E) (   )

Complications:

a. Tuberculosis (TB). (   )

b. Toxoplasmosis. (   )

c. Neurological complications. (   )

d. Wasting syndrome. (   )

Prevention:

a. Use a new condom every time you have sex (   )

b. Consider the drug Truvada (   )

c. If you're pregnant, get medical care right away (   )
**nursing management for nutrition balance include the following:**

a. Provide attractive meals
b. Encourage to eating
c. Provide the prescribe diet usually high caloric – protein
d. Administer supplemental vitamins and minerals as prescribed

**nursing management for fluid volume deficit include the following:**

a. Check intake and output chart
b. Increase fluid intake
c. Encourage to take enough fluid between the meals
d. I V rehydration if need

**nursing management for hyperthermia include the following:**

a. Assess body temp
b. Good ventilation
c. Advise to bathing
d. Increase fluid intake
e. Administer anti piratic as prescribed

**nursing management for Activity intolerance include the following:**

a. Encourage patient to perform daily living activity
b. Encourage patient to do exercises
c. Physiotherapy if need