Journal of Education and Practice
ISSN 2222-1735 (Paper) ISSN 2222-288X (Online)
Vol.5, No.24, 2014

Factors Contributing To HIV/AIDS – Related Stigma and Discrimination Attitude in Egypt: Suggested Stigma Reduction Guide for Nurses in Family Health Centers

Ebtesam Mo'awad El-Sayed Ebied
Community Health Nursing lecturer, Faculty of Nursing- Cairo University
E-mail of the corresponding author: ebtesam.ebied@cu.edu.eg

Abstract
HIV/AIDS remains one of the world's most significant public health challenges, particularly in low- and middle-income countries like Egypt. HIV/AIDS – Related Stigma and Discrimination (S&D) has been shown to be a barrier to HIV prevention, voluntary counseling, testing, and care in many international settings. Nurses are expected to provide social and psychological support for persons living with HIV (PLHIV) in order to help them cope with stress and to reduce the stigma directed against PLHIV. However, HIV/AIDS-related S&D including HIV testing without consent, breaches of confidentiality, labeling, gossip, verbal harassment, differential treatment and even denial of treatment have been extensively documented amongst nurses. In order to combat stigma and discrimination, it is important to quantify them, to understand their magnitudes, to explore their associated factors and to explore how they vary across groups, settings and cultural contexts. Therefore, the aim of this study is first to assess factors contributing to HIV/AIDS-related S&D attitude and second to suggest a stigma reduction guide for nurses in family health centers in Egypt using a descriptive correlational design. Ten accredited family health centers which follow thirty seven medical areas of Cairo Governorate were randomly selected using a two stage cluster sampling technique; then nurses involved in primary health care activities were recruited using simple random sampling. A structured interviewing questionnaire was developed by researcher to assess nurses' personal characteristics, educational level, HIV/AIDS training, work experience, knowledge about HIV/AIDS, and attitude domains of HIV/AIDS-related S&D such as fear of casual transmission and refusal of contact with PLHIV and AIDS; values and morality-related attitude, and discrimination. Results revealed unaccepted level of knowledge and a prevalent negative stigmatizing/ discriminatory attitude about HIV/AIDS and PLHIV among nurses in these health centers. Significant relationships between nurses' levels of knowledge, years of experience, HIV/AIDS training and HIV/AIDS- related stigma and discrimination attitude were observed at 0.000, 0.001 and 0.005 levels respectively. The current study recommends enforcement of anti-stigma and discrimination training and policies in family health centers to tackle this problem in Egypt.
Keywords: HIV/AIDS – related stigma and discrimination, Stigma Reduction Guide, Nurses, Family Health Centers, Egypt.

1-Introduction

HIV Infection results in the progressive deterioration of the immune system, breaking down the body's ability to fend off some infections and other diseases. AIDS (Acquired immune deficiency syndrome) refers to the most advanced stages of HIV infection, defined by the occurrence of any of more than 20 opportunistic infections or related cancers. HIV can be transmitted through unprotected sexual intercourse (vaginal or anal) or oral sex with an infected person; transfusions of contaminated blood; the sharing of contaminated needles, syringes or other sharp instruments; the transmission between a mother and her baby during pregnancy, childbirth and breastfeeding (WHO, 2013).

HIV continues to be a major global public health issue, having claimed more than 39 million lives so far. Globally, an estimated 35.0 million people were living with HIV, and 3.2 million of these were children and 1.5 million people died from HIV-related causes in 2013. The vast majority of people living with HIV are in low- and middle-income countries. An estimated 2.1 million people were newly infected with the virus in 2013. There is no cure for HIV infection. However, effective treatment with antiretroviral drugs can control the virus so that people with HIV can enjoy healthy and productive lives. In 2013, 12.9 million people living with HIV were receiving antiretroviral therapy (ART) globally, of which 11.7 million were receiving ART in low- and middle-income countries. The 11.7 million people on ART represent 36% of the 32.6 million people living with HIV in low- and middle-income countries (WHO, 2013).

Egypt has low HIV/AIDS prevalence among the general population (below 0.1%) but has an epidemic concentrated among high risk group including men having sex with men (MSM Cairo 5.4% and Alex 6.9%) and people who inject drugs (IDUs Cairo 7.7% and Alex 6.7%) (Family Health International, 2010). As of the end of 2009, 3919 HIV cases has been detected in Egypt, among which 1078 (27.5 %) developed AIDS (UNAIDS, 2010). Furthermore, there is weak provision for people living with HIV and AIDS in Egypt (UNICEF, 2010). In 2010, most transmissions occurred sexually (66.8%) of which 46.2% and 20.6% occurred through hetero- sexual

and homosexual transmissions respectively. Transmission through Injecting drugs represents around 28.3% while 4.9% of new detected cases were affiliated to mother to child transmission (UNAIDS, 2012).

UNAIDS report, 2012 also added that there are 9.500 HIV positive cases in Egypt and that 3,058 of them are confirmed cases. 66% of these confirmed cases catch the disease through sexual transmission however, transmission through renal dialysis and cases where the mode of transmission is unknown each represent 9% of detected cases. Current data and the many linkages between risk groups and the general population highlight the urgency to inform and sensitize Egyptians about HIV/AIDS to prevent further transmission. Available data indicates that adults in the age group 25 – 40 years are the most affected by HIV (60% of all detected cases). The Male-currently 4: 1 probably due to more men accessing testing centers while in terms of treatment the total antiretroviral therapy as of 2011 is 760 individuals (UNAIDS , 2012).

Although HIV is not widespread in Egypt, reported cases are increasing exponentially. The threat of a growing epidemic is significant; particularly due to the high-levels of stigma and discrimination (S&D) and many common misconceptions that prevail. In the meantime, PLHIV in Egypt are struggling to maintain a sense of normalcy. They are constrained by medical limitations, family abandonment, social discrimination and a lack of comprehensive care and support (UNICIEF, 2014). HIV/AIDS- related stigma is the collection of adverse attitudes, beliefs and actions of others against people living with or affected by HIV/AIDS, which may result in deleterious internalized beliefs or actions taken by persons living with or affected by HIV infection that may result in negative health outcomes. These negative health outcomes include mental health issues, medication adherence issues, accession of healthcare services, employment issues, housing issues, and physical violence and verbal abuse. Stigmatizing attitudes are often directed not only toward the person with HIV/AIDS, but also toward behaviors believed to have caused the infection (Aubrey L. Florom-Smith and Joseph P. De Santis, 2013).

Discrimination may be described as a form of "enacted stigma" or the negative acts of exclusion or abuse that result from stigma which serve to devalue and reduce the life chances of the stigmatized (USAID, 2007). It includes refusal of health care, gossip, social and physical isolation and loss of work. HIV/AIDS-related stigma and discrimination (S&D) attitude has accompanied the AIDS epidemic from the start and it can occur everywhere, but they may have more serious consequences in healthcare settings. The healthcare sector is of paramount importance due to the role of health care workers (HCWs) in caring for HIV-positive patients, despite that, it was consistently identified as a major source of S&D. Recent studies on the obstacles to care for PLHA found that physicians and nurses were often reluctant to provide PLHA with health services due to their lack of knowledge about infection prevention; doubts as to the effectiveness of prevention measures; moral stigmas against illegitimate sex; fears of being stigmatized by the community; misconceptions about care and treatment of PLHA; and the generally negative connotations associated with HIV/AIDS (Ihab et al, 2013).

It is worth saying that, while access to appropriate treatment and care for individuals with HIV/AIDS is generally recognized as a fundamental human right, discrimination prevents individuals from getting tested and seeking or adhering to treatment and care due to the stigma associated with being HIV positive (CDC, 2010). According to a study quoted in the 2011 Egyptian Initiative for Personal Rights HIV-related stigma report, denial of care, breach of confidentiality, non-consensual testing, poor quality of care, gossip and blame were all frequent features of Egypt's health care setting and any of the 11,000 Egyptians living with HIV would rather suffer minor health problems than attempt to obtain health care (Henry J. Kaiser Family Foundation, 2011).

The report also found that nurses were often reluctant to provide people living with HIV health services due to their lack of knowledge about infection prevention; doubts as to the effectiveness of prevention measures; moral stigma against 'illegitimate sex'; fears of being stigmatized by the community; misconceptions about care and treatment of people living with HIV/AIDS; and the generally negative connotations associated with HIV/AIDS. The authors recommended, among other things, improved infection control programs and training on medical ethics with the aim of establishing effective anti-stigma policies, as well as education for health workers on health services for HIV-positive patients (Henry J. Kaiser Family Foundation, 2011).

HIV/AIDS-related S&D refers to prejudice, negative attitudes, abuse and maltreatment directed at people living with HIV and AIDS. Stigma and discrimination are central to the challenges of the global AIDS response and main social barriers hindering the response in Egypt. HIV related stigma encompasses the negative attitudes PLHIV fueled by rooted misconceptions. HIV related stigma and discrimination result in poor quality of care for PLHIV, frighten away potential clients in need of health service from seeking services and undermine prevention efforts by making people afraid to seek out information about how to reduce their risk of exposure to HIV, and to adopt safer behaviors and find out whether or not they are infected. The fear of stigma and discrimination also discourages PLHIV from disclosing their status, even to family members and PLHIV, and undermines their ability to adhere to treatment (UNAIDS, 2012).

2-Significance

In the Middle East and North Africa (MENA) region, the HIV epidemic has been on the rise since 2001. Although the overall HIV prevalence in the region is still low, the rise in new infections has put MENA among

the top two regions in the world with the fastest growing HIV epidemic. AIDS-related mortality has also almost doubled in the past decade among both adults and children in the MENA region. Stigma and discrimination is one of the primary reasons that people living with HIV or key populations at higher risk do not have access to essential HIV services, as they constrain the effectiveness of the region's response to HIV (UNAIDS Middle East and North Africa Regional report, 2011). Approximately 500 000 people are living with HIV in the MENA region. The epidemic in Egypt has increased during the past few years; HIV prevalence was only 0.6% in 2006, but it has increased to 6.7% in 2010 with hepatitis C (HCV) prevalence of 63% among Egyptians (Ministry of Public Health and Family Health International, 2010).

This indicates the potential for an expanded epidemic among key populations at higher risk within a short timeframe if adequate services with appropriate coverage are not in place. Although a low-prevalence country (below 0.1% in 2009), there is an evidence that Egypt is facing growing concentrated epidemics among most at-risk populations (MARPs), such as intravenous drug users and men having sex with men. All classes of MARPs are vulnerable to HIV/AIDS in Egypt, as they often exhibit multiple-risk behaviors, including unprotected sex, numerous sexual partners, forced sex, and intravenous drug use. They also represent a bridge population that could potentially transmit the disease to the general population (FHI, 2011).

HIV/AIDS -related stigma and discrimination remain a major challenge hampering the effective delivery of key services as prevention and treatment for PLHIV. While several programs worked on addressing S&D at health services, a major gap remains as reported by PLHIV, as almost 30% of surveyed men and women living with HIV prefer not to attend to a health care facility in fear of being stigmatized and rejected (ESPSRH, UNAIDS and UNICEF 2014). Furthermore, half of PLHIV would prefer not to disclose their status. Shockingly, a 71.3% of health care providers' reports they would refuse treating PLHIV (ESPSRH and ford foundation 2011).

HIV-related stigma and discrimination continue to be experienced across the globe, impeding access to and scale-up of HIV prevention, treatment, care and support programs (CDC, 2011 and UNAIDS, 2007). In 1987, HIV stigma was described as the 'third epidemic' coming after those of HIV and AIDS and no less crucial (Jonathan Mann, 2012). Since HIV/AIDS- related stigma acts at both the societal and at the individual level, there is an urgent need in many contexts to address stigma to promote adequate, accessible and acceptable HIV/AIDS programs and services. HIV/AIDS- related stigma has been shown to be inversely related to knowledge of HIV transmission, access to antiretroviral treatment and disclosure of HIV status (Castro & Farmer, 2005).

Understanding the magnitude of and causes underlying HIV-related stigma and discrimination amongst health workers is necessary for developing anti-stigma strategies and programs. Furthermore, to be able to characterize stigma as a global driver of HIV infection, it is necessary to measure it more uniformly and accurately. Stigma and discrimination deeply affect the lives of people living with HIV around the world. The burden of these attitudes is even heavier in conservative countries such as Egypt, yet scarcity of studies exploring HIV-related stigma in Egypt is already there. Stigma and discrimination are serious obstacles standing in the way of effective HIV/AIDS prevention and care (Kalichman, 2006).

In order to combat HIV/AIDS-related S&D, it is important to quantify them, to understand their magnitudes, to explore their associated factors and to explore how they vary across groups, settings and cultural contexts within a country (Ihab et al, 2013). In this respect, Egyptian report recommended training of nurses and equipping healthcare services for HIV-positive patients with monitoring systems that allow instances of abuse, negligence and malpractice by HCWs to be reported. Such reports should be followed up by investigations and, if necessary, disciplinary action. Furthermore, UNAIDS, 2012 recognizes stigma and discrimination among the top priorities to halt and start reversing the spread of HIV by 2015.

3- Aim of the Study

First, to assess factors contributing to HIV/AIDS– related stigma and discrimination among nurses in family health centers in Egypt. And second, to suggest a stigma reduction guide for nurses in family health centers.

4-Research questions

What are the factors that contribute to HIV/AIDS– related stigma and discrimination among Nurses working in Family Health Centers, Egypt?

5-Subjects and Methods

5.1- Research Design

A descriptive cross sectional correlational study was designed to collect data pertinent to study

5.2- Setting

Using cluster sampling technique, ten family health centers which follow thirty seven medical areas of Cairo Governorate were randomly selected using a two stage cluster sampling technique. In the first stage, 10

accredited family health centers were randomly selected. In the second stage, nurses were selected from each health center (a total sample of 100) by simple random sampling. These health centers provides primary health care services through outpatient clinics such as immunization clinic, dentistry clinic, labor room, emergency clinic, family planning clinic and counseling room, family medicine clinics, medical- aid services such as pharmacy, clinical laboratory, and x ray room, paramedical- aid services (laundry, kitchen, sterilization), and family filing room.

5.3 Sample

A total of 100 nurse who were involved in primary health care activities within the selected family health centers and who agreed to participate in the current study were recruited in the current study using simple random sampling study without restriction to age or gender.

5.4- Tools for data collection

A structured interviewing questionnaire sheet was developed by the researcher to assess:

1-Personal data and occupational health history includes nurses' age, gender, marital status, level of education, years of experience, job title, attended training courses about HIV/AIDS, training (e.g., on protecting HIV patients' confidentiality). Legal, policies and work environment included questions such as availability of protective supplies and procedures at workplace (e.g., gloves and post needle stick or splash exposure prophylaxis), existence and implementation of policies to protect PLHIV.

2-Nurses' knowledge regarding HIV/AIDS (definition, causative agent, etiology, reservoir of infection, mode of transmission, course, stages of disease, clinical manifestation, diagnosis, prevention, control, and management.

3- HIV/AIDS-related S&D attitude domains which were developed based on the standardized, field tested tool for measuring HIV-related stigma among health facility staff by (Laura Nyblade, 2013) and (UNAID, 2006) S&D technical brief prepared by (Annne,L, 2012) covering domains such as fear of casual transmission and refusal of contact with people living with HIV and AIDS domain that includes questions such as fear or worry of contracting HIV while working with PLHIV; ranging from non-invasive (taking temperature) to invasive (drawing blood). Values (shame, blame and social judgment) include questions such as (e.g., I would be ashamed if I were infected with HIV). Discrimination questions measures agreement with different attitudinal actions (items) such as extra infection precautions taken with PLHIV but not with other patients, Specific behaviors observed in the health center in the past 12 months (e.g; gossiping about a client's HIV status, willingness to treat six different key populations including men who have sex with men, sex workers, people who inject drugs, advising an HIV women not to have children.

5.5- Procedure

First, the researcher did an extensive review of related literature to get acquainted with the research problem and to develop the study tools and the stigma reduction guide. Second and once an official permission was granted to proceed with the study, all nurses worked in family health centers clinics were interviewed by the researcher for 30-45 minutes using the structured interviewing questionnaire. At the end of the study every participant was provided with a hard Arabic copy of the stigma reduction guide which includes content such as knowledge about HIV/AIDS mode of transmission, course, clinical manifestation, prevention, control, management and misconceptions. The guide also cover areas such as definitions, causes, forms, types, and examples of stigma and discrimination, negative consequences of S&D, work policies, anti S&D standards relevant to PLHIV'S rights, preventing S&D, voluntary HIV counseling and testing policy and services, and dealing with S&D and HIV positive health care staff in health care setting.

5.6- Protection of ethical and human rights

Full explanation of the purpose and the nature of the study and its importance were done for nurses prior to the anonymous interviewing questionnaire. Consent was granted by the participant by answering yes to the first question. Participation in the study was strictly voluntary. Confidentiality was maintained as the tools were not shared.

5.7- Validity, reliability and scoring system of study tools

The content validation of the questionnaire was performed by professionals to be 0.83. Cronbach's α for the study tool was 0.76. Scoring system of study tools was calculated by giving 1 score for "Yes" questions and zero for "No" questions then a total score was calculated for knowledge, and HIV/AIDS-related S&D attitude domains. The scores of the items were summed- up and the totals were divided by the number of the items and multiplied by 100, giving a mean percent score, then mean and standard deviation were computed. The total scores of values were then calculated and both knowledge level as well as S&D attitude level were estimated on a continuum to be either good (for values more than 80 %) or positive attitude level (non- stigmatizing/ non-discriminatory or accepted knowledge level (for values ranged from 60-80 %) and negative stigmatizing/ discriminatory or unaccepted knowledge level (for values less than 60 %).

5.8- Pilot Study

A pilot study was conducted on 10 (10%) nurses to ensure feasibility of the study, validity and reliability of the study tools. Based on the results of the pilot study, required changes in the tool were done.

5.9- Statistical data analysis

Upon completion of data collection, data were scored, tabulated, and analyzed by computer using the "Statistical Package for the Social Sciences" (SPSS) program. Descriptive statistics such as frequency, percentage, mean and standard deviation were utilized to analyze data pertinent to the study while the threshold of significance is fixed at the 5 % level (p-value). Chi and T. test was utilized to analyze data pertinent to the study.

6 -Results and Data Analysis

Section I: Description of nurses' personal data and occupational health history:

Table 1: Frequency distribution of nurses' personal data and occupational health history (n= 100).

Item	Frequency	
	No.	%
Age (years)		
25-	17	17
30-	33	33
40-	28	28
50-	22	22
Mean ±SD	39.7±9.4	
Number of wok years (experience)		
Less than 5 years	6	6
5-	39	39
10-	34	34
20-	18	18
30-	3	3
Mean ±SD	19.9+9.5	
Attended training courses about HIV/AIDS		
Yes	9	9
No	91	91
Legal policies and work environment		
Since I have been working at my institution, I have been trained in protecting the confidentiality of patients' HIV status		
Yes	11	11
No	89	89
My health center is well equipped with personal protective equipment Yes		
No	44	44
	56	56
My health center has clear policy for post needle-stick/splash exposure		
Yes	19	19
No	81	81
My health center has policies to protect HIV positive patients from discrimination		
Yes	12	12
No	88	88

A total of 100 nurses agreed to participate in the study, resulting in a response rate of 85.3%. The above table (1) revealed that the study sample aged from 25 to less than 60 years old with mean average 39.7±9.4. All nurses were married females, had three years diplomas and worked as clinic nurses with mean years' experience 19.9+9.5. It is also clear from the table that only 9% of nurses reported that they have attended training courses on aids while only 11% have been trained in protecting the confidentiality of patients' HIV status. Moreover, 81% 88% and of nurses respectively reported that the health centers they worked in is not well equipped with PPE (56%) and didn't have policies for post needle-stick or splash exposure or policies to protect HIV positive patients from discrimination.

Section II: Frequency distribution of nurses' knowledge about HIV/ AIDS:

Table 2: Frequency Distribution of causative agent and mode of HIV transmission (n= 100).

Causative agent and mode of transmission	Knowledge					
	Right answer		Wrong answer		I don't know	
	No.	%	No.	%	No.	%
Causative agent of AIDS	12	12	62	62	26	26
AIDS is highly contagious.	51	51	39	39	10	10
HIV/AIDS can be transmitted by casual contact.	38	38	51	51	11	11
HIV/AIDS has been transmitted to blood donors during blood transmission.	50	50	40	40	10	10
HIV/AIDS has been transmitted to people receiving blood transfusion.	75	75	59	59	16	16
Following an accidental needle stick, there is a greater likelihood of infection with hepatitis B virus than with HIV/AIDS.	11	11	70	70	19	19
Flees can transmit AIDS	21	21	44	44	35	35
HIV/AIDS can be transmitted through kisses	19	19	41	41	40	40
Touching vomitus of HIV positive patient can transmit	19	19	41	41	40	40
HIV/AIDS can be transmitted to blood donors during blood donation.	51	51	23	23	26	26
AIDS can be transmitted from mother to fetus during labor	45	45	23	23	32	32
AIDS can be transmitted from mother to fetus during breast feeding	25	25	35	35	40	40
AIDS- can- be- easily- transmitted- to- men- to- women- more- than- women- to- men	37	37	20	20	43	43

As observed from table (2) it is clear that 88 % of nurses didn't know the causative agent of HIV/AIDS while 38% of them reported that HIV/AID can be transmitted by casual contact. Furthermore, 50% and 51% of nurses respectively mentioned that HIV/AIDS has been transmitted to blood donors during blood transmission and to blood donors during blood donation. However, only 25% of nurses knew that AIDS can be transmitted from mother to fetus during breast feeding. As well, 45% of nurses reported that HIV/AIDS can be transmitted from mother to fetus during labor. Moreover, 37% of nurses mentioned that HIV/AIDS- can- be- easily- transmitted- to- men- to- women- more- than- from women- to- men.

Table 3: Frequency distribution of nurses' knowledge about HIV/ AIDS course and clinical manifestation (n= 100).

Course and clinical Manifestation	Knowledge					
	Right answer		Wrong answer		I don't know	
	No.	%	No.	%	No.	%
Persons with HIV can be asymptomatic, but still infectious.	59	59	39	39	2	2
The average length of time from the diagnosis of HIV/AIDS until symptoms is 10 years	24	24	52	52	24	24
The incubation period for AIDS	36	36	44	44	20	20
Opportunistic infection (such as Candida esophagitis) in a previously healthy person is suggestive of HIV/AIDS.	35	35	40	40	25	25
One should suspect the diagnosis of AIDS in a young person who presents with Kaposi's sarcoma.	2	2	88	88	10	10
HIV/AIDS is characterized by a decrease in T-4 lymphocytes, causing an impaired cellular immunity	25	25	45	45	30	30
Positive HIV patients- with- oral- candidiasis- is- in- clinical- stage- 3-	9	9	16	16	75	75
An individual may be infected with the AIDS virus even if the test for antibody to the AIDS virus is negative.	5	5	86	86	9	9

As shown in table (3), 64% of nurses don't know the right incubation period for AIDS. While only 35% of nurses mentioned that Opportunistic infection (such as Candida esophagitis) in a previously healthy person is suggestive of HIV/AIDS Surprisingly, 2% of nurses respectively stated that one should suspect the diagnosis of AIDS in a young person who presents with Kaposi's sarcoma. Furthermore, 91% of nurses don't know if positive HIV patients- with- oral- candidiasis- is- in- clinical- stage- 3-. Moreover, only 5% of them knew that an individual may be infected with the AIDS virus even if the test for antibody to the AIDS virus is negative.

Table 4: Frequency distribution of nurses' knowledge about HIV/ AIDS prevention (n= 100).

HIV prevention, control and management	Knowledge					
	Right answer		Wrong answer		I don't know	
	No.	%	No.	%	No.	%
You can minimize AIDS transmission by using condom	29	29	46	46	25	25
Gloves are not necessary when handling the specimen of a patient with HIV/AIDS.	80	80	7	7	13	13
ARV drugs during pregnancy can minimize mother to child transmission	5	5	25	25	70	70
Antiretroviral must begin within 72 hours of exposure, before virus has time to rapidly replicate in your body.	7	7	9	9	84	84
Positive partners- don't- need- sex- protection- methods	23	23	57	57	20	20

It is also clear from table (4) that 46% of nurses don't know that HIV/AIDS transmission can be prevented by using condom. Furthermore, 84% of them don't know if Antiretroviral must begin within 72 hours of exposure, before virus has time to rapidly replicate in your body. Moreover, 80% of nurses knew that gloves are necessary when handling the specimen of a patient with HIV/AIDS.

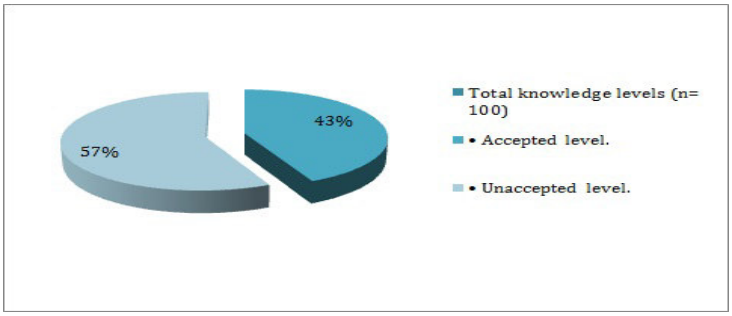

Figure 1: Nurses total knowledge levels (n= 100).

As observed from the previous figure, the accepted level of nurses' knowledge was 43% only whereas. With a mean score of knowledge (Mean+SD= 38.4+3.5).

Section III: Frequency distribution of nurses' HIV/ AIDS S&D attitude domains:

Table (5) Frequency distribution of fear of casual transmission and refusal of contact with people living with HIV and AIDS domain (n= 100).

Items	Positive attitude		Negative attitude	
	No.	%	No.	%
- I Would avoid caring for HIV/AIDS positive patient if I can.	23	23	77	77
- It is safe for people who have AIDS to work with children.	24	24	76	76
- People who have HIV should be isolated.	44	44	56	56
-How worried would you be of getting HIV if you did the following?				
- Caring for a person with HIV or AIDS.	30	30	70	70
- Took the temperature of a patient living with HIV	82	82	18	18
- Drawing blood	7	7	93	93
- Touching the saliva of a person with HIV or AIDS.	15	15	85	85
- I am comfortable assisting or being assisted by a colleague who is HIV infected.	66	66	34	34
- I am comfortable providing health services to clients who are HIV-positive.	15	15	85	85
- I am comfortable sharing a bathroom with a colleague who is HIV-infected.	15	15	85	85
- Clients who are sex workers deserve to receive the same level and quality of health care as other clients.	45	45	55	55
- The most frequent mode of contracting HIV among health care workers is through work-related exposure.	22	22	78	78
- you will worn your colleague if you know the patient is HIV positive	13	13	87	87
Are you worried about assisting in labor and delivery if The woman is living with HIV?	11	11	89	89
I will use extra PPE if patient is HIV positive	3	3	97	97

As shown from table (5) 77% of nurses reported that they would avoid caring for HIV/AIDS positive patient if they can. While 56% of nurses reported that People who have HIV should be isolated. Moreover, nurse reported that they are uncomfortable providing health services to PLWHIV (85%) and that they would be worried of getting HIV while performing the following procedures for a PLWHIV drawing blood (93%), touching the saliva of a person with HIV or AIDS (85%) and assisting in labor and delivery of an HIV positive woman (89%).

Table 6: Frequency distribution of values (shame, blame and social judgment) (n= 100).

Items	Positive attitude		Negative attitude	
	No.	%	No.	%
People living with HIV could have avoided HIV if they wanted to	33	33	67	67
People living with HIV should feel ashamed of themselves	37	37	63	63
I would feel ashamed if I was infected with HIV.	18	18	82	82
I would be ashamed if someone in my family had HIV	26	26	74	74
HIV is punishment from God for bad behavior.	30	30	70	70
People with HIV/AIDS are to be blamed for bringing the disease to the community	21	21	79	79
- HIV/AIDS spreads due to immoral behavior.	26	26	74	74
- Prostitution should be prohibited as a method of reducing the transmission of HIV.	46	46	54	54
- Homosexuality is the cause of AIDS	15	15	85	85

The above table (6) illustrated that 67% of nurses believed that People living with HIV could have avoided HIV if they wanted to. Moreover, 82% of nurses reported that they would feel ashamed if they were infected with HIV (74%) or if someone in their family had HIV. Furthermore, 79% of them reported that People with HIV/AIDS are to be blamed for bringing the disease to the community.

Table 7: Frequency distribution of discrimination attitude domain (n= 100).

Items	Positive attitude		Negative attitude	
	No.	%	No.	%
In the past 12 months, have you seen /observed the following happen in this health center because a client was known to have or was suspected of having HIV/AIDS?				
1. Receiving less care/attention than other patients.	25	25	75	75
2. Extra precautions being taken in the sterilization of instruments used on HIV positive patients.	31	31	69	69
3. Using latex gloves for performing noninvasive exams on clients suspected of having HIV.	5	5	95	95
4. Because a patient is or suspected to be HIV-positive, a senior nurse assigned the client to a junior nurse.	16	16	84	84
5. Testing a client for HIV without his/her consent.	41	41	59	59
6. Nurses gossiping about a client's HIV status.	21	21	79	79
I would never test a patient for HIV without informed consent.	39	39	61	61
No matter my views or feelings, it is my professional responsibility to maintain the confidentiality of patients living with HIV.	41	41	59	59
I would prefer not to provide services to:				
• People who inject illegal drugs	12	12	88	88
• Men who have sex with men	2	2	98	98
• Sex workers	16	16	84	84
• Transgender people	21	21	79	79
• Women who have sex with women	1	1	99	99
• Migrants	90	90	10	10
Women with HIV should be prevented from having children.	23	23	77	77

In this table (7) it is clear that nurses have seen/observed an obvious discrimination against AIDS/ HIV positive patient as evidenced by providing less care for these suspected or confirmed patients (75%), using extra sterilization precaution (69%), Using latex gloves for performing noninvasive exams on clients suspected of having HIV (95%), assigning junior nurses for care of the suspected or positive HIV patient, testing a client for HIV without his/her consent (59%) and nurses gossiping about a client's HIV status (79%). Furthermore, nurses reported that they would not prefer to provide care to People who inject illegal drugs (88%), Men who have sex with men (98%), sex worker (84%), Transgender people (79%) and Women who have sex with women (99%).

Moreover, 77% of nurses reported that Women with HIV should be prevented from having children while 61% of them mentioned that would test a patient for HIV without informed consent.

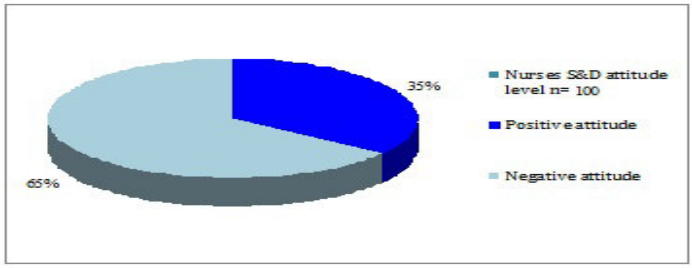

Figure 2: Nurses' total S&D attitude level (n= 100).

It is also observed from figure (2), that the positive non-stigmatizing /non-discriminatory attitude level among nurses was 35% while a negative stigmatizing discriminatory attitude level was 65%. The mean score of knowledge was (Mean+SD = 42.7+4.7).

Table 8.Statestical significant relationship between S & D attitude, knowledge, years of experience and training about HIV/AIDS (n=100).

Item	Level of knowledge	Years of experience	Training about HIV/ AIDS
S&D attitude Mean± SD= 42.7+4.7	Mean± SD=38.4+3.5	Mean± SD=19.9+9.5	Mean± SD=0.09
Test p. value	T= 10.47 P= 0.000*	T= 14.3 P= 0.001*	Chi = 29.2 P= 0.005*

(*) Statistically significant

As observed from table 8, it is clear that highly significant differences were found between S&D attitude, nurses level of knowledge , years of experience and HIV/AIDS training at P= 0.000* , P= 0.001* and 0.005* respectively.

7- Discussion

A total of 100 female nurse respondents were willing to participate in this study. Their age ranged from twenty five to less than sixty years old with mean average thirty nine years. Concerning education, all nurses had three years diplomas. More than half of nurses had from five to twenty years of job experience with a mean nineteen years. Unfortunately, almost all nurses reported that the health center doesn't have adequate PPE or any policies to protect HIV positive patients from discrimination. Nurses also reported that they have not been trained in protecting the confidentiality of patients' HIV status. In this regard (Garumma T Feyissa, Lakew Abebe, Eshetu Girma and Mirkuzie Woldie, 2012) reported that, lack of PPE, specific policies or clear guidance related to the care of clients with HIV reinforces discriminatory behavior amongst healthcare providers. This underscores the need to focus on equipping health centers with PPE and clearly communicating anti-stigma and anti-discrimination regulations and training for nurses.

In relation to nurses' level of knowledge about causative agent and mode of HIV transmission, course, clinical manifestation, prevention and treatment, majority of them didn't know the causative agent of AIDS. Only one third of nurses knew that AIDS can be transmitted from mother to fetus during breast feeding or from mother to fetus during labor. Around half of nurses mentioned that HIV/AIDS has been transmitted to blood donors during blood transmission and to blood donors during blood donation. Moreover, around two third of nurses mentioned that HIV/AIDS- can- be- easily- transmitted- to- men- to- women- more- than- women- to-men. Furthermore, more than half of them didn't know the incubation period or the opportunistic infection. Surprisingly, almost all nurses didn't know about Kaposi's sarcoma, stages of disease or window period. Around half of nurses don't know that HIV/AIDS transmission can be prevented by using condom.

To sum up, around half of nurses show unaccepted level of knowledge particularly with regard to HIV transmission routes, clinical manifestation and management which necessities an in depth HIV/ AIDS awareness among them. This goes with (Garumma T Feyissa, 2012) who found in a similar study that health care worker including nurses lack the in-depth knowledge on HIV and orientation about policies against stigma and discrimination. In this regard, (Akin S, Mendi B, Mendi O, Durna Z, 2013) added that Improving nurses' knowledge and attitudes towards patients with HIV/AIDS is vital for providing quality care for such patients.

Regarding nurses' HIV/ AIDS S&D attitude domains, a negative attitude was prevailing among sixty four percent of nurses. Fear of casual transmission and refusal of contact with PLWHIV and AIDS domain was shown by nurses who reported being uncomfortable providing care for PLWHIV and AIDS especially with invasive procedures or contact with patients' blood or bodily fluids during labor for example or by using extra PPE if patient is HIV positive. Furthermore, in relation to values (shame, blame and social judgment) attitude domain, majority of nurses reported that they would feel ashamed if they or someone in their family were

infected with HIV/AIDs and they also reported that People with HIV/AIDS are to be blamed for bringing the disease to the community especially the homosexual and IDU.

This goes with a recent qualitative Egyptian study that identify obstacles health care workers face in providing care for (PLWHA), Thirty in-depth interviews were conducted with physicians and nurses in one 300-bed tertiary care public hospital in Giza, Egypt. Five main themes were identified (1) fear of infection; (2) disbelief in effectiveness of infection control measures to protect against HIV; (3) misconceptions regarding medical care for PLWHA; (4) fear of secondary stigma; and (5) moral judgments toward PLWHA and negative connotations related to HIV. The researcher has recommended that interventions targeting health care workers should be multidimensional, including knowledge and skills building as well as value and attitude change (Lohiniva, Benkirane, Abdelrahman, Atta,. Saleh, Talaat, Dueger,El-Sayed, 2013). In this respect also, Ozakgül AA, Sendir M, Atav AS, Kızıltan B, 2013 reported that attitudes of nurses towards HIV/AIDS are affected by fear of HIV/AIDS infection, resulting in both negative attitudes and reluctance to care for these patients.

This fear of occupational exposure to HIV/AIDS was also confirmed by another South African study on rural nurses, where 58.6% of the respondents were found to be worried about occupational exposure (Delobelle P, Rawlinson JL, Ntuli L, Malatsi I, Decock R, Depoorter, 2009). Discriminatory attitude toward PLWHIV was manifested among nurses in family health centers as evidenced by majority nurses who observed these patients receiving less care, using extra sterilization precaution among more than half of nurses, Using latex gloves for performing noninvasive exams on clients suspected of having HIV by almost all nurses, testing a client for HIV without his/her consent, nurses gossiping about a client's HIV status and assigning junior nurses for care of the suspected or positive HIV patient. Furthermore, almost all nurses reported that they would not prefer to provide care men who have sex with men or women who have sex with women while majority of nurses reported that they would not prefer to provide care to people who inject illegal drug, sex worker, and transgender people.

In this respect, a study that examined specifically different forms of S&D concluded that denial of care, breach of confidentiality, non-consensual testing, poor quality of care, and gossip and blame were all frequent features of Egypt's healthcare setting. Due to the prevailing climate of HIV/AIDS- related S&D, many PLHA said they would rather suffer minor health problems than attempt to obtain healthcare (Lohiniva et al, 2013). Another study reported isolation, differential treatment, denial of care, mandatory HIV testing, disclosure of serostatus without consent, and verbal abuse or gossip occurring frequently to PLHA in the healthcare setting. Fear of being expelled from doctors' offices and dental clinics is common (Khattab et al, 2010).

Furthermore, many PLHA report having been denied other care services, such as surgery and normal deliveries, in most Egyptian healthcare institutions. One case of negligence and denial of care even resulted in the death of a female PLHA (EIPR, 2007).

Recent qualitative studies on HIV/AIDS related S&D in the healthcare setting pursue similar findings. A study that examined specifically different forms of S&D concluded that denial of care, breach of confidentiality, non-consensual testing, poor quality of care, and gossip and blame were all frequent features of Egypt's healthcare setting. Due to the prevailing climate of HIV/AIDS-related S&D, many PLHA said they would rather suffer minor health problems than attempt to obtain healthcare (Lohiniva et al, 2013). Another study reported isolation, differential treatment, denial of care, mandatory HIV testing, disclosure of serostatus without consent, and verbal abuse or gossip occurring frequently to PLHA in the healthcare setting. Fear of being expelled from doctors' offices and dental clinics is common (Khattab et al, 2010).

Furthermore, many PLHA report having been denied other care services, such as surgery and normal deliveries, in most Egyptian healthcare institutions. One case of negligence and denial of care even resulted in the death of a female PLHA (EIPR, 2007). Recent studies on the obstacles to care for PLHA found that physicians and nurses were often reluctant to provide PLHA with health services due to their lack of knowledge about infection prevention; doubts as to the effectiveness of prevention measures; moral stigmas against illegitimate sex; fears of being stigmatized by the community; misconceptions about care and treatment of PLHA; and the generally negative connotations associated with HIV/AIDS (Ihab, 2013). Furthermore there were highly significant differences between S&D attitude, nurses' level of knowledge and Years of experience highly significant differences were found between S&D attitude, nurses' level of knowledge and Years of experience. This goes with (Garumma T Feyissa, Lakew Abebe, Eshetu Girma and Mirkuzie Woldie, 2012)

(Laura et al, 2013) concluded that Stigma-reduction programmes in healthcare facilities are urgently needed to improve the quality of care provided, uphold the human right to healthcare, increase access to health services, and maximize investments in HIV prevention and treatment. This is why each nurse was provided with an Arabic copy of the stigma reduction guide at the end of the study, Studies conducted in Egypt have also found that proper training and education on how to treat PLHA have the potential to change the attitudes of HCWs towards PLHA and improve the quality of care they are provided with (Khattab et al, 2010; Abul-Seoud, 2009). Studies carried out elsewhere have further indicated that the implementation of anti-stigma policies can serve to reduce stigma, while interactive and participatory interventions hosted by healthcare facilities can also be effective (Avert, 2009).

8-Summary and conclusion:

Based on the results of the present study it could be concluded many factors were contributing to HIV/AIDS – related stigma and discrimination attitude among nurses working in family health centers in Egypt. These factors included years of experience, level of knowledge as well as attended HIV/ AIDS training courses. Unaccepted low levels of knowledge regarding HIV/AIDS transmission, clinical manifestation prevention, control and management, lack of orientation about policies against stigma and discrimination as well as a stigmatized/ discriminatory attitude remain a thorny health issue among nurses at family health centers in Egypt. HIV/AIDS- related sigma and discrimination training and policies are strongly required to reduce the impact of stigmatization and discrimination against PLWHA.

9- Recommendations

-Train all nurses in family heath care centers about HIV/ AIDS related stigma and discrimination reduction.
-Establish clear effective and well communicated anti-stigma policies and guidelines in family health centers.
-Equip healthcare services for HIV-positive patients with monitoring systems that allow instances of abuse, negligence and malpractice by nurses to be reported.
-Involve stigma prevention and HIV/AIDS rights protection teams at national level with a specific concentration on its relation to health care ethics.

References

Abul-Seoud, May 2009. Increasing Corporate Engagement in Prevention of HIV/AIDS in Egypt: Lessons Learned Egyptian Experience, Care International, Ford Foundation Cairo, Egypt.

Akin S, Mendi B, Mendi O, Durna Zm 2013. Turkish nursing students' knowledge of and attitudes towards patients with HIV/AIDS. J Clin Nurs.

Anne L. Stangl, Laura Brady and Katherine Fritz, 2012, .International Center for Research on Women, strive tackling the drivers of HIV/AIDS Measuring HIV stigma and discrimination, S&D technical brief, Washington, DC,USA.

Aubrey L. Florom-Smith and Joseph P. De Santis, 2013 Nursing Forum. Exploring the Concept of HIV-Related Stigma, Author manuscript; available in PMC. Published in final edited form as: Nurse Forum. 2012 Jul-Sep; 47(3): 153–165.

Avert 2009. HIV & AIDS stigma and discrimination http://www.avert.org/hiv-AIDS- stigma.htm

Castro A, Farmer P. 2005. Understanding and addressing AIDS-related stigma: from anthropological theory to clinical practice in Haiti. American Journal of Public Health.;95:53–59. [PMC free article]

Centers for Disease Control and Prevention. HIV among gay, bisexual and other men who have sex with men (MSM) 2010b Retrieved from http://www.cdc.gov/hiv/topics/msm/pdf/msm.pdf. Center for Disease Control and Prevention (CDC). (2011). a public health approach for advancing sexual health in the United States: Final Meeting Report [Online] www.cdc.gov/sexualhealth/docs/Sexual HealthReport-2011-508.pdf

Delobelle P, Rawlinson JL, Ntuli L, Malatsi I, Decock R, Depoorter AM: *2009,*. HIV/AIDS knowledge, attitudes, practices and perceptions of rural nurses in South Africa. *J Adv Nurs,*. 65:1061-73.

Family Health International FHI, .2010. HIV/AIDS Biological-Behavioral Surveillance Survey. Family Health International, Cairo, Egypt.

Egyptian Initiative for Personal Rights (EIPR) (a) 2007. Egyptian Initiative for Personal Rights (2007) Negligence Apparent Cause of Death for Woman Living with HIV http://eipr.org/en/pressrelease/2007/01/29/249

ESPSRHM UNAIDS and UNICEF, .2014. Stigma Perceived by PLHIV in Egypt

ESPSRHM and Ford Foundation, .2011. Stigma towrd PLHIV among health care providers in Egypt

Garumma T Feyissa, Lakew Abebe, Eshetu Girma and Mirkuzie Woldie, 2012, Stigma and discrimination against people living with HIV by healthcare providers, Southwest Ethiopia, Department of Health Education and Behavioral Sciences, and Department of Health Services Management, Jimma University, Jimma, Ethiopia BMC Public Healthm, http://www.biomedcentral.com/1471-2458/12/522

Henry J. Kaiser Family Foundation, 2011. HIV Risk Factors, Misconceptions Could Lead to "Rapid Spread" of Virus in Egypt, Daily News Reports available at kaisernetwork.org.

Ihab Abdelrahman, Anna Leena Loviniva, Amr Kandeelm Manal Benkiranm Hosam Atta, Hanan Saleh, Nasr El Sayed, Maha Talat and Lohiniva, 2013 Learning about Barriers to Care for People Living with HIV in Egypt: A Qualitative Exploratory Study, Ministry of Health in Egypt, Cairo, Global Disease Detection and Response Program, US Naval Medical Research Unit, Journal of the International Association of Providers of AIDS Care (JIAPAC).

Kalichman SC et al 2006. Generalizing a model of health behavior change and AIDS stigma for use with sexually transmitted infection clinic patients in Cape Town, South Africa. AIDS Care 18 (3): 178-182

Khattab et al 2010. The Agony of AIDS: A Qualitative Study on the Experience of AIDS in Egypt, ESPSRH.

Laura Nyblade, Aparna Jain, Manal Benkirane, Li Li, Anna-Leena Lohiniva, Roger McLean,

Janet M Turan,Nelson Varas-Díaz, Francheska Cintrón-Bou, Jihui Guan, Zachary Kwena and Wendell Thomas 2013. A brief, standardized tool for measuring HIV-related stigma among health facility staff: results of field testing in China, Dominica, Egypt, Kenya, Puerto Rico and St. Christopher & Nevis, Journal of the International AIDS society, volume 16, sublement 2

Lohiniva1. L., M. Benkirane, E. Abdelrahman, H. Atta, H. Saleh, M. Talaat, E. Dueger, N. El Sayed, 2013,

Learning About Barriers to Care for People Living with HIV in Egypt: A Qualitative Exploratory Study , Journal of the International Association of providers of AIDS Care. 2013 Jun 21. [Epub ahead of print], ;8(3):e59816. doi: 10.1371/journal.pone.0059816. Epub 2013 Mar 27.

Ministry of Public Health and Family Health International. Integrated Bio-Behavioural Surveillance Surveys, Round two, Egypt. 2010,. Country progress report, Egypt. 2010

Ozakgül AA, Sendir M, Atav AS, Kızıltan B, 2013:Attitudes towards HIV/AIDS patients and empathic tendencies: A study of Turkish undergraduate nursing students© Nurse Educ Today.Wiley Publishing Asia Pty Ltd.

UNAIDS Middle East and North Africa Regional report, 2011, The Joint United Nation Programme on HIV/AIDS, UNAIDS.Org

UNAIDS (2012). Global Report: UNAIDS Report on the Global AIDS epidemic (2012). [Online] www.UNAIDS.org/globalreport/documents/ 20121123_GlobalReport_full_en.pdf

USAID: 2007. [http://www.icrw.org/publications/measuring-hiv-stigma] website, Working Report Measuring HIV stigma: Results of a Field Test in Tanzania. USAID, Washington DC

UNICEF 2014. What Religious Leaders Can Do about HIV/AIDS: Action for Children and Young People. Accessed on 10 August 2010 from: www.unicef.com

World Health Organization. Health Topics. Human Immunodeficiency Virus (HIV)/ AIDS 2013. Available at: URL: www.WHO.int/topics/hiv_aids/en/ Accessed Sep 10, 2013.

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:
http://www.iiste.org

CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: http://www.iiste.org/journals/ All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: http://www.iiste.org/book/

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digtial Library , NewJour, Google Scholar