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Knowledge, Attitudes and Practice of Nurses Working with HIV/AIDS Patients

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ABSTRACT

Background: Human Immunodeficiency Virus (HIV) has become one of the most serious challenges to public health due to its high morbidity, mortality and economic impacts. Knowledge and positive attitudes are important aspects of providing nursing care for people living with HIV/AIDS. **Aim:** This study aimed to assess knowledge, attitudes and practices of nurses working with HIV/AIDS patients. **Methods:** this study was descriptive, performed on 65 nurses working with HIV/AIDS patients at El-Homiaat Hospital. Data were collected using A) Socio demographic questionnaire, B) HIV Knowledge Questionnaire (HIV-KQ-18) C) AIDS Attitude Scale (AAS) and D) Nurses' Practice Checklist (NPC). **Results:** The result of this study showed that nurses working with HIV/AIDS patients possess satisfying level of knowledge about transmission and non-transmission routes (78.5%) beside unsatisfying knowledge about preventive methods especially safe sexual practice (44.6%). However, nurses under study showed high level of empathic attitude toward people living with HIV/AIDS (78.5%) but at the same time high level of avoidance were observed (72.3%). Regarding practice, nurses under study showed lack of proper use of communication skills (80%) with adherence to safety measures (89.2%) with HIV/AIDS patients. Nurses with bachelor degree showed satisfying practice of both communication skills and safety measures. **Conclusions:** There were satisfying knowledge, negative attitudes and unsatisfying practice level among nurses under study. **Recommendations:** Training should focus on Preventive methods and modes of HIV transmission, care and support of all patients no matter what the disease, emphasizing confidentiality as a patient right that should not be ignored and monitor nurses' communication skills.

Key words: Knowledge, Attitude, Practice, Nurses, HIV, AIDS.

INTRODUCTION

HIV epidemic have become one of the most important public health problems in recent years. HIV/AIDS influence all aspects of human life such as physical, social, emotional and spiritual **(Koka et al., 2013)**.

HIV can only be transmitted by unprotected oral, anal, vaginal sexual intercourse with an infected partner, contact with blood of an infected person for example by using a contaminated needle or through needle stick injuries,

from mother to child during pregnancy, childbirth or breastfeeding **(Brunner & Suddarth, 2014)**. The virus is transmitted through blood, sperm, vaginal fluids, pre-seminal fluid and breast milk. It is evidenced that saliva, tears and sweat doesn't spread HIV, also handshake, kiss, hug, sharing toilet seat, swimming pool or a glass with an infected person doesn't hold a risk of HIV infection. It also not possible to contract the disease by eating foods that prepared by infected person **(Pinsky & Douglas, 2009)**.

Knowledge is an important aspect of providing nursing care for people living with HIV/AIDS, knowing the different modes of transmission will make it easy for nurses to interact and deliver care with more positive attitude to HIV/AIDS patient. The negative attitudes of healthcare workers toward HIV/AIDS patients help in spreading the disease, because people refrain from performing HIV testing fearing of the consequences. Perceived stress and discrimination among HIV/AIDS patients can lead to severe mental health problems and risk behaviors as unprotected sexual relation and forced sex **(Lau & Tsui, 2005; WHO, 2009)**.

AIDS stigma exists around the world in a variety of ways, including; isolation, rejection, discrimination and avoidance of HIV infected people. The negative attitudes among people and healthcare providers prevent many people from seeking HIV testing, returning for their results, or securing treatment, possibly turning what could be a manageable chronic illness into a death sentence and perpetuating the spread of HIV **(UNAIDS, 2013)**.

HIV/AIDS becomes an epidemic disease so that the demand for medical care worldwide is necessary. Health service workers play an important role in the battle against HIV/AIDS by providing testing, care, and treatment for people living with HIV/AIDS **(Unger et al., 2002)**. Furthermore, HIV also indirectly affects the health workforce in terms of increasing physical and emotional stress for care providers working with people living with HIV/AIDS **(Marchal et al., 2005)**.

Nurses as a healthcare providers have critically important roles in HIV/AIDS treatment and educational programs. Quite often, they are among the first care providers for patients with HIV, thought they exposed to an occupational risk of HIV infection due to direct contact with blood and body fluids during clinical practice. The unrealistic fear of contagion may lead to biased and prejudiced nursing

care for HIV and AIDS patients **(Kermode et al., 2005; RekabEslamiZadeh, 2011)**.

Significance of the study

In Egypt, among the over 5 million people tested by the Egyptian national mandatory HIV testing program between 1990 and 2003, a total of 1,838 cases of HIV/AIDS were detected. In 2009, Egypt has an HIV/AIDS infection rate of 0.02% (11,000 cases) and 500 cases die each year from HIV/AIDS **(UNAIDS, 2013)**.

Health professionals have a negative attitude towards patients with AIDS and many are reluctant to provide care to these patients. The quality of care received by HIV-infected individuals and AIDS patients can be affected by the reaction of healthcare providers. In this regard, nurses have a key position in the delivery of care **(Morrow, 2011; Tomaszewski, 2012)**.

Aims of this study are to: assess knowledge, attitudes and practices of nurses working with HIV/AIDS patients.

Research Questions: This study is based on answering the following question:

- What are the knowledge, attitudes and practice of nurses working with HIV/AIDS patients?

Subject and Methods

Research Design: A Descriptive research design was selected to fulfill the aim of the study and answer the research questions.

Setting of the Study: The study was conducted at El-Homiaat Hospital. It is affiliated to the Ministry of Health and Population (MOHP).

Subject: - The subjects of the present study included 65 nurses working with HIV/AIDS patients. The sample size represents about 85 % of total nurses number in the hospital.

Data Collection tools

Data were collected using the following tools:

A- Interviewing Questionnaire:

It was designed by the researcher in simple Arabic language after reviewing literature. The questionnaire consists of questions about demographical characteristics such as age, sex, marital status, education level, serostate of respondents, source of information about HIV, and the number of years they worked with HIV/AIDS patients.

B- HIV-Knowledge Questionnaire:

It was developed by **Carey and Schroder (2002)**. It was utilized to measure knowledge about HIV regarding prevention and modes of transmission. The HIV-KQ-18 consists of 18 “true”, “false”,

or "don't know" statements, which are tallied up as a crude score on the overall correct answers identified. The minimum and maximum value range from 0-18. Each correct answer is scored with 1 and 0 for every wrong answer, don't know responses are considered incorrect and thus scored 0.

C- AIDS Attitude Scale (AAS):

It was developed by **Froman, Owen, and Daisy (1992)**. The scale is based on a three point Likert scale "disagree", "may be" and "agree". Each item is scored from 0 to 2. According to Froman and Owen, the questionnaire is composed of two correlated subscales: 14 empathetic items and 7 avoidant items. The empathetic items are described as questions, which denote a therapeutic and positive viewpoint towards HIV/AIDS, while avoidant subscales are described as stigmatic and negative.

The items 1-5, 8-11, 14, 15 and 19-21 are coded as avoidant and items 6, 7, 12, 13, 16-18 are coded as empathetic items. A higher score on the empathetic subscale indicates a more acceptant attitude towards HIV/AIDS, while a higher score on the avoidant subscale denotes a more intolerant attitude towards people living with HIV/AIDS. In order to calculate the total scores of AAS.

D- Nurses' Practice Checklist (NPC):

It is an observation checklist developed by the researcher. The Nurses' Performance Checklist consists of 39 items divided into two main categories Communication Skills (items 1-23) and Safety Measures (items 24-39). Each item has responses of "most of times" "sometimes" "rarely" and "never" that are filled by the researcher based on four times observation of study subjects dealing with HIV/AIDS patients. Each item is scored from 0 to 3. The maximum and minimum value range from 0 to 117. A higher score on the NPC indicate satisfying communication skills and safe practice with HIV/AIDS patients and a lower score on the NPC indicate poor communication skills, negative attitude and poor application of safety measure with HIV/AIDS patients.

Pilot study

The pilot study was conducted on seven nurses from the hospital. They represent 10% of total sample to ensure the clarity of questions, applicability of the tools and the time needed to complete them. The necessary modifications were done as a result of pilot study; those nurses were excluded from the actual study sample.

Ethical considerations

The ethical research considerations in this study included the following:

Table (1): Socio-demographic Characters of Nurses Under Study:		
Items	**No**	**%**
Age in years:		
<30	45	69.2
>30	20	30.8
Sex:		
Males	16	24.6
Females	49	75.4
Residence:		
Rural	4	6.2
Urban	61	93.8
Number of family members:		
<3	8	12.4
3-5	48	73.8
≥6	9	13.8
Marital status:		
Single	22	33.8
Married	39	60.0
Divorced	2	3.1
Widow	2	3.1
Education:		
Diploma	30	46.2
Institute	22	33.8
Bachelor	13	20.0
Family medical history:	14	20.5
Positive serostate	11	16.9
IV drug abuse	3	4.6
Work extra shifts:	31	47.7
Years of experience:		
<1 year	42	64.6
≥1 year	23	35.4

1- The research approval of each participant to share in the study was taken.
2- The researcher clears the objective and aim of the study to subjects.
3- The researcher maintain on anonymity and confidentiality of subjects.

Subjects are allowed to choose to participate or not, and they have the right to withdraw from a study at any time.

Result

Table (1): clarifies that, the mean age of nurses under study was 28.6, more than two thirds of nurses under study (67.7%) aged older than 30 years old, the majority of them (75.4%) were females and more than half of them (60%) were married. Concerning residence, the majority of nurses under study (93.8%) reside in urban area however near half of them (44.6%) comes from rural descend. More than two thirds of the studied subjects reported having three to five family members (73.5%).

Near half of study sample (46.2%) were diploma nurse followed by (33.8%) graduated from technical institute of nursing. The majority of the sample was free from any physical diseases and only (16.9%) reported a first-degree relative

with a positive serostate of HIV, HCV or HBV.

Table (2): Distribution of Studied Subjects in Relation to their Sources of Information about HIV/AIDS and Services Provided by the Hospital.

Source of information:	No	%
Family member	8	12.3
Mass media	36	55.4
Doctors/nurses	42	64.6
Study curricula	39	60.0
Internet	28	43.1
Hospital services to staff:	**No**	**%**
Medical services		
Yes	41	63.1
No	24	36.9
Periodical checkup		
Yes	0	0
No	65	100

Table (2) reveals that co-workers "doctors and nurses" were the most reported source of information about HIV/AIDS by the studied subjects (64.6%), followed by the formal education (60%), mass media (55.4%) and Internet (43.1%), and the least reported source was family members (12.3%). Furthermore, more than half of studied subjects have health insurance (63.1%) and none perform periodical checkups neither optional nor mandatory.

Table (3) clarify that indicates that the overall knowledge level is satisfying in more than three quarters of subjects under study (78.5%). However, the prevention questions indicate lack of knowledge about the HIV's preventive methods in near half of the studied sample (44.6%). It also clarifies that most of study subjects have unsatisfying practice regarding communication skills (80%). However, the adherence to safety measures was observed to be satisfying in almost 90% of the studied subjects. However more than three quarters of the studies subjects show empathic attitude toward people living with HIV/AIDS (78.5%), they also display an avoidant attitude toward people living with HIV/AIDS (72.3%).

Table (3): Distribution of Studied Subjects in Relation to their Total Scores Percentages of Knowledge, Attitude and Practice.

Total score	Unsatisfying <60%		Satisfying >60%	
	No	%	No	%
Knowledge	**14**	**21.5**	**51**	**78.5**
Transmission	8	12.3	57	87.7
Prevention	29	44.6	36	55.4
Attitude	**46**	**70.8**	**19**	**29.2**
Empathic	14	21.5	51	78.5
Avoidant	47	72.3	18	27.7
Practice	**52**	**80**	**13**	**20**
Communication	52	80	13	20
Safety measures	7	10.77	58	89.23

Discussion

Knowledge about HIV/AIDS has crucial part in decreasing the fear and enhances the ability of nurses to care for

people living with HIV/AIDS. The present study results shows that none of nurses under study routinely got a viral testing. This may be due to that nurses under study are unaware that they could be infected with HIV infection from a healthy looking individual and lack of supervision from the infection control team and hospital administration. This result is consistent with **World Health Organization (WHO) (2013)**, which reported that nurses who work with HIV positive or AIDS patients are avoiding viral testing not to be subjected to stigma and discrimination from their colleagues.

Regarding source of information about HIV, the majority of nurses under study reported that HIV/AIDS is not a topic for discussion within family context. This may be due to the fact that Egyptian culture is sexually conservative. This interpretation is supported by **Wahba and Roudi-Fahimi (2012)** who discussed reproductive health in schools in Egypt and reported that sexual related health issues could not be discussed inside Egyptian family because of traditional religious and family values. This result is also congruent with **Ouzouni and Nakakis (2012)** who assessed HIV knowledge among student nurses and reported that HIV related knowledge is decreased in the studied sample who descend from religious backgrounds.

The present study demonstrates satisfying level of knowledge for both male and female nurses under study. This result may be related to the reported sources of information about HIV from nurses under study. Near two thirds of nurses under study gain their information about HIV/AIDS from their co-workers (doctors and nurses) and formal education. This result is consistent with **Alwutaib et al. (2012)** who assessed knowledge and attitudes of nurses regarding blood borne infections and reported that nurses under study reported an acceptable level of knowledge regarding HIV infection. This result is also supported by **Koc (2013)** who assessed nurses' level of knowledge and practices regarding HIV/AIDS and revealed good knowledge level among nurses under study.

Regarding modes of transmission, the majority of nurses under study scored high in modes of transmission related items. This result may be due to that nurses under study reported co-workers and formal education as their source of information about HIV, which gives accurate information about modes of transmission of HIV. This result is supported by **Shivalli**

(2014) who assessed perception and prevention practices of nursing students and reported good knowledge about the modes of transmission of HIV among nursing students under study.

Regarding HIV prevention, nurses under study scored considerably low regarding HIV prevention items. This may be due to the lack of quality in-service education in hospital and the conservative culture in Egypt that doesn't allow conversation about certain issues such as safe sex. This result is consistent with **Geel (2012)** who revealed in her article that Egyptian public schools (include nursing schools) only contain limited aspects of sexual related health topics. As well, this result is supported by **Boutros and Skordis (2010)** who investigated HIV/AIDS challenges in Egypt and found that social, conservative norms and laws prevent sexual education and safe sexual practice in Egypt.

The present study demonstrates that more than two thirds of nurses under study have negative attitudes toward people living with HIV/AIDS. This result may be related to the effect of general attitudes of the community toward people living with HIV/AIDS on nurses under study. This result is supported by **Hassan and Wahsheh (2011)** who assessed knowledge and attitudes of nurse and reported a negative attitude exhibited by nurses under study toward people living with HIV/AIDS. As well, this result is supported by **RekabEslamiZadeh (2011)** who assessed knowledge and attitudes of nurse working with HIV/AIDS and reported a negative attitude toward HIV/AIDS patients expressed by nurses under study.

In addition, this result is inconsistent with study by **Alwutaib et al. (2012)** who reported that nurses exhibited positive attitude toward people living with HIV. Moreover, this result is incongruent with **Ouzouni and Nakakis (2012)** who reported a positive attitude toward people living with HIV/AIDS among student nurses in Greece. This inconsistency may be due to cultural differences.

Regarding empathic and avoidant attitudes, however most of nurses under study expressed high empathic attitudes towards people living with HIV/AIDS, most of them exhibited avoidant attitude toward people living with HIV/AIDS. This may be related to the fact that nurses are caring persons in the first place and the religious background that influence people's attitudes within the Egyptian culture. In agreement with the present

study, the study by **Eriksson and Grundin (2010)** who assessed student nurses in India and reported high empathic attitudes towards people living with HIV/AIDS, but at the same time refraining attitudes were observed. Additionally, the present study results are in agreement with **Taher and Abdelhai (2011)** who reported an avoidant attitude that was present in both students and postgraduate nurses before the intervention program, which changed to a lesser extent after the applied educational program.

Nurses under study showed an over all unsatisfying total practice level, this may be related to the impact of negative attitude exhibited by nurses under study toward people living with HIV/AIDS. This result is supported by **Koc (2013)** who reported unsatisfying level of practice among nurses who work with HIV/AIDS patients. This result disagrees with **Achappa et al. (2012)** who reported a satisfying level of practice among nurse working with HIV/AIDS. This contradiction may be due to different samples where institutional policies were applied to achieve a satisfactory level of practice.

Concerning communication skills, nurses under study have unsatisfying communication skills, however nurses with bachelor degree had average good scores in communication skills. This finding may be due to the fact that educational level of nursing staff has a major influence on patients' outcomes. This interpretation is corresponding to **Hickam et al. (2003)** who assessed the effect of healthcare working conditions in patient safety and suggested that bachelor degree nurses are more likely to demonstrate professional behaviors important to patient safety and communication. Moreover, the present study result is in agreement with **Lima et al. (2011)** who assessed communication between student nurses and AIDS patients and concluded that it was difficult for nursing students to establish an effective communication with HIV/AIDS patients.

Regarding safety measures, nurses under study have satisfying practice of safety measures regardless educational level and years of experience. This result may be due to the application of infection control standards in hospital as reported by nursing staff. This result is supported by **Ewis and Emad (2014)** who assessed nursing adherence to safety measures in Egypt and showed that 70% of nurses under study adhere to infection control measures and devoted that adherence to managerial supervision by infection control

team. Moreover, 29.4% of nurses under study reported a regular evaluation for infection control measures compliance.

This result is inconsistent with **Simbar et al. (2010)** who assessed health believes of midwives about HIV/AIDS protection and reported moderate practice among studied subjects. Midwives reported two main barriers that impacted their protection behavior, which were emergency situations and low availability of protective equipment. This inconsistency may be due to presence of different samples with different working conditions.

Conclusion

Nurses working with HIV/AIDS patients have satisfying level of knowledge about mode of transmission of HIV infection and less knowledge about HIV related preventive methods especially condom use and safe sexual practices. Nurses under study in general expressed high levels of empathic attitudes towards people living with HIV/AIDS, but at the same time avoidant attitudes were observed. Negative attitudes towards specific groups such as homosexuals and intravenous drug users were found among Nurses under study.

Practice level was unsatisfying among nurses under study regarding communication skills, but at the same time nurses under study showed satisfying commitment to the safety measures. There was no significance difference between knowledge, attitude and practices of studied subjects but their poor practice of communication skills were closely related to their negative attitude toward people living with HIV/AIDS.

Recommendation

1) Teach nurses preventive methods and modes of HIV transmission.

2) Education about HIV prevention should start at school age.

3) Care and support of all patients no matter what the disease.

4) Care and support of people living with HIV regardless the cause of infection.

5) Emphasizing confidentiality as a patient right that should not be ignored.

6) Encourage managers to monitor the communication skills of nurses with patients and arrange the suitable training courses about communication skills for nurses and the entire healthcare sector.

7) Establishing policies and protocols for post-exposure prophylaxis for nurses.

8) Psychological counseling should be provided for HIV/AIDS patients in facilities serving HIV/AIDS patients and should be delivered by professionals.

9) Provide psychological care for nurses working with HIV/AIDS patients to prevent psychological burden and decrease their negative attitude toward HIV/AIDS patients.

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