



## KNOWLEDGE AND ATTITUDES OF PARAMEDICAL STAFF IN PRIMARY HEALTH CARE CENTERS IN BAGHDAD/IRAQ TOWARDS ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

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**ABSTRACT** **BACKGROUND :** HIV/AIDS is an infectious disease and the fourth cause of death in the world and it is a matter of concern because the number of cases has increased dramatically over the last ten years.

**OBJECTIVES :** Aim of this study is to assess the level of knowledge and attitudes of paramedical staff and to determine the effect of socio-demographic data and job title of paramedical staff on the level of knowledge and attitudes toward HIV/AIDS.

**METHODOLOGY :** A cross-sectional study was carried out on 400 paramedical staff in PHC centers in Al-Karkh health directorate in Baghdad.

**RESULT:** The result of this study showed 264 (66%) of paramedical staff had acceptable and 136 (34%) had good knowledge scores. And there was significant relation ( $p=0.0001$ ) with the job title of the staff. Regarding attitudes scores, 172 (43%) of paramedical staff had poor, 164 (41%) had acceptable and only 64 (16%) had good attitudes scores. And there was significant relation between attitudes and age, gender, job title of the staff with ( $p=0.0001$ ).

**CONCLUSION:** The study suggested the need for more in-service training on HIV/AIDS for nurses to improve nurses knowledge and positive attitude towards HIV/AIDS patients.

### KEYWORDS :

#### INTRODUCTION

**Human immunodeficiency virus infection and acquired immune deficiency syndrome (HIV/AIDS)** is a spectrum of conditions caused by cellular and humeral immune dysfunction resulting from infection with the human immunodeficiency virus (HIV)<sup>(1)</sup>.

The vast majority of HIV-infected people, approximately 95% of the total, live in developing countries. Sub-Saharan Africa has been hit especially hard, with almost 70% of all HIV-infected patients living there and 90% of all maternal-fetal transmission occurring there.

HIV/AIDS has had a great impact on society, both as an illness and as a source of discrimination. The disease also has large economic impacts. Iraq is still among the low prevalence countries for HIV/AIDS.<sup>(2)</sup>

The prevalence of HIV in Iraq is currently less than 0.1% of the population, but associated vulnerability and risk factors continue to increase as a result of liberalized trade relations and increased drug use.<sup>(3)</sup>

#### 1-TRANSMISSION

HIV is transmitted by three main routes: sexual contact, significant exposure to infected body fluids or tissues, and from mother to child during pregnancy, delivery, or breastfeeding (known as vertical transmission). There is no risk of acquiring HIV if exposed to feces, nasal secretions, saliva, sputum, sweat, tears, urine, or vomit unless these are contaminated with blood.<sup>(4,5)</sup>

#### 2-CLINICAL MANIFESTATION

The clinical consequences of HIV infection encompass a spectrum ranging from an acute syndrome associated with primary infection to a prolonged asymptomatic state to advanced disease. It is best to regard HIV disease as beginning at the time of primary infection and progressing through various stages, HIV disease in untreated patients inexorably progresses even during the clinically latent stage.<sup>(6)</sup>

#### 3-PREVENTION

##### SEXUAL CONTACT

Consistent condom use reduces the risk of HIV transmission by approximately 80% over the long term. When condoms are used consistently by a couple in which one person is infected, the rate of HIV infection is less than 1% per year. The Application of a vaginal gel containing tenofovir (a reverse transcriptase inhibitor) immediately before sex seems to reduce infection rates by approximately 40% among African women.<sup>(7,8)</sup>

Circumcision in Sub-Saharan Africa "reduces the acquisition of HIV by heterosexual men by between 38% and 66% over 24 months".<sup>(9)</sup>

Comprehensive sexual education provided at school may decrease high risk behavior.<sup>(9)</sup>

#### PRE-EXPOSURE

Antiretroviral treatment among people with HIV whose CD4 count  $\leq$  550 cells/ $\mu$ L is a very effective way to prevent HIV infection of their partner (a strategy known as treatment as prevention). It is associated with a 10 to 20 fold reduction in transmission risk. Pre-exposure prophylaxis with a daily dose of the medications tenofovir, with or without emtricitabine, is effective in a number of groups including men who have sex with men<sup>(10)</sup>

#### POST-EXPOSURE

A course of antiretrovirals administered within 48 to 72 hours after exposure to HIV-positive blood or genital secretions is referred to as post-exposure prophylaxis. The use of the single agent zidovudine reduces the risk of a HIV infection five-fold following a needle-stick injury. As of 2013, the prevention regimen recommended in the United States consists of three medications—tenofovir, emtricitabine and raltegravir—as this may reduce the risk further.<sup>(11)</sup>

#### MOTHER-TO-CHILD

Programs to prevent the vertical transmission of HIV (from mothers to children) can reduce rates of transmission by 92–99%. This primarily involves the use of a combination of antiviral medications during pregnancy and after birth in the infant and potentially includes bottle feeding rather than breastfeeding.<sup>(12,13)</sup>

#### 4-TREATMENT

There is currently no cure or effective HIV vaccine. Treatment consists of highly active antiretroviral therapy which slows progression of the disease. Treatment also includes preventive and active treatment of opportunistic infections.<sup>(14)</sup>

#### SUBJECT AND METHODS

##### 1-STUDY DESIGN:

A descriptive cross sectional study.

##### 2- TIME OF THE STUDY:

The data collection were carried out during the period between 1<sup>st</sup> February to 1<sup>st</sup> July 2018.

##### 3- SETTING:

The study was conducted in Al-Karkh health directorate in Baghdad/Iraq and the PHC centers were chosen randomly.

##### 4-SAMPLE SIZE AND SAMPLING TECHNIQUE:

A total of 400 paramedical staff in the PHC centers in Al-Karkh health directorate were selected to participate in the study on a random base.

##### 6-INCLUSION CRITERIA:

Paramedical staff of both sexes in seven sectors of PHCs in Baghdad Al-Karkh Health directorate.

**7-EXCLUSION CRITERIA:**

Paramedical staff who refuse to participate in this study for any reason.

**9-ETHICAL CONSIDERATION:**

- 1- The study was approved by the scientific council of Arab Board for health specialization of family medicine.
- 2- The manger of PHCs were visited before starting work in each center for taking permission.
- 3- Verbal consent was approved from each paramedics before giving questionnaire.

**11-STATISTICAL ANALYSIS:**

Data were presented in simple measures of frequency, percentage, mean, standard deviation, and range (minimum-maximum values). The significance of difference of different percentages (qualitative data) were tested using Pearson Chi-square test ( $\chi^2$ -test). Statistical significance was considered whenever the P value was equal or less than 0.05.<sup>(15)</sup>

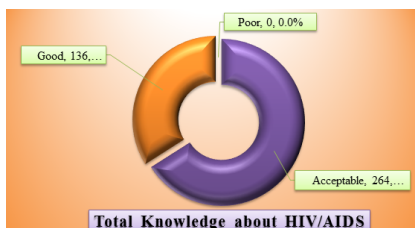
**RESULT**

**Table (1) distribution of paramedical staff according to sociodemographic characteristics**

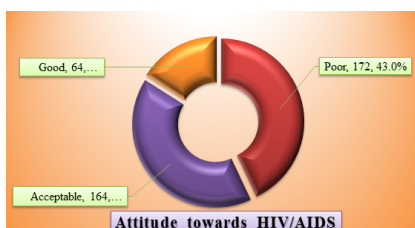
	No.	%	
Age (years)	20---29	172	43.0
	30---39	88	22.0
	40---49	96	24.0
	=>50	44	11.0
	Mean±SD(Range)	34.2±9.8 (20-55)	
Gender	Male	168	42.0
	Female	232	58.0
Job title	Nurse	64	16.0
	Skilled nurse	88	22.0
	Technical Nurse	64	16.0
	Medical assistant	184	46.0

**Table(2): Distribution of paramedical staff according to their knowledge and attitudes scores.**

	Poor		Acceptable		Good	
	No.	%	No.	%	No.	%
Knowledge on HIV/AIDS	-	-	264	66.0	136	34.0
Attitudes towards HIV/AIDS	172	43.0	164	41.0	64	16.0



**Figure(1) : Distribution of paramedical staff according to knowledge scores**



**Figure (2): Distribution of paramedical staff according to attitudes scores.**

**Table(3):Relation between sociodemographic characteristics and knowledge on HIV/AIDS.**

	Knowledge on HIV/AIDS						P value	
	Poor		Acceptable		Good			
	No.	%	No.	%	No.	%		
Age (years)	20---29	-	-	108	40.9	64	47.1	0.205
	30---39	-	-	56	21.2	32	23.5	
	40---49	-	-	72	27.3	24	17.6	

	=>50	-	-	28	10.6	16	11.8	
Gender	Male	-	-	116	43.9	52	38.2	0.274
	Female	-	-	148	56.1	84	61.8	
Job title	Nurse	-	-	28	10.6	36	26.5	0.0001*
	Skilled nurse	-	-	68	25.8	20	14.7	
	Technical Nurse	-	-	44	16.7	20	14.7	
	Med assistant	-	-	124	47.0	60	44.1	

**Table(4): Relation between sociodemographic characteristics and attitudes towards HIV/AIDS.**

	Attitudes towards HIV/AIDS						P value	
	Poor		Acceptable		Good			
	No.	%	No.	%	No.	%		
Age (years)	20---29	72	41.9	64	39.0	36	56.3	0.035*
	30---39	40	23.3	36	22.0	12	18.8	
	40---49	36	20.9	44	26.8	16	25.0	
	=>50	24	14.0	20	12.2	-	-	
Gender	Male	92	53.5	44	26.8	32	50.0	0.0001*
	Female	80	46.5	120	73.2	32	50.0	
Job title	Nurse	16	9.3	28	17.1	20	31.3	0.0001*
	Skilled nurse	44	25.6	44	26.8	-	-	
	Technical Nurse	20	11.6	24	14.6	20	31.3	
	Med assistant	92	53.5	68	41.5	24	37.5	

**DISCUSSION**

Inspite of some gaps in their knowledge about HIV/AIDS, especially those related to its modes of transmission, paramedical staff recruited in this study showed (34%), (66%) of them had good and acceptable knowledge scores respectively, however a percentage of paramedical staff showed negative attitudes toward those who affected by HIV/AIDS, where (43%) of them had poor attitude scores. The incongruity between perceived knowledge and reported attitudes among paramedical staff suggests that there is a need for specially designed and culturally tailored HIV/AIDS health education programmes. These findings were close to that which was obtained by the study carried out among nursing staff in South east, Nigeria (2017) where (75.1%) of the nurses who responded scored highly in the knowledge section but differ in that (94.6 %) of them scored highly in the attitudes section.<sup>(16)</sup>

In this study, there was no significant relationship between variables of age and gender with paramedical staff knowledge and this result agree with the study carried out by Mohammed Ali in Tehran (2010), but differ with that study in there was significant relation between knowledge and the job title of the staff.<sup>(17)</sup>

On the other hand attitudes were significantly influenced by the age which was significantly higher in younger age this agree with study carried out by Mostafa A.Abolfotouh in Saudi Arabia (2013),<sup>(18)</sup> also there was significant relation with gender which was higher in females ,this result agree with study carried out by Mehrdad Askarian in Iran

(2006) where females more often answered correctly.<sup>(19)</sup> in this study there was significant relation between knowledge, attitudes and the job title of the staff .This results was comparable with that of the study carried out by Mehrdad Askarian in Iran (2006), where knowledge and attitudes was significantly influenced by the job title of the staff.<sup>(19)</sup> Similarly in the study which was carried out in South East, Nigeria (2017), showed that respondents level of knowledge was influenced by the level of formal education attained.<sup>(16)</sup>

Therefore exploration of the knowledge , attitudes of paramedical staff and investigation of their educational needs about HIV/AIDS is of great importance and should be repeatedly evaluated in the future.

**CONCLUSION**

Generally, paramedical staff showed good knowledge about HIV/AIDS.

High percentage of paramedical staff showed negative attitudes

toward those affected by HIV/AIDS based mainly on misconceptions and fears which have no scientific justification.

The knowledge of paramedical staff was significantly influenced by the job title of the staff, higher level of knowledge was found among medical assistants followed by skilled nurses followed by technical nurses then nurses.

The attitudes of paramedical staff were significantly influenced by the job title of the staff, higher attitudes were found among medical assistant followed by technical nurse and nurses followed by skilled nurses.

## RECOMMENDATIONS

Curriculum of health institutes should be revised regarding the included information regarding HIV/AIDS.

Adoption of training sessions, workshops on HIV/AIDS, setting the retraining and continuing educational programs on AIDS for at risk groups such as nurses is recommended.

Development of booklets containing different informations about HIV/AIDS and these booklets should be distributed to all paramedical staff in the primary health care centers and emphasis on mass media to educate general public.

Finally, further, larger, scale studies are recommended in future show the awareness of paramedical staff working in primary health care centers towards HIV/AIDS infection.

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