

## IMPLEMENTATION AND RESULTS OF SEMINARS HELD IN SCHOOLS IN TASHKENT ON HIV INFECTION IN NURSE PRACTICE

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### ABSTRACT

The article is devoted to the role of nurses in the prevention of immunodeficiency virus. Since nurses, by virtue of their activities, are closest to the sick and their families, they are able to create the most favorable atmosphere for them, which is very important for the success of treatment and control. Today's nurse is the foremost force of modern medicine. It plays an important role in the implementation of health reforms. Based on international requirements, the nursing education system is being improved.

**Keywords:** *HIV infection, nurses, health, social problem, prevention work, educational institutions, pupil.*

### INTRODUCTION

In modern conditions, in the fight against the spread of HIV infection, the implementation of various comprehensive measures to improve the knowledge of the population about HIV infection, especially in high-risk groups, improving the early detection of this disease using low-threshold technologies, organizing an approach to providing nursing care to HIV-infected patients in the presence of medical, information, material and technical and human resources on the basis of monitoring the achievement of goals [1].

In the field of prevention, including among high-risk groups, the priority is to develop and approve a unified Russian information strategy on HIV infection with the creation of an expert council, the involvement of specialists and representatives of the media, public organizations, and the development of uniform standards and systems. Among young people, it is necessary to develop and implement special educational programs at all levels for high school students, students of higher and secondary educational institutions. The rationale for this recommendation is the effectiveness of systems developed and implemented in educational institutions in the interaction of health care and education systems, proven in our study [2,5].

In preventive work, special attention should be paid to children and adolescents, because it is among them that there is a very low level of HIV awareness [3,4]. The effectiveness of the implementation of the seminar methodology was assessed in the course of sociological research among senior adolescents, their parents and teachers. With the participation of school nurses, a number of seminars, sanitary and educational works were held on the basis of the methodological recommendation "The role of nurses in organizing HIV prevention work in educational institutions" institutions".

### MATERIAL AND METHODS

The city of Tashkent was chosen as the capital of the economically developed Republic of Uzbekistan for research. As of December 15, 2020, the population of the Republic of Uzbekistan was 34,550,623. Tashkent is an economically developed "industrial center". Tashkent has large treatment and prevention, specialized, diagnostic and private medical institutions. The city has a population of 2,510,800 in 2019 and a population density of 7,380 people per 1 km<sup>2</sup>. At the national level, this figure is on average 100 times higher than in other

regions. Given that the level of medical care in the capital and the level of health literacy of the population should be high, we selected the population of Tashkent for the study. Thus, in terms of key demographic, social and economic characteristics, Tashkent is one of the most industrialized regions of Uzbekistan, and the scientific results based on it are areas with an epidemic situation comparable in terms of HIV infection and the level of development of can be used for medical care. This work is a complex organizational, socio-hygienic and medical-statistical research. It provided for the solution of a number of tasks that would allow developing recommendations for nurses on the implementation of an innovative direction for the prevention of HIV infection among the population. In accordance with the tasks, a research program was drawn up, which includes 5 stages. The choice of research objects was determined in accordance with the tasks and stages of work. **The search for literary sources** was carried out using the bibliographic databases Web of Science, Scopus, DBLP, Medline. When selecting sources, they paid attention to experimental articles, literary reviews, the number of their citations over the past year.

## RESULTS

The seminars were conducted using information and communication technologies, booklets, brochures, presentations, etc. All were tested before and after the workshop using a specially designed HIV awareness questionnaire. The tables below show the results of the survey. Pupils of the 9th, 10th, 11th grades (85%), teachers (8%) and parents (7%) of secondary school No. 276 were under observation (Table 1.1.1).

Table 1.1.1.

Activity	Pupil		Teacher		Parents		All	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%
	434	87±1.5	32	6±1	34	7±1.1	500	100

The age of the participants was from 14-18 years old (87%), from 19-35 years old (7%) and from 36 years old and above (6%).

Table 1.1.2.

Age	14-18		19-35		36 years old and above		All	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%
	434	87±1.5	34	7±1.1	32	6±1	500	100

Table 1.1.3.

***Awareness of schoolchildren in grades 9-11 about HIV infection (Results of the implementation of professional work in schools in Tashkent, 2019, 2020, 2021, (% of correct answers), (95% CI)***

№	Question	2019 (Before seminars)	2020 (After seminars)	2021 (After seminars)
1.	Do you think there is an HIV problem in our city?	43,3* (39,3-47,3)	83,1* (78,1-85,2)	92,7* (90,4-94,6)
2.	Is HIV and AIDS the same?	40,2* (36,3-44,1)	63,6 (59,5-67,5)	73,9 (71,6-76,1)
3.	HIV is the causative agent of AIDS eh?	26,9	81,2*	88,9

		(30,1-23,7)	(79,1-83,1)	(85,9-90,9)
4.	Only people get HIV?	25,3 (20,8-30,0)	72,9 (69,1-76,6)	75,7 (72,5-78,7)
5.	Can HIV be transmitted through blood and sex fluids?	32,4 (27,4-37,4)	72,6 (67,7-77,2)	89,4 (85,9-92,4)
6.	Can I get HIV from intravenous drug use?	37,1 (32,0-42,2)	82,9* (79,1-84,2)	90,9 (88,24-93,0)
7.	Can you get HIV through kissing?	9,7 (6,86-13,0)	71,3 (69,0-73,5)	77,4* (73,9-80,6)
8.	Can HIV infection be transmitted through sexual intercourse?	22,7 (19,2-26,2)	62,6 (59-66,1)	64,9 (59,8-69,8)
9.	Can an HIV-infected mother give birth to a healthy baby?	12,6 (15-10,2)	45,7 (41,6-49,8)	49,4 (44,1-54,7)
10.	Is it possible to get infected by communicating with an HIV-infected person?	20,1* (19,0-21,2)	77,4* (73,9-80,6)	81,2* (79,1-83,1)
11.	Can you get HIV if a sick person sneezes or coughs at you?	21,2* (18,0-24,6)	71,7 (67,0-76,4)	74,6* (71,0-78,0)
12.	Is it dangerous to be in the same class with an HIV-infected child?	39,4 (32,5-46,3)	42,7 (37,5-47,9)	58,0 (55,4-60,4)
13.	Can you get infected if you stop the blood of an HIV-infected person without rubber gloves?	34,3 (29,2-39,3)	83,8 (81,8-85,6)	85,3 (81,4-88,8)
14.	Outwardly, do HIV-infected people look the same as healthy people?	20,1* (19,0-21,4)	79,0* (75,7-82,2)	81,2* (79,1-83,1)
15.	Throughout life, an HIV-infected person can transmit the virus to others?	43,3* (39,3-47,3)	88,4 (85,9-90,6)	88,5 (84,9-91,6)
16.	Does HIV reduce the body's ability to fight off other diseases?	33,3 (28,4-38,3)	85,1 (83,2-86,8)	92,7* (90,4-94,6)
17.	Is HIV infection curable?	20,1 (16,0-24,4)	86,9* (73,9-80,6)	85,3 (81,4-88,8)
18.	If the HIV test is "Positive" does it mean that the person has HIV?	10,1 (7,1-13,4)	49,8 (46,1 – 53,4)	58,0 (54,4-61,6)
19.	After a dangerous exposure to HIV +, will the HIV test be positive immediately?	20,1 (16,0-24,4)	62,6 (59-66,1)	75,7 (72,5-78,7)
20.	Can a classmate refuse to study with an HIV + student?	9,7 (6,86-13,0)	48,7 (43,4-53,9)	86,9* (73,9-80,6)

Note: differences are valid,  $p < 0,001$ : \* – from 2019 y., \*\* – from 2021 y.

Before the seminar, the participants considered the problem of HIV infection less urgent for our city (41%), but this indicator increased after the seminar to 92%.

Most of the participants (60%) do not know what AIDS is or think that it is the same as HIV. But after the training seminar, they realized that HIV is the causative agent (92%), and AIDS is the last stage of the disease (75%).

Many respondents believed that not only people are sick with HIV (76%).

After the training seminar, many learned that blood and sexual fluids are the main living environment for HIV (88%).

The majority of schoolchildren did not know that HIV can be contracted through intravenous drug use (38%). It should be noted that this indicator increased after the trainings by 2.5 times (94%).

To the question "Is it possible to get HIV through kissing?" Only 9% answered correctly, but after the measures taken, the answers of the research participants were correct in 77% of cases.

Almost 2/3 of the participants did not know before the seminar that HIV can be transmitted through unprotected sex (66%).

Many respondents thought that an HIV-infected mother could not give birth to a healthy child (88%).

In the tables below, you can see that the majority of participants believe that HIV is transmitted by airborne droplets (79%), i.e. low awareness of the ways of transmission of this infection (78%) and in most cases causes fear of communicating with an HIV-infected person (61%).

But after the seminars, these indicators have noticeably changed in a positive direction. The trainees made a conclusion for themselves in what situations HIV is not transmitted, and that in everyday life an HIV-infected person is not dangerous, they can live in their families and infection does not occur through everyday contacts.

The risk of infection can only arise in the course of first aid for accidents involving bleeding, so the participants were shown the skills to safely handle injuries to people with HIV.

To the question "Can you get infected if you stop the blood of an HIV-infected person without rubber gloves?" only a third of the respondents gave the correct answer. In this regard, we explained to the listeners that in case of possible contact with blood during the provision of assistance, whether a person is infected with HIV or not, assistance must be provided with latex gloves, and after the seminar, 81% of the listeners answered this question correctly.

To the question asked before the seminar "Do HIV-infected people outwardly look like healthy people?" only a fifth answered that HIV infected people do not differ from healthy people in any way. At the seminar, we noted that there are no visible signs of the presence of HIV in the human body. Therefore, a person may not be aware that he is HIV-infected. Outwardly, an HIV-infected person looks the same as an uninfected ordinary person. After the seminars, 78% of the participants agreed with this conviction, that is, the opinion of the listeners changed more than 3 times.

A new message for the participants of the seminar was that HIV infected throughout his life can transmit the virus (up to 44%, after - 91%).

Only a third of the respondents had an idea that HIV infections lead to a decrease in immunity due to the destruction of the human immune system by the virus (HIV) and the loss of the body's ability to resist various diseases (37%). During the seminars, the necessary information was given about the course of this infection, its consequences.

Thus, the knowledge of the participants of the seminars about the possibilities of treating HIV infection increased almost 4 times (from 24% to 85%), many learned that it is not currently possible to cure a patient of HIV infection, but antiviral therapy can take the process of HIV reproduction in the body under control and significantly prolong the life of the patient.

A positive result indicates that a person has become infected with HIV and this result persists for life (51%).

Negative test results during the "window period" may be associated with low antibody levels during this period and do not rule out infection. Therefore, during this period of time, a negative test result does not mean that there is no HIV in the human body. It was explained to the participants that immediately after a dangerous contact with an HIV-infected person, an HIV test can be negative (59%), although even after the explanation, 41% did not agree with this belief and remained unconvinced.

In our country, according to the Constitution of the Republic of Uzbekistan, the guarantee of the rights of citizens is protected by law, and no one has the right to discriminate against HIV-infected people. But, unfortunately, low awareness, as well as personal dislike for these patients, shows an unfavorable attitude towards them (91%).

## DISCUSSION

When analyzing the efficiency of knowledge assimilation, the compared options, in contrast to the analysis of minimizing costs, are characterized by greater or lesser, but not equivalent, efficiency. In this regard, it is important to assess the degree of feasibility of the analysis, depending on the level of reliability of the data. The test results were expressed in points. Participants' results were calculated using Microsoft Excel software. The calculations showed that the average score of the participants' answers before the seminar was 22 points, after 72 points. The ratio of the total score is 13530 points to 36040 points. Standard deviation (21.6 / 12.9). The assessment of the effectiveness of the assimilation of knowledge was calculated based on the application of the proposed methodological recommendation in practice. Thus, each participant of the seminar, on average, increased his theoretical and practical level of knowledge in the field of HIV infection and its prevention by almost half. A further prospect of this study is to save money on the diagnosis and treatment of HIV-infected patients, since if the future generation adheres to safe attitudes and behaviors, they can reduce the risk of contracting this disease and prevent the risk of spreading in the future. Our proposals for further research are the study of the awareness of the contingent of preschool education.

## CONCLUSION

In the Republic of Uzbekistan, about 50 thousand HIV-infected have been identified and registered, of which more than 5 thousand are children under the age of 15. Young people are a powerful resource for prevention activities. Adhering to safe behaviors and attitudes is easier if you get used to them beforehand. The need for awareness-raising activities among the population, especially among young people who are most at risk of HIV infection, is beyond doubt. According to experts, one of the reasons for the high prevalence of HIV infection is the low level of awareness among young people about the ways of transmission and prevention of this disease, as well as those who practice risky behavior. The health of children and youth is a high social and humanitarian value of our country. In the context of generalization of the spread, the first place is taken by the prevention of HIV infection, especially among young, reproductive, working age. At the same time, adolescents and young people are the most vulnerable group of the population, which is quickly involved in the epidemic

process: HIV infection, alcoholism and drug addiction, viral hepatitis. Their share in the age structure of the incidence of the population is increasing every year. With regard to solving this problem, a preventive approach can be effective, contributing to the formation of "immunity" to dangerous behavior in young people or creating motivation to abandon dangerous behavior. The basis of a preventive approach to solving the problem of combating epidemics of social diseases is to create conditions for effective work by training students of educational institutions, employees of educational, social and educational institutions, a team of equal instructors from among the volunteers of the Youth Union, conducting an educational campaign to prevent the spread of HIV infection, drug addiction, alcoholism, dissemination of reliable information about the problem among the younger generation.

### ACKNOWLEDGEMENT

Thus, the improvement of the system of counteracting the spread of HIV infection should be carried out in the following areas:

- prevention, including among high-risk groups;
- improving early detection of HIV infection;
- improving the provision of medical care for HIV-infected;
- improving the prevention of perinatal mother-to-child transmission of HIV infection.

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