

## The effect of educational program of AIDS prevention on knowledge of pregnant women in the health centers of Ahvaz in 2011

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### Abstract

**Introduction:** Awareness of pregnant women about HIV/AIDS can play an important role in prevention of disease in the society. This study aimed to evaluate the effect of educational program on knowledge of pregnant women about HIV/AIDS.

**Material and Method:** This was a randomized controlled trial on which, 120 pregnant women referred to health centers of Ahvaz for their routine follow-ups during pregnancy were selected on the basis of inclusion criteria in 2011. A questionnaire about socio-demographic and knowledge about HIV/AIDS was provided and completed using interview. Women were randomly classified into two groups (intervention and control).

Individuals in control group only received routine care during pregnancy. But intervention group received two educational sessions and a booklet regarding HIV/AIDS transmission and prevention. Knowledge of participants was assessed at the beginning and at the end of study using the same questionnaire. Data analyzed using the SPSS ver 16 and descriptive, chi-square, independent, paired t-test and Pearson test were used for statistical purposes.

**Results:** The findings revealed that; 33% of individuals had enough knowledge about transmission ways and 28% had enough knowledge about how to prevent disease. Majority of women (80%) did not receive any education about HIV/AIDS.

There was significant difference between both of groups after accomplishment of educational program and mother's knowledge in intervention group was significantly increased.

**Conclusion:** Considering the educational classes for pregnant women and encouraging them to participate in these classes can be an effective way to reduce the rate of transmission of HIV/AIDS.

**Key words:** HIV/AIDS, Pregnant women, Educational program, Transmission, Prevention

## Introduction

The acquired Immune deficiency syndrome (AIDS) is a fatal and fast transmitted disease in the world. It is the obstacle of the economy and health development in the developing and under developed countries and is the forth cause of death from the infectious disease in the world (1-2).

The HIV/AIDS can be transmitted in the different ways e.g. blood contamination, sexual intercourse, blood transfusion, pregnancy and breast feeding. One of the transmission way is from mother to fetus during pregnancy which occur in 35- 45% of cases. The percentages of affected women are more than men; that is increasing rate of disease in the fetus, neonate and infant subsequently. Children with HIV in addition to not having the normal life, are at risk of debilitating diseases which impose the health system and their families with high burden (3-4). The statistics show that the women are being infected with HIV faster (5).

According to the WHO report, about 33 million people were affected with HIV until 2008 (6). At the present time, every day more than 7000 new cases are added to the list of HIV positive patients, which 97% of these cases are living in the middle income or poor countries. The number of affected people in the Asian countries is four times compared to other countries (7). At the end of the 2010, 34 million people are living with HIV in the world that has been increased 17% in comparing to year 2001 (6,8).

Iran is one of the Eastern Mediterranean Region (EMRO) which according to the WHO's report, the HIV/AIDS' epidemic is expanding (3-4). According to the Medical Universities' report, 24290 individual are affected to HIV/AIDS until 2012 in Iran, which 90.8% of them were male and 9.2% were female. IV Drug users, sexual intercourse, transmission from mother to fetus are responsible for 62.5%, 21.2% and 3.9% respectively (7). The HIV/AIDS infection in terms of social involvement, the incidence and prevalence in the working age population, the high mortality rate and high cost of health care are major concerns about this disease. The prevention of transmission, control and care of affected patients are main activities of health care system in different countries in the world (2). Since the awareness about HIV/AIDS has an important role in spreading of disease,

individuals need to be educated about prevention methods and choosing an effective lifestyle. In the absent of effective treatment or vaccine, the only way to curb this dangerous disease is health education for changing risky behavior (9). The educational program for prevention of HIV/AIDS is the most important way to decrease the risk of HIV infection among individuals. In respect to the increasing cases of HIV/AIDS and severe complications, especially in women and children, the first step in this case, is increasing the community awareness about disease (10-11). There are few studies are targeting pregnant women to evaluate their knowledge and attitude about HIV/AIDS in Iran. In the study in Arak and Semnan, which recruited 1900 women 15-50 year old, results showed that; the knowledge of individuals about transmission ways of HIV was not sufficient (12).

In a study which carried out in 2006 in Iran, results showed that; 86.5% of pregnant women were not aware about medications which can prevent HIV transmission from mother to fetus. General awareness about disease in average was 62.2% and knowledge about methods of transmission was 75.3% (13).

Improvement of knowledge and attitude of community is one of the main strategies for prevention of HIV/AIDS which established by WHO (14). Educating pregnant women can play an important role in promoting awareness and prevention of disease in the society.

The healthy society depends on women's health. Considering the importance of women's status and their role in the society improvement (13), this study aimed to evaluate the impact of educational intervention on the knowledge of pregnant women in Ahvaz, Iran.

## Material and Methods

This is a randomized controlled trial on which 140 pregnant women who came to the health clinics in Ahvaz recruited randomly. There are 21 health clinics in Ahvaz and one third of these clinics were selected using simple random selection. For each clinic 10-20 women selected according to cases per center and inclusion criteria. This study started in May and accomplished in November 2011. The Ethics Committee of Tabriz University of Medical Sciences approved the design of the study. The inclusion criteria included; first pregnancy and having at least high school

education. Women, who participated in the educational classes for HIV/AIDS, were excluded from study. A list of eligible women prepared from each center and 10-20 women selected randomly. Women were invited to clinic using a phone call. One hundred thirty women gave consent to participate in the study.

Data gathered using a questionnaire which designed for socio-demographic data and the knowledge of participants about HIV/AIDS. The content validity used for checking the validity of questionnaire.

All women signed an informed consent prior to the study. Women randomly allocated into two groups (intervention or control). The control group only received the routine prenatal care. The intervention group received two educational sessions (about transmission and prevention methods of HIV/AIDS) every week. The sessions designed as group discussion, lecturing with slide demonstration. The intervention group also received a booklet about HIV/AIDS. The participants had access to the researcher's phone number in case they had a question about sessions. At the end of two weeks, participants completed the same questionnaire in the baseline about knowledge.

### **Statistics**

Data entry and analyzing carried out using SPSS ver 16. Descriptive statistics e.g. frequency and percentages, mean and standard deviation were used for describing demographic characteristics.

The chi-square test was used for assessing differences between intervention and control groups in categorical data. The independent t-test was used for testing differences between two groups regarding knowledge and other continues data. The paired t-test was used to assess the difference before and after intervention within each group. The Pearson test was used for testing relationship between education and the level of knowledge. The significant level was considered if  $p < 0.05$ .

### **Results**

Of 130 women ten women dropped-out from study. Five women did not offer any reason. Two women did not have proper mental conditions. Two women gave birth before completing classes and one dropped-out because of moving. The mean age of participants was 26.6 and most of them had

diploma. The socio-demographic characteristics of participants are listed in Table 1. The results about knowledge showed that; 85% of pregnant women did not accomplish the HIV test, while 55% were not willing to do that. Most of them (92%) did not have sufficient knowledge about preventive methods from HIV/AIDS in pregnancy. The average general knowledge of participants about HIV/AIDS was 43%, the knowledge about transmission routes was 33.1% and about prevention of disease was 28.3%. Overall 43% of participants had good, 22% moderate and 35% weak knowledge about HIV/AIDS (Table 2). Average awareness of mothers who had high school diploma significantly was higher compared to those in the lower level of education.

There was not any significant relationship between age and job with the level of knowledge about HIV/AIDS. The level of knowledge after intervention in the intervention group was significantly higher than that in the control group ( $p < 0.002$ ) (Table 2).

### **Discussion**

In connection with HIV/AIDS prevention, awareness about prevention is essential. The present study aimed to evaluate the impact of educational intervention on the knowledge of pregnant women in Ahvaz, Iran. Results showed that providing information to pregnant women about sexually transmitted diseases is an effective way to prevent HIV/AIDS. Almost half of pregnant women in this study thought that HIV can transmit with hand shaking. Our results are not in line with other studies. In a study in Nigeria, results showed that; about 91% of women knew that hand shaking is not a way to transmit HIV (15). Furthermore in a study in 2010, results showed that; about 82% of participants were aware of this matter (16-17).

In our study the women's knowledge about prenatal and breastfeeding transmission of HIV was not satisfactory. Whereas in other studies by Yerdaw and Abiodun most women had good information about prenatal and breastfeeding transmission (18-19).

In the present study the knowledge of participants about prevention of HIV/AIDS was insufficient and only 55% of women had moderate knowledge about prevention. The prevention of disease is an effective way for

controlling diseases. Our study proved that educational programs can improve women's knowledge about transmission and prevention of HIV/AIDS. Awareness is a potentially modifiable factor that can predict how healthy a society is. Although media is the best tool for rapid dissemination of information and simple truths with little cost to a large number of people, it cannot be a good way to achieve the desired specific group like pregnant women (17, 20).

One of the strength point of this study is; applying a randomized controlled trial method with very intensive follow-up. Participants were given the researcher's phone number and they benefitted from researchers' support during intervention. Giving information about HIV/AIDS for pregnant women in public clinics in Iran is not customary. This study can be a start point for policy makers in health

domain to organize educational programs for pregnant women and also improve the quality of these programs.

#### **Conclusion**

With respecting the results of this study, educational program can increase knowledge of pregnant women in line with prevention of HIV/AIDS . The health staffs have a key role for education. Thus, training in connection with HIV/AIDS should be an essential part of prenatal care.

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