

# International Conference on “the Third Millennium and Humanities”

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## Studies on Vulnerable Women: The Impact of Education on Reducing the Risk of AIDS

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### Abstract

Women are potentially more susceptible to getting some diseases such as AIDS due to their especial physiology and anatomy. Recently, the third wave of HIV transmission through sex has risen. The aim of this study was to investigate the effect of education on reducing the AIDS epidemic in vulnerable women regarding the age, education, occupation, marital status and other potential parameters such as using condom and having multiple sex partners. The study was conducted as a semi-experimental trial with pre-, post-education intervention on 46 vulnerable women referring to Behavioral Health Counseling Center and Special Center for Counseling Vulnerable Women. Women received education package in three stages (before, one week after and two months after education). Data were collected by questionnaire in which two parts existed. The first part included demographic questions and the second part was in regard to the questions about knowledge, attitude, practice and the risky behaviors. Data were evaluated statistically using SPSS version 21 and descriptive tests, t-tests, and (Analysis of Variance) ANOVA. The results demonstrated that the mean (SD) age of samples was  $31.08 \pm 6.9$  with the maximum and minimum of 20 and 45, respectively of them 43% of them were in the age range of 26 - 35 years. About 70% and 76% of the samples were housewives and undergraduate, respectively. Regarding the martial state, 56.5% of them were either unmarried or widow/separate. The significant difference between before and after intervention was the use of condoms ( $p < 0/001$ ). There was not a statistically significant difference ( $p < 0.07$ ) when comparing those with numerous sexual partner pre-, post-education intervention. The appropriate method of educational interventions provided positive effects in increasing participats' knowledge in using condom. The education intervention did not lead to modify multiple sex

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partners to uni-sex partner for some reasons of them lack of socio-family support and economic situation was the most important.

**Key words:** AIDS, Education, Vulnerable Women

## Introduction

HIV / AIDS is the most deadly virus known in the present decades and due to its high mortality and elevated health care costs considers a serious threat to the health and economy of societies (Spears, 2006, UNAIDS,2010).

AIDS epidemic could occur in all countries, different ages, gender, race, socio-economic class and culture (Evans ,2006). More than three decades have passed since the discovery of the virus and 35 million people worldwide have been infected with the virus and 2 million people have lost their lives due to this disease. Currently 70% of all new HIV infections is concerned to sub-Saharan Africa region in spite that 82% of countries are used to perform national strategic plans to combat AIDS (UNAIDS,2010).

According to statistics published by AIDS National Committee (2013) there are nearly 27 thousand people infected with HIV virus of them 10 percent of whom are women (Progress report, Iranian AIDS Report, 2013). It was estimated that the number of infected women with the virus in 2014 compared with 2009 will increase more than 35% (CDC Iran, 2011)

Over the biological reasons, women and girls are more susceptible against such diseases due to socio-economic and cultural factors. They are up to two to four times more susceptible than men and almost 50 percent of new HIV incidence in the world are in this group (NAIDS and WHO. 2009). At-risk groups are generally doing risky behaviors. Such behaviors refers to those are likely increasing destructive physical, psychological, social and individual consequences (Exner et al, 1997). HIV / AIDS high-risk behavior is linked with unprotected sex and injection drugs. The main HIV transmission via in the world is sexual report, about 85% of new HIV incidence (Abdul- karim, 2007). In Iran, the most common way of transmission is drug injection and sexual relation that are mentioned as high-risk behavior (Progress report, Iranian AIDS Report, 2013).

The first strategy in the third National AIDS Control Program includes education for different target groups. In the same program, sexual transmission prevention was defined as the fifth strategy. These two strategies clearly describe the inappropriate knowledge of vulnerable groups despite provided educational programs offered by the government (Third National Strategic Plan , 2010 -2015).

Several centers such as Health Counseling Centre are established governmentally in order to control the epidemic HIV / AIDS in vulnerable women. In such centers, women who are either addicted or had been imprisoned, or even has addicted and HIV positive husbands or have multiple sex partners, are target for receiving especial governmental education and further supports (. Protocols Counseling Center ,2010).

Prevention strategy based on group-discussion education has not been used for the vulnerable women in Iran till now. In this especial education type, everybody has opportunity to share her ideas, opinions and experiences with others explaining their justification. This type of active learning helps effectively the participants to take the most appropriate decision (Shabani ,1999).

This study aimed to evaluate the impact of education on self-care of vulnerable women to prevent HIV infection considering the age, education, occupation, marital status and other potential parameters such as using condom and having multiple sex partners.

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## Materials and Methods

This study aimed to evaluate the impact of education on self-care of vulnerable women to prevent HIV infection considering the age, education, occupation, marital status and other potential parameters such as using condom and having numerous partners. The study was conducted as a semi-experimental trial with pre, post-education intervention on 46 vulnerable women aged between 15 and 45, referring to Behavioral Health Counseling Center and Special Center for Counseling Vulnerable Women. Not being positive HIV/AIDS and attending whole course were two inclusion criteria for this study.

Niknami questionnaire (2004) was used in this study which its validity and reliability were evaluated, measured and confirmed through content validity method and ray test, respectively (Niknami et al, 2004). The reliability coefficient for knowledge, attitudes and performance of questions were identified 75, 81 and 80%, respectively.

The questionnaire consisted of two parts. The first part was related to demographic identification (including age, occupation, marital status and education) the second part was about several important challenges such as using condom, having multiple sex partners, having tattoo, and having sexual transmitted diseases (STD). Written permission from the Ministry of Health and Medical Education, and University of Medical Sciences Alborz was taken after description of the project from participants. Educational interventions in all three areas of cognitive, emotional and behavioral education included an educational package and group-discussion for four sessions of one and a half hours was conducted. The questionnaires were fulfilled in three stages (before, one week after and two months after education) by the under studied women. Data were evaluated statistically using SPSS version 21 and descriptive tests, t-tests, and (Analysis of Variance) ANOVA.

## Results

Based on the demographic data of the women participated in the present study, the age and mean (SD) of age of participants were between 20 and 45 years and  $31.08 \pm 6.9$ , respectively. As shown in table 1, 76.1% of the participants had secondary or higher education, indeed 70% of them were housewives (equivalent of two-thirds of the studied population, statistically). Regarding the marital status, 56.5% of them were categorized as unmarried women including widows, unmarried and divorced (Table 1).

**Table 1. Demographic characteristics of the women participated in the present study**

Variable	group	Frequency	percent
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<b>age</b>	15 - 25	13	28.25
	26 - 35	20	43.5
	36 - 45	13	28.25
<b>Education</b>	Low literate	11	23.9
	Under graduate	35	76.1
<b>Marital status</b>	Married	20	43.5
	Unmarried (single, widow and divorced)	26	56.5
<b>Occupation</b>	Housewife	32	62.6
	Occupied	14	30.4

Based on the results obtained through questionnaires, the condom usage rate was only 24% pre-education intervention and 76% of the participants experienced unprotected sex. However, this rate was significantly increased, up to 82%, post education intervention. The rest 18% who did not actually used condom, mentioned either lack of access or personal interest and partner disagreement as the main reasons of their risky action of not using condom (Figures 1, 2).

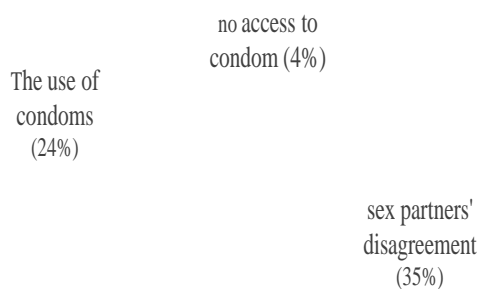
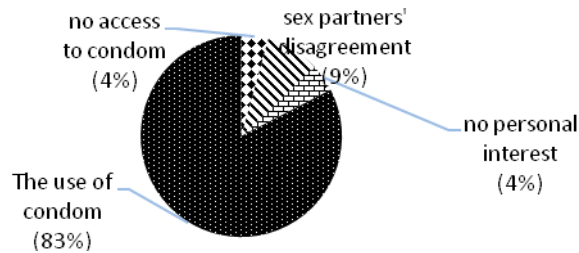


Figure 1. The frequency of condom use pre-education intervention in the women participated in this study

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**Figure 2. The frequency of condom use post-education intervention in the women participated in this study**

There was a significant difference between the use of condoms before and after the education intervention at  $p < 0.001$  (Table 2).

**Table 2. Condom use comparison in the women participated in the study, pre-, post-education intervention**

Condom use pre-education intervention	Condom use, post-education intervention		Significant level.
	Yes	No	
Yes	10	1	0.001
No	27	8	

The results demonstrated that there were either 6.5% of participants or 17.5% of their partners who used injection drugs. Indeed about 11% and 37% of participants had been imprisoned or got STD, respectively (Table 3).

**Table 3. Risk Behavior Survey in samples**

High risk behaviors	Frequency	percent
A history of intravenous drug HIV-positive wife	3	6.5
Prison record	5	10.9
Sex partner with a history of intravenous drug users	8	17.4
A history of sexual transmitted diseases	17	36.9
History of non-vaginal sex	27	58.7
HIV-positive wife	5	10.9

In this study, 74% of the participants admitted to have multiple sex partners. However there was not any significant difference between pre, post-education intervention to convince the participants to have uni-sex partner (Table 4).



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**Table 4. Multiple sex partners in pre-, post-education intervention in the women participated in the present study**

Multiple sex partners in pre-education intervention	Multiple sex partners in post-education intervention		Significant level
	Yes	No	
Yes	14	20	0.07
No	7	5	

## Discussion

We have collected demographic data including age, occupation, marital status and education from the women participated in this research to provide a database on 46 so-called vulnerable women. The vulnerable women are women who are either addicted or had been imprisoned, or even has addicted and HIV positive husbands or have multiple sex partners.

It was revealed that the provided education intervention improved the performance of vulnerable women in decreasing risky behaviors especially to have not unprotected sex by using condom. In fact, 24 % of the participants had unprotected sex pre-education; however it has increased up to 83% upon receiving education package.

It has reported that the effectiveness of condoms in preventing HIV transmission is about 60-96% with an average of 87% (Sherwood et al, 2004). Armstrong et al, (2013) confirmed the increase in condom use in the female sex workers of East India after receiving education intervention from 35.2 to 72.4 and from 25.8 to 57.7 as occasional or permanent condom use, respectively (Armstrong et al, 2013).

Ye et al, (2012) showed that women in Shanghai, China, who had either received more social support or had been informed more about the risk of HIV, had more protected sex (Ye et al, 2012). However in the present research, 35% of the participants stated to not use condom since the disagreement of their sex partners.

Outwater et al, (2000) described that the condom use was a function of the age, as the elder partner made decision to not use condom, in Tanzania (Outwater et al, 2000).

Orgasmic Dysfunction has reported as another reason to not use condom according to Malayerikhah Langroodi et al, (2014) (Malayerikhah Langroodi et al, 2014). Other studies have shown that condom use has a multi-dimensional and a complex nature. The interaction between personal, environmental and social factors plays an important role in the use of condoms (Nattrass , 2009) (Mallory et al, 2009) and it is not possible to predict condom use relying solely on individual factors (Evans and Lambert ,2008).

In this study it was shown that education had positive effect on the prevention of high risk behaviors, particularly condom use could be crucial.

Having STDs is another parameter which increases probability of getting HIV. In the present research, 37% of the participants had STDs in the six months prior to the study. In the study carried out by Phrasisombath et al, (2012) on vulnerable women in Laos, half of participants had STDs three months prior to the study in spite only two-thirds of them asked for medical counsel. The main reason mentioned for not asking medical counsel was the negative attitude devoted towards them in the medical centers (Phrasisombath et al, 2012).

Over the tattoo-related infections, and skin and allergic problems that could happened while doing tattoo, HIV could transmit in case of not using disposable tattoo supplies. Based on the data of this research, 6.5% of the participants had tattoo. Ataii et al, (2010) described that the age as another crucial parameter has linked with doing tattoo, the younger the more probability for doing tattoo which lead the younger women be more susceptible against HIV (Ataiiet et al ,2010). This seems important issue to be considered when preparing any education intervention. Even more, being imprisoned considers as another factor related to doing tattoo. In this regard, Bagherzadeh et al, reported 4 and 16.5 % of doing tattoo in prison (Bagherzadeh et al, 2010).

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Having multiple sex partners, though does not consider as an active terror to get HIV, potentially is related to HIV. In this study, 74% of the participants admitted to have multiple sex partners. However there was not any significant difference between pre, post-education intervention to convince the participants to have uni-sex partner. This could be due to not having socio-economic supports for that group including unmarried and not occupied women which were forced to be sex workers. However, having unprotected sex makes sex workers more susceptible against AIDS but not having multiple sex partners( Lau et al,2007 )The same results obtained by Kelly et al, (1994) which 4-week education did not modify multiple sex partners, even though positively increased condom use for 20% (Kelly et al,1994). Marshall et al, (2010) stated that street youngsters in Colombia accept sex only for survival, money, housing and drugs (Marshall et al, 2010).

## Conclusion

The Vulnerable women considers as a potential risk to transmit HIV. Programming and performing continuous, interacted and targeted education interventions accompanied with positive attitude of medical personals that their actions are far from any pre-judgment over receiving social and economic assistances from governmental organization for those who need job, should be seriously taken in account to prohibit AIDS transmission. To establish full support of the vulnerable women could be an important step toward controlling AIDS.

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