

## Health Behaviors and Awareness of Midwives Regard to AIDS Management in Pregnancy

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**Abstract:** Nowadays more than 33.2 million HIV positives live throughout the world. The rate of HIV in Iran has been reported to be 20130 cases. Transmission rate through sexual contact and vertical (maternal to newborn) is 13.1 and 0.9 percent, respectively. Midwives are among high risk groups, exposed to blood and other body secretions of people unaware of their contamination. Therefore it is important to evaluate their behavior and awareness towards AIDS in pregnancy. This is a cross-sectional survey in order to determine the Health behaviors and awareness of 125 midwives regard to AIDS management during pregnancy in educational hospitals of Mazandaran province, Iran. Sampling was randomly and questionnaire forms were our data gathering instrument. For analysis of findings this study used descriptive statistic, Chi-square test and Pearson correlation coefficient. The results showed that most midwives (76.8%) had moderate behavior of AIDS management in pregnancy and their awareness was mostly (70.4%) moderate too. There was a significant correlation between behavior and awareness with class and educational workshops ( $p < 0.001$ ). Regarding the results of this research, we recommend workshops and more educational programs on the subject to promote the awareness of the midwives and thus their desired behavior. [Hajar Salmalian, Masomeh Bayani, Fatemeh Bakouei, Roshanak saghebi, Fatemeh Nasiri Amiri, Hajar Pasha, Zahra Banihoseini. **Health Behaviors and Awareness of Midwives Regard to AIDS Management in Pregnancy.** *Life Sci J* 2013;(7s):828-832] (ISSN:1097-8135). <http://www.lifesciencesite.com>. 133

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### 1.Introduction

Human immune deficiency virus is rapidly expanding throughout the world, leading to the weakness and death of lots of adults in early life and also contaminating individuals of different categories. This virus has a diverse frequency in different countries (Raiser and Cohn, 2005). The reported rate of AIDS in Iran is 20130 cases. Based on these reports the transmission rate of sexual or vertical method are 13.1 and 0.9 percent respectively (Tarahomi et al., 2010). Even though there hasn't passed much time since the first HIV positive case in the United States (1981), there are more than 3.2 million HIV positive individuals living throughout the world which are twice as many as the ones in year 1995 (WHO/UNAIDS, 2007). On the other hand, studies show that nowadays almost ninety percent of the HIV positive individuals live in the under developed countries specially African and Asian ones and unfortunately the frequency of HIV is more rapidly increasing in such countries (Simon and Quarraisha, 2006). In present, one third of the new cases occur due to opposite sex transmission two third of which happens in women (Cunningham et al., 2010). All through the world 500 thousand infants are contaminated each year and every day there is a

1600 new case report in children. Eighty percent of AIDS infected children are less than 5 years old which is a confirmation of transmission from mother to child; 91 percent of HIV infection in children happens in this way. In America almost all HIV infections in children less than 13 years old happens due to vertical transmission from a contaminated mother (Nasiri Amiri, 2008). Vertical transmission of HIV is the most common way of infection in less than 15 year-olds. Fifteen to twenty percent of children are infected during pregnancy, 50 % during labor and delivery and 33% through breast feeding. Regarding that WHO has promoted mother and family hygiene as a universal program for preventing HIV in newborns, most programs focus on vertical transmission prevention (Jennifer, 2009). Not only AIDS is a fatal disease but also it acts as a huge socio economic burden on the patients and health system (Mazloomi et al, 2006). HIV is expanding throughout Asia at the present time. One of the most important means of transmission is maternal-fetal, happening almost in 35 to 45 percent of the cases, while with educating mothers and early start of prophylactic medicine for mothers and then infants, avoiding breast feeding, cesarean section, the risk could fall into 2 percent (Tarahomi et al, 2010).

During the past decade prenatal transmission has been declined more than 9 percent. On the other hand, the effective retroviral treatment has led to the increase of chronic HIV cases (Cunningham et al, 2010). Today AIDS is a global threat with the rate of the disease increasing in most communities. Our country is no exception to the fact and the condition should be under control before it becomes noticeably frequent. This calls for hygiene education and promoting every individuals, knowledge and practice. Preventing this infection is one of the main responsibilities of the health care workers (Psani et al, 2005). Education plays a very effective role in increasing knowledge and altering society attitude towards the subject (Hammett et al, 2005). Midwives are among high risk groups, exposed to blood and other body secretions of people unaware of their contamination. Therefore it is important to evaluate their awareness and behaviors towards AIDS management during pregnancy.

## 2. Material and methods

This cross-sectional study was performed on 125 occupied midwives working in educational hospitals of Mazandaran province, Iran. Sampling was randomly and a three section questionnaire form was our data gathering instrument:

- 1) Demographic characteristics of the study subjects.
- 2) Awareness questions regarding AIDS management during pregnancy.
- 3) Health behaviors questions regarding AIDS management during pregnancy.

WHO protocol for Control of Sexually transmitted disease was used to develop the interviewer administered structured questionnaire (WHO, 2009).

In order to obtain validity for our data gathering instrument we used content validity method and to determine its reliability, Test re test of the research instrument was done before the actual administration of the questionnaire. The test retest at a three week interval period yielded which with 99% confidential level, showed a high correlation coefficient between the two times of study (grades pertaining to Health awareness questions ( $r=0.80$  and  $p=0.001$ ) and behavior questions ( $r=0.81$  and  $p=0.001$ ) respectively. The data was collected by the researcher with the assistance of ward managers. Data gathering method ran as follows: we interviewed each study subject about their demographic characteristics at first and then the interview went on about behaviors, and awareness questions, respectively. Awareness rate of the individuals was divided into three groups of poor (0-6), moderate (7-12) and good (13-19); while their behaviors rate was also divided into 3

groups of poor (0-6), moderate (7-13) and good (14-20) based on the achieved scores. For analysis of findings this study used descriptive statistic, Chi-square test and Pearson correlation coefficient. The study protocol and the procedures were approved by Babol University Ethical Committee. The questionnaire was given to the respondents to fill after obtaining informed consent. The respondents were assured of anonymity and confidentiality of information.

## 3. Results

The study subjects had an average age range of  $27.4 \pm 4.5$  years old. Regarding education status, 95.2% had a bachelor and 4.8% a two –years midwifery course. Most of them (40 percent) had been working for 1-7 years, and the 16 years or more occupational background had the least percentage (29.6%). Twenty four point eight percent were single and 75.2% married. The spouses' educational status of 71 percent of the study subjects were at university level and 45.6% of the cases had one or two children.

The most important information source of 42.4% of the study subjects regarding AIDS management during pregnancy, delivery and postpartum was books and other educational pamphlets, 30.6% classes and educational workshops, 8.9% community media and 7.3% from specialists and health care personnel. In the present study, most study subjects (70.4%) possessed an moderate awareness regarding AIDS management during pregnancy, whereas only 4.8% had a good awareness ( $2.657 \pm 8.06$ ). Furthermore behavior of the majority of them (76.8%) was found to be moderate ( $8.06 \pm 2.65$ ).

Awareness and behavior of the midwives regarding AIDS management during pregnancy are mentioned in Tables 1 and 2. There was no significant difference between awareness and behaviors with age, educational status, marital status, spouse's education and occupation background; whereas based on the  $\chi^2$  test, there was a significant correlation between awareness and behaviors with class and educational workshops ( $p<0.001$ ). Furthermore, the study results show that there was a significant linear correlation between awareness and behaviors of the midwives ( $r=0.87, p<0.05$ ).

## 4. Discussion

In the present study 70.4% of the study subjects had a moderate awareness regarding AIDS management in pregnant women which possessed the most frequency. On the other hand and the behaviors of most of them (76.8%) was moderate. In Ndikom and colleagues' study the knowledge of nurse midwives in case of preventing vertical transmission

of HIV was moderate (51.4%). (Ndikom and Onibokun, 2007). Furthermore, the results of Hentgen and colleagues showed that the awareness of health care workers was poor towards HIV; as twenty percent of them stated that AIDS patients should be isolated in quarantine (Hentgen et al, 2002). On the other hand Mchunu and Bhengu's study revealed a good awareness in labor personnel about AIDS.

Table 1: the midwives awareness regarding AIDS transmission prevention

Question	Correct answer N(%)
Best Time of Zidovidine porophylactic treatment start during pregnancy	25 (20)
Necessary vaccines for HIV positive pregnant woman	76 (60.8)
Best way of delivery in HIV positive mothers	55 (44)
Risk factors relating vertical transmission of HIV from mother to child	90 (72)
Risky body liquids	80 (64)
Most common way of AIDS transmission in children	93 (74.4)
Breast feeding an increasing factor for HIV transmission	46 (36.8)
Necessity of zidovidine administration in infants born from HIV positive mothers	44 (35.4)
Increased risk of infection transmission from breast milk in the presence of mastitis, abscess and fissure of nipple	45 (36)
Increased risk of infection transmission in case of mouth cooties	66 (52.8)

Mchunu and Bhengu, 2004). Hussain and colleagues' study in Pakistan demonstrated a good knowledge and attitude in general physicians; but only 40.8 % of them stated that they would refer a HIV positive patient to AIDS control centers. The researches have recognized medical education programs to be necessary for HIV management (Hussain et al, 2011). In Balogun & Odeyemi study performed in Nigeria, the knowledge of traditional caretakers in case of vertical HIV transmission was not enough and only 8.3% of them possessed a good awareness of the case. On the other hand; behavior regarding patient consult about HIV and reference for HIV test was poor (Balogun and Odeyemi, 2010). In the current study, 93 percent of the midwives, knew that the most common way of AIDS infection in the children is from infected mother to fetus and infant, 45 percent pointed out the increased risk of

transmission from breast milk in case of mastitis, abscess and nipple fissure. Furthermore; 66percent mentioned the presence of mouth cooties in the child. Also the results of Madhivian and colleagues' study in India revealed that 72 percent of labor caretakers indicated that the AIDS virus is transmitted from mother to fetus and only 13 percent of them would refer the mother in case of severe bleeding after delivery (Madhivanan et al, 2010). While in Balogun & Odeyemi study in Nigeria only 20.4% of the cases mentioned the transmission of HIV from infected mother to child and 90.7% indicated that breast feeding is the factor for transmission from mother to infant. Their good knowledge had an effect on some vertical transmission-preventing practice. (Balogun and Odeyemi, 2010).

Table 2: Health behaviors of the midwives in prevention of AIDS transmission

Questions	Correct answer N (%)
Replacing cap of syringe after administration	18 (14.4)
Ameniotomy without any limitations	19 (15.2)
Avoiding bladder catheterization and Enema	52 (41.6)
Applying covering glasses during all deliveries	119 (95.2)
Avoiding Vaginal delivery in order to prevent vertical transmission	10 (8)
Administration of gloves and liquid resistance gowns in all deliveries	119 (95.2)
No need for administration of long gloves in order to placental remove	2 (1.2)
Avoiding Umbilical cord blood suction towards the newborn	19 (15.2)
Avoiding mouth to mouth resuscitation of the newborn	97 (77.6)
Avoiding the injection of BCG vaccine to the infants in AIDS	76 (60.8)
Not recommending IUD as the contraceptive method in women infected with HIV	89 (71.2)

In Foster and colleagues' study in Jamaica, even though health care workers were acquainted with the risk of infection transmission (79% stated the risk transmission through breast feeding and 22.5% through contaminated needle); their overall precautions were inadequate and the researchers recommended general educational programs in order to improve their attitude and practice (Foster et al, 2010). In the current study, only 8 percent of the midwives recommended avoiding vaginal delivery in

order to prevent vertical transmission, whereas the results of Rogowska and colleagues' study showed that only 10 percent of gynecologists and 13.3% of the midwives gave the correct answer about the infection of a HIV positive woman and having a healthy baby. Among the gynecologists, 36.7 percent and 23.3 percent of the midwives indicated NVD to be safer for the child. Furthermore 13.3% of the gynecologists and 76.6% of the midwives were aware that the infected women should not perform breast feeding. (Rogowska-Szadkowska et al, 2008). In the present study there was no significant difference between the behavior and awareness of the study subjects with age or their educational status; whereas in Chiamaka and colleagues' study there was a significant difference between knowledge and attitude of the individuals and their age ( $p < 0.05$ ). (Chiamaka et al, 2008). On the other hand in Balogun & Odeyemi study, there was no significant correlation between educational status and knowledge level. The practice of labor caretakers in consulting patients about HIV and their referral for HIV test was poor, whereas the higher levels of knowledge showed a significant relation with their practice  $p < 0.05$ . (Balogun and Odeyemi, 2010). The most common sources of information for the study subjects in the present research were books and educational pamphlets (42.4%) whereas the least sources were the specialists and other hygiene personnel (7.3%). The proportion of workshops and educational classes was 30.6%. In other study the most common information source about AIDS was found to be from radio and television and only 7.4% had received their information from other labor caretakers. (Balogun and Odeyemi, 2010). The results of Veeramah and colleagues' study demonstrated that 53% of the study subjects had taken educational courses and 63.8% stated the source of their attitude promotion to be journals and only 32% declared to having taken care of an AIDS patient (Veeramah et al, 2008).

In Chiamaka and colleague's study the most common source of information was health seminars and there was a significant difference between source of information and knowledge ( $p < 0.05$ ). (Chiamaka et al, 2008) Furthermore in Ndikon and Onibokun's study, there was no significant statistical difference between knowledge level of educated nurse midwives and non educated ones ( $p = 0.152$ ), although the knowledge level of nurse midwives with an experience in managing AIDS infected pregnant women had a significant difference with those without experience ( $p = 0.000$ ). (*Ndikom and Onibokun, 2007*). The result of Bassey and colleagues' study in Nigeria revealed that 44.3% of the traditional labor care-takers had no official

education regarding AIDS. Twenty six point four percent of them stated that they had received information about AIDS from social health care centers and 23.6% had no information on the subject (Bassey et al, 2007). None of our study subjects had a background of managing AIDS infected pregnant women. The individuals referring AIDS patients for all sorts of care had a less experience towards HIV as shown in Martin and Bedimo's study. (Martin and Bedimo, 2000). Altogether in our study regarding the appropriate educational level of the midwives (95.2% bachelor), the behavior and awareness of most of them concerning management AIDS in pregnant women was moderate, while their occupational conditions requires their behavior and awareness to be in an acceptable level. Although one of the reasons for their moderate behavior and awareness could be that none of them had a background of managing an AIDS infected pregnant woman. Another reason could be their information source regarding the subject. As the results of Lynda study showed; obstetric nurses who were informed of the situation of more than 4 HIV affected individuals showed a more positive attitude ( $p < 0.05$ ) (Lynda and Tyer-Viola, 2007). In other study members with more positive attitudes showed less prejudice and more willing toward care taking of HIV positive women than others  $p < 0.0001$ . (Balogun and Odeyemi, 2010)

As AIDS is a universal complication, it is expected from all our cases to have taken the educational classes and workshops regarding the management of AIDS infected pregnant women, whereas this rate was only 30.6%. Also the data transfer regarding management and taking care of AIDS infected pregnant women could happen through specialists and higher health care personnel whereas their proportion was only 7.3% in this study. Thus regarding the important role of education in promoting awareness and better behavior, there is an obvious need for continuous educational programs for this professional group. On the other hand as long as midwives don't possess the appropriate information and awareness towards the management of AIDS infected mothers; they can't be good educators and consultants for such patients. Therefore there should be a fundamental programming from ministry of hygiene, treatment and medical education in order to improve the education of midwives in this case with finally leads to progress of community health level.

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