

# Attitudes And Knowledge of Pregnant Women Towards HIV Screening As A Routine Prenatal Work-Up

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## **Background:**

Persons who do not know they are HIV infected are unable to access effective treatment as compared with those who knew they have the infection, and are more likely to transmit it to others. Pregnant women need to know if they are HIV infected so they can take steps to avoid transmitting HIV to their infants and access medical care for themselves.

## **Objective:**

To determine the attitude and knowledge of pregnant women toward HIV screening as a routine prenatal work-up. To determine any significant difference on their attitude and level of knowledge on HIV screening and to present their demographic profile.

## **Materials and Methods:**

Descriptive study is used with a researcher-designed questionnaire as instrument given to the sampled subjects using a 4-point Likert scoring system for the items. Quota sampling using 100 pregnant patients consulting at the Outpatient department of the Department of Ob-Gyne from November 9-21, 2009 were included. A one-way analysis of variance (ANOVA) was used for noting significant difference in attitude and knowledge on HIV screening and Pearson Product Moment Correlation was used to see relationship among three variables using the software, Statistical Package for Social Sciences (SPSS).

## **Results:**

The profile showed that the common pregnant patient at the OPD of the Ob-Gyne is between 15-35 years old, Roman Catholic and single. These are young sexually productive patients. Pregnant women “always” want to know more about how HIV screening is done, the benefits, and their free submission to undergo the procedure. They were “moderately knowledgeable” on the effect of HIV infection to the fetus, to its prevention, causes, mode of transmission, signs and symptoms. The only portion they were not knowledgeable were on the diagnostic test for HIV infection, the counseling, and blood test procedures. However, they were moderately knowledgeable on the benefits of HIV screening. The Pearson correlation coefficient for knowledge and attitude indicated that there is a “high” (good) attitude of pregnant women to submit themselves for HIV screening even they have little knowledge about the disease, the



procedure and their expected benefits. Among the profile variables considered in the study, it was age and highest educational attainment of the respondents that were found significant in the evaluation on their level of perception on their attitudes and knowledge toward HIV screening. In terms of attitude, respondents with elementary education are more optimistic to the HIV screening than the rest. But the ages 26-35 which are considered vulnerable and high risk pregnant women of this age group have showed their interest for HIV screening. In terms of knowledge respondents with college education have higher level of perception on HIV screening,

**Conclusion:**

The findings implied that it would not be difficult for the hospital to adopt and implement policies regarding the inclusion of HIV screening as a routine activity for check-up because the pregnant patient have that positive attitude toward HIV screening. Age and highest educational attainment were significant variables in assessing the level of perception of the respondent's attitudes and knowledge toward HIV screening. Age group between 26-35 years old and those with lower educational level were more optimistic and have positive attitude to HIV screening. Those with higher level of education have higher level of knowledge about HIV screening.

**Key Words:** HIV screening, Pre-natal HIV screening, HIV/ADIS

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## Introduction

Human immunodeficiency virus infection is caused by RNA retroviruses, *human immunodeficiency viruses, HIV-1 and HIV-2*. It has grown tremendously in the past several years. In the long term causes AIDS (acquired immunodeficiency syndrome). By damaging cells of the body's immune system, HIV progressively destroys the body's ability to fight infections and certain cancers. AIDS was first reported in the United States in 1981. Studies of previously stored blood samples indicate that the virus entered the U.S. population sometime in the late 1970s though HIV was identified in 1983. The US National Institute of AID, NIH reports that in the United States, 886,575 cases of AIDS, and 501,669 deaths among people with AIDS had been reported to the Centers for Disease Control and Prevention (CDC) by the end of 2002. It disproportionately affects the most socially and economically vulnerable (Piot & Merson, 2000).<sup>1</sup>

Global HIV and AIDS estimates as of 2009 and 2010 show the following: The prevalence is 34 million people live with HIV/AIDS worldwide in 2010. Mortality as of 2010 is at 1.8 million dying due to AIDS-related illnesses worldwide. Similar to our study on testing for prevention, there are now 119 countries that reported a total of 95 million people tested for HIV.<sup>2</sup>

The Philippine Department of Health (DOH) noted that in February 2012, there were 274 new HIV Antibody sero-positive individuals confirmed by

the STD/AIDS Cooperative Central Laboratory (SACCL) and reported to the HIV and AIDS Registry.

This was 72% higher compared to the same period in 2011 (n=159), and the highest number of cases ever reported in the registry. There were 233 new HIV/AIDS cases recorded in April 2012.<sup>3</sup> Risk of HIV transmission is affected by factors related to the virus, the mother, the delivery process, the baby, and infant-feeding practices.<sup>4</sup> Thus, HIV screening for pregnant women would be ideal but there is a need to know the attitude of this group on HIV screening to prevent maternal transmission to fetus.

The incubation period from exposure to clinical disease is days to weeks. Acute HIV infection is similar to many other viral syndromes and usually lasts less than 10 days. After symptoms abate, the set-point of chronic viremia is established. The progression from asymptomatic viremia to AIDS has a median time of approximately 10 years.

A number of clinical and laboratory manifestations herald disease progression. Generalized lymphadenopathy, oral hairy leukoplakia, aphthous ulcers, and thrombocytopenia are common. Neurological disease is common, and approximately half of patients have central nervous system symptoms. A CD4<sup>+</sup> count <200/mm<sup>3</sup> is also considered definitive for the diagnosis of AIDS.

There are unique gynecological issues for women with HIV, such as menstrual abnormalities, contraceptive needs, and genital neoplasia as well

other STDs that may persist into pregnancy. A person can only be determined to be infected with HIV or AIDS if he/she submits him/herself for an HIV test. HIV test in the Philippines is called an HIV antibody test (HAT). HAT has pre-requisites. It should be done with informed consent. It should be voluntary, confidential and must have undergone adequate pre and posttest counseling. These pre-requisites are stated in *Article 3. Testing, Screening and Counseling Sections 15, 20 Republic Act 8504 (otherwise known as "the Philippine AIDS Prevention and Control Act of 1988" or AIDS Law)*.

### **Prenatal HIV Screening**

The Center for Disease Control and Prevention (2006c), the American College of Obstetricians and Gynecologists (2008), the American Academy of Pediatrics (2006), and the United States Preventive Services Task Force (2005) recommend prenatal screening using an *opt-out approach*. This means that the woman is notified that HIV testing is included in a comprehensive set of antenatal tests, but that testing may be declined. Women are given information regarding HIV but are not required to sign a specific consent. Through the use of such *opt-out* strategies, HIV testing rates have increased. Each provider should be aware of specific state laws concerning screening. Several states also recommend or require HIV testing at delivery.

Screening is performed using an ELISA test with a sensitivity of >99.5 percent. A positive test is confirmed with either a Western blot or immuno-

fluorescence assay (IFA), both of which have high specificity.

Women with limited prenatal care or with undocumented HIV status at delivery should have a "rapid" HIV test performed. These tests can detect HIV antibody in 60 minutes or less and have sensitivities and specificities comparable with those of conventional ELISAs. A negative rapid test result does not need to be confirmed. A positive rapid test result is suggested for confirmation with a Western blot or IFA test.

### **General Objective of the Study:**

To determine the attitude and knowledge of pregnant women toward HIV screening as a routine prenatal work-up

### **Specific Objectives of the Study:**

#### **Specifically it aims to:**

1. To identify the socio-demographic profile of respondents in terms of:
  - i. Age
  - ii. Religion
  - iii. Civil Status
  - iv. Highest Educational Attainment
2. To determine the level of perception of pregnant Filipino women towards their attitudes on HIV Screening;
3. To determine the level of perception of pregnant Filipino women towards their knowledge on HIV Screening in terms of:

- HIV as Infectious Disease
- Procedures on HIV Screening, and
- Benefits derived from HIV Screening

4. To evaluate the difference on the level of perception of pregnant women between their attitudes and knowledge towards HIV Screening.

5. To evaluate the relationship on the level of perception of pregnant women towards their attitudes and knowledge across their profile variables.

### **Hypotheses:**

Null Hypothesis is proposed

There is no significant relationship between the attitudes and knowledge towards HIV screening as perceived by respondents in terms of age, educational attainment, religion and civil status.

### **Scope and Delimitations**

The study was conducted among 100 Filipino pregnant women in the Obstetrics and Gynecology Outpatient Department of Region I Medical Center. The study period was from November 9-21, 2009.

### **Methods**

This study employed the descriptive method of research which involved a sample survey applied with correlation techniques. The first part presents the socio-demographic profile of the respondents then the level of perceptions on their attitudes and knowledge toward HIV screening. Correlation analysis was used to determine relationship between their perceived attitudes and knowledge. Moreo-

ver, a comparative analysis was used to compare differences on the level of perceptions of their attitudes and knowledge across their profile variables such as age and highest educational attainment.

### **Sampling and Data Gathering Procedure**

The purposive and quota sampling procedure was applied as a sampling technique in this study. This procedure identified only pregnant women as respondents and set a quota of 100 individuals who happened to have their check-up at the Obstetrics and Gynecology Outpatient Department during the conduct of the study.

A researcher-designed questionnaire was prepared as an instrument in gathering the data. (available upon request) The first part of the questionnaire presented the profile of respondents. The second part listed some indicators to answer the perceived attitudes of respondents towards HIV screening and the last part were indicators to answer the level of perception on their knowledge about HIV screening.

### **Statistical Treatment and Data Analysis (Statistical Package for Social Science, SPSS was used)**

To describe the socio-demographic profile descriptive statistics was used- frequency counts and percentages. To measure the level of perception on the attitudes of respondents toward HIV screening, mean was drawn from each indicator through a 4-point Likert scale using the rating and descriptive equivalent as follows:

Rating	Range	Descriptive Equivalent
4	3.26 – 4.00	Always
3	2.51 – 3.25	Often
2	1.76 – 2.50	Sometimes
1	1.00 – 1.75	Never

To measure the level of perception on the knowledge of respondents toward HIV screening, the mean was drawn from each indicator through a 4-point Likert scale using the rating and descriptive equivalent as follows:

Rating	Range	Descriptive Equivalent
4	3.26- 4.00	Very Knowledgeable
3	2.51- 3.25	Moderately Knowledgeable
2	1.76- 2.50	Slightly Knowledgeable
1	1.00 -1.75	Not Knowledgeable

To determine the significant difference between perceived level of attitudes and knowledge of respondents toward HIV screening, analysis of variance (ANOVA) was utilized.

To determine the significant relationship on the perceived level of attitudes and knowledge toward HIV screening across profile variables, Pearson Product Moment Correlation analysis was used to compare three variables (e.g. age and highest educational attainment).

## Results And Discussion

The following are the findings of the study which are presented in tabular forms for easy reference.

## Profile of the Respondents

Table 1. Socio-Demographic Profile of Respondents.

Socio-Demographic Variables	Frequency count	Percentage
Age Distribution		
15-25	35	35
26-35	49	49
35-45	16	16
TOTAL	100	100
Religion		
Roman Catholic	90	90
Born again Christian	8	8
Iglesia ni Cristo	2	2
Total	100	100
Civil Status		
Single	67	67
Married	33	33
Total	100	100
Educational Attainment		
College graduate	8	8
College level	12	12
High school grad	45	45
High school level	21	21
Elementary grad	8	8
Elementary level	5	5
No Formal Educ	1	1
Total	100	100

Table 1 presents the age distribution profile of respondents. Roughly 85 % of the respondents belonged to ages 15- 35 years old, the most sexually productive years. Roman Catholics comprise 90 % of the respondents. This religious group is what is being wooed by the Catholic Church to decline the Reproductive Health Bill (RH) though it has just been passed as a law this December 2012.

Interestingly, 67 % of the respondents are single. These are due to teen-age pregnancies, pre-marital pregnancies, or purposely becoming pregnant without a husband. The RH law may find its relevance in here for unwanted pregnancies if only these women knew how to avoid it. Majority of the respondents (45 %) have their highest educational attainment at being high school graduate. This may be comparable to national figures.

#### B. Attitudes of Pregnant Women Toward HIV Screening

**Table 2. Attitudes of Pregnant Women Toward HIV Screening**

Indicators	Weighted Mean	Descriptive Rating
1. I want to know more about how HIV screening is done.	3.90	Always
2. I want to know more about the benefits of HIV screening.	3.97	Always
3. I freely submit myself to HIV screening.	3.32	Always
4. I fear knowing the result of the screening.	3.05	Often
5. I refused HIV screening due to lack of financial resources.	3.04	Often
6. I have no time to undergo HIV screening.	2.19	Sometimes
7. I fear of lost of confidentiality on the result of my test.	2.99	Often
<b>Overall Mean</b>	<b>3.21</b>	<b>Often</b>

Table 2 presents the level of perception of the respondents on their attitudes toward HIV screening. Pregnant women “always” want to know more about how HIV screening is done, the benefits, and their free submission to undergo it. However, they “often” perceived their fear of knowing

the result of the test, their refusal due to lack of financial resources and the lost of confidentiality of the result of the test. Moreover, “sometimes” they don’t have time to undergo HIV screening.

Overall, pregnant women perceived “often” in their attitudes toward HIV screening with mean rating of 3.21.

#### B. Knowledge of Pregnant Women Toward HIV Screening

**Table 3.1 Knowledge of Respondents on HIV Infection**

Indicators	Weighted Mean	Descriptive Rating
1. Causes of HIV Infection	2.60	Moderately Knowledgeable
2. Disease process and staging of HIV Infection	2.07	Slightly Knowledgeable
3. Mode of Transmission of HIV Infection	2.57	Moderately Knowledgeable
4. Signs and symptoms HIV Infection	2.53	Moderately Knowledgeable
5. Diagnostic Test for HIV Infection	1.67	Not Knowledgeable
6. Effects of HIV Infection to the Fetus	3.17	Moderately Knowledgeable
7. Management or treatment for HIV Infection	2.10	Slightly Knowledgeable
8. Prevention of HIV Infection	2.81	Moderately Knowledgeable
<b>Overall Mean</b>	<b>2.44</b>	<b>Slightly Knowledgeable</b>

Table 3.1 presents the knowledge of pregnant women to HIV as infectious disease. Respondents are “moderately knowledgeable” on the effect of HIV infection to the fetus, to its prevention, causes, mode of transmission, signs and symptoms. The

only portion they are not knowledgeable is on the diagnostic test for HIV infection. This pulled down the overall rating to “slightly knowledgeable” in terms of HIV as infectious disease with mean rating of 2.44.

**Table 3.2 Knowledge of Respondents on the Procedures of HIV Screening**

Indicators	Weighted Mean	Descriptive Rating
1. Counseling	2.20	Slightly Knowledgeable
2. Blood Test	2.50	Slightly Knowledgeable
Overall Mean	2.35	Slightly Knowledgeable

In terms of the procedures in HIV screening, pregnant women are “slightly knowledgeable” about counseling and blood test as basic procedures for HIV screening with mean rating of 2.35 (Table 3.2).

**Table 3.3 Knowledge of the Respondents on the Benefits Derived from HIV Screening**

Indicators	Weighted Mean	Descriptive Rating
1. HIV Screening enhances the practice of universal precaution.	3.03	Moderately Knowledgeable
2. HIV Screening enables early detection and treatment of HIV Infection.	2.94	Moderately Knowledgeable
3. HIV Screening reduces prenatal transmission.	3.05	Moderately Knowledgeable
4. HIV Screening increases life expectancy.	3.02	Moderately Knowledgeable
5. HIV screening maximizes care during and after pregnancy.	2.89	Moderately Knowledgeable
Overall Mean	2.99	Moderately Knowledgeable

Table 3.3 presents the knowledge of respondents about the benefits derived from HIV screening. Pregnant women are “moderately knowledgeable” in all stated indicators such as reduction of prenatal transmission, practice of universal precaution, increase of life expectancy, early detection and treatment and care during and after pregnancy with overall mean rating of 2.99.

### C. Relationship Between Attitude and Knowledge Towards HIV Screening

The relationship between the perceived levels of attitudes and knowledge among pregnant women to HIV screening is significant at 0.05 level (Table 4). This is indicated by correlation coefficient of -0.199 with significance of 0.048 less than the significance level of 0.05. The correlation coefficient indicates that there is a “high” (good) attitude of pregnant women to submit themselves for HIV screening even they have little knowledge about the disease, the procedure and their expected benefits. Thus the null hypothesis of the study is rejected.

The findings implied that it would not be difficult for the hospital to adopt and implement policies regarding the inclusion of HIV screening as a routine activity for check-up because the pregnant patient have that positive attitude toward HIV screening.

#### D. Difference on the Attitude and Knowledge Across Significant Profile Variables

Among the profile variables considered in the study, it was age and highest educational attainment of the respondents that were found significant in the evaluation on their level of perception on their attitudes and knowledge toward HIV screening.

Difference is highly significant at  $p < 0.01$  level. ns – not significant at 0.05 and 0.01 level

Table 5.1 showed the variance across age profile of respondents. In terms of their attitudes, different age groups have different level of perception. Age group between 26-35 years old have higher level of perception compared to age groups 36-45 years old and 15-25 years old who are just comparable in their level of perception. The findings implied that at ages 26-35 which are considered vulnerable and high risk pregnant women of this age group have showed their interest for HIV screening.

However, in terms of their knowledge, different age group have the same level of perception (not significant differences at either  $p < 0.05$  and 0.01 level).

Table 5.2 ANOVA on Attitude and Knowledge Across Highest Educational Attainment of Respondents

Difference is highly significant at  $p < 0.01$  level.

As shown in Table 5.2, highest educational attainment was found highly significant in both the

perception levels of attitudes and knowledge of respondents toward HIV screening.

In terms of attitudes, differences on the level of perception among respondents with elementary, high school and college education were highly significant. Result of the study showed that respondents with elementary education are more optimistic to the HIV screening than those with high school and college education which have comparable attitudes.

In terms of their knowledge, differences on the level of perception among respondents with elementary, high school and college education were likewise highly significant. Result of the study showed that respondents with college education have higher level of perception on HIV screening, followed by those with high school education and elementary education, respectively.

#### Conclusions and Recommendation:

Findings of the study showed that there were more single pregnant women and majority were high school graduates with positive attitudes towards HIV screening. Although they were slightly knowledgeable to HIV as infectious disease and HIV screening and moderately knowledgeable to the benefits they derived from HIV screening, they were ready to undergo HIV screening in their work-up. However, hesitance to comply with the test may be due to financial aspects.

Age and highest educational attainment were found significant variables in assessing the level of perception of the respondent's attitudes and knowledge toward HIV screening. Age group between 26-35 years old and those with lower educational level were more optimistic and have positive attitude to HIV screening. Moreover, those with higher level of education have higher level of knowledge about HIV screening.

Adoption of HIV screening as routine work up for pregnant women is strongly recommended to increase awareness of HIV so that prevention and timely treatment and information about preventing HIV transmission can be given. However, policies for implementation and adoption should be made giving emphasis to financial aspects. There must be more information dissemination to be conducted to increase awareness about the disease.

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