

# Factors Affecting the Acceptability of HIV Testing Among Pregnant Women Consulting in a Rural Government Tertiary Hospital: A Validation-Reliability Testing of Formulated Questionnaire; A Qualitative Cross-Sectional Survey Study\*

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## ABSTRACT

**Background:** In consideration of the prevention of maternal to child transmission, it has been essential to consider once HIV status. HIV testing has been in existence for a long time. In essence, there is a dilemma to consider the factors affecting as well as enhancing its acceptability among pregnant women.

**Objective:** To determine the factors based on the generated domains which may affect the acceptability of HIV testing among pregnant women consulting in our institution.

**Methods:** A qualitative descriptive study design in the form of a survey employing validated questionnaires will be given to elicit responses among 246 pregnant women consulting the Out-Patient Department of our institution. Eligibility criteria were determined. The study was divided into pre-validation, validation and administration of questionnaire phases. Statistical analysis utilized were descriptive statistics, t-test, Chi-square test of association.

**Results:** The age ranged was 14 to 46 years old with a mean age of 27.43 years. 41.4 % had a knowledge about HIV testing whereas, 48.4% did not have knowledge on HIV testing. 37.4% were willing to voluntarily submit themselves for the test. Majority of our respondents (85.4%) were knowledgeable about maternal to child transmission. Split and heterogenous responses were elicited to the validated questionnaires. However, 71.5% believed and preferred pre-natal HIV test counselling. 59.8% believed that it had to be done routinely. The over-all acceptability was 37%.

**Conclusion:** The knowledge on HIV testing was 41%. Its acceptability was 37%. Hence, we conclude that it had a low acceptability rate, therefore we must consider the various responses elicited by the survey in order to improve and enhance its acceptability among pregnant women.

*Keywords: Human Immunodeficiency Virus (HIV), Acquired Immune Deficiency Syndrome (AIDS), HIV testing, Opt- Out Approach, Pre-natal Counselling, Acceptability*

## INTRODUCTION

The fight against HIV AIDS continues as the disease remains to be one of the world's most serious health challenges. By the end of 2011, 34 million people are living with HIV worldwide.<sup>1</sup> Globally, the number of people newly infected is decreasing however results are not uniform for all countries. The Philippines is one of the 9 countries identified to have more than twenty five percent (25%) increase in new cases from 2001-2011.<sup>1</sup> At present, the National Epidemiology Center of the Department of Health has reported a total of 13,594 cases of HIV in our country from January 1984 to May 2013.<sup>2</sup> Cavite has the

most number of people living with HIV in Southern Tagalog Area, amounting to a total of 216 recorded cases from 2011 to September 2012.

The rising incidence in the country suggests spread and not reversal of the infection. A large number of these cases are underreported as represented by a large discrepancy between the projected number of HIV cases and that of the reported ones.<sup>3</sup> This may still be due to multiple social and political factors including (1) social stigma of being diagnosed with HIV and disclosing it in a predominantly Catholic country, (2) the lack of awareness and knowledge by both the patients and health care providers, and (3) prohibition of mandatory testing as stated in RA 8504.<sup>4</sup>

Maternal to child transmission of HIV accounts for only 1% of HIV cases.<sup>2</sup> Despite its low contribution to transmission, ensuring that no baby is born with HIV is an

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essential and critical step to achieve an AIDS free generation. Key interventions have been set including: (1) Primary prevention of HIV among women of reproductive age, (2) provision of appropriate counselling and support to women living with HIV, (3) ensure HIV testing and access to antiretroviral drugs for pregnant women living with HIV and (4) better integration of HIV care, treatment and support for HIV positive women and their families.<sup>5</sup>

HIV testing is the first critical step in linking people living with HIV to treatment and is one of the important pillars to prevent mother to child transmission. From 2009-2012, Southeast Asia offers the lowest coverage (22%) for HIV testing and counseling in pregnant women worldwide.<sup>6</sup> In the United States current HIV testing recommend an “opt out” approach wherein HIV testing is routinely incorporated in the standard panel of prenatal laboratories. Pregnant patients are given the option to proceed or decline HIV testing.<sup>7</sup> The same approach is recommended and endorsed locally by the Philippine Obstetrical and Gynecological Society.<sup>8</sup> However, issues are still raised with regards to acceptability of both the patient and health care provider in proceeding with the screening test.

A study on women’s opinion on HIV testing involving 850 subjects showed that patients with higher HIV knowledge prove more comfortable with HIV testing. Approximately half of the respondents indicate the need for further information prior to agreeing with HIV screening.<sup>9</sup> A locally conducted study involving both health care providers and patients revealed poor knowledge among patients and increased stigma among health care providers.<sup>3</sup>

Recognizing the importance of implementing the opt out approach, it is thus the aim of this study to probe into the factors affecting acceptability of routine HIV screening among pregnant women consulting in our institution. Perhaps through identifying specific road-blocks in routine HIV screening in pregnant patients, we can formulate strategies to eventually aid us in winning the battle against HIV.

## GENERAL OBJECTIVE

To determine the factors affecting the acceptability of HIV testing among pregnant women consulting at the Out Patient Department of the Department of Obstetrics and Gynecology of a rural government tertiary hospital.

## SPECIFIC OBJECTIVES

1. To be able to do focus group discussions among pregnant women concerning the acceptability of opt-out strategy for HIV testing

2. To establish the face validity and the content validity of the formulated questionnaires
3. To perform reliability testing on the formulated questionnaire
4. To be able to perform qualitative item analysis on the formulated questionnaires
5. To determine which among the socio-demographic factors may play significant roles in the acceptance of the opt- out approach for HIV testing
6. To assess the knowledge of these pregnant women regarding the existence of HIV testing for pregnancy, as well as their knowledge on HIV maternal to child transmission.
7. To determine the attitudes of these pregnant women regarding their acceptance of HIV testing
8. To determine the practices of these pregnant women in compliance to their acceptance of HIV testing if in case this would be included in the panel of their routine pre- natal laboratory work-ups.
9. To be able to identify the preferences of these pregnant women prior to their acceptance of HIV testing

## SIGNIFICANCE OF THE STUDY

HIV-AIDS has been a very sensitive and a critical concern of any citizen worldwide. Such issue curtails individual differences as to the way it will be tackled ethically and morally without sacrificing the moral rights of any individual. The burden of illness has been so vast and great and it has been happening exponentially. In relation to this, tremendous way of prevention has been underway as well as discovering strategic ways on how to screen individuals most especially the pregnant women to prevent maternal to child transmission as well as enhancing policies on the best way to approach such screening strategies. In so doing, we may want to discover and unlock what can make this HIV screening ante-natally more acceptable among these pregnant women by going deeply into assessing their knowledge, attitudes, preferences, and practices about HIV testing. This may give us some insights and information

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as to the best strategy applicable and adaptive into our own setting.

## REVIEW OF RELATED LITERATURE

### A. LITERATURE SEARCH STRATEGY

In the search for related literature, we used PubMed. The investigators entered as a free text the word, HIV testing in the text box and obtained 18,867 journal articles. Secondly, we entered Pregnant women as a free text word and obtained 71,695 journal articles. We combined HIV testing and Pregnant women by using the word, OR to expand our search and obtained 89,302 articles. In limiting our search, we combined HIV testing and Pregnant women by using the word, AND. We obtained 1,260 articles. Ultimately, we combined the words HIV testing AND Pregnant Women and Acceptability and it produced 53 articles.

### B. RELATED LITERATURES

A randomized controlled trial was done in a hospital antenatal clinic in Zambia involving 3,024 pregnant women in a 10 month period. Its objective is to determine the uptake and acceptability of the different methods of a universal offer of voluntary HIV testing to these pregnant women. It involves randomized controlled trial involving four combinations of written and verbal communications followed by the direct offer of a test. The control group received no information and no direct offer of a test, although the testing was available on request. Outcomes which were studied included the uptake of HIV testing and women's knowledge, satisfaction, and anxiety. Results showed that the uptake rate in the control group was 6%, whereas in the experimental group was 35%. The significant independent predictors were a direct offer, the midwife seen, and being unmarried, previously tested and younger age. The knowledge of the specific benefits of testing increased with the amount of information given. Neither the satisfaction nor anxiety was affected by the type of offer.

This study concluded that a policy offering the HIV test to all women resulted in higher uptake. Uptake depends more on the health care provider's enthusiasm in offering the test together with the methods in offering the test.<sup>13</sup> (Simpson, 1998)

There were several cross-sectional studies conducted on the aspect of the acceptability of the test. One study which was a cross-sectional descriptive study conducted at antenatal clinics at primary health centers in Osogbo, Southwest, Nigeria among 270 pregnant women between May 2009 to October 2010. Majority of the respondents

(96.3%) were willing to do the test after counselling. 46.5% were willing to undergo the test provided treatment is available for positive cases. 16.5% were willing to undergo the test provided anonymity would be strictly maintained. The major reason given by the respondents who were not willing to undergo the test was that they were not at risk (70%). The specific MTCT related knowledge was strongly correlated with willingness to undergo the test. This study recommended that HIV educational activities should target special groups such as pregnant women attending the primary health centers and must address the challenges peculiar to these groups.<sup>11</sup> (Bello-Olugbenga, 2012)

Another cross-sectional survey was conducted on May-June 2004 at 14 geographically diverse clinics among 853 women respondents to the one-page, self-completed survey questionnaire. 90% agreed with routine HIV testing and 91% reported being comfortable with testing, demonstrating that the large majority of women agree with and support HIV testing as a part of routine pre-natal care. Women's opinions were associated with HIV testing status like 76% of women who had never been tested for HIV thought HIV testing should form part of a routine pregnancy check-up as compared to HIV negative (93%) and HIV positive (90%). The comfort with HIV testing was associated with higher HIV knowledge. Approximately 50% of the respondents need more information prior to testing. Results showed clear consensus in support of the routine testing.

Increased efforts to disseminate resources to providers coupled with provider's effective communication of information to pregnant women can build on the support that women have conveyed for HIV testing during pregnancy.<sup>9</sup> (Podhurst, 2009)

A cross-sectional study of 270 randomly selected ante-natal clinics in the municipality of Wa, Ghana was conducted to assess the acceptability of the routine offer of HIV testing (Opt-Out Approach) among these clients noted that, more than 90% of the respondents were in favour of the opt-out policy. The most common reasons were, it would help pregnant women know their status which would facilitate the prevention of maternal to child transmission of HIV.

About 60% had tested for HIV in their current pregnancy, however more than 90% reported that the test was offered in a manner in which they could have refused the test. HIV testing in the current pregnancy was associated significantly with having known and heard of the opt-out policy and the awareness that the test was offered in their facility. It was not related with educational level. Out of the 112 clients who had not had the test in the current pregnancy, 61.8% claimed that the test had not been offered to them, while 82.4% expressed willingness to have submitted to the test if offered.<sup>10</sup>

In the United States of America, part of the guidelines in the current recommendations of HIV testing is an opt-out approach, whereby HIV testing is incorporated routinely into the standard panel of pre-natal tests with the option to decline.<sup>7</sup>

In the most recent CDC recommendations in 2006, the recommendations for HIV screening for HIV among pregnant women were included among the general recommendations for all adults and adolescents. The CDC 2006 guideline recommended Opt-Out HIV screening for all adults aged 13-64 years old for all those adults seeking medical care in any healthcare settings, thus include all pregnant women. It strengthened the recommendations for opt-out screening in pregnant women. It also strengthens the recommendation for re-screening during pregnancy. If found negative during the first trimester, a repeat HIV testing would have to be done during the third trimester if the woman found to have been living with high risk sexual behaviors. Routine universal retesting could be considered in healthcare facilities with high prevalence among women of childbearing age.<sup>7</sup>

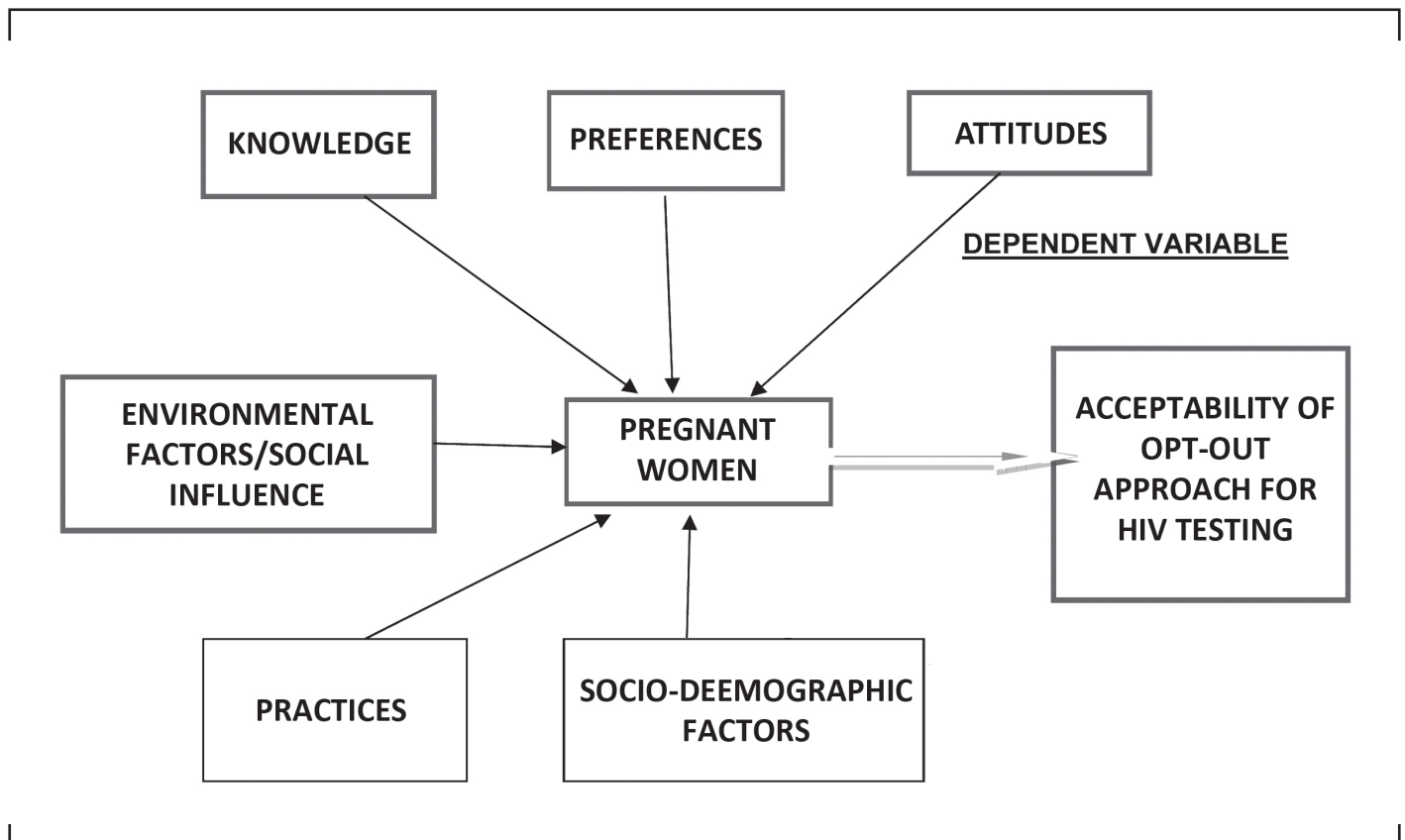
In the most recent post-graduate course given by the Department of Obstetrics and Gynecology of the Philippine General Hospital, they emphasized that the antenatal screening for all pregnant women of HIV testing be part of the routine pre-natal laboratory tests in an opt-

out approach. Universal voluntary testing of all pregnant women for HIV has been endorsed by many professional organizations including the Philippine Obstetrical and Gynecological Society. The pregnant women must be informed that the HIV testing will be performed as part of the panel of pre-natal tests unless she declines or defers testing which are embodied in the opt-out testing. Mandatory testing must not be done as it is unlawful in the Philippines as is stated in the Republic Act 8504. Women who refuse testing will still receive the same standard care due her. Testing is essential not only to maintain the health of the patient but also to be able to intervene in the form of anti-retroviral therapy and obstetrical intervention, as well as to reduce the risk of maternal to child transmission of HIV.<sup>8</sup> (Quimio, 2013)

An interview and a pre-test counselling about HIV are necessary before blood is drawn. A post-test counselling should be done by the healthcare provider once the HIV screening test result is known.

The practice recommendations according to the task force on HIV prevention and control program spearheaded by the Philippine Obstetrical and Gynecological Society for the providers of obstetric care, the healthcare providers should inform that an HIV screening test will be performed as part of the recommended routine pre-conceptual and or antenatal package. Preliminary counselling dialogue

**INDEPENDENT VARIABLES**



must be done with an option to decline the test.<sup>15</sup>

## THE CONCEPTUAL FRAMEWORK

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Our conceptual framework depicts essentially a health belief model. There may be several factors interplaying together which may influence the decision of a pregnant woman considering her acceptance of an HIV testing. Will she accept it if, it would be offered to her routinely or will she accept it if, it would be offered to her on a voluntary basis, Such factors may include her knowledge about the presence of HIV testing, awareness of its other mode of transmission other than the sexual means. Her awareness that it could be transmitted via Maternal to Child (MTCT), the magnitude of the problem that it could bring to her offspring and the availability of anti-retroviral treatment if in case she was detected positive. Her attitude would tract the line of her open-mindedness if in case this would be offered as part of the pre-natal laboratory work-ups but with the option to decline. This also considers her fear of being tested because the sensitivity of branding to have such an illness would create a social stigma which may be threatening to the acceptance of such test. Her preferences on how she would want to be tested. Her preferences must be well taken into consideration as these may remind us of her conditional means on how we can attract her to submit herself to a test. This may also remind us of a due respect and courtesy to someone's right to decide for herself in accordance to her volition. Environmental factors and social influence may play also a factor in the sense that in a Filipino culture, the family plays a central and significant role in decision making, especially if it concerns someone's health. The social media, peers, neighbours and be it the most distant relatives may contribute and could spell a big difference in trying to make her decision.

Her acceptance may also be guided by some perceived benefits and threats. Such threats would account for her sexual lifestyle. Her kind of lifestyle may bring her to the decision as she may consider herself at high risk or low risk to possibly contract the disease. This may account for her perceived susceptibility to contract the disease. The perceived severity accounts for the magnitude of the problem. We're aware of the fact that HIV imposes a continuing saga for overwhelming challenges on clinical decision makings, and treatment. The disease has gone up scaling exponentially. It has to create a craving from all of us to participate in the control of this overwhelming problem.

The gamut of all these factors may bring to its center the final decision of a pregnant woman whether she will submit herself or reject the test. These may also guide the investigators to form strategies that may be of help in trying

to get the consent of these pregnant women for a test. The strategies may enhance their decision-making hence may help us lead to an action.

## METHODOLOGY

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### A. TARGET POPULATION and SETTING:

The target population included pregnant women consulting at the Out-Patient Department of a rural government tertiary hospital. The eligibility criteria were as follows:

#### A.1. Inclusion Criteria:

1. Pregnant women consulting on an out patient basis at the department of Obstetrics and Gynecology of a government rural tertiary hospital.
2. They have to be between 18 to 48 years old.
3. They came in for out-patient consultation regardless of the age of gestation
4. Patient with whom informed consent has been explained very well and conformed to be included in the study by signing the informed consent
5. They must have a good workin knowledge and understanding of the Pilipino language

#### A.2. Exclusion Criteria:

1. Pregnant women who have been aware of HIV testing status
2. Women who have been tested with HIV prior to the study
3. Women who are mentally challenged

### B. SELECTION OF SUBJECTS:

Convenient sampling was employed among study participants for the focused group discussion. Simple random sampling was employed among study respondents for the survey.

### C. STUDY PROCEDURE AND METHOD OF DATA COLLECTION:

This is a qualitative cross sectional descriptive study in the form of a survey to be conducted at the Department of Obstetrics and Gynecology of a government rural tertiary hospital between January 2013-June 30, 2013. The study was divided into three phases, namely:

#### I. Initial Phase

##### 1.A. Focus Group Discussion

- 1.A.1. Drafting of the Guide for Focus Group Discussion
- 1.A.2. Pre-testing of the Focus Group Discussion Guide
- 1.A.3. Conduct of the Focus Group Discussion

- 2. for the pregnant women between the ages 26-35 years old who obtained secondary education, there were 3 participants
- 3. for the pregnant women between the ages 36-48 years old, there were 4 participants.

## 2. Mid-Phase

- 2.A. Formulation of the Preliminary Set of Questionnaire
- 2.B. Pre-testing of the preliminary set of questionnaire followed by debriefing
- 2.C. Qualitative Item Analysis of the questionnaire
- 2 D. Validity Establishment of the Questionnaire
  - 2.D.1. Face Validity
  - 2.D.2. Content Validity
- 2.E. Reliability testing of the formulated preliminary set of questionnaire
- 2.F. Formulation of the final set of questionnaire

## 3. Final Phase

- 3.A. Administration of the final set of questionnaire to the respondents
- 3.B. Statistical Analysis
  - 3.B.1. Frequency Endorsement
  - 3 B.2. Chi-square test
- 3 C. Writing of the final paper

Exploratory interviews in the form of a focus group discussion (FGD) was done. Focus group discussions are appropriate in order to explore the depth and nuances of opinions about an issue, to understand differences in perspectives, and to understand what factors may influence opinions concerning the acceptability of HIV testing.

Focus group discussions regarding the acceptability of opt-out strategy for HIV testing among pregnant women were conducted in three (3) sets. The investigators prepared the format for the focused group discussion. The FGD format underwent pre-testing. The FGD format and the questions (Appendix C) underwent pre-testing among senior Ob-Gyne consultants of the department, clinical epidemiologist, infectious obstetrician-gynecologist, statistician as well as the junior and senior residents of the department. Pregnant women were selected randomly after each informed consent was signed. Each focus group discussion was composed of 8-10 pregnant women as participants per session. Adequacy of representation was ensured based on the following:

- 1. for the pregnant women regardless of the age of gestation between the ages 18 to 25 years old, there were 3 participants

Informed consent was obtained from them prior to their participation in the focus group discussion.

Questions in accordance to the FGD format were prepared to guide the moderator-interviewer as to the most appropriate and leading questions to be asked. The discussions were divided into 4 parts which included: (1.) general knowledge on the availability of HIV testing as well as transmission and prevention of HIV- AIDS. (2.) Attitudes towards HIV testing (3.) Practices with HIV testing (4.) Preferences which may enhance acceptability of HIV testing. (5.) Social influence

These were done based on the systematic way a focus group discussion had to be done. Answers were properly recorded using a tape recorder as well as properly documented through verbal to written transcriptions by the group secretary. After each focus group discussion, debriefing session for each conducted focus group discussion was done. Debriefings were done to explicitly explain to the participants some misconceptions or misunderstanding they had during the FGD as well as properly addressed those questions and responses which were not cleared enough and would require further explanations. Successive focus group discussions were done until saturation point was reached, until such time that redundancy of the responses were noted by the investigators from the study participants.

The mid-phase composed of the making of the preliminary set of questionnaire. The preliminary set of questionnaire was drafted. It underwent pilot testing to at least 5 to 10 consultants of the department. After which, cognitive debriefing as well as face and content validation followed to obtain their feedbacks as to the format of the questionnaires, the color of the paper, the font of the words, wordings, phrasings, and to obtain information on how they felt while answering the preliminary sets of questionnaire. The investigators would meet to make necessary revisions, modifications and other changes to make it more facilitating, readable, appropriate and conducive to answering .

Pre-testing of the preliminary set of questionnaire was done to a group of consultants, residents as well as among pregnant women consulting at the out-patient department of our institution. Cognitive debriefing followed to obtain their feedbacks concerning the different factors mentioned previously.

Cognitive debriefing consisted of the investigators together with the respondents/participants trying to elicit

feedbacks to the questionnaires considering the wordings, the manner that they were phrased, type of questions which were threatening, acceptable, demeaning and attractive. After each cognitive debriefing, the investigators met in order to modify, remove, add or make necessary corrections as to the words, wordings, phrases, statements in order to make the questionnaires suitable to be understood and answered personally and properly by the respondents. The questionnaire must take the form answerable by a Grade VI student.

The necessary revisions were done after each pre-test until such time that all the items were comprehensible. After several pre-testing sessions, the final set of questionnaire was made.

### Face Validity

The format as well as the structure of the questions as to the font type and size, color of the paper, ways by which options were structured were evaluated by two senior obstetricians with experiences on doing qualitative researches.

### Content Validity

The investigators intended to make content validity of the questionnaire by showing it to the panel of experts composed of an infectious disease specialist, clinical epidemiologist and public health HIV-AIDS medical practitioner.

The preliminary questionnaire constructed was pre-tested by pregnant women consulting the out-patient department of the institution, senior and junior Ob-Gyne consultants of the department as well as the residents.

The item analysis was done to check the reliability and internal consistency of the questions on attitudes, practices and preferences.

There were seven (7) knowledge questions, twelve (12) questions for attitudes, six (6) questions for practices, four (4) questions for preferences and two (2) questions for social influence and one open ended question that inquires about what other possible reason/s may persuade her to submit herself to HIV testing. As a rule of thumb, to get the number of participants needed to accomplish such process, the number of items shall be multiplied by 3. Hence, the initial survey was administered to 123 respondents (41 items multiplied by 3). After which the analysis was done using STATA version 9.0 software. The inter-item correlation, item-total correlation, and Cronbach's alpha reliability coefficients were determined.

The inter-item correlation computes for the correlation coefficient (Pearson  $r$ ) for all pairs of items in the test scale or domain. The items in the test scale should be moderately correlated with each other. A correlation coefficient ( $r$ ) equivalent to 0.40 to 0.60 generated by an item

when paired with other items means that such item is moderately correlated with other items. If  $r$  is greater than 0.6 no additional information for the trait being measured may be obtained from that item. While if the  $r$  is less than 0.4, the item may not be measuring the same concept as the other items in the domain.

The item-total correlates the item with the total of the other items in the domain. An item-total correlation coefficient of greater than 0.20 suggests that the item has a good correlation with the total score of the other items in the test scale.

The Cronbach's alpha reliability coefficient normally ranges from 0 to 1. The closer the alpha to 1.0, the internal consistency of the items in the scale is greater. The ideal alpha is 0.8 but a coefficient of 0.6 is acceptable. If an item when deleted from the domain obtains a Cronbach's alpha of 0.6 or greater, this means that if that item is omitted the homogeneity of the items in the test scale improves. This makes the scale more reliable in measuring a particular concept or trait. Hence, the item may not belong to the scale and will not be useful in measuring the trait involved. As a result this item may be removed from the domain.

## RELIABILITY TESTING

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The 41 items after qualitative analysis were subjected to reliability testing. Looking into the item-total correlation of each item, an item with an item-total correlation result of greater than 0.20 suggests that the item has a good correlation with the total score of the other items in the test scale. Eighteen items (Table 1) from the forty one items (Items 1-2, 4-7, 11, 17-20, 22-27 and 34) obtained an item total score of less than 0.20, hence these items did not have a good correlation with the total score of the other items in the test scale.

Therefore, 18 items were candidates for deletion. On the 41 items the cronbach's alpha was .779. The ideal alpha is 0.8 but a coefficient of 0.6 is acceptable. If those items when deleted from the domain obtains a Cronbach's alpha of 0.6 or greater, this means that if that item is omitted the homogeneity of the items in the test scale improves. The investigators decided to remove thirteen items only and retained the five items in knowledge. When the thirteen items from the 41 items were removed, the Cronbach's alpha improved from .779 to .838. Therefore, the thirteen items were decided to be removed and retained the five questions in the knowledge domain.

Initially, there were 50 items (Figure 1) in the first set of preliminary questionnaire. It underwent pilot testing and pre-testing. An open-ended question was added to the questionnaire concerning the other possible reason/s which may persuade you to submit yourself to the test. Therefore, the second set of preliminary questionnaire

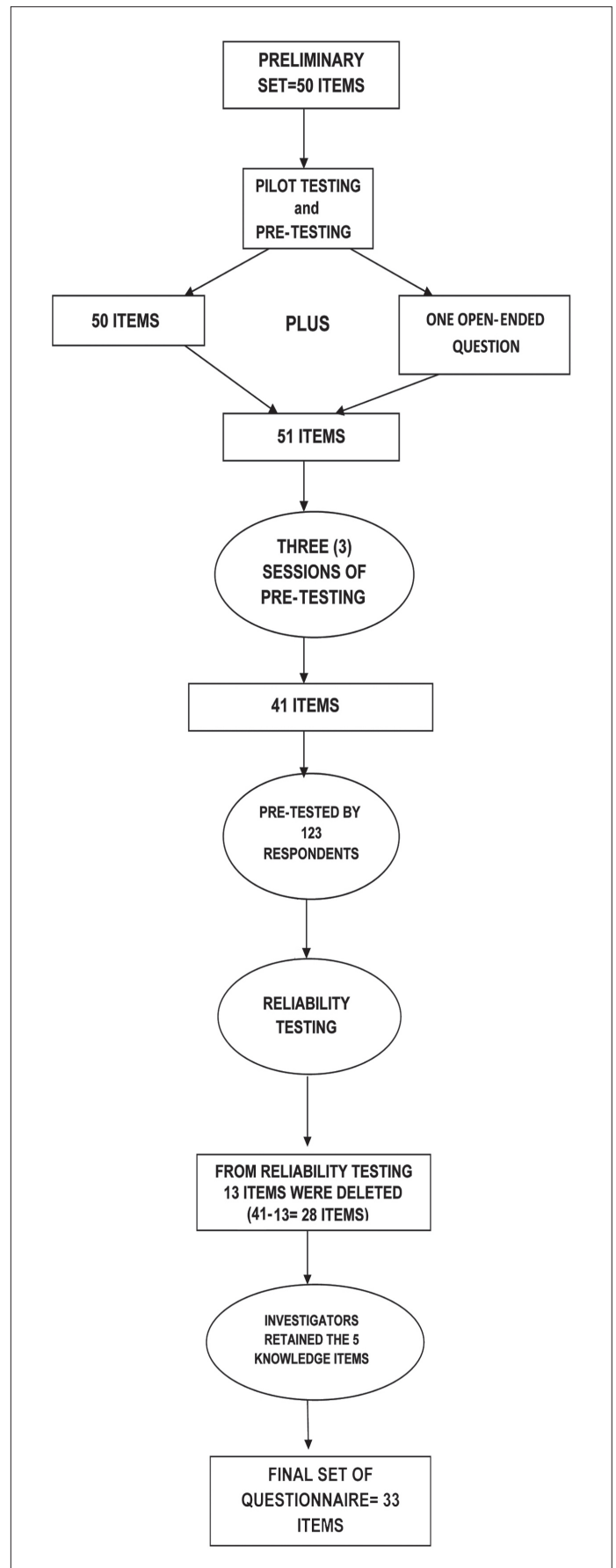
**Table 1.** Item - total score of the 18 items from the preliminary questionnaire

ITEMS	ITEM-TOTAL SCORE
1	-.087
2	.147
4	.041
5	-.090
6	-.099
7	-.571
11	.098
17	.168
18	.078
19	.151
20	-.142
22	-.060
23	.136
24	.153
25	.102
26	.195
27	.177
34	.026

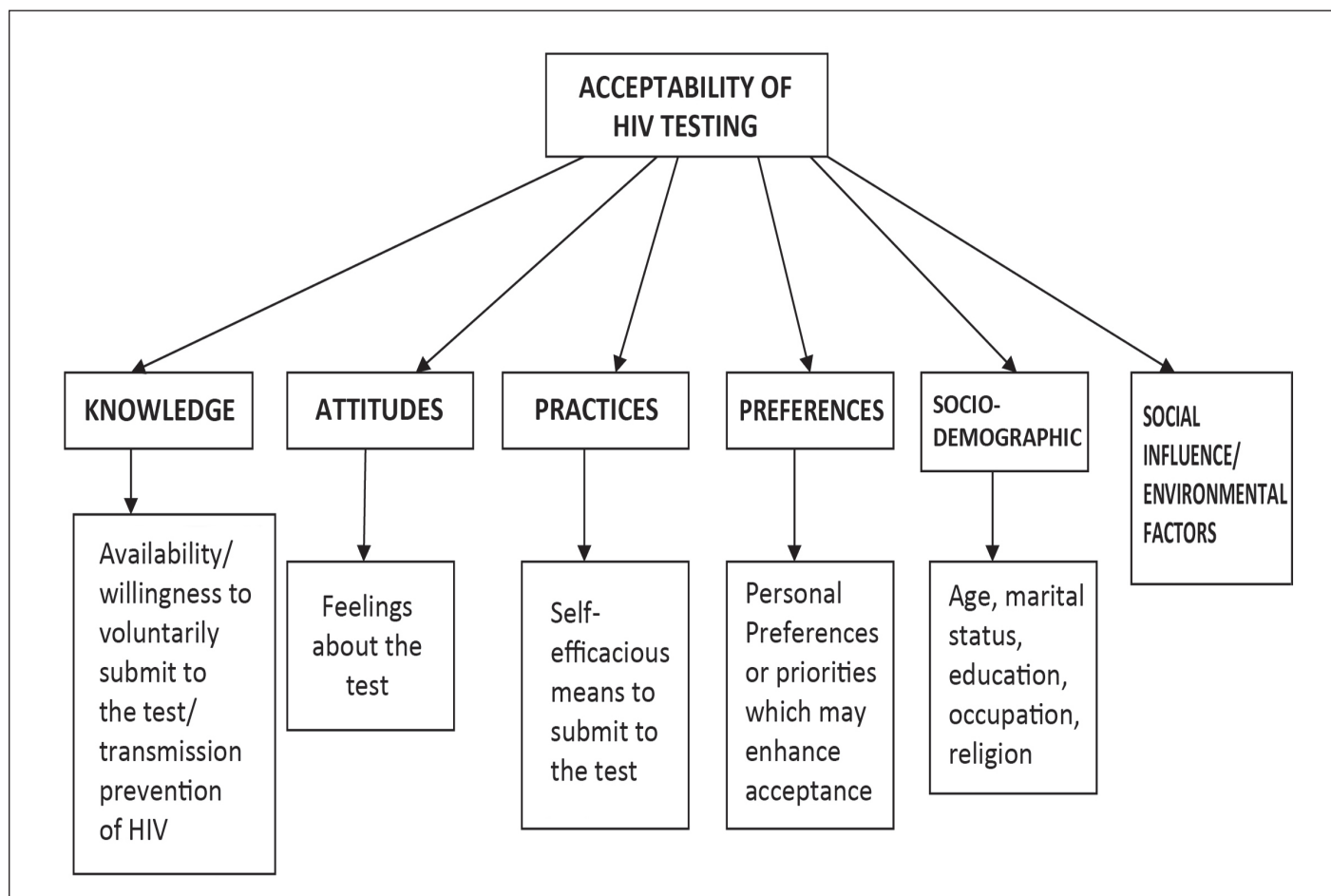
had 51 items. It underwent three sessions of pre-testing and it was reduced to 41 items. These 41 items were pre-tested among 123 respondents and underwent reliability testing. The result of reliability testing deleted thirteen (13) items. Hence, twenty eight items were left. Five questions were deleted from the knowledge questionnaire. However, the investigators decided to retain the five questions from the questionnaire since they may have significant impact on the assessment of knowledge of the respondents.

The final set of questionnaires composed of seven domains with a total of 33 items were administered to 246 pregnant women in order to obtain information intended to fulfil our objectives. The content of the questionnaire underwent validation. It made use of the Likert scale in the form of the following choices to elicit responses from the respondents.

1. Sumasang-ayon sumasang-ayon
2. Lubos na sumasang-ayon
3. Hindi sumasang-ayon
4. Lubos na hindi
5. Walang opinyon



**Figure 1.** The Process of Validation and Selection of Preliminary to Final Set of Questionnaire



Based on our Literature search up to the present times, there have been validated tool/s to satisfy our research objectives. The investigators decided to formulate its own tool by forming sets of questions which will answer our objectives. Questions that will compose the questionnaire will be selected properly which will fit to give us insights and concrete information on the succeeding domains.

The study's construct to be measured is the acceptability behaviour of pregnant women in a rural tertiary government hospital of HIV testing. Such behaviour maybe affected by several factors such as knowledge, attitudes, practices, preferences, socio- demographic factors and social influence as well as environmental factors. These factors constitute the domains of the study. The variables to be measured and tried to elicit as responses from our respondents were composed of the feelings about the test, self efficacious behaviour in conformity to her decision, personal preferences which may enhance acceptance as well as other socio-demographic variables in association with the questions for each domain.

To operationalize the terms relative to our research objectives, we define each domain as follows:

## DOMAINS

### 1. Knowledge

It refers to the fact or condition of knowing something with familiarity gained through experiences or association. In our study, we intend to get how knowledgeable were our respondents considering the availability of HIV testing in their areas. The knowledge about maternal to child transmission as well as HIV- AIDS transmission and its prevention.

### 2. Attitudes

An attitude is an expression of favour or disfavour toward a person, place, thing or event. In the study, the investigators would intend to inquire about what would be those mental and emotional states of our respondents, or simply stated their reactions toward HIV testing. We would like to know also their feelings about the test. Will the participants have a positive or a negative attitudes towards the test?

### 3. Practices

Practices refer to a habitual or customary action or

way of doing something. In the study, the investigators would want to know what would be the intended practices of the respondents if in case HIV testing opt-out strategy would be included in the panel of pre-natal tests. The investigators would like to know if they would carry out the test immediately or will they postpone the test until such time they were fully decisive to carry out the test. This intends to measure self-efficacy in the sense that, they would put into practice what they have decided.

#### **4. Preferences**

It refers to the selecting of someone or something over another or others. In our study it would refer to the conditions preferred by the respondents which would enhance them to submit themselves to be tested.

#### **5. Socio-demographic**

It refers to the social and demographic characteristics of the respondents

#### **6. Environmental factors**

It refers to the circumstances, influences, stresses, competitive, cultural, demographic, economic, natural, political, regulatory and technological factors which may influence the choices of our respondents

#### **7. Social influence**

It refers to the influence of the families, friends and the environments on the decision-making of our respondents

#### **8. Others/ information/ reasons/ insights**

The investigators provided certain part in the questionnaire to elicit responses to an open-ended question asking for their responses as to what would be some other reasons which may submit them to the HIV testing.

### **SAMPLE SIZE CALCULATIONS**

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The sample size needed for the item analysis assessment of the questionnaire was computed by multiplying the total number of items by three (3). As mentioned earlier, the empiric rule for the item analysis on the number of participants needed to accomplish such process is that the number of items for the attitude, practices, and preferences should be multiplied by three. Hence, the total number of respondents needed for item analysis assessment was 123.

Regarding the number of pregnant women needed to answer the final questionnaire, the formula for the estimation of single proportion for a cross-sectional survey was initially used in the computation. The value for the parameter  $p$  which was 0.20, reflected the percentage which was 20% among pregnant women were aware about the

maternal to child transmission of HIV. This information was obtained from the study of Madamba et al. in 2012. Using this as the parameter,  $p$ , with a 95% confidence level, and a desired precision of 0.05, 246 pregnant women responders were required to answer the final questionnaire.

### **STATISTICAL ANALYSIS**

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The data were encoded and tallied on SPSS version 17. Descriptive statistics were generated for all variables. For nominal data frequencies and percentages were computed. For numerical data, mean  $\pm$  SD were generated. Comparison of the different variables under study would be done using the following test statistics:

- 1.) The t- test was used to compare two groups with numerical data (compares means)
- 2.) Chi-square test – used to compare/associate nominal data.

### **LIMITATION OF THE STUDY**

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The study aims to evaluate/assess the present status of the knowledge, attitudes, practices, preferences, social influence, environmental as well as socio-demographic factors affecting a group of pregnant women coming from different localities consulting a certain rural tertiary hospital on their acceptability of HIV testing ante-natally. It does not aim to evaluate any existing HIV ante-natal counselling and or any HIV program related thereto. The body of information which may be elicited from the respondents were representative of the pregnant women coming from certain portions of the localities of the province only. It may not be reflective of the perceptions of the population of pregnant women of the entire province.

### **RESULTS**

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The reporting of the results of the study will be divided into qualitative and quantitative parts.

#### **X.1. QUALITATIVE RESULTS:**

##### **A. FOCUS GROUP DISCUSSION**

Three sessions of focus group discussions were done. Each group was composed of 10 to 15 pregnant women who intentionally participated after signing an informed consent. Each of the focused group discussion was held in the air-conditioned department's conference room. Participants were each seated comfortably surrounding an oblong shaped conference table. Each focused group discussion lasted from one and a half to two hours (1 ½ -

2 hours). Each participant was randomly given sufficient time to give their individual response to the questions being asked and moderated by the investigator. Participants were given the opportunity to speak out her insights on the said topic. The principal investigator initiated the discussion by explaining to the participants the purpose of the focused group discussion.

Summary of responses to the questions asked during the focused group discussion Questions such as, “Meron po ba tayong wasto at sapat na kaalaman tungkol sa HIV testing para sa mga nagbubuntis?” (May we know if we had sufficient knowledge on HIV testing to be done among pregnant women?). Most of the participants were aware of the existing HIV testing, however 50% of the participants were unaware that, it could be done among pregnant women. Most of the participants were knowledgeable that, it could be transmitted sexually. One participant mentioned that, it could be transmitted via secretions like saliva, as well as sharing of things that were used by an HIV patient. One mentioned that it could be transmitted via sharing of needles. Fifty percent (50%) of the participants were aware about the maternal to child transmission. One participant mentioned, “Siyempre po yung sa loob natin baby natin nandoon iyong dugo natin yung laman parang nagko-connect sa atin”. This created awareness of maternal to child transmission. One participant even made a comparison saying, “Yung para pong kung ano ang kinakain ng magulang ay iyon din yung napupunta sa baby.”

Most of the participants said that, they would submit themselves voluntarily to the test for the following reasons; (a.) it must be included as part of the pre-natal laboratory test (b.) to make sure if positive or negative (c.) it's good if the result would be known earlier rather than late for earlier intervention to be applied (d.) It's good to have an idea whether you are sick or not as long as we can afford the test (e.) in doubt of the faithfulness of their partners.

Some participants expressed their fears that, their lives would no longer be normal once they were found positive for HIV. They believed that they could get it from their husbands due to their uncertainties to their husbands' faithfulness once outside their homes.

Some of them preferred that the submission to the test would be for themselves only and it should not be known by anyone. They fear that, once it was known by anyone it could be presumed that they were promiscuous. They preferred that, their husbands would have to be with them during the test and some preferred that, any of their relatives could be with them during the test.

One participant mentioned that, once it's a hospital policy as a requirement to be included in their pre-natal laboratory exams then they wouldn't have any second

thought to submit themselves to be tested. Hence, they would require themselves to be tested right away.

The preliminary sets of questions were derived from the investigators' brainstorming sessions, review of literatures as well as from the three sessions of focused group discussions conducted on three separate occasions among pregnant women consulting the OB-GYN OPD (Out Patient Department).

The sets of questionnaires were formed, modified, revised after they underwent several pre-testing sessions and cognitive debriefing among pregnant women consulted at the OPD, the junior as well as the senior resident physicians and the consultant staff of the department.

After several pre-testing questions, they arrived at the final sets of questions for each domain which were administered to the patients according to the study's sample size.

## **B. QUALITATIVE ITEM ANALYSIS**

### **B.1 PRE-TESTING**

The preliminary questionnaire which was constructed was pre-tested by senior and junior consultants as well as the training residents of the department of Obstetrics and Gynecology of the said rural government tertiary hospital.

#### **PRE-TESTING RESULTS:**

**The following were several comments brought out during the pre-testing and cognitive debriefing sessions:**

1. The question number 8 in knowledge was revised to “pribadong” one on one counselling. Therefore the question was rephrased as, “kailangan magkaroon muna ng pribadong one on one counselling sa pre-natal check up bago isagawa ang HIV test.”
2. The statement numbered 11, “Kailangan maging confidential ang resulta ng HIV test” was removed due to redundancy.
3. The statements numbered 13, and 14; the “*bukod sa akin*” words would have to be added to imply involvement of someone in the knowledge of one's results.
4. The statement numbered 15 has to be retained to imply if pregnant women would want a “routine mass screening”.
5. The statements numbered 21 and 48 would mean redundancy considering the voluntary means of submitting to the test. We omitted question number 21.
6. Words such as “*pumapayag*” was changed to “*papayag lamang ako*” for questions numbers 25 and 26. This implies preference of pregnant women prior to the submission to the test.
7. The statements numbered 24 and number 17 would

imply redundancy as to the choice of “*provided kasma ko ang aking asawa*” so we omitted question number 24.

8. The statement numbered 29, “*Pumapayag ako magpa-HIV testing kung hindi malalaman ng ibang tao ang resulta ko maliban lamang sa aking doctor at ako lamang*” was removed because it implied confidentiality of the result which was similar to statement 11.
9. The statement numbered 30, “*Pumapayag ako magpa-HIV testing kung may supisiyenteng privacy*” was synonymous to question number 10, therefore it was removed.
10. Statement numbers 42, 43 and 44 “*kinakailangan kong magpa-HIV testing ayon sa aking doctor,.....sabi ng aking nurse.....ayon sa aking komadrona*” were lumped up to only one statement, “*Kinakailangan kong magpa-HIV test ayon sa aking doctor, nurse o komadrona.*”
11. Statements number 47 and 51 implied redundancy, hence we omitted question number 47.
12. Statement number 49, “*Natatakot akong makakuha ng HIV-AIDS kaya kinakailangan na makapag test ako habang maaga para makaiwas sa panganib na maidudulot nito*” was removed because it was similar to its implication to statement number 40, “*Sa kadahilanang hindi maganda ang nagiging epekto sa Nanay at sa kanyang magiging anak ng HIV-AIDS sa naririnig ko sa telebisyon at mga babasahin, ako ay kinakailangang magpa-examine ng HIV testing.*”
13. Statement number 50, “*Ako ay magpapa test na para makaiwas sa panganib na maidudulot ng HIV-AIDS*” was removed due to redundancy.
14. Statement number 51, “*Sa mga naririnig kong masamang epekto ng HIV-AIDS sa baby, nais kong magpa-test ng HIV test*” was removed due to redundancy considering statement number 47, “*Kinakailangan ko magpa-HIV test para maiwasan ko na makahawa ng HIV sa aking magiging mga anak kung ako ay positive dito*”

From the first pre-testing question, three questions we omitted. From the original 51 questions, 41 questions were retained.

These 41 questions were subjected to item analysis.

## **B.2. FACE VALIDITY**

The structure of the questionnaire was shown to the panel of experts such as infectious Ob-Gyne specialist, public health consultant in HIV-AIDS engage in doing qualitative research, senior OB-GYNE consultants of the department and a student of Masteral degree in Clinical

Epidemiology. They all agreed to the format as well as other structural parts of the questionnaire. Nothing had been changed with the over-all structure of the preliminary and final questionnaires.

## **B.3. CONTENT VALIDITY**

The questionnaire was shown to the panel of experts such as an infectious disease Ob-Gyne specialist, public health consultant in HIV-AIDS, senior OB-GYNE consultants of the department and a student of Masteral degree in Clinical Epidemiology.

## **X.2. QUANTITATIVE RESULTS:**

### **A. FREQUENCY ENDORSEMENT REPORT:**

A total of 246 pregnant women were included in the study. Our response rate was 100%.

Table 2 shows the distribution of pregnant women according to the different demographic characteristics. Their age ranged from 14 to 46 years with a mean age of 27.43 years. 41.9% of our respondents were married. 67.2% were high school graduate. 79.7% were jobless. Majority (80.5%) belonged to the Roman Catholic faith.

Table 3 showed that 41.1% of the respondents had knowledge on HIV testing, 48.4% of the respondents did not have any knowledge on HIV testing, and 10.6% did not have any answer. However, 37.4% were willing to voluntarily undergo HIV testing. 19.1% were not willing to undergo the test. A large percentage 43.5% were undecided if they would voluntarily undergo HIV testing.

Table 4 gives us some background on the assessment of these pregnant women’s knowledge on transmission and prevention of HIV-AIDS. 93.1% knew that it can be transmitted sexually. 85.4% knew about its Maternal to Child Transmission. However, still few (42.4%) answered that it could be transmitted via using a public toilet. 53.6% of them answered that it could be transmitted during labor and delivery. 59.3% of the respondents answered that it could be transmitted via breastfeeding.

Table 5 shows the different expressions of PREFERENCES (Q8-Q9) and ATTITUDES (Q10-Q14) of these pregnant women to the HIV test. 71.5% of them would prefer a “one on one” pre-natal counseling. 69.5% would want it to be incorporated in the Mothers Class. 59.8% of them would want it to be done routinely on all pregnant women. 52% would prefer to be alone while doing the test. Fifty five and seven percent (55.7%) would prefer that other than themselves the result should be known by their boyfriend or partner also. Sixty and six percent (60.6 %) would want that the result of their test would be known immediately by their families. Sixty and one percent (61 %) would want that they must be accompanied by someone during the test.

**Table 2.** Demographic Characteristics of Pregnant Women

	Frequency (n=246)	Percentage
<b>Age</b>		
≤20	48	19.5
21 – 30	112	45.5
31 – 40	79	32.1
41 – 50	7	2.8
Mean ± SD = 27.43 ± 6.98		
<b>Status</b>		
Single	57	23.2
Married	103	41.9
Live-in	86	35.0
<b>Educational Attainment</b>		
Elementary	13	5.3
HS	162	67.2
College	60	24.2
Post Graduate	8	3.3
<b>Occupation</b>		
With	50	20.3
Without	196	79.7
<b>Religion</b>		
Roman Catholic	198	80.5
Protestant	2	0.8
Born Again	21	8.5
Islam	5	2.0
IBC	15	6.1
None	1	0.4
Others	4	1.6

**Table 3.** Distribution of Pregnant Women with Knowledge on HIV Testing and Whether they Will Voluntarily Undergo the Test

	Frequency (n=246)	Percentage
<b>Knowledge on HIV Testing</b>		
With	101	41.1
Without	119	48.4
No answer	26	10.6
<b>Will voluntarily undergo the test</b>		
Yes	92	37.4
No	47	19.1
No answer	107	43.5

**Table 4.** Distribution of Pregnant Women According to their Knowledge on Transmission and Prevention of HIV

	Frequency (n=246)	Percentage
1. Ang isang buntis na babae ay puwedeng makakuha ng HIV sa paggamit ng isang silid palikurang pampubliko.	104	42.3
2. Ang isang buntis na babae ay puwedeng makasalin ng HIV sa kanilang pinagbubuntis na magiging anak.	210	85.4
3. Ang HIV ay puwedeng makuha sa pakikipag talik	229	93.1
4. Ang isang buntis na babae ay pupuwedeng makapag salin ng HIV habang sila ay nanganganak.	132	53.6
5. Ang isang nakapanganak na buntis ay pupuwedeng makapagsalin ng HIV habang sila ay nagpapasuso ng kanilang anak	146	59.3
<b>Prevention</b>		
6. May mga gamot at pamamaraang medical na pupuwedeng makapag iwas ng pagkakahawa ng isang sanggol ng HIV kung ang kanilang ina ay positibo sa pagkakaroon ng HIV	197	80.0
7. Ako ay naniniwala sa pagkakaroon dapat ng HIV testing bago magbuntis para makaiwas sa pagkakahawa ng isang sanggol habang nagbubuntis ang isang babae.	211	85.8

Table 6 showed that the person they would want to be with during the test or accompanying them during the test was their husband. (69.1%), secondly their live-in partner (11%), thirdly their relatives (5.7%), fourthly their relatives (5.7%), lastly their friends and boyfriend at 1.2% and 0.4% respectively. 12.6% had no answer.

Table 7 would give us insights on some of the PRACTICES (Q16 and 17)/PREFERENCES (Q18 and 19) of the re-

**Table 5.** Distribution of Pregnant Women Responses on .....

	Sumasang-ayon	Lubos na Sumasang-ayon	Hindi Sumasang-Ayon	Lubos na Hindi Sumasang-ayon	Walang Opinyon	Total
8. Kailangan magkaroon muna ng pribadong "one on one" counselling sa pre-natal check up bago isagawa ang HIV test	176 (71.5%)	57 (23.2%)	1 (0.4%)	4 (1.6%)	8 (3.3%)	246
9. Kailangan isama sa pagkakabuo ng isang Mother's Class ang counselling sa HIV testing	171 (69.5%)	58 (23.6%)	4 (1.6%)	2 (0.8%)	11 (4.5%)	246
10. Kailangan nag- iisa lamang ako habang isinasagawa ang HIV test	128 (52.0%)	53 (21.5%)	36 (14.6%)	6 (2.4%)	23 (9.3%)	246
11. Bukod sa akin kailangan malaman ng asawa o ng boyfriend o ng kinakasama ko ang resulta ng HIV test ko	137 (55.7%)	92 (37.4%)	3 (1.2%)	2 (0.8%)	12 (4.9%)	246
12. Bukod sa akin kailangan malaman kaagad ng pamilya ko ang resulta ng HIV test ko	149 (60.6%)	79 (32.1%)	5 (2.0%)	2 (0.8%)	11 (4.5%)	246
13. Kailangan maging "routine" o maisagawa sa lahat ng mga nagbubuntis ang HIV testing	147 (59.8%)	69 (28.0%)	13 (5.3%)	2 (0.8%)	15 (6.1%)	246
14. Kailangan may kasama ako habang isinasagawa ang test	150 (61.0%)	31 (12.6%)	38 (15.4%)	4 (1.6%)	23 (9.3%)	246

**Table 6.** Distribution of Pregnant Women with Knowledge on their Response on Whom They Want to be Accompanied

	Frequency	Percentage
Spouse	170	69.1
Boyfriend	1	0.4
Live in partner	27	11.0
Relatives	14	5.7
Friends	3	1.2
No Answer	31	12.6

spondents about HIV testing. 52 % would opt for a test if it would be given for free. 55.7% preferred that it would have to be part of the Department of Health programs. 46.7% would prefer if they would be given due and indiscriminating treatment by the healthcare providers. 47.2% would want the results be kept confidential between her and her doctors only.

Table 8 depicts some questions assessing the ATTITUDES (Q20-24 and Q26), PRACTICE (Q25) and SOCIAL INFLUENCE (Q27) among our respondents. Questions 20-24 showed that majority of our respondents showed and expressed fears of having known to have a positive test (58.5%), magnitude of expenses if found to be posi-

tive (55.3%), being separated from relatives and friends (48%), separation from the husband (42.3%), and destruction of public image (49.2%). 57.7% of them would be comfortable if in case it would be included in their pre-natal laboratory work ups. 64.2% believed that there were adequate information being given to them about HIV-AIDS.

Table 9 shows SOCIAL INFLUENCE (Q29), PRACTICE (Q30-32), ATTITUDE (Q33) on HIV testing as well as the PRACTICE of our respondents towards HIV testing. 57.7% of them would have the test because of their healthcare provider's advice. 77% did not agree that they would submit to the test because they did not trust their husbands' fidelity. Some practices would reveal that 59.8% would want to know their present HIV status, 56.5% to prevent maternal to child transmission and 52.4% as a preventive strategy and early treatment if known to have a positive result.

#### SUMMARY OF THE RESPONSES PER DOMAIN:

Table 9 shows the ranking of responses from the respondents who agreed with the variables under the domain on attitudes. As an expression of positive attitude (Table 10-A), sixty and one percent (61%) would

**Table 7.** Distribution of Pregnant Women Responses on .....

	Sumasang-ayon	Lubos na Sumasang-ayon	Hindi Sumasang-Ayon	Lubos na Hindi Sumasang-ayon	Walang Opinyon	Total
16. Magpapagawa ako ng HIV testing kung ito ay libre	128 (52.0%)	93 (37.9%)	9 (3.7%)	1 (0.4%)	15 (6.1%)	246
17. Kailangan isama sa proyekto ng Department of Health at ng pamahalaan ang HIV testing	137 (55.7%)	99 (40.2%)	0	1 (0.4%)	9 (3.7%)	246
18. Papayag ako magpa- HIV test kung ang mga doctor,nurses at mga iba pang nagtatrabaho sa hospital ay pakikitaan ako ng mabuting atensiyong medical kung sakaling ako ay positive	105 (42.7%)	115 (46.7%)	12 (4.9%)	1 (0.4%)	13 (5.3%)	246
19. Papayag ako magpa- HIV testing kung hindi malalaman ng ibang tao ang resulta, ako at ang aking doctor lamang	116 (47.2%)	67 (27.2%)	30 (12.3%)	6 (2.5%)	27 (11.1%)	246

**Table 8.** Distribution of Pregnant Women Responses on .....

	Sumasang-ayon	Lubos na Sumasang-ayon	Hindi Sumasang-Ayon	Lubos na Hindi Sumasang-ayon	Walang Opinyon	Total
20. Natatakot ako kung sakaling malaman ko na positibo ako sa HIV test ko.	144 (58.5%)	57 (23.2%)	16 (6.5%)	5 (2.0%)	24 (9.8%)	246
21. Natatakot ako sa napakalaking gastusin kung positive ako sa HIV test	136 (55.3%)	78 (31.7%)	12 (4.9%)	3 (1.2%)	17 (7.0%)	246
22. Natatakot ako na mawalan ako ng mga kamag-anakan at mga kaibigan kung sakaling malaman nila na "positive" ako	118 (48.0%)	72 (29.3%)	25 (10.2%)	8 (3.3%)	23 (9.3%)	246
23. Natatakot ako na iwanan ng aking asawa kung "positive" ako sa HIV test	104 (42.3%)	76 (30.9%)	28 (11.4%)	10 (4.1%)	28 (11.4%)	246
24. Natatakot ako na pandirihan ng publiko at sumama ang imahe ko kung sakaling mag- positive ako sa test.	121 (49.2%)	69 (28.0%)	26 (10.6%)	8 (3.3%)	22 (8.95)	246
25. Kinakailangan bang maging parte ng isang routine laboratory exams ang HIV testing?	147 (59.8%)	64 (26.0%)	7 (2.8%)	7 (2.8%)	21 (8.5%)	246
26. Ikaw ba ay magiging panatag o komportable na magkaroon ng HIV testing sa iyong pre-natal check up?	142 (57.7%)	52 (21.1%)	18 (7.3%)	12 (4.9%)	22 (8.9%)	246
27. Naniniwala ka ba na may sapat na impormasyon tungkol sa HIV at pagbubuntis na "available" kung saan ka nagpapacheck-up na ospital para sa mga nagbubuntis?	158 (64.2%)	51 (20.7%)	11 (4.5%)	2 (0.8%)	24 (9.8%)	246

want to be with someone while doing the test. Sixty and six (60.6%) expressed that other than themselves, the result will have to be known also by their families. Fifty nine and eight percent expressed that HIV testing must be routinely done on all pregnant women. Fifty seven and seven percent (57.7%) would feel comfortable on including HIV testing as part of their ante-natal laboratory work-ups. Fifty five and seven percent (55.7%) they want that the result of the test be known also by their boyfriend or partner in life. Fifty two and four percent (52.4 %) would want to be tested as a form of preventive strategy. Fifty two (52 %) would want to be alone while performing the test.

As an expression of negative attitude (Table 10-B), fifty eight and five percent (58.5 %) fear of having a positive result. Fifty five and three percent (55.3 %) would have some fears on the big expenses they would face when found positive. Forty nine and two percent (49.2%) would fear that their public image will be destroyed. Forty eight percent (48%) would fear of separation from their friends and relatives. Forty two and three percent (42.3%) fear of being separated from their husbands.

Table 11 shows the ranking of responses from the respondents who agreed with the variables under the domain on practices. The top three responses were: 59.8 % expressed that it needs to be a part of the routine lab-

**Table 10-A.** Expression of Positive Attitudes

1. I need to be with someone while doing the test	61 %
2. Other than myself, the result will have to be known by my family as well	60.6 %
3. HIV testing must be routinely done on all pregnant women	59.8 %
4. They would be comfortable on including HIV test as part of their laboratory examinations during their pre-natal	57.7 %
5. Other than myself, the result will have to be known also by my boyfriend or partner in life	55.7 %
6. I need to be tested as a form of preventive strategy	52.4 %
7. I need to be alone while performing the test	52 %

**Table 9.** Distribution of Pregnant Women Responses on .....

	Sumasang-ayon	Lubos na Sumasang-ayon	Hindi Sumasang-Ayon	Lubos na Hindi Sumasang-ayon	Walang Opinyon	Total
29. Kinakailangan ko magpa HIV test ayon sa aking doctor/nurse/komadro-na	142 (57.7%)	45 (18.3%)	22 (8.9%)	4 (1.6%)	33 (13.4%)	246
30. Kinakailangan ko magpa test kasi hindi ako nagtitiwala sa katapatan ng aking asawa	74 (30.3%)	24 (9.8%)	77 (31.6%)	18 (7.4%)	51 (20.9%)	246
31. Kinakailangan ko magpa HIV test kasi gusto ko malaman ang kasalukuyan kong "status" kung positive ba ako o negative?	147 (59.8%)	57 (23.2%)	18 (7.3%)	5 (2.0%)	19 (7.7%)	246
32. Kinakailangan ko magpa- HIV test para maiwasan ko na makahawa ng HIV sa aking magiging anak kung ako ay positive dito	139 (56.5%)	75 (30.5%)	12 (4.9%)	3 (1.2%)	17 (6.9%)	246
33. Natatakot akong makakuha ng HIV-AIDS kaya kinakailangan na makapag test ako habang maaga para makaiwas sa mga panganib na maidudulot nito sa akin at sa aking anak	129 (52.4%)	91 (37.0%)	7 (2.8%)	3 (1.2%)	16 (6.5%)	246

oratory work-ups, as well as 59.8% would want to know their present HIV status whether positive or negative, 56.5 % would want to prevent maternal to child transmission, and 55.7% would wish it to be a part of the DOH program.

Table 12 shows the ranking of responses from the respondents who agreed with the variables under the domain of preferences. The top three responses were: 71.5% preferred to have a one on one pre-natal counseling, 69.5% preferred it to be included in the Mother's class and 61% preferred that they should be accompanied by someone during the testing period. 60.6% preferred that the result of the test be known by their family members. 59.8% preferred that it be included routinely in their laboratory work up. 55.7 % preferred that the result of the test be known by their husbands. 52% preferred that they must be alone once the test is done. 47.2% preferred confidentiality. And 46.7% preferred to have indis-

criminate treatment from their healthcare providers.

Table 13 shows that 64.2% believed that there were sufficient medical information in the institution where they were having their pre-natal check up therefore they would submit themselves to the test and 57.7% of them would submit to the test as per advised by their healthcare providers.

Table 14 shows the comparison of age of pregnant women who either agree or disagree to the different statements. From the different statements, K20 to K24 were negatively worded questions, hence the scoring were reversed. The results showed that there was a significant difference noted in age of pregnant women who agree or disagree with statements "*Magpapagawa ako ng HIV testing kung ito ay libre*" (K16), "*Kinakailangan bang maging parte ng isang routine laboratory exams ang HIV testing?*" (K25), "*Kinakailangan ko magpa HIV test kasi gusto ko malaman ang kasalukuyan kong "status"*

**Table 10-B.** Expression of Negative Attitudes

1. Fear of knowing to have a positive result	58.5 %
2. Fear of having big expenses when found to be positive	55.3 %
3. Destruction of public image	49.2 %
4. Fear of being separated from friends and relatives	48%
5. Fear of being left by their husbands	42.3 %

**Table 11.** Practices

1. It needs to be part of the routine laboratory work-ups for pregnant women	59.8 %
2. To know present HIV status; if positive or negative	59.8 %
3. To prevent maternal to child transmission	56.5 %
4. It needs to be part of the DOH program	55.7 %
5. They would submit to the test provided it is given for FREE	52.1 %
6. They would submit to the test not because they don't trust their husbands' fidelity	31.6 %

**Table 12.** Preferences

1. They prefer "one on one" pre-natal counselling	71.5 %
2. They prefer it to be included in the Mother's Class	69.5 %
3. They prefer that there is a need that they must be accompanied by someone	61.0 %
4. They prefer that the result of the test be known also by their family members	60.6 %
5. They prefer that the test be included routinely in their laboratory work-up	59.8 %
6. They prefer that the result be known by their husbands	55.7 %
7. They prefer to be alone once the test is done	52.0 %
8. They prefer confidentiality	47.2 %
9. They prefer indiscriminate medical treatment from their healthcare providers	46.7 %
10. Persons they want to be with during the test	
1. spouse= 69.1 %	
2. live-in partner= 11%	
3. relatives= 5.7%	
4. friends= 1.2%	
5. boyfriend= 0.4%	

kung positive ba ako o negative?" (K31) and "Kinakailangan ko magpa-HIV test para maiwasan ko na makahawa ng HIV sa aking magiging anak kung ako ay positive dito" (K32) as proven by all p values of <0.05. The mean age of pregnant women agreeing to these statement were significantly lower than those disagreeing except for the

**TABLE 13.** Social Influences

1. They would submit to the test because there are sufficient medical information available in their institution	64.2 %
2. They would submit to the test as advised by their healthcare providers	57.7 %

**Table 14.** Comparison of Age of Pregnant Women who Agree and do not Agree to the Different Statement

	Age (Mean ± SD)		P value
	Agree	Do not Agree	
K8	29.92 ± 8.66	27.29 ± 6.87	0.18 (NS)
K9	28.88 ± 7.85	27.32 ± 6.92	0.38 (NS)
K10	27.80 ± 6.98	27.30 ± 6.99	0.62 (NS)
K11	29.47 ± 7.19	27.28 ± 6.95	0.21 (NS)
K12	28.00 ± 8.24	27.39 ± 6.89	0.72 (NS)
K13	27.97 ± 8.33	27.36 ± 6.79	0.66 (NS)
K14	26.52 ± 7.04	27.76 ± 6.94	0.22 (NS)
K16	24.36 ± 7.06	27.78 ± 6.90	0.02 (S)
K17	26.30 ± 7.47	27.48 ± 6.97	0.60 (NS)
K18	26.08 ± 7.16	27.59 ± 6.96	0.30 (NS)
K19	26.35 ± 7.58	27.80 ± 6.74	0.16 (NS)
K20	27.47 ± 7.02	27.25 ± 6.85	0.84 (NS)
K21	27.55 ± 6.94	26.63 ± 7.26	0.48 (NS)
K22	27.51 ± 7.08	27.16 ± 6.68	0.74 (NS)
K23	27.49 ± 7.01	27.29 ± 6.93	0.84 (NS)
K24	27.12 ± 6.98	28.50 ± 6.93	0.19 (NS)
K25	29.69 ± 8.13	27.06 ± 6.71	0.03 (S)
K26	27.73 ± 7.25	27.35 ± 6.89	0.72 (NS)
K27	26.62 ± 7.24	27.58 ± 6.94	0.44 (NS)
K29	28.02 ± 7.52	27.25 ± 6.81	0.46 (NS)
K30	27.39 ± 6.98	27.50 ± 7.01	0.90 (NS)
K31	28.90 ± 7.27	27.13 ± 6.90	0.13 (NS)
K32	30.13 ± 7.42	27.04 ± 6.84	0.02 (S)
K33	30.58 ± 7.80	27.06 ± 6.80	0.01 (S)

Legend:

k= question number referring to the questionnaires  
NS= not significant S= significant

statement K16 where the mean age of pregnant women agreeing to these statement were significantly higher than those disagreeing.

Table 15 showed the association of status of pregnant women and their responses (agree or disagree) to the different statements. The results showed that there was a significant association noted between the status and the pregnant women's responses on the following statements "Magpapagawa ako ng HIV testing kung ito ay libre" (K16), "Papayag ako magpa-HIV test kung ang mga doctor, nurses at mga iba pang nagtatrabaho sa hospital ay pakikitaan ako ng mabuting atensiyong medical kung sakaling ako ay positive" (K18), "Papayag ako magpa-HIV testing kung hindi malalaman ng ibang tao ang resulta, Ako at ang aking doctor lamang" (K19) and "Kinakailangan ko magpa test kasi hindi ako nagtitiwala sa katapatan ng aking asawa" (K30) as proven by all p values <0.05. The proportion of pregnant women agreeing on statements K16, K18 and K19 was significantly higher among married and living-in than the single pregnant women. For statement K30, significantly more proportion of single pregnant women agree on it.

Table 16 shows the association of education of pregnant women and their responses (agree or disagree) to the different statements. The results showed that there was a significant association noted between the education and the pregnant women's responses on statement K8 "Kailangan magkaroon muna ng pribadong "one on one" counselling sa pre-natal check up bago isagawa ang HIV test". as shown by the p value of 0.0004. The proportion of pregnant women agreeing on this statement increases with increasing level of education.

Table 17 shows the association of occupation of pregnant women and their responses (agree or disagree) to the different statements. The results showed that there was no significant association noted as proven by all p values >0.05.

Table 18 shows the association of religion of pregnant women and their responses (agree or disagree) to the different statements. The results showed that there was a significant association noted between the status and the pregnant women's responses on the following statements "Bukod sa akin kailangan malaman kaagad ng pamilya ko ang resulta ng HIV test ko" (K12), "Kailangan may kasama ako habang isinasagawa ang test" (K14) and "Papayag ako magpa-HIV test kung ang mga doctor, nurses at mga iba pang nagtatrabaho sa hospital ay pakikitaan ako ng mabuting atensiyong medical kung sakaling ako ay positive" (K18) as proven by all p values <0.05. The proportion of pregnant women agreeing on these statements were significantly higher among catholics than the non-catholics.

The preceding tables (Tables 14 to 18) show us the association of the socio-demographic factors in relation

**Table 15.** Association of Marital Status of Pregnant Women with their Responses to the Different Statement

Agree Responses	Status			Pvalue
	Single (n=57)	Married (n=103)	Live-in (n=86)	
K8	53 (93.0%)	100 (97.1%)	80 (93.0%)	0.36 (NS)
K9	53 (93.0%)	94 (91.3%)	82 (95.3%)	0.54 (NS)
K10	45 (78.9%)	73 (70.9%)	63 (73.3%)	0.54 (NS)
K11	52 (91.2%)	96 (93.2%)	81(94.2%)	0.79 (NS)
K12	53 (93.0%)	95 (92.2%)	80 (93.0%)	0.97 (NS)
K13	48 (84.2%)	88 (85.4%)	80 (93.0%)	0.18 (NS)
K14	42 (73.7%)	79 (76.7%)	60 (69.8%)	0.56 (NS)
K16	46 (80.7%)	96 (93.2%)	79 (91.9%)	0.03 (S)
K17	53 (93.0%)	101 (98.1%)	82 (95.3%)	0.28(NS)
K18	45 (78.9%)	95 (92.2%)	80(93.0%)	0.01 (S)
K19	34 (59.6%)	84 (81.6%)	65 (75.6%)	0.009 (S)
K20	15 (26.3%)	18 (17.5%)	12 (14.0%)	0.16 (NS)
K21	9 (15.8%)	11 (10.7%)	12 (14.0%)	0.62 (NS)
K22	13 (22.8%)	20 (19.4%)	23 (26.7%)	0.48 (NS)
K23	16 (28.1%)	27 (26.2%)	23 (26.7%)	0.96 (NS)
K24	14 (24.6%)	24 (23.3%)	18 (20.9%)	0.86 (NS)
K25	49 (86.0%)	90 (87.4%)	72 (83.7%)	0.77 (NS)
K26	40 (70.2%)	85 (82.5%)	69 (80.2%)	0.17 (NS)
K27	47 (82.5%)	91 (88.3%)	71 (82.6%)	0.45 (NS)
K29	43 (75.4%)	77 (74.8%)	67 (77.9%)	0.87 (NS)
K30	31 (54.4%)	33 (32.0%)	36 (41.9%)	0.02 (S)
K31	49 (86.0%)	82 (79.6%)	73 (84.9%)	0.50 (NS)
K32	48 (84.2%)	89 (86.4%)	77 (89.5%)	0.63 (NS)
K33	51 (89.5%)	90 (87.4%)	79 (91.9%)	0.60 (NS)

Legend: K= question number referring to the questionnaires    NS= not significant    S= significant

to the specific questions stated in the questionnaires. Socio-demographic factors such as age, marital status, occupation, educational attainment and religion were found to be associated with the different questions applied to were these factors were significant. Statistical analysis was applied on the 33 questions versus the different socio-demographic characteristics of the respondents using the determination of the p- value as to what question we can find significant in relation to each socio- demographic characteristics. Age was significantly associated with the questions if it would be given for free, HIV testing must form part of the pre- natal laboratory exams, to know the present HIV status as well as to prevent HIV transmission. The mean age of women who believed that it must form part of the routine pre-natal lab examinations, to know the existing HIV status and to prevent transmission was significantly of lower mean age compared to, HIV if it would be given for free which accounted for women of higher mean age. It means that older women would like to get it for free and younger women would prefer the rest of the

conditions. (Table 14)

In relation to marital status (Table 15), preferential issues related to procurement of the test for free, compassionate healthcare providers, confidentiality between the patient and the doctors only, and fidelity found their significant associations. Married women and those living-in with partners would prefer the first three conditions as mentioned. The issue on whether they would submit themselves for HIV testing just because they were doubting the fidelity of her husband had significant association among single respondents.

Educational attainment (Table 16) found its significant association with one on one pre-natal counselling with the healthcare provider. Significantly its association was considerably noted that, as the educational attainment became higher, the higher would be its association with keeping the privacy among themselves only.

Majority of our respondents were jobless. In relation to occupation (Table 17), no question/s were found to be significantly associated with occupation.

**Table 16.** Association of Education of Pregnant Women with their Responses to the Different Statement

Agree Responses	Status				P value
	Elementary (n=13)	HS (n=162)	College (n=60)	Post Graduate (n=8)	
K8	9 (69.2%)	155 (95.7%)	58 (96.7%)	8 (100%)	0.0004 (S)
K9	12 (92.3%)	150 (92.6%)	57 (95.0%)	7 (87.5%)	0.85 (NS)
K10	8 (61.5%)	117 (72.2%)	48 (80.0%)	5 (62.5%)	0.41 (NS)
K11	11 (84.6%)	152 (93.8%)	55 (91.7%)	8 (100%)	0.50 (NS)
K12	12 (92.3%)	150 (92.6%)	55 (91.7%)	8 (100%)	0.86 (NS)
K13	10 (76.9%)	142 (87.7%)	55 (91.7%)	7 (87.5%)	0.51 (NS)
K14	11(84.6%)	118 (72.8%)	43 (71.7%)	7 (87.5%)	0.62 (NS)
K16	13 (100%)	141 (87.0%)	56 (93.3%)	8(100%)	0.21 (NS)
K17	13 (100%)	154 (95.1%)	58 (96.7%)	8 (100%)	0.74 (NS)
K18	12 (92.3%)	143 (88.3%)	54 (90.0%)	8 (100%)	0.73 (NS)
K19	9 (69.2%)	114 (70.4%)	50 (83.3%)	8 (87.5%)	0.19 (NS)
K20	3 (23.1%)	28 (17.3%)	14 (23.3%)	0	0.38 (NS)
K21	2 (15.4%)	24 (14.8%)	5 (8.3%)	0	0.40 (NS)
K22	3 (23.1%)	39 (24.1%)	14 (23.3%)	0	0.48 (NS)
K23	3 (23.1%)	46 (28.4%)	16 (26.7%)	0	0.36 (NS)
K24	4 (30.8%)	38 (23.5%)	13 (21.7%)	0	0.40 (NS)
K25	12 (92.3%)	135 (83.3%)	55 (91.7%)	8 (100%)	0.30 (NS)
K26	7 (53.8%)	126 (77.8%)	51 (85.05)	7 (87.5%)	0.08 (NS)
K27	11 (84.6%)	137 (84.6%)	52 (86.7%)	6 (75.0%)	0.86 (NS)
K29	11 (84.6%)	122 (75.3%)	44 (73.3%)	7 (87.5%)	0.71 (NS)
K30	6 (46.2%)	67 (41.4%)	20 (33.3%)	5 (62.5%)	0.38 (NS)
K31	8 (61.5%)	133 (82.1%)	53 (88.3%)	8 (100%)	0.06 (NS)
K32	10 (76.9%)	142 (87.7%)	53 (88.3%)	6 (75.0%)	0.51 (NS)
K33	11 (84.6%)	141 (87.0%)	57 (95.0%)	8 (100%)	0.24 (NS)

Legend: K= question number referring to the questionnaires    NS= not significant    S= significant

On the issues of religion (Table 18), issues such as that, if they were found to be positive it had to be known immediately by their families, they need somebody to be with during the HIV testing, and health care providers must give indiscriminate medical attention to those HIV positive. Catholics favourably considered the stated conditions significantly more than the Non-Catholics.

## DISCUSSION

Information and knowledge have been crucial in understanding the burden an HIV-AIDS can bring to someone's life, most especially among the vulnerable sector of our society, i.e. the pregnant women themselves and their babies. Everybody must already have that growing awareness for the disease because it has been striking exponentially people from different walks of lives, different age groups, lifestyles, races and socio-economic strata. No one can be spared from being caught unaware of the vast problems that it could bring.

The need to acquire some information as well as understand pregnant women's opinions about the process of pre-natal HIV testing has been a universal concern. OB-GYN practitioners were given clear recommendations by the different local and international societies, however, it has been noteworthy to say that, the healthcare practitioners lack of information, as well as attention to women's knowledge, opinions, attitudes and preferences may serve as one of the barriers in the acceptance of such test. Some of our pregnant women are in the dilemma and we as the healthcare providers must learn to see, feel and understand their sentiments, emotions and most of all their perceptions on HIV testing.

The survey necessitates assessing the existing knowledge of the pregnant women consulting the Out-Patient Department of a tertiary rural government hospital regarding the availability of HIV testing. Considerably, 41.4% of the respondents had a knowledge on HIV testing, whereas 48.4% did not have the knowledge on HIV testing (Table 3). However, 37.4% (Table 3) were willing to voluntarily

**Table 17.** Association of Occupation of Pregnant Women with their Responses to the Different Statement

	Occupation		P value
	With (n=50)	Without (n=196)	
K8	49 (98.0%)	184 (93.9%)	0.48 (NS)
K9	49 (98.0%)	180 (91.8%)	0.20 (NS)
K10	40 (80.0%)	141 (71.9%)	0.24 (NS)
K11	49 (98.0%)	180 (91.8%)	0.20 (NS)
K12	45 (90.0%)	183 (93.4%)	0.38 (NS)
K13	43 (86.0%)	173 (88.3%)	0.66 (NS)
K14	36 (72.0%)	145 (74.0%)	0.78 (NS)
K16	46 (92.0%)	175 (89.3%)	0.57 (NS)
K17	49 (98.0%)	187 (95.4%)	0.69 (NS)
K18	45 (90.0%)	175 (89.3%)	0.88 (NS)
K19	40 (80.0%)	143 (73.0%)	0.30 (NS)
K20	9 (18.0%)	36 (18.4%)	0.95 (NS)
K21	7 (14.0%)	25 (12.8%)	0.82 (NS)
K22	11 (22.0%)	45 (23.0%)	0.89 (NS)
K23	12 (24.0%)	54 (27.6%)	0.61 (NS)
K24	9 (18.0%)	47 (24.0%)	0.36 (NS)
K25	47 (94.0%)	164 (83.7%)	0.06 (NS)
K26	42 (84.0%)	152 (77.6%)	0.32 (NS)
K27	45 (90.0%)	164 (83.7%)	0.26 (NS)
K29	36 (72.0%)	151 (77.0%)	0.46 (NS)
K30	17 (34.0%)	83 (42.3%)	0.28 (NS)
K31	41 (82.0%)	163 (83.2%)	0.84 (NS)
K32	44 (88.0%)	170 (86.7%)	0.81 (NS)
K33	44 (88.0%)	176 (89.8%)	0.71 (NS)

submit themselves for an HIV test. Surprisingly, a bigger percentage of the respondents did not have any information on the availability of the test for pregnant women. This has been essentially crucial in the undertakings of their pre-natal check-ups. It has been noteworthy to emphasize at this point that, pre-natal HIV testing has been a key component in an effective strategy to eliminate maternal to child transmission of HIV, the so called MTCT. (Podhurst, 2004) Several reasons maybe accountable to the findings of the survey. Our respondents have been living in a rural setting. They may be unaware of the availability of HIV testing intended for pregnant women due to inaccessibility of the respondents to legitimate information from the print and social media. Improper handling of healthcare information by their healthcare providers may make them incognizant of being tested because of the fear of being stigmatized of having a “deadly” disease. It may create an attitude of indifference because at all times, they have focused themselves on the care of their individual families. Nyuzaghl, et

**Table 18.** Association of Religion of Pregnant Women with their Responses to the Different Statement

	Religion		P value
	Catholics (n=198)	Non-Catholics (n=48)	
K8	188 (94.9%)	45 (93.8%)	0.72 (NS)
K9	185 (93.4%)	44 (91.7%)	0.75 (NS)
K10	143 (72.2%)	38 (79.2%)	0.32 (NS)
K11	187 (94.4%)	42 (87.5%)	0.08 (NS)
K12	187 (94.4%)	41 (85.4%)	0.05 (S)
K13	174 (87.9%)	42 (87.5%)	0.94 (NS)
K14	151 (76.3%)	30 (62.5%)	0.05 (S)
K16	181 (91.4%)	40 (83.3%)	0.09 (NS)
K17	192 (97.0%)	44 (91.7%)	0.10 (NS)
K18	181 (91.4%)	39 (81.3%)	0.04 (S)
K19	149 (75.3%)	34 (70.8%)	0.52 (NS)
K20	35 (17.7%)	10 (20.8%)	0.61 (NS)
K21	23 (11.6%)	9 (18.8%)	0.19 (NS)
K22	42 (21.2%)	14 (29.2%)	0.24 (NS)
K23	50 (25.3%)	16 (33.3%)	0.26 (NS)
K24	45 (22.7%)	11 (22.9%)	0.98 (NS)
K25	169 (85.4%)	42(87.5%)	0.70 (NS)
K26	156 (78.85)	38 (79.2%)	0.95 (NS)
K27	171 (86.4%)	38 (79.2%)	0.21 (NS)
K29	150 (75.8%)	37 (77.1%)	0.84 (NS)
K30	83 (41.9%)	17 (35.4%)	0.41 (NS)
K31	163 (82.3%)	41 (85.4%)	0.60 (NS)
K32	174 (87.9%)	40 (83.3%)	0.40 (NS)
K33	176 (88.9%)	44 (91.7%)	0.57 (NS)

Legend: K= question in the questionnaires S= significant NS= not significant

al noted in their study among pregnant women in Ghana that, some of their respondents were not being exposed to education on MTCT.<sup>10</sup> Some of the information being given to them was inadequate. Therefore, there is a need to ensure completeness of MTCT information being given to these pregnant women. This may be the case in our respondents hence, there is a need for optimum education campaign and dissemination of information to proper authorities, most especially the healthcare providers.

Podhurst, et al noted that, discomfort in refusing HIV testing may be related to a feeling of disempowerment in provider-patient interaction. Example would be low health literacy. This may be a predictor of an HIV test acceptance. In one study by Barragan et al, they noted that, patients presenting to an urgent care center with poorer health literacy appear more willing to comply with healthcare provider’s recommendations to undergo the test than those with adequate literacy when an opt-out strategy combined with a low-literacy brochure is used. Therefore,

we can say that communication style by the respondents and lower level of education increase the social distance between the provider and the patient. This factor may increase the likelihood that the patient may cooperate with the provider's recommendations.

Another finding was noted by Nyuzaghl et al., that, out of 112 respondents who had not had HIV test in the current pregnancy. 61.8% claimed the test had not been offered to them while 82.4% expressed willingness to have the test done if offered. In our survey, 37.4% would voluntarily undergo the test. However, 43.5% were still hesitant to undergo the test or not. This may account for a large group that needs special attention. This may explain heterogenous opinions for their acceptance. This points that emphasis be given on the proper strategy to be employed in order to facilitate their acceptance of the test.

In the assessment of our respondents knowledge on transmission of HIV. Majority of them scored high at 93.1% (Table 5), in knowing that it has been sexually transmitted. 85.4% were correct in saying that it can be transmitted from the mother to the child (MTCT). They fairly scored on their responses that HIV can be transmitted while they were delivering their babies and that it can be transmitted while they were breastfeeding at 53.6% and 59.3% respectively. A still high percentage at 42% had a knowledge that it can be transmitted using a public toilet. Similarly in a study by Podhurst et. al., they noted that a high acceptance of the test can be seen from the responses of the respondents in order to prevent perinatal transmission. They noted that pregnant women wrote in their comments that emphasized the importance of routine HIV testing in order to protect both the mother and the child<sup>9</sup>.

On the preventive aspect, a high percentage of the respondents were aware at 80% about the availability of medical treatment (Table 5) which can prevent MTCT, as well as the importance of the presence of ante-natal HIV testing to prevent MTCT. However this figure on the realization of the importance of ante-natal HIV testing which was 85.8% in order to prevent MTCT did not reflect exactly the percentage of the respondents who did not have the knowledge about the existence of HIV testing. 48.4% did not have any knowledge about the existence of HIV testing, which was a little less than the respondents realization of its importance. Much more alarming was 43.5% did not have any response on their voluntary submission to the test. This pointed out the assumption that, they seemed to realize its value but they might be unaware of the availability that an HIV testing could be done on them.

The expression of positive attitude towards the test has been noted from more than fifty percent of our respondents. The expressions of a positive attitude was noted as an acceptance by directly submitting themselves to the test. They would want to be with somebody during the

test, the results will have to be known by their families and husbands right away and that, the test must be routinely done on all pregnant women. Negative attitudes were noted from the expressions of fear to some forms. The fear on the destruction of public image, and being separated from their friends, relatives and most especially from their husbands. These forms of fear must be properly addressed as this may create an obstacle in the acceptance of HIV testing.

In the local study by Madamba, et al. a higher percentage (78%) of pregnant women said that it is best to offer HIV testing to all pregnant women. 85% would agree to a free test in contrast to our study which was 52%. They noted that 71% claimed that HIV test be included as part of routine pre-natal blood work up. Seventy eight percent (78%) preferred that, HIV testing should include counselling about the test.

In practice, Madamba, et. al. considered the components of mandatory testing as well as offering the test with the right to refuse, which were accepted by 77 % and 37 % of the respondents respectively. In contrast to our study, in line with practice we concentrated on the components which would gauge as our strong basis of saying that going into the actual practice would be strongly considered by the respondents. Identification of one's present status, prevention of maternal to child transmission, the need of the test to be a part of the routine ante-natal test, the need to be given for free and it has to be incorporated among the Department of Health program priority. More than 50% of the respondents agreed to all these components.

The preferential conditions noted from our survey were that pre-natal counselling before the HIV testing would have to be done. Much more appreciated was that if it could form part of the Mother's Class that tipped its scale at a higher percentages of 71.5% and 69.5% respectively (Table 5). This finding pointed out to the importance that they would have to be counselled before the test. This realized the importance of such counselling in an opt-out approach. An opt-out approach would require that, all women be informed that the HIV testing would be routine and would be performed. The survey showed that 59.8% (Table 5) of our respondents preferred that it had to be done on a routine basis and it had to be done on all pregnant women whether they have had high risk or low risk lifestyles. The main and the essential component of the opt-out approach is that, they have the right to refuse the test.

Madamba, et. al., noted that of the 430 pregnant women they investigated at the out-patient department, 84 of them accounting to twenty percent (20%) signified their willingness to undergo HIV counselling and testing. There were more patients (66- 83%) without any history of high risk behaviour such as history of multiple sexual partners, symptoms of sexually transmitted diseases, use of

condoms during sexual contact and history of drug abuse were willing to undertake the test than those with history of high sexual risk behaviors which was one to eighteen percent (1-18%).

In a study by Olugbenga-Bello et al., 96.3% of their respondents were willing to do the test after counselling, but only if treatment was available for positive cases (46.5%) and if anonymity was strictly maintained (16.9%)<sup>11</sup>

The Center for Disease Control in the United States continues to adopt the Opt-out approach for HIV testing due to the following reasons:

1. It maximizes opportunities for pregnant women to learn about their HIV status during pregnancy.
2. It protects their choice to decline HIV testing.
3. It makes sure that the provider-patient relationship is intact which brings forth to its end point of quality clinical and preventive care on the part of the healthcare provider.

Some issues concerning the opt-out strategy oftentimes focused on the woman's rights as the essential grounds for requiring pre-test counselling and active consent. Its concern is that, HIV testing may become so mechanical that pregnant women may not be properly informed or their option to decline the test might suffer. Pregnant women may at times be vulnerable when interacting with their physicians because they have been looking up to them as to have the final say to their decisions. Furthermore, pregnant women may not be prepared how to handle themselves emotionally, most especially the consequences of the situation once they knew that they were positive for the test.

The opt-out approach requires the need to differentiate HIV test from other pre-natal routine laboratory test. It requires that the healthcare provider explicitly share information about the HIV test and offer the right to decline. However, other laboratory test do not require this.

The concept of routine screening must be completely spelled out. A routine offer may potentially deter pregnant women from seeking ante-natal care because of fears from being tested. The fundamental human rights of these women may be infringed to refuse an HIV test because of the way it was offered.

Fourty seven and two percent (47.2%) (Table 7) of our respondents would want that the results be known only by herself and her healthcare provider. The confidentiality of the results may mean how stigmatizing HIV-AIDS could be. Some preferential conditions elicited by which they would favourably submit themselves to the test would be if:

- If it could be given for free. Most of them (52%) (Table 7) realized that, it must be expensive
- If it could be included in the Department of Health programs as well as other government programs like the PhilHealth (55.7%) (Table 7)
- If the healthcare provider could provide

indiscriminating medical attention and treatment to them (42.7%)

These simply implied that based on the survey, HIV-AIDS prevention must come from a considerably concerted efforts among pregnant women, health care providers as well as national legislative and administrative institutions. The issue on affordability of the test must be given due concern. Our respondents once tested to be positive expressed their fears from the following:

- the fear of spending more than able
- the fear of being discriminated by family members and friends.
- the fear of being separated from her husband
- the fear of "social stigma"

Fears come in different forms and they follow right after results had been known by the respondents. Surprisingly, fear of being separated from their partners however, they would submit to the HIV testing because they did not doubt the fidelity of their partners. It seems respondents to our survey practiced monogamous relationship. They had a stronghold of trust to their partners as well as to themselves considering the issues on fidelity.

Fifty seven and seven percent (57.7%) of our respondents perceived that, they would be more comfortable once they were tested and that information were available and accessible to them from the insitution where they had been getting their pre-natal check-ups.

The reasons most importantly perceived by the respondents that would push them to submit to the test would be:

- There is a need as advised by the doctors and nures
- They need to have the test not because they doubt the fidelity of their partners
- They wanted to know their present HIV status
- They wanted to prevent MTCT
- They wanted the test as a form of preventive strategy
- They would expect results would be confidential

Confidentiality remains to be one of the reasons which would help them decide to proceed with the test. Concerns about confidentiality represents an important factor in increasing acceptability. Pregnant women seem to place a high value on privacy. Practices that maximize the "autonomy" of the client seem thus correspond well with high demands.<sup>12</sup> (Wendy, 1997)

The responses we elicited from our subjects would mean a great lift for the investigators. Unlocking someone's perceptions, insights and attitudes could break the silent barriers between the health care provider and their patients as to the acceptability of HIV testing among its population. HIV testing has been there for a long time. The healthcare providers must learn what could be its impact once it has been included in the routine pre-natal laboratory work ups Would these pregnant women just

ignored its presence, would they react combatively, or would they just accept it openly. It must be the concern of the healthcare providers to consider their feelings, emotions and sentiments. It must be our responsibility to allay their fears, as well as provide and disseminate legitimate information and education about the importance of the test. HIV-AIDS is a dreaded and a deadly disease. Healthcare providers must be at the forefront in realizing the components of the Opt-Out strategy most especially the importance of these pregnant women's right for a pre-natal counselling and most importantly their rights to decline.

These elicited responses may give us information about the best strategy to be adopted to our settings to make the HIV test more acceptable, as well as the proper way on how to resolve the issues considering the opt-out approach.

## CONCLUSION

The responses elicited from the survey were variable. The respondents' knowledge score on MTCT was 85%. 41% of them had knowledge about the existence of the test and 37% were willing to voluntarily submit themselves to the test. The evaluated knowledge on the non-awareness of the existence of HIV testing remained fairly high among the respondents, however their enthusiasm to voluntarily submit themselves to the test was overwhelming. The components of the opt-out approach were acceptable most especially the preference on ante-natal screening and informed consent. More than 50% of our respondents had a positive attitude towards the test, especially toward a "one on one" pre-natal counselling, inclusion of it in the Mother's class,

accompanying relative during the testing session, as well as it has to be done routinely on all pregnant women, they need to be with someone during the test and as a form of preventive strategy. In practice, they would submit themselves right away to the test for preventive strategy and proper management be instituted right away if the result would turn out positive. In preference, they prefer the test to be given for free and confidentiality be maintained as to the outcome of their HIV test.

We conclude that, significant associations were noted variably among the respondents with the different domains in the study. The heterogeneity on their attitudes, preferences and practices essentially must be considered in enhancing strategies to improve acceptability and awareness of our target population.

## RECOMMENDATIONS

Since the elicited responses were varied and split and more than half of the respondents were unaware of the existence of the test, the investigators recommend that further educational information dissemination be done. Responses elicited from the survey be essentially considered in order to improve acceptability. The elicited reasons of our respondents must be considered and validated as well. These may help us devise proper ways and means to enhance acceptance of HIV testing. Appropriate authorities must be informed considering the outcomes of the survey in order to modify policy making appropriate for the pregnant women of our settings.

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