

## COMPLIANCE TO GYNECOLOGICAL DIAGNOSTIC EXAMINATIONS

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### Abstract

The periodic health screening examination like gynecological exams helps detect the following ailments of women that are especially amenable to early diagnosis and treatment. In Mt. Province, it is observed that some women undergo gynecological diagnostic examinations voluntarily and some do not. Others undergo such since these are required by their health care providers. The researchers believe that the over-all wellbeing of women in government service is very important as they are partners in development.

The research design for this study is descriptive correlational research design. This method is used to gather information from the premenopausal and menopausal women concerning their profile, knowledge of gynecological diagnostic examinations specifically on papilloma smear, AA wash, mammography and ultrasonography; their compliance and their extent of compliance to these exams. The respondents are much knowledgeable on the gynecological diagnostic examinations. There is significant difference on the level of knowledge of respondents on the examinations according to civil status and occupation but no significant difference according to age and religion. Respondents very much complied with the different gynecological diagnostic examinations. However, there is no significant difference of the extent of compliance of the gynecological diagnostic examination according to age, civil status, religion and occupation. There is no relationship of knowledge and compliance on the gynecological diagnostic examinations.

Keywords: Gynecological, Diagnostics, Premenopausal, Menopausal, compliance, examination

### 1. INTRODUCTION

Women's health is an important issue that has to be addressed. The gynecological examination is an essential part of gynecological care and is one of the most commonly performed procedures. Most women undergo gynecological examinations some time in their life yet some women undergo such several times in their lives. Gynecological examination is performed for several reasons, including pregnancy diagnosis, gynecological screening and as a measure in differential diagnosis (3). The most common reason for gynecological diagnostic examination for pre -menopausal and menopausal women is abnormal uterine bleeding. It should be noted that the examination which is gynecological in nature should be performed in a way that makes it a positive experience for women. During the earlier days of gynecological examinations, women were placed in extreme vulnerable situations that they have a negative perception on gynecological examinations. There were times when women receive insufficient information about how the examination is performed. They also are humiliated and experience physical discomfort and psychological effects during the examination because they are embarrassed. Cold instruments, lack of information about the procedure, lack of gentleness from the examiner and a male physician contribute to the uncomfortable and negative experience of women during gynecological exams (2). However, reluctance to undergo gynecological examination

may result in delay or avoidance of examination with potentially harmful health effects (3).

Accordingly for women to be comfortable during the exam, they want information about the procedure, prefer a warmed speculum, and want the doctor to consider their feelings (2). Likewise, in another study it was found out that women's experiences of pelvic examination were negative when communication between the women and the doctors was poor (1). The examination could be a positive experience if the doctor gave information about the procedure and about the findings. Information about the anatomy of the genitalia could also diminish the discomfort of the situation. The periodic health screening examination like gynecological exams helps detect the following ailments of women that are especially amenable to early diagnosis and treatment. There is a need to approach each woman not just as a person requiring medical intervention for a specific presenting problem, but also as one who may have a variety of factors possibly affecting her health.

Studies showed that women on menopausal age experience changes in their body hormones that may give them a chance of getting gynecological diseases hence, a need for gynecological diagnostic examinations.

In Mt. Province, it is observed that some women undergo gynecological diagnostic examinations voluntarily and some do not. Others undergo such since these are required by their health care providers. Based on the data of Bontoc General Hospital there had been a decreased in number of women who undergo gynecological examination. Data showed that there is almost 50% decreased from 2010 to present of women which is believed by the researchers to be alarming. The researchers being nurses believe that a strong need to conduct a study on the compliance of women on gynecological diagnostic examinations for early detection of gynecological problems. The researchers also observed that government employees have lot of concerns on gynecological problems. However, these are not addressed properly due to lack of appropriate gynecological exams. With this, information dissemination on the importance of gynecological diagnostic examinations is wanting. Further, results of this study would enhance yearly physical examinations of government employees to include gynecological diagnostic examinations for women. The researchers believe that the over-all wellbeing of women in government service is very important as they are partners in development.

## **2. METHODOLOGY**

The research design adopted for this study is the descriptive correlational research design. This method was used to gather information from the premenopausal and menopausal women concerning their profile, knowledge of gynecological diagnostic examinations specifically on papilloma smear, AA wash, mammography and ultrasonography and their compliance to these exams and their extent of compliance to these exams. The respondents of this study were the premenopausal and menopausal women, aged 40 and above and who are government employees of the municipality of Bontoc, Mt. Province that are randomly taken as respondents. There were 100 employees who participated in the study.

The study used a knowledge test composed of 25 questions dealing on the different characteristics of the identified gynecological diagnostic exam and a questionnaire to gather data on the extent of compliance on the different processes undertaken for each of the gynecological diagnostic exams. The data gathering instrument consisted of the following: profile of respondents to gather data on stage of menopause, civil status, religion and occupation; knowledge test; and part 3 is the extent of compliance to the different gynecological exams. The researcher sought the permission from the Provincial Governor and the Provincial Health Officer to gather data for the study. After securing their approval, the researcher personally distributed and retrieved questionnaires from the respondent

### 3. RESULTS and DISCUSSIONS

#### Level of Knowledge on the Gynecological Diagnostic Examinations

**Table 1. Level of Knowledge of the Respondents on the Gynecological Diagnostic Examinations**

<u>Examinations</u>	<u>Mean Score</u>	<u>DE</u>
<u>Pelvic Examination</u>	<u>3.13</u>	
<u>Acetic Acid Wash</u>	<u>3.61</u>	
<u>Papilloma Smear</u>	<u>3.43</u>	
<u>Pelvic Ultrasonography</u>	<u>2.70</u>	
<u>Mammography</u>	<u>4.27</u>	
<u>TOTAL</u>	<u>17.14</u>	<u>MK</u>

Table 1 shows the level of knowledge of the respondents on the gynecological diagnostic exams. Taken individually, respondents are very much knowledgeable on mammography. This can be attributed to the fact that a lot of informational materials are available relative to mammography as one of the ways to detect breast cancer. Women who have close kin diagnosed with breast cancer are advised to undertake this exam annually.

The respondents are much knowledgeable with pap smear and acetic acid wash. More often than not, whenever women experience gynecological issues, these are being requested by doctors. Moreover, these are also exams which are usually offered for free by the government to women during the Women's Day celebration. It is because of the frequent conduct of these exams that women get to know about these.

Pelvic ultrasonography is non-invasive and it involves no radiation and avoids possible hazards. However, the respondents are slightly knowledgeable because there was no proper information dissemination. In addition, awareness on how this type of examination and its possible effect is important for them to fully understand. Respondents are knowledgeable on pelvic examination. Their level of knowledge is attributed to proper information regarding this gynecological examination.

Overall, the respondents got a mean score of 17.44 which is described as much knowledgeable. This means that the respondents were made aware about the

examinations by health professionals. Furthermore, these respondents were given ample information about the gynecological examinations and that discussions were made before and after the examinations hence, the respondents are much knowledgeable.

In a study of Tashan T. et al., (15) they concluded that women have experienced mild anxiety after a gynecological examination; as the level of education and income increases, experienced anxiety reduces. Women state that they are ashamed of gynecological examination, so they delay to go to the examination; they feel stressful and discomfort due to being opened of their genitalite. Furthermore, the results suggested that women who come for gynecological examination should be informed and be allowed to ask questions before and during the examination in order to decrease the examination anxiety, and health professionals should not be quick not doing the examination and the communication skills should be used to women. Similarly, Tao, JF., et.al., (14) concluded that most Chinese women the awareness of HRT was poor and influenced by menopausal, working and marital status.

Furthermore, Gynecological examination is an important part of gynecological controls and in practice it is very commonly used method. However, gynecological examination means examination of the genital organs which needs to be covered, hide and protected for most of the women. Therefore, gynecological examination applications can cause some traumatize impacts that result in the reactions such as avoidance of being examined, light anxiety and feeling of shame. Gynecological examination anxiety poses an obstacle for women to get the best health care which is possible (16).

**Table 1.1. Comparison of the Level of Knowledge of the Respondents on the Gynecological Diagnostic Examinations According to Age**

Age	Mean	DE	SD	Mean Difference	t-value	p-value
Premenopausal	17.12	MK	1.73	-.045	-.159	.874*
Menopausal	17.16	MK	1.05			

\* at 0.05 alpha

Statistical analysis using t-test reveals that the t-value is -0.159 with a p-value of 0.874. This means that the null hypothesis is failed to be rejected. Furthermore, it implies that there is no significant difference on the level of knowledge of the respondents grouped according to their age about the gynecological diagnostic examinations.

As seen in the table, the respondents who are considered premenopausal got a mean score of 17.12 which is a slight lower than the mean of those respondents who are considered as menopausal with a mean score of 17.16. Their mean difference is -

0.045. This shows that the two groups of respondents do not differ in their level of knowledge regarding the gynecological diagnostic examination. Moreover, it implies that age do not affect the level of knowledge of the respondents regarding the gynecological diagnostic examinations.

This contradicts the result of the study where finding shows that Respondents of year three and above were more knowledgeable about breast cancer compared to lower grade level respondents (18). Another study done in Nigeria 2005 women with higher level of education is better knowledge than their counter parts (17). This is for the reason that as they stay in the university increases access to information about breast cancer by different means like through formal education in courses and participation in clubs may increase the knowledge.

In another study the findings revealed that there are variables that affect the knowledge and attitude on gynecological examinations such as age, marital status, educational attainment and occupation. These variables are associated with adequate practice to these gynecological examinations. Higher percentages of adequate practice were observed among the women who live with a partner and lived near the health clinic (2).

**Table 1.2. Comparison of the Level of Knowledge of the Respondents on the Gynecological Diagnostic Examinations According to Civil Status**

Civil Status	Mean	DE	SD	f-value	p-value
Single	16.77 <sup>ac</sup>	MK	1.29	3.355*	.039
Single Mother	16.79 <sup>b</sup>	MK	1.80		
Married	17.51 <sup>c</sup>	MK	1.26		

\* Significant at 0.05 level of significance

The same letter implies significant difference

Statistical analysis using f-test reveals that the f-value is 3.355 and a p-value of 0.039. This means that the null hypothesis is rejected at 0.05 level of significance. Furthermore, it implies that there is a significant difference on the level of knowledge of the respondents on the gynecological diagnostic examinations according to their civil status.

Further analysis using Scheffe's test reveals that the respondents who are single have a significant different knowledge compared to married respondents. Single respondents got a mean score of 16.77 compared to the mean score of the married respondents who got a mean score of 17.51. This shows that civil status affects the level of the knowledge of the respondents on the gynecological diagnostic examinations. In addition, married respondents are more knowledgeable compared to the respondents who are single.

Women who are sexually active are advised to undertake some kind of a gynecological exam which will explain why married respondents are more knowledgeable than the single women. Camila, et al,(22) found out that The only factor associated with the adequate practice of the examination was marital status. In another study result



showed that most participants indicated that they would need spousal financial and emotional support before attending screening services. Further, in Africa men have an important role to play in improving uptake of screening programs and health interventions, so health education programs for women's health need to engage spouses in order to increase their chances of success (27).

A study in Tanzania found that, when husbands approved of screening, the likelihood of participating in screening increased significantly. Further, demographic, knowledge, attitudinal, and accessibility are factors associated with uptake of cervical cancer screening among women in a rural district of Tanzania: three public policy implications (24).

**Table 1.3. Comparison of the Level of Knowledge of the Respondents on the Gynecological Diagnostic Examinations According to Religion**

Religion	Mean	DE	SD	f-value	p-value
RC	17.24 <sup>a</sup>	MK	1.36	1.841	.112*
Anglican	17.61 <sup>b</sup>	MK	1.44		
Muslim	17.00 <sup>c</sup>	MK			
INC	16.20 <sup>d</sup>	MK	1.93		
Baptist	16.64 <sup>e</sup>	MK	1.08		
Others	17.33	MK	.57		

\* at 0.01 level of significance

Statistical analysis using f-test reveals that the f-value is 1.841 and a p-value of 0.112. This means that the null hypothesis is failed to be rejected at 0.05 and 0.01 level of significance. Furthermore, it implies that there is no significant difference on the level of knowledge of the respondents on the gynecological diagnostic examinations according to their religion. As seen in their mean perceptions, they are considered on the same level. This shows that religion does not affect the perceptions of the respondents on the gynecological diagnostic examination.

The study supports the findings that most Muslim women do not perceive breast self-examination as being against their Islamic beliefs and that they believe clinical breast examination by a male physician does not interfere with their religious beliefs (25).

Participants mentioned in the study conducted by Modibbo, F.I. et. Al.,(26) that religious and cultural obligations of modesty, gender of healthcare providers, fear of disclosure of results, fear of nosocomial infections, lack of awareness, discrimination at hospitals, and need for spousal approval as barriers to screening. However, these barriers varied by religion across the geographical regions.

Diversity of cultural and religious beliefs of people in the developing world, especially Africa, the Middle East, and Asia, affects their views and perceptions of cancer care. Many African and Middle Eastern countries consider mentioning cancer a taboo and many forbid the telling of a patient that he/she is dying (28). A study by Mostafa et al. (30) in Saudi Arabia, another Muslim majority country, found religious leaders and traditional healers were common sources of infertility information. The expression of medical pluralism in much of Indonesia encompasses the validation of lay knowledge

shared within local communities (31) reflecting the high reliance on friends as a source of infertility information.

**Table 1.4. Comparison of the Level of Knowledge of the Respondents on the Gynecological Diagnostic Examinations According to Occupation**

Occupation	Mean	DE	SD	f-value	p-value
Professional	16.62 <sup>ad</sup>	MK		3.472*	.019
Skilled	16.69 <sup>b</sup>	MK			
Semi-skilled	16.85 <sup>c</sup>	MK			
Unskilled	17.58 <sup>d</sup>	MK			

\* Significant at 0.05 level of significance

The same letter implies significant difference

Statistical analysis using f-test reveals that the f-value is 3.472 and a p-value of 0.019. This means that the null hypothesis is rejected at 0.05 level of significance. Furthermore, it implies that there is a significant difference on the level of knowledge of the respondents on the gynecological diagnostic examinations according to their occupation.

Further analysis using Scheffe's test reveals that the respondents who are professionals have a significant different knowledge compared to unskilled respondents. Professional respondents got a mean score of 16.62 compared to the mean score of the unskilled respondents who got a mean score of 17.58. This shows that occupation affects the level of the knowledge of the respondents on the gynecological diagnostic examinations. In addition, unskilled respondents have a higher mean knowledge level compared to professional respondents.

This would contradict a study done in Nigeria 2005 that women with higher level of education is better knowledge than their counter parts hence, As the stay in the university increases access to information about breast cancer by different means like through formal education in courses and participation in clubs may increase the knowledge (17). Further another study showed that there is no statistical significant difference existed between educational background and undergoing mammography. Two separate studies conducted in the urban and rural areas in Turkey identified that the rate of undergoing mammography was not significantly influenced by the educational background (19). In another study by Ozmen V, et. Al (20) results revealed that women with a higher educational level underwent mammography more often.

In a study, women who belonged to the lower socio-economic category were more knowledgeable about cervical cancer prevention compared to those from the higher status. However, it could reflect service utilization trends in rural areas whereby long waiting hours and poor quality of services at health facilities may act as discouragements and hinder working women (higher income women) from seeking care.

In another study it is concluded that nearly half of the nurses working at the university hospital were not knowledgeable about breast cancer and its screening methods (29).

**Table 2. Extent of Compliance on the Gynecological Diagnostic Examinations**

Gynecological Diagnostic Examinations	Mean	DE
Pelvic Examination	4.64	VMC
Acetic Acid Wash	4.58	VMC
Papilloma Smear	4.58	VMC
Pelvic Ultrasonography	4.70	VMC
Mammography	4.77	VMC
Grand Mean	4.57	VMC

It can be gleaned from the table that the different gynecological diagnostic examinations were considered as very much compliant with a grand mean of 4.57.

A closer look at the different processes involved in the gynecological exams show that respondents complied with these exams as evidenced by their willingness to submit to the examination, following what the instructions of the doctor are prior to and during the examination, listening to the explanation of the doctor regarding the result of the exam and following suggestions of the doctor regarding the result of the exam.

This finding is in contrast with some of the results of interviews with women who said that they are afraid to undergo these examinations as they might find out that they have a lot of ailments. Moreover, even if they undergo these exams, some would not go back to their doctors for interpretation because of the same notion.

Conversely, some women presented as a justification, problems that are easily resolved for not having attended the follow-up consultation, and even then, did not seek any other alternative. This situation complicates the monitoring, integrity and continuity of care, contributing to the persistence of a serious problem in this area, which is the intervention at later stages of the disease (22). Few studies have examined adherence with gynecological visits among HIV-positive women. The prospective Swiss HIV Cohort Study (SHCS) examined factors associated with frequency of gynecological follow-up, including cervical cancer screening, in a cohort of 2,186 HIV-positive women using self-reported data; they found that only 45% of those women reported seeing a gynecologist within the previous 6 months, although 82% of the women reported having a Pap smear. Predictors for fewer gynecological examinations and Pap smears were older age, nonwhite ethnicity, current IVDU, lower education, lower CD4 counts, underweight, obesity, and current smoking (8).

**Table 2.1 Comparison of the Mean Perception on the Compliance of the Gynecological Diagnostic Examination According to Age**

Age	Mean	DE	SD	Mean Difference	t-value	p-value
Premenopausal	4.57	VMC	.81	.010	.061	.951
Menopausal	4.56	VMC	.81			



Statistical analysis using t-test reveals that the t-value is .061 and the p-value is .951. This means that the null hypothesis is failed to be rejected at 0.05 level of significance. Furthermore, it implies that there is no significant difference on the mean perceptions of the respondents grouped according to their ages regarding the compliance of the gynecological diagnostic examination.

As seen in the table, the mean perception of those premenopausal respondents got a mean of 4.57 while those under menopausal age got a mean of 4.56. Their mean difference is .010. This shows that age does not affect the mean perception of the respondents in terms of the compliance of the gynecological diagnostic examination. Few studies have examined adherence with gynecological visits among HIV-positive women. The prospective Swiss HIV Cohort Study (SHCS) examined factors associated with frequency of gynecological follow-up, including cervical cancer screening, in a cohort of 2,186 HIV-positive women using self-reported data; they found that only 45% of those women reported seeing a gynecologist within the previous 6 months, although 82% of the women reported having a Pap smear. Predictors for fewer gynecological examinations and Pap smears were older age, nonwhite ethnicity, current IVDU, lower education, lower CD4 counts, underweight, obesity, and current smoking (8).

**Table 2.2 Comparison of the Mean Perception on the Compliance of the Gynecological Diagnostic Examination According to Civil Status**

Civil Status	Mean	DE	SD	f-value	p-value
Single	4.59 <sup>a</sup>	VMC	.79	.049	.952
Single Mother	4.61 <sup>b</sup>	VMC	.73		
Married	4.55 <sup>c</sup>	VMC	.87		

Statistical analysis using f-test reveals that the f-value is .049 and the p-value is .952. This means that the null hypothesis is failed to be rejected at 0.05 level of significance. Furthermore, it implies that there is no significant difference on the mean perceptions of the respondents grouped according to their civil status in terms of the compliance of the gynecological diagnostic examination. As seen in the mean perceptions of the respondents, these mean perceptions are considered as same level. This shows that civil status does not affect the mean perceptions of the respondents on the gynecological diagnostic examination.

**Table 2.3 Comparison of the Mean Perception on the Compliance of the Gynecological Diagnostic Examination According to Religion**

Religion	Mean	DE	SD	f-value	p-value
RC	4.54 <sup>a</sup>	VMC	.76	.627	.680
Anglican	4.49 <sup>b</sup>	VMC	.90		
Muslim	5.00 <sup>c</sup>	VMC			
INC	4.61 <sup>d</sup>		.71		
Baptist	4.23 <sup>e</sup>	VMC	.92		
Others	4.56 <sup>f</sup>	VMC	.77		

Statistical analysis using f-test reveals that the f-value is .627 and the p-value is .680. This means that the null hypothesis is failed to be rejected at 0.05 level of significance. Furthermore, it implies that there is no significant difference on the mean perceptions of the respondents grouped according to their religion in terms of the compliance of the gynecological diagnostic examination. As seen in the mean perceptions of the respondents, these mean perceptions are considered as same level. This shows that religion does not affect the mean perceptions of the respondents on the gynecological diagnostic examination.

Participants mentioned in the study conducted by Modibbo, F.I. et. Al.,(26) that religious and cultural obligations of modesty, gender of healthcare providers, fear of disclosure of results, fear of nosocomial infections, lack of awareness, discrimination at hospitals, and need for spousal approval as barriers to screening. However, these barriers varied by religion across the geographical regions.

**Table 2.4 Comparison of the Mean Perception on the Compliance of the Gynecological Diagnostic Examination According to Occupation**

Occupation	Mean	DE	SD	f-value	p-value
Professional	4.54 <sup>a</sup>	VMC	.84	.395	.757
Skilled	4.49 <sup>b</sup>	VMC	.87		
Semi-skilled	4.73 <sup>c</sup>	VMC	.63		
Unskilled	3.49 <sup>d</sup>	VMC	.92		

Statistical analysis using f-test reveals that the f-value is .395 and the p-value is .747. This means that the null hypothesis is failed to be rejected at 0.05 level of significance. Furthermore, it implies that there is no significant difference on the mean perceptions of the respondents grouped according to their occupation in terms of the compliance of the gynecological diagnostic examination. As seen in the mean perceptions of the respondents, these mean perceptions are considered as same level. This shows that occupation does not affect the mean perceptions of the respondents on the gynecological diagnostic examination.

In a study conducted in a PHU in Fortaleza, the main reasons cited by the women for not having returned were: the work situation of the woman, the financial and travel difficulties, the lack of adequate guidance from professionals regarding the need to return, difficulties in changing the return date, as well as the long wait to schedule a consultation and reduced material and human resources (21).

Furthermore, in a study conducted in China results revealed that women who had lower incomes had higher willingness to screen compared to their other counterparts (23), on the other hand a study found that previous cervical cancer screenings were high among women of higher incomes (24).

Studies focusing on minority racial/ethnic populations indicate that lack of health insurance, lower level of education, lack of continuity of care, and lower use of public services were associated with lack of adherence to annual Pap smears (12).

**Table 3. Relationship of Knowledge and Compliance on the Gynecological Diagnostic Examination**

Correlation	Mean	DE	SD	r-value	p-value
Knowledge	17.14	MK	1.43	-.112	.266
Compliance	4.57	VMC	.81		

Statistical analysis using Pearson r reveals that the r-value is -.112 and the p-value is .266. This means that the null hypothesis is failed to be rejected. Furthermore, it implies that there is no significant correlation between knowledge and compliance on the gynecological diagnostic examination. However, reluctance to undergo gynecological examination may result in delay or avoidance of examination with potentially harmful health effects (3).

The summary of the WHO/ICO report on Human Papilloma Virus and related cancers in the Philippines, it stated that only 7.7% of the total population of women aged 69 years old undergoes cervical screening examination. The small number of women that undergo screening for cervical cancer may be result of lack of information regarding the examination or simply these women lack the financial capability to undergo cervical cancer screening tests. This implies that the number of women that will be afflicted with cervical cancer will continue to rise as with the number of fatalities unless more women under goes cervical cancer screening (32).

An analysis on the compliance of HIV Women on the utilization of health care services was conducted and results revealed that the rate of clinic visit adherence is significantly lower for HIV gynecological care than for HIV primary care in the same population of women. Factors associated with HIV gynecological clinic visit noncompliance included African American race/ethnicity, substance use, and more advanced immunosuppression, (7).

### Conclusion

Results of the study revealed that Respondents are much knowledgeable on the gynecological diagnostic examinations. There is significant difference on the level of knowledge of respondents on the examinations according to civil status and occupation but no significant difference according to age and religion. Respondents very much complied with the different gynecological diagnostic examinations. However, there is no significant difference of the extent of compliance of the gynecological diagnostic examination according to age, civil status, religion and occupation. There is no relationship of knowledge and compliance on the gynecological diagnostic examinations. This study recommends that an Intensive information dissemination should be undertaken by the health units in the provincial and municipal levels on diagnostic gynecological examinations to all women as this will ensure early diagnosis of gynecological problems in order to ensure the overall wellbeing of women as they are partners in development. Flyers, brochures and other informational materials on gynecological diagnostic exams can be designed and distributed by concerned agencies to different government offices. Government

agencies can include in their required annual physical examination for their employees' mandatory gynecological diagnostic exams for women employees.

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