Assessment of Family Planning and Contraceptive Method Use among Women in the

National Capital Region

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Stat 134: Introduction to Scientific Writing in Statistics

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RESULTS AND DISCUSSION

Socio-demographic Profile of the Respondents

       This section presents the sociodemographic profile of the 2,574 women aged 15 to 49 from the National Capital Region (NCR) who participated in the survey. Key variables such as age, educational attainment, religion, ethnicity, and wealth index are discussed to provide an overview of the respondents.

Age Distribution

Figure 1.1

Distribution of Respondents by Age Interval
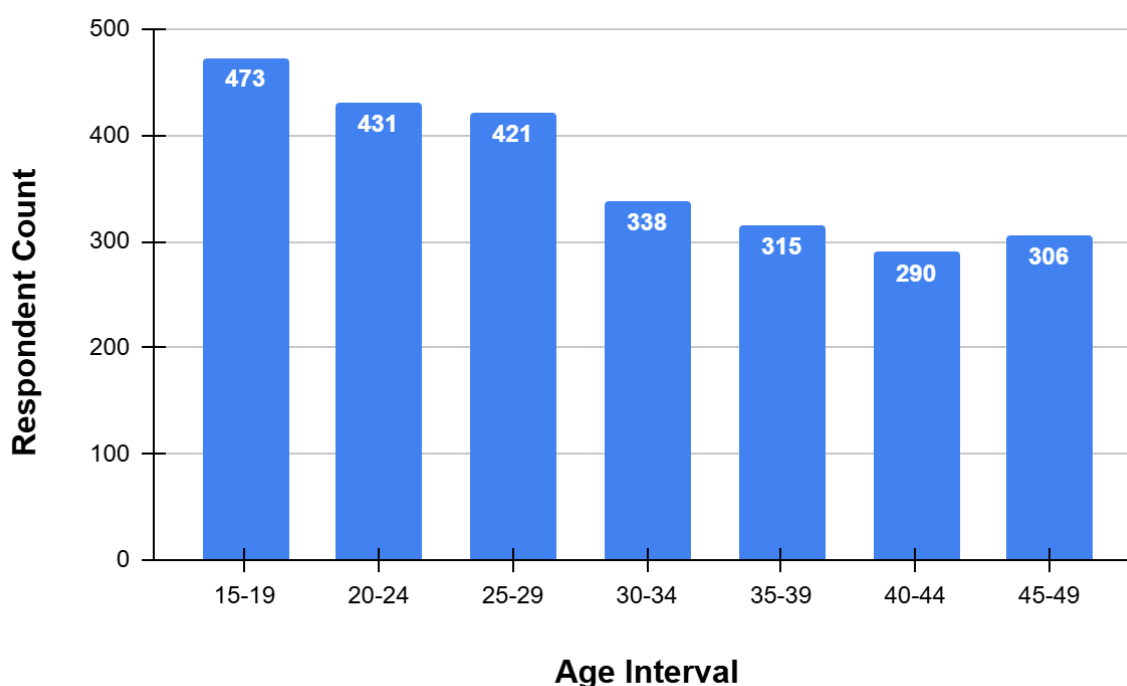
       As illustrated in Figure 1.1, the age distribution of the respondents is relatively balanced across the younger age groups. The highest number of respondents is in the 15 to 19 and 20 to 24 age intervals, totaling 473 and 431, respectively. As the age intervals increase, there is a gradual decline in the number of respondents, with the 40 to 44 age group having the least representation at 290 respondents. The mean age of the respondents

is 30 years, with a standard deviation of 10 years (rounded off to the nearest integer). Overall, the age distribution suggests that the data provides a reasonable representation of the target population of women aged 15 to 49.

Table 1.1

Count of Total Children Born by Age Interval

Age	None	One	Two	Three	Four	Five	Six	Seven	Eight	Nine	Ten
15-19	451	19	3	0	0	0	0	0	0	0	0
20-24	298	91	29	11	2	0	0	0	0	0	0
25-29	187	89	100	31	11	3	0	0	0	0	0
30-34	83	92	82	38	26	13	4	0	0	0	0
35-39	68	58	83	53	30	9	7	5	2	0	0
40-44	52	32	62	65	34	28	9	1	1	4	2
45-49	43	39	56	63	50	24	13	8	6	2	2
Total	1182	420	415	261	153	77	33	14	9	6	4

Table 1.2

Mean of Total Children Born by Age Interval

Age	Mean
15-19	0.1
20-24	0.4
25-29	1.0
30-34	1.7
35-39	2.0
40-44	2.6
45-49	2.9

Table 1.1 shows that the majority of respondents have not given birth to any children. We can also see a trend that the total number of children of the respondent increases along with the age interval. Moreover, what we can see in Table 1.2 supports this statement since the mean total number of children born by age increases as we move from the younger respondents to the older respondents.

Educational Attainment

Figure 1.2

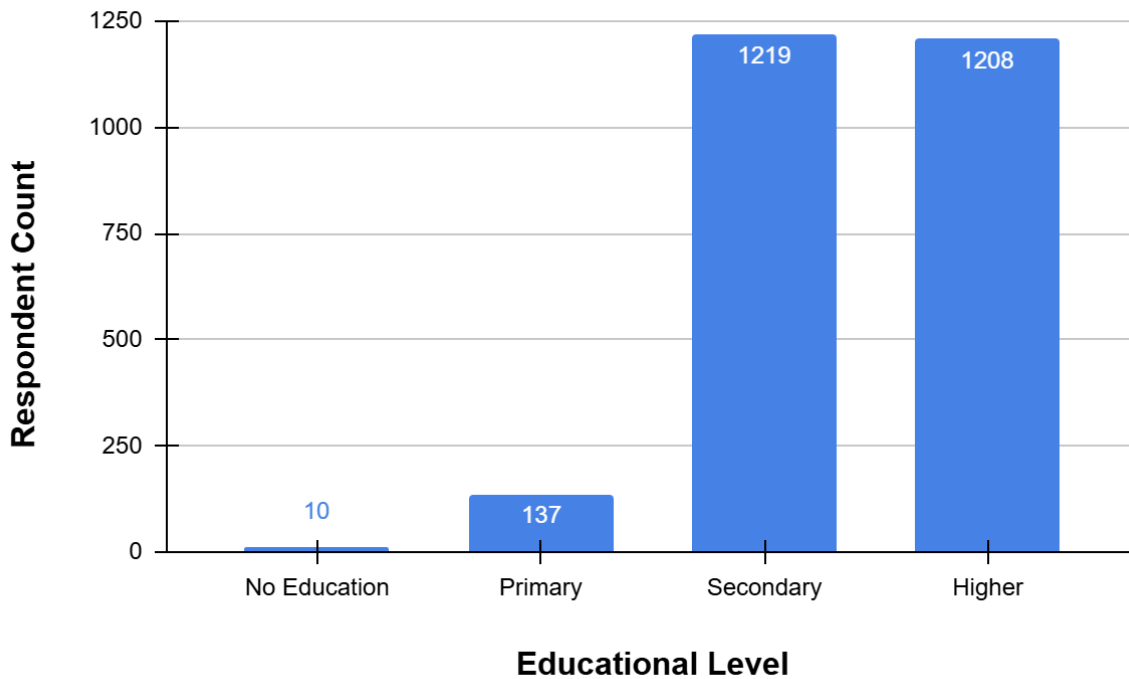*Distribution of Respondents by Educational Level*

Figure 1.2 presents the distribution of the respondents according to their highest educational attainment. The responses are classified into four categories: "No Education", "Primary", "Secondary", and "Higher" educational attainment. The respondents' educational attainment is one factor considered in analyzing the responses for the research since the educational standing of the respondents influences their perception and knowledge of the topic at hand. Only 0.39% of respondents have no education while 5.32% of respondents reached the primary level. Furthermore, 47.36% of respondents reached the secondary level, and lastly, 46.93% respondents reached the higher level. This graph shows that the majority of the respondents either reached secondary and higher education while a lesser percentage of the respondents reached primary education or had no education at all.

Religious Affiliation

Table 1.3

Distribution of Respondents by Religion

Religion	Respondent Count
Roman Catholic	2309
Protestant	140
Iglesia ni Cristo	49
Aglipay	3
Islam	28
Other Christian	29
Other	14
None	2
Total	2574

As seen in Table 1.3, the overwhelming majority identify as Roman Catholic, comprising 90% of the sample (2,309 out of 2574 respondents). Smaller percentages of respondents belong to Protestant (5.44%), Iglesia ni Cristo (1.90%), Islam (1.09%) and Other Christian (1.13%). Very few respondents identify with Aglipay (0.12%) or Other religions (0.54%), and only a tiny fraction, 0.08%, report having no religious affiliation. This distribution highlights the dominant influence of Roman Catholicism within the sample, which is not unexpected, given that Catholicism plays a central role in the Philippines' religious and cultural identity. Moreover, the relatively small representation of other religious affiliations is consistent with the religious composition typically observed in the NCR, where Roman Catholicism is the predominant faith.

Since religion plays a significant role in attitudes towards family planning and contraceptive use, the high prevalence of Roman Catholicism in the sample may influence

respondents' views and practices related to contraception. As such, understanding the religious composition is important in interpreting findings related to family planning practices.

Ethnic Background

Table 1.4

Distribution of Respondents by Ethnicity

| Religion	Respondent Count
Tagalog	1848
Cebuano	118
Ilokano	93
Ilonggo	87
Bikolano	135
Kapampangan	32
Maranao	9
Tausug	6
Visaya	141
Waray	39
Other	66
Total	2574

The ethnicity distribution of respondents, as summarized in Table 1.4, reveals that the sample is predominantly Tagalog, comprising 71.79% of the respondents (1,848 out of 2,754). This is consistent with the fact that the NCR is primarily composed of Tagalog-speaking communities. Other ethnic groups such as Cebuano (4.58%), Bikolano (5.24%), and Visaya (5.48%) are also present, though in smaller numbers. The remaining ethnic groups each make up an even smaller percentage of the sample. This distribution is notably skewed, with a clear dominance of Tagalog respondents. The data indicates that the

sample is not equally distributed among different ethnic groups, with Tagalog respondents overwhelmingly comprising the majority of the sample.

Wealth Index

Figure 1.3

Distribution of Respondents by Wealth Index
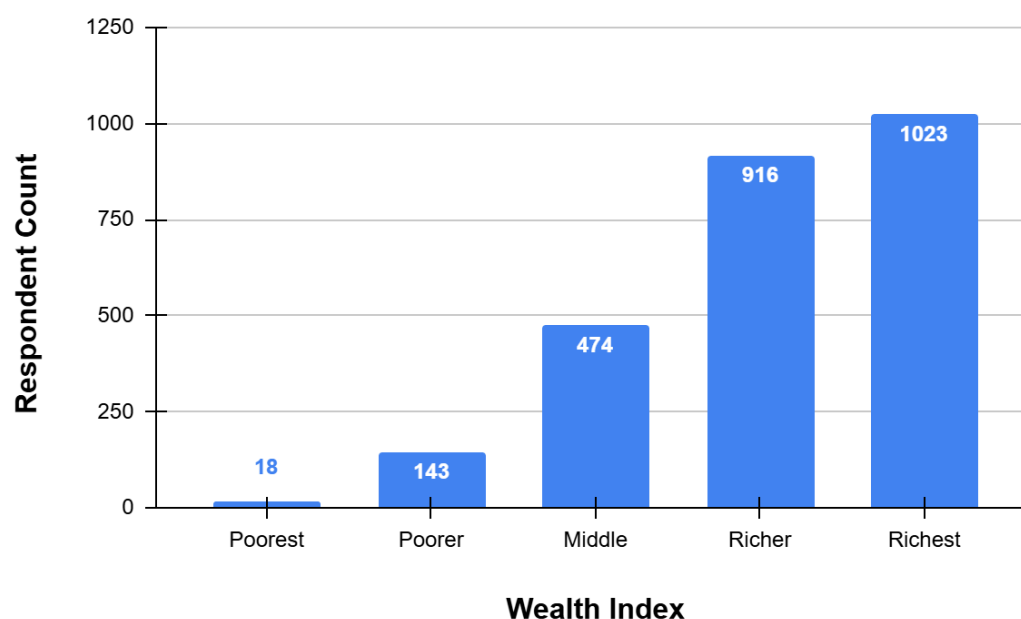
Finally, Figure 1.3 presents the distribution of the respondents according to their wealth index. The responses are classified into five categories: "Poorest", "Poorer", "Middle", "Richer", and "Richest." The respondents' wealth index is one factor considered since a person's wealth index can determine their access to information, knowledge, and services regarding their reproductive health. Observing the figure, we can see that only 0.70% of respondents are extremely poor, while 5.56% of respondents are relatively poor. Furthermore, 18.41% of respondents are neither poor nor rich. Finally, 35.59% of respondents are rich, while 39.74% of respondents are extremely rich. It can be seen that the majority of the respondents lie on the richer to richest side in terms of wealth index. We can say that the majority of the respondents could have access to information, knowledge, and services regarding family planning, contraceptive use, and reproductive health.

To ensure that the statistical tests in succeeding sections are meaningful and to avoid errors due to small cell frequencies, certain directly adjacent groups will be combined in the succeeding sections, where necessary. For example, the 'poorest' and 'poorer' categories will be merged, as well as 'no education' and 'primary. The latter combination is reasonable because in either case, it is unlikely that respondents falling under those categories are receiving education about family planning and contraceptives.

Perspectives and Experiences Regarding Family Planning

To determine women's perspectives and experiences regarding family planning, the respondents were asked about their exposure to different channels about family planning, knowledge of the ovulatory cycle, and awareness of conception after birth and before period. Relationships and tests in this section among the relevant socio-demographic factors will be condensed because of the sparseness of the data as stated above.

Exposure to Family Planning in Different Channels

Figure 2.1

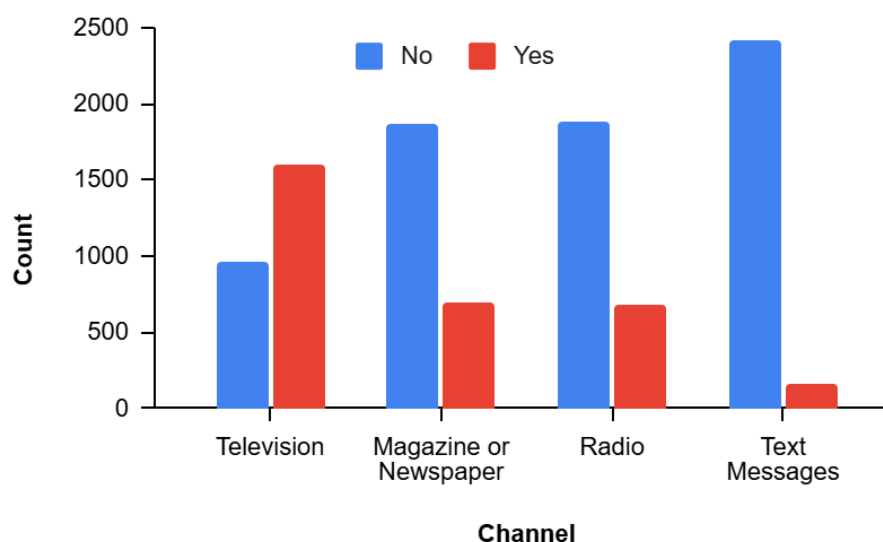*Count of Respondents Who Heard Family Planning in the Last Few Months by Channel*

Figure 2.1 shows that 1,607 (62.43%) of the 2,574 respondents heard of family planning in the last few months through television, unlike in the other channels where less than 30% of the respondents heard of family planning. In fact, only 6.14% of the total respondents heard of family planning through text messages, the lowest percentage of "Yes" responses of the participants among the channels.

Let's try to discuss the cause of these findings. First, among the channels, information may not have been disseminated evenly. Information may have been mainly coming from television. Second, the majority of respondents may be using television more

compared to the other channels. A reason for this cause may be because of accessibility issues or preferences.

   We finished presenting the responses in each of the channels. Let us now try to look at the overall view of the respondents' exposure to family planning in these channels.

Figure 2.2

Percentage of Respondents Who Heard Family Planning in at Least One of the Channels in the Last Few Months
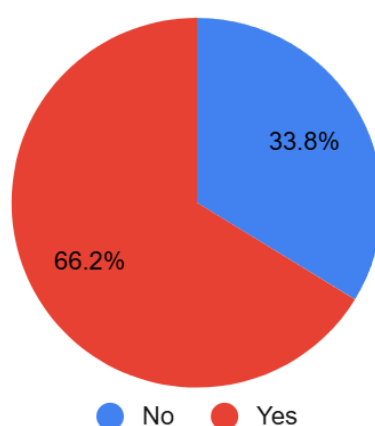

   Not hearing of family planning in the last few months in at least one of the channels does not imply that they do not know of family planning. They may have heard about family planning through other channels (e.g., church, school, family members, etc.) or more than a few months ago. As such, a percentage of 33.8% as seen in Figure 2.2 does not mean they did not hear of it at all. It is important to take note that the responses are bounded by the channels and time constraints. Therefore, we will not assess this data along with religion, level of education, and ethnicity.

   What we can do instead is to look at the data's relationship along with other relevant socio-demographic factors according to our dataset. We will relate it with age group and wealth index to look for meaningful results.
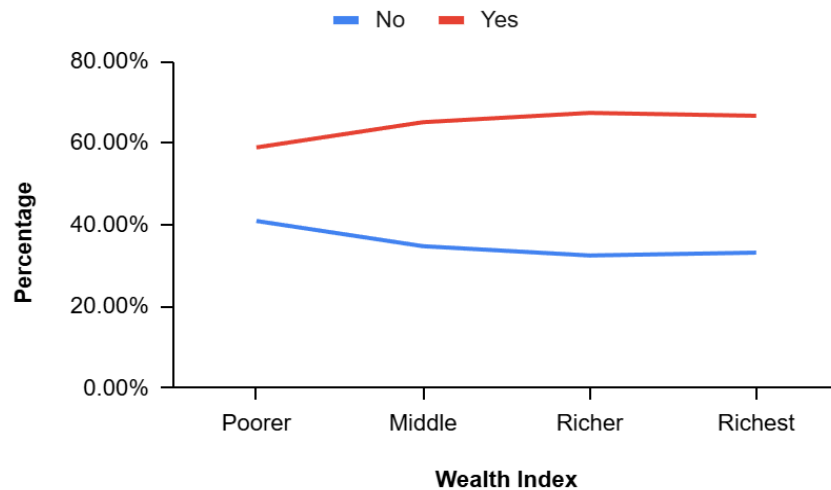
Figure 2.3

Percentage of Respondents Who Heard Family Planning in at Least One of the Channels in the Last Few Months by Age
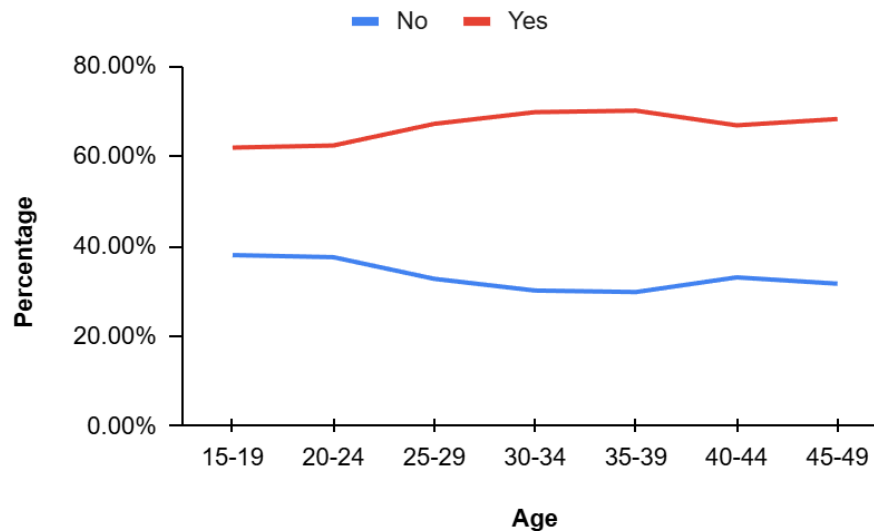
As we can see in Figure 2.3, there are no significant differences in the percentages of respondents who answered "No" among the age groups. However, we can see small differences where the younger respondents hear less of family planning among the channels compared to the older respondents. The percentage started to decrease a little bit starting from age 25 to 39 and increased again after reaching the 40s. Thus, although minimal, we can say the middle age groups hear the most regarding family planning among the channels.

Figure 2.4

Percentage of Respondents Who Heard Family Planning in at Least One of the Channels in the Last Few Months by Wealth Index

Since the wealth index is skewed to the poorer part, there is a big difference in the frequencies of each group. This difference may affect the distribution of their responses by wealth index. However, upon examining Figure 2.4, we can see from their percentages that as we go from the poorer to the richest group, the count of "Yes" responses start to increase. This result may indicate that the poorer the people are, the more likely they will not hear of family planning in at least one of the four channels in the last few months.

Now, we will test our hypothesis whether hearing about family planning in at least one of the channels in the last few months is associated with age or wealth index. We will use Pearson's chi-square test to check for the association at .05 level of significance.

Table 2.1

Pearson's Chi-Square Test for the Association Between Hearing About Family Planning in at Least One of the Channels in the Last Few Months and Socio-demographic Groups

| Variable	χ^2	df	p
Age	11.65	6	.070
Wealth Index	4.74	3	.192

Results of the Pearson's chi-square test in table 2.1 show that we do not have sufficient evidence to suggest that hearing about family planning in at least one of the channels in the last few months is associated with neither age group (χ^2 = 11.65, *p* = .070) nor wealth index (χ^2 = 4.74, *p* = .192). Hence, we do not have sufficient evidence to support our claim about age and wealth index being associated with hearing about family planning in at least one of the channels in the last few months.

Knowledge of Ovulatory Cycle

To assess the population's knowledge on the ovulatory cycle and conception, participants were asked to identify which phase of the cycle they believe has the highest likelihood of conception.

Figure 2.5

Percentage of Respondents' Answers as to When Conception is Highly Likely
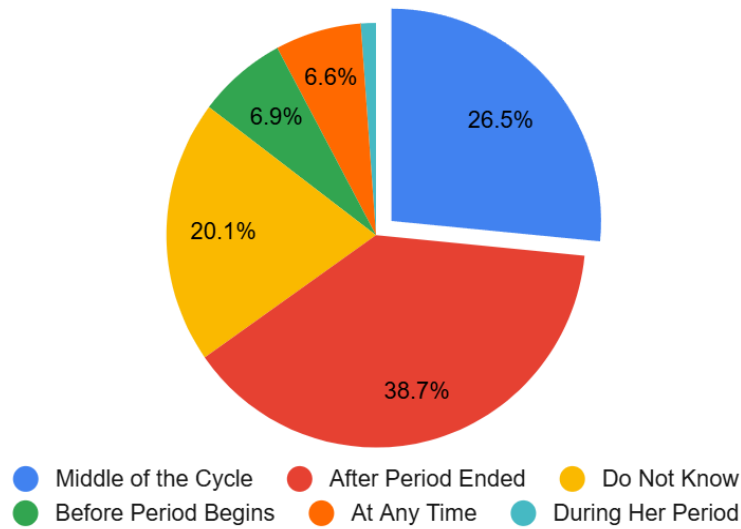
The answer as to when conception is highly likely is during the ovulation phase, or the middle of the cycle in terms of the options (Watson, 2023). However, as seen in Figure 2.5, only 26.5% of the respondents answered correctly. More respondents even answered after period ended compared to the middle of the cycle. The responses indicate that the majority of the respondents do not know exactly when conception is highly likely in a menstrual cycle.

Table 2.2

Categorization of Responses in Knowledge of the Ovulatory Cycle into "Yes" and "No"

Categories	Responses
Yes	3-Middle of the cycle
No	1-During the period 2-After period begins 4-Before period begins 5-At any time 8-Do not know

Therefore, we categorized the "Middle of the cycle" responses as "Yes," to indicate that this is the correct answer when comparing among relevant socio-demographic variables. Since the distribution of the religion and ethnicity of the respondents are skewed to the point where we are not sure whether all groups are properly represented, we will only look at the relationship of this categorization with age, education level, and wealth index.

Figure 2.6

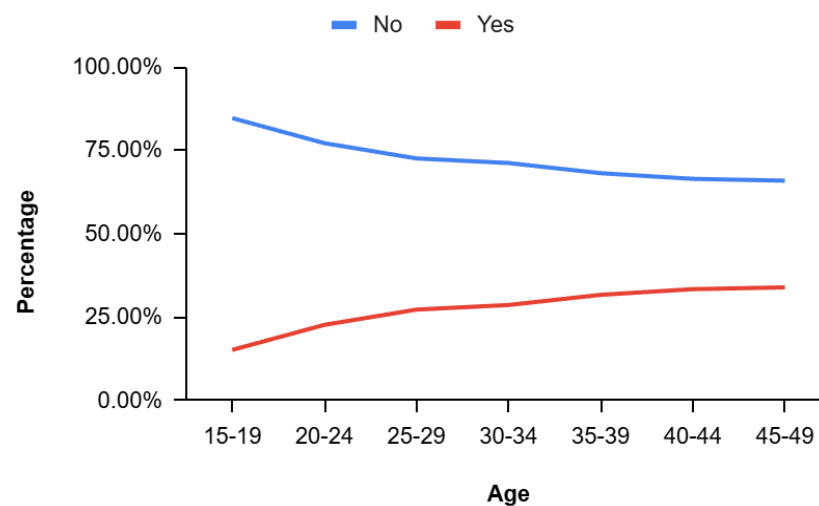*Percentage of Respondents Who Knows When it is Highly Likely to Get Pregnant by Age*

Figure 2.6 shows that 70 to 85% across all age groups do not know exactly when conception is highly likely in a menstrual cycle. This percentage is an indication that accidental conception is a big possibility should they trust their knowledge without using other types of contraceptives. It is also noticeable that the level of awareness varies directly with age. We can see that the percentage of respondents who know when it is highly likely to conceive in a menstrual cycle increases as we go from the younger to the older group. The responses indicate that people tend to gain more knowledge about reproductive health and conception with age, which may be based on personal experiences, education, and other factors.

Figure 2.7

Percentage of Respondents Who Knows When it is Highly Likely to Get Pregnant by Level
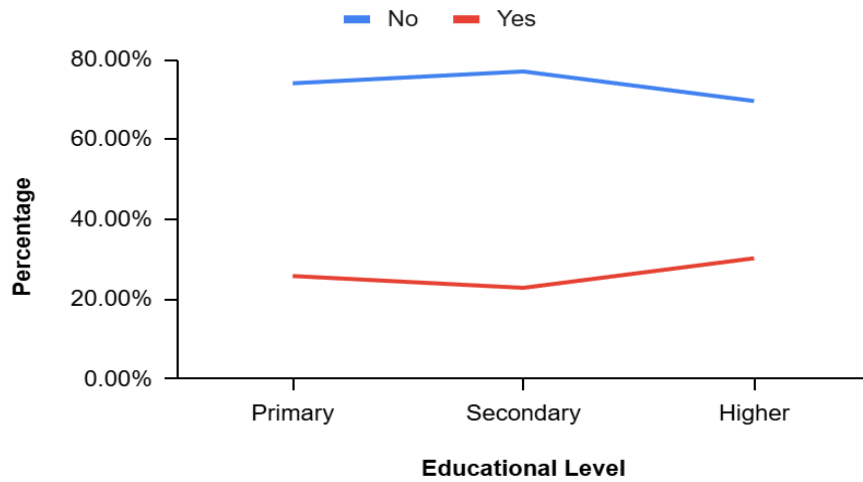
of Education

Figure 2.7 shows that the level of awareness across all education levels ranged from 20 to 30%. Graduates of secondary education were found to be less aware than primary education graduates. These responses do not seem to make sense as the concept of family planning is typically taught during your secondary years of education. This may indicate insufficient learning among the secondary-level respondents. On the other hand, higher education respondents were found to have the highest percentage of those who know when it is highly likely to conceive, which should make sense since they finished their secondary education where they learned all about reproductive health.

Figure 2.8

Percentage of Respondents Who Knows When it is Highly Likely to Get Pregnant by Wealth Index
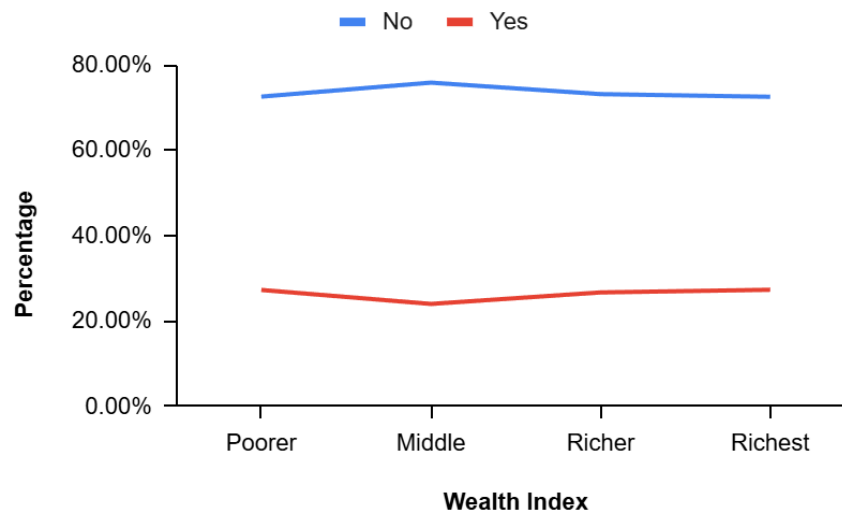

Figure 2.8 shows that the percentage of awareness looks almost consistent throughout all indexes. The responses imply that wealth index has no effect on one's awareness of the ovulatory cycle and conception.

However, we want to know whether the relationships between these variables are statistically significant. Therefore, we will conduct Pearson's Chi-square test at .05 level of significance to test our hypotheses that awareness of the ovulatory cycle and conception is associated with age, educational level, and wealth index.

Table 2.3

Pearson's Chi-Square Test for the Association Between Awareness of the Ovulatory Cycle and Conception and Socio-demographic Groups

Variable	χ^2	df	p
Age	55.4	6	<.001
Education Level	17.13	2	<.001
Wealth Index	1.94	3	.585

The Chi-square test statistic for age was calculated to be 55.40, with a p-value of less than .001, indicating that there is a significant association between age and one's knowledge of the ovulatory cycle and conception. The Chi-square test statistic for education level was calculated to be 17.13, with a p-value of less than 0.001, showing that there is a significant association between education and a person's awareness of the reproductive cycle. The Chi-square test statistic for wealth index was calculated to be 1.94, with a p-value equal to 0.585, which shows that we do not have sufficient evidence to suggest that there is an association between wealth index and knowledge of the ovulatory cycle and conception.

Question - "Can Women Get Pregnant After Birth and Before their Period?"

To further explore the population's knowledge of the ovulatory cycle, they are asked about their understanding of pregnancy, particularly whether women can get pregnant after birth and before their period. The responses are simply categorized into "Yes", "No", and "Don't Know" answers.
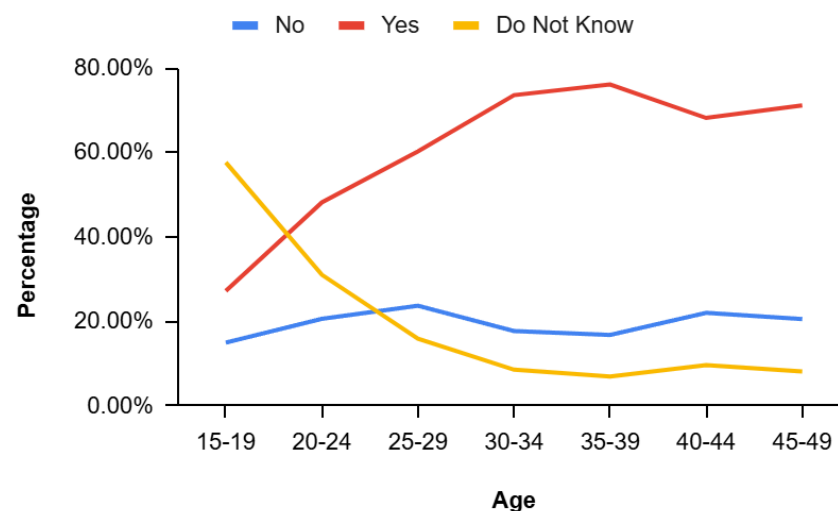
Figure 2.9

Percentage of the Respondents for the Question, "Can Women Get Pregnant After Birth and Before their Period?"

As women can get pregnant before their postpartum period (De Bellefonds, 2024), it is more desirable for the answer to be "Yes" in the survey. 1496 respondents (out of 2574) correctly recognized that women could conceive during this time. However, 22.5% of the respondents were uncertain and 19.4% were wrong, indicating a lack of knowledge or understanding about postpartum fertility. This highlights a widespread misconception about reproductive health, with a large percentage of the respondents either misunderstanding or being unaware of the possibility of pregnancy during this period.

To further explore this misconception, we examine each socio-demographic variable's relationships and their response to the question.

Figure 2.10

Percentage of the Respondents to the Question, "Can Women Get Pregnant After Birth and Before their Period?" by Age

As presented in Figure 2.10, we can observe that the majority of the respondents aged from 15 to 19 answered "Do Not Know." On the other hand, the majority of the respondents aged 20 to 49 believe that women can get pregnant before their postpartum period. This trend indicates that younger people may have less access to accurate reproductive health education. They may rely on incomplete or incorrect information from family, friends, or unreliable sources, contributing to a sense of uncertainty and

misinformation. Meanwhile, older people may have more life experience and access to reproductive health information. However, these resources may be insufficient to fully correct misconceptions about postpartum fertility.

Figure 2.11

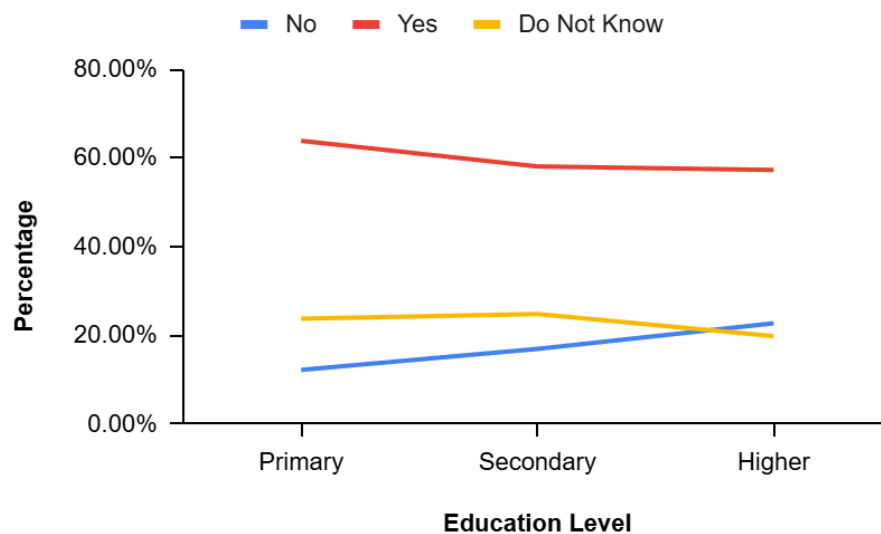*Percentage of the Respondents to the Question, "Can Women Get Pregnant After Birth and Before their Period?" by Educational Level*

The data is examined based on the respondents' educational level. We can observe that the "Yes" response is the largest percentage among the three choices across the three academic levels. This implies that regardless of finishing only primary education or higher education, the majority believe that women can experience pregnancy before their postpartum period. This suggests that education improves access to accurate reproductive health knowledge, as students who attend more advanced schools may have encountered more comprehensive health-related topics. Despite this, we can see that across all educational levels, the percentage of respondents who believe that women cannot get pregnant before their postpartum period is still present and even increases along with academic level. Additionally, some respondents are unsure of the concept across the three academic levels. This indicates that even higher education does not eliminate

misconceptions about postpartum fertility and suggests a lack of emphasis on reproductive health issues at all educational levels.

Figure 2.12

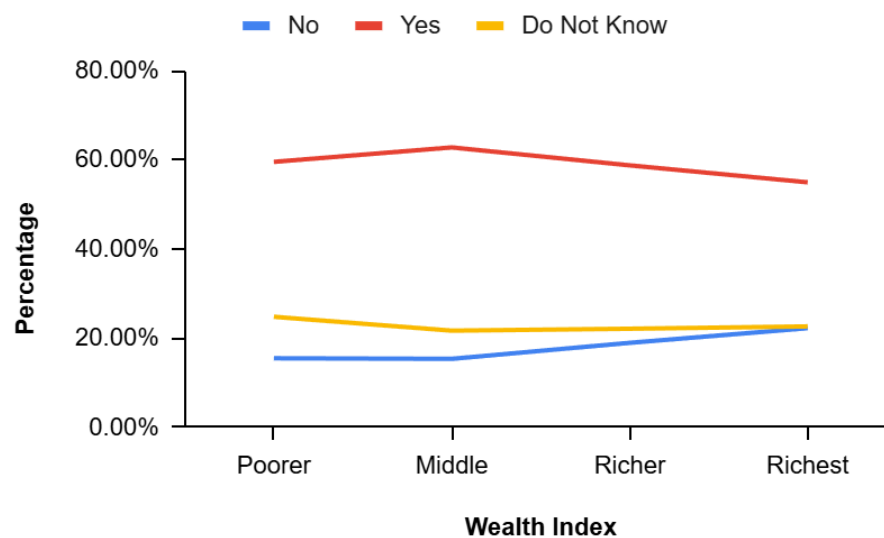*Percentage of the Respondents to the Question, "Can Women Get Pregnant After Birth and Before their Period?" by Wealth Index*

We can observe in Figure 2.12 that the number of respondents who do not believe and are uncertain about a woman's postpartum period are close to each other in value. On the other hand, regardless of wealth status, the majority are those respondents who believe that women can get pregnant before their postpartum period. In regards to the respondent's wealth status, there could be a difference between access to information and knowledge. The poorer group might not have the same accessibility to information as the other groups, which could explain their higher proportion of "No" and "Don't Know" responses.

To further understand the implication of the data presented previously, we will perform tests to see whether each relevant socio-demographic group is associated with the knowledge of the postpartum period. To test these hypotheses, we will use Pearson's chi-square test to check whether there is a significant association between these variables at .05 level of significance.

Table 2.4

Pearson's Chi-Square Test for the Association Between Knowledge on Pregnancy Before

Postpartum Period and Socio-demographic Groups

Variable	$\chi 2$	df	p
Age Group	538.71	12	<.001
Education Level	22.42	4	<.001
Wealth Index	13.85	6	.031

First, testing the association between age group and knowledge on pregnancy before postpartum period yielded a Chi-square test statistic of 538.71 and a p-value of less than .001. These results suggest a significant association between the age group and the belief or knowledge about whether women can conceive after birth and before their period.

Next, we test for the association between the respondent's educational level and knowledge on pregnancy before postpartum period. The test resulted in a Chi-square test statistic of 22.42 and a p-value of less than .001. This result suggests that education level is also significantly associated with the variable in question.

Lastly, we examine the association between the respondent's wealth index and knowledge on pregnancy before postpartum period. The test resulted in a Chi-square test statistic of 13.85 and a p-value of .031. Thus, the result indicates that wealth status has a statistically significant association with the knowledge of whether women can get pregnant after birth and before their period.

Prevalence of Modern Contraceptive Methods

This section examines the prevalence of modern contraceptive methods among the respondents by exploring their current use of contraceptives and their intentions regarding future use. By analyzing these factors, the section provides insights into the adoption of modern contraceptive practices among women aged 15-49 in the National Capital Region, highlighting differences across key socio-demographic groups.

Contraceptive Use and Intention

Table 3.1

Current Contraceptive Use Among Respondents

Status	Respondent Count
Using	789
Not using	1785
Total	2574

Table 3.2

Intention to Use Contraceptives in the Future Among Current Non-Users

Intention	Respondent Count
Intends to use later	429
Does not intend to use later	1356
Total	1785

It is seen in Table 3.1 that out of the 2,574 respondents, only 789 (30.65%) were using contraceptives at the time of the survey, while 1,785 (69.35%) were not. This tells us that the majority of the respondents reported that they were not actively engaged in using

contraceptive methods. At first, it was considered that a significant portion of the non-users might not yet have been sexually active, which could explain their lack of contraceptive use. However, upon further examination, it was found that all the respondents had already engaged in sexual activity, based on their response to a question regarding contraceptive use and intention. This suggests that other factors may be influencing the lack of contraceptive use rather than factors related to sexual activity. Additionally, Table 3.2 shows that out of the 1,785 respondents who reported that they were not using any contraceptive methods, only 429 (24.03%) said that they had plans of using contraceptives in the future.

We now examine contraceptive use among respondents in relation to their socio-demographic characteristics. Given the heavily skewed distributions of religion and ethnicity—with 90% of the respondents identifying as Roman Catholic and 71.79% as Tagalog—our analysis focuses on age group, educational attainment, and wealth index. At first glance, these three variables seem to have a more direct influence on access to, awareness of, and affordability of contraceptives.

Table 3.2

Current Contraceptive Use of Respondents By Age Interval

Age Interval	Contraceptive Use Status		Total	Row Percentage (%)
	Using	Not Using		
15-19	14	459	473	2.96
20-24	83	348	431	19.26
24-29	144	277	421	34.20
30-34	156	182	338	46.15
35-39	147	168	315	46.67
40-44	142	148	290	48.97
45-49	103	203	306	33.66

Age Interval	Contraceptive Use Status		Total	Row Percentage (%)
	Using	Not Using		
Total	789	1785	2574	

Table 3.2 reveals several observations about contraceptive use across different age intervals, with the given row percentages representing the proportion of contraceptive users relative to the total number of respondents in each age group. The 15 to 19 age group has the lowest percentage of users at 2.96%, which is considerably lower than the 20 to 24 age group at 19.26%. Contraceptive use then rises notably and steadily up until the 40 to 44 age group, with 48.97% contraceptive users. However, there is a drop in usage in the 45 to 49 age group at 33.66%. There is a noticeable trend that the number of respondents who are not using contraceptives is higher than the number of those using contraceptives for all age intervals. Additionally, it is apparent that contraceptive use generally increases with age, as observed in the higher number of users in the older age groups. This could possibly be attributed to factors like greater maturity, improved access to contraceptives, or changing life circumstances.

Table 3.3

Current Contraceptive Use of Respondents by Educational Attainment

Educational Attainment	Contraceptive Use Status		Total	Row Percentage (%)
	Using	Not Using		
None/Primary	47	100	147	27.89
Secondary	406	813	1219	33.31
Higher	336	872	1208	27.81

Educational Attainment	Contraceptive Use Status		Total	Row Percentage (%)
	Using	Not Using		
Total	789	1785	2574	

Table 3.3 presents the distribution of current contraceptive use among the respondents, categorized by educational attainment. The row percentages, which represent the proportion of contraceptive users within each educational level group, show that 27.89% of respondents with no formal education or only primary education use contraceptives. The percentage rises slightly to 33.31% among those who reached secondary education. However, it drops back down to 27.81% for individuals with higher education, indicating that there is a lower percentage of contraceptive users in the higher education bracket than in the none/primary education bracket. These figures show a relatively small difference in contraceptive use across educational levels, suggesting that education alone may not be a strong determinant of contraceptive use.

Table 3.4

Current Contraceptive Use of Respondents by Wealth Index

Wealth Index	Contraceptive Use Status		Total	Row Percentage (%)
	Using	Not Using		
Poorest/Poorer	59	102	161	36.65
Middle	181	293	474	38.19
Richer	298	618	916	48.97
Richest	251	772	1023	33.66
Total	789	1785	2574	

Table 3.4 outlines the current contraceptive use of the respondents based on their wealth index. The row percentages, indicating the proportion of contraceptive users within each wealth group, reveal some variation across economic strata. Among the poorest/poorer group, 36.65% of respondents reported using contraceptives. This percentage increases to 38.19% in the middle group and reaches its highest at 48.97% in the richer group. However, the percentage drops noticeably to 33.66% among the richest respondents. This pattern suggests that while contraceptive use tends to rise with increasing wealth, the decline in the richest group may point to other influencing factors, such as lifestyle choices in higher economic classes.

Table 3.5

Pearson's Chi-Square Test for the Association Between Contraceptive Use and Socio-demographic Groups

Variable	χ^2	df	p
Age Group	322.74	6	<.001
Education Level	8.74	2	.013
Wealth Index	314.37	3	<.001

We performed Chi-square tests to examine the association between contraceptive use and socio-demographic groups, including age interval, education level, and wealth index. The results show statistically significant associations for all three variables, at .05 level of significance. As shown in Table 3.5, the p-value for the test involving age interval is less than .001, indicating that the null hypothesis of the Chi-square test must be rejected, i.e., a relationship exists between age and contraceptive use. Similarly, wealth index also demonstrates an association with contraceptive use, with a p-value less than .001. The p-value for the test involving education level, despite being much higher at .013, is still below

the level of significance, indicating that educational attainment and contraceptive use are associated with each other. However, it is important to note that these Chi-square tests do not provide information on the direction or nature of the associations, meaning they do not tell us whether the relationship is positive or negative, nor the strength of their relationship.

Types of Contraceptive Methods Used

Table 3.6

Contraceptive Methods Used by the Respondents

Contraceptive Methods	Respondent Count
Pills	261
IUD	42
Injections	82
Male Condom	34
Female Sterilization	112
Calendar or rhythm method/Periodic abstinence	39
Withdrawal	185
Other Methdods (Implants/Norplant, LAM, Male Sterilization, SDM, Other Traditional Method)	34
Total	789

In Table 3.6, the contraceptive methods used by the respondents are presented along with their respective counts. The pill is the most commonly used method, with 261 out of 789 respondents (33.08%) reporting its use. The next most commonly used method is withdrawal, with 185 respondents (23.45%). Following these two, female sterilization is used by 112 respondents (14.20%), and injections are used by 82 respondents (10.39%). Male

condoms are one of the least popular methods, with only 34 respondents (4.31%) using them. Other methods, including implants, lactational amenorrhea (LAM), male sterilization, Standard Days Method (SDM), and other traditional methods, account for a combined 34 respondents (4.31%) as well. These findings highlight the prominence of modern contraceptives like the pill, with traditional methods such as withdrawal still being a fairly common choice among respondents.

Out of all the contraceptive methods listed in Table 3.6 above, the following are considered to be traditional methods: calendar or rhythm method/periodic abstinence, withdrawal, prolonged abstinence, and other unspecified traditional methods. All other contraceptive methods are considered to be modern.

Table 3.7

Contraceptive Method Type Used by the Respondents

Contraceptive Method Type	Respondent Count
Traditional	226
Modern	563
Total	789

Majority of the respondents who use contraceptives are using modern methods, with 563 out of 789 individuals (71.36%) selecting this type. In contrast, only 226 respondents (28.64%) utilize traditional methods. This suggests a clear preference for modern contraceptive methods over traditional ones, which could be attributed to factors like reliability and effectiveness in preventing unintended pregnancies. Additionally, traditional methods, such as withdrawal or abstinence, are more prone to user error and require more discipline, which may contribute to their lower usage rates.

Table 3.8

Contraceptive Method Type Used by Age Interval

Age Interval	Contraceptive Method Type		Total	Row Percentage (%)
	Modern	Traditional		
15-19	10	4	14	71.43
20-24	56	27	83	67.47
24-29	112	32	144	77.78
30-34	113	43	156	72.44
35-39	100	47	147	68.03
40-44	107	35	142	75.35
45-49	65	38	103	63.11
Total	563	226	789	

Table 3.8 gives a breakdown of the contraceptive method type used by the respondents per age interval, with the row percentages pertaining to the proportion of respondents using modern contraceptive methods. The percentages of respondents who prefer to use modern methods over traditional ones is relatively similar for all age groups, ranging from 63.11% to 77.78%. There also does not appear to be a clear trend or consistent increase or decrease in the data. The values fluctuate up and down as the age intervals increase.

Table 3.9

Contraceptive Method Type Used by Educational Attainment

Educational Attainment	Contraceptive Method Type		Total	Row Percentage (%)
	Modern	Traditional		
No Education/Primary	39	8	47	82.98
Secondary	301	105	406	74.14
Higher	223	113	336	66.37
Total	563	226	789	

The contraceptive method type used by the respondents across different levels of educational attainment, along with the respective counts is presented in Table 3.9. The row percentages, representing the proportion of respondents within each educational level who prefer modern over traditional contraceptive methods, show a consistent decline as educational attainment increases. Specifically, the preference for modern methods is highest among respondents with lower levels of education and gradually decreases as education level rises. This trend suggests that higher educational attainment may be associated with a greater likelihood of choosing traditional methods, though further analysis is needed to explore the underlying factors that contribute to this finding.

Table 3.10

Contraceptive Method Type Used by Wealth Index

Wealth Index	Contraceptive Method Type		Total	Row Percentage (%)
	Modern	Traditional		
Poorest/Poorer	49	10	59	83.05
Middle	139	42	181	76.80
Richer	204	94	298	68.46
Richest	171	80	251	68.13
Total	563	226	789	

Table 3.10 presents the distribution of contraceptive method type by wealth index. Among the poorest/poorer group, a total of 59 out of 789 individuals were reported, with 83.05% using modern contraceptive methods. The middle wealth group demonstrated a lower proportion of modern contraceptive users (76.80%) compared to the poorest/poorer group. For the richer group, 68.45% reported using modern methods. Similarly, in the richest group, consisting of 251 individuals, 68.13% use modern contraceptive methods. It is noteworthy that, similar to what was seen in Table 3.9, there is also a pattern in the row percentages in Table 3.10, indicating that the proportion of modern contraceptive use decreases as wealth increases. Conversely, the reliance on traditional methods increases with wealth, suggesting a trend that warrants further investigation.

Table 3.11

Pearson's Chi-Square Test for the Association Between Contraceptive Method Type

(Modern vs. Traditional) and Socio-demographic Groups

Variable	χ^2	df	p
Education Level	8.73	2	.013
Wealth Index	9.07	3	.028

We performed Chi-square tests to examine the association between contraceptive method type and socio-demographic groups, particularly education level and wealth index. The results show statistically significant associations for the two variables, at .05 level of significance. As shown in Table 3.11, the p-value for the test involving education level is .013, suggesting that the null hypothesis of the Chi-square test must be rejected, i.e., a relationship exists between education level and contraceptive method type. Likewise, wealth index also demonstrates an association with contraceptive method type, with a p-value of .028. Nonetheless, it must be acknowledged that these Chi-square tests are not sufficient to determine the direction or nature of the associations. Consequently, they do not tell us whether the relationship is positive or negative, nor the strength of their relationship.

CONCLUSION

In summary, this report assessed, explored, and analyzed family planning and contraceptive method use among women aged 15-49 in the National Capital Region.

We found that age group is significantly associated with knowledge of the ovulatory cycle and knowledge of pregnancy before postpartum period. The older respondents knew when it is highly likely to get pregnant in a menstrual cycle more than the younger respondents. The same goes for the knowledge of pregnancy before postpartum period where a larger percentage of the older percentage are right compared to the younger respondents in general. One thing to note is the big percentage of the young respondents claiming to not know whether you can get pregnant before postpartum period.

We also found that educational level is significantly associated with knowledge of the ovulatory cycle and knowledge of pregnancy before postpartum period. We saw that those who reached higher education knew more about when it is highly likely to get pregnant in a menstrual cycle compared to the other education levels. However, 70 to 80% of the respondents across all education levels did not know when exactly. This is a big issue that gives light to the need for intensive reproductive health education. On the other hand, a different case occurred in knowledge of pregnancy before postpartum period. A bigger percentage of the primary education level respondents were right compared to those of secondary and higher education levels. However, these results could have been affected by the imbalance of the respondents per education level category.

We also do not have sufficient evidence to say that exposure to family planning across radio, television, newspaper or magazine, and text messages is associated with age group and wealth index. However, this result may be due to the time and channel constraint. In addition, we found no sufficient evidence to conclude that wealth index is associated with knowledge of the ovulatory cycle and knowledge of pregnancy before postpartum period. However, like the others, the sparseness of data among the categories in wealth index could have affected the results.

In terms of contraceptive use, most of the respondents are not using contraceptives. Moreover, among those who are not, most do not intend to use contraceptives in the future. Upon conducting Chi-square tests for the association between contraceptive use and socio-demographic groups (age interval, educational attainment, and wealth index), it was revealed that there is an association between i) education level and contraceptive use, ii) age interval and contraceptive use, and iii) wealth index and contraceptive use. Furthermore, most of the respondents that opt to use contraceptives prefer modern methods over traditional ones. And upon conducting Chi-square tests for the association between contraceptives method and socio-demographic groups (educational attainment and wealth index), it was established that there is a significant association between (i) education level and contraceptive method and (ii) wealth index and contraceptive method.

RECOMMENDATIONS

Based on our exploration and analysis of the data, there are many recommendations for further studies regarding the topic. First, we recommend future studies to examine regions with diverse ethnic groups and religious affiliations where each group can be properly represented for a wider scope. Doing so, more meaningful conclusions could be made regarding the relationships between variables.

The survey's examination of respondents' exposure to family planning was restricted by the limited selection of media channels provided and the narrow time frame considered, which only considered exposure within the past few months. We recommend further studies to be more open to other sources of information when they gather data and avoid these constraints as much as possible.

Additionally, for contraceptive use, we suggest that reasons for preferring to use or not use contraceptives also be taken into account, including but not limited to affordability, effectiveness, religious beliefs, and the sex of the respondent's partner. Elaborating on the last reason mentioned, it is possible that some respondents are engaging in sexual activity with female partners. This could influence contraceptive choices, and further clarification might provide a better understanding of the findings.

There is a great need for intensive reproductive health education among ages 15-30 regardless of education level as these are the groups where there is insufficient knowledge on ovulatory cycle and conception. These needs include checking the competency of reproductive health education in schools so that the students will be more aware. Outreach programs for those who have limited access to information is also recommended.

APPENDIX

On exploring and analyzing family planning variables among relevant

socio-demographic groups of the respondents:

```r
data$V384All <- ifelse((data$V384A + data$V384B + data$V384C + data$V384D) >
0, 1, 0)
Explore <- data.frame(Age = data$V012, Education = data$V106, Wealth =
data$V190, Heard = data$V384All, Knowledge = data$V217, Question = data$V244,
Total = data$V201)
Explore$Agegroup <- cut(Explore$Age,
                        breaks = 7,
                        labels = c("15-19", "20-24", "25-29", "30-34",
"35-39", "40-44", "45-49"))
Explore$Knowledge_01 <- ifelse(data$V217 == 3, 1, 0)
Explore$Education_01 <- ifelse(data$V106 == 0, 1, data$V106)
Explore$Wealth_01 <- ifelse(data$V190 == 1, 2, data$V190)
for (i in c("V384A", "V384B", "V384C", "V384D", "V384All", "V217", "V244")) {
  print(table(data[i]))
}
for (i in c("Agegroup", "Wealth_01")) {
  print(table(Explore[[i]], Explore$Heard))
  print(chisq.test(table(Explore[[i]], Explore$Heard)))
}
for (j in c("Knowledge_01", "Question")) {
  for (i in c("Agegroup", "Education_01", "Wealth_01")) {
    print(table(Explore[[i]], Explore[[j]]))
    print(chisq.test(table(Explore[[i]], Explore[[j]])))
  }
}
```

```
# additional

table(Explore$Agegroup, Explore$Total)
```

On exploring and analyzing contraceptive use and methods among relevant socio-demographic groups of the respondents:

We filtered the frequencies of the responses of the respondents through a pivot table in Microsoft Excel and created dataframes in R using the extracted values. We performed the necessary tests using these dataframes and the script below shows the code used.

```
wi <- data.frame(
  Wealth_Index = c("Poorest/Poorer", "Middle", "Richer", "Richest"),
  Using_Contraceptives = c(59, 181, 298, 251),
  Not_Using_Contraceptives = c(102, 293, 618, 22)
)
colnames(wi) <- c("Wealth Index", "Using Contraceptives", "Not Using
Contraceptives")
wi_2 <- wi[, -1]
rownames(wi_2) <- wi$'Wealth Index'
wi_3 <- as.table(as.matrix(wi_2))
print(wi_3)
chisq.test(wi_3)



wj <- data.frame(
  Wealth_Index = c("15-19", "20-24", "25-29", "30-34", "35-39", "40-44",
"45-49"),
  Using_Contraceptives = c(14, 83, 144, 156, 147, 142, 103),
  Not_Using_Contraceptives = c(459, 348, 277, 182, 168, 148, 203)
)
```

```
colnames(wj) <- c("Age Interval", "Using Contraceptives", "Not Using

Contraceptives")

wj_2 <- wj[, -1]

rownames(wj_2) <- wj$'Age Interval'

wj_3 <- as.table(as.matrix(wj_2))

print(wj_3)

chisq.test(wj_3)




wk <- data.frame(

  Highest_Educational_Attainment = c("No Education/Primary", "Secondary",

"Higher"),

  Using_Contraceptives = c(47, 406, 336),

  Not_Using_Contraceptives = c(100, 813, 872)

)

colnames(wk) <- c("Highest Educational Attainment", "Using Contraceptives",

"Not Using Contraceptives")

wk_2 <- wk[, -1]

rownames(wk_2) <- wk$'Highest Education Attainment'

wk_3 <- as.table(as.matrix(wk_2))

print(wk_3)

chisq.test(wk_3)




xi <- data.frame(

  Wealth_Index = c("Poorest/Poorer", "Middle", "Richer", "Richest"),

  Modern_Contraceptives = c(49, 139, 204, 171),

  Traditional_Contraceptives = c(10, 42, 94, 80)

)

colnames(xi) <- c("Wealth Index", "Modern Contraceptives", "Traditional

Contraceptives")
```

```
xi_2 <- xi[, -1]

rownames(xi_2) <- xi$'Wealth Index'

xi_3 <- as.table(as.matrix(xi_2))

print(xi_3)

chisq.test(xi_3)




xj <- data.frame(

  Wealth_Index = c("No Education/Primary", "Secondary", "Higher"),

  Modern_Contraceptives = c(39, 301, 223),

  Traditional_Contraceptives = c(8, 105, 113)

)

colnames(xj) <- c("Highest Educational Level", "Modern Contraceptives",

"Traditional Contraceptives")

xj_2 <- xj[, -1]

rownames(xj_2) <- xj$'Wealth Index'

xj_3 <- as.table(as.matrix(xj_2))

print(xj_3)

chisq.test(xj_3)
```

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