Chapter 5

Knowledge-Building and Information-Seeking Behaviour Regarding Reproductive Health and Well-Being Among Women – A Quantitative Study

This chapter presents the objective, methods, results, and findings of the quantitative study, which was conducted understand knowledge-building and information-seeking behaviours concerning reproductive health and well-being among women of different ages.

Information regarding reproductive health and well-being is communicated to women at an early age. However, the implications of such information are realised at a much later stage in life. In most situations, the knowledge obtained during adolescence is not retained till adulthood. Learning to deal with complex reproductive health issues is the result of lived experience and possessing the knowledge gathered to deal with the situation. In most situations, women are not prepared or do not foresee the consequences of reproductive health issues. This emphasises the gap in the current system of educating adolescents to prepare them for their future health.

To gain a thorough understanding of the given context, a quantitative study was conducted amongst women from diverse sociodemographic locations across India. The purpose of the study was to understand the level of awareness about reproductive health and well-being and the level of information retention since adolescence to the present. The variables studied were health information-seeking behaviour, current knowledge about reproductive health and well-being, the age at learning about reproductive health, and information about reproductive health and well-being. In addition, the sources of information about reproductive health and well-being were identified.

1.1 Constructs Studied in the Interviews

1.1.1 Health Information-Seeking Behaviour

Health information-seeking behaviour refers to how individuals try to find and use health information in various health contexts. Research on this topic consistently shows that individuals endeavour to cope with stressful health challenges such as the diagnosis of illness or the management of chronic disease. Emerging evidence reveals that individuals actively

search for wellness information, and that there is a positive association between a self-reported 'health-conscious' or 'health-active' orientation and engaging in health information-seeking behaviour.

The definition of health information-seeking behaviour has evolved from 1984 to 2003 (Weaver et al., 2010). Initially, it was interpreted as a series of interrelated behaviours that can vary along two dimensions: the extent and the method. Later, it was defined as a verbal or non-verbal action used to satisfy a query and obtain knowledge of a specific event or situation. Over the years, it was redefined as a self-regulatory strategy that patients use to organise transactions between the self and health-related settings. Accordingly, research shows that a purposive acquisition of information from selected information sources can be used to cope with and reduce stress; individuals engage in such information acquisition with the motive of formulating a problem-focused coping strategy as a response to threatening situations.

1.1.2 Knowledge Building

Knowledge building is a form of constructivism, where a learner creates their own knowledge. It entails a communal inquiry into a particular subject, leading to deeper understanding through interactive questioning, dialogue, and the ongoing improvement of ideas (Bereiter & Scardamalia, 2014). A deliberate, conscious action that produces knowledge based on one's exposure to various sources of information, knowledge building is considered to occur in a problem space—that is, a conceptual space that contains goal states, intermediate states, constraints, and possible moves. Importantly, the problem space for knowledge building is larger and more complex than that for knowledge creation. In summary, knowledge building is an educational approach that aims to improve ideas and the advancement of community knowledge, with individual learning as a byproduct. The aspects that influence knowledge building are social and personal. Personal knowledge is the result of personal comprehension, tacit pre-understanding, and personal beliefs, whereas social knowledge is influenced by cultural artefacts, collaborative knowledge, shared understanding, arguments, rationales, and other people's statements

1.1.3 Stages of Ageing Among Women

A woman's body undergoes several changes during her life. These phases can be divided into four stages: puberty, reproductive age, the climacteric period, and old age. Among these phases, reproductive health and well-being is primarily affected during the period from

menarche to menopause. Issues related to women's well-being persist through the climacteric period and old age.

The continuum of a woman's life can be further divided into several life stages, each characterised by specific features that are associated with hormonal changes that further influence a woman's body at every stage. To thoroughly understand a woman's body, it is important to capture all of these life stages and consider other external variables such as psychosocial or environmental factors that influence women's health (Takeda, 2010).

1.2 Objectives

The objectives of the quantitative were to:

1. understand the status of information and knowledge retained about reproductive health and well-being among women from different age ranges;
2. compare if knowledge about reproductive health and well-being is related to the source of information;
3. identify if the information gathered is aligned to the relevant age for specific information;
4. identify if the source of information seeking varies according to age;
5. and identify if individuals' perceived knowledge is comparable to actual knowledge.

1.3 Methods

A quantitative survey design was used to conduct the study. To understand if knowledge received during adolescence is retained at later stages of life, the study was conducted among women aged 21–70 years. This section details the methods used and procedures followed to conduct the study.

1.3.1 Sample

The quantitative data comprised 736 participants aged 21–70 years residing in various parts of India. Of these, 696 responses were valid and included in the analysis. An attempt was made to recruit significant numbers of participants from each zone of India. The current location of the participants was spread across 87 cities and towns, varying from urban to peri-urban areas. Further, the locations where the participants received their early education spanned 167 cities, towns, and villages, and included rural, urban, and peri-urban areas; data about these locations were collected to identify any relationship between learning during one's formative years and information seeking and knowledge building.

1.3.2 Constraints

As the survey was conducted online, the data were limited to participants who were acquainted with English and had Internet access.

1.3.3 Data Collection

Snowballing was used to recruit the study participants. In this technique, researchers begin with a small number of initial contacts (seeds) who fit the research criteria and are invited to participate in the research. The participants are subsequently asked to recommend other contacts who fit the research criteria and may be willing to participate in the study, who in turn recommend other potential participants. This process is continued until the required sample size is achieved (Naderifar et al., 2017; Parker et al., 2019). To control the data sources, approximately 250 individuals were identified from among the researcher's personal contacts with whom the survey was shared. At the end of the survey, the participants were requested to share the survey link with five more women. In addition, a few participants volunteered to have the survey completed by a certain number of participants. The data were collected over a period of 18 months with a staggered approach.

1.3.4 Source of the Gathered Data

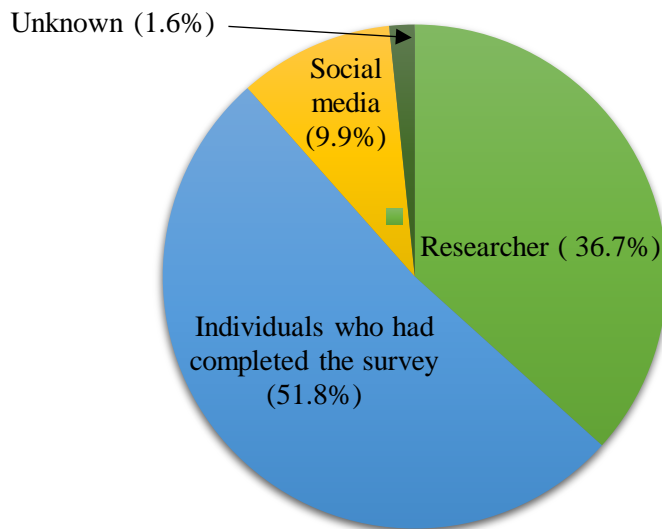**Figure 1**

Data Sources in the Quantitative Sample

Figure 10 shows the sources from which the participants accessed the survey questionnaire. Of the participants, 36.7% were individuals who received the questionnaire directly from the researcher, and 51.8% received the questionnaire from individuals who had taken the survey and shared it with others. Although strict instructions were given to not publish or share the survey link on any online platform, 9.9% of the participants came from social media and unknown sources. The overall data generated included 736 responses, of which 696 were considered valid for the analyses. The reasons for rejections included incomplete answers, ambiguous answers to the descriptive questions, and participants whose current location and location where they received their early education were both outside India.

1.3.5 Tool Development

The survey questionnaire was developed with the aim of understanding participants' health information-seeking behaviour and current knowledge about reproductive health and well-being. It included 22 questions—20 multiple-choice and two short descriptive questions—that evaluated awareness of reproductive health, issues related to reproductive

health, conceptual understanding of reproductive health, and sources of information and factors influencing information seeking (see Table 6). These questions were identified from the articles '*The State of Adolescent Sexual and Reproductive Health*' (Liang et al., 2019) and '*A Package of Sexual and Reproductive Health and Rights—What Does It Mean for Adolescents?*' (Engel et al., 2019).

The 20 questions included binary and multiple choices. To validate the extent of perceived knowledge, the responses to the descriptive questions were open-ended. The responses were validated by three gynaecologists, who responded to the questions with clarifications.

Table 1

Structure of the Survey Questionnaire

Question type	Topic
Demographic questions	• Age • Gender • Children • Marital status • Current location • Location of early school education
Knowledge about reproductive health	• Hormones • Menopause • Menstruation • Mental health • White discharge • The ovaries and uterus • Reproductive and sexual health • Polycystic ovary syndrome (PCOS) • Problems related to reproductive health
Information-seeking behaviour	• Source of information • Level of confidence with information • Age at learning about reproductive health

1.4 Results

With the assumption that age would affect the knowledge regarding certain topics, the questions were clustered into four categories: understanding of reproductive health, understanding of issues related to reproductive health, conceptual understanding of reproductive health, and other related issues.

1.4.1 Demographic Details of the Participants

The demographic data included the age of the participant, marital status, current location, and location of early education. As the study aimed to understand reproductive health and well-being, emphasis was given to information-seeking behaviour and the age when the participants started learning or understanding reproductive health and well-being.

1.4.1.1 Age. The age ranges were divided according to the stages of ageing among women, that is, 21–30 years, 31–45 years, 46–60 years, and 61 years and above (see Figure 11). Of the participants, 38.6% were aged 31–45 years; 30.6%, 46–60 years; 24.4%, 21–30 years; and 6.3%, 61 years and above.
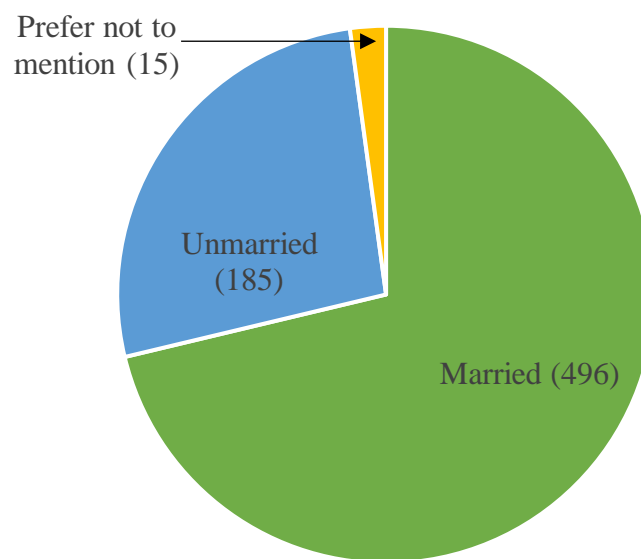
Figure 2

Distribution of Participants by Age Range
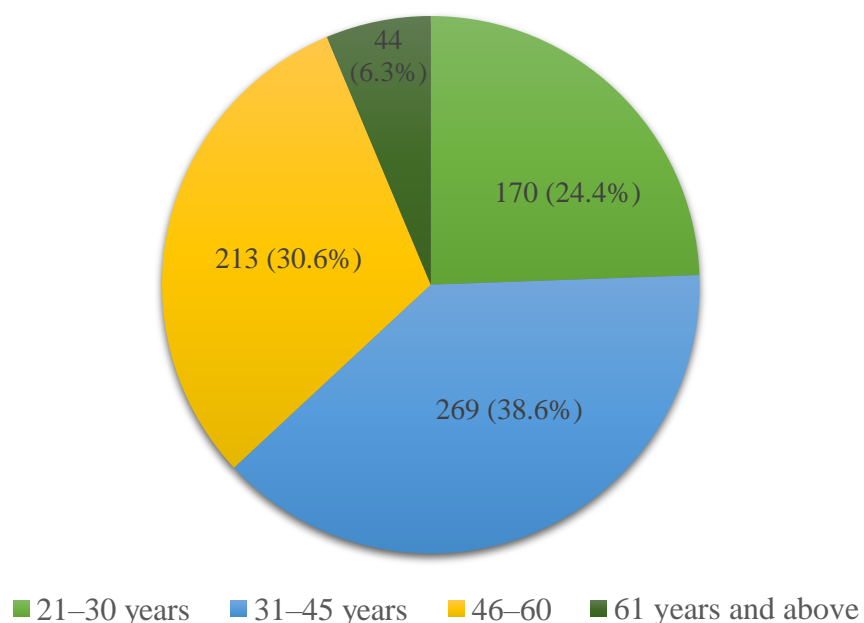
1.4.1.2 Marital Status. Of the 696 participants who were included in the analyses, 496 were married, 185 were unmarried, and 15 chose not to mention their marital status (see Figure 12).

Figure 3

*Distribution of Participants by Marital Status*

1.4.1.3 Location. The questionnaire gathered information about the participants' current location of the participants and location of early education, with the purpose of determining any influence of the sociodemographic setting on information seeking and knowledge. To ensure diversity, the researcher attempted cover as many zones of India as possible. The participants' current location covered a total of 87 cities and towns, varying from urban to peri-urban settings. By region, 95 participants were from North India; 24, Central India; 65, Eastern India; 236, Southern India; 228, Western India; and 48, outside India.

Similarly, the participants' location of early education covered 167 cities, towns, and villages, including rural, urban, and peri-urban locations (see Figure 13). Among the 696 participants, 108 received their early education in Northern India; 65 in Central India; 104 in

Eastern India; 156 in Southern India; 226 in Western India; 22 received their early education in multiple locations; and 15 received their early education in a country other than India.

Figure 4

Geographical Location of Participants
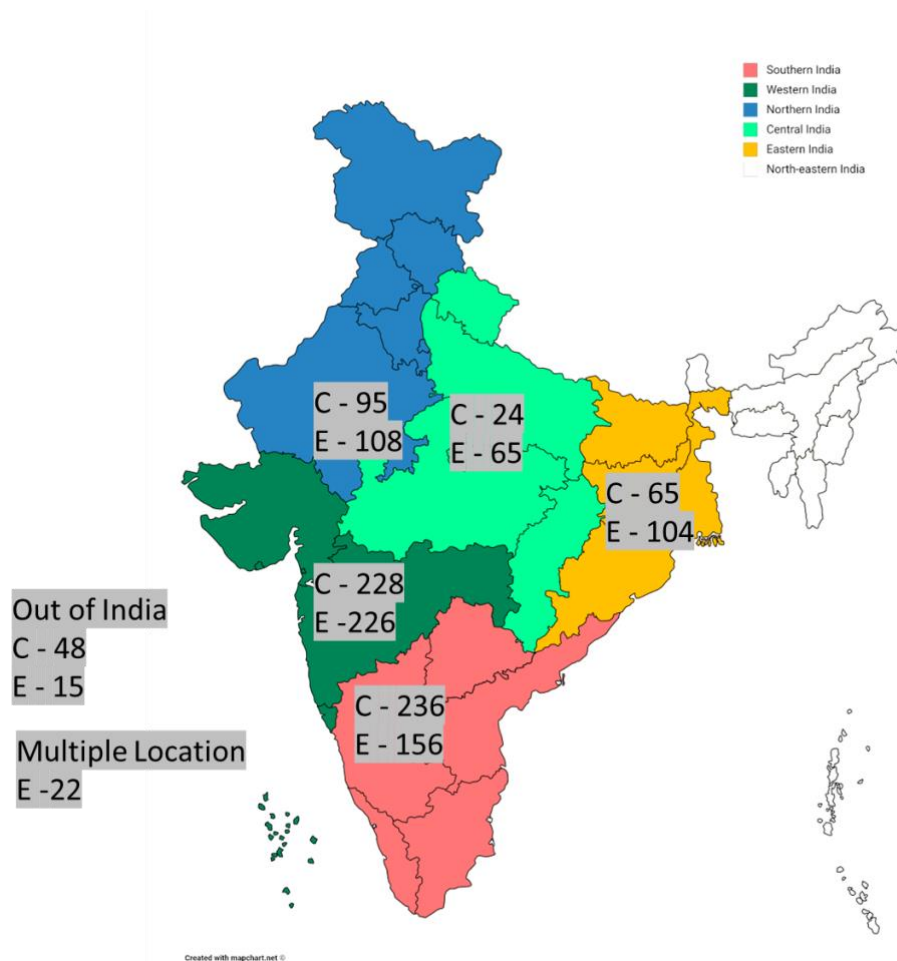
1.4.2 Knowledge About Reproductive Health and Well-Being

This section presents the results of the analysis of questions aimed at understanding the participants' knowledge about reproductive health and well-being. The data in Figure 14 show the overall results for the 19 knowledge-related questions.

Figure 5

Descriptive Statistics for Responses by Age Range

	Age Group	count	mean	std	min	25%	50%	75%	max
0	21-30	170.0	6.047059	2.072108	2.0	5.0	6.0	8.0	12.0
1	31-45	269.0	6.479554	2.014071	2.0	5.0	6.0	8.0	13.0
2	46-60	213.0	6.286385	1.927373	2.0	5.0	6.0	7.0	12.0
3	61 +	44.0	5.931818	1.822313	3.0	5.0	5.5	7.0	11.0

Across the four age ranges (21–30, 31–45, 46–60, and 61 years and above), the results revealed that none of the participants in any age group were able to correctly answer all the questions. Participants aged 31–45 years had the highest mean correct score ($M = 6.48$, $SD = 2$), followed by those aged 46–60 years ($M = 6.2$, $SD = 1.9$), 21–30 years ($M = 6.04$, $SD = 2$), and those aged 61 years and above ($M = 5.3$, $SD = 1.8$). To facilitate a comprehensive picture of the results, the questions were divided into three categories: (a) understanding of reproductive health, (b) problems associated with reproductive health, and (c) other issues related to reproductive health and well-being.

1.4.2.1 Understanding of Reproductive Health. This category included questions on topics of reproductive and sexual health; the reproductive organs, ovaries and uterus; and menstruation.

1.4.2.1.1 Reproductive and Sexual Health. In response to the question whether reproductive and sexual health are the same, different, or connected, of the 696 participants, 56.9% answered correctly that both are connected with each other and 43.1% answered incorrectly (see Figure 15).

A comparison of correct and incorrect answers across the age groups showed that 72.7% of the women aged 61 years and above gave correct responses. In all the other groups, the proportion of correct responses varied from 51.2% to 58.7%. The chi-square value, $\chi^2(3, N = 696) = 7.2$, was not significant.

Figure 6

*Graph of the Difference Between Reproductive and Sexual Health*
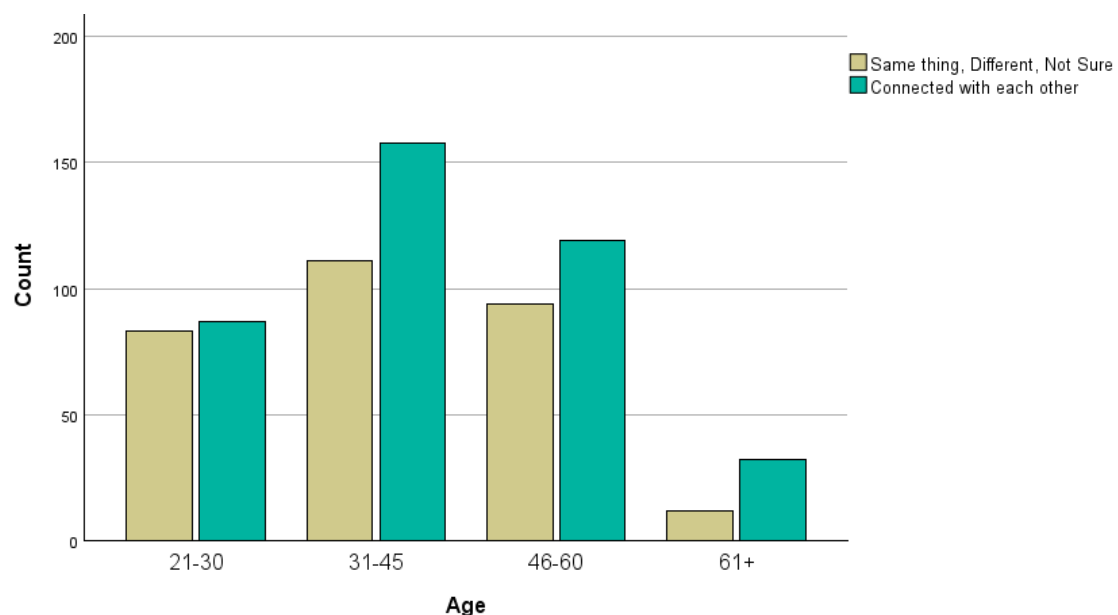
1.4.2.1.2 The Purpose of the Reproductive Organs. In response to the question about the purpose of reproductive organs in women, of the 696 participants, 43.8% answered correctly ('To remain sexually active, to have babies, to remain physically and mentally healthy'), 53.5% had partially correct answers where they had selected two of the three options, and 2.7% had incorrect answers (see Figure 16).

A comparison of correct and incorrect answers across the age groups showed that women older than 61 years had 50% correct responses; the other age groups scored 46.5%, 43.7%, 41.3%, respectively. The chi-square value, χ^2 (9, $N = 696) = 16.4$, was not significant.

Figure 7

*Graph of the Purpose of the Reproductive Organs*
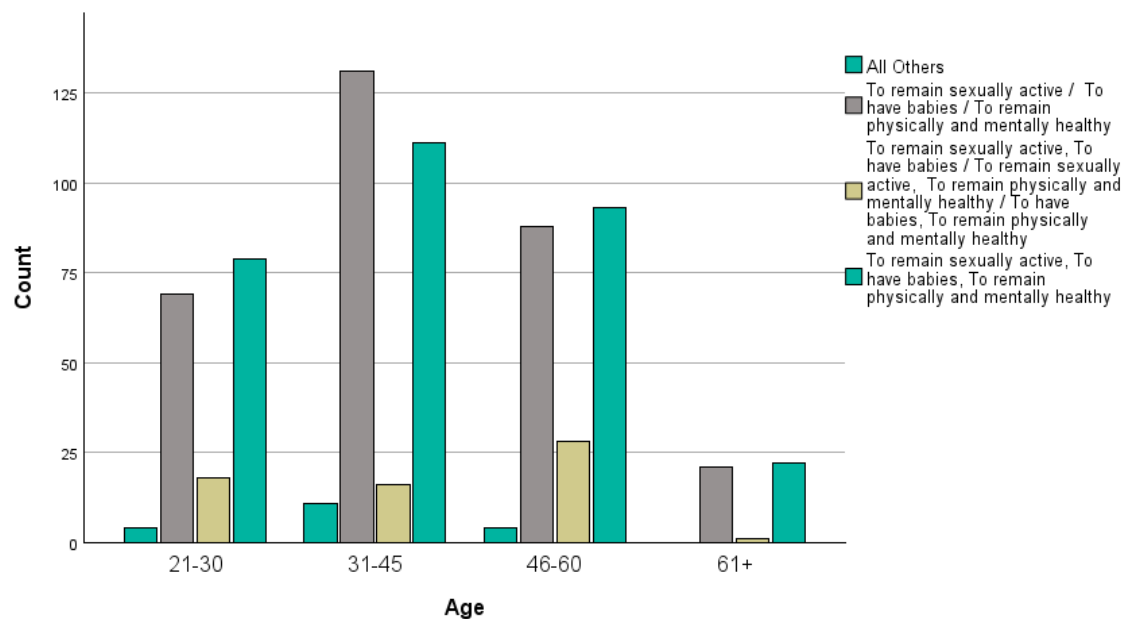
1.4.2.1.3 The Function of the Ovaries. In response to the question about the function of the ovaries, of the 696 participants, 30.5% correctly answered that the ovaries facilitate childbirth, maintain physical and mental well-being, and secrete hormones; 61.9% had partially correct answers; and 7.6% had incorrect answers (see Figure 17).

A comparison of correct and incorrect answers across the age groups showed that 34.2% of the women aged 31–45 years had correct responses; those aged 46–60 years had the lowest proportion of correct answers (25.4%). The chi-square value, $\chi^2(9, N = 696) = 12.6$, was not significant.

Figure 8

*Graph of the Function of the Ovaries*
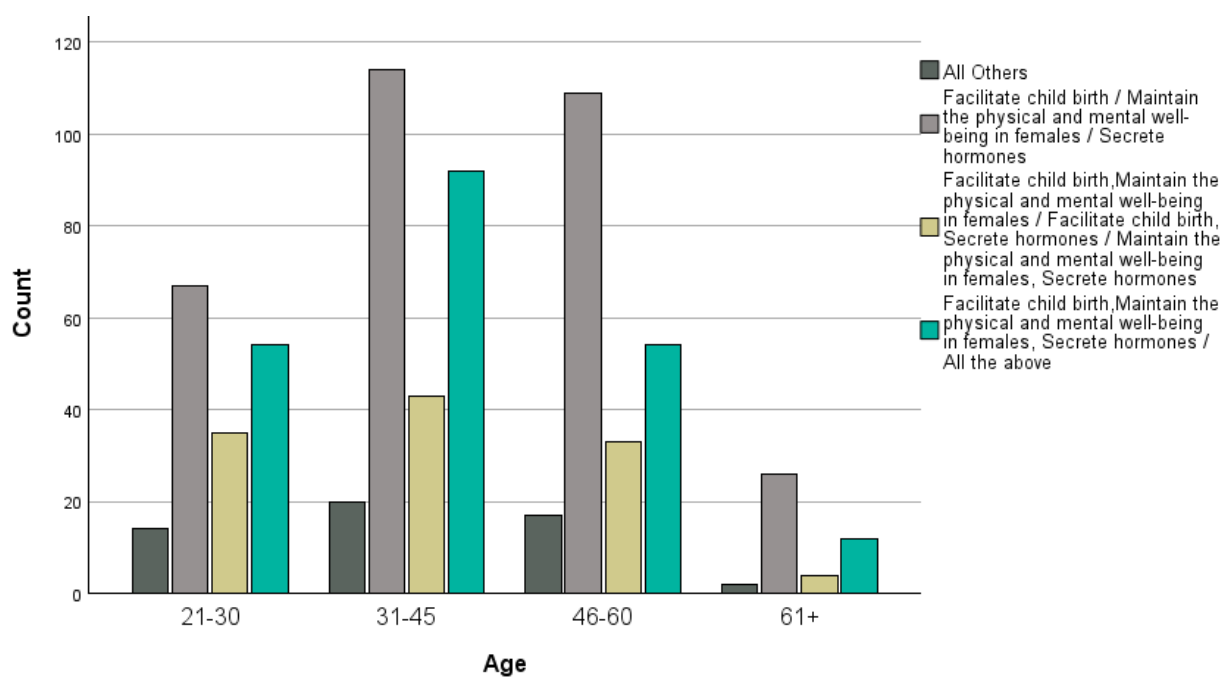
1.4.2.1.4 Function of the Uterus. In response to the question about what the uterus facilitates, of the 696 participants, 44.4% correctly answered that the uterus facilitates childbearing during pregnancy and maintains a hormonal balance, 50.1% had incorrect answers, and 5.5% had partially correct answers (see Figure 18).

A comparison of correct and incorrect answers across the age groups showed that 52.3% of women aged 61 years and above had correct responses; the proportion of correct responses for the other groups were 50.7%, 42.4%, and 37.6%, respectively. The chi-square value, $\chi^2(6, N = 696) = 10.92$, was not significant.

Figure 9
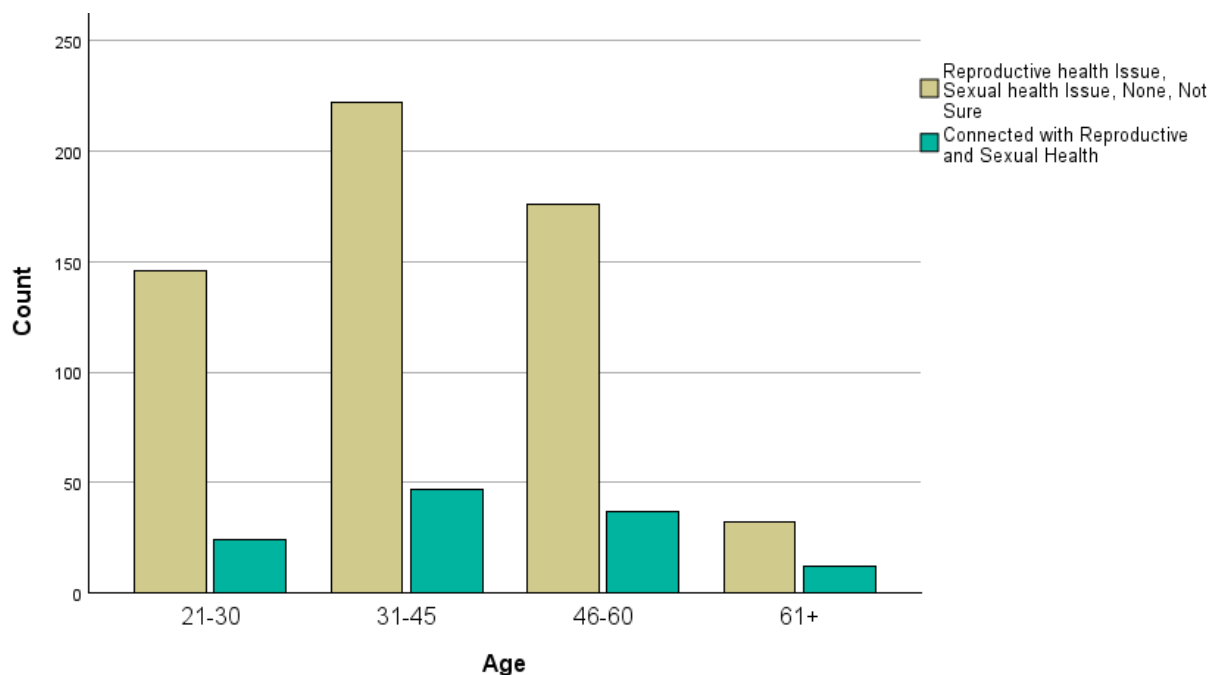
Graph of the Function of the Uterus
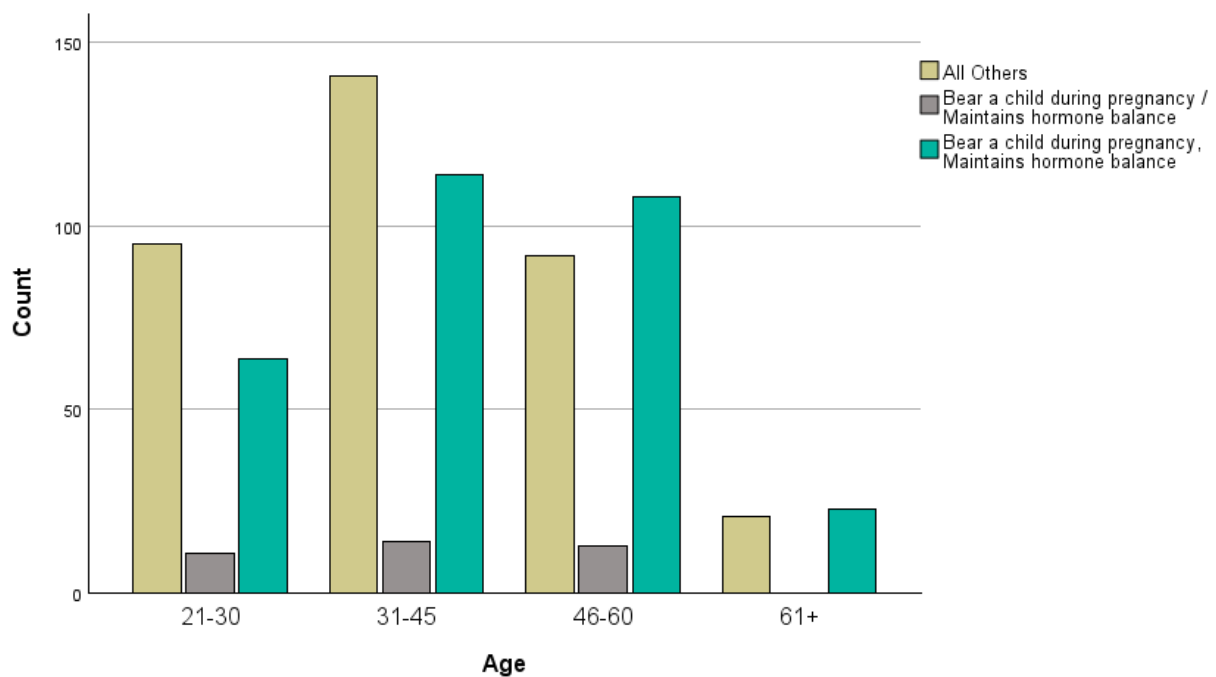
1.4.2.1.5 Menstruation. In response to the question about what menstruation is associated with, of the 696 participants, 17.2% correctly answered that menstruation is associated with reproductive and sexual health and 82.8% had incorrect answers (see Figure 19).

A comparison of correct and incorrect answers across the age groups showed that 27.3% of the participants aged 61 years and above gave correct responses. The proportions of correct responses for the other age groups were 14.1%, 17.5%, and 17.4%, respectively. The chi-square value, $\chi^2(3, N = 696) = 4.2$, was not significant.

Figure 10

Graph of the Association of Menstruation With Reproductive and Sexual Health

1.4.2.1.6 Summary. The overall results suggested that four out of the five questions on the understanding of reproductive health had higher accurate response rates among women aged 61 years and above. The question regarding the function of the ovaries had a higher accurate response rate among those aged 31–45 years. However, there was no significant difference in the within-group scores.

1.4.2.2 Problems Associated With Reproductive Health. This category of questions included those related to problems associated with reproductive health, menopause, white discharge, PCOS, and so on.

1.4.2.2.1 Similarity Between Menopause and Removal of the Ovaries and Uterus. In response to the question about whether menopause refers to the removal of the ovaries and uterus, of the 696 participants, 89.1% had correct answers ('False') and 10.9% had incorrect answers (see Figure 20).

A comparison of correct and incorrect answers across the age groups showed that 90.3% of the participants aged 31– 45 years had correct responses. The chi-square value, $\chi^2(3, N = 696) = .92$, was not significant.

Figure 11

Graph of the Similarity Between Menopause and Removal of The Ovaries and Uterus
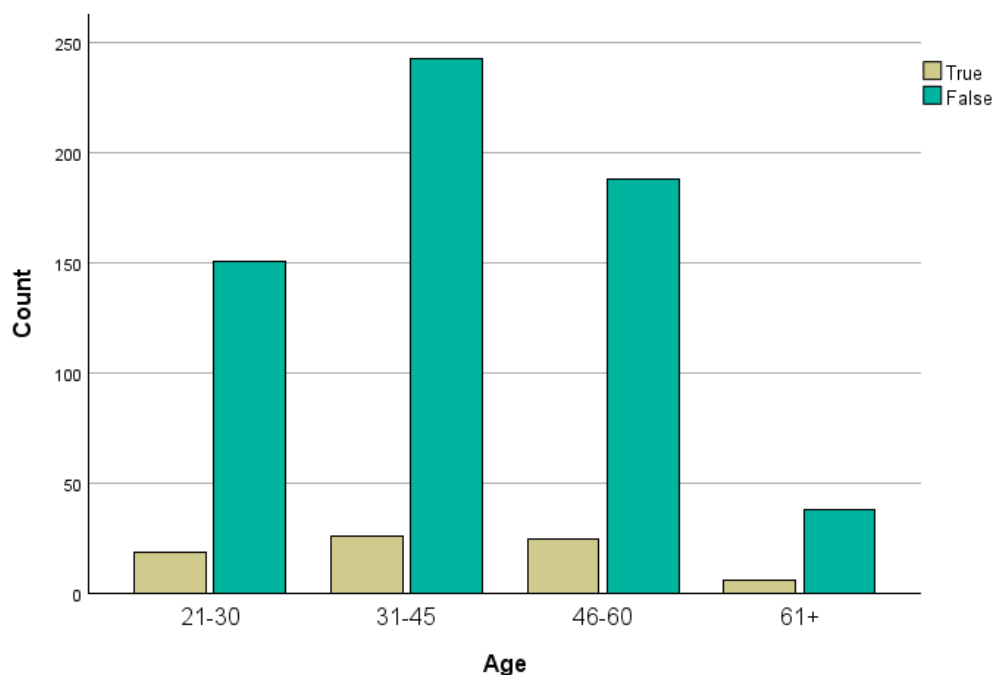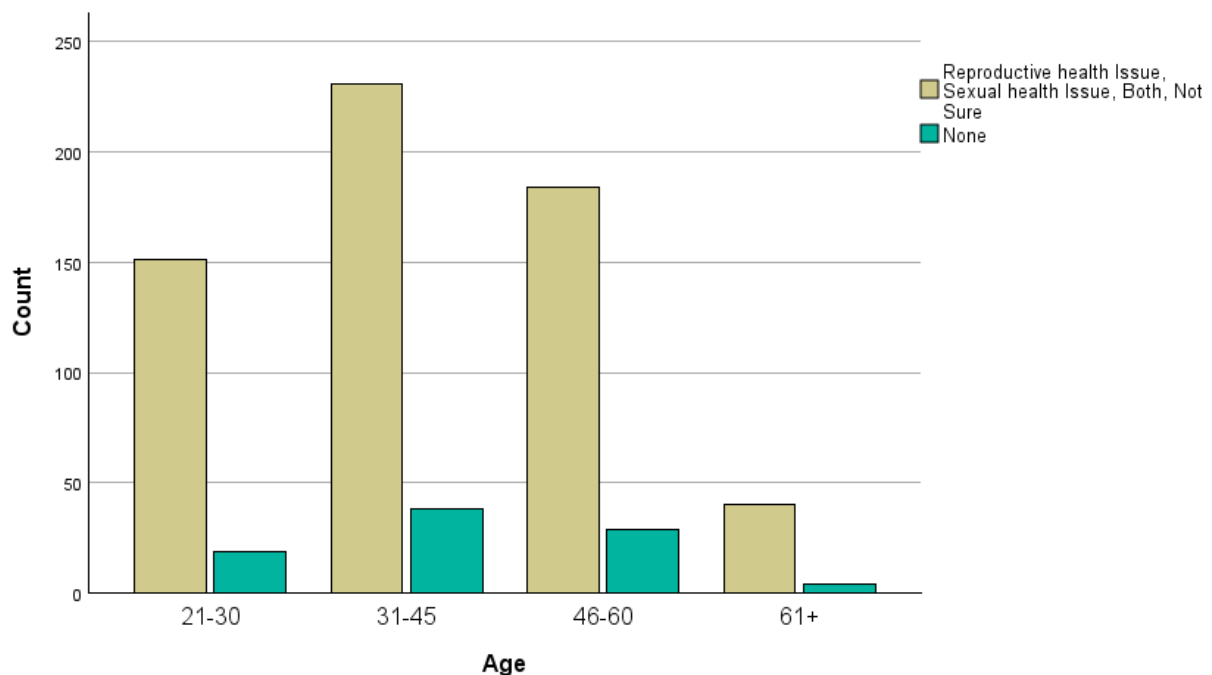
1.4.2.2.2 The Nature of White Discharge. In response to the question regarding whether white discharge is a reproductive and sexual issue, of the 696 participants, 12.9% had correct answers and 87.1% had incorrect answers (see Figure 21).

A comparison of correct and incorrect answers across the age groups showed that 14.1% of the participants aged 31–45 years gave correct responses. The percentage of correct responses ranged from 11.2% to 13.6% in the other age groups, and was the lowest (9.1%) among the participants aged 61 years and above. The chi-square value, $\chi^2(3, N = 696) = 1.47$, was not significant.

Figure 12

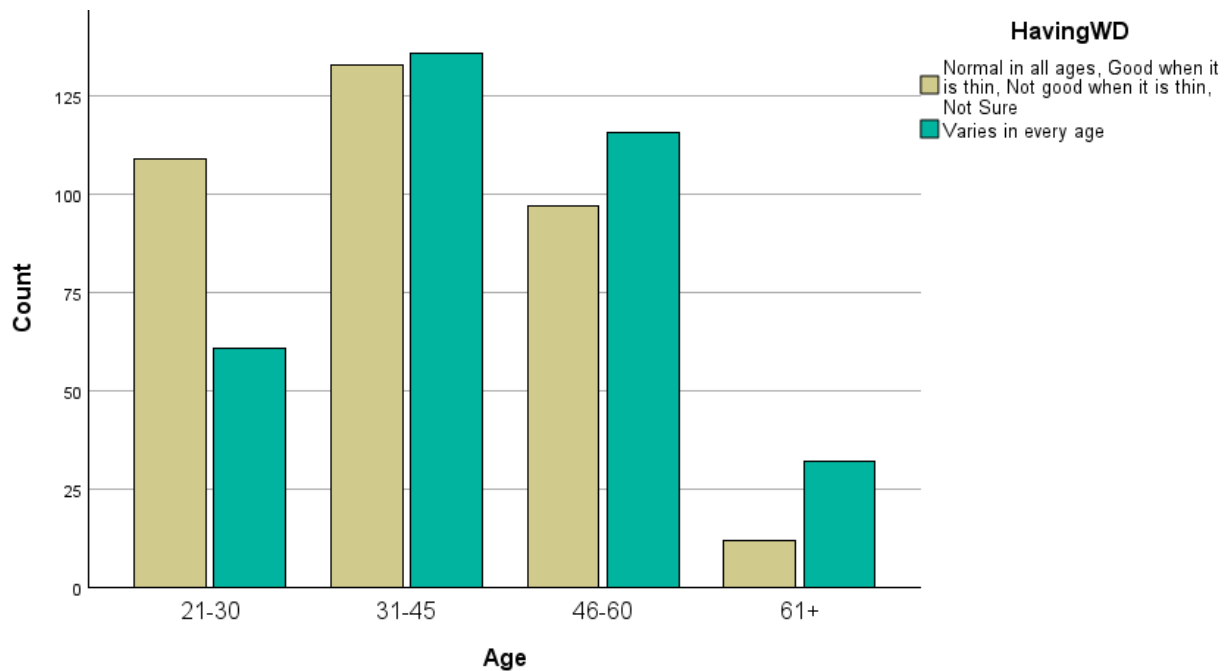*Graph of the Nature of White Discharge*

1.4.2.2.3 Presence of White Discharge. In response to the question about having white discharge, of the 696 participants, 49.6% had correct answers ('Varies in every age') and 50.4% had incorrect answers (see Figure 22).

A comparison of correct and incorrect answers across the age groups showed that 72.7% of the participants aged 61 years and above had correct responses. The percentage of correct responses varied from 35.9% to 54.5% in the other age groups. The chi-square value, $\chi^2(3, N = 696) = 24.3$, **was significant, $p < .001$**.

Figure 13

Graph of the Presence of White Discharge

1.4.2.2.4 Normality of Odorous White Discharge. In response to the question about if it is normal for white discharge to have an odour, of the 696 participants, 63.8% had correct answers ('No') and 36.2% had incorrect answers (see Figure 23).

A comparison of correct and incorrect answers across the age groups showed that 70.6% of the participants aged 31–45 years gave correct responses. The percentage of correct responses varied from 47.1% to 69.0%; it was the lowest among the participants aged 21–30 years. The chi-square value, $\chi^2(3, N = 696) = 28.68$, **was significant, *p* < .001**.

Figure 14

*Graph of the Normality of Odorous White Discharge*
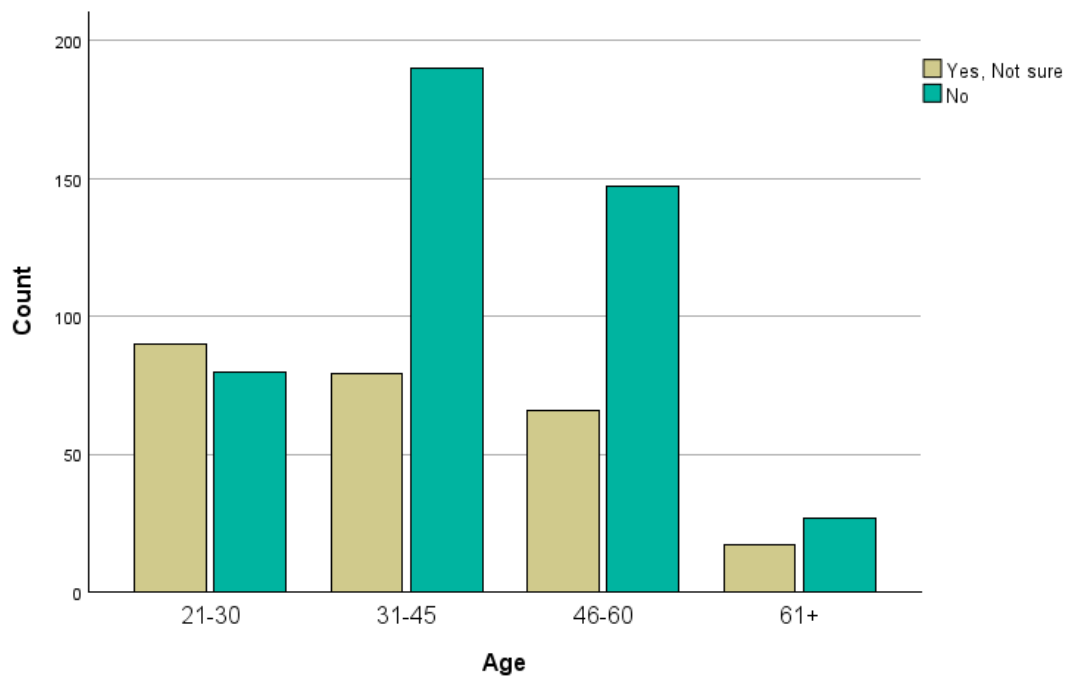
1.4.2.2.5 The Nature of PCOS. In response to the question about PCOS, of the 696 participants, 21.7% had correct answers ('PCOS is a reproductive health, hormonal, and lifestyle issue'; see Figure 24).

A comparison of correct and incorrect answers across the age groups showed that the percentage of correct responses was 25% among those aged 61 years and above; 24.4% among those aged 46–60 years, and 22.4% among those aged 21–30 years. The chi-square value, $\chi^2(9, N = 696) = 50.756$, **was significant, *p* < .001**.

**Figure 15**

Graph of the Nature of PCOS
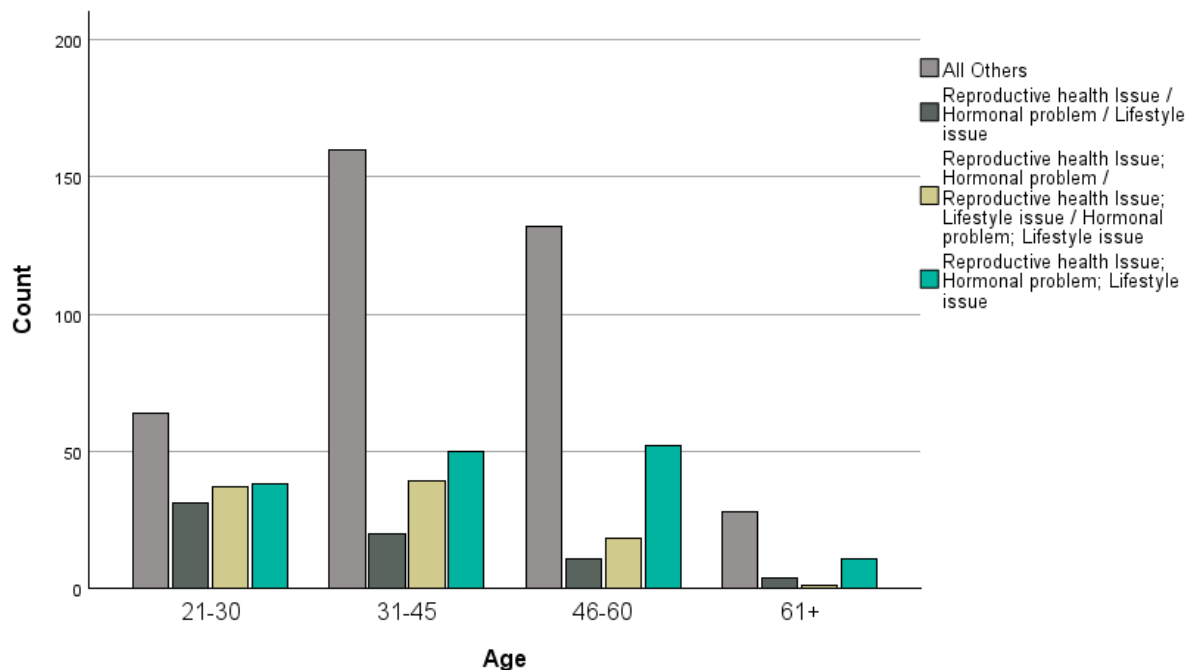
1.4.2.2.6 The Causes of PCOS. In response to the question about the cause of PCOS, of the 696 participants, 24% correctly answered that PCOS is related to fertility, and 76% had incorrect answers (see Figure 25).

A comparison of correct and incorrect answers across the age groups showed that the percentage of correct responses was 27.3% and 27.2% among the participants aged 61 years and above and those aged 46–60 years, respectively. The chi-square value, $\chi^2(3, N = 696) = 2.4$, was not significant

Figure 16

Graph of the Causes of PCOS
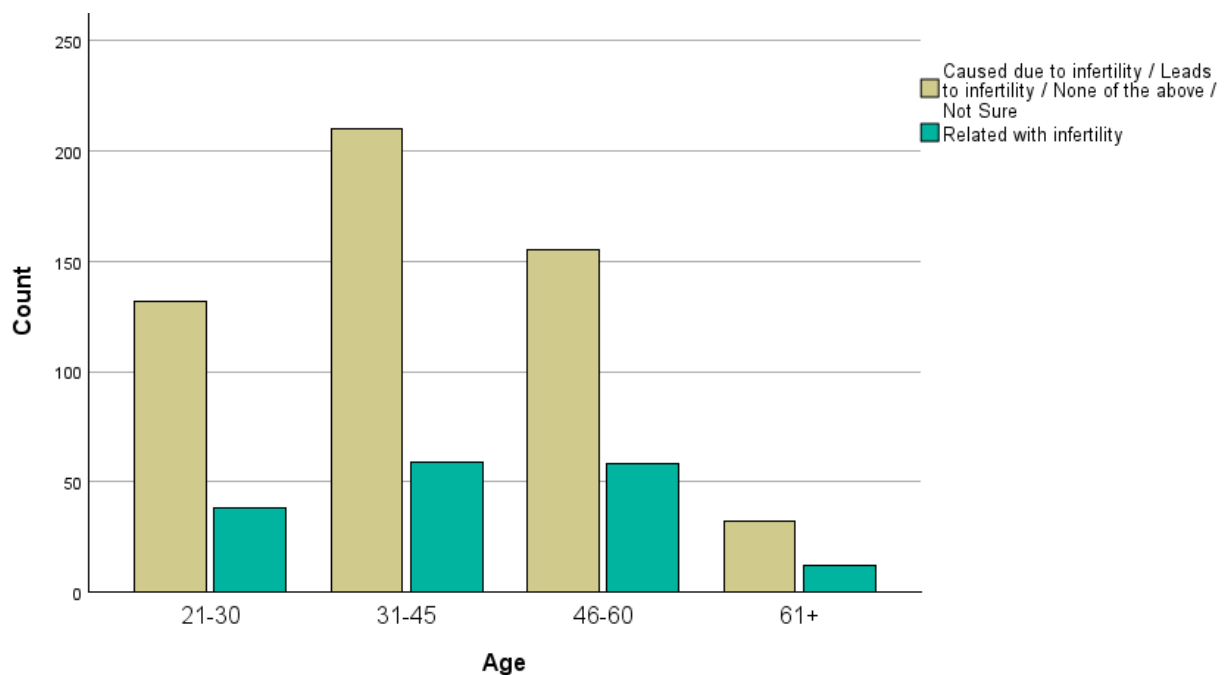
1.4.2.2.7 The Removal of the Ovaries and Uterus. In response to the question about the removal of the ovaries and uterus, of the 696 participants, 36.4% correctly answered that the removal of the ovaries and uterus has no relationship with a woman's mental and physical well-being, and 63.6% had incorrect answers (see Figure 26).

A comparison of correct and incorrect answers across the age groups showed that 36.4% of the participants aged 61 years and above gave correct responses. The chi-square value, $\chi^2(3, N = 696) = 19.68$, **was significant, <.001.**

Figure 17

Graph of the Removal of the Ovaries and Uterus
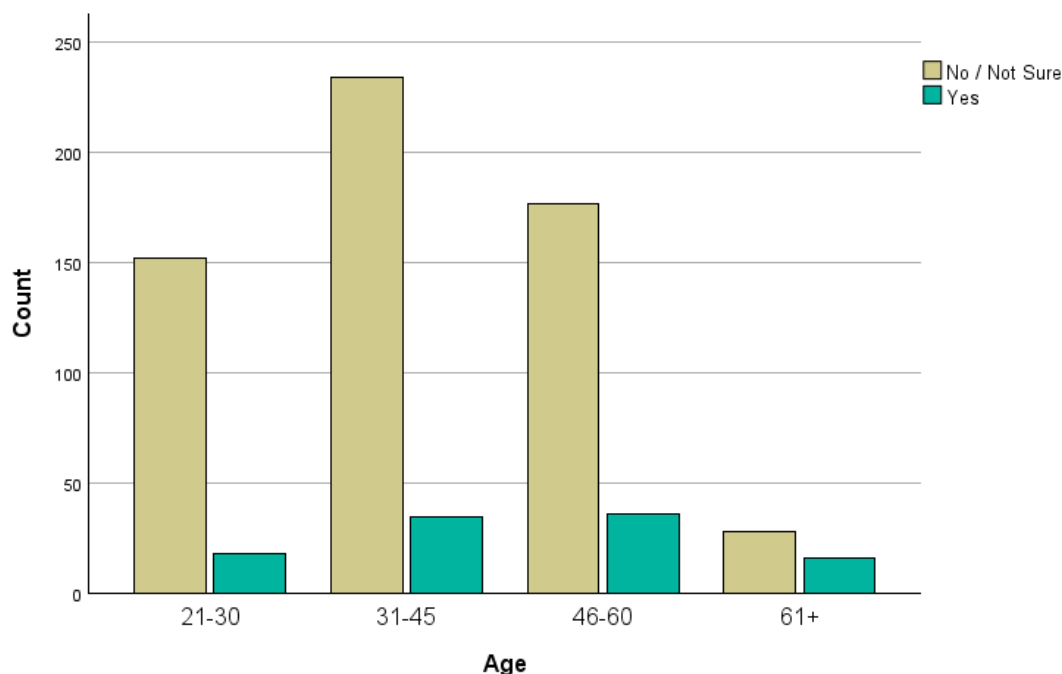
1.4.2.2.8 Summary. The results for the questions related to problems associated with reproductive health and well-being indicated that the participants aged 31–45 years had a better understanding of topics such as menopause and white discharge. Participants aged 61 years and above had significantly higher scores for the questions about white discharge, PCOS, and removal of the uterus and ovaries. For the question about the causes of PCOS, the participants aged 46–60 years scored significantly higher than the other age groups.

1.4.2.3 Other Issues Related to Reproductive Health and Well-Being.

1.4.2.3.1 The Role of Estrogen. In response to the question on the role of estrogen, of the 696 participants, 36.6% correctly answered that it maintains the reproductive system, female phenotypes, bone health, and is involved in childbirth. The remaining participants gave partially correct answers (see Figure 27).

A comparison of correct and incorrect answers across the age groups showed that the percentage of correct answers was 61.4% among the participants aged 61 years and above gave correct responses; it was 38.3%, 36.6% and 27.6% in the other groups. The chi-square value, $\chi^2(12, N = 696) = 26.58$, was not significant.

Figure 18

Graph of the Role of Estrogen
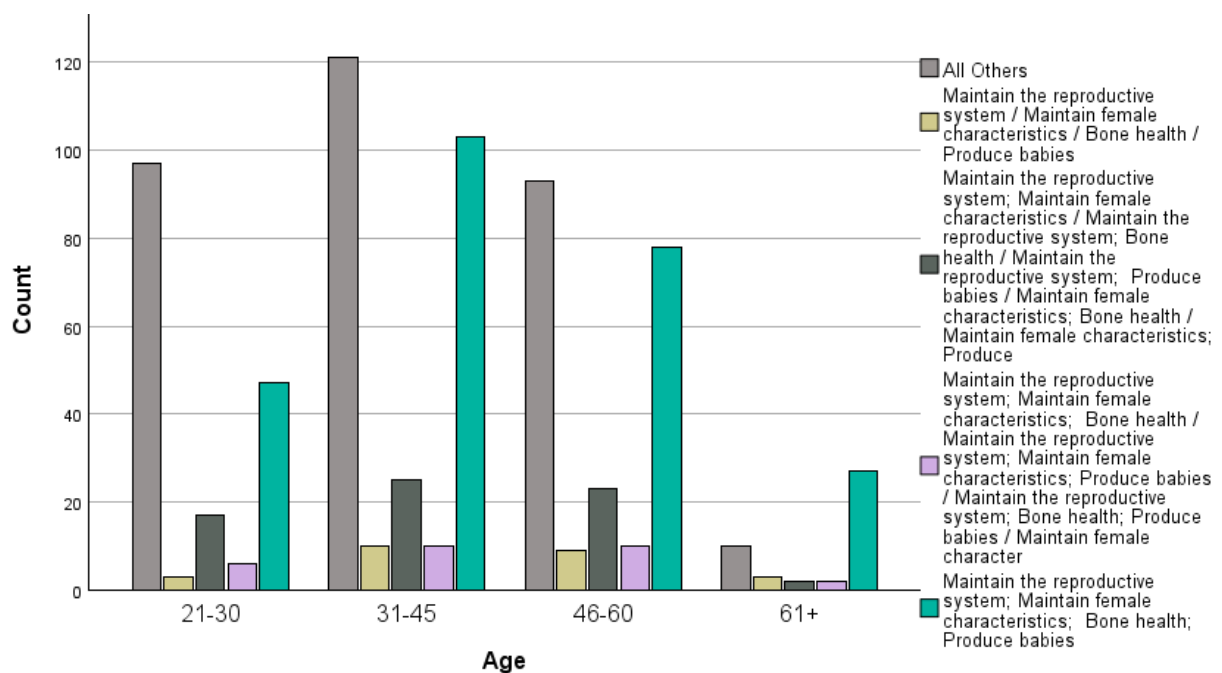
1.4.2.3.2 Arthritis or Bone Issues. In response to the question about what arthritis or bone issues are related to, of the 696 participants, 22% correctly answered that arthritis or bone issues is related to calcium and vitamin-D deficiencies and hormonal problems, 55.2% gave incorrect answers, and 22.8% gave partially correct answers (see Figure 28).

A comparison of correct and incorrect answers across the age groups showed that 36.4% of the participants aged 60 years and above gave correct responses; the percentage of correct responses ranged from 16.4% to 28.2%. The chi-square value, $\chi^2(9, N = 696) = 20.63$, was not significant.

Figure 19

Graph of Arthritis or Bone Issues
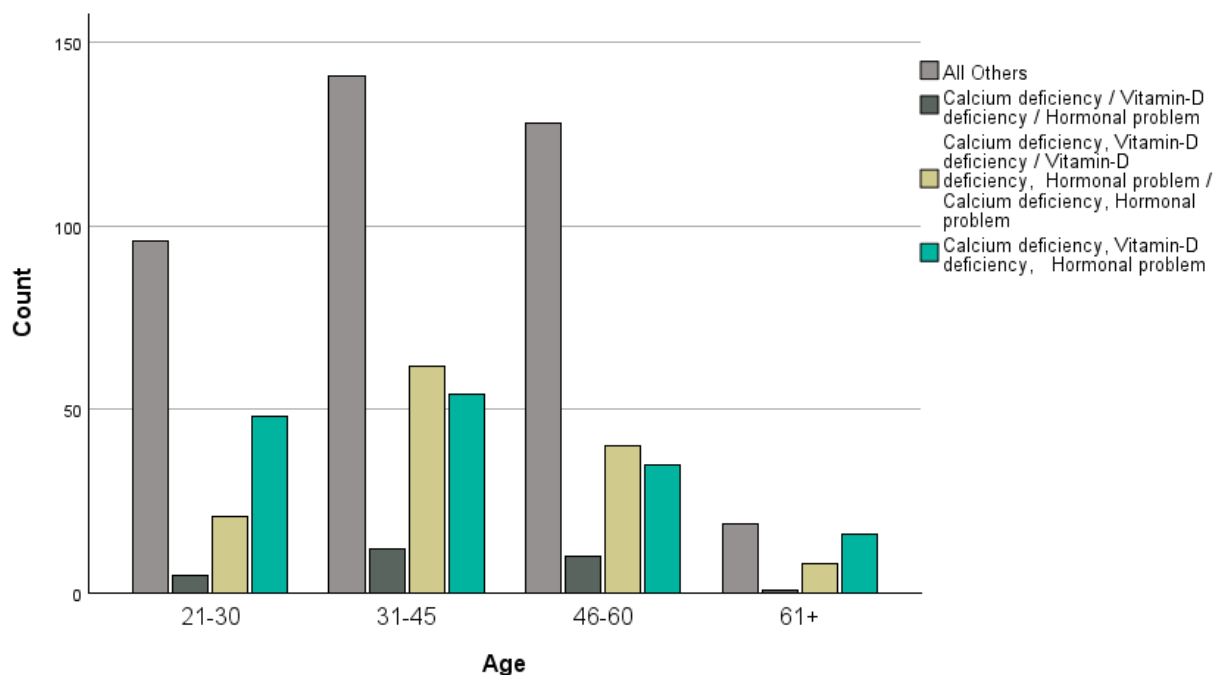
1.4.2.3.3 Gestational Diabetes. In response to the question about the cause of gestational diabetes, of the 696 participants, 30.3% had correct answers ('Both are connected with each other') and 46.7% had partially correct answers (see Figure 29).

A comparison of correct and incorrect answers across the age groups showed that 34.2% of the participants aged 31–45 years gave correct responses. The chi-square value, $\chi^2(6, N = 696) = 20.68$, was not significant.

Figure 20

Graph of Gestational Diabetes
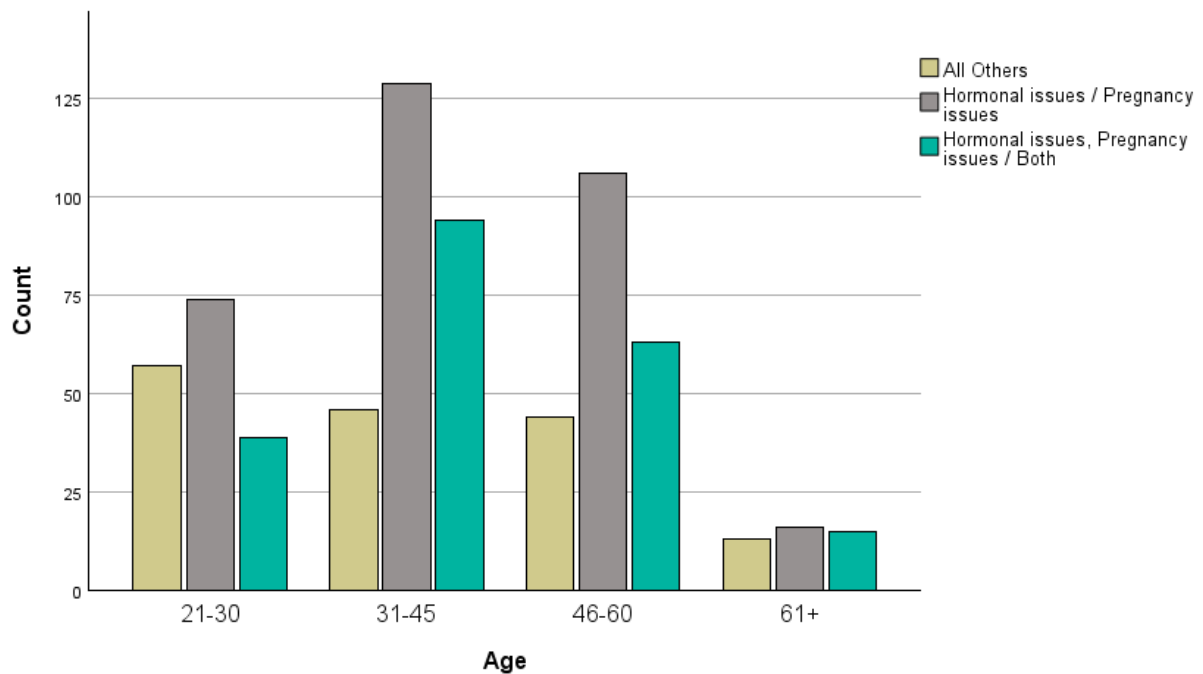
1.4.2.3.4 Common Problems Related to Reproductive Health. In response to the question about common problems related to reproductive health, of the 696 participants, 21.6% gave correct answers ('Uterine fibroids, polycystic ovary syndrome, menopause'; see Figure 30).

A comparison of correct and incorrect answers across the age groups showed that 47.7% of the participants aged 61 years and above gave correct responses. The chi-square value, $\chi^2(9, N = 696) = 28.156$, **was significant, *p* < .001.**

Figure 21

*Graph of Common Problems Related to Reproductive Health*
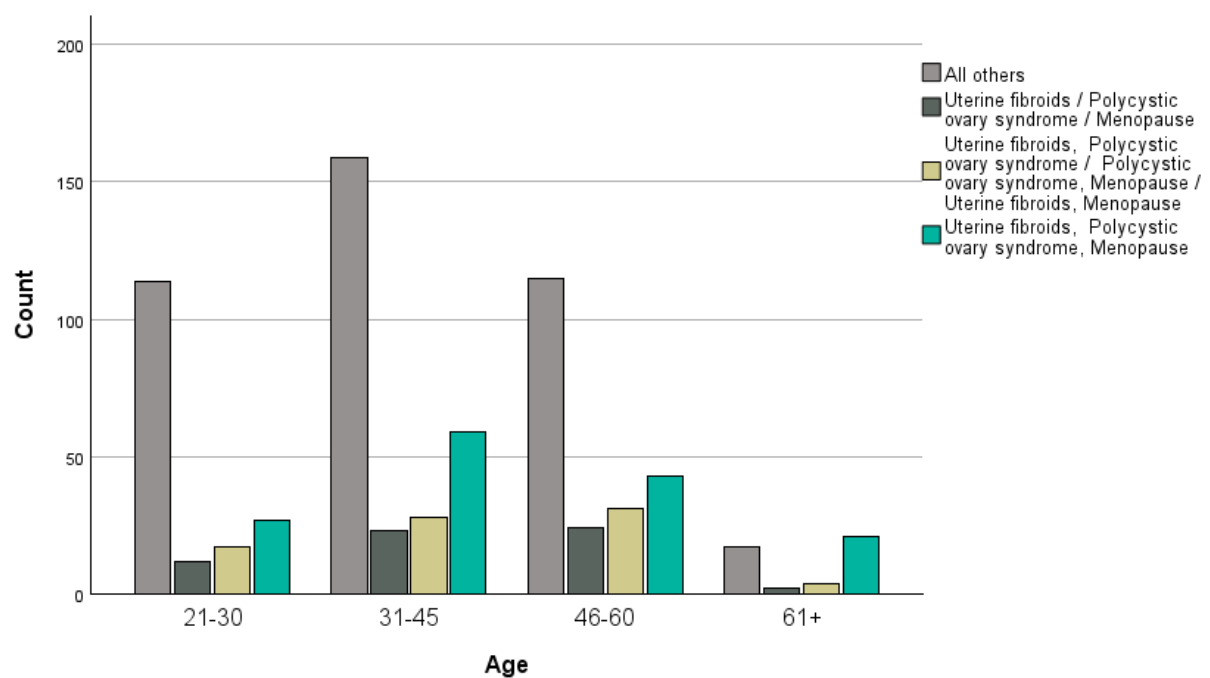
1.4.2.3.5 The Essentiality of Reproductive Health and Well-Being. In response to the question about the stage at which the well-being of reproductive health is essential, of the 696 participants, 57.5% gave correct answers ('All throughout life') and 42.5% gave incorrect answers (see Figure 31).

A comparison of correct and incorrect answers across the age groups showed that 61.7% of the participants aged 31–45 years gave correct responses. The participants aged 61 years and above had the lowest percentage of correct responses (36.4%). The chi-square value, $\chi^2(3, N = 696) = 10.823.013$, was not significant.

Figure 22

*Graph of Essentiality of Reproductive Health and Well-Being*
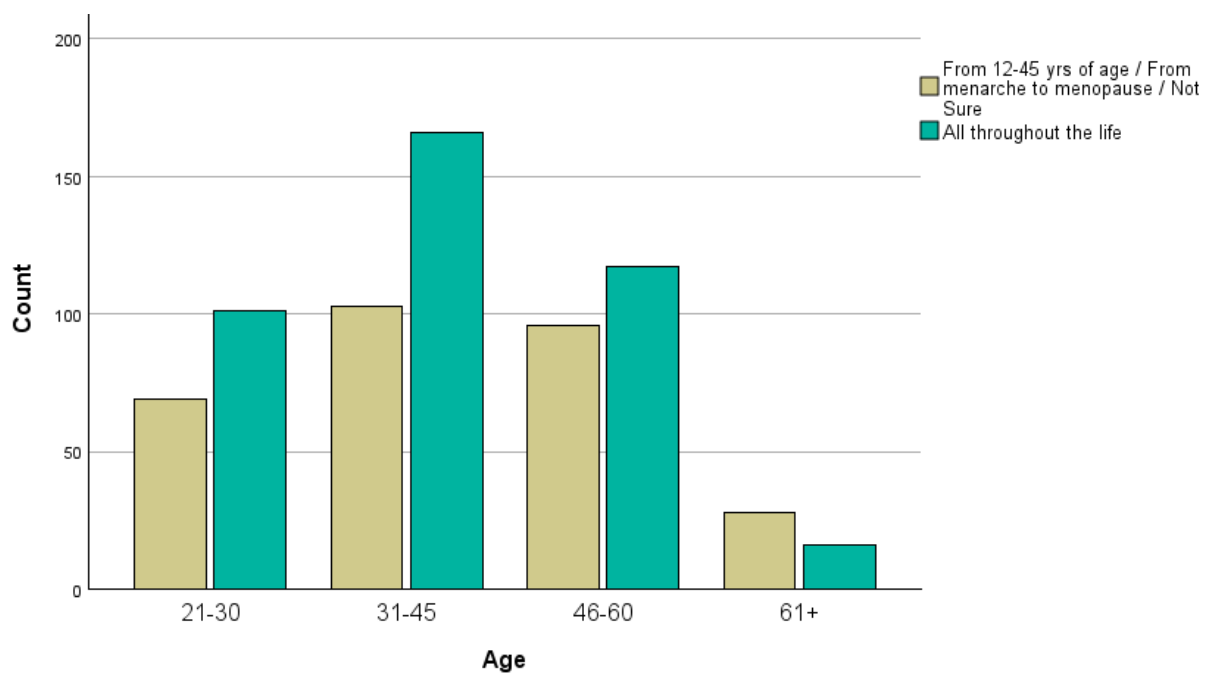
1.4.2.3.6 Difficulties in Conception. In response to the question about difficulties in conceiving, of the 696 participants, 51.6% gave correct responses ('age-related, reproductive health, hormonal, and lifestyle issues'; see Figure 32).

A comparison of correct and incorrect answers across the age groups showed that 72.7% of the participants aged 61 years and above gave correct responses; in all other groups, the proportion of correct responses varied from 40.6% to 57.3%. The chi-square value, $\chi^2(9, N = 696) = 30.49$, **was significant, *p* < .001**.

Figure 23

*Graph of Difficulties in Conception*
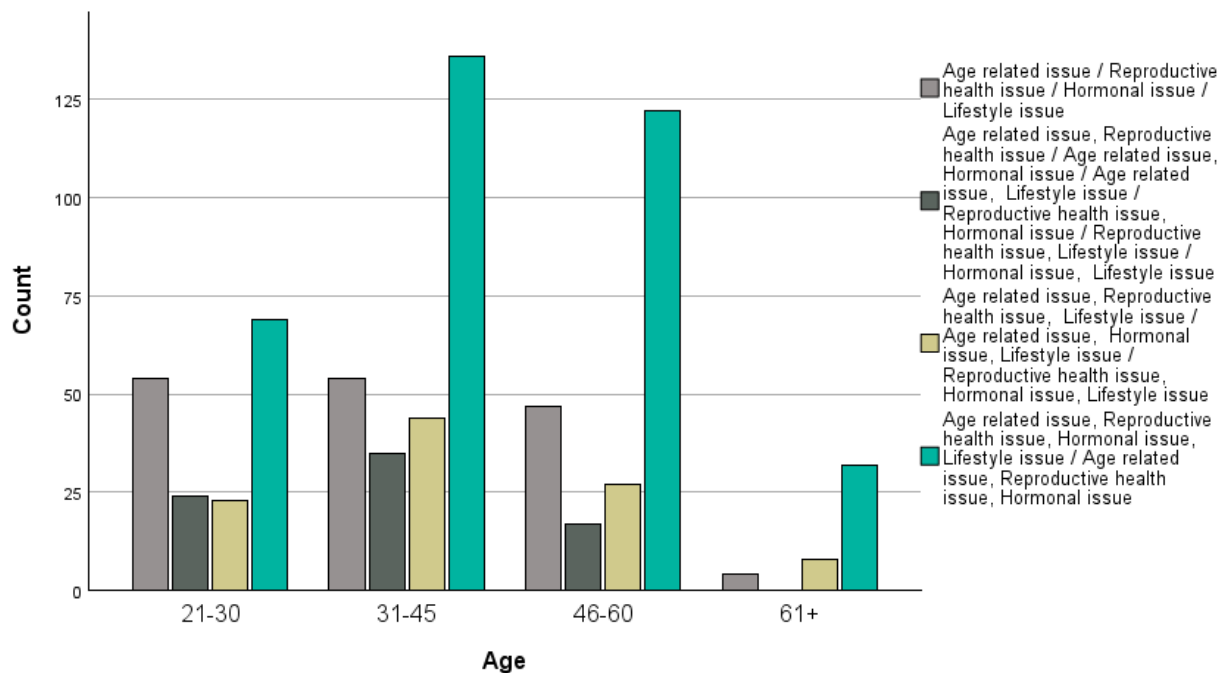
1.4.2.3.7 Relationship Between Mental Health and Reproductive Well-Being. In response to the question about the connection between mental health and reproductive well-being, of the 696 participants, 88.5% gave correct answers ('There is a connection between mental health and reproductive well-being') and 11.5% gave incorrect answers (see Figure 33).

A comparison of correct and incorrect answers across the age groups showed that the percentage of correct responses was 92.4% among the participants aged 21–30 years and the lowest (72.7%) among the participants aged 61 years and above. The chi-square value, $\chi^2(3, N = 696) = 13.28$, was not significant.

Figure 24

Graph of the Relationship Between Mental Health and Reproductive Well-Being
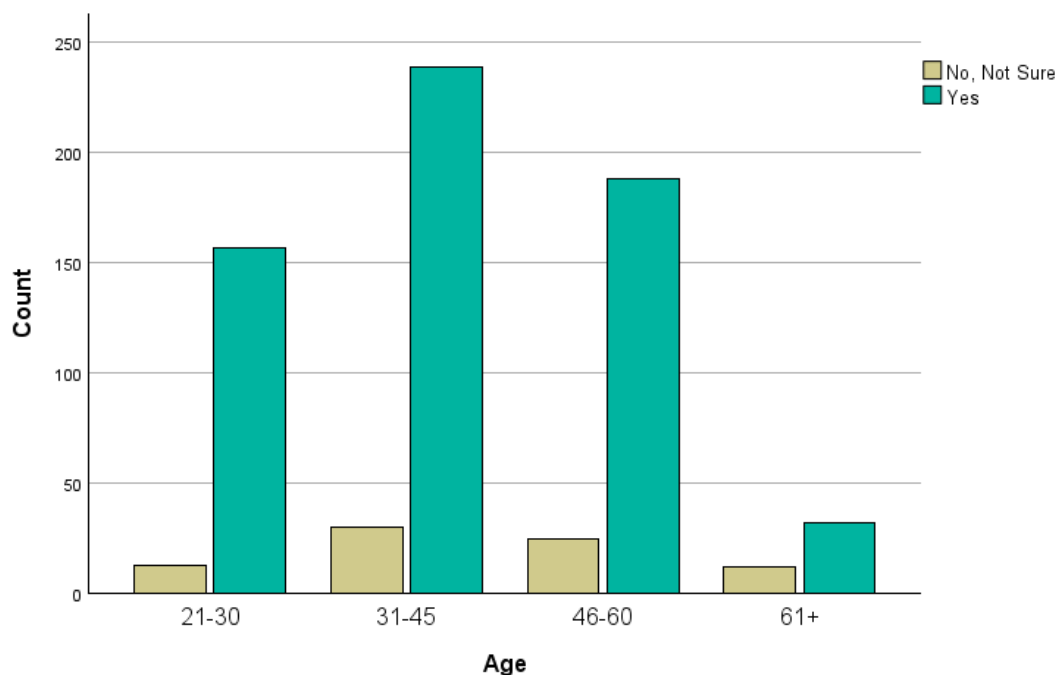
1.4.2.3.8 Summary. The overall results for this question category suggested that the participants aged 61 years and above had higher scores compared to the other age groups for topics related to estrogen, arthritis, and common problems related to reproductive health and conception, and significantly higher scores for questions regarding common problems related to reproductive health. The participants aged 21–30 years had higher scores for mental health-related questions, although these scores were not significantly higher.

1.4.3 Perceived Knowledge of Reproductive Health and Well-Being

In response to the question about how would they rate their knowledge regarding reproductive health and well-being, only 4.7% said they 'have a thorough understanding of reproductive health and well-being', of which the highest within-group score of 5.3% belonged to the age group of 21–30 years. Further, 52.3% of the participants said they 'know nothing about the topic', of which the highest within-group score of 57.7% belonged to the age group of 46–60 years (see Figure 34).

Figure 25

Graph of the Perceived Knowledge of Reproductive Health and Well-Being
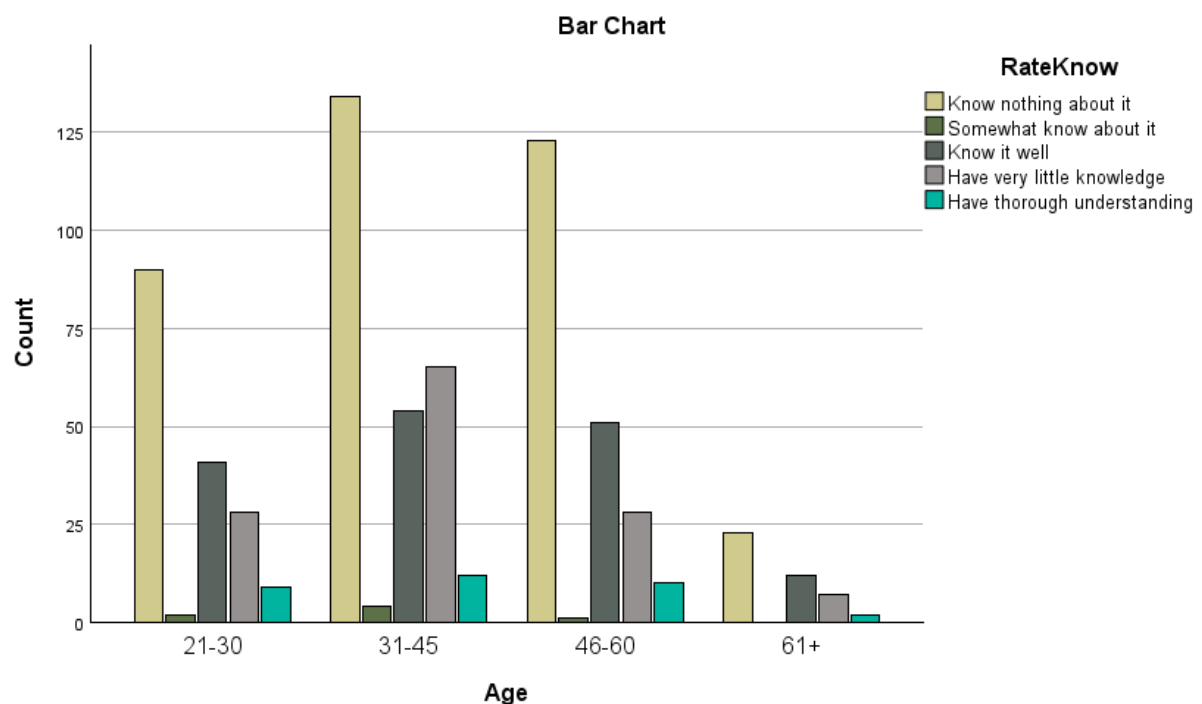
1.4.4 Summary of the Data on Knowledge Of Reproductive Health and Well-Being

The overall data suggested a lack of conceptual understanding of reproductive health and well-being among participants of all ages. Although there were only 44 participants aged 61 years and above, they had the highest score (11 of 19 questions), followed by those aged 31–45 years (6 of 19 questions). The participants aged 21–30 and 46–60 years had the highest scores for only one question. However, individuals from the same group claimed to have a

thorough understanding of the topic. While the overall scores varied, the scores for only five questions showed significant differences in the within-group responses. This indicates that, first, people's perception regarding their knowledge is not related to their actual knowledge, and second, individuals develop conceptual knowledge with age and experience.

1.4.5 Information Sources and Age at Acquiring Knowledge

This section present the analysis of the age at acquiring knowledge by the participants, and the information source that they have used to access information regarding reproductive health and well-being.

1.4.5.1 Age at Learning About Reproductive Health. The data on the age at which participants began learning about reproductive health suggested that participants from all the age groups began learning about the topic from the age of 12–20 years onwards (see Figure 35). This included 81.8% of the participants aged 21–30 years; 59.5% of those aged 31–45 years; 64.3% of those aged 46–60 years; and 70.5% of those aged 61 and above. The chi-square value, $\chi^2(12, N = 696) = 42.59.001$, **was significant, $p < .001$**.

Figure 26

Graph of the Age at Learning About Reproductive Health
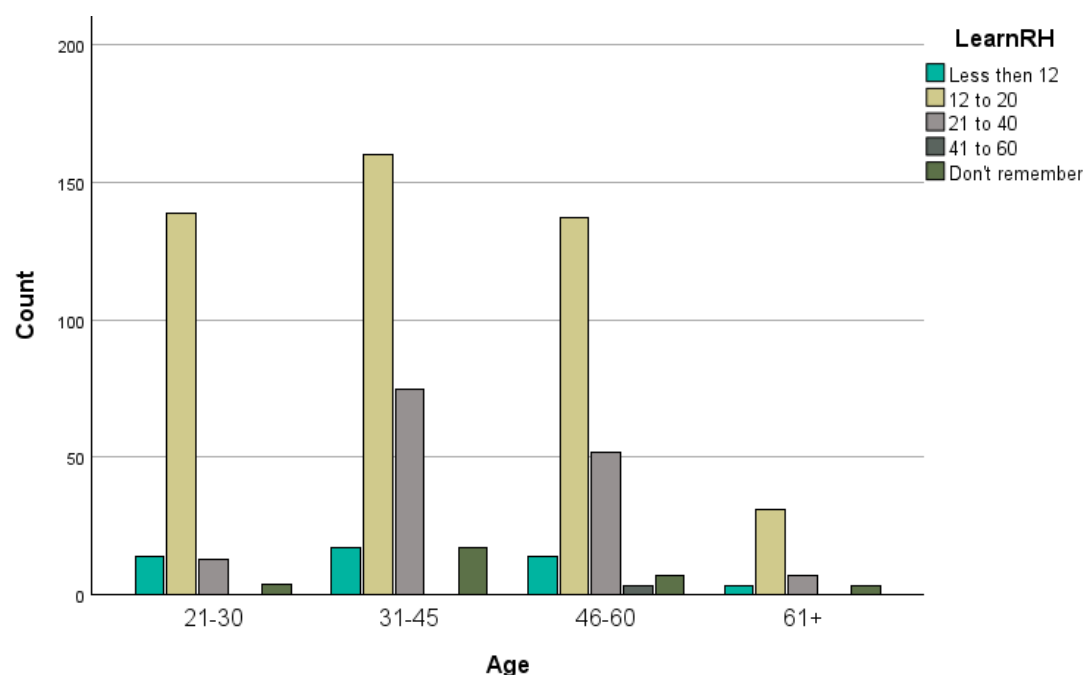
1.4.5.2 Source Of Information for Understanding Reproductive Health. Data were collected to identify the source of information the participants used to understand reproductive health and well-being. The information sources that emerged from the descriptive data included formal education (including sex-education classes in school and promotional events by agencies dealing with sanitary products), discussions with friends and peers, family, doctors, media (including books, the Internet, and social media), and lived experiences. A miscellaneous category was created to account for multiple sources of information. In addition, ten participants reported having had no sources of information.

The data revealed that of the 696 participants, 34.8% had used multiple (miscellaneous) modes to gather information; 26.6% had received information from formal education. In terms of age, of those aged 21–30 years, 48.2% had acquired information from multiple sources and 27.1% from formal education; among those aged 31–45 years, 33.8% had received information from miscellaneous sources and 25.3% from formal education; and among those aged 46–60 years, 28.2% received information from miscellaneous sources and 27.7% from formal education. Only the participants who were aged 61 years and above had received more information from formal education (27.3%); 20.5% of them received information from miscellaneous sources. The chi-square value, $\chi^2(21, N = 696) = 53.55$, **was significant, p < .001**.

1.4.5.3 Effects of Age, Age at Learning About Reproductive Health, and Information Source on Participants' Perceived Knowledge. A one-way analysis of variance was conducted to determine the effects of age, age at learning about reproductive health, and information source on participants' perceived knowledge. The results are presented in Table 7. There were no significant differences among the age groups in terms of age at learning about reproductive health and information source, suggesting that different age groups of women do not differ in their perceptions of self-knowledge about reproductive health. However, the mean scores of the different age groups suggested that the participants aged 36–45 years had a stronger perception of self-knowledge and those aged 46–60 years had the weakest perception of self-knowledge. There were no significant differences in the age at learning about reproductive health, suggesting that the age at learning about reproductive health does not

affect perceptions of self-knowledge about reproductive health. However, the means for the age at learning about reproductive health suggested that participants aged 41–60 years had the

Table 2

Effects of Age, Age at Learning About Reproductive Health, and Information Source on Participants' Perceived Knowledge

Variable	F	p	M	SD
Age				
21–35			2.20	1.37
36–45	1.36	.256	2.32	1.40
45–60			2.07	1.33
< 61			2.20	1.36
Age at learning about reproductive health				
> 12			2.50	1.45
13–20	1.98	.95	2.11	1.32
21–40			2.35	1.48
41–60			2.00	1.00
Do not remember			2.52	1.38
Information source				
Peers			2.48	1.47
Media			2.26	1.46
Family			2.25	1.34
Doctors	.951	.467	2.00	1.35
Miscellaneous			2.16	1.30
No information			2.60	1.50
Formal education			2.17	1.38
Lived experience			2.92	1.50

weakest perception of self-knowledge compared to those younger than 21 years. There were no significant differences in the source of information about reproductive health, suggesting

that these sources did not affect perceptions of self-knowledge about reproductive health. However, the means scores for information sources suggested that the participants who had 'visited/consulted doctors' had the weakest perception of self-knowledge compared to those possessed lived experience. Overall, the results suggested that there were no significant effects of age, age at learning, and information source on the perceived knowledge of the participants.

1.5 Conclusion

This quantitative study was conducted to understand the level of awareness about reproductive health and well-being among women. The results indicated that knowledge about reproductive health and well-being was lacking among women of all ages, which was also reflected in responses to the question 'How would you rate your knowledge of reproductive health and well-being?', where 53.2% of the participants responded that they knew nothing about the topic.

Women aged 61 years and above were the most knowledgeable about their reproductive health and well-being; however, their source of information was lived experience. Women aged 21–30 and 31–45 years had accessed information through multiple sources, but their knowledge was not reflected in their responses to the questions.

There were no significant differences in the responses across the age groups, except among those aged 61 years and above, who had significantly higher scores. Questions related to PCOS, the ovaries and uterus, and common problems related to reproductive health and conception were more accurately answered by women above the age of 61. Notably, questions related to mental health in the context of reproductive health had more accurate responses from women aged 21–30 years, indicating a change in trends and increasing awareness about mental health issues. The final sample, which included 696 participants, was demographically representative; however, it was limited to individuals with Internet access and knowledge of English. The patterns that emerged from the data are indicative of the gap that exists in understanding reproductive health and well-being among women of different ages. This underscores the need to design interventions for adolescents that help them prepare better for their future health outcomes.

The quantitative study helped understand the extent of the knowledge gap regarding reproductive health and well-being among women. Chapter 6 combines the findings of the qualitative and quantitative studies, further validating them with theories using the triangulation method.