

RESEARCH ARTICLE: Knowledge and health-related quality of life (HRQoL) of young women with polycystic ovarian syndrome (PCOS) in Jolo

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ABSTRACT. The study aimed to evaluate the knowledge and health-related quality of life (HRQoL) of young women with polycystic ovarian syndrome (PCOS) in Jolo during the Fiscal Year 2023. The study involved 33 respondents, mostly single with college level, aged between 20 and 30 years, and with a menstrual cycle of once in 9-12 months with 2-7 days of menstrual period. The findings showed that on average, respondents agreed that there was a high extent of knowledge about PCOS and a high quality of life. However, variables such as age, civil status, educational level, frequency of menstruation, and length of menstruation did not significantly mediate the assessment of knowledge and health-related quality of life. This study support the theory of Adaptation Model of Nursing that has been promulgated by Sister Callista Roy in 1976. Roy explained that adaptation occurs when people respond positively to environmental changes, and it is the process and outcome of individuals and groups who use conscious awareness, self-reflection, and choice to create human and environmental integration. The key concepts of Roy's Adaptation Model are made up of four components: person, health, environment, and nursing (Kozier, 2020).
KEYWORDS: *Adaptation; Menstruation; Nursing; Environmental Changes; Awareness; Health*

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Introduction

About 8–13% of fertile women are believed to have PCOS, or polycystic ovarian syndrome. Up to 70% of affected women remain undiagnosed globally. PCOS is the most common cause of anovulation and a significant factor in infertility. PCOS is associated with a number of long-term health problems that affect both mental and physical welfare. Despite the fact that PCOS runs in families, the illness's signs and symptoms vary depending on one's ethnicity.

The co-occurrence of hyperandrogenism and chronic anovulation in women without a discernible underlying adrenal or pituitary gland disease is the standard description of polycystic ovarian syndrome (PCOS) (Franks, 2019). Among the common PCOS symptoms that can significantly lower quality of life are anovulation, obesity, amenorrhea, oligomenorrhea, hirsutism, acne, and subfertility. While Paulson et al. (2018) and Downey et al. (2019) have linked infertility problems to difficulty at work, shifts in self-perception, and family conflicts, Sonino et al. (2020)

has demonstrated that hirsutism can result in significant psychological stress. A comprehensive review by Jones et al. (2022) found a paucity of data about the effects of PCOS symptoms and related medications on the quality of life for women living with the condition. A complex and dynamic phrase, health-related quality of life, or HRQoL, includes social, psychological, and physical components of a specific ailment or its treatment (Naughton and McBee, 2019; Colwell et al., 2018). The psychometric properties of the questionnaire, or the tests that form its foundation and assessment, as well as the statistical methods employed for data analysis and interpretation, determine the reliability of a quality of life assessment, even though HRQoL measurement is important in evaluative research (Fayers and Machin, 2020). Therefore, it is imperative that these psychometric characteristics form the cornerstone of any HRQoL that is used. It is well acknowledged that these characteristics must be legitimate, dependable, and adaptable to change, despite the fact that there are numerous tests that may be utilized to assess them (Nunally, 2018).

The purpose of this research project is to evaluate the knowledge and health-related quality of life (HRQoL) of young women in the municipality of Jolo who have been diagnosed with polycystic ovarian syndrome (PCOS). The notion of health-related quality of life (HRQoL) revolves around how an individual's health status affects their ability to live a fulfilling and purposeful life. HRQoL is a broad concept that includes aspects of general well-being that are both positive and negative, as well as aspects of physical, psychological, and social functioning. A major worry is the persistent condition known as polycystic ovarian syndrome (PCOS), which frequently impairs a person's health-related quality of life (HRQoL). The estimated incidence of this specific illness, which affects women who are fertile, ranges from 5% to 10%. The literature has a wealth of information on the disease's clinical symptoms, which include hirsutism, obesity, infertility, and abnormalities in hormones and biochemistry. However, a reduction in women's self-perception and self-esteem is often correlated with these symptoms, possibly having an effect on her health-related quality of life (HRQoL), especially with regard to psychological elements. Medical research frequently uses the multidimensional notion known as health-related quality of life, or HRQoL. Nonetheless, its application in routine medical practice is increasing. A person's subjective perception of their own existence within the parameters of their culture and belief systems, as well as their own goals and concerns, is referred to as their "self-concept." The analysis of HRQoL includes important aspects such as degree of autonomy, social relationships, psychological well-being, and physical health. Measurements of health-related quality of life (HRQoL) are becoming more and more integrated into clinical research as well as the routine clinical management of patients with polycystic ovarian syndrome (PCOS). The need of examining young women's health-related quality of life (HRQoL) and information regarding polycystic ovarian syndrome in Jolo led to the selection of this research topic.

Research Questions

This study determines the knowledge and health-related quality of life (HRQoL) of young women with polycystic ovarian syndrome (PCOS) in Jolo. Specifically, it seeks to answer the following questions:

1. What is the extent of knowledge of young women on polycystic ovarian syndrome (PCOS) in Jolo in the following dimensions:
 - 1.1 Causes;
 - 1.2. Pathophysiology;
 - 1.3 Complications;
 - 1.4 Management?
2. What is the extent of health-related quality of life (HRQoL) of young women with polycystic

ovarian syndrome (PCOS) in Jolo in the following dimensions:

- 2.1. Impact;
 - 2.2. Mental (Infertility);
 - 2.3. Physical (Hirsutism);
 - 2.4. Emotional (Mood);
 - 2.5. Menstrual Problem?
3. Is there a significance difference in the extent of knowledge of young women with polycystic ovarian syndrome in Jolo in terms of:
- 3.1 Age;
 - 3.2 Civil Status;
 - 3.3 Educational level;
 - 3.4 Frequency of Menstruation;
 - 3.5 Length of Menstruation?
4. Is there a significance difference in the extent health-related quality of life (HRQoL) of young women with polycystic ovarian syndrome in Jolo when data are grouped according to socio-demographic profile in terms of:
- 4.1 Age;
 - 4.2 Civil Status;
 - 4.3 Educational level;
 - 4.4 Frequency of Menstruation;
 - 4.5 Length of Menstruation?
5. Is there a significance correlation between knowledge and health-related quality of life (HRQoL) of young women with PCOS?

Literature

A wide range of symptoms linked to a generalized disruption of hormone levels can be found in polycystic ovarian syndrome, an endocrine system disease. It is thought to be one of the most common endocrine disorders in women of reproductive age and a significant cause of infertility, according to Sedighi et al. (2018). A increasing body of studies indicates that the disorder is caused by a mix of metabolic and reproductive issues that result in high quantities of estrogen and testosterone, which in turn create hormonal disruption, even if the exact etiology of the condition is still unknown. This hormonal disturbance, which is associated with low levels of progesterone and steady state levels of LH, is caused by the lack of regular hormonal feedback. The primary signs of PCOS, which commonly manifest in adolescence, are ovulatory failure and hyperandrogenism. Moreover, PCOS can lead to several problems that negatively affect women's health and well-being (Thornton, Von Wald ; Hansen, 2019). The most characteristic symptoms, acne, hirsutism, and anovulation, can be attributed to an overabundance of testosterone production. The revised Rotterdam criteria were developed by the American Society for Reproductive Medicine and the European Society for Human Reproduction and Embryology. The criteria stipulate that a patient must fulfill two of the three criterion in order to be diagnosed with PCOS. Broekmans et al. (2018) state that anovulation, androgen excess, and polycystic ovarian morphology are necessary for ultrasonography evaluation. In addition, a wide range of symptoms and complications involving various systems are experienced by women with PCOS. These include gynecological (dyslipidemia, insulin resistance, diabetes type 2), metabolic (insulin resistance, hypertension, and cardiovascular diseases), physical (central obesity, acne, hirsutism, hair loss, and baldness), and psychological (depression, stress, and anxiety) (Moran, Gibson-Helm, Teede; Deeks, 2019).

A major global health concern, polycystic ovarian syndrome (PCOS) is a common endocrine disorder marked by high testosterone production (Alabaño, 2023). This study's goals were to provide data, conclusions, and an evaluation of how PCOS affects the quality of life for young women in the millennial generation living in Dapitan City, Zamboanga del Norte province. The purpose of the study was to look at the certified respondents' demographics with regard to their marital status and number of children. It also aimed to assess the quality of life that PCOS-affected millennial women experienced. Furthermore, by examining the data according to marital status and number of children, the study sought to ascertain whether there is a statistically significant variation in the quality of life among millennial women with PCOS. The research utilized a cross-sectional descriptive strategy in conjunction with a quantitative methodology to evaluate the results acquired from the eligible participants and quantify the data collected. On the northwest coast of the island of Mindanao, in the province of Zamboanga del Norte, is Dapitan City, the site of the research project. The study comprised 32 respondents in total, and data collection happened over the course of two weeks after the respondents were chosen based on predetermined criteria.

As a methodological strategy, the researchers used quota sampling, focusing primarily on a subset of people who serve as a representative sample of the entire study population (Alabaño, 2023). This extensive study aimed to evaluate the clinical symptoms and treatment response of several PCOS patients with varying ethnic backgrounds. A systematic search was conducted to find research that analyzed and contrasted a number of PCOS clinical features in two or more distinct ethnic groups. After a comprehensive examination of 2264 papers, 35 publications were deemed eligible for inclusion in the final study (Alabaño, 2023). According to Bulent O (2021), women with polycystic ovarian syndrome (eaPCOS) who are East Asian have lower levels of hirsutism than women who are White (wPCOS).

Understanding the causes and treatments of polycystic ovarian syndrome (PCOS) has advanced significantly in recent years. This study's goal was to use bibliometric analysis to evaluate the characteristics and trends of PCOS articles throughout Southeast Asia (SEA). Using the Scopus database, a thorough review of the body of research on polycystic ovarian syndrome (PCOS) in Southeast Asian (SEA) countries from 1975 to 2020 was carried out. This research includes all pertinent studies on PCOS that authors from Southeast Asian countries have conducted or published (Bulent O, 2021).

Women who are of reproductive age are often affected with PCOS, or polycystic ovarian syndrome, an endocrinopathy that is quite common. The development of insulin resistance and dyslipidemia is intrinsically linked to metabolic problems, such as obesity, insulin resistance, and dyslipidemia. However, it is still unclear if the metabolic profiles of obese and lean PCOS women are comparable. Women with PCOS who are fat or overweight also have a higher prevalence of dyslipidemia and impaired glucose metabolism than PCOS patients who are not obese. Compared to non-obese PCOS patients, obese and overweight women are more likely to experience dyslipidemia and impaired glucose metabolism (Corrine L., 2022).

Research Methodology

This study employed a descriptive research design to gather and assess data and information regarding the knowledge and health-related quality of life (HRQoL) of young women with polycystic ovarian syndrome (PCOS) in the locality of Jolo. With this specific approach, there is no attempt to infer causal relationships—rather, observations and facts regarding a certain subject matter are made. Providing an accurate and comprehensive picture of the population or phenomenon being studied is the main goal of descriptive research. It also aims to identify any

relationships, patterns, or trends that may be found in the data that have been gathered. With methodical observation and data collection, descriptive research makes it easier to gain thorough understanding about a specific topic. This method gives researchers a deeper understanding of a particular problem and provides important insights that can direct future research. Cross-sectional design was also used in the processing of the study. Cross-sectional study design is a type of observational study design. In a cross-sectional study, the investigator measures the outcome and the exposures in the study participants at the same time.

1. Population and Sampling Design

The number of respondents required for the study was obtained through the use of the purposive sampling technique, which enables the researcher to collect detailed information on certain subjects or problems. Additionally, it was applied in research projects with tiny sample sizes. As the survey questions required replies based on knowledge and health-related quality of life (HRQoL) about (PCOS) in Jolo, the respondents of the study consisted of 33 selected young women with PCOS who matched the inclusion criteria and were ages below 20 to 35.

2. Instruments

Utilizing questions adapted from previously conducted research study entitled “A Study to Measure the Health Awareness of Polycystic Ovarian Syndrome in Saudi Arabia” by Dr. Amani Ali Shaman, 2017. The rating scale and survey form are the research instruments utilized in the study to collect the necessary data. A carefully thought-out form with a series of questions intended to elicit and generate responses from the respondents. An organized survey form is employed. Respondents indicate how much they agree with a statement by filling out a Likert-scale questionnaire. The items are arranged in a table, with a corresponding scale (strongly agree, agree, partially agree, disagree, strongly disagree) in each column. Respondents select their choice by checking the appropriate box. Since the instrument saves the respondents some time, particularly when they are busy, it is convenient for both the researchers and the respondents. By using a 5-point Likert scale to calculate the weighted average, the researchers were able to examine the respondents’ responses. An instrument that is frequently used to assess people’s ideas and viewpoints globally is the 5-point Likert’s scale. This particular scale is a five-point Likert’s scale with two extreme poles, a neutral option, and intermediate answer choices in between. There were five choices for responses to the survey question: strongly agree, agree, partially agree, disagree, strongly disagree.

3. Data Gathering procedure

In the process of gathering data, an approval letter from the Dean of Graduate Studies, and research adviser was secured to seek permission in launching the study. The same, a letter to the Hospital Administration (Sulu Sanitarium and General Hospital), Barangay Chairman, and respondent were prepared to sought permission to allow the researcher to conduct study entitled “Knowledge and Health-Related Quality of Life (HRQoL) of Young Women with Polycystic Ovarian Syndrome (PCOS) in Jolo” among selected constituents of the Municipality of Jolo. The questionnaire was distributed to thirty-three (33) selected young women with PCOS. The respondents were advised to answer the questionnaire honestly and read the items carefully before selecting their answers. The questionnaire was translated to Bahasa Sug or Tausug dialect. The researcher personally administered and retrieved the research instruments from the respondents. All data had been accurately tabulated, processed, and statistically treated following the data gathering procedure.

4. Data Analysis

The survey questionnaire underwent tests before it was launched to the intended participants of the study. Face validation was done by the thesis adviser, Asso. Prof. Frissida A. Daud, by checking if the items included in the questionnaire are relevant or not. The content validation was done by two (2) experts from the academy which is composed of Dr. Nelson U. Julhamid, VPRE and Dr. Masnona S. Asiri, Dean – Graduate Studies. After incorporating all their suggestions, a new draft of the survey questionnaire was prepared for the next step.

Results

1. What is the extent of knowledge of young women in Jolo on polycystic ovarian syndrome (PCOS) in Jolo in the following dimensions: 1.1 Causes; 1.2 Pathophysiology; 1.3 Complications; 1.4 Management?

Table 1 presents the level of awareness among young women in Jolo on the following aspects of PCOS: Causes, Pathophysiology, Complications, and Management. Respondents evaluated the following subcategories under this category: Causes, with a weighted mean score of 4.0606 overall and S.D. Pathophysiology had a total weighted mean score of 4.1030 and S.D. of .75413 and was scored as Agree. Complications with a total weighted mean score of 4.2848 and S.D. of .70378 and evaluated as Agree. Management received a total weighted mean score of 4.1697 and a S.D. of .68196, rating them as Agree. .66355 and assigned an Agree rating.

According to these findings, participants in the survey largely agreed that young women in Jolo are thought to know a lot about polycystic ovarian syndrome. This study supports the conclusions of (Aslam, 2023) Polycystic Ovary Syndrome (PCOs) is a significant hormonal syndrome that affects young women's quality of life (QoL) and general mental wellbeing. In other words, Jolo's youth are capable of comprehending the existence and characteristics of PCOS. In more detail, study participants specifically agreed on the following items: "Metabolic syndrome," "Hypertension (high blood pressure)," "Weight loss," "Genetic factors," "Environmental factors (stress)," "Polycystic ovaries contain more visible follicles than the average ovary," and "Polycystic ovaries tend to ovulate less frequently than the average ovary."

Table 1 Extent of knowledge of young women on polycystic ovarian syndrome (PCOS) in Jolo in the following dimensions: Causes, Pathophysiology, Complications, and Management.

Causes		Mean	S.D.	Rating
1	Genetic factors.	4.3333	.88976	Agree
2	Environmental factors (Stress)	4.3030	.72822	Agree
3	Disrupted ovulation (release of eggs from the ovary).	4.1212	.96039	Agree
4	Imbalance in sex hormones, specifically an increase in androgens (male hormones) like testosterone.	3.8485	.97215	Agree
5	Insulin resistance.	3.6970	.88335	Agree
Total Weighted Mean		4.0606	.75413	Agree
Pathophysiology		Mean	S.D.	Rating
1	Polycystic ovaries contain more visible follicles than the average ovary.	4.3333	.69222	Agree
2	Polycystic ovaries tend to ovulate less frequently than the average ovary.	4.2727	.71906	Agree
3	Polycystic ovaries tend to make more male hormones like (testosterone) than the average ovary.	4.0000	.93541	Agree
4	More free testosterone promotes unwanted hair growth, acne, and scalp hair loss (alopecia).	4.0000	.86603	Agree

5	High insulin levels are common in women with PCOS	3.9091	.91391	Agree
Total Weighted Mean		4.1030	.70378	Agree
Complication		Mean	S.D.	Rating
1	Diabetes Mellitus (DM)	4.1212	.89294	Agree
2	Cardiovascular disease	4.4848	.79535	Strongly Agree
3	Metabolic syndrome	4.2121	.92728	Agree
4	Hypertension (high blood pressure)	4.1818	.98281	Agree
5	Endometrial cancer (cancer of the inner lining of the uterus)	4.4242	.83030	Agree
Total Weighted Mean		4.2848	.68196	Agree
Management		Mean	S.D.	Rating
1	Hormonal contraception.	4.2424	.75126	Agree
2	Weight loss.	4.2121	.81997	Agree
3	Regular exercise and meditation.	4.2121	.81997	Agree
4	Oral hypoglycemic agents (metformin).	3.9091	.91391	Agree
5	Health and changes in diet.	4.2727	.76128	Agree
Total Weighted Mean		4.1697	.66355	Agree

Legend: (5) 4.50-5.0=Strongly Agree (SA); (4) 3.50 – 4.49=Agree (A); (3) 2.50 – 3.49=Partially Agree (U); (2) 1.50 – 2.49=Disagree (D); (1) 1.00 – 1.49=Strongly Disagree (SD)

2. *What is the extent of health-related quality of life of young women with polycystic ovarian syndrome in Jolo in the following dimensions: 2.1 Impact; 2.2 Mental (Infertility); 2.3 Physical (Hirsutism); 2.4 Emotional (Mood); and 2.5 Menstrual Problem?*

Table 2 shows the extent of health-related quality of life of young women with polycystic ovarian syndrome in Jolo in the dimensions of Impact, Mental (Infertility), Physical (Hirsutism), Emotional (Mood), and Menstrual Problem. Under this category, respondents assessed the following sub-categories; namely: Impact with total weighted mean score of 3.6909 and S.D. of .88754 and rated as Agree; Mental (Infertility) with total weighted mean score of 2.7576 and S.D. of .0721 and rate as Partially Agree; Physical (Hirsutism) with total weighted mean score of 3.0667 and S.D. of 1.0267 and rated as Partially Agree; Emotional (Mood) with total mean score of 2.8485 and S.D. of 1.5231 and rated as Partially Agree; Menstrual Problem with total mean score of 4.2424 and S.D. of .50189 and rated as Agree.

These results demonstrate that the study's participants were, on the whole, in agreement that young women in Jolo who have polycystic ovarian syndrome struggle with their health-related quality of life. This notion aligns with the research results of (Chavez, 2023) disempowering instruments against the self-perceptions of oppressed genders. In Jolo, young women are perceived as capable of leading satisfying lives, with both positive and negative effects on their physical, psychological, and social functioning and well-being. This theory agrees with the results of (Amiri, 2019). More precisely, the following items were among those with which respondents in this study partially agreed: "I felt like a less woman because of my PCOS," "I felt abnormal because of my PCOS," "I felt depressed because of infertility issue along with PCOS," "I felt embarrassed by my facial hair," "I felt like a failure because of my trouble conceiving," and "I have experienced mood swing because of my PCOS."

Table 2 Extent of health-related quality of life of young women with polycystic ovarian syndrome in Jolo in the dimensions of Impact, Mental (Infertility), Physical (Hirsutism), Emotional (Mood), and Menstrual Problem.

Impact		Mean	S.D.	Rating
1	I felt like I'm a lesser woman because of my PCOS.	2.7576	1.4583	Partially Agree
2	I felt abnormal because of my PCOS.	3.4848	1.3257	Partially Agree
3	I felt that it is unfair that I have PCOS.	4.3939	1.1709	Agree
4	I felt like I didn't know what to do to control my PCOS.	3.4545	1.2769	Partially Agree
5	I have been envious of women without PCOS.	4.3636	.92932	Agree
Total Weighted Mean		3.6909	.88754	Agree
Mental (Infertility)		Mean	S.D.	Rating
1	I felt depressed because of the infertility issue along with PCOS.	2.8182	1.2107	Partially Agree
2	I felt like a failure because of my trouble conceiving.	2.6061	1.1973	Partially Agree
3	I felt anxious about conceiving a child.	2.7576	1.2997	Partially Agree
4	I felt under pressure to have a child.	2.5758	1.1734	Disagree
5	I'm scared that I may not have children.	3.0303	1.3106	Partially Agree
Total Weighted Mean		2.7576	1.0721	Partially Agree
Physical (Hirsutism)		Mean	S.D.	Rating
1	I felt embarrassed by my facial hair.	3.1818	1.0739	Partially Agree
2	I felt depressed because of my facial hair.	3.2424	1.0316	Partially Agree
3	Been worried about other people seeing my facial hair.	3.4545	1.4809	Partially Agree
4	Spent a lot of time and energy removing excess hair.	2.5758	1.1997	Partially Agree
5	I felt moody because of my excess hair.	2.8788	1.1661	Partially Agree
Total Weighted Mean		3.0667	1.0267	Partially Agree
Emotional (Mood)		Mean	S.D.	Rating
1	I felt guilty for being overly aggressive towards a friend or family member.	3.8788	1.0534	Agree
2	I over reacted to a day-to-day occurrence because of my PCOS.	4.6667	.64550	Strongly Agree
3	I have a short temper with my close friends and/or family.	3.8485	1.1214	Agree
4	I have experienced mood swings because of my PCOS.	3.3636	1.2201	Partially Agree
5	I felt like crying for no reason.	3.9697	.98377	Agree
Total Weighted Mean		2.8485	1.5231	Partially Agree
Menstrual Problem		Mean	S.D.	Rating
1	I'm having abdominal bloating and menstrual cramps.	4.1515	.90558	Agree
2	I have an irregular/late menstrual period.	4.6667	.64550	Strongly Agree

3	I'm having heavy menstrual bleeding.	4.1212	.78093	Agree
4	Menstrual periods with clots.	4.1818	.84611	Agree
5	Headaches.	4.0909	1.1281	Agree
Total Weighted Mean		4.2424	.50189	Agree

Legend: (5) 4.50-5.0=Strongly Agree (SA); (4) 3.50 – 4.49=Agree (A); (3) 2.50 – 3.49=Partially Agree (U); (2) 1.50 – 2.49=Disagree (D); (1) 1.00 – 1.49=Strongly Disagree (SD)

3. Is there a significant difference in the extent of knowledge of young women in Jolo on polycystic ovarian syndrome in Jolo in terms of: 3.1 Age; 3.2 Civil Status; 3.3 Educational level; 3.4 Frequency of Menstruation; 3.5 Length of Menstruation?

3.1 According to Age

The variations in the level of awareness among young women in Jolo regarding polycystic ovarian syndrome are displayed in Table 3.1, which is based on age-based socio-demographic groupings. This table indicates that none of the subcategories that fall under the umbrella of how much information young women in Jolo have about polycystic ovarian syndrome has F-ratios or P-values that are statistically significant at alpha.05. This implies that respondents' perceptions of the extent to which young women in Jolo are aware of polycystic ovarian syndrome varied based on respondents' ages. This theory agrees with what (Avery, 2007) found. The study's PCOS-afflicted women favored using the Internet for informational reasons because of its advantages in terms of accessibility, ease, and privacy. The results of (Chavez, 2020) show that they have lower content confidence, which is compatible with this viewpoint. It is safe to say that variable age has no significant mediation in ways that respondents assessed the extent of knowledge of young women in Jolo on polycystic ovarian syndrome. This result suggests that being older or within 31 years old & above may not necessarily put a respondent in vantage point towards assessing the extent of knowledge of young women in Jolo on polycystic ovarian syndrome than those who are within 20 years old and below, 21-25 years old, 26-30 years old, or vice versa.

Table 3.1 Differences in the extent of knowledge of young women in Jolo on polycystic ovarian syndrome when data are grouped according to socio-demographic profile in terms of age.

SOURCES OF VARIATION		Sum of Squares	Df	Mean Square	F	Sig.	Description
Causes	Between Groups	3.772	3	1.257	2.527	.077	Not Significant
	Within Groups	14.427	29	.497			
	Total	18.199	32				
Pathophysiology	Between Groups	3.623	3	1.208	2.865	.054	Not Significant
	Within Groups	12.226	29	.422			
	Total	15.850	32				
Complications	Between Groups	1.743	3	.581	1.283	.299	Not Significant
	Within Groups	13.139	29	.453			
	Total	14.882	32				
Management	Between Groups	.214	3	.071	.149	.929	Not Significant
	Within Groups	13.875	29	.478			
	Total	14.090	32				

*Significant alpha .05

3.2 According to Civil Status

Table 3.2 illustrates the variations in the level of awareness among young women in Jolo regarding polycystic ovarian syndrome based on civil status socio-demographic profile groupings. This table indicates that the P-values and Mean Differences for all the subcategories that fall under the umbrella of how much knowledge young women in Jolo have about polycystic ovarian syndrome are not significant at alpha.05. This suggests that respondents' assessments of the level of knowledge young women in Jolo have regarding polycystic ovarian syndrome are consistent, notwithstanding variations in their marital status. The results of (Chavez, 2023) people depending on their gender roles, level of education, and generational disparities are consistent with this idea. When assessing the level of knowledge that young women in Jolo have about polycystic ovarian syndrome, this finding suggests that married respondents may not always have an advantage over single respondents. This idea is in line with the findings of PCOS patients at risk for psychiatric disease (Elsenbruch, 2020) in terms of sociodemographic and clinical characteristics, as well as evaluating the impact of emotional distress on quality of life. In light of this, it is reasonable to conclude that the degree to which nurse respondents evaluated the knowledge of young women in Jolo regarding polycystic ovarian syndrome was unaffected by variable civil status. Therefore, the hypothesis which states that "There is no significant difference in the extent of knowledge of young women in Jolo on polycystic ovarian syndrome when data are grouped according to their socio-demographic profile in terms of civil status" is accepted.

Table 3.2 Differences in the extent of knowledge of young women in Jolo on polycystic ovarian syndrome when data are grouped according to socio-demographic profile in terms of civil status

VARIABLES	Grouping	Mean		Mean Difference	t	Sig.	Description
		Mean	S. D.				
Causes	Single	3.9273	.83847	-.40000	-1.462	.154	Not Significant
	Married	4.3273	.47559				
Pathophysiology	Single	4.0000	.73808	-.30909	-1.197	.240	Not Significant
	Married	4.3091	.60902				
Complications	Single	4.1545	.74048	-.39091	-1.589	.122	Not Significant
	Married	4.5455	.47405				
Management	Single	4.0909	.68654	-.23636	-.964	.343	Not Significant
	Married	4.3273	.61496				

*Significant at alpha 0.05

3.3 According to educational Level

The variations in the level of information that young women in Jolo have about polycystic ovarian syndrome are displayed in Table 3.3, which groups the data based on the educational attainment of the sociodemographic profile. This table indicates that none of the subcategories that fall under the umbrella of how much information young women in Jolo have about polycystic ovarian syndrome has F-ratios or P-values that are statistically significant at alpha.05. This indicates that, despite differences in respondents' educational backgrounds, there is no discernible difference in their evaluations of the level of knowledge that young women in Jolo have regarding polycystic ovarian syndrome. According to this finding, a responder who has completed college may not be in a better position than someone who has just completed elementary school, high school, or no formal education to gauge how much knowledge young women in Jolo have about polycystic ovarian syndrome, or vice versa. This theory is consistent with (Coffey,

2023) findings. However, it is safe to conclude that respondents' assessments of the young women in Jolo's degree of knowledge about polycystic ovarian syndrome were not significantly influenced by their varied educational backgrounds. Therefore, the hypothesis which states that “There is no significant difference in the extent of knowledge of young women in Jolo on polycystic ovarian syndrome when data are grouped according to their socio-demographic profile in terms of educational level” is accepted.

Table 3.3 Differences in the extent of knowledge of young women in Jolo on polycystic ovarian syndrome when data are grouped according to socio-demographic profile in terms of educational level

SOURCES OF VARIATION		Sum of Squares	Df	Mean Square	F	Sig.	Description
Causes	Between Groups	1.918	2	.959	1.767	.188	Not Significant
	Within Groups	16.281	30	.543			
	Total	18.199	32				
Pathophysiology	Between Groups	2.347	2	1.173	2.607	.090	Not Significant
	Within Groups	13.503	30	.450			
	Total	15.850	32				
Complications	Between Groups	2.256	2	1.128	2.680	.085	Not Significant
	Within Groups	12.627	30	.421			
	Total	14.882	32				
Management	Between Groups	.623	2	.311	.694	.508	Not Significant
	Within Groups	13.467	30	.449			
	Total	14.090	32				

*Significant alpha .05

3.4 According to Frequency of Menstruation

Table 3.4 illustrates the variations in the level of awareness among young women in Jolo regarding polycystic ovarian syndrome based on data categorized by menstrual frequency socio-demographic profile. This table indicates that none of the subcategories covered by the young women in Jolo's level of knowledge on polycystic ovaries had significant F-ratios or P-values at alpha.05. This indicates that while respondents' rates of menstruation vary, they are all in agreement about how much knowledge young women in Jolo have about polycystic ovaries. This finding suggests that a respondent who cycles once a month may not be in a better position to evaluate the level of awareness among young women in Jolo about polycystic ovarian syndrome than those who cycle once every two to four months, once every six to eight months, once every nine to twelve months, or vice versa. This notion is consistent with the findings of (Ilagan-Vega, 2022). The research conducted in SEA was focused on PCOS prevalence, risk factors, infertility, and metabolic complications. However, it is reasonable to conclude that respondents' assessments of the degree of knowledge held by young women in Jolo regarding polycystic ovaries were not significantly influenced by the variability in menstrual frequency. Thus, the hypothesis that reads, "When data are grouped according to their socio-demographic profile in terms of frequency of

menstruation, there is no significant difference in the extent of knowledge of young women in Jolo on polycystic ovarian" is accepted.

Table 3.4 Differences in the extent of knowledge of young women in Jolo on polycystic ovarian syndrome when data are grouped according to socio-demographic profile in terms of frequency of menstruation

SOURCES OF VARIATION		Sum of Squares	Df	Mean Square	F	Sig.	Description
Causes	Between Groups	1.780	4	.445	.759	.561	Not Significant
	Within Groups	16.418	28	.586			
	Total	18.199	32				
Pathophysiology	Between Groups	.894	4	.224	.419	.794	Not Significant
	Within Groups	14.955	28	.534			
	Total	15.850	32				
Complications	Between Groups	3.014	4	.754	1.778	.161	Not Significant
	Within Groups	11.868	28	.424			
	Total	14.882	32				
Management	Between Groups	3.419	4	.855	2.243	.090	Not Significant
	Within Groups	10.671	28	.381			
	Total	14.090	32				

*Significant alpha .05

3.5 According to Length of Menstruation

Table 3.5 presents the differences in the extent of knowledge of young women in Jolo on polycystic ovarian syndrome when data are grouped according to socio-demographic profile in terms of length of menstruation. It can be gleaned from this table that the values of Mean Differences and P-values of all the sub-categories subsumed under the extent of knowledge of young women in Jolo on polycystic ovarian syndrome are not significant at alpha .05. This means that even though respondents vary in length of menstruation, yet they do not differ in their assessment towards the extent of knowledge of young women in Jolo on polycystic ovarian syndrome. This finding suggests that a respondent with a menstrual period of 2–7 days, or vice versa, may not be better suited to evaluate the degree of awareness that young women in Jolo possess regarding polycystic ovarian syndrome. This theory is in line with study by Himelein and Thatcher (2006), which discovered that women with PCOS have higher rates of anxiety and depression than those without the illness (Deeks et al., 2011). Furthermore, a responder who has a menstrual cycle lasting 8–14 days might not be able to evaluate the same data as a respondent who has a cycle lasting 2–7 days, or the opposite may be true. However, it is reasonable to conclude that the degree to which nurse responders evaluate the knowledge of young women in Jolo regarding polycystic ovarian syndrome, the length of menstruation has no discernible mediating effect. Thus, the hypothesis that "When data are grouped according to their socio-demographic profile in terms of length of menstruation, there is no significant difference in the extent of knowledge of young women in Jolo on polycystic ovarian syndrome" is accepted.

Table 3.5 Differences in the extent of knowledge of young women in Jolo on polycystic ovarian syndrome when data are grouped according to socio-demographic profile in terms of length of menstruation

VARIABLES	Grouping	Mean		Mean Difference	t	Sig.	Description
		Mean	S. D.				
Causes	2-7 days	4.0000	.76661	-.33333	-.979	.335	Not Significant
	8-14 days	4.3333	.68896				
Pathophysiology	2-7 days	4.0593	.70124	-.24074	-.753	.457	Not Significant
	8-14 days	4.3000	.74565				
Complications	2-7 days	4.2000	.69725	-.46667	-1.549	.132	Not Significant
	8-14 days	4.6667	.48442				
Management	2-7 days	4.1111	.66641	-.32222	-1.079	.289	Not Significant
	8-14 days	4.4333	.63770				

*Significant at alpha 0.05

4. Is there a significance difference in the extent of health-related quality of life of young women with polycystic ovarian syndrome in Jolo when data are grouped according to socio-demographic profile in terms of: 4.1 Age; 4.2 Civil Status; 4.3 Educational level; 4.4 Frequency of Menstruation; 4.5 Length of Menstruation?

4.1 According to Age

When data are categorized by age-related sociodemographic profile, Table 4.1 shows the variations in the degree of health-related quality of life of young women with polycystic ovarian syndrome in Jolo. This table shows that, for all subcategories included in the assessment of health-related quality of life of young women with polycystic ovarian syndrome in Jolo, the F-ratios and P-values are not significant at alpha.05. This indicates that, despite the age range of the respondents, there is no difference in their evaluation of the level of health-related quality of life experienced by young women in Jolo who have polycystic ovarian syndrome. According to this result, a respondent's age or being between the ages of 31 and above may not always give them an advantage when evaluating the degree of health-related quality of life of young women with polycystic ovarian syndrome in Jolo compared to those who are between the ages of 20 and below, 21–25, 26–30, or vice versa. This idea is consistent with the findings of (Ollila, 2016) which showed that women with OA+H at age 31 or a diagnosis of PCOS by age 46 had the highest BMI across all age groups when compared to the controls. Women with isolated OA (P =.006), OA+H (P =.001), and PCOS diagnosis (P =.001) had higher increases in BMI between the ages of 14 and 31 but not between 31 and 46 as compared to controls. However, it is reasonable to conclude that respondents' assessments of the degree of health-related quality of life of young women with polycystic ovarian syndrome in Jolo are not significantly influenced by age. Thus, the hypothesis that "When data are grouped according to their socio-demographic profile in terms of age, there is no significant difference in the extent of health-related quality of life of young women with polycystic ovarian syndrome in Jolo" is accepted.

Table 4.1 Differences in the extent of health-related quality of life of young women with polycystic ovarian syndrome in Jolo when data are grouped according to socio-demographic profile in terms of age

SOURCES OF VARIATION		Sum of Squares	Df	Mean Square	F	Sig.	Description
Impact	Between Groups	.270	3	.090	.105	.957	Not Significant
	Within Groups	24.937	29	.860			
	Total	25.207	32				
Mental (Infertility)	Between Groups	2.312	3	.771	.648	.590	Not Significant
	Within Groups	34.469	29	1.189			
	Total	36.781	32				
Physical (Hirsutism)	Between Groups	6.178	3	2.059	2.167	.113	Not Significant
	Within Groups	27.555	29	.950			
	Total	33.733	32				
Emotional (Mood)	Between Groups	3.997	3	1.332	1.367	.273	Not Significant
	Within Groups	28.272	29	.975			
	Total	32.269	32				
Menstrual Problem	Between Groups	1.128	3	.376	1.573	.217	Not Significant
	Within Groups	6.932	29	.239			
	Total	8.061	32				

*Significant alpha .05

4.2 According to Civil Status

Table 4.2 indicates the variations in the degree of health-related quality of life among young women with polycystic ovarian syndrome in Jolo when classified based on their civil status in the sociodemographic profile. This table shows that, for all subcategories included in the assessment of health-related quality of life of young women with polycystic ovarian syndrome in Jolo, the Mean Differences and P-values are not significant at alpha.05. This indicates that while respondents' civil statuses varied, they do not differ in how much they value the health-related quality of life of Jolo's young women with polycystic ovarian syndrome. This result implies that when assessing the level of health-related quality of life of young women with polycystic ovarian syndrome in Jolo, married respondents might not necessarily have an advantage over single respondents. This idea is in line with research by Rzońca (2018), which discovered that age, professional activity, BMI, time since PCOS diagnosis, and socioeconomic status were all significant predictors of QoL in PCOS patients ($p < 0.05$). However, it is safe to conclude that variable civil status has no significant mediation in the ways that nurse-respondents evaluated the degree of health-related quality of life of young women with polycystic ovarian syndrome in Jolo. Thus, the hypothesis that "When data are grouped according to their socio-demographic profile in terms of civil status, there is no significant difference in the extent of health-related quality of life of young women with polycystic ovarian syndrome in Jolo" is accepted.

Table 4.2 Differences in the extent of health-related quality of life of young women with polycystic ovarian syndrome in Jolo when data are grouped according to socio-demographic profile in terms of civil status

VARIABLES	Grouping			Mean	t	Sig.	Description
		Mean	S. D.	Difference			
Impact	Single	3.6364	.97909	-.16364	-.493	.625	Not Significant
	Married	3.8000	.69857				
Mental (Infertility)	Single	2.5818	.89848	-.52727	-1.349	.187	Not Significant
	Married	3.1091	1.33376				
Physical (Hirsutism)	Single	3.1636	.89578	.29091	.762	.452	Not Significant
	Married	2.8727	1.27522				
Emotional (Mood)	Single	3.5818	.94800	.00000	.000	1.000	Not Significant
	Married	3.5818	1.15743				
Menstrual Problem	Single	4.1818	.50487	-.18182	-.980	.334	Not Significant
	Married	4.3636	.49653				

*Significant at alpha 0.05

4.3 According to educational Level

The variations in the degree of health-related quality of life among young women with polycystic ovarian syndrome in Jolo are shown in Table 4.3, which groups the data based on the educational attainment of the sociodemographic profile. This table shows that, for all subcategories included in the assessment of health-related quality of life of young women with polycystic ovarian syndrome in Jolo, the F-ratios and P-values are not significant at alpha.05. This indicates that although respondents' educational backgrounds differ, they all evaluate the same degree of health-related quality of life for young women in Jolo who have polycystic ovarian syndrome. According to this research, respondents who have completed college may not be better qualified than those who have only completed elementary school, high school, or no formal education to assess the health-related quality of life of young women in Jolo who have polycystic ovarian syndrome, or vice versa. This theory, which is in line with research by Jabeen (2022), contends that increasing knowledge through awareness campaigns can aid in improving comprehension, increasing PCOS diagnosis rates, and effectively managing the condition. However, it is safe to conclude that respondents' assessments of the degree of health-related quality of life of young women with polycystic ovarian syndrome in Jolo were not significantly mediated by variable educational level. Thus, the hypothesis that "When data are grouped according to their socio-demographic profile in terms of educational level, there is no significant difference in the extent of health-related quality of life of young women with polycystic ovarian syndrome in Jolo" is accepted.

Table 4.3 Differences in the extent of health-related quality of life of young women with polycystic ovarian syndrome in Jolo when data are grouped according to socio-demographic profile in terms of educational level

SOURCES OF VARIATION		Sum of	Mean	F	Sig.	Description
		Squares	Square			
Impact	Between Groups	.047	.023	.028	.973	Not Significant
	Within Groups	25.161	.839			
	Total	25.207	32			
	Between Groups	1.198	.599	.505	.609	Not Significant

Mental (Infertility)	Within Groups	35.583	30	1.186			
	Total	36.781	32				
Physical (Hirsutism)	Between Groups	.559	2	.279	.253	.778	Not Significant
	Within Groups	33.174	30	1.106			
	Total	33.733	32				
Emotional (Mood)	Between Groups	.419	2	.210	.197	.822	Not Significant
	Within Groups	31.850	30	1.062			
	Total	32.269	32				
Menstrual Problem	Between Groups	.288	2	.144	.556	.579	Not Significant
	Within Groups	7.772	30	.259			
	Total	8.061	32				

*Significant alpha .05

4.4 According to Frequency of Menstruation

Table 4.4 illustrates the variations in the degree of health-related quality of life among young women with polycystic ovarian syndrome in Jolo based on the frequency of menstruation, as categorized by socio-demographic profile. This table shows that, for all subcategories included in the assessment of health-related quality of life of young women with polycystic ovarian syndrome in Jolo, the F-ratios and P-values are not significant at alpha.05. This indicates that while respondents' assessments of the degree to which young women with polycystic ovarian syndrome in Jolo have a poor quality of life linked to their health are similar, they do differ in the frequency with which they menstruate. This result implies that when assessing the level of health-related quality of life of young women with polycystic ovarian syndrome in Jolo, a respondent who only menstruates once a month might not be in a better position than those who do so once every two to four months, once every six to eight months, once every nine to twelve months, or vice versa. Research by Barnard (2007), which indicated that weight was the primary factor determining negative quality of life among women who were taking medication or not, lends credence to this notion. However, it is reasonable to conclude that respondents' assessments of the degree of health-related quality of life for young women with polycystic ovarian syndrome in Jolo were not significantly influenced by the frequency of menstruation. Thus, the hypothesis that "When data are grouped according to their socio-demographic profile in terms of frequency of menstruation, there is no significant difference in the extent of health-related quality of life of young women with polycystic ovarian syndrome in Jolo" is accepted.

Table 4.4 Differences in the extent of health-related quality of life of young women with polycystic ovarian syndrome in Jolo when data are grouped according to socio-demographic profile in terms of frequency of menstruation

SOURCES OF VARIATION		Sum of Squares	Df	Mean Square	F	Sig.	Description
Impact	Between Groups	1.477	4	.369	.436	.782	Not Significant
	Within Groups	23.731	28	.848			
	Total	25.207	32				
	Between Groups	4.172	4	1.043	.896	.480	Not Significant

Mental (Infertility)	Within Groups	32.609	28	1.165			
	Total	36.781	32				
Physical (Hirsutism)	Between Groups	3.984	4	.996	.937	.457	Not Significant
	Within Groups	29.749	28	1.062			
	Total	33.733	32				
Emotional (Mood)	Between Groups	3.336	4	.834	.807	.531	Not Significant
	Within Groups	28.933	28	1.033			
	Total	32.269	32				
Menstrual Problem	Between Groups	.236	4	.059	.211	.930	Not Significant
	Within Groups	7.825	28	.279			
	Total	8.061	32				

*Significant alpha .05

4.5 According to Length of Menstruation

The variations in the degree of health-related quality of life among young women with polycystic ovarian syndrome in Jolo are displayed in Table 4.5, which groups the data based on the menstrual cycle duration sociodemographic profile. This table shows that, for all subcategories included in the assessment of health-related quality of life of young women with polycystic ovarian syndrome in Jolo, the Mean Differences and P-values are not significant at alpha.05. This suggests that although respondents' opinions on the level of health-related quality of life varied, they are similar when it comes to the young women in Jolo who have polycystic ovarian syndrome. This theory agrees with the research results of (Aliasghari, 2017). This result suggests that, a respondent who has a menstruation period of 2-7 days may not necessarily put her in a vantage point towards assessing the extent of health-related quality of life of young women with polycystic ovarian syndrome in Jolo than those who has a menstruation period of 8-14 days, or vice versa. Depression is one of the many factors that significantly affect these women's quality of life, so appropriate strategies must be put in place to control these factors and enhance quality of life. Thus, the hypothesis that "When data are grouped according to their socio-demographic profile in terms of length of menstruation, there is no significant difference in the extent of health-related quality of life of young women with polycystic ovarian syndrome in Jolo" is accepted.

Table 4.5 Differences in the extent of health-related quality of life of young women with polycystic ovarian syndrome in Jolo when data are grouped according to socio-demographic profile in terms of length of menstruation

VARIABLES	Grouping	Mean			t	Sig.	Description
		Mean	S. D.	Difference			
Impact	2-7 days	3.6667	.94625	-.13333	-.328	.745	Not Significant
	8-14 days	3.8000	.60663				
Mental (Infertility)	2-7 days	2.7185	1.0859	-.21481	-.438	.664	Not Significant
	8-14 days	2.9333	1.0856				
Physical (Hirsutism)	2-7 days	2.9852	1.0196	-.44815	-.966	.341	Not Significant
	8-14 days	3.4333	1.0689				

Emotional (Mood)	2-7 days	3.4963	1.0173	-.47037	-1.039	.307	Not Significant
	8-14 days	3.9667	.92448				
Menstrual Problem	2-7 days	4.1778	.48464	-.35556	-1.608	.118	Not Significant
	8-14 days	4.5333	.51640				

*Significant at alpha 0.05

5. Is there a significance correlation between knowledge and health-related quality of life of young women with PCOS?

The relationship between the level of knowledge and the health-related quality of life of Jolo's young women with PCOS is shown in Table 5. The information in this table indicates that there is a significant alpha of .05. The calculated Pearson Correlation Coefficients (Pearson r) between these variables show that there is a high degree of positive correlation between knowledge and the health-related quality of life of young women with PCOS in Jolo. These results imply that the individuals who evaluated the health-related quality of life and knowledge of young PCOS-afflicted women in Jolo as Agree or with High Extent are probably also the ones who evaluated these women's knowledge levels as Agree or with High Extent. For the time being, it is safe to say that, generally, the extent of knowledge and health-related quality of life of young women in Jolo with PCOS are highly correlated. Research by Bazarganipour (2019) found that infertility and irregular menstruation were more closely associated with worse HRQOL in PCOS-affected women than obesity. Therefore, the hypothesis which states that, "There is no significant correlation between extent of knowledge and health-related quality of life of young women with PCOS in Jolo" is rejected.

Table 5 Correlation between the extent of knowledge and health-related quality of life of young women in Jolo with PCOS

Variables		Pearson <i>r</i>	Sig	N	Description
Independent	Dependent				
Knowledge of young women with PCOS	Health-related quality of life	.531**	.001	100	High

*Correlation Coefficient is significant at alpha .05

Correlation Coefficient Scales Adopted from Hopkins, Will (2002):

0.0-0.1=Nearly Zero; 0.1-0.30=Low; .3-0.5 0=Moderate; .5-0.7-0=High; .7-0.9= Very High; 0.9-1=Nearly Perfect

Conclusion

The study draws the following conclusions from its data: The age, marital status, educational attainment, frequency, and duration of menstruation of the respondents are all sufficiently represented. Most respondents concur that young women in Jolo have a good level of understanding about polycystic ovarian syndrome. Most respondents concur that young women with polycystic ovarian syndrome in Jolo have a high degree of health-related quality of life. In general, respondents' assessments of the amount of awareness of young women in Jolo with PCOS were not substantially mediated by characteristics such as age, civil status, educational attainment, frequency of menstruation, or duration of menstruation. Generally, variables age, civil status, educational level, frequency of menstruation, and length of menstruation do not significantly mediate in ways how respondents assessed the extent of health-related quality of life of young women with polycystic ovarian syndrome in Jolo. Generally, the group of respondents who assessed the extent of knowledge and health-related quality of life of young women in Jolo with

PCOS as Agree or with High Extent is mostly probably the same group of respondents who assessed the extent of knowledge of young women in Jolo with PCOS as Agree or with High Extent, respectively. The results of this study appear to validate the Adaptation Model of Nursing theory, which Sister Callista Roy introduced in 1976. According to Roy, adaptation is the process and result of people and communities using conscious awareness, self-reflection, and choice to build human and environmental integration. It happens when people respond favorably to environmental changes. Four components comprise the core ideas of Roy's Adaptation Model: person, health, environment, and nursing (Kozier, 2020).

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