

LEVEL OF AWARENESS OF WOMEN ABOUT POLYCYSTIC OVARIAN SYNDROME (PCOS)

Mary Joy C. Jasmin, Fria Jae A. Hangdaan, Francis John P. Hernaez, Anabelle A. Orpiano, RN, MSN⁴

ABSTRACT

Polycystic Ovarian Syndrome (PCOS) is a prevalent endocrine disorder among women of reproductive age. Yet, it remains widely misunderstood and underdiagnosed—particularly in the Philippines. This quantitative-descriptive and comparative study assessed the level of awareness about PCOS among 275 women aged 20–49 years in Barangay Salvacion, Bayombong, Nueva Vizcaya. It was analyzed using ANOVA because this research compared group means across age, marital status, educational attainment, and family history of PCOS. Data were collected using a validated survey adapted from a related study. A four-point Likert scale was used to assess the level of awareness among women regarding Polycystic Ovary Syndrome (PCOS). The scale measured awareness across several areas: general concept, causes, signs and symptoms, diagnosis, complications, prevention, and management of PCOS. Findings revealed that most participants were "not fully aware" of PCOS, with the highest awareness observed in recognizing infertility as a complication and irregular menstruation as a symptom. Younger, college graduates, and single women showed relatively higher awareness levels. However, no significant statistical differences were found across all demographic variables. Nearly half of the women acquired knowledge from two or more sources, indicating a tendency to consult multiple channels rather than relying on a single one. In response to these findings, the researchers developed an appropriate infographic as an Information, Education, and Communication (IEC) material to enhance awareness and understanding among women. This study underscores the importance of enhancing PCOS awareness to support early diagnosis, proper management, and improved quality of life among Filipino women.

Keywords: Awareness level, community-based study, health education, polycystic ovarian syndrome, women of reproductive age

INTRODUCTION

Polycystic Ovarian Syndrome (PCOS) is a chronic, hormonal, and metabolic disorder that affects women of reproductive age, often causing infertility, irregular menstruation, and other complications such as type 2 diabetes and cardiovascular disease (Barbieri & Ehrmann, 2023; Goh et al., 2022). Despite its prevalence, PCOS remains widely misunderstood and underdiagnosed, especially in the Philippines, where health data and public awareness are limited (Barlis et al., 2021).

Global studies have shown that many women lack proper awareness of PCOS, particularly about its causes, symptoms, and management strategies (Radwan et al., 2023; Rizvi et al., 2023; Zaitoun et al., 2023). In the Philippine context, this knowledge gap contributes to delayed diagnosis and increases the risk of long-term health issues. Moreover, psychological distress, including anxiety and depression, is often reported by women with PCOS due to symptoms like hirsutism and weight gain (Rajkumar et al., 2022; Hall, 2022).

Demographic factors such as age, marital status, educational attainment, and family history of PCOS influence women's awareness. Younger women often access health information through social media (Rizvi et al., 2023). In contrast, older women may rely on traditional beliefs or overlook symptoms. Higher levels of education correlate with better health literacy and PCOS knowledge (Jabeen et al., 2022), while familial experience with PCOS promotes earlier

recognition and proactive health-seeking behavior (Camaya, 2021).

Sources of information also play a key role. Studies report that digital media is the primary source of PCOS information among younger populations, but it is often unreliable (Goh et al., 2022; Alruwaili et al., 2020; Shah & Shah, 2024). In contrast, though trusted, healthcare professionals are underutilized (Abu-Taha et al., 2020; Camaya, 2021). This study is guided by Nola Pender's Health Promotion Model, which emphasizes the role of individual experiences, knowledge, and motivation in health behavior. Increasing awareness is essential for early diagnosis, proper management, and the promotion of health-seeking behaviors among women with PCOS.

This study is significant because it aims to close a crucial knowledge gap by assessing PCOS awareness among women. The researchers chose this study to strengthen local support organizations and establish safe spaces where women with PCOS can freely share their experiences, concerns, challenges, and successes. Through this study, the researchers can break the silence surrounding PCOS and offer unwavering support to women with PCOS throughout their journey. This study will shed light on gaps in awareness and understanding about this common endocrine disorder. As future healthcare promoters, we can highlight areas where education and awareness initiatives may be needed and contribute to advancements in the nursing profession.

Furthermore, this will also contribute to evaluating the effectiveness of programs focused on PCOS awareness. This research can serve as a foundation for school-based interventions that integrate PCOS education into anti-bullying and mental health programs, fostering a more supportive environment for affected individuals. This study can be an additional reference for researchers who will conduct related studies about the level of awareness of women regarding PCOS in other locales. For the women of Barangay Salvacion, this study serves as a mirror and a springboard. It allows them to assess their current knowledge, identify health risks, and, if needed, seek care. Informed women are empowered women- they can make better lifestyle decisions, engage in earlier consultations, and advocate for their own reproductive and mental health. The study's findings will help healthcare professionals, policymakers, and community leaders design targeted interventions to improve PCOS education, prevention, and management within the community. Also, this will serve as a basis for crafting Information, Education, and Communication (IEC) materials and their possible contents based on the findings from the study.

This study assessed women's awareness of PCOS in Barangay Salvacion across key knowledge domains such as general concept, causes, signs and symptoms, diagnosis, complications, prevention, significant differences on the domains when grouped according to age, marital status, educational attainment, and family history of PCOS, and management and developed an Information, Education, and Communication (IEC) material to address identified gaps.

METHODOLOGY

The study employed a quantitative-descriptive-comparative research design to describe the profile and level of awareness, and, likewise, to determine whether there is a significant difference in the level of awareness when grouped according to their profile variables.

The study was conducted in Barangay Salvacion, Bayombong, Nueva Vizcaya. This study aimed to determine the level of awareness of polycystic ovarian syndrome among women in Barangay Salvacion, Bayombong, Nueva Vizcaya. The researchers selected this location for implementation because it is where the Municipal Health Office (MHO)/Rural Health Unit (RHU)

of Bayombong is located, where many women visit for checkups. It is also near the Provincial Health Office (PHO). Moreover, Barangay Salvacion was recommended by a health worker from the Municipal Health Office (MHO)/Rural Health Unit (RHU) of Bayombong. This location offers convenient access to health information, enabling researchers to determine respondents' level of awareness of polycystic ovarian syndrome.

The study aimed to assess the level of awareness about polycystic ovarian syndrome (PCOS) among women aged 20–49 in Barangay Salvacion, Bayombong, Nueva Vizcaya. Out of a total population of 955 women, a sample of 275 was selected using the Raosoft calculator with a 5% margin of error. The age range was chosen because PCOS symptoms typically begin at age 20, and women may still conceive before age 49. Convenience sampling was used, with inclusion criteria limited to women aged 20–49 residing in the barangay. Those younger than 20 or older than 49, or not residing in the area, were excluded. Participation was voluntary, with informed consent obtained, and the study did not involve a vulnerable population.

The study utilized an adapted questionnaire to assess women's awareness of polycystic ovarian syndrome (PCOS), based on a tool from Goh et al. (2022), which originally surveyed 410 Malaysian women. The original 20-item questionnaire had a Cronbach's alpha of 0.861 and covered sociodemographic characteristics, PCOS knowledge, clinical assessment, and health-related practices. For this study, modifications were made: certain sociodemographic variables were removed, while family history of PCOS and sources of information were added. The revised tool excluded the original knowledge and health practice sections, modified the clinical assessment section, and introduced a 4-point Likert scale for awareness levels (ranging from not aware to fully aware). The final version had three parts: personal profile, sources of information, and awareness questions categorized by PCOS concepts, causes, symptoms, tests, complications, prevention, and management. A total of 20 original items were revised, and 17 new ones were added. The questionnaire was translated into Tagalog, validated by experts, and pilot-tested with 20 women in Barangay DMM, yielding a high reliability score of 0.91.

Before data collection, the researchers obtained approval from the Bayombong Municipal Health Office and were endorsed by the barangay. They requested a list of women aged 20–49 to identify potential respondents. With the help of a barangay officer, the researchers conducted house-to-house visits to locate participants. The study's purpose was explained, and informed consent was obtained before data collection. Respondents completed the questionnaire, which took 15–20 minutes, with researchers present to assist and answer questions. Completed questionnaires were collected, and the data were transcribed and analyzed using appropriate statistical tools.

The researchers analyzed the collected data using a four-point Likert scale to assess women's level of awareness about PCOS across various areas, including general concept, causes, symptoms, diagnosis, complications, prevention, and management. The mean and standard deviation were used to determine overall awareness levels. Awareness was interpreted as follows: 3.25–4.0 (Fully Aware), 2.5–3.25 (Aware), 1.75–2.5 (Not Fully Aware), and 1.0–1.75 (Not Aware). To compare awareness levels by age, marital status, educational attainment, and family history of PCOS, an ANOVA was used.

RESULTS AND DISCUSSION

Section 1. Profile of the Respondents

The majority of respondents in Barangay Salvacion, Bayombong, Nueva Vizcaya were women aged 20–29 years (42.5%), married (60.7%), and college undergraduates (36.0%). Most

had no known family history of PCOS (97.5%), which may indicate underdiagnosis or lack of awareness regarding the condition.

Section 2. Sources of Information about PCOS

The study revealed that nearly half (48.7%) of the respondents obtained information about PCOS from two or more sources, indicating a trend toward multi-channel learning. The internet (21.1%) and television (20.4%) were the most common single sources, reflecting a shift toward digital and mass media platforms for health information. This finding supports Goh et al. (2022), who reported that young Malaysian women primarily used the internet to learn about PCOS, and Alruwaili et al. (2020), who found that Saudi women relied heavily on social media and television over healthcare professionals.

Traditional sources—friends, relatives, newspapers, and even health workers—played a minor role, highlighting the declining influence of interpersonal and print media. Eppes et al. (2023) emphasized that digital campaigns, particularly on social media, achieve higher engagement and reach than traditional methods, making them more effective for health education.

Given these trends, nurses and health educators must adapt by using digital tools—such as apps, social media, and websites—to deliver accessible and accurate PCOS information. The use of telehealth and multimedia communication also offers new opportunities for nurses to assess, monitor, and educate patients. Collaboration with IT professionals to develop user-friendly digital resources, such as symptom trackers and medication reminders, is essential. Additionally, nurses should guide women in identifying credible sources to counter misinformation and promote proactive health behaviors.

Section 3. Level of Awareness of Women on PCOS

The participants' overall awareness of PCOS was categorized as "Not fully aware", indicating limited understanding across general concepts, causes, symptoms, diagnosis, complications, prevention, and management. However, there was partial awareness of specific aspects—particularly infertility—most respondents lacked comprehensive knowledge. This aligns with studies by Barlis et al. (2021), Abu-Taha et al. (2020), and Goh et al. (2022), who found that infertility is the most commonly recognized complication of PCOS among women in Batangas (84%), Jordan (79.3%), and Klang Valley (76.1%), respectively.

Participants also demonstrated fair awareness of menstrual irregularities, echoing findings from Abu-Taha et al. (2020) and Barlis et al. (2021), in which irregular periods were the most frequently reported symptom. However, emotional and psychological impacts—such as anxiety and body image issues—were less recognized. This underscores the need for nurses to incorporate mental health assessments into PCOS care plans.

Preventive awareness was notable, especially regarding lifestyle factors such as maintaining a healthy weight, regular exercise, healthy eating, and avoiding smoking. These findings mirror those of Barlis et al. (2021), in which high percentages of participants acknowledged the roles of exercise (93%), diet (93%), and weight loss (79%) in managing PCOS symptoms. Additionally, the importance of routine checkups was moderately acknowledged, indicating awareness of the need for metabolic monitoring to reduce risks such as insulin resistance and cardiovascular disease.

These results highlight the critical role of nurses as health educators and advocates. Personalized education strategies, grounded in each woman's current awareness, can foster

realistic health goals and behavior changes. Nurses should collaborate with dietitians, physicians, and mental health professionals to provide holistic care. Furthermore, promoting PCOS screening in reproductive and preconception health settings, especially among women with menstrual irregularities or fertility concerns, is essential for early detection.

Section 4. Comparison of the Level of Awareness of Women in Terms of Profile Variables

Level of Awareness of Women in Terms of Age:

Women aged 20–29 have significantly higher awareness of PCOS in terms of general concepts, causes, symptoms, diagnosis, and prevention compared to those aged 30–39 and 40–50. This aligns with Jabeen et al. (2022), who found that younger women are more informed about PCOS, though other studies (Pitchai et al., 2016; Zaitoun et al., 2023) found no age-related differences in awareness. The variation highlights the need for targeted education, especially for older women with lower levels of awareness. Nurses should assess patients' baseline knowledge and tailor teaching plans based on factors such as stigma, culture, and access barriers. Student nurses play a key role by engaging with communities and developing age- and culture-appropriate educational tools—such as digital media for younger women and in-person workshops for older women—thereby improving understanding, trust, and empowerment across all age groups.

Level of Awareness of Women in Terms of Marital Status

Single women have significantly higher awareness of PCOS across general concepts, causes, symptoms, diagnosis, complications, and management compared to married women. This may be because single women tend to focus more on their personal health and proactively seek information (Chainani, 2019; Rajkumar et al., 2022), while married women often prioritize fertility and motherhood, which may narrow their focus on PCOS beyond reproductive concerns (Mishra et al., 2022). However, some studies report no significant differences or differences in the opposite direction by marital status (Alessa et al., 2017; Alruwaili et al., 2020; Goh et al., 2022; Zaitoun et al., 2023).

These findings highlight the need for tailored education: building on single women's proactive health behavior and broadening married women's understanding of PCOS beyond fertility to include long-term health, emotional wellbeing, and partner support. Nurses can encourage open communication, involve partners in education, and promote inclusive care strategies. This flexible approach ensures all women, regardless of marital status, receive comprehensive support for early detection and effective PCOS management.

Level of Awareness of Women in Terms of Educational Attainment

Women with higher educational attainment—particularly college undergraduates and graduates—have significantly greater awareness of PCOS across all areas, including general concepts, causes, symptoms, diagnosis, complications, prevention, and management, compared to those with lower education levels, such as elementary or high school graduates. This aligns with findings from Alessa et al. (2017) and Alshdaifat et al. (2021), which show education positively correlates with PCOS awareness, especially among students in health-related fields. However, some studies, like Zaitoun et al. (2023), found no such correlation.

These results highlight the importance of education in improving PCOS knowledge and suggest the need for targeted health education initiatives for women with lower levels of education to ensure equitable access to information. Nurses should assess educational and health literacy levels to tailor communication, using simple language, visual aids, and digital

tools to enhance understanding. They should also prioritize screening and early identification in lower-education populations and support patients in navigating healthcare and community resources.

Student nurses have a valuable role as community advocates by providing culturally appropriate, accessible education through local partnerships, schools, and health centers. Consistent outreach and education can empower women to recognize symptoms, seek timely care, and manage PCOS effectively, helping close the awareness gap.

Section 5. Information, Education, and Communication (IEC) Material

This PCOS awareness and prevention infographic aims to empower women of reproductive age, healthcare providers, and educators with key information and practical guidelines. It highlights major concerns like hormonal imbalances, irregular periods, infertility, and associated health risks such as diabetes and heart disease. Key prevention and management strategies include:

- **Healthy Lifestyle:** Emphasizes regular exercise, a healthy diet, weight management (even a 5% weight loss helps), gut health, avoiding tobacco, stress-reduction techniques (yoga, meditation), and quality sleep to improve symptoms and overall health.
- **Early Detection:** Stresses the importance of recognizing early symptoms (irregular periods, excess hair growth, acne, weight gain) and seeking timely diagnosis through physical exams, blood tests, and ultrasounds to prevent complications.
- **Preventive Health Measures:** Encourage routine metabolic screenings, maintaining a healthy weight, and using medications or surgery as needed to manage symptoms and fertility issues. Individualized treatment plans with healthcare providers are vital.

Overall, the toolkit promotes awareness of PCOS's physical, emotional, and reproductive impacts, supports early diagnosis, encourages lifestyle changes, and fosters open conversations to reduce stigma. It empowers women to take proactive, holistic care of their health and wellbeing.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The study involving 275 women revealed that nearly half were aged 20-29, most were married, and a large majority had no family history of PCOS, with many being college undergraduates. Almost half of the participants obtained information about PCOS from multiple sources, highlighting the importance of using diverse channels for effective education campaigns. Despite some awareness of preventive measures, overall knowledge of PCOS was limited, particularly regarding symptoms, diagnosis, complications, and treatment options, indicating the need for broader and more targeted educational programs. Awareness levels varied significantly by age, marital status, and education, with younger women, single women, and college graduates demonstrating higher awareness. These differences suggest that public health efforts should be tailored to reach older, married, and less educated women more effectively. Addressing these gaps is essential to improving early diagnosis and management of PCOS and to ensuring equitable health outcomes across all groups.

Recommendations

Based on the study's findings, several recommendations are made for key groups. Saint Mary's University should strengthen anti-bullying policies to address issues related to PCOS symptoms like overweight, acne, and hair loss, and create supportive spaces where students with PCOS can share their experiences safely. College professors and instructors are encouraged to raise PCOS awareness by serving as resource speakers in academic and community settings, educating others about the causes, symptoms, complications, diagnosis, and management of the condition. Student nurses are urged to actively organize and participate in PCOS awareness programs, seminars, and workshops, helping to educate peers, reduce stigma, and provide support. Lastly, future researchers are recommended to conduct broader studies on factors affecting PCOS awareness across diverse populations and to evaluate the effectiveness of different educational interventions aimed at improving knowledge and prevention.

REFERENCES

- Abu-Taha, M., Daghash, R., Daghash, R., & Farha, R. A. (2020). Evaluation of women knowledge and perception about polycystic ovary syndrome and its management in Jordan: A survey-based study. *International Journal of Clinical Practice*, 74(10). <https://doi.org/10.1111/ijcp.13552>
- Alshdaifat, E., Sindiani, A., Amarin, Z., Absy, N., AlOsta, N., Abuhayyeh, H. A., & Alwani, M. (2021). Awareness of polycystic ovary syndrome: A university students' perspective. *Annals of Medicine and Surgery*, 72, 103123. <https://doi.org/10.1016/j.amsu.2021.103123>
- Alruwaili, G., Mohammad, S., Almoaibed, F., Badawi, F., Alruwaili, R., Alkholaifi, M., Alharthi, K., Alhassoun, A., & AlNissayan, S. (2020). General public awareness toward polycystic ovarian syndrome among females in Saudi Arabia. *International Journal of Medicine in Developing Countries*, 1847–1853. <https://doi.org/10.24911/ijmdc.51-1601060234>
- Barbieri, R., & Ehrmann, D. (2023, November 7). Polycystic ovary syndrome (PCOS): Beyond the basics. *UpToDate*. <https://www.uptodate.com/contents/polycystic-ovary-syndrome-pcos-beyond-the-basics/print>
- Barlis, C. B. C., Achapero, J. G. C., Ancheta, M. M. P., Angeles, P. A. A., Tai, S. D. S. A., Benavidez, C. M. B., & Villegas, V. G. (2021). The assessment of health literacy and awareness of the female residents of Barangay Dagatan, Sabang, and Marauoy Lipa, Batangas on polycystic ovarian syndrome: A cross-sectional study. *International Journal of Progressive Research in Science and Engineering*, 2(8), 588–606. <https://journal.ijprse.com/index.php/ijprse/article/view/404/382>
- Camaya, C. G. (2021). A comparative study of awareness among third year female undergraduates from the medical technology and pharmacy degree programs in the University of Tomas on comorbidities of polycystic ovarian syndrome (PCOS). *ASEAN Endocrine Journal*. <https://doi.org/10.15605/jafes.036.S92>
- Eppes, E. V., Augustyn, M., Gross, S. M., Vernon, P., Caulfield, L. E., & Paige, D. M. (2023). Engagement with and acceptability of digital media platforms for use in improving health behaviors among vulnerable families: Systematic review. *Journal of Medical Internet Research*, 25, e40934. <https://doi.org/10.2196/40934>
- Goh, J. E., Farrukh, M. J., Keshavarzi, F., Yap, C. S., Saleem, Z., Salman, M., Ramatillah, D. L., Goh, K. W., & Ming, L. C. (2022). Assessment of prevalence, knowledge of polycystic ovary syndrome and health-related practices among women in Klang Valley: A cross-sectional survey. *Frontiers in Endocrinology*, 13. <https://doi.org/10.3389/fendo.2022.985588>
- Hall, L. (2022, January 19). I was called Chewbacca by school bullies after medical condition meant I had to shave my entire body. *The U.S. Sun*. <https://www.the-sun.com/lifestyle/4493862/called-chewbacca-school-bullies-pcos-hir>

- [sutism-medical-condition/amp](#)
- Jabeen, A., Yamini, V., Amberina, A. R., Eshwar, M. D., Vadakedath, S., Begum, G. S., & Kandi, V. (2022). Polycystic ovarian syndrome: Prevalence, predisposing factors, and awareness among adolescent and young girls of South India. *Cureus*. <https://doi.org/10.7759/cureus.27943>
- Rajkumar, E., Ardra, A., Prabhu, G., Pandey, V., Jeyavel, S., Manzoor, R., Sooraj, K., Manikandaprabu, M., & Badiger, T. (2022). Polycystic ovary syndrome: An exploration of unmarried women's knowledge and attitudes. *Heliyon*, 8(7), e09835. <https://doi.org/10.1016/j.heliyon.2022.e09835>
- Rizvi, M., Islam, M. A., Aftab, M. T., Naqvi, A. A., Jahangir, A., Ishaqui, A. A., Iqbal, M. Z., & Iqbal, M. S. (2023). Knowledge, attitude, and perceptions about polycystic ovarian syndrome, and its determinants among Pakistani undergraduate students. *PLOS ONE*, 18(5), e0285284. <https://doi.org/10.1371/journal.pone.0285284>
- Zaitoun, B., Kubaisi, A. A., AlQattan, N., Alassouli, Y., Mohammad, A., Alameeri, H., & Mohammed, G. (2023). Polycystic ovarian syndrome awareness among females in the UAE: A cross-sectional study. *BMC Women's Health*, 23(1). <https://doi.org/10.1186/s12905-023-02318-y>