Table 5: Characteristics of Included Studies

Author, Year, Country	Design	Participants	Data collection	Findings and Recommendations	JBI Score
Williams, T. L. (2014). United States of America	Descriptive Study.	Participants n=211: certified nurse practitioners (62% of participants involved)	Participants completed the Polycystic Ovary Syndrome questionnaire online via a link through Qualtrics Survey Program.	Participants of this study acknowledged there were no diagnostic guidelines/criteria for adolescents with Polycystic Ovary Syndrome. Due to lack of diagnostic guidelines, diagnosis is often problematic because symptoms commonly experienced by girls in their teenage years, such as irregular menses, acne, and weight gain are also part of normal physiologic pubertal changes. Over half of participants report diagnosing adult women who reported clinical manifestations in their adolescent years. Potential reasons may include: (1) parent's denial of potential Polycystic Ovary Syndrome diagnosis, (2) exhaustion on behalf of the parent and adolescent from multiple tests were prior to confirmation of Polycystic Ovary Syndrome diagnosis and (3) parents and adolescents overlooking symptoms of Polycystic Ovary Syndrome perceiving them as a normal part of adolescence. Practitioners are strongly encouraged to evaluate adolescents when clinical manifestations of Polycystic Ovary Syndrome occur. While some symptoms may appear to be a normal physiological part of puberty, diagnosis of Polycystic Ovary Syndrome should be considered. In addition, Polycystic Ovary Syndrome is a diagnosis of exclusion. Therefore, parents should be encouraged to be patient and understanding with the diagnostic process of Polycystic Ovary Syndrome in their adolescent since it can be time consuming. Future studies should focus on evaluating currently used diagnostic criteria in the adolescent population and explore developing a specific diagnostic criterion for adolescents to increase diagnostic rates.	8/8
Amasha, H. A., & Heeba, M. F. (2014).	Quasi-experimental one-group	Participants n=50: maternity nurses	Based on the related literature, a semi-structured questionnaire was developed by the researchers for the	The result showed that the nurses lack knowledge about Polycystic Ovary Syndrome and there is a statistically significant difference in the mean of pretest and posttest scores. There was	7/9

Egypt	pre-test/ posttest design		purpose of the study. The Questionnaire included the following: (1) Nurses socio-demographic characteristics such as age, nursing qualifications, marital status, family income, experience years, attended training program before in the field of work. (2) Nurses' knowledge about polycystic ovary syndrome (definition- causes- risk factors, signs and symptoms, complications, diagnostic criteria, goals of management, the treatment strategies and nursing role).	no significant association between level of knowledge and sociodemographic variables. This study reflects the need for a staff development program to increase maternity nurses' level of knowledge related to PCOS	
Sunanda, B., & Nayak, S. (2016). India	Descriptive survey approach and descriptive design	Participants n=150: 2nd and 3rd year nursing students	The data was collected by using a structured knowledge questionnaire on Polycystic Ovary Syndrome which consists of 20 items. The results were analysed through descriptive and inferential statistics	The level of knowledge was categorized as poor (13.3%), average (76.0%) and good (10.7%). The level of knowledge of the students was assessed through frequency and percentage which depicts that most of the students had average knowledge (76%). Due to the varied nature of Polycystic Ovary Syndrome and the large range of possible signs and symptoms, health personnel need a thorough knowledge of the disorder and its management. Nurses should be aware of the various organizations which render support. Counseling for adolescents should be included in the curriculum which will provide an awareness towards the disorder and lifestyle modification.	6/8
Huffman, C. S., Brackney, D. E., & Martin, S. R. (2017). United States of America	Cross-sectional survey design using descriptive statistics. Cross tab analysis was	Participants n=13: Nurse Practitioners	Self-administered 22-item forced choice Polycystic Ovary Syndrome Provider Survey. Provider comfort was rated as "very comfortable" to "very uncomfortable" and perceived patient willingness was rated as "not at all willing" to "very willing". Initial treatment approach to Polycystic	NPs (62%) were more likely to endorse a period of lifestyle management prior to prescribing medications for ovulation induction than physicians (47%). NPs perceived patients as more willing to engage in lifestyle management for Polycystic Ovary Syndrome, Polycystic Ovary Syndrome related infertility, and management of pregnancy compared to their physician colleagues. Of the 3 provider groups, NPs were also more comfortable in giving specific diet and exercise advice. From a	6/8

			Ovary Syndrome related infertility was assessed by selecting one of four options. Participants were allowed to free text their initial approach to Polycystic Ovary Syndrome related infertility, if their approach was not contained in one of the four options.	specialty perspective, providers from family practice felt more comfortable than those from OB/GYN practices in giving specific advice. OB/GYN providers were more likely to rate patients unwilling to engage in lifestyle management for management of their Polycystic Ovary Syndrome related infertility. The results of this study suggest that provider comfort and perception of patient willingness may vary based on provider training, specialty, and practice location. Further studies are needed to understand broader outcomes.	
carried out by provider type, specialty, and location of practice. Percentages were calculated and chi-square performed when assumptions were met.					
Carron, R., Simon, N., Gilman-Kehrer, E., & Boyle, D. K. (2018). United States of America	Pretest-posttest design.	Participants n=78: Licensed Nurse Practitioners, Nurse Practitioner Student (Doctor of Nursing Practice Student and Family Nurse Practitioner Student), Clinical Nurse Specialist.	The pre-and-posttest questionnaires were designed to evaluate common knowledge domains about Polycystic Ovary Syndrome found in textbooks and journal articles: diagnostic criteria, laboratory testing, treatment options and long-term consequences. Four short-answer questions covered Rotterdam diagnostic criteria, laboratory testing, treatment options, and long-term consequences. Short-answer and multiple-choice questions have similar reliability and validity. Finally, the questionnaire had four demographic questions license type, type of practice, years in practice, and where the participant learned about Polycystic Ovary Syndrome.	In this study, many rural NPs did not have the baseline knowledge to diagnose and manage Polycystic Ovary Syndrome. The NP participants practiced in family practice, women's health, internal medicine, and adult mental health – all settings where women may present with a Polycystic Ovary Syndrome -related problem. This study also sheds new light on the value of a CE program on Polycystic Ovary Syndrome for NPs. In addition, the program was successful in educating participants about the newest treatment guidelines for managing Polycystic Ovary Syndrome and broadening their perspectives on available treatment options. The findings demonstrate the need for ongoing updates on Polycystic Ovary Syndrome management options. This study was meaningful because it demonstrated that nurse educators need to include Polycystic Ovary Syndrome in continuing education program content. A 6-month and 12-month follow-up is needed to determine retention of knowledge and to identify time points where continuing education boosters would be helpful. Surveying NP faculty about Polycystic Ovary Syndrome content in their programs of study could help	7/9

				determine whether program content is adequate for graduating students.	
Adjei, L. (2019). Ghana	Cross-sectional design	Participants n=142: nurses, from all departments at La General Hospital.	Quantitative Data Collection, self-administered questionnaire consisting of close-ended questions.	Knowledge level was very low amongst nurses as more than half of the respondents had poor knowledge, likely attributed to inadequate experience with the condition and 51% of nurses surveyed were unaware of the condition. Because nurses' knowledge as well as their awareness on Polycystic Ovary Syndrome is low, there is the need to create awareness and intensify knowledge sources to increase knowledge about the condition. Nurses had a few misconceptions about the condition, in relation to its management and genetic loading. Similar studies should be conducted across various facilities among nurses, campaign to create awareness on Polycystic Ovary Syndrome among nurses, the training unit of the hospital should conduct frequent training sessions for staff nurses to educate them and clear all misconceptions they may have on the condition, collaborations with NGOs who are involved on female reproductive issues to run workshops aimed at creating awareness and educating nurses on Polycystic Ovary Syndrome.	6/8
Onwuzurumba ., K. (2020). United States of America	Pretest-posttest design.	Participants n=8: Participant criteria included: Doctor of Nursing Practice Student, enrolled in the family nurse practitioner specialty, and having completed the women's health course within the program.	Data was collected from participants via Qualtrics survey.	Varying degrees of improvement can be seen in some aspects of the study including knowledge of long-term complications, knowledge of treatment options, and confidence in starting treatment. Areas that showed minimal or no improvement include knowledge of signs/symptoms of Polycystic Ovary Syndrome and diagnostic criteria. This project does show there is a lack of knowledge in various aspects of Polycystic Ovary Syndrome and that there may be a need for additional education for those who are entering into practice. This study was meaningful because it shows potential knowledge gaps of the upcoming providers regarding this topic and their confidence in approaching this topic. Although the sample size of this study was small, the results do lead to further questions that may be addressed in subsequent studies and	8/9

				quality improvement efforts. Questions that may revolve around selecting the optimum medium utilized for education, length of time of the education/depth of the education, and method of assessment used. Despite these participants' knowledge or acquisition of this syndrome, it was not sufficient to provide confidence in the diagnosis or treatment of Polycystic Ovary Syndrome.	
Sehar, S. (2020). India	Quantitative Research Approach and Descriptive Research Design.	Participants n=60: 3rd and 4th year nursing students	The researchers administered structured questionnaire through the online mode (Google form) to collect the data for assessing the knowledge of students regarding Polycystic Ovary Syndrome. There were 40 questions to assess the level of knowledge regarding Polycystic Ovary Syndrome. Each question had a score of one mark. Maximum score was 40 and minimum was 0.	The study found that majority of nursing students (60%) have average knowledge, 38.33% have good knowledge and 1.66% have poor knowledge regarding Polycystic Ovary Syndrome. Student nurses should be educated about Polycystic Ovary Syndrome. The nurse acts as an advocate in helping the patient and family understanding the complexities of treatment decisions and manages the side effects of drugs and complications associated with Polycystic Ovary Syndrome. A well-informed nurse can empower the patients with knowledge of the disease and treatment. It can have more positive influence on outcome of disease.	6/8
Sasikala, R., Shanmugham, D., Varghese, J., & Saravanan, D. K. (2021). India	Questionnaire-based cross-sectional study	Participants n=88: nursing students	This is a questionnaire based cross-sectional study conducted in the department of obstetrics and gynaecology in a tertiary care centre from March 2020 - May 2020. The survey was conducted among the nursing students by consecutive sampling after informed and written consent. A pre-designed, pre-tested, semi-structured 15 items questionnaire containing 3 components: knowledge about risk factors [obesity, sedentary life style, lack of physical exercise, junk food intake, familial inheritance - (6)],	Among 95 participants, 88 students responded to the online questionnaire. The knowledge about the risk factors for PCOS is illustrated in table 1. Regarding the knowledge about the risk factors, 83 students were aware of obesity as the risk factor, 73 participants knew that sedentary lifestyle and lack of physical exercise can increase the risk for PCOS.70% of the students accepted that junk food intake is associated with PCOS. Only half of the participants had the knowledge about familial inheritance of PCOS. Table 2 depicts the knowledge about clinical presentation of PCOS. On analysing the awareness about the clinical presentation, 85% responded as menstrual irregularities, half of them had knowledge about hirsutism and acanthosis nigricans (56.81% and 61.36% respectively). Interestingly, majority of them (84.09%) knew that PCOS can cause infertility. Knowledge about the long-term complications associated with	6/8

| | | | clinical symptoms & signs [menstrual irregularities, hirsutism, acanthosis nigricans, infertility- (4)] and complications [metabolic syndrome, dyslipidaemia and coronary artery disease, endometrial cancer, diabetes mellitus, psychological upset - (5)] of PCOS was used for online data collection.
The data collected were analysed through descriptive analysis as frequencies and percentages after entry into Microsoft excel sheets. Chi square test was used to test the association between different variables. P value <0.05 was considered significant. | PCOS among the study participants is shown in table 3. In view of knowledge on long term complications, 62 students (70.45%) were aware about metabolic syndrome, 59 students (67.04%) about dyslipidaemia and risk for coronary artery disease, 51 students (57.95%) about hypertension, 50 participants (56.81%) about being prone for diabetes mellitus, 60 students (68.18%) about risk of endometrial cancer. However almost all of them knew that the lifestyle modification is the first line of management in PCOS. Chi square test was used to test the association between known demographic characteristics like age, sex, educational level and knowledge and awareness about PCOS. Younger the nurse, lower the knowledge level on PCOS (p=0.04). Third year nursing students had more knowledge on risk factors and complication compared to first year students which was statistically significant (p< 0.001). Similarly female students had more knowledge and awareness on PCOS compared to male nursing students (p< 0.01).
Even though the nursing students had knowledge regarding the risk factors associated with PCOS, their awareness about the complications of PCOS is significantly less. Effective educational intervention conducted especially for nurses can significantly increase their level of knowledge | |
| Santhi, V., Santhi, S., Neelakshi, D., & Mahadevi M. (2021). India | Descriptive research design | Participants n=44: 3rd and 4th year nursing students | The tool used was a structured questionnaire consisting of demographic variables, a tool for diagnosis of Polycystic Ovary Syndrome and structured questionnaire on PCOS. The data were analysed by using descriptive and inferential statistics. | The majority of nursing students 37(84.09%) had moderately adequate knowledge. The overall mean score was 14.2±3.173; the mean percentage was 46.6%. There was no significant association found between the level of knowledge on poly cystic ovarian syndrome among nursing students with their demographic variables. The findings revealed that 84.09% of the nursing students had moderately adequate knowledge on poly cystic ovarian syndrome. Nurses have an expanded and extended role of promotive, preventive, curative and rehabilitative services of individual, family and community level. Nurses can provide centralized approach regarding obesity and | 8/8 |

				PCOS by taking action to impart knowledge to the community people. To educate patients, it is essential that nurses should be competent and should have sound knowledge to improve the level of understanding on obesity and PCOS and an improved level of understanding can be reflected to public through education. Nurses have to play a multidimensional role and their skills must be combined with the specialised knowledge to ensure prevention of complications of obesity and PCOS.	
Thabet, H., Alsharif, F., Garoot, L., Yousef, M., Almutairi, L & Kutbi, R. (2021). Saudi Arabia	Descriptive quantitative design.	Participants n=158: nursing students	Adaptive questionnaire was adopted, and some modifications were made to be appropriate for the culture of the participants. Part 1): Sociodemographic characteristics. Part 2): Knowledge regarding Polycystic Ovary Syndrome, this part assessed female nursing students' knowledge about Polycystic Ovary Syndrome. It contained 20 questions, (definition, pathophysiology, causes, complications, diagnostic procedures, treatment), which were designed with three answers including 'Yes' 'No' and 'I do not know' to choose from. Part 3): Clinical evaluation of Polycystic Ovary Syndrome, this part was used to assess the clinical evaluation of Polycystic Ovary Syndrome. It contains 12 questions regarding clinical diagnosis, family history clinical assessment of PCOS, which were designed with three answers including 'Yes' 'No' and 'I do not	Based on the findings of this study and the data analysis, the current study concluded that, most of the students were aware about Polycystic Ovary Syndrome but do not have enough knowledge. More than three quarters of them had moderate knowledge on Polycystic Ovary Syndrome. The study finding shows that there is a significant relationship between the sociodemographic variables such as academic year and level of knowledge. There is no significant relationship between the sociodemographic variable and level of knowledge. Based on the findings of the present study, the following recommendations are suggested: (1) Conducting an educational program for young girls in different setting to increase levels of awareness concerning PCOS educational program, which includes counselling for women about disorder and modifications of lifestyle. (2) Further studies should be carried out on a large number of samples to generalize the study findings.	8/8

			know' to choose from. Part 4): Source of information, this part was used to assess the source of information. Contains one question (from where this information).	