Effectiveness of Structure Teaching Program on Knowledge Regarding Polycystic Ovarian Syndrome among Undergraduate Female Students – Narrative Review

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Abstract

Introduction: *The hormonal condition known as PCOS, or polycystic ovarian syndrome, is most prevalent in women between the ages of 18 and 45. Infertility, insulin resistance, dyslipidaemia, amenorrhea, and signs of hyperandrogenism (HA) are among the possible signs of PCOS. An extended period of continuous anovulation appears to be the underlying cause.* ***Aim:*** *The study's objective was to increase public knowledge of the benefits of using medical professionals for early PCOS detection and management.* ***Methodology:*** *Adopting a quasi-experimental two group pre- and post-test design, the impact of a structured training curriculum on female undergraduate students' understanding of polycystic ovarian syndrome was investigated. The study's target population consisted of female undergraduate students. The sample size of 60 was determined by applying the study's objectives and underlying assumptions to the data analysis. The data was analysed using the Statistical Package EZR - Software version 2.4.* ***Result:*** *The experimental group's pre-test knowledge scores were 12.40 ± 5.19, while the control groups were 11.77 ± 4.36 for the female students. The post-test knowledge scores of the experimental group were statistically significantly different from those of the control group (p=0.00), with the experimental group's mean scores being 23.53±3.51 and the control group's being 14.53±2.93.* ***Outcome:*** *The findings suggest that adolescents need to understand PCOS to understand disease conditions and obtain the right treatment to prevent the development of other life-threatening conditions and infertility in the future.*

Keywords: *Polycystic ovarian syndrome, Hirsutism, Dyslipidaemia, Acanthesis Nigricans, Hyperandrogenism.*

INTRODUCTION OR BACKGROUND

Polycystic ovarian syndrome (PCOS) is a hormonal condition that is highly prevalent in women who are reproductive age. PCOS is often identified in women who present with infertility. Amenorrhea, hirsutism, and enlarged ovaries with numerous cysts were among the complex symptoms that Stein and Leventhal first described as PCOS in 1935.[1]

The following conditions may indicate PCOS: insulin resistance, dyslipidaemias, amenorrhea, infertility, and signs of hyperandrogenism (HA). The underlying cause appears to be persistent anovulation over a prolonged period. Many endocrinopathies can lead to anovulatory follicles and the subsequent development of polycystic ovaries. Thus, PCOS may be considered a functional

abnormality.[2] It could reverse the signs and symptoms and help prevent unanticipated or expected side effects in the future. Three main symptoms of polycystic ovary syndrome are polycystic ovaries, excessive body or facial hair, and irregular menstrual cycles. The term polycystic refers to "many cysts," and PCOS frequently results in groups of tiny, pearl-sized cysts in the ovaries. The cysts contain immature eggs and are filled with fluid.[1] Some symptoms of PCOS are related to the slightly elevated production of androgens, which are male hormones, in women.

Patients with PCOS can exhibit any of the dysfunctional states in their ovarian status and clinical picture. Due to their increased risk of endometrial cancer, dyslipidaemias, type II diabetes, and premature arteriosclerosis, women with PCOS should also have their abnormalities checked for as part of their treatment. Treating the concurrent abnormalities experienced by each PCOS woman will result in a better outcome.[3] PCOS can cause baldness, increased facial and body hair, and long-term health problems like diabetes and heart disease. Birth control pills and diabetic medications can help with hormone imbalance and improve symptoms.[4,5,6] Because obesity increases insulin secretion, which in turn causes the ovaries to produce androgens, obesity is a pathophysiologic factor in PCOS. Consequently, a chronic dysregulation of sex hormones occurs, upsetting the ovulation cycle and ultimately leading to infertility.[4,5] Poor eating habits and obesity appear to have contributed to a rise in PCOS cases in teenage girls in recent years. Overweight or obese young women with PCOS often develop subsequent metabolic and reproductive disorders requiring costly and invasive treatment. When treating these young women, diet and nutrition should be carefully considered.[6]

Future mothers in our society, female students are a homogeneous group that can be reached out to. Some college students may appear healthy and may not even realize they have PCOS until they experience difficulties becoming pregnant after getting married.

Haq, Noman & Khan, Zarmina & Riaz, Sohail & Nasim, Aqeel & Shahwani, Razzaq & Tahir, Maria, carried out a research study on the prevalence and knowledge of polycystic ovarian syndrome (PCOS) among female science students at various public universities in Quetta, Pakistan. The study's conclusions showed that 374 (72.5%) respondents had never heard of PCOS and had only received information from a brochure. Although 407 (90.2%) of the subjects had sufficient knowledge about PCOS following the educational intervention.[7]

Carmona-Ruiz IO, Saucedo-de la Llata E, Moraga-Sánchez MR, Romeu-Sarró A. carried out an observational, transversal prevalence study on [Polycystic ovary syndrome: is there a rise in the prevalence?] among a group of women from Spain between July 1 and October 31, 2014, with the objective to determine the most prevalent phenotypes of the disease. The study finds that PCOS has become more common in the Caucasian population, with the classic phenotype—oligo-anovulation, hyperandrogenism, and polycystic ovaries—being the most prevalent way the syndrome manifests itself.[8]

The increased risk of depressive disorders in women with polycystic ovary syndrome was the subject of a cohort study by Hollinrake E, Abreu A, Maifeld M, Van Voorhis BJ, and Dokras A. Iowa City, USA's University of Iowa. The study found that women with PCOS had a markedly higher risk of depressive disorders (as listed in the Diagnostic and Statistical Manual IV), and it suggests routine screening for this population.[9]

Despite the extensive number of reports on PCOS and its prevalence in the currently available literature, many teenage girls are still ignorant of the illness. The researcher concludes that some of Sharda University's campuses in Greater Noida, Uttar Pradesh, need to teach teenage female undergraduate students about polycystic ovarian syndrome.

MATERIAL AND METHOD
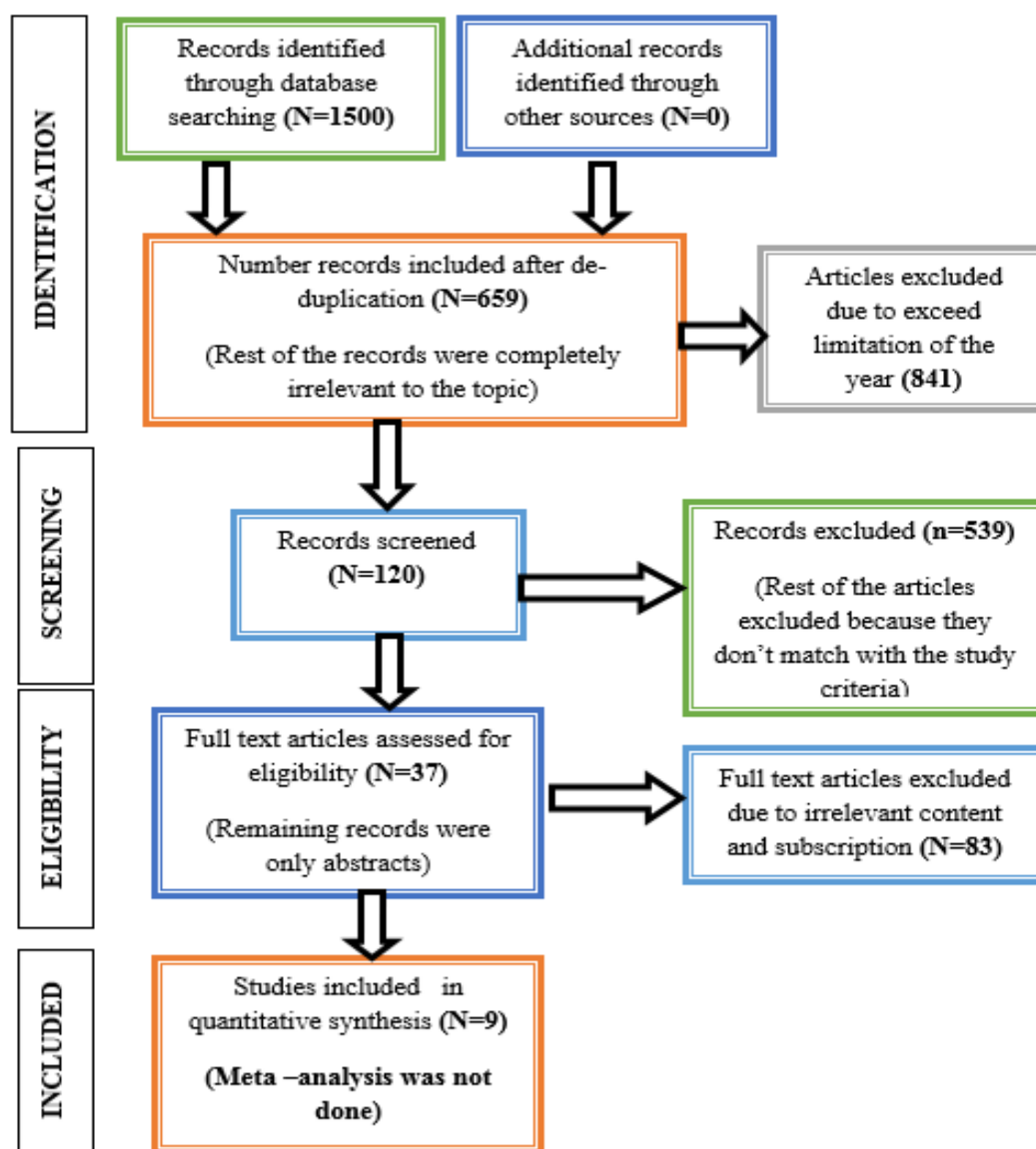
FINDINGS

The term was formulated separately and integrated with all synonyms according to the database to conduct a systematic search. Similarly, a manual search was conducted on PUBMED and Google Scholar, utilizing keywords and search synonyms from previously published articles. Ten more articles were discovered in the database. 1500 articles were found in the initial search, 659 of which required manual selection. Replication in the database led to the rejection of 539 articles. After replication was eliminated, 120 articles underwent an acceptability review. Out of those, 37 articles were evaluated for eligibility, and 83 articles were rejected because the full text was unavailable, the content was irrelevant, or the subscriptions were unrelated. Nine articles, including one with a quantitative study, were thus screened.

DISCUSSION

In the post-test, the experimental group scored an average of 23.53 ± 3.51 in knowledge, while the control group scored an average of 14.53 ± 2.93, which is statistically significant ($p<0.05$). This indicates that the structure teaching program enhanced the understanding of polycystic ovarian syndrome among the undergraduate female students in the interventional group. The research findings are corroborated by another study conducted by Kumari D. et al., which demonstrated a significant mean difference in post-test knowledge scores between the interventional group and control group (12.6 ± 1.9 versus 7.4 ± 2.9 in the control group). The organized education program helped people understand polycystic ovarian syndrome better. Anxiety, depression, eating disorders, and bipolar disorder are all experienced by women with PCOS. Because they are more self-conscious about their appearance than boys, teenage girls are more likely than boys to experience depression. [7,8] To encourage awareness of the condition and lifestyle modification, the graduate program should include in-depth study of the condition as well as counselling for teenagers. Early and precise diagnosis may be essential for PCOS treatment to be effective.

CONCLUSION

Based on the results, it is imperative that young female populations are aware of PCOS to comprehend disease conditions and pursue appropriate treatment to avoid future infertility and the development of other potentially fatal disorders. Ignored cases may lead to a reduced quality of life if appropriate treatment is not received. As such, lowering its incidence as well as its complications is essential. Eating a nutritionally balanced diet that includes all five food groups in moderation, getting regular exercise, getting enough sleep each night, maintaining good mental health, and engaging in regular activities like yoga and walking can all help prevent and treat PCOS.

Sourse of Funding: Self-funding

Ethical Clearance

$\rightarrow$ Prior permission was obtained from the internal ethical committee of Sharda University.

$\rightarrow$ Informed written consent was taken from each participant under the study. Objective of the study was maintained with honesty, privacy confidentiality and anonymity.

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