Original Article

The Knowledge and Awareness on Polycystic Ovarian Syndrome among Lady Health Visitors in Public Health Nursing School Lahore

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ABSTRACT

Polycystic Ovarian Syndrome is a common endocrine condition, rises in adolescent girls and young women during their reproductive years. According to the World Health Organization (WHO), 116 million (3.4%) of women worldwide experienced PCOS in 2012. PCOS increases a woman's risk of type 2 diabetes, cardiovascular disease, infertility, anxiety, and depression, as well as a poor quality of life related to their health. **Objectives:** To assess the knowledge and awareness on polycystic ovarian syndrome among lady health visitors in Public Health Nursing School Lahore. **Methods:** A Descriptive Cross-Sectional study was conducted at Public Health Nursing School in Lahore. A total of 141 participants were recruited through random sampling technique. Lady health visitor (LHV) students of first year and second year between the age group 17 to 30 year were participated in the study. Data analysis was done using SPSS version-25, the most recent release of the Statistical Package for Social Sciences (SPSS). **Results:** Results of the study indicated that majority of participants 114 (80.9 %) were of age ranging from 17-20 years and belongs to belongs to urban areas 75(53.2%). The findings revealed that data was normally distributed as p-value is < 0.05. Results indicated that the total knowledge score of participants regarding PCOS was poor. **Conclusions:** It was shown that the participants knew nothing about PCOS. The participants' understanding of PCOS risk factors, factors connected to PCOS, and consequences from PCOS is noticeably lacking. A successful teaching intervention designed specifically for nurses can greatly improve their understanding of PCOS.

INTRODUCTION

Polycystic Ovarian Syndrome is a common endocrine condition, rises in adolescent girls and young women during their reproductive years[1]. It is a condition in which a woman's hormones are out of balance, causing menstruation irregularities as well as numerous abnormal cysts in enlarged ovaries, which prevents them from producing the typical number of eggs and causes aberrant ovulation, making it difficult to conceive [2]. PCOS is characterized by a buildup of several cysts on the ovaries along with metabolic abnormalities and persistent anovulation. If left untreated, it can eventually result in significant health issues like diabetes and heart disease [3]. PCOS may be present at birth, although symptoms do not appear until adolescence. Additionally, from adolescent through post-menopausal age, the clinical characteristics of this illness may alter [4]. According to ultrasound examination, up to 22% of women in the general population have polycystic ovaries, making PCOS one of the most frequent endocrine disorders affecting women of reproductive age [5]. In general, PCOS prevalence estimates are extremely diverse and range from 2.2% to 26%. According to the World Health Organization (WHO), 116 million (3.4%) women worldwide had PCOS in 2012 (5). Another study found that the estimated prevalence of PCOS was an exceptionally high 53.7%. 40% of women with PCOS experience infertility as the most common reason of anovulatory behaviour [1]. PCOS affects 90% to 95% of anovulatory women who visit infertility clinics. The

prevalence for black women was 7.0%, while research at two major infertility clinics in south Enugu state, Nigeria, found that the prevalence of PCOS was 18.1%. This result of PCOS prevalence is not surprising because PCOS is a real cause of infertility in women. According to estimates, PCOS affects between 6% and 26% of women worldwide [6]. Adolescent girls with PCOS typically have higher-than-normal levels of androgen production in their ovaries, which interferes with ovum formation [7]. The most typical symptoms of PCOS are irregular menstruation, infertility, increased hair growth with a male pattern (for example, on the chest and face), acne, and obesity. The main clinical manifestations that are positively related with PCOS diagnosis in young women were thought to be irregular menstrual cycles. Early detection and treatment of these instances are necessary to prevent related metabolic problems [3]. In Pakistan, there are 16.5 and 25 million adolescents between the ages of 10 and 15 and 15 and 24, respectively [8]. The number of female teenagers between the ages of 10 and 14 and 15 and 19 is 9 million. The remaining one-third of the population lives in rural areas, leaving two-thirds in metropolitan areas. The societal taboos that prevent free discussion of the subject, particularly among the young group, are the main reason why research on teenagers' reproductive concerns remains limited [9]. A paucity of research demonstrates that Pakistanis generally, and adolescents (male and female) in particular, have little access to care for their health difficulties, particularly puberty issues [10]. Research studies in poor nations, such as Pakistan, highlighted the awareness of PCOS in nurses, doctors, and females after marriage. However, no research on the effects of educational interventions in public health nursing programmes at Pakistani academic institutions could be located. In order to determine the effectiveness of an educational intervention programme for female health visitors in preventing PCOS in themselves and others, further research is required. Although much progress has been made in raising clinicians' awareness of polycystic ovarian syndrome, from the standpoint of Pakistan, this issue is still being disregarded.

METHODS

A descriptive cross-sectional study design was used to conduct the study. Simple random sampling technique was used to carry out in a Public Health Nursing School in Lahore. The participants were enrolled in the present academic year, 2020 to 2022, as first- and second-year professionals of lady health visitors. From February 2022 to April 2022, data were gathered throughout a three-month period. With a margin of error of 6% and a sample size calculation of 141 instances, the estimated percentage of

student understanding of PCOs is 15.63% [11]. All the lady health visitor (LHV) students of first year and second year studying, had age between 17- 30year, and tthose willing to attend full educational session on PCOS were included in the study. LHV students had age above 30 year and below 17 years, who were on leave during this period, and student who has already taken educational intervention regarding PCO were excluded from the study. Knowledge Questionnaire was adopted from Sunanda & Naya (2016) [12]. Accordingly, the total score ranged from 0–30, with an overall greater score indicated good knowledge. Based on the modified Bloom's cut-off point, respondents were considered as having good knowledge with 76-100% correct responses, Average Knowledge with 50%–75% correct responses, and poor knowledge with < 50% correct responses. After taking written informed consent from participants, data were collected by researcher through asking multiple choice questions. Questionnaire took almost 20 to 30 minutes for completion. Data analysis were carried out using SPSS version 25.0, the most recent release of the Statistical Package for Social Sciences (SPSS). For participant demographics and knowledge score, frequencies and percentages were computed.

RESULTS

The Public Health Nursing School in Lahore provided the study's sample population, which consisted of 141 lady health visitors. There are two parts to this chapter. Section I of this article discusses demographic characteristics, while Section II discusses understanding about polycystic ovary syndrome. This section showed Demographic Characteristics of participants. Table 1 showed that one hundred and forty-one LHVs who fulfilled the eligibility criteria were recruited into the study. Demographic characteristics including age of participants in year, Education of respondent's father, Education of respondent's mother, and Residence of respondent is presented in tables. Table 1 shows that a total of 141 LHVs participated in study and out of them majority of participants 114 (80.9 %) were of age ranging from 17-20 years and 27(19.1%) were between 21-24 years of age. The Results revealed that majority of respondent's father 63(44.7%) were matric pass, 44(31.2%) were having Primary Education, and 17(12.1%) had Graduation and above level education, and 17(12.1%) had no formal education. The results of Education of respondent's mother showed that among 141 respondents, majority of mothers 49(34.8%) were passed matric, 39(27.7%) had no formal education, 33(23.4%) had primary level education, and 20(14.2%) had graduation and above level education. majority of respondents 75(53.2%) belongs to urban areas.43 (30.5%) have residency in Rural areas and 23(16.3%) lived in

suburban area.

Table 1: Demographic characteristics of participants

Variables	Categories	Frequency (%)
Age	17-20	114(80.9)
	21-24	27(19.1)
Educational Status of Respondents father	Primary Education	44(31.2)
	Matric	63(44.7)
	Graduate and above	17(12.1)
	No Formal Education	17(12.1)
Educational Status of Respondents mother	Primary Education	33(23.4)
	Matric	49(34.8)
	Graduate and above	20(14.2)
	No Formal Education	39(27.7)
Residence	Rural	43(30.5)
	Suburban	23(16.3)
	Urban	75(53.2)

Table 2 results indicated that proportion of correct answers of statement number 1,2,3,4,6,13,16,18,20, and 22 were significantly higher. While remaining statement also showed significant difference of correct responses in knowledge score.

Table 2: Knowledge of lady health visitors regarding polycystic ovarian syndrome

Statements	Knowledge score (Correct information) Frequency (%)
Name of female Gonad homologues to the male testes	78(55.4)
Ovary is located on	85(60.2)
The number of ovary present in female	90(63.8)
Ovarian cyst is	89(65.2)
Polycystic ovary syndrome is known as	53(37.6)
Excessive hair growth	88(62.4)
Sign of PCOS except	57(40.4)
Treatment of PCOS except	35(24.8)
Which makes polycystic ovary syndrome an unlikely diagnosis	65(44)
Increased estrogen level in PCOS increase the risk	46(32.6)
Preventive measures of PCOS Except	50(35.5)
Risk of PCOS	71(50.4)
The main cause of PCOS	83(58.8)
Insulin is produced by	65(46.1)
Insulin resistance means	68(48.2)
Insulin resistance cause	65(46.1)
Hormonal imbalance is caused by	53(37.6)
The signs and symptoms of PCOS	82(58.2)
Hirsutism means	71(50.4)
Endometrial Cancer known as	63(44.7)
In PCOS, ultrasound scan the result show	84(59.6)
Test to determine PCOS	77(54.6)
The main treatment measure of PCOS	40(28.4)
Drug correct the hormonal imbalance in PCOS	26(18.9)
In PCOS patients' surgery	61(43.3)
Treatment of PCOS except	46(32.6)
Use of laparoscopic drilling procedure	58(41.1)
Long-term complication of PCOS	53(37.6)
Primary prevention of PCOS	61(43.3)
Healthy diet to prevent PCOS	71(50.4)

Table 3 indicated that there was majority of participants 64(45.4%) had average knowledge regarding PCOS, 59(41.8%) had poor knowledge and only 18(12.8%) had good knowledge of PCOS.

Table 3: Level of knowledge of lady health visitors

Level of knowledge	Knowledge Score Frequency (%)
Poor Knowledge	59(41.8)
Average Knowledge	64(45.4)
Good Knowledge	18(12.8)

DISCUSSION

This chapter focuses on how the inferences from the current study should be interpreted in the context of earlier research on the subject at hand. A diverse, persistent endocrine condition typically identified in women of reproductive age is polycystic ovarian syndrome (PCOS). PCOS raises the risk for a number of metabolic, reproductive, dermatologic, oncologic, and psychiatric abnormalities [12]. Increasing girls' knowledge of PCOS can aid in early detection, prevention, and information acquisition [10]. Therefore, the goal of this study was to ascertain how a knowledge intervention programme for lady health visitor students affected their knowledge of polycystic ovarian syndrome. This section is broken up into two sections: the socio-demographic features of female health visitors, and the participants' awareness of polycystic ovarian disorder. The present study was conducted on 141 lady health visitor students by using simple random sampling technique. Out of 141, majority of the participants 114(80.9%) were aged between 17 to 20 years. This is supported by a study conducted by Wahane *et al.*, and Maghraby *et al.*, that reported age of majority of participants between 16 to 30 years [13, 14]. Another study conducted in India demonstrated that majority of participants were aged between 18 to 30 years [15]. Majority of girls enrolled in lady health visitors were came after passing their matriculation. Therefore, majority of participants were in adolescent age. The current study has shown that significant percentage (44.7%) of respondents' fathers were passed matric. Consistent with these results Ragina *et al.*, also concluded that fathers of majority participants had matric level education [16]. Pakistan is a developing country and here majority of people had matric level education. The current study also showed that most of the participants' mothers (44.7%) were passed matric and 31.2% had primary level education. Conversely, existing literature reviewed by Sarwar *et al.*, reported that majority of the mothers of participants were having university level

education [17]. The present study has shown that about half of the participants lived in urban areas. This finding is consistent with a study conducted in South India reported that majority (40%) of the participants belongs to urban areas [18]. The majority of participants (41.85%) had poor understanding of PCOS, and just 12.8% of students had strong knowledge, according to the study, which examined the students' knowledge of the condition. Theses study results were supported by Almukhtar who reported that knowledge of participants on polycystic ovarian syndrome was low [6]. Additionally, these findings supported Shukla *et al.,* study, which examined the general PCOS awareness of rural adolescent females [19]. A study from Egypt assessed the knowledge on PCOS among adolescent girls and researchers found enhancement of poor knowledge scores in case of 84% of the students [11]. Similar results were seen in another study, when the majority of participants had inadequate awareness of PCOS [7]. Additionally, Abraham *et al.,* who examined the students' understanding of polycystic ovarian syndrome, provided support for the current study's findings. It shown that the majority of students had insufficient knowledge, whereas 53 (83.3%) of them had acceptable knowledge following the programme [20]. Study conducted by Devi *et al.,* showed that the knowledge scores on PCOS was poor among participants [21]. In addition, a study in south India evaluated nursing students' knowledge and awareness of PCOS and the impact of structured teaching programmes on PCOS. It found that adolescent girls had poor knowledge of PCOS [12]. As same as Sehar in its study which was done to evaluate the knowledge and attitude of school going adolescents regarding PCOS and on reproductive health and reported that participants had moderate level of knowledge and attitude of regarding PCOS and reproductive health [22].

CONCLUSIONS

It was shown that the participants knew nothing about PCOS. The participants' understanding of PCOS risk factors, factors connected to PCOS, and consequences from PCOS is noticeably lacking. The current study determines the knowledge of polycystic ovarian syndrome among lady health visitors in Public Health Nursing School Lahore. Majority of participants had poor knowledge medication and treatment of hormonal imbalance. The study results concluded that majority of lady health visitors had average and poor knowledge regarding polycystic ovarian syndrome.

Authors Contribution

Conceptualization: MFH
Methodology: JK, DYS, FD, MN, FH, RY
Formal analysis: AP, SAR, NB
Writing-review and editing: MFH

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