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Awareness, Prevalence, Attitudes, and Practice of Polycystic Ovarian Syndrome among University Students

Sabira Sultana^{*}, Samina Perveen, Tayyaba Ashraf

Faculty of Medical Science, Department of Eastern Medicine, Government College University Faisalabad, Pakistan

***Corresponding author:** Sabira Sultana, Faculty of Medical Science, Department of Eastern Medicine, Government College University Faisalabad, Pakistan, Email: drsabirachishti12@gmail.com

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1. Abstract

Polycystic ovarian syndrome (PCOS) is the most common female disorder which affects approximately 4-8% of women of reproductive age. It is generally related to hormonal disturbance, emotional, metabolic, and reproductive dysfunction. The study was conducted among students in different departments of Government Collage University Faisalabad (GCUF). The data from 350 female students of age range between 18- 25 years were collected. The objective was to conclude and understand the prevalence of symptoms of PCOS in female students that what percentage of female students suffer from basic related symptoms and to check the percentage of females who are aware of this syndrome. The clinical criterion of the American College of Obstetricians and Gynaecologists (ACOG) for PCOS was used. A questionnaire was designed containing four parts to assess the awareness, prevalence, and attitude of the female student toward polycystic ovarian syndrome and its effect on their normal life. The obtained data were analyzed by following the appropriate statistical method. Results revealed that about 46% of the students knew regarding PCOS whereas 3% were suffering from PCOS. Most frequent symptoms reported were frequent lower back pain, 60%, similarly, about 3 percent of students were suffering from the alteration of voice. Different thoughts exposed misinterpretations related to the polycystic ovarian syndrome. The findings further exposed that the incidence of features of the syndrome is rising day by day but students were not aware and conscious of PCOS even though the different features regarding this syndrome were present in many students. Moreover, it was observed that many women do not discuss with a gynecologist until there is a rigorous or difficult situation that occurred. The study concluded that there is a vital need for awareness programs and education related to PCOS and the issue must be discussed deliberately to prevent various misconceptions.

2. Keywords:

Polycystic ovarian syndrome, PCOS, prevalence, awareness, symptoms

3. Introduction

The most common female syndrome is known as Polycystic Ovarian Syndrome (PCO). The polycystic ovarian syndrome is a state of illness that mostly disturbs the hormonal levels in women [1]. The polycystic ovarian syndrome can affect pituitary hormones including growth hormone, gonadotropin hormone, Adrenocorticotrophic Hormone (ACTH) and can also affect the adrenal and sex hormones, that's why this syndrome can be called multi-organ syndrome [2]. The polycystic ovarian syndrome is classified depending upon ovulatory diseases containing group number two according to World Health Organization. These ovulatory diseases of set number two are considered as HPA union dysfunctions [3]. About 4 to 18 percent of women of child-bearing age are suffering from the polycystic ovarian syndrome. It is associated with metabolic, psychological, and reproductive dysfunctions [4]. Those women that are suffering from polycystic ovarian syndrome considered having highly thickened endometrium

as well as cancer of the endometrium, infertility, obstructive sleep apnoea, or inability to sleep, abnormal glucose metabolism, anxiety, and depression [5]. The exact cause of the polycystic ovarian syndrome is not known. Different studies demonstrate that there are some inborn abnormalities like follicular development and ovarian steroidogenesis that contribute a significant part to PCOS. This syndrome is also associated with an excess of luteinizing hormone, decreases secretion of FSH- follicular stimulating hormone, and continuous increase in gonadotropin-releasing hormone (GnRH) which contribute to ovulatory dysfunction and overproduction of androgen hormones [5]. A transmutation in polycystic ovarian syndrome proteins also correlates with multiple environmental factors and inherited factors. Multiple genes are responsible for the incidence of PCOS [6]. It has been hypothesized that the earlier predisposing gestational factors of polycystic ovarian syndrome constitute disturbed fetal programming in the uterus and birth weight [7]. The incidence of the premenstrual syndrome appears to vary in different countries. About 6.6 percent prevalence rate has been documented in females of the south-eastern university [8].

The prevalence of polycystic ovarian syndrome seems to be lower in Asian countries with a reported incidence rate of 2.4 percent in China [9]. The prevalence rate reported in Sri Lanka is 6.3 percent according to Rotterdam criteria [10]. A polycystic ovarian syndrome is associated with a mental and reproductive disorder and almost 4% to 18% of mature female students are affected by polycystic ovarian syndrome [11] female affected by polycystic ovarian syndrome have an increased risk of infertility, ovarian cancer, skin problems, and psychological problems such as anxiety, depression, and changes in sleep along with mood swings [12]. The complication of the polycystic ovarian syndrome is Hypertension, diabetes mellitus, obesity, cardiovascular disorder, ovarian cancer, skin problems, liver diseases and psychological disorder [13].

Quality of life reduces by depression, obesity, hirsutism, and infertility caused by polycystic ovarian syndrome (PCOS) [14]. Kerchner et al. identified depression in 40 percent of females with polycystic ovarian syndrome (PCOS). The incidence rate of suicide is increased by seven folds in polycystic ovarian syndrome [15-16].

Women suffering from PCOS have a high risk of developing endometrial cancer whereas their risks of developing ovarian and breast cancer are the same as those of females in the overall common population [17]. There are some health significances of polycystic ovarian syndrome including overweight, null parity, and continued unrestrained increase of estrogen that are highly linked with cancer [18-19].

Women with PCOS have a mutual feature of infertility. Usually, infertility is considered as an ovulatory complaint.

Hyperinsulinemia seems to interact with an ovulatory mechanism as well as ovarian steroidogenetic faults. Moreover, insulin resistance plays role in metabolic features of the polycystic ovarian syndrome (PCOS). Even though obesity has a stimulating role, insulin resistance seems to be an essential feature of the polycystic ovarian syndrome, independent of all other associated factors [20].

The vital treatment option for polycystic ovarian syndrome is the lifestyle modifications in those cases in which different risk factors are correlated to stimulate the presentations of the polycystic ovarian syndrome (PCOS) [21-22]. Lifestyle modification is very essential in overweight patients with the polycystic ovarian syndrome. Every woman with polycystic ovarian syndrome can take advantage of a properly balanced diet and consistent exercise. In most programs of dietary involvement, the energy restriction has been forefront while the excellence of diet may also play a major role in polycystic ovarian syndrome [23-24]. To accomplish a long term reduction in weight is the major difficulty in polycystic ovarian syndrome. So additional medical therapies are also necessary. In the management of polycystic ovarian syndrome, there is a stimulating pathophysiological background to sustain the therapeutic benefits of insulin sensitizers including hyperandrogenaemia, metabolic characteristics, and ovulatory functions. Accessible literature delivers acceptance to this whole concept and inspires the addition of insulin sensitizers in the therapeutic management of PCOS. There are two main and most beneficial insulin sensitizers including metformin and thiazolidinediones [25].

We conducted the study to conclude and understand the incidence of various symptoms of the polycystic ovarian syndrome. To assess the percentage of female students between 18 to 23 years in Government College University that is aware of this syndrome. What percentage of the student is hirsute? And what percentage of the student is suffering from oligomenorrhea, amenorrhea, acne, psychological problems, and obesity?

4. Methods and Methods

The current study was carried out among students in different departments of Government College University Faisalabad (GCUF). The protocol and materials utilized in this study are detailed below:

4.1 Study type

The cross-sectional study was carried out on female students of Government College University Faisalabad from February 15, 2020, to April 10, 2020. Students of different age group were selected from different departments (Departments of medical science i.e. Department of eastern medicine and surgery (BEMS), Department of physical therapy (DPT), Department of an Allied Health Professional (AHP), and Master of Public Health (MPH), Department of arts, Department of economics and Department of physics, botany, zoology, chemistry, bioinformatics, and biotechnology. The present study was a survey base trial on female students of Government College University Faisalabad (GCUF).

4.2 Study settings

The sample consisted of a questionnaire that was related to the awareness and prevalence of polycystic ovarian syndrome (PCOS) of different age group female students. The questionnaire was developed in English to simplify data collection. University students joined the survey voluntarily. The questionnaire contained four parts to assess the awareness, prevalence, and behavior of female students toward polycystic ovarian syndrome and its effect on their normal life.

4.3 Sample size

The overall method contained 350 samples of female students. The sample size calculator with a margin of error was 10 percent and the confidence interval was 90 percent.

4.4 Sampling technique

The sampling technique was established on the availability of respondents in a particular range.

4.5 Inclusion criteria

The study was contained all the willing unmarried female students of Government College University Faisalabad (GCUF) included both medical and non-medical living in rural and urban areas from age limit 18 to 25 years.

4.6 Exclusion criteria

In the study, all the psychological (known cases), none willing students, and married students were excluded. Students rather than Government College University Faisalabad (GCUF) and age, less than 18, and more than 25 were also excluded.

4.7 Procedure

A self-developed structure questionnaire was organized according to demand and suitable questions which were added through literature searchers and reformed from already issued studies. Before the accomplishment of the study, the questionnaire was accurately assessed by two experienced teachers and a proficient professor. For assessment of importance, coherent and transparency, 19 students were tested. The question was used for the level of awareness was whether they had ever heard of Polycystic Ovarian Syndrome (PCOS) before.

The questionnaire was also contained questions related to their weight, age, exercise routine, diet, and family history of metabolic disorders such as chronic renal failure, chronic heart diseases, tuberculosis, and diabetes mellitus. Then the data was sorted and compiled and results were obtained by grouping data.

The questionnaire contained seven portions. The first portion was comprised of the personal status-related question for example age, department, and socioeconomic status. In the second portion, students were inquiring about polycystic ovarian syndrome-related symptoms like weight gain, hirsutism or excessive hair growth, nausea,

vomiting, acne or oily skin, and mood swings (aggression, stress, and anxiety), any psychological issues like dizziness or headache. The third part of the study was comprised of questions related to menstrual characteristics like cyclic regularity, length, and duration of flow and cycles per year. In the fourth portion, students were asked about their lifestyle and their dietary habits.

The fifth portion was related to the pattern of hair growth, its presence, and its extent. The sixth portion was comprised of the attitude of students toward polycystic ovarian syndrome (PCOS) and assesses their previous knowledge about polycystic ovarian syndrome (PCOS). In the seventh portion, students were asked about their source of information e.g. doctor, obstetrician, paper, internet, and teacher.

To diagnose polycystic ovarian syndrome, the criteria of the American College of Obstetrician and Gynaecologist (ACOG) for the polycystic ovarian syndrome (PCOS) will be used to evaluate the symptoms like weight gain, hirsutism, and acne. It should be necessary that the patient must be present with obesity, abnormal hair growth, skin problems, and psychological symptoms.

4.8 Data collection tool:

The self-created questionnaire was utilized as a data collection tool. For this purpose face and content, confirmation was conducted by experts of the Faculty of Medical Sciences. The questionnaire was categorized into four domains with the first one including the demographic information of participants. The second portion consisted of different questions related to PCOS knowledge. The third part included questions related to clinical assessment about PCOS prevalence. The last part was comprised of questions related to information sources regarding PCOS.

4.9 Statistical analysis:

Data was analyzed significantly by using IBM Statistical Package for Social Science (SPSS) version 20.0 (IBM SPSS Statistics for Window, Armonk, NY) and also using Microsoft Excel 2016 (Microsoft Corp., Redmond, WA). Findings were presented as frequencies and percentages.

4.10 Duration of Study:

The present study was carried out from February 15, 2020, to April 10, 2020.

4.11 Ethical consideration:

Ethical guiding principles for human investigation were followed accordingly in the study. Study approval was achieved by the research committee from the Department of Eastern Medicine, Faculty of Medical Sciences. Written approval was taken from each contributor before conducting the research.

5. Results

350 students from Government College University, Faisalabad (GCUF) aged from 18-25 years, contributed to current research. Age and locality were taken as two major demographic variables. Two age groups were selected including a first group ranging from 18-21 years of age while the second group included students from 22-25 years of age. Major demographic detail of participants is given in Table 1.

The data obtained from the current survey revealed that 60% of students out of these 350 students, suffered from frequent lower back pain. While 51% of students suffered from mood swings. The prevalence of irregular menstrual cycle or Amenorrhea (no menstrual cycle) was recorded to be about 17%. The incidence of various additional symptoms of PCOS in university students was also evaluated based on the findings of the present study. 49% of students feel weak and tired while 46% of students suffered from hair loss.

Additional symptoms including weight gain, frequent headaches, voice changes, acne, hair loss, oily skin, mood swings, fatigue, and weakness are given in Table 2

The majority of students 46% (n=160) heard about PCOS. Data presented in figure 4.1 indicates that 26% of students revealed that the source of information was other. While Figure 2 explains that 17% of students mentioned the internet as a second source, 14% of students selected people as the third information source, and 11% of students selected hospital as the fourth source. Television was selected by 6% of students being indicating this source as the

smallest percentage.

Television was selected by 6% of students being indicating this source as the smallest percentage whereas 26% of students specified another source for the information of PCOS.

Data collected from PCOS students showed that 11% of their sisters or mothers had related symptoms and they had been examined and diagnosed; data are given in figure 4.3. Whereas data presented in figure 4.4 indicated that a family history of diabetes, endocrine disorders, and high blood pressure was found in 57% of PCOS students.

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Moreover, in response to the question “if they suffered from two or more of these symptoms will they consider visiting a gynecologist?” 3% of respondents said “Yes” whereas 97% said “No” (Table 3)

6. Discussion

The random sampling survey was done on female candidates of Government College University Faisalabad. Students of different age group were selected from different departments (Departments of medical science i.e. Department of eastern medicine and surgery (BEMS), Department of physical therapy (DPT), Department of an allied health professional (AHP), and Master of public health (MPH), bioinformatics and biotechnology. The present study was a survey base trial on female students of Government College University Faisalabad (GCUF).

The overall method contained 350 samples of female students. The sample size calculator with a margin of error was 10 percent and the confidence interval was 90 percent. The study was contained all the willing unmarried female students of Government College University Faisalabad (GCUF) included both medical and non-medical living in rural and urban areas from age limit 18 to 25 years. The sample consisted of a questionnaire that was related to the awareness and prevalence of polycystic ovarian syndrome (PCOS) of different age group female students of Government College University Faisalabad (GCUF), Pakistan.

The population-based features of students are given in Table 1. A total of 350 students were involved in the survey. The age range was involving 18 to 25 years of age while polycystic ovarian syndrome can occur at any childbearing age, from all students in GC University Faisalabad, Pakistan. Of the total 350 students, about 46 % (n=160) were aware of polycystic ovarian syndrome.

In the demographic representation, about 69 percent (n=240 out of total 350) of students belong to 18-21 years of age. While 31 percent (n=110 out of a total 350) students belong to the age group of 22 to 25 years. Similarly, about 57 percent (n=200 out of total 350 students sample) of students belong to the urban areas and 43 percent (n=150 out of 350 sample size) of students belong to the rural areas.

Similar studies related to the incidence as well as awareness of polycystic ovarian syndrome had been done in the past. Correspondingly, Al Bassam et al. (2018) found the prevalence and awareness among female students concerning (PCOS) polycystic ovarian syndrome at Qassim University, Qassim region Saudi Arabia. They found similar demographic characteristics of the different age groups of students between 18 to 25 years. They found that about 16% (n=56) of students were associated with the age group of 18-19 years. While about 32% (n=113) of students belonging to the group between 20-21 years of age. And almost 44% (n=154) of students had under the age group of 22 to 23 years. About 8% (n=27) of students were between the age group of 24-25 years and the total sample of their study was (n=350).

Results related to the prevalence of PCOS symptoms are given in Table.2. According to the data obtained in this study, about 60% (n=210) of the students had frequent lower back pain, 51% (n=180) of female students suffering from emotional disorders, 49% (n=170) suffer from weakness. Also, 46% (n=160) of female students have hair loss.

About 43% (n=150) of students have headaches and dizziness and 37% (n=130) of students suffered from weight gain. About 29% (n=100) of students had oily skin and acne. About 17% (n=60) of students have suffered from the irregular menstrual cycle and 9% (n=30) have hirsutism. And about 3% (n=10) of students had voice changes.

Similar results were found by Al Bassam et al. (2018) regarding the prevalence and awareness of polycystic ovarian syndrome among female students in Qassim University Saudi Arabia. They found that about 74% (n=260 out of 350) students were suffered from hair loss from different body parts such as (abdomen, chin, upper lips), 67%

(n=236) students had been suffered from mood swings (anxiety, depression), 61% (n=213) students had oily skin or acne, similarly, 55% (n=193) of students were suffering from weakness and tiredness, about 46% (n=162) students had frequent headache and dizziness, and 41% (n=144) students suffered from hirsutism, and 40% (n=139) of students had suffered from frequent lower back pain, about 37% (n=128) of students were suffering from the irregular menstrual cycle, others 31 percent (n=107) students were suffered from weight gain and only 8% (n=27) students had voice changes.

About 92.2% (n=416) of students were suffered from an unusual amount of hair growth on different body parts such as (upper lips, chin, abdomen, thighs) or hirsutism. About 89.6% (n=404) of students in their study were found severe acne problems of oily skin. About 86.7% (n=391) of students suffered from anxiety, depression, or mood swings. And almost about 75.6% (n=341) of students were suffering from hair loss especially from the scalp. While 20 percent (n=90) of students were suffered from continuous weight gain.

The majority of students 46% (n=160) heard about Polycystic Ovarian Syndrome (PCOS) as seen from data presented in Figure 1. Whereas, 54% (n=190) of the students had not heard about (PCOS) polycystic ovarian syndrome at all. Correspondingly, Al-Bassam et al. (2018) found the prevalence and awareness regarding PCOS Polycystic Ovarian Syndrome at Qassim University, Saudi Arabia. They found that about 71% of the students (n=248 out of 350 total sample) heard about PCOS-polycystic ovarian syndrome. While about 29% (n=102) of students had not heard about the term polycystic ovarian syndrome.

Fig. 2 describes the data obtained considering the sources of information of the female students on the polycystic ovarian syndrome. About 26% (n=90) of students told that the most common first source was others (mother, sister, cousin, etc.). The second source of information was social media or the internet which was about 17% (n=60). As the internet can provide awareness among women of the polycystic ovarian syndrome.

The third source of information was considered as people selected by students and about 14% (n=50) of students selected it. The fourth source of information about polycystic ovarian syndrome was a hospital and about 11% (n=40) of students selected it. The fifth source was a minimum of about 6% (n=20) and it was included television.

Previously, similar data was obtained by Al Bassam et al. (2018) considering especially the sources of information of the female students of Qassim University Saudi Arabia regarding Polycystic Ovarian Syndrome (PCOS). They found that the most common source of information about polycystic ovarian syndrome mentioned by the students was others /people (mother, sister, cousin) and about 46% of students mentioned it. While about 21 percent of students mentioned the internet as the second most common source of information related to Polycystic Ovarian Syndrome (PCOS). They also found in their study that about only 20 percent of students told about the hospital as a third source of information regarding polycystic ovarian syndrome.

However, the college was the fourth source of information with regards to polycystic ovarian syndrome and it was selected by 11 percent of students. While they found that the least percentage of the students was mentioned TV as a source of information about polycystic ovarian syndrome and it was mentioned by only 1 percent of students.

Data collected from polycystic ovarian syndrome PCOS students showed that 11% of their mothers or sisters also had similar symptoms and they had been investigated and diagnosed, while 89 percent of students mentioned that their mother and sisters had not same symptoms and they not been diagnosed, data given in figure 3. Whereas data presented in figure 4 indicated that 57% of PCOS students had a family history of Diabetes, High blood pressure, or Endocrine disorders (Diagnosed). While about 43 percent of polycystic ovarian syndrome students showed that they had no family history of diabetes, high blood pressure, or Endocrine disorders.

Correspondingly, the same results were found by Al Bassam et al. (2018) regarding the prevalence and awareness of polycystic ovarian syndrome among female students of Qassim University Saudi Arabia. They found that about 29 percent of students had mentioned that their mother and sisters also had similar symptoms of the polycystic ovarian syndrome and they had been investigated from PCOS.

While about 71 percent of students had mentioned that their mother and sisters had not the similar symptoms and had not been diagnosed previously with the polycystic ovarian syndrome. However, they found that 53 percent of students had a family history of Diabetes, High blood pressure, or Endocrine disorders while 47 percent of students had no family history of any endocrine disorders, diabetes, or high blood pressure.

Additionally, when asked from the students "If you suffer from 2 or more of these symptoms of the polycystic

ovarian syndrome, are you going to visit a gynecologist?" then about 3% of students said "Yes" and 97% of students said "No" as mentioned in Table 3. Some reasons of those students who said No were due to their family, unconsciousness or unawareness of the symptoms, symptoms are not very serious, symptoms don't need of any treatment or gynecologist, no need of a consultation to doctors, some students said that maybe there is another reason of these symptoms. Some said that it is not a big issue to be discussed. Some students belonging to rural areas have no availability of gynecologists. Some students have already managed these symptoms. Some students consider it is normal.

Similarly, relative results were found by Al Bassam et al. (2018) following the prevalence of polycystic ovarian syndrome among female students of Al Qassim University Saudi Arabia. When they asked the students "If you suffered from one or more of these symptoms are you going to visit the gynecologist"? About 44% of students said yes and 56% said no. They asked those students who said No, to give some reasons related to the question.

Some of the students mentioned that these symptoms were not very serious, some asked that they were afraid, some said that they were busy and ignored it, some of them said that they were not required any gynecologists for this matter, some said that they were suffering from other diseases and some of them mentioned that symptoms were occurred due to stress and some said that they do not care and they do not like hospitals.

The students who had been investigated or diagnosed with this syndrome include about 60% (n=210) frequent lower back pain as the most common symptom. While voice change is the least common symptom in polycystic ovarian syndrome and it is about 3% (n=10). The most common symptoms were included such as 60% (n=210) frequent lower back pain, 51% (n=180) Mood swings, 49% (n=170) feel weakness and tiredness, about 46% (n=160) hair loss, 43% (n=150) frequent headache and dizziness, and 37% (n=130) weight gain, about 29% (n=100) oily skin or acne and 17% (n=60) irregular menstrual cycle. These symptoms are considered as the main symptoms of polycystic ovarian syndrome in the present study.

Similarly, Haq et al. (2017) had also found the incidence and awareness of polycystic ovarian syndrome (PCOS) in female students of Different Public Universities of Quetta Pakistan. They found a similar demographic representation of students of different age group between 18 to 26 years. They found that 45.7% (n=206 out of total 500 samples) of students were associated with the age group of 18 to 20 years. About 50% (n=226) of students were under the age group of 21 to 23 years. And 4.2% (n=19) of students had age group related to 24-26 years. Also, about 28.8% (n=130) of students belonged to the rural areas while 71.2 (n=321) students were from urban areas. They also found the prevalence and awareness related to the polycystic ovarian syndrome in female students of different public universities of Quetta, Pakistan. They found that about 100 percent (n=451 out of 500 total sample) of students had heard about the term Polycystic Ovarian Syndrome (PCOS). While in the same way of other studies about 9.8 percent (n=49) students of the polycystic ovarian syndrome had not heard about this polycystic ovarian syndrome term at all.

Similarly regarding awareness of polycystic ovarian syndrome among female students of public universities of Quetta, Pakistan. They found that about 8% of students had told that their mother and sisters had a history of polycystic ovarian syndrome and also had similar symptoms of PCOS and they had been clinically investigated for polycystic ovarian syndrome. While about 83.8% of students mentioned that their mother and sisters had not any type of history of the polycystic ovarian syndrome and had not been diagnosed. They also found that about 30.2% of students had a family history of Diabetes while 62.7% had not any type of family history of Diabetes, High blood pressure, and any Endocrine disorders as well.

The fundamental treatment option for polycystic ovarian syndrome is lifestyle modifications in those cases in which different risk factors are correlated to stimulate the presentations of Polycystic Ovarian Syndrome (PCOS). The main objective of these types of modifications is to decrease the weight and maintain reduced body weight for the long-term. Improvement of insulin resistance through weight loss with help of exercise and diet seems to contribute to the development of metabolic, clinical, and hormonal factors of Polycystic Ovarian Syndrome (PCOS).

6. Conclusion

46% of students had conscious regarding polycystic ovarian syndrome. 3% of females were suffering from polycystic ovarian syndrome (PCOS). The most common symptoms reported were frequent lower back pain, 60%,

similarly, about 3 percent of students were suffering from the alteration of voice. Different thought exposed misinterpretations related to the polycystic ovarian syndrome, so there should be knowledge regarding this syndrome.

The result of the survey exposed the incidence of features of polycystic ovarian syndrome are rising day by day but students were not aware and conscious of Polycystic Ovarian Syndrome (PCOS) even though the different features regarding this syndrome were present in many students. Therefore, few teaching projects or schemes have to be prepared to make available information related to these types of disorders in women. Moreover, a survey shows many women do not discuss with a gynecologist until there is a rigorous or difficult situation occurred. Consequently, women must have to talk to any gynecologist or doctor for health and fitness.

The last prominent matter was about the contemplation of the society about the polycystic ovarian syndrome. The most common answer suggested that the people needed awareness concerning polycystic ovarian syndrome and also most people said that it is a significant issue to be discussed because there were misconceptions about the polycystic ovarian syndrome.

7. Conflict of interest

The author has no conflict of interest

Table: 1: Demographic details of participants.

Variables		Number	Percentage
Age	18-21	240	69%
	22-25	110	31%
Locality	Urban	200	57%
	Rural	150	43%

Table: 2: Incidence of PCOS symptoms among GCUF students.

Symptoms	Number of students	Percentage
Hair Loss	160	46%
Mood swings	180	51%
Oily Skin and acne	100	29%
Weakness and tiredness	170	49%
Dizziness and frequent headache	150	43%
Hirsutism	30	9%
Frequent lower back pain	210	60%
Irregular menstrual cycle	160	17%

Wight gain	130	37%
Voice changes	10	3%

Table: 3: Participants response for question about visiting the gynaecologist.

Variables	Number of Students	Percentage
Yes	10	3%
No	340	97%

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