Perception of Non-Medical Faculties Female Students regarding Polycystic Ovary Syndrome

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Abstract

Background: Polycystic ovary syndrome is a multifaceted condition regarded as a hyperandrogenic disorder associated with menstrual irregularities, small cysts on one or both ovaries, chronic oligo-anovulation and hirsutism. **Aim of study:** Was to assess perception of non-medical faculties' female students regarding polycystic ovary syndrome. **Research design:** A descriptive research design was utilized to conduct this study. **Setting:** The study was conducted at Faculty of Arts, Commerce and Education. **Sample:** A purposive sample, included 370 female students. **Tools:** Three tools were used to conduct this study. **Tool I:** A structured interviewing questionnaire which included 2 parts: **Part I: A)** It was concerned with demographic characteristics of female students. **B)** It was concerned with menstrual and obstetric history of female students. **Part II:** It was concerned with knowledge of female students regarding polycystic ovary syndrome. **Tool II:** It was concerned with attitude of female students regarding polycystic ovary syndrome. **Tool III:** The modified Ferriman-Gallwey scale to assess hirsutism of female students. **Results:** 50.3% of studied female students had normal weight. While, 50.8% of them had mild hirsutism. **Conclusion:** Approximately more than half of studied female students had average total knowledge level regarding polycystic ovary syndrome, while more than three fifth of them had negative total attitude level regarding polycystic ovary syndrome. Also, there was a positive correlation between female students' total knowledge level and their total attitude level regarding polycystic ovary syndrome. **Recommendation:** Perform health educational program for non- medical faculties female students to improve perception about polycystic ovary syndrome.

Keywords: Perception, Non-Medical Faculties, Female Students, Polycystic Ovary Syndrome.

Introduction

Perception is the process by which adolescents detect and interpret information from the external world through senses. It involves organizing and interpreting sensory input to give meaning. This complex process is influenced by various factors including past experiences, cultural background, and current emotional state. Non-medical faculties female students often hold misconceptions about Polycystic Ovary Syndrome (PCOS). While many are aware of PCOS, understanding is often incomplete, leading to stigmatization and anxiety. Common misconceptions include believing PCOS is solely a fertility issue, associating it with weight gain, and overlooking its psychological impact. These misconceptions highlight the need for comprehensive education on PCOS to dispel myths, promote understanding and ultimately reduce the stigma associated with this condition **(Dember et al., 2024; Masood et al., 2024).**

Adolescence is a crucial stage of life that bridges the gap between childhood and adulthood, bringing about significant biological, physical, psychological, and social changes. Adolescence is a critical phase in a young female life that necessitates a unique approach and careful attention. The transitional period exposes female adolescents to a wide range of challenges, including overall well-being, reproductive health, sexual topics, and psychological issues. During adolescence young females prepare themselves for future motherhood, as female adolescents play a direct role in shaping the next generation. Among the various issues faced by this age group, menstrual irregularities are the most common complaint. The primary cause of prolonged irregular menstruation is polycystic ovary syndrome, which is the most prevalent endocrine disorder with long-term health implications **(Agarwal et al., 2024).**

Polycystic ovary syndrome is the most common endocrinal disorder that affects 5.0-10.0% of the female students of reproductive-age worldwide, and was known as Stein-Leventhal syndrome, named after the first researcher who identified this disorder. It has a wide spectrum of manifestations such as irregular menstruation, hyperandrogenism, appearance of 12 or more cysts/follicles within the range of 2-9 mm in ultrasound, insulin resistance, acne, alopecia, skin tags, and truncal fat **(Goyal & Kruthiventi, 2024).**

The exact known cause of PCOS has not been defined. However, there are specific influences that could predispose female students to it as genetic factors, environmental pollutants, diet and lifestyle choices, and obesity. The pathophysiology of PCOS has been linked to genes and mutations that impact ovaries, like the genes signaling steroidogenesis. Environmental pollutants like heavy metals and insecticides affect health and reproduction. Diet and lifestyle choices could also be responsible for a role in the pathophysiology of PCOS. High-calorie diets in conjunction with sedentary lifestyles could exacerbate. Obesity exacerbates PCOS not only through insulin resistance but also by increasing androgen production and causing hyperandrogenism **(Coleman, 2024).**

The diagnosis of PCOS in adolescents is challenging because the pathological features of PCOS often coincide with normal physiologic pubertal events. According to Rotterdam criteria presence of at least two out of the following criteria **firstly:** clinical/biochemical hyperandrogenism, **secondly:** ovulatory dysfunction, and **thirdly:** Polycystic Ovary Morphology (PCOM) with gynecological ultrasound or elevated anti-müllerian hormone levels are required, after exclusion of differential diagnoses. In adolescents, both ovulatory dysfunction and hyperandrogenism are mandatory for PCOS diagnosis (**Forslund et al., 2024).**

The first-line treatment for PCOS is lifestyle management including weight reduction through diet and exercise. It has been shown that a 5.0% decrease in body weight can improve symptoms associated with PCOS such as hirsutism and acne, all the way to improve laboratory values including insulin and testosterone levels. Oral contraceptive pills are frequently used to treat PCOS as they suppress the hypothalamic pituitary ovarian axis, thus improving hyperandrogenism and menstrual irregularities. Metformin is commonly prescribed because it increases peripheral insulin sensitivity and decreases hepatic glucose production **(Nortz, 2024).**

Community Health Nurse (CHN) plays a pivotal role in supporting female students with PCOS by providing comprehensive care, education, and advocacy. CHN acts as vital source of information, educating female students about PCOS symptoms, potential complications, and the importance of early diagnosis and treatment. CHN offers personalized advice on lifestyle modifications, including diet and exercise to help manage symptoms and reduce the risk of associated health issues like diabetes and cardiovascular diseases. Also, CHN facilitates access to healthcare services, assisting female students in navigating the healthcare system and ensuring female students receive appropriate medical attention and follow-up care **(Ali, 2024).**

Significance of the study

The World Health Organization (WHO) estimated that 116 million females worldwide (3.4%) are affected by PCOS. Prevalence of PCOS varies greatly across the world, from 2.2% to as high as 26.0%. While up to 70.0% of PCOS suffering females go undiagnosed. In Egypt, 6.6% of adolescent females have PCOS, and 12.6% of them are at high risk. Early detection and treatment of PCOS in female adolescents can help in avoiding the syndrome's long-term reproductive, cardio metabolic, and emotional effects in the future. There is a need to a strategic planning for regular screening of Egyptian female students and applying a screening program for PCOS to decrease the long-term health consequences linked to PCOS. The first step in controlling PCOS is to raise awareness and get a proper diagnosis **(Abdelnaem et al., 2023).** So that, the researchers found that it is important to conduct the study to assess perception of non-medical faculties female students regarding polycystic ovary syndrome.

Aim of the study

This study aimed to assess perception of non-medical faculties' female students regarding polycystic ovary syndrome.

Research questions

1. What is the knowledge of non-medical faculties female students regarding polycystic ovary syndrome?
2. What is the attitude of non-medical faculties female students regarding polycystic ovary syndrome?
3. Is there a relation between demographic characteristic of non-medical faculties female students, their knowledge and attitude regarding polycystic ovary syndrome?
4. Is there a correlation between total knowledge and total attitude of non-medical faculties female students regarding polycystic ovary syndrome?

Subject and methods

Research design

A descriptive research design was utilized to conduct this study.

Setting

Benha University consists of 16 Faculties, 4 Medical Faculties and 12non-Medical Faculties; the study was conducted on 25.0% of non-Medical Faculties (3Faculties) that selected randomly (each Faculty was assigned a unique identifier number from 1 to 12, slips of papers with identifier numbers were prepared and thoroughly mixed in a container, 3 slips were randomly drawn from the container to represent 25.0% of Non-Medical Faculties) and namely as Faculty of Arts, Faculty of Commerce and Faculty of Education.

Sampling

A purposive sample, included 370 female students that were selected according to the following criteria:

- In first academic year.
- Regular attendance.
- Accept to participate in the study.

Tools for Data Collection: Three tools were used for data collection.

Tool I: A structured interviewing questionnaire: It was developed by the researchers, based on reviewing related literatures **(Abdelnaem et al., 2023), (Ali et al., 2023) & (Bekhatroh et al., 2023)**. It consisted of two parts:

Part I: A. Demographic characteristics of studied female students. It included 12 closed ended questions.

B. Menstrual and obstetric history of the studied female students: It included of 9 closed ended questions.

Part II: Knowledge of non-medical faculties female students regarding polycystic ovary syndrome. It included 9 closed ended questions.

Scoring system of students' knowledge

The scoring system for non-medical faculties female students' knowledge was calculated as follows 2 score for correct complete answer, and 1 score for correct incomplete answer, while 0 score for don't know. For each area of knowledge, the score of the questions was summed-up and the total divided by the number of the questions, which converted into a percent score. The total knowledge scores =16 points, which further categorized:

- **Good knowledge** → if the total score of knowledge was ≥75% (≥12points).
- **Average knowledge** → if the total score equals 50<75% (8<12 points).
- **Poor knowledge** → if the total score was < 50% (< 8 points).

Tool II: Attitude of non-medical faculties female students regarding polycystic ovary syndrome: Using likert scale adapted from **(Rizvi et al., 2023)** and was modified by the researchers. It was consisted of 19 items.

Scoring system of students' attitude

Scoring system is graded according to the items of questionnaire. The scoring system for non-medical faculties female students' attitude was calculated as 2 scores for always, and 1 scores for sometimes while, 0 for never. For each area of attitude, the score of the questions was summed-up and the total divided by the number of the questions, which converted into a percent score. The total attitude scores = 38 points which further categorized:

- **Positive attitude** → if the total score of attitude was ≥60% (≥23 points).
- **Negative attitude**→ if the score was ≤ 60% (≤ 23 points).

Tool III: The modified Ferriman-Gallwey (mFG) scale to assess hirsutism of non-medical faculties female students. It was adopted from **(Ferriman & Gallwey, 1961)**. It included 9 closed ended questions.

Scoring system of modified Ferriman-Gallwey scale

According to the mFG scoring system, each region was separately evaluated in terms of the rate of terminal hair growth and scored as 0 score for absence of terminal hair, 1 score for mild hair growth, 2 score for moderate hair growth, 3 score for abundant hair growth and 4 score for very abundant hair growth. The score of the questions was summed-up. The total of the modified Ferriman-Gallwey scores =36 which further categorized:

- **No hirsutism** → if the total score of mFG was < 8.
- **Mild hirsutism** → if the total score of mFG was 8-16.
- **moderate hirsutism** → if the total score of mFG was 17-24.
- **Sever hirsutism** → if the total of mFG score was > 24.

Tools validity

The tools validity was done by five members of Faculty's Staff Nursing-Benha University Experts from Community Health

Nursing Specialties who reviewed the tools for clarity, comprehensiveness, applicability and easiness for implementation and according to their opinion, minor modifications carried out.

Tools Reliability

The reliability was done by Cronbach's Alpha coefficient test that developed by Lee Cronbach in 1951 which revealed that each of the three tools consisted of relatively homogeneous items as indicated by the moderate to high reliability of each tool. The internal consistency of knowledge was 0.849, attitude was 0.745 and the modified Ferriman-Gallwey scale was 0.861.

Ethical consideration

Approval and an informed consent were obtained from Research Ethical Committee at Faculty of Nursing Benha University to conduct the study, oral and written consent from all study participants was obtained after explaining the purpose of the study to gain their trust and cooperation. Each student had a choice to continue or withdraw from the study. Privacy and confidentiality were assured. Ethics, values, culture, and beliefs were respected. The data collected was stored in a confidential manner.

Pilot study

The pilot study was carried out in the beginning of February 2024 to ascertain the clarity and applicability of the study tools representing 10% (30 study sample) of total study participants 370 study sample. It had also served in estimating the time needed for filling the questionnaires. It ranged between 20-30 minutes to assess perception of non-medical faculties female students regarding polycystic ovary syndrome. No modification was done, so the pilot study included in the study main subjects.

Field work

This study was conducted at Faculty of Arts, Faculty of Commerce and Faculty of Education at Benha University after getting of the necessary official permission from the Dean of the Faculty of Nursing, Benha University to the Deans of the previously mentioned settings to conduct the study. The process of data collection took about two months started at mid-February 2024 to the mid of April 2024. The process of data collection was three days per week (Sunday, Tuesday and Thursday) from 9 am to 1 pm to collect data from non-medical faculties female students. The average time needed for the sheet was around 20-30 minutes for each student, the average number interviewed at non-medical faculties was 15-16 student/day depending on their responses of the interviewers.

Statistical analysis

All data collected were organized, tabulated and analyzed by using the Statistical Package for Social Science (SPSS version 21), which was used frequencies and percentages for qualitative descriptive data, and chi-square coefficient x^2 was used for relation and Pearson correlation tests, and mean and standard deviation was used for quantitative data. The observation difference and associations were considered as the following: (p-value):

- Highly statistically significant P< 0.001**.
- Statistically significant P< 0.05*.
- Not significant P > 0.05.

Results

Table (1): Shows that; 50.0% of non-medical faculties female students aged 19 years old with Mean age 19.52±1.22, 55.4% of them were from rural areas and 97.8% of them were singles. In addition; 38.4% of female students' mothers had secondary education and 88.1% of their fathers were working, while 67.0% of their mothers weren't working. Regarding family type, 62.2%of studied female students had nuclear

family and 61.1% of them had enough income.

Figure (1): Shows that; 57.0% of studied female students had average total knowledge levels regarding polycystic ovary syndrome and 24.9% of them had poor total knowledge levels, while 18.1% of them had good total knowledge levels regarding polycystic ovary syndrome.

Figure (2): Illustrates that; 63.0% of studied female students had negative total attitude regarding polycystic ovary syndrome while, 37.0% of them had positive total attitude.

Figure (3): Illustrates that; 50.8% of studied female students had mild hirsutism, and 22.2% of them had moderate hirsutism, while 10.0% of them had sever hirsutism.

Table (2): Shows that; there were a highly statistically significant relation between female students' total knowledge scores and their mothers' education and family type, and there was statistically significant relation between students' total knowledge level and their marital status. While there were no statistical significant relation between female students' total knowledge scores and their age, collage, place of residence, their mothers' occupation and income.

Table (3): Shows that; there were a highly statistically significant relation between female students' total attitude scores and their age, their mothers' occupation and family type, and there was a statistically significant relation between students' total attitude level and their place of residence, marital status, and their mothers' education. While there were no statistical relation between female students' total attitude scores, their collage and income.

Table (4): Shows that; there was a positive correlation between female students' total knowledge levels and their total attitude levels regarding polycystic ovary syndrome.

Table (1): Frequency distribution of studied female students regarding their demographic characteristics, (n=370).

Demographic characteristics	No.	%
Age / years:		
≤ 18 years	109	29.5
19 years	**185**	**50.0**
20 years or more	76	20.5
Mean ±SD	**19.52±1.22**	
Place of Residence:		
Urban	165	44.6
Rural	**205**	**55.4**
Marital status:		
Married	8	2.2
Single	**362**	**97.8**
Mother education:		
Can't read or write	14	3.8
Basic education	133	35.9
Secondary education	**142**	**38.4**
University education or more	81	21.9
Father occupation:		
Working	**326**	**88.1**
Not working	٤٤	١١.٩
Mother occupation:		
Working	122	33.0
Not working	**248**	**67.0**
Family type:		
Nuclear family	**230**	**62.2**
Extended family	140	37.8
Income:		
Enough and saving	103	27.8
Enough	**226**	**61.1**
Not enough	41	11.1

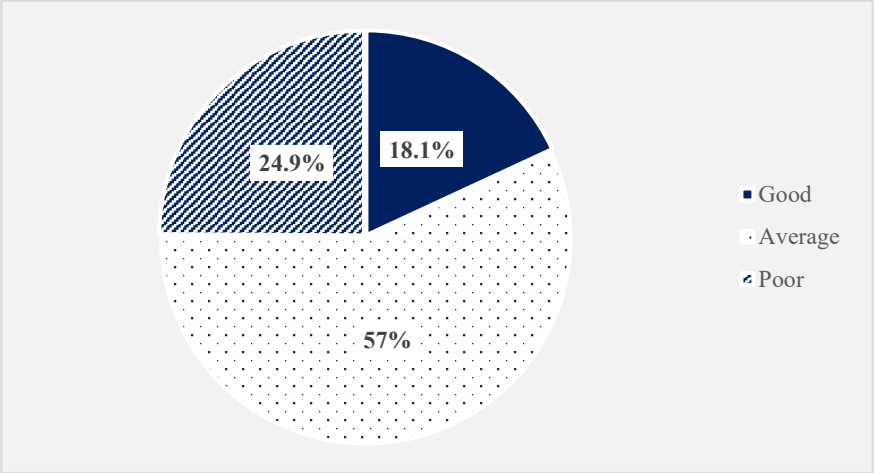

Figure (1): Percentage distribution of studied female students regarding their total knowledge levels about polycystic ovary syndrome, (n=370).

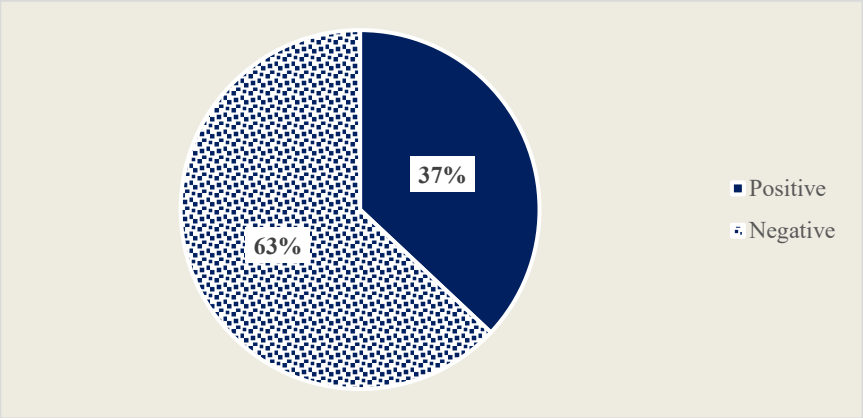

Figure (2): Percentage distribution of studied female students regarding their total attitude levels regarding polycystic ovary syndrome, (n=370).

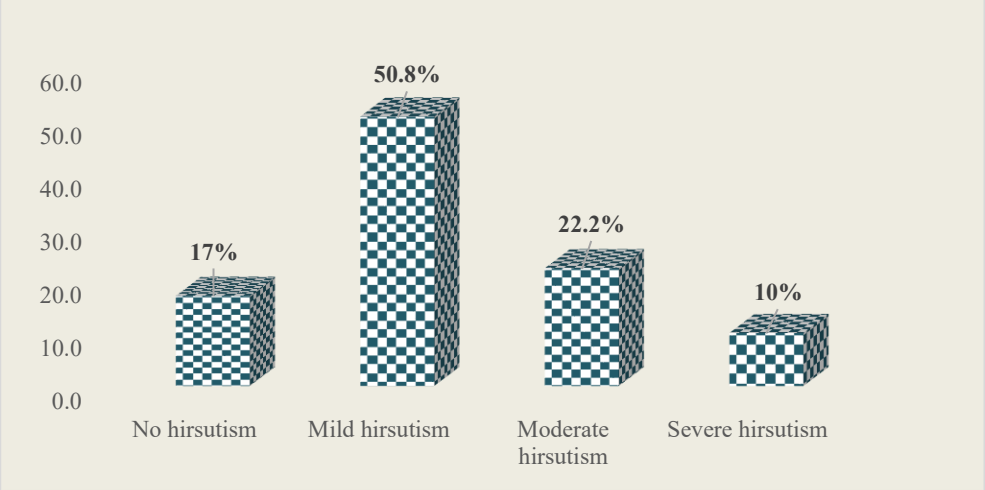

Figure (3): Percentage distribution of studied female students regarding their total Ferriman-Gallwey scale level, (n=370).

Table (2): Statistically relation between total knowledge scores and demographic characteristics of studied female students regarding polycystic ovary syndrome, (n=370).

Demographic characteristic	Total knowledge scores						X^2	p-value
	Good (n=67)		Average (n=211)		Poor (n=92)			
	No.	%	No.	%	No.	%		
Age / years								
≤18	26	38.8	62	29.4	21	22.8	7.532	0.11
19	25	37.3	111	52.6	49	53.3		
20 or more	16	23.9	38	18.0	22	23.9		
College								
Faculty of Arts	26	38.8	98	46.4	38	41.3	1.755	0.781
Faculty of Education	27	40.3	79	37.4	37	40.2		
Faculty of Commerce	14	20.9	34	16.2	17	18.5		
Place of Residence								
Urban	29	43.3	94	44.5	42	45.7	0.088	0.957
Rural	38	56.7	117	55.5	50	54.3		
Marital status								
Married	1	1.5	1	0.5	6	6.5	11.55	.004*
Single	66	98.5	210	99.5	86	93.5		
Mother education								
Can't read or write	1	1.5	2	0.9	11	12.0	37.49	.000**
Basic education	24	35.9	80	37.9	29	31.5		
Secondary education	21	31.3	78	37.0	43	46.7		
University education or more	21	31.3	51	24.2	9	9.8		
Mother occupation								
Working	20	29.9	70	33.2	32	34.8	0.436	0.804
Not working	47	70.1	141	66.8	60	65.2		
Family type								
Nuclear family	29	43.3	129	61.1	72	78.3	20.38	.000**
Extended family	38	56.7	82	38.9	20	21.7		
Income								
Enough and saving	19	28.4	57	27.0	27	29.3	2.471	0.65
Enough	42	62.6	126	59.7	58	63.1		
Not enough	6	9.0	28	13.3	7	7.6		

**Highly Statistically Significant * Statistically Significant

Table (3): Statistically relation between total attitude scores and demographic characteristics of studied female students regarding polycystic ovary syndrome, (n=370).

Demographic characteristic	Total attitude scores				X^2	p-value
	Negative (n=233)		Positive (n=137)			
	No.	%	No.	%		
Age / years						
≤18	85	36.5	24	17.5	26.57	.000**
19	117	50.2	68	49.7		
20 or more	31	13.3	45	32.8		
College						
Faculty of Arts	105	45.1	57	41.6	0.803	0.669
Faculty of Education	90	38.6	53	38.7		
Faculty of Commerce	38	16.3	27	19.7		
Place of Residence						
Urban	132	56.7	93	67.9	4.566	.033*
Rural	101	43.3	44	32.1		
Marital status						
Married	8	3.4	0	0.0	4.808	.028*
Single	225	96.6	137	100.0		
Mother education						
Can't read or write	13	5.6	1	0.7	10.45	.015*
Basic education	90	38.6	43	31.4		
Secondary education	89	38.2	53	38.7		
University education or more	41	17.6	40	29.2		
Mother occupation						
Working	59	25.3	63	46.0	16.66	.000**
Not working	174	74.7	74	54.0		
Family type:						
Nuclear family	177	76.0	53	38.7	50.97	.000**
Extended family	56	24.0	84	61.3		
Income						
Enough and saving	66	28.3	37	27.0	0.409	0.815
Enough	143	61.4	83	60.6		
Not enough	24	10.3	17	12.4		

**Highly Statistically Significant * Statistically Significant

Table (4): Correlation between total knowledge and total attitude of studied female students regarding polycystic ovary syndrome, (n=370).

Total attitude levels	Total knowledge levels	
	r.	p-value
	.843	0.000**

**Highly Statistically Significant

Discussion

Polycystic ovary syndrome is the most common endocrine disorder in reproductive-age women. The prevalence ranges from 4.0% to 26.0% depending on the population studied. Although the etiology of PCOS is not completely understood yet, PCOS is considered a multifactorial disorder with various genetic, metabolic, endocrine, and environmental abnormalities. PCOS patients can present a wide range of signs and symptoms as irregular menstrual cycles, hyperandrogenism, hirsutism, obesity, acne and mood swing. PCOS impacts a females' life, starting in utero, manifesting clinically at puberty and continuing through reproductive years with ongoing menstrual disorders, infertility, and obesity. Therefore, early diagnosis is crucial to reduce the risks of potential long-term complications **(Mirza et al., 2022).**

Regarding demographic characteristics of the studied female students, the present study findings showed that; half of the studied students aged 19 years old with mean age was 19.52±1.22. This finding came consistent with the study performed by **Ali et al. (2023),** who studied "Lifestyle and reproductive health knowledge in female nursing students about polycystic ovary syndrome, in Egypt", (n=200), and found that; 49.0% of participants were aged 19 years old with mean age was 18.57± 0.572. On the other hand, this finding disagreed with the study performed by **Alshdaifat et al. (2021),** who studied "Awareness of polycystic ovary syndrome: A university students' perspective, in Jordan", (n=1182), and found that, 36.1% of students ranged in age from 20 to 21 years old. This might be due to the criteria of sample selection.

Regarding students' marital status and family monthly income, this study showed that; most of students were single, and slightly more than three fifth of them had enough family monthly income. These findings were in the same line with the study performed by **Rizvi et al.(2023),** who studied " Knowledge, attitude, and perceptions about polycystic ovarian syndrome, and its determinants among Pakistani undergraduate students, in Pakistan", (n=646), and found that; 92.1% of students were single, and 50.8% of them had enough family monthly income. This might be due to females were at the first year of collage and their education is often a priority than marriage.

Regarding total knowledge level of the studied female students, the current study clarified that; more than half of studied female students had average total knowledge levels regarding polycystic ovary syndrome, while quarter of them had poor total knowledge levels and slightly less than one fifth of them had good total knowledge levels regarding polycystic ovary syndrome. These findings were congruent with the study performed by **Teh (2023),** who studied " Knowledge and attitude towards polycystic ovary syndrome among female undergraduate students in a private University in Kajang, in Malaysia", (n=373), and found that; 40.8% of the

participants demonstrated average total knowledge level regarding polycystic ovary syndrome, 38.6% of the participants have poor total knowledge and 20.6% of them had good total knowledge.

Also, these findings disagreed with the study performed by **Maghraby et al. (2022),** who studied "Assessment of female nursing student's knowledge regarding polycystic ovarian syndrome at South Valley University, in Egypt ", (n=260), and found that; 53.4% of students had good total knowledge level regarding polycystic ovary syndrome, 45.4% of them had average total knowledge level regarding polycystic ovary syndrome while, 1.4% of them had poor total knowledge level regarding polycystic ovary syndrome. This discrepancy might be due to the differences in the composition of the study participants. The current study encompassed female students from non-medical faculties, whereas the participants from the previous study were female students from medical faculties.

Regarding total attitude level of the studied female students, the current study showed that; more than three fifth of studied female students had negative total attitude towards polycystic ovary syndrome while, more than one third of them had positive total attitude. This study findings were consistent with the study performed by **Ali (2024),** who studied " Awareness of females regarding polycystic ovarian syndrome at outpatient clinics in Minya health insurance hospital, in Egypt", (n=100), and found that; 52.0% of studied females had negative total attitude towards polycystic ovary syndrome and 48.0% of them had positive total attitude. This might be due to cultural contexts and societal norms that can contribute to misunderstandings about polycystic ovary syndrome, further deepening the existing stigma and leading to negative attitudes towards polycystic ovary syndrome. Therefore, distinct socio-cultural contexts and life experiences can significantly influence females' attitude towards polycystic ovary syndrome, resulting in differing viewpoints on the matter.

Concerning female students' modified Ferriman-Gallwey (mFG) score for hirsutism, the current study illustrated that; half of students had mild hirsutism, slightly more than one fifth of them had moderate hirsutism, while tenth of them had sever hirsutism and slightly less than one fifth of them didn't had hirsutism. These study findings were in the same line with the study performed by **Abdelnaem et al. (2023),** who found that; 65.0% of studied students had mild hirsutism, 14.8% of them had moderate hirsutism, while 15.6% of them didn't had hirsutism and the 4.6% of them had sever hirsutism. This might be due to mild hirsutism can often be caused by slightly higher levels of androgens (male hormones like testosterone), which can vary naturally among young adolescents. This mild increase can lead to some hair growth, but not enough to cause severe symptoms in most cases.

As regard to statistically relations between female students' demographic characteristics and their total knowledge levels regarding polycystic ovary syndrome, this study showed that; there was a highly statistically significant relation between students' total knowledge levels and their mothers' education. This study finding was inconsistent with the study performed by **Salama & Elbana (2019),** who studied "Effect of self-instructional module on awareness of polycystic ovarian syndrome among adolescent students, in Egypt", (n=175), and found that; there was statistically significant relation between studied female students' total knowledge and their mothers' education. This might be due to mothers often serve as primary role models for their daughters and educated mothers are more likely to be informed about health issues,

including polycystic ovary syndrome. They can pass this knowledge on to their daughters, fostering greater awareness and understanding of the condition.

Concerning statistically relations between the female students' demographic characteristics and their total attitude levels regarding polycystic ovary syndrome, this study showed that; there were a highly statistically significant relation between students' total attitude levels and their age, their mothers' occupation, and there were statistically significant relation between students' total attitude levels and their place of residence and their mothers' education. These study findings were in the same line with the study performed by **Mohamed et al. (2022) [b],** who studied " Knowledge and attitude of late adolescent girls regarding polycystic ovarian syndrome, in Egypt ", (n=239), and found that; there were a highly statistically significant relation between students' total attitude levels and their age, residence, mother' education and mother' occupation. This might be due to age affects awareness and experience, younger females potentially having less knowledge than older women. A mothers' occupation and education level impact access to information and resources, promoting positive attitudes. Place of residence, whether urban or rural, can dictate cultural norms and access to healthcare, influencing perceptions of polycystic ovary syndrome. Together, these factors shape how females understand and respond to polycystic ovary syndrome, highlighting the importance of education and support in fostering informed attitudes.

Regarding correlation between the students' total knowledge and their total attitude levels about polycystic ovary syndrome, this study showed that; there was a positive correlation between total students' knowledge levels and total attitude levels regarding polycystic ovary syndrome $p< 0.001$. This finding came congruent with the study performed by **Maghraby et al. (2022),** who found that; there was statistically significant positive correlation between total students' knowledge level and total attitude regarding polycystic ovary syndrome $p< 0.001$.

Also, this finding agreed with the study performed by **Teh (2023),** who found that; there was highly statistically significant positive direct relationship between students' knowledge regarding polycystic ovary syndrome and their attitude level. In the researchers point of view this might be due to knowledge play an important role in changing attitude which in turn enhancing perception of the students regarding polycystic ovary syndrome.

Conclusion

The study showed that approximately more than half of studied female students had average total knowledge level regarding polycystic ovary syndrome and slightly less than quarter of them had poor total knowledge level, while less than one fifth of them had good total knowledge level regarding polycystic ovary syndrome. In addition, more than three fifth of studied female students had negative total attitude regarding polycystic ovary syndrome, while more than one third of them had positive total attitude. Also, there was a highly statistically significant relation between students' total knowledge level and their mothers' education and family type, and there was a statistically significant relation between students' total knowledge level and their marital status.

Additionally, there was a highly statistically significant relation between students' total attitude level and their age, their mothers' occupation and family type, and there were statistically significant relations between students' total attitude level and their place of residence, marital status, and their mothers' education. Moreover, there was a positive

correlation between female students' total knowledge level and their total attitude level regarding polycystic ovary syndrome.

Recommendations

- Perform health educational program for non-medical faculties female students to improve perception about PCOS.
- Apply further research in large sample and other setting for generalization.

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إدراك طالبات الكليات الغير طبية حول متلازمة تكيس المبيض

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تعد متلازمة تكيس المبيض من أكثر الاضطرابات شيوعاً بين النساء والفتيات في سن الانجاب،حيث تتميز بفرط الأندروجينية، خلل التبويض، وتكيس المبايض، مما يجعل متلازمة تكيس المبايض واحدة من اضطرابات الغدد الصماء الأكثر شيوعًا. لذلك هدفت الدراسة الى تقييم إدراك طالبات الكليات الغير طبية حول متلازمة تكيس المبيض. حيث تتكون جامعة بنها من ١٢ كلية غير طبية وتم إجراء الدراسة على ٢٥٪ من هذه الكليات (٣ كليات) تم اختيارهم عشوائياً وهم كلية الآداب وكلية التجارة وكلية التربية. وكانت عينة غرضية تضمنت ٣٧٠ طالبة من الكليات المذكورة سابقاً. وقد كشفت النتائج أن57.0% من طالبات الكليات الغير طبية لديهن مستوى متوسط من المعلومات حول متلازمة تكيس المبايض بينما ٦٣,٠٪ لديهن إتجاهات سلبية تجاة متلازمة تكيس المبايض وايضا ٥٠,٨٪ من الطالبات كان لديهم شعرانية خفيفة. كما أوضحت الدراسة أن هناك علاقة ارتباطية ايجابية بين المعرفة الكلية للطالبات وإتجاهاتهن تجاه متلازمة تكيس المبيض. كما اوصت الدراسة أنه يجب تطوير وتنفيذ برنامج تثقيفي صحي لطالبات الكليات الغير طبية لتحسين وتحديث معلوماتهن حول متلازمة تكيس المبيض.