



Perception and Attitude of Women of Reproductive Age Group towards Polycystic Ovarian Syndrome (PCOS) and Its Effect on ABO Blood Group in Rivers State, Nigeria.

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ABSTRACT

Background: Polycystic ovarian syndrome (PCOS) simply refers to the presence of small and painless cysts in the ovaries. It remains a public health concern of women in reproductive age. Despite the fact that its prevalence is global, it has been found that the perception of the patients and their attitudes towards its existence varies from one geographical location to another. The study therefore investigated the perception of women of reproductive age group in Rivers State of polycystic ovarian syndrome and their attitude towards the condition as well as its effect on ABO blood group.

Methods: This study was a cross-sectional study conducted amongst a sample of 120 PCOS women with age ranging from 15years to 50 years to evaluate their perceptions of the PCOS condition and their attitudes towards the condition. A structured questionnaire was used to collect data from the respondents.

Results: The results showed that the respondents have a wrong perception of and a negative attitude towards the PCOS condition, as majority of them were greatly worried about their infertility state, their inability to lose weight, their menstrual irregularities and their excess body hair. It was also found that majority of the women with PCOS belong to blood group O while the least number were of blood group A.

Conclusions: It was therefore concluded that the women in this study generally have a negative attitude and a wrong perception of PCOS and that PCOS is mostly prevalent among blood group O women.

INTRODUCTION

Polycystic ovarian syndrome (PCOS) is a hormonal disorder causing enlarged ovaries with small cysts on the outer edges or many small, fluid-filled sacs growing inside the ovaries. It is said to be the most common cause of infertility in women.^[1] In addition to infertility, the rates of co morbidities have also been significantly higher in women with PCOS. Again, PCOS has been associated with obesity and other metabolic disorders.^[2] Most studies have focused more in determining the prevalence of PCOS among women of Nigeria.^[3] Only a few have attempted to assess the perception and attitude of women towards the condition in the south – south region of Nigeria.^[4] There is therefore the need to carry out a cross-sectional survey to evaluate the perception of and attitude of women of reproductive age group towards PCOS in Rivers State.

MATERIALS AND METHODS

This study was a descriptive cross-sectional survey. Interviewer-administered questionnaires were used to obtain information from one hundred and twenty (120) respondents in some health facilities in Port Harcourt, Rivers State to evaluate their perceptions and attitudes towards polycystic ovarian syndrome (PCOS) and its effect on ABO blood group. The study sample included 120 women suffering from polycystic ovarian syndrome (PCOS) of age 15-50years, attending the selected health facilities in Obio-Akpor Local Government Area in Rivers State. The exclusion criteria include the women suffering from polycystic ovarian syndrome (PCOS) but are not willing to participate in the study. Also men attending the selected health facilities were excluded from the study. Finally, girls younger than 15years and women older than 50years were also excluded from the study.

A Serially numbered interviewer-administered questionnaire was used in obtaining data for this study. The instrument was divided into three sections to obtain the data for this study. The first section (Section A) contains questions on the socio-demographic characteristics of the respondents, including their ABO and Rhesus blood groups; the second section (Section B) contains questions on the perception of the respondents to PCOS while the third section (Section C) contains questions on the attitude of the respondents towards PCOS. The data were collected by the researcher aided by some other research assistants who were recruited and trained prior to the time of data collection. The benefits of the study were explained to the respondents. Assurance was also given to the respondents that the information about them will be

handled with an utmost confidentiality. Permission to conduct the study was sought and obtained from the University of Port Harcourt Ethical Committee and the health facilities. Consent was sought and obtained from the respondents before the commencement of the interview. The confidentiality of all respondents was guaranteed by excluding the use of identifiers such as names, address and other information that can reveal the identity of the research participants. After the questionnaires are filled, the researcher and research assistants checked for completeness and errors before leaving the health facility.

The responses of the respondents were analyzed using Statistical Package for Social Sciences (IBM SPSS) version 20.0.

RESULTS

Table 1: Distribution of Respondents by Socio-Demographic characteristics

Variables	Frequency (N=120)	Percentage (%)
State of Origin		
Abia	34	28.3
Bayelsa	6	5.0
Delta	10	8.3
Rivers	48	40.0
Others	22	18.3
Religion		
Christianity	96	80.0
Islam	16	13.3
Traditional	8	6.7
Others	0	0
Family History		
Menstrual problems	70	58.3
Obesity	40	33.3
PCOS	10	8.3
Blood group		
A ⁺	11	9.2
A ⁻	5	4.2
B ⁺	22	18.3
B ⁻	10	8.3
AB ⁺	8	6.7
AB ⁻	4	3.3
O ⁺	48	40
O ⁻	12	10

Table 2: Perception of Respondents towards PCOS

Variables	Agree		Disagree	
	Frequency	Percentage	Frequency	Percentage
My Genetic makeup increases my risk of having PCOS	34	28.3	86	71.7
Certain Environmental factors can increase my risk of having PCOS	20	16.7	100	83.3
If I lose/reduce weight it would help in restoring ovulation (monthly release of mature egg from the ovaries)	70	58.3	50	41.7
I think miscarriage can be as a result of PCOS	80	66.7	40	33.3
I think my having PCOS can lead to Menstrual irregularities	78	65.0	42	35.0
I think having PCOS is responsible for my Mood/psychological disorders	84	70.0	36	30.0
I think having PCOS leads to excess/abnormal hair growth of a masculine pattern	90	75.0	30	25.0
I feel Polycystic Ovarian Syndrome is a health problem which majorly affect young females	86	71.7	34	28.3
I feel Polycystic Ovarian Syndrome is a health problem which majorly affect females of reproductive age	78	65.0	42	35.0
I feel Polycystic Ovarian Syndrome is a health problem which majorly affect elderly women who have passed the period of monthly menstrual cycle	30	25.0	90	75.0
Polycystic Ovarian Syndrome and its feature can be controlled with me making healthy lifestyle choices alone	40	33.3	80	66.7
I feel PCOS is a cancerous type of disease	54	45.0	66	55.0
PCOS can increase my risk of womb cancer	42	35.0	78	65.0
I think PCOS (Polycystic Ovarian Syndrome) makes me more prone to depression and psychological disorders than other women	96	80.0	24	20.0

Table 3: Attitude of the Respondents towards PCOS

Variables	Agree		Disagree	
	Frequency	Percentage	Frequency	Percentage
I'm concerned about being overweight	88	73.3	32	26.7
I Feel frustrated trying to lose weight	86	71.7	34	28.3
I feel embarrassed of excess body hair	80	66.7	40	33.3
I feel sad because of infertility	90	75.0	30	25.0
I feel a lack of control over PCOS	52	43.3	68	56.7
I'm afraid of not having children	80	66.7	40	33.3
I have low self-esteem having PCOS	78	65.0	42	35.0
I am moody as a result of having PCOS	74	61.7	46	38.3
I am depressed having PCOS	90	75.0	30	25.0
I think I have difficulties staying at an ideal weight	82	68.3	38	31.7
I am sad with the growth of visible body hair	86	71.7	34	28.3
I am sad with the growth of visible hair on face	90	75.0	30	25.0
I am depressed and anxious	87	72.5	33	27.5

DISCUSSION

Distribution of Respondents by Socio-Demographic Characteristics

Concerning the state of origin of the respondents, majority of them (40.0%) were from Rivers State, followed by Abia State (28.3%) while the least number of them were from Delta State (8.3%). When request was made about the family history of the respondents, most of them (58.3%) confessed of having menstrual problems in their family medical history, 33.3 confessed to belong to a family with obesity as a medical history while 8.3% agreed that PCOS is found in their family lineage. Regarding the relationship between the weight of the respondents and their tendencies of developing PCOS, Overweight or obesity is said to affect approximately 60-80% of PCOS patients.^[5] PCOS is associated with overweight or obesity, mainly abdominal adiposity; approximately 80% of patients with PCOS are either overweight or obese.^[6] It has been found that the majority of women with PCOS (38%-88%) are either overweight or obese.^[7] Data from the Northern Finland Birth Cohort (NFBC) 1966 shows a significant association between body mass index (BMI) and features of PCOS at all ages.^[8] Furthermore, modest weight-loss (around 5%) often results in clinically meaningful improvements in the reproductive, hyper androgenism and metabolic features of PCOS.^[9] It has been found that in obese women with PCOS, there are often features like hirsutism, menstrual irregularities, and fertility problems that amalgamate with the already complex interlinks between obesity and mental and emotional functioning.

In terms of religion all the respondents practice one form of religion or the other. A vast majority of the respondents were Christians (80%), about 13% of them reported to be Muslims while only 6.7% confessed to practice African traditional religion. Religion in this part of the world undoubtedly plays a very significant role in the belief system, perception and attitude of practitioners. Health professionals therefore need to be very sensitive to the religious and cultural background of their patients in order to provide the best medical support.

Relationship between PCOS and ABO blood group of the Respondents

Regarding their blood groups, 50.0% of the respondents were of blood group O (40.0% were O⁺ while 10.0% were O⁻), 26.6% of them were of blood group B (18.3% were B⁺ while 8.3% were B⁻), 10% of them were of blood group AB (6.7% were AB⁺ while 3.3% were AB⁻), while 13.4% of them had blood group A (9.2% were A⁺ while 4.2% were A⁻). This result suggests that 'O' positive females are more prone to PCOS. The first description of the Human blood group system was published by Landsteiner in 1900, in an attempt to understand the unpredictability of haemolytic reaction resulting from

early attempts at transfusion.^[1] Presently, the International society of blood transfusion (ISBT) recognizes 285 blood group antigens. In Humans, among these, ABO system is the most important blood group system, followed by Rh.^[1]

This finding corroborates with the result obtained by other researchers. A study carried out to establish a correlation among polycystic ovary syndrome, blood group and diet among Indian women, revealed that the highest risk of PCOS was observed in females with blood group 'O' positive followed by 'B' positive who were on mixed diet and used to consume alcohol.^[1] The study also showed that Rh negative individuals didn't show any association with PCOS. There is increasing evidence that blood group substances play a significant role in the causation of a disease and in the protective mechanism against it. Another study conducted by a group of researchers showed a significant positive association with blood group A and negative association with blood group O in myocardial infarction, a significant positive association with all the blood groups except for blood group O, in valvulo-pathic diseases, a positive association with A phenotype and negative with Bin arterial hypertension, in males only and no association of ABO blood groups and congenital heart diseases.^[10] The present study therefore revealed that women with blood group 'O' positive have the highest risk of developing PCOS, followed by women of blood group 'B' positive.

Perception of the Respondents towards PCOS

Few of the respondents (28.3%) perceived that their genetic makeup increased their risk of having PCOS. Other respondents (83.3%) disagreed that certain environmental factors increased their risk of having PCOS while 16.7% agreed. Most of the respondents (58.3%) agreed that if they lose/reduced weight it would help in restoring ovulation. Majority of the respondents (66.7%) agreed that miscarriage can be as a result of PCOS. Most of the respondents (65.0%) agreed that PCOS can lead to menstrual irregularities. A large number of the respondents (33.3%) agreed that Polycystic Ovarian Syndrome and its feature can be controlled with by making healthy lifestyle choices alone. Only 25.0% of the respondents agreed that Polycystic Ovarian Syndrome is a health problem which majorly affects elderly women who have passed the period of monthly menstrual cycle. Majority (65.0%) of the respondents felt that Polycystic Ovarian Syndrome is a health problem which majorly affects females of reproductive age while 75.0% of them agreed that having PCOS can lead to excess/abnormal hair growth of a masculine pattern.

The respondents in this study therefore showed varying perceptions about PCOS. This is in line with several studies. In this study participants perceived being in poorer state of health than other non-PCOS patients since they are diagnosed with PCOS. Some other studies had earlier reported associations of PCOS

with reduced quality of life measures such as experiencing isolation, physical problems.^[11, 12] In a study conducted among adolescent respondents, those with PCOS reported experiencing a range of negative outcomes compared with their peers without PCOS.^[13] Other perceptions observed in this study also align with the general literature. In one cross-sectional and self-reported study on 177 women with PCOS and 109 healthy controls, scores for anxiety, depression, and negative body image were significantly higher in the women with PCOS.^[14] Body image and self-worth were also found to be predictors of anxiety and depression (regardless of PCOS status), and time taken to diagnose PCOS was associated with poor psychological functioning.^[14] In another cross-sectional study on 50 patients with PCOS and 41 healthy controls, women with PCOS had significantly higher depression and anxiety scores when compared with the controls.^[15] Interestingly, however, temperament and character were equivalent between PCOS and control groups.^[15]

Attitude of the Respondents towards PCOS

Most of the respondents (73.3%) are concerned about being overweight; 86% of them feel frustrated, trying to lose weight while 82% of them confessed having difficulties staying at an ideal weight. Regarding their states of infertility as a result of the PCOS condition, 90% of them feel bad about their condition and 80% of them are afraid of not being able to have children of their own. Their sense of self-worth was similarly impacted negatively as 78% of them confessed to have a low self-esteem, 90% said they are depressed, 87% said they are both depressed and anxious while 74% confessed their moody states as a result of their PCOS condition. Majority of the respondents therefore demonstrated a negative attitude and outlook to life. The PCOS condition has significantly reduced the self-esteem and confidence of the some of the women and has also negatively affected their behaviors. Some of the women now restrict their eating, start obsessing over food or stop spending time with friends. A number of research studies have discovered that women with PCOS are less satisfied when it comes to their sex lives. Other researchers suggested that this attitude will negatively impact on their relationships.

CONCLUSIONS

From the results of this study, it can be concluded that patients suffering from PCOS generally live in a state of worry and depression with a consequent reduction in their life quality. PCOS tend to be more predominant among blood group O respondents and least prevalent among blood group A individuals. Finally,

ETHICAL APPROVAL

Ethical approval was secured by the authors from the ethics committee of the University of Port Harcourt

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

AUTHOR'S CONTRIBUTION

Author Orijii Eunice Ibiye conceived the study, designed the protocol, distributed the questionnaires and contributed in the manuscript writing while author Ojeka Sunday Ogbu assisted in the distribution of the questionnaires and contributed in the manuscript writing. Finally, author Zabbey Victor Zigabelbari performed the statistical analysis, data interpretation and also contributed in the manuscript writing. All authors read through and approved the final manuscript.

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