The Effect of Polycystic Ovarian Syndrome on the Physical Status of Women in Reproductive Age

أثر متلازمة المبيض المتعدد الاكياس على الحالة الجسمية للنساء في سن الانجاب

Azhar H. Ali, MSc.*
Rabe'a M. Ali, PhD**

* **Academic Nurse, Al-Yarmouk Teaching Hospital, Ministry of Health**
** **Assistant Professor, Maternal and Child Health Nursing Department, College of Nursing, University of Baghdad, rabea_ali@ymail.com**

المستخلص:

الاهداف : لتقييم تأثير الحالة الجسمية لمتلازمة المبيض المتعدد الاكياس على النساء في سن الإنجاب لمعرفة العلاقة بين متلازمة المبيض المتعدد الأكياس والصحة الجسمية للمرأة(حب الشباب ،الشعرانية ،زيادة الوزن ، عدم انتظام الحيض)و التعرف على علاقة الحالة الجسمية لمتلازمة المبيض المتعدد الأكياس وبعض الخصائص الاجتماعية الديمغرافية (العمر ،المهنة ،السمنة)والخصائص الانجابية(الحمل ،الولادة ، الإسقاط ،انتظام الدورة الشهرية).

المنهجية:دراسة تحليلية وصفية وقد اختيرت عينة غير احتمالية (غرضيه) شملت (١٠٠) امرأة يعانون من متلازمة المبيض المتعدد الأكياس في سن الانجاب وتم جمع العينة من استشاريات العقم في ثلاث مستشفيات في مدينة بغداد والتي تشمل مستشفى اليرموك التعليمي ، مستشفى بغداد التعليمي ، ومستشفى كمال السامرائي / مركز الخصوبة وعلاج العقم وأطفال الأنابيب في قطاعي الكرخ والرصافة. الدراسة نفذت في الفترة من ٢ كانون الثاني إلى ٣٠ نيسان ٢٠١٣.واستخدمت الاستبانة كأداة لجمع البيانات ولتحقيق الهدف من الدراسة وتتألف من جزئيين ،وتتضمن الجزء الاول على ١-الخصائص الاجتماعية الديموغرافية ،٢-معلومات الانجابية ،٣- معلومات حول انتظام الدورة الشهرية ٤-و التاريخ الطبي والامراض الوراثية السابقة والجزء الثاني يتضمن الاسئلة المتعلقة بالهرمونات والحالة الجسمية لنساء العينة .تم تحديد الثبات والمصداقية لاستمارة الاستبيان من خلال اجراء دراسة تجريبية لاختبار مصداقية الاستبيان والمحتوى ،و أجريت صحة من خلال ٢١ من الخبراء كما اجري تحليل البيانات من خلال تطبيق الإحصاء الوصفي و الاستدلالي.

النتائج : كشفت النتائج بأن (٨٣%)من النساء في المجموعة الدراسية كانت اعمارهم تتراوح بين(٢٠-٣٤)سنه و(٨٩%) كانت ربة بيت و(٧٧%) كانت من خريجات الابتدائية وان(٦٦%)كانت تعاني من الوضع الاجتماعي والاقتصادي المنخفض و(٩٩%)كانت تعاني من العقم و(٦٧%) ويكون عمرها عند اول دورة شهرية لها هو(١٢)سنه وان(٨٨%)تعاني من عدم انتظام الحيض و(٨٧%)تتراوح مدة الحيض لديها من(٢-٧) ايام ، و(٥١%) تعاني من الم شديد اثناء الحيض و(٣٠%)تعاني من المبيض المتعدد الأكياس الوراثي بالإضافة إلى أن نسبة الأخوات المصابات خلال الدراسة تبينت انها(٢٢%)

التوصيات : أوصت الدراسة استحداث برامج ودورات توعية الخاصة بمرض متلازمة المبيض المتعدد الاكياس للنساء المصابات لغرض معرفة كيفية التعامل مع المرض وكذلك كيفيه الوقاية من مضاعفاته ،استحداث دورات للممرضين وخاصة المتواجدين في مراكز العقم لتوعيتهم وإيصال المعلومات الحديثة عن كل ما هو جديد من بحوث وطرق علاج وكيفية التعامل مع المريض.

Abstract

Objectives: To Assess the Effect of Physical Status of Polycystic Ovarian Syndrome on Women in Reproductive Age, To Find out the Relationship Between Polycystic Ovarian Syndrome and Women's Physical Health (Acne , Hirsutism , Weight Gain , Irregular Menstrual Period),&To Identify the Association of Physical Status to polycystic ovarian syndrome and Some Socio Demographic Characteristic (Age ,Occupation & Obesity), and Reproductive Characteristic(Gravida ,Para ,Abortion &Menstrual Regularity).

Methodology :a descriptive analytical study was conduct on Non-probability (purposive sample) of (100)women who suffering from polycystic ovarian syndrome in reproductive age in infertility counseling from three hospitals at Baghdad city which include al- yarmouk teaching hospital ,Baghdad teaching hospital , and Kamal Al-Samaraee Hospital/ fertility and IVF at al-karck and al- Russafa sectors . Study implemented for the period of 2nd January 2013 to 30April 2013. A questionnaire was used as a tool of data collection to fulfill with objective of the study and consisted of two parts, including part I 1-socio-demographic characteristic 2- a reproductive information, 3-menstrual cycle information& 4-Previous medical history. And part II includes questions about hormonal and physical status of polycystic ovarian syndrome symptoms to women samples. A pilot study was carried out to test the reliability of the questionnaire and content, and validity was carried out through the 21 experts. Descriptive and inferential statistical analyses were used to analyze the data.

Results: the results revealed that (83%) of the women in the study group were between the ages of (20-34) years 89%) were housewives, (77%) were primary school graduates and (66%) were suffering from low socio-economic status, (99%) were suffering from infertility, (88%) suffer from irregular menstrual cycle, (87%) The duration of the menstrual cycle has a (2-7) days, and (51%) suffer from severe pain during menstruation ,(30%) suffer from polycystic ovary syndrome in addition to the genetic percentage sisters infected during the study identified it (22%).

Recommendations: The study recommended the development of programs and awareness sessions for disease polycystic ovarian syndrome for women living with for the purpose of learn how to deal with the disease, as well as how to prevent complications, the development of courses for nurses, especially present in the centers of infertility awareness and deliver new information about what's new research and methods of treatment and how to deal with patient.

Keywords: Effect, Physical Status, Polycystic Ovarian Syndrome (PCOS), Women and Reproductive Age

Introduction:

A polycystic ovary has an abnormally large number of developing eggs visible near its surface, looking like many small cysts or a string of pearls. Polycystic ovarian syndrome is the most common hormonal disorder in women worldwide with prevalence estimates between 4%-8% but as high as 25% in some population [(1)].

Polycystic ovarian syndrome (PCOS) characterize-ed by menstrual disturbances, clinical and biochemical manifestations of hyperandrogenism and polycystic ovaries [(2)]. The detrimental and widespread effects of PCOS on the physiology and metabolism of the body have led to its recognition as a metabolic syndrome with detectable abnormalities, such as insulin resistance, hyperinsulinemia, obesity, dyslipide-mia [decreased high-density lipoprotein (HDL) cholesterol and hypertriglyceridemia] and hypertension that culminate in serious long-term consequences, such as increased risk of development of type 2 diabetes mellitus, endometrial hyperplasia and coronary artery disease [(3)] .In addition to the traditional PCOS symptoms, women with PCOS are also more likely to suffer from auto-immune or inflamma-tion related diseases such as arthritis, Irritable Bowel Syndrome(IBS), thyroid disorders, or even asthma[(4)].

Objective: To Assess the Effect of Physical Status of Polycystic Ovarian Syndrome on Women in Reproductive Age, To Find out the Relationship Between Polycystic Ovarian Syndrome and Women's Physical Health (Acne , Hirsutism , Weight Gain , Irregular Menstrual Period),& To Identify the Association of Physical Status to polycystic ovarian syndrome and Some Socio Demographic Characteristic (Age ,Occupation &Obesity), and Reproductive Characteristic (Gravida ,Para ,Abortion& Menstrual Regularity).

Methodology: a descriptive analytical study was conduct on Non-probability (purposive sample) of (100)women who suffering from polycystic ovarian syndrome in reproductive age in infertility counseling from three hospitals at Baghdad city which include al- Yarmouk Teaching Hospital ,Baghdad Teaching Hospital , and Kamal Al-Samaraee Hospital/ fertility and IVF at al-karck and al- Russafa sectors . Study implemented for the period of 2nd January 2013 to 30April 2013. A questionnaire was used as a tool of data collection to fulfill with objective of the study and consisted of two parts, including part I 1-socio-demographiccharacteristic2-a reproductive infor-mation, 3-menstrual cycle information& 4-Previous medical history. And part II includes questions about hormonal and physical status of polycystic ovarian syndrome symptoms to women samples. A pilot study was carried out to test the reliability of the questionnaire and content, and validity was carried out through the 21 experts. Descriptive and inferential statistical analyses were used to analyze the data.

Results:

Table 1. Distribution of Socio-Demographical Characteristics variables with Comparison Significant

Socio-Demographics	Groups	Freq.	Percentage	Cum. Percentage
Age Groups	< 20 yrs.	5	5	5
	20 - 24 yrs.	25	25	30
	25 - 29 yrs.	31	31	61
	30 - 34 yrs.	27	27	88
	35 - 39 yrs.	9	9	97
	40 ≥ yrs.	3	3	100
	$\bar{x} \mp S.D$	27.81 ∓ 5.70 (yrs.)		
Occupation	Teacher worker	4	4	4
	Government Employee	5	5	9
	Housewife	89	89	98

Table 1. Continues

	Others mentioned	**2**	**2**	**100**
Education Level	**Illiterate**	**8**	**8**	**8**
	Reads and Writes	**17**	**17**	**25**
	Primary school graduate	**36**	**36**	**61**
	Intermediate school graduate	**16**	**16**	**77**
	Secondary school graduate	**11**	**11**	**88**
	College graduate	**11**	**11**	**99**
	Master and more	**1**	**1**	**100**

Freq: Frequency. Cum: Cumulative, $\bar{x}$=Mean, SD=Standard Deviation

Table (1) shows that relative to women's age groups, the majority (31%)of the sample were reported at the range (20 – 34) years. old and they are accounted (83.0%),women's occupation, the most of them were housewife and they are accounted (89.0%),regarding educational levels most of the studied sample were low levels, (77.0%) primary school graduation.

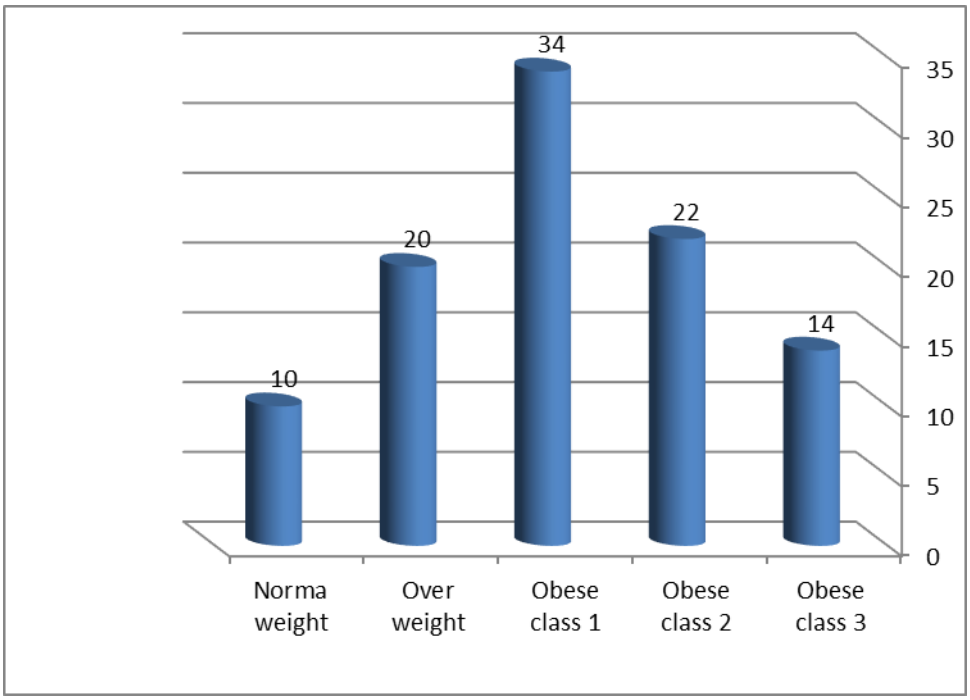

Figure 1. Bar Charts for the distribution of study sample according to Body Mass Index (BMI).

This figure Shows that the study finding regarding body mass index (BMI) reported highest percentage 34(34%)of women were obese , and the lowest percentage (10%) were in normal weight . While 90% of the left over sample fall under the categories of overweight and obesity

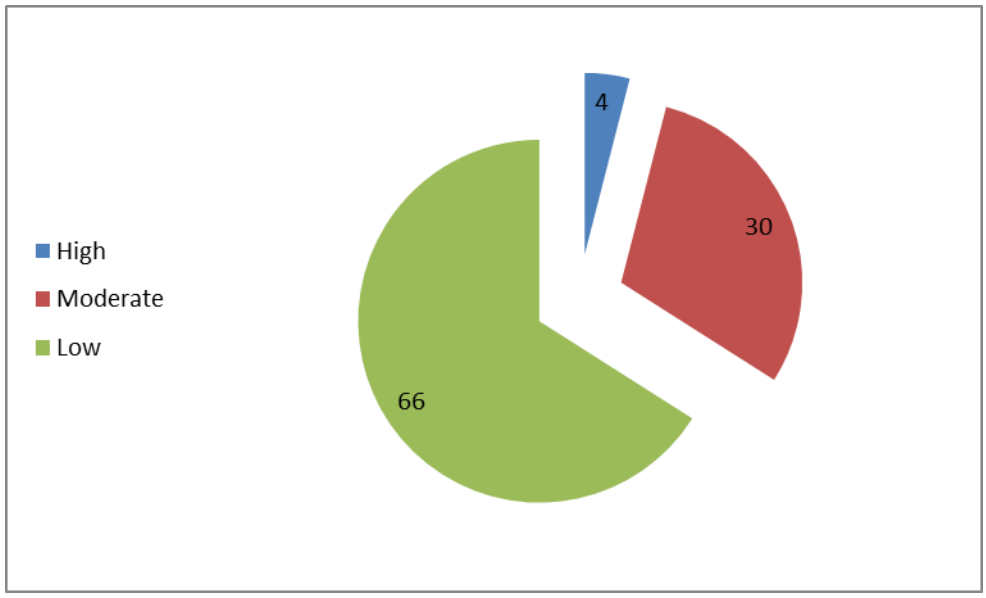

Figure 2. Pie chart for the distribution of study sample according to Socioeconomic Status

The vast majority of the study sample is within Low socio-economic status and accounted for (66.0%).

Table 2. Distribution of study sample according to Menstrual Cycle Characteristics Parameters with Comparison Significant

Information about the Menstrual Cycle	Groups	Freq.	Percentage	Cum. Percentage	C.S. (*) P-value
Age at Menarche	10 -	6	6	6	χ^2= 98.000 P=0.000 HS
	12 -	67	67	73	
	14 -	19	19	92	
	16 - 18	8	8	100	
Menstrual Cycle Regularity	Regular	12	12	12	Binomial P=0.000 (HS)
	Irregular	88	88	100	
Duration of Menstrual Period	Less than 2 days	2	2	2	χ^2= 130.00 P=0.000 HS
	2-7 days	87	87	89	
	8 days or more	11	11	100	
The amount of the menstrual cycle	Normal Flow	17	17	17	χ^2= 10.000 P=0.019 S
	Low flow	18	18	35	
	Medium flow	36	36	71	
	Heavy flow	29	29	100	
The severity of the pain associated with the menstrual cycle	Mild	29	29	29	χ^2= 15.260 P=0.000 HS
	Moderate	20	20	49	
	Severe	51	51	100	

Freq: Frequency, Cum: Cumulative.χ2: Chi-Squared Test. C.S: Combative Significant. P: Probability level. HS: Highly Significant,S: Significant

Table (2) shows that relative to women's age at menarche, the majority of the sample were reported at (12 years) and they are accounted (67.0%),the samples of women's whom had irregular cycle among total sample were reported (88.0%),duration of menstrual period, the majority of the sample were reported (2-7)days and they are accounted (87.0%),the majority of the sample their severity of the pain with the menstrual cycle were " Severe " and accounted 51%.

Table 3. Distribution of study sample according to Information about the Family History with Comparison Significant

Information about the Family History	Groups	Freq.	Percentage	Cum. Percentage	C.S. (*) P-value
Is there a problem in the ovaries within the family, especially the mothers side	Yes	26	26	26	Binomial P=0.000 (HS)
	No	74	74	100	
A member of your family complain of infertility	Yes	32	32	32	Binomial P=0.000 (HS)
	No	68	68	100	
Your family has a problem in regularity of menstrual cycle and especially from the mother's side	Yes	30	30	30	Binomial P=0.000 (HS)
	No	70	70	100	
Did your family complain of obesity, especially the mother's side	Yes	69	69	69	Binomial P=0.000 (HS)
	No	31	31	100	

(*) HS: Highly Sig. at P<0.01cut off point =1.5, Freq: Frequency, Cum: Cumulative, C.S: Comparative Significant, P: Propability level.

Table (3) shows that(26.0%) of the study sample there is a Problem in the ovaries within the family, especially the mothers side , (32%)of them have "Family complain of infertility, (30%)Problem in regularity of menstrual cycle and especially from the mother's side ,and(69%) Family complain of obesity, especially the mother's side".

Table 4. Physical status of polycystic ovarian syndrome concerning history of Menstrual cycle Disorders

Questionnaire's Items		Never	Some times	Always	No.	MS	SD	RS	Ass.
History of Menstrual Cycle:									
1- Menstrual Disorders									
1.	Suffering from irregular menstruation	2	11	87	100	2.85	0.41	95.0	bad
2.	The amount of the menstrual period heavy	37	31	32	100	1.95	0.83	65.0	good
3.	Does the onset of menstruation delayed	11	22	67	100	2.56	0.69	85.3	bad
4.	Is the number of menstrual periods less than the normal	9	13	78	100	2.69	0.63	89.7	bad
5.	Does the color of menstrual blood variable during the days per/ on cycle	21	63	16	100	1.95	0.61	65.0	good
6.	Dose the amount of menstrual cycle light &mild	45	34	21	100	1.76	0.78	58.7	good
7.	Do you suffer of dysmenorrheal	8	23	69	100	2.61	0.63	87.0	bad
8.	Repetition of cycle several times per month	83	17	0	100	1.17	0.38	39.0	good
9.	Is menstruation continue for more than 1 week	50	46	4	100	1.54	0.58	51.3	good
10.	Is menstruation continue for more than 2 week	71	27	2	100	1.31	0.51	43.7	good

No: Number Cut off point =2 , MS: Mean Score, SD: Standard Deviation, RS: Relative Sufficiency, ASS: Assessment.

Table (4) shows that women's physical status of PCOS in light of menstrual disorders shows bad assessment in items(1,3,4,7)(Suffering from irregular menstruation, Does the onset of menstruation delayed, Is the number of menstrual periods less than the normal, Do you suffer of dysmenorrheal)with high mean score(MS) and(RS). While the leftover items assessed good with low (MS) & (RS).

Table 5. Physical status of polycystic ovarian syndrome concerning with Amenorrhea

Questionnaire's Items		Never	Some times	Always	No.	MS	SD	RS	Ass.
History of Menstrual Cycle:									
2- Amenorrhea									
1-	complain of absence of menstruation for three consecutive months at least	11	26	63	100	2.52	0.69	84.0	bad
2-	Practicing heavy sports	63	27	10	100	1.47	0.67	49.0	good
3-	Smoke greedily	95	3	2	100	1.07	0.33	35.6	good

No: Number cut off point =2MS: Mean Score, SD: Standard Deviation, RS: Relative Sufficiency, ASS: Assessment.

Table (5)shows that women's physical status of PCOS in light of amenorrhea shows good assessment with low mean score &RS undercut off point for items(2,3)(Practicing heavy sports, Smoke greedily, while item (1) (complain of absence of menstruation for three consecutive months at least) show bad assessment with high mean score &RS.

Table 6. Physical Status of (PCOS) Concerning with Signs and Symptoms Associated with High Male Hormone

Questionnaire's Items		Yes	No	No.	MS	SD	RS	Ass.
Signs and Symptoms Associated with high Male Hormone:								
1.	Suffering of infertility due to high hormones	95	5	100	1.95	0.22	97.5	bad
2.	Suffering of Excessive appearance of acne	32	68	100	1.32	0.47	66.0	good
3.	Conducting hormonal analysis related to acne appearance	33	67	100	1.33	0.47	66.5	bad
4.	Suffering the appearance of excessive hair in certain areas of the body	75	25	100	1.75	0.44	87.5	bad
5.	Conducted analyzes of male hormones due to increase in hair growth	77	23	100	1.77	0.42	88.5	bad
6.	hair Become lightly, especially in the foreground	46	54	100	1.46	0.50	73.0	good

Table 6. Continues

7.	Notice hair loss in large quantities	66	34	100	1.66	0.48	83.0	bad
8.	Your hair fall like falling in men (baldness in men)	14	86	100	1.14	0.35	57.0	good
9.	suffer of anemia that causes you to Hair Loss	37	63	100	1.37	0.49	68.5	good
10.	Suffer of obesity&enable to lose excess weight	75	25	100	1.75	0.44	87.5	bad
11.	Gaining weight during the absence period	87	13	100	1.87	0.34	93.5	bad
12.	visit doctors to diagnose the cause and conduct an analysis of hormones	94	6	100	1.94	0.24	97.0	bad
13.	suffer of diabetes after developing polycystic ovarian syndrome	18	82	100	1.18	0.39	59.0	good
14.	Suffer of hypertension after developing polycystic ovarian syndrome	24	76	100	1.24	0.43	62.0	good
15.	prior diagnosed for cyst were done by external and internal sonar	98	2	100	1.98	0.14	99.0	bad
16.	You feel constant pain lower abdomen and pelvic area	78	22	100	1.78	0.42	89.0	bad
17.	Dealt with the proper treatment of the ovarian cyst	94	6	100	1.94	0.24	97.0	good
18.	Complained that repeated spontaneous abortions	34	66	100	1.34	0.48	67.0	good
19.	Do you have been diagnosed with pregnancy before abortionwith pregnancy test or sonar	36	64	100	1.36	0.48	68.0	good
20.	Complained that black spots and thick roughtexture on the neck and thigh and sensitive places	21	79	100	1.21	0.41	60.5	good
21.	Your skin become creasy abnormally	56	44	100	1.56	0.50	78.0	bad
22.	You feel your sound change and become rough	38	62	100	1.38	0.49	69.0	good
23.	Conducted analyzes of male hormones for changing sound	22	78	100	1.22	0.42	61.0	good
24.	Complained chronic diabetes	4	96	100	1.04	0.20	52.0	good
25.	Complained hypertension chronic	6	94	100	1.06	0.24	53.0	Good
26.	Complained high blood cholesterol	1	99	100	1.01	0.10	50.5	Good
27.	Complained chronic arthritis	23	77	100	1.23	0.42	61.5	Good
28.	Complained chronic epilepsy	1	99	100	1.01	0.10	50.5	Good
29.	Complained that idle or high thyroid hormone	14	86	100	1.14	0.35	57.0	Good

No: Number Cut off point =1.5MS: Mean Score. SD: Standard Deviation. RS: Relative Sufficiency. ASS: Assessment.

Table (6) shows that women's physical status of PCOS in light of Signs and Symptoms Associated with high Male Hormone shows bad assessment in items(1,3,4,5,7,10,11,12,15,16,21)with high mean score and (RS). While the leftover items assessed good with low mean score & (RS).

Table 7. Summary statistics for the core responding of Questionnaire's sub and main domains for studying the effect of poly cystic ovarian syndrome on physical status of women in reproductive age

Sub and Main Domains	No.	GMS	SD	Ass.
Menstrual Disorders	100	52.0	12.8	good
Amenorrhea	100	34.3	16.4	bad
Signs and Symptoms Associated with high Male Hormone	100	55.2	13.0	good
The physical Status of Polycystic Ovary Syndrome	100	54.3	10.0	good

No: Number, GMS: Grand Mean Score, SD: Standard Deviation, Ass: Assessment.

The results shows that the three historical problems of part one named "Menstrual Disorders , Amenorrhea , and Signs and Symptoms Associated with high Male Hormone "full inside " good, bad, and good " assessment respectively

Table 8. Association between Socio-Demographical Characteristics variables with an overall assessments of all main domains according to "Under/Upper" Cutoff point

Main Domain	Basis Information and Demographical Characteristics X Ass. Status	Contingency Coefficients	Approx. Sig.	C.S.(*)
Overall assessment	Age Groups	0.169	0.712	NS
	Marital status	0.093	0.647	NS
	Age at Marriage	0.106	0.889	NS
	Consanguinity	0.043	0.670	NS
	Marriage Duration Years	0.182	0.330	NS
	Relationship between (mom and dad) ….	0.039	0.693	NS
	Socioeconomic Status	0.164	0.250	NS
	BMI	0.084	0.950	NS

(*)NS: Non Significant at P>0.05, C.S: Comparative Significant, Approx. Sig: Approximately Significant

The results has reported that "Basis Information of Socio-Demographical Characteristics" variables, had no significant relationship with overall assessment according to "Under/Upper" Cutoff point in percentile transforming formed for the global mean of score values, since a non-significant correlation ships were obtained at P>0.05, and we could concludes that the studied questionnaire due to this part of, " Demographical Characteristics Parameters", could be amend for all individual's population whatever a differences with their demographical characteristics responding.

Table 9. Association between of Menstrual Cycle Parameters with an overall assessments due to compacted all domains according to "Under/Upper" Cutoff point

Main Domain	Basis Information of Menstrual Cycle Parameters X Overall Ass. Status	Contingency Coefficients	Approx. Sig.	C.S.(*)
Overall assessment	Age at Menarche	0.063	0.941	NS
	Menstrual Cycle Regularity	0.027	0.789	NS
	Duration of Menstrual Period	0.086	0.689	NS
	The amount of the menstrual cycle	0.219	0.169	NS
	The severity of the pain associated with the menstrual cycle	0.097	0.623	NS
	Is there suffering from polycystic ovary syndrome in the family	0.125	0.206	NS
	If the answer is yes, whom were they? (Mother)	None	None	None
	If the answer is yes Who were they? (Sister)	0.125	0.208	NS
	If the answer is yes Who were they? (Relative on the mothers' side)	0.027	0.789	NS

(*)NS: Non Significant at P>0.05, C.S: Comparative Significant, Approx.Sig: Approximately Significant

The results has reported that "Basis Information of Menstrual Cycle" parameters, had no significant relationship with their overall assessments according to "Under/Upper" Cutoff point in percentile transforming formed of the global mean of score values.

Discussion:

sample of the study consisted of (100)women's of polycystic ovary syndrome who visited hospital when occurs some of signs and symptoms Especially women visited hospital for the purpose of taking the treatment of infertility, which is one of the main symptoms of polycystic ovary syndrome:

The study result shows high percentage (83.0%) of women's were included in the study their age group (20-34) years to that, mean value of the total sample (27.81yrs.) with standard deviation (5.70 yrs). More study agreement with the present study that the age group ranged from 20-36 years, more than half had four or more members in the family, and nearly two thirds had a single family member [5]. And PCOS is considered to be a polygenic trait, and clinical features of this disorder may

change with age, beginning in adolescence and ending with menopause [6].

Regarding to Socio-Economic Status, The vast majority of the study sample is within Low category and accounted for (66.0%) and then followed within moderate category and accounted for (30.0%), and the leftover were at low score and they are accounted (4.0%). In one of the previous study, the results indicate a strong association between low childhood Socio-Economic Status (SES) and PCOS, primarily among women with high Socio-Economic Status (SES) in adulthood. After adjusting for age, race, BMI, and waist circumference, this group was over twice as likely to have PCOS as women with both high parental and high personal education. There was no statistically significant interaction between race and SES with regard to PCOS this result disagreement with the present study [7].

Regarding to women's suffering from infertility, (99.0%) cases had been reported from the total of the studied sample, and they are accounted highly significant at P<0.01, then followed with asking if the answer is yes, (52.5%) were reported primary infertility, and the leftover were reported (47.5%) secondary infertility, and statistically anon significant different was obtained at P<0.05.

The results of this study showed that about one-third of women attending infertility clinic were found to have PCO. All 102 women who attended the (GOPD) gynecological outpatient department (GOPD) at Muhimbili National Hospital (MNH) in Dares Salaam, Tanzania during the study period due to infertility were recruited .and Primary infertility (46.9) percentage, and Secondary (53.1) percentage[8] .

Regarding to menstrual cycle regularity, the samples of women's whom had irregular cycle among total sample were reported (88.0%), and that outcomes seems ought to be sure resulted by the effect of poly cystic ovarian syndrome.

A woman that finds herself with irregular menstrual cycles, excess facial and body hair, adult acne, weight gain, infertility and enlarged ovaries may have polycystic ovary syndrome (PCOS), an unfortunate condition that afflicts 5-10 percent of women of child-bearing age and approximately 70-90 percent of women with irregular menstrual cycles [9].**Regarding to the "Amenorrhea**", it shows that women's physical status of PCOS in light of amenorrhea shows good assessment with low mean score &RS under cut off point for items(2,3, and 98% of them not smokers, while item (1) show bad assessment with high mean score &RS. Reported that ovarian dysfunction usually manifests as oligomenorrhoea/ amenorrhoea resulting from chronic oligo ovulation/ anovulation. However, prolonged anovulation can lead to dysfunctional uterine bleeding which may mimic more regular menstrual cycles. The majority of PCOS patients have ovarian dysfunction, with 70% to 80% of women with PCOS presenting with oligomenorrhoea or amenorrhoea. Among those with oligomenorrhoea, 80% to 90% will be diagnosed with PCOS. Among those with amenorrhea, only 40% will be diagnosed with PCOS as hypothalamic dysfunction is a more common cause. Oligomenorrhoea occurs usually in adolescence, with onset later in life often associated with weight gain [10].

Regarding to physical status of polycystic ovarian syndrome concerning with Amenorrhea, Amenorrheic women with PCOS usually have the most severe hyperandrogenism and higher antral follicle counts as compared with women presenting with oligomenorrhea or regular menstrual cycles. cycles in women withPCOS become more regular as they approach menopause Obesity rather than the menstrual cycle pattern or the size of the follicular cohortdyslipidemia, and, hypertension indetermines hyperinsulinemia aging women with PCOS [11] .

Regarding to Signs and Symptoms Associated with high Male Hormone ", it shows that women's physical status of PCOS in light of Signs and Symptoms Associated with

high Male Hormone shows bad assessment with high mean score and relative suffiency in items(1,3,4,5,7,10,11,12,15,16, 21)While the leftover items assessed good with low mean scores &(RS),which mean that there are women suffering from signs and symptoms associated with high male hormone, and others less suffering. It is estimated that 60% to 80% of women with PCOS demonstrate elevated circulating androgen levels [12].

Regarding to Hirsutism, is the most common clinical manifestation of hyperandrogenism in women. Approximately 60% to70% of women with PCOS has hirsutism. Hirsutism is defined as excessive terminal hair growth that takes on a male pattern distribution. The clinical assessment of hirsutism is overtly subjective, and it is therefore prudent in clinical assessment to consider the patient's perception of unwanted hair growth in addition to the perceived rate and timing of hair growth onset. Rapid and sudden appearance of thick pigmented hair suggests the presence of an androgen secreting neoplasm, whereas hair growth in PCOS tends to be more gradual and commonly occurs following cessation of long-term hormonal contraceptive use. Age and ethnicity significantly also influence hair growth due to genetic variances in reeducates activity [13].

Regarding to acne, One third of women with PCOS, particularly younger women, demonstrate acne. Androgens participate in the development of acne by stimulating sebum production, thereby providing optimal conditions for bacterial colonization with organisms such as Propionibacterium acnes. Scoring systems that classify and/or grade acne severity (i.e., numbers and types of acne lesions) are reliable and widely used in dermatology to facilitate therapeutic decisions and assess response to treatment. We know very little about the severity of acne in PCOS because acne scores are seldom used or reported. Moreover, it is unclear whether the actual prevalence of acne is increased in women with PCOS compared with the population at large. Some form of acne occurs in virtually all teenage girls and in more than one halfof women over the age of 25[13]**. Regarding toAssociation between Socio-Demographical Characteristics variables with an overall assessments of all main domains according to "Under/Upper" Cutoff point**

The results have reported that "Socio-Demographical Characteristics" variables have no significant relationship with overall assessment according to "Under/Upper" Cutoff point in percentile transforming formed for the global mean of score values, since a non-significant correlation ships are obtained at P>0.05, and it could be concluded that the studied questionnaire due to this part of, " Demographical Characteristics Parameters", could be amend for all individual's population whatever a differences with their demographical characteristics responding.

In another studies stated that the clinical features and metabolic consequences of PCOS may change with age, marital status, Consanguinity, Marriage Duration Years, Socioeconomic Status, BMI, and these variables related changes may affect the observed incidence of PCOS. Which is inconsistent that present study that show no correlation ship between the socio - demographic variables and PCOS [15] [16].

Regarding to physical status of (PCOS) concerning with Signs and Symptoms Associated with high Male Hormone, it shows bad assessment with high mean score and relative suffiency in items :(Suffering of infertility due to high hormones, Conducting hormonal analysis related to acne appearance, Suffering the appearance of excessive hair in certain areas of the body, especially the chin, upper lip, around the nipples, lower abdomen, Conducted analyzes of male hormones due to increase in hair growth, Notice hair loss in large quantities, Suffer of obesity& enable to lose excess weight, Gaining weight during the absence of period ,visit doctors to diagnose the cause and conduct an analysis of hormones, Prior diagnosis for cyst were done by external

and internal sonar, feeling constant pain in lower abdomen and pelvic area , the skin become creasy abnormally) .While the leftover items assess good with low mean scores &(RS),which means that there are women suffering from signs and symptoms associated with high male hormone, and others less suffering.

Stated that the excess of male hormones in the polycystic ovary syndrome therefore comes from both the ovaries and the adrenal glands. This is why removal of the ovaries does not solve the problem of excess body hair and acne and another reason why the name “the polycystic ovary syndrome” is stupid! The high levels of male hormones change the functioning of the fertility clock.The high level of insulin in the blood stream also stimulates the pituitary gland to produce increased amounts of LH[17].Girls with PCOS are more likely to have infertility, excessive hair growth, acne, obesity, diabetes, heart disease, high blood pressure, abnormal bleeding from the uterus, and cancer[18].**Association between Menstrual Cycle Parameters with overall assessments due to compacted all domains according to "Under/Upper” Cutoff point:**

The results in present study have reported that Menstrual Cycle parameters have no significant relationship with their overall assessments according to "Under/Upper" Cutoff point in percentile transforming formed of the global mean of score values, since a non-significant correlation ships are obtained at P>0.05 except with basis information variables, due to complained family of genetic diseases, such as (Diabetic, Thyroid, Heart Disease, and chronic pelvic pain), and it could be concluded that the studied questionnaire due to part three in impact form, "Signs and Symptoms of Polycystic Ovary Syndrome", can be amend for all individual's population whatever a differences with their (Basis Information of Menstrual Cycle) and could be a good measure for exploring the differences among women's who have complained family genetic diseases diagnosed.

In another study, menstrual cycle disturbances are one of the most common complaints causing women of reproductive age to seek medical care. An estimated 2% to 5% of women in the general population have amenorrhea. The prevalence is even higher in female athletes; an estimated 66% of these women do not get their periods. A total of 346 PCOS patients were interviewed by telephone, with a mean age of 38.7 years (range 30.3–55.7) and a mean body mass index of 24.4 (range 17.5–55.8). Diabetes occurred in eight (2.3%), hypertension in 31 (9%) and cardiac complaints in three (0.9%) of the women. The prevalence of diabetes and hypertension differ significantly from the prevalence of these conditions in the Dutch female population (both $P < 0.05$). In PCOS women aged 45–54 years ($n = 32$) the prevalence of diabetes is four times higher ($P < 0.05$) and of hypertension 2.5 times higher ($P < 0.01$) than the prevalence of these conditions in the corresponding age group of the Dutch female population. Hypertension also occurs significantly ($P < 0.05$) more in the younger (35–44 years) PCOS group ($n = 233$), but this age group is significantly more obese ($P < 0.01$) when compared with figures of obesity of the Dutch female population [19].

An excellent study from the Texas Institute for Reproductive Medicine and Endocrinology shows that young women with a testosterone level more than 30 mg/dl had a higher risk for high blood pressure. In addition, prediabetes, diabetes, low HDL cholesterol, high triglycerides level, small dense LDL cholesterol and high blood pressure lead to narrowing of the blood vessels and eventually many patients have a heart attack [20].

Recommendations:

1. Development of programs and awareness sessions for disease polycystic ovarian syndrome for women living with for the purpose of learn how to deal with the disease, as well as how to prevent complications.

2. Development of courses for nurses, especially present in the centers of infertility awareness and deliver new information about what's new research and methods of treatment and how to deal with patient.

3.Guidance of women and make them aware that this disease is possible that be hereditary and if it's in the family, especially the mother's side-positive women should be based examination continued ovaries and attention on the issue of irregular menstrual cycle as well as attention to the symptoms, even though it was simple..

References:

1.Teede H;Deeks A; and MoranL.:**Polycystic ovary syndrome: a complex condition with psychological, reproductive and metabolic manifestations that impacts on health across the lifespan,Clayton**, Australia, BMC Medicine 2010, doi:10.1186/1741-7015—8-41.

2.WitchelSF;Azziz R;Carmina E;Dewailly D;Diamanti-Kandarakis E; Escobar-Morreale HF;Futterweit W; Janssen OE;Legro RS; Norman RJ;Taylor AE.: **Androgen Excess Society: Position statement: criteria for defining polycystic ovary syndrome as a predominantly hyperandrogenic syndrome: an Androgen Excess Society guideline**.J ClinEndocrinolMetab, 2006, 91:4237-4245.

3. Franks S.;BarberT.M;WassJ.A.; McCarthyM.I; **Metabolic characteristics of women with metabolic characteristics of women withpolycystic ovaries and oligo-amenorrhea but normal androgen levels: implications for the management of polycystic ovary syndrome** ,ClinEndocrinol, 66: (2007) 513–17

4.Marsh WA; Moore VM;Willson KJ; Phillips DI; Norman RJ; Davies MJ: **The prevalence of polycystic ovary syndrome in a community sample assessed under contrasting diagnostic criteria** .um Reprod 2010, 25:544-551

5.SundararamanPG;Shweta, Sridhar GR, **Psychosocial Aspects of Women with Polycystic Ovary Syndrome from South India** , JAPI • VOL. 56 • DECEMBER 2008 .

6.Pasquali R;& Gambineri A. **Polycystic ovary syndrome: a multifaceted disease from adolescence to adult age.** Ann N Y AcadSci 2006؛ 1092:158–174**.**

7.Sharon Stein Merkin, Ph.D; Ricardo Azziz, M.D., M.P.H., M.B.A.; Teresa Seeman, Ph.D., Ronit Calderon-Margalit, M.D., M.P.H.; Martha Daviglus, M.D., Ph.D.;CatarinaKiefe, Ph.D..; M.D.; Karen Matthews, Ph.D.; Barbara Sternfeld, Ph.D.; and David Siscovick, M.D., M.P.H, **Socioeconomic Status and Polycystic Ovary Syndrome**, J Womens Health (Larchmt). 2011 March; 20(3): 413–419. .

8. PEMBEA.B& ABEIDM.S.: **the Polycystic ovaries and associated clinical and biochemical features among women with infertility in a tertiary hospital in Tanzania**,Tanzania Journal of Health Research,P.O. Box 65117, Dar es Salaam, Tanzania,2009.

9.Azziz R; Woods KS; Reyna R; Key TJ;Knochenhauer ES;Yildiz BO: **The prevalence and features of the polycystic ovary syndrome in an unselected population** .J Clin EndocrinolMetab,2004, 89:2745-2749

10. Brassard M;AinMelkY;Baillargeon JP: **Basic infertility including polycystic ovary syndrome**

11. Elting MW; Korsen TJ;&Schoemaker J.: **Obesity, rather than menstrual cycle pattern or follicle cohort size, determines hyperinsulinaemia, dyslipidaem and hypertension in ageing women with polycystic ovary syndrome**. ClinEndocrinol (Oxf) 2001;55:767–76.

12.Azziz R;Carmina E;Dewailly D;Diamanti-Kandarakis E; Escobar-Morreale HF;Futterweit W; Janssen OE;Legro RS; Norman RJ; Taylor AE;Witchel SF; Androgen Excess Society: **Position statement: criteria for defining polycystic ovary syndrome as a predominantly hyperandrogenic syndrome: an Androgen Excess Society** guideline. JClin Endocrinol Metab,2006, 91:4237-4245.

13. Buggs C;& Rosenfield RL. **Polycystic ovary syndrome in adolescence**. Endocrinol MetabClin North Am 2005;34:677-705.

14- Strauss JS;Krowchuk DP; Leyden JJ; Lucky AW;Shalita AR; Siegfried EC;Thiboutot DM; VanVoorhees AS;Beutner KA; Sieck CK and

Bhushan R, **Guidelines of care for acne vulgaris management**. J Am Acad Dermatol ,2007; 56:651-63.

15. Rodríguez-Morán M, and Guerrero-Romero F.: **Insulin resistance is independently related to age in Mexican women**, J Endocrinol Invest, 2003;26:42-48.[Medline].

16.Bili H; Laven J; Imani B; Eijkemans MJ; Fauser BC.: **Age-related differences in features associated with polycystic ovary syndrome in normogonadotrophicoligo-amenorrhoeic infertile women of reproductive years**, Eur J Endocrinol, 2001;145:749-755.

17. Mackenzie, Jamesd. Nichols, Mark e. Seamans, and Gutie´ rrez R. J.: **Modeling species occurrence dynamics with multiple states and imperfect detection Ecology, the Ecological Society of America**, 90(3), 2009, pp. 823–835.

18. Hirsch B. T., Kaysa, R., Jansen P. A. and Smithsonian: **Evidence for cache surveillance by a scatter-hoarding rodent,2013**, Received 1 September 2012,Final acceptance 2 April 2013. www.elsevier.com/locate/anbehav.

19. Elting M.W. ; Korsen T.J.M.; Bezemer P.D. and Schoemaker J. : **Prevalence of diabetes mellitus, hypertension and cardiac complaints in a follow-up study of a Dutch PCOS population**, Amsterdam, The Netherlands ,Received April 4, 2000, Accepted November 30, 2000.

20.Yildiz BO; Knochenhauer ES; Azziz R. :**Impact of obesity on the risk for polycystic ovary syndrome**, **J ClinEndocrinolMetab**, 2008;93:162-168.

21.Department of Anatomy**, Histology and Anthropology**, Faculty of Medicine, Vilnius University, M. K. Ciurlionio 21/27, Vilnius, Lithuania