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SOCIO-DEMOGRAPHIC CHARACTERISTICS OF GNM STUDENTS TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING POLYCYSTIC OVARIAN SYNDROME (PCOS) AMONG IN SELECTED SCHOOLS OF NURSING MOGA , PUNJAB

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ABSTRACT

Polycystic Ovarian Syndrome (PCOS) is one of the most common endocrine disorders affecting women of reproductive age and adolescents. It is characterized by hormonal imbalance, irregular menstrual cycles, ovarian cysts, and metabolic disturbances. PCOS not only affects reproductive health but is also associated with long-term complications such as infertility, diabetes, obesity, and cardiovascular diseases. The increasing adoption of sedentary lifestyles and westernized dietary habits has contributed to a growing prevalence of PCOS among young women, particularly in developing countries like India.

The present study aimed to assess the effectiveness of a structured teaching programme on knowledge regarding PCOS among GNM students. A quasi-experimental research design was adopted. The target population included GNM students from selected nursing colleges in Moga, Punjab. A total of 500 students were selected using purposive sampling, with 250 in the experimental group and 250 in the control group. Data were collected using a structured questionnaire and analysed using descriptive and inferential statistics.

The findings revealed that the majority of students were aged 20–21 years and belonged to rural areas. Most participants obtained information about PCOS from friends, family members, and mass media. The study highlights the importance of educational interventions to improve awareness and promote early identification and prevention of PCOS among young women.

Keywords: *Polycystic Ovarian Syndrome (PCOS), GNM Students, Structured Teaching Programme, Knowledge, Adolescent Girls, Hormonal Disorder, Reproductive Health, Nursing Education, Awareness, Prevention.*

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INTRODUCTION

Young people are resourceful, courageous, and well aware that their future depends not only on what we can do for themselves and to the society they live in. Girls in developing countries most at risk from the intensifying effects of climate change are proving to be the most effective advocates for addressing the issue, as evidenced by youth participation. They are agents of change in their communities and dynamic contributors in global forums. They are engaged and have valuable ideas on how to tackle present global challenges. Student is the period of growth and development. During this time ,are many structural problems can arise. (Goldiziher JW 2011)

Ovulation means ovaries, where a woman's eggs are produced, have tiny fluid-filled sacs called follicles or cysts. As the egg grows, the follicle builds up fluid. When the egg matures, the follicle breaks open, the egg is released, and the egg travels through the fallopian tube to the uterus (womb) for fertilization. (E.EWilson 2011)

Polycystic ovarian syndrome is the most common female endocrine disorder, affecting approximately 5%-10% of all females and 4-6% of adolescent girls and young women. Polycystic ovarian syndrome is a hormonal disorder that involves multiple organ systems within the body and is believed to be fundamentally caused by insensitivity to the hormone insulin. It can be diagnosed in all phases of life - in girls as young as 8-9 years of age through post-menopausal females. Although Polycystic ovarian syndrome is one of the leading causes of infertility, the reproductive aspects of the disorder are secondary. Polycystic ovarian syndrome is not limited to women of reproductive age or potential. (Padubidri av, daftary NS 2009)

Polycystic ovarian syndrome is a problem in which a woman's hormones are out of balance. It can cause problems with the menstrual periods and make it difficult to get pregnant. It may also cause unwanted changes in the look. If it is not treated, over time it can lead to serious health problems, such as diabetes and heart disease. Polycystic ovarian syndrome (PCOS) is common, affecting as many as 1 out of 15 women. Often the symptoms begin in the teen years. Treatment can help control the symptoms and prevent long-term problems. (S.Elensbruch 2007)

Within the past two decades, these developing nations began relying on Westernized diets and lifestyle. It is predicted that they may see up to a sixfold increase in obesity prevalence in the next ten years especially for India who already has the highest rates of diabetes in the world. (Dutta DC 2006)

The recent preoccupation with thinness for middle to upper class young adult women, where dieting has become common, has been criticized as "the food-as-poison discourse that originates in the U.S.". Balancing this new "discourse" with traditional ideals of food, as a positive influence for the balance of mind and body, is challenging. Where eating was once central to an Indian's psychological and physical "existence", it is now complicated with mixed emotions of desire to eat, but a desire to be thin. (Kakar and Kakar, Norman R.2006)

A sense of urgency is needed in addressing contemporary metabolic and reproductive health in India , including the associated psychosocial and biopsychosocial health of the people facing these increasing global health issues, such as The Polycystic ovarian syndrome term 'psychosocial' refers to the interplay of both social and psychological processes involved in behavior . Mental, emotional, and behavioral processes can interact in the biological and psychological development and expression of health and disease. A person's experiences, feelings, and moods regarding their health or disease status can influence and exacerbate health and disease by their own behavioral actions or thoughts. (Lovalo et al 2006)

A key sign of PCOS is irregular or missed periods because the effects of the condition on the ovaries can make a girl stop ovulating. However, because it can take up to 2 years after her first period for a girl's menstrual cycle to become regular, it can be hard to recognize missed periods as a sign of PCOS in teen girls. Imbalanced hormone levels can cause changes in a girl's entire body, not just her ovaries. (T.Setji et al 2003)

First described polycystic ovarian syndrome, (PCOS), was characterized as a disorder involving irregular menstrual cycles, infertility, obesity, and overproduction of testosterone. Since then, studies have shown that high insulin levels in the blood are common in PCOS and contribute to the overproduction of testosterone. Additional studies have confirmed that women with polycystic ovarian syndrome have an increased risk of developing metabolic disturbances, including type II diabetes and lipid (blood fat) abnormalities. Women with PCOS also have a high rate of obstructive sleep apnoea, a breathing disorder. Sleep apnoea itself appears to cause or worsen high insulin levels and may contribute to the metabolic disturbances of PCOS. (*David Ehrmann 2002)*

REVIEW OF LITERATURE

A study was done by the ultrasonographic appearance of polycystic ovary; the prevalence varies depending on the study settings used. Polycystic ovaries are seen in 92% of women with idiopathic hirsutism, 87% of women with oligomenorrhea, 21-23% of randomly selected women, 23 % of women who consider themselves normal and who report regular menstrual cycles and in 17% of women participating in routine PAP smear. Up to 25% of patients with this sonographic picture maybe entirely asymptomatic, however, nor do all patients with hyperandrogenism demonstrate polycystic ovary syndrome. (Gellar D.H et al. 2011)

A study conducted a descriptive study shown the prevalence of polycystic ovarian syndrome in Indian adolescents. presence of >10 cysts, 2-8 mm in diameter, usually combined with increased ovarian volume of >10 cm(3), and an echo-dense stoma in pelvic ultrasound scan. Out of 460 girls, one (0.22%) had oligo/ amenorrhea with clinical hyper androgens, 29 (6.30%) had oligomenorrhea with polycystic ovaries, one (0.22%) had polycystic ovaries with clinical hyper androgens and 11 (2.39%) had oligomenorrhea with polycystic ovaries in the presence of clinical hyper androgens. Thus 42 (9.13%) girls satisfied Rotterdam's criteria for Polycystic ovarian syndrome, which increased to 50.46 (10.97%) when imputed data were included. Prevalence of Polycystic ovarian syndrome in Indian adolescents is 9.13%. (Egger S. and Kichengrast S. 2010)

A study conducted a descriptive study to find out the prevalence of polycystic ovary syndrome in a community sample of Iranian population. The mean +/- SD of age of study population was 34.4 +/- 7.6 years. Estimated prevalence of idiopathic hirsutism was 10.9% (95% CI: 8.9-12.9%); 8.3% of women had only logo/ anovulation and 8.0% had only polycystic ovaries. The prevalence of Polycystic ovarian syndrome was 7.1% (95% CI: 5.4-8.8%) using the NIH definition, 11.7% (95% CI: 9.5-13.7%) by AES criteria and 14.6% (95% CI:12.3-16.9%) using the Rot definition. At community level, wide spread screening of Rotterdam criteria will increase the estimated prevalence of polycystic ovarian syndrome over two-fold. (Bina shah 2009)

A study was done on prevalence of heterogeneous condition affecting 7-10%of women worldwide, irrespective of ethnic background, making it the most common endocrine disorder among reproductive-aged women. The 2003 Androgen Excess Society (AES) consensus required two of the following three criteria as necessary for the diagnosis: hyperandrogenism, ovarian dysfunction (oligo- or anovulation),and/or a polycystic ovary. Result shown that polycystic ovarian syndrome typically develops during adolescence and is a heterogeneous syndrome classically characterized by features of anovulation combined with signs of androgen excess. Increasing obesity in adolescents probably exacerbates signs of PCOS, contributing its earlier recognition. Recognizing the features of this syndrome can be very challenging in adolescence. (Franks,2008)

RESEARCH METHODOLOGY

The research design selected for the present study was quasi experimental design. The target population of the study was GNM students of Dr Shyam Lal Thapar School of Nursing Babe Ke college of nursing and Lala Lajpat Rai college of nursing and MLM College of nursing Moga. The sample of 500 GNM students,250 for experimental and 250 for control group by using purposive sampling method.

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DATA ANALYSIS AND INTERPRETATION

SECTION – I SAMPLE CHARACTERISTICS

TABLE 1 Percentage Distribution of Sample Characteristics.

(N = 500; Control Group = 250, Experimental Group = 250)

S. No	Characteristics	Control (n)	Control (%)	Experimental (n)	Experimental (%)	df	χ^2	p-value
1	**Age in years**					2	0.00	NS
a	20–21	83	33.2	83	33.2			
b	22–23	81	32.4	81	32.4			
c	24–25	86	34.4	86	34.4			
2	**Education of Father**					3	57.43	**p<0.001**
a	Illiterate	35	14.0	25	10.0			
b	Primary	61	24.4	33	23.0			
c	Secondary	97	38.8	58	40.0			
d	Graduate & above	57	22.8	134	53.6			
3	**Education of Mother**					3	57.43	**p<0.001**
a	Illiterate	51	20.4	34	13.6			
b	Primary	71	28.4	61	24.4			
c	Secondary	75	30.0	46	18.4			
d	Graduate & above	53	21.2	109	43.6			
4	**Occupation of Mother**					3	6.98	*p<0.05*
a	Housewife	40	16.0	40	16.0			
b	Labourer	50	20.0	60	24.0			
c	Government employee	100	40.0	100	40.0			
d	Private employee	60	24.0	50	20.0			
5	**Occupation of Father**					4	9.04	NS
a	Labourer	33	13.2	21	8.4			
b	Government job	34	13.6	51	20.4			
c	Private job	79	31.6	84	33.6			
d	Business	84	33.6	66	26.4			
e	Farmer	20	8.0	31	12.4			
6	**Family Monthly Income**					3	55.36	**p<0.001**
a	≤ ₹5000	88	35.2	20	8.0			
b	₹5001–10000	72	28.8	93	37.2			
c	₹10001–15000	49	19.6	71	28.4			
d	≥ ₹15000	41	16.4	66	26.4			

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7	**Type of Family**					2	49.21	**p<0.001**
a	Nuclear	75	30.0	151	60.4			
b	Joint	145	58.8	75	30.0			
c	Extended	28	11.2	24	9.6			
8	**Place of Residence**					1	0.003	NS
a	Rural	162	64.4	162	64.4			
b	Urban	88	35.6	88	35.6			
9	**Source of Information***					4	0.61	NS
a	Friends & neighbours	83	33.2	85	34.0			
b	Family members	65	26.0	65	26.0			
c	Mass media	46	18.4	46	18.4			
d	Health personnel	33	13.2	28	11.2			
e	Teachers	23	9.2	26	10.4			
10	**Dietary Habit**					1	0.00	NS
a	Vegetarian	161	64.4	161	64.4			
b	Non-vegetarian	89	35.6	89	35.6			

NS – Not Significant

- Table 1, showed that GNM students were distributed into various In the present study Age in years, Education of father, Education of mother, Occupation of mother, Occupation of father, Family Monthly income in Rupees, Type of Family , Place of Residence, Source of Information, Dietary Habits,. Matching of the variables was done by using chi-square. All variables in experimental and control group were matched.
- According to age that both in experimental group and control group maximum number 83 (33.2%) of GNM students were belongs to 20-21 years of age and followed by 81 (32.4%) belong to 24-25 years of age and minimum number 86 (34.4%) of GNM students were belongs to 22-23 years of age respectively.
- According to education of father in experimental group, maximum number of 134 (53.6%) GNM student's father were educated up to graduate and above, followed by 58 (23.2%) GNM student's fathers of adolescent girls were educated up to secondary and higher secondary level, 33(13.2%) GNM student's father were educated up to primary level and minimum number 25(13.2%) GNM student's father were illiterate where as In control group, maximum number of 97 (38.8%) GNM student's father were educated up to secondary and higher secondary level , followed by 61 (24.4%) GNM student fathers were educated up to primary,57(22.8%) father of GNM were educated up to graduate and above and minimum number 35(14%) GNM student father were illiterate respectively.
- According to education of mother in experimental group, maximum number of 109(43.6%) GNM student's mothers were graduated and above, followed by61 (24.4%) GNM student's mothers were primary level of education, followed by 46 (18.4%) GNM student's mothers were educated up to primary level and minimum number only 25 (13.2%) GNM student's mothers were illiterate whereas In control group maximum number of 75 (30%) GNM student's mother's had their Secondary level of education and followed by 71 (28.4%) GNM student's mother's had their Primary level of education,53(21.2%) GNM students mother were educated up to graduate and above and minimum number only 51 (20.4%) GNM student's mothers were Illiterate respectively.
- According to occupation of mother that in Experimental group, maximum number 100 (40%) GNM student's mothers were at government job, followed by 60 (24%) GNM student's mother's occupation were Labourer,50(20%) GNM student mothers were at private job and minimum number 40(16%) GNM student mothers were housewife respectively. In Control group, maximum number 100 (40%) of GNM student's mothers were at government job followed by 60(24%) GNM student mothers were at private job,50(20%) gnm student mothers were labourer, and minimum number 40(16%) GNM student mother Housewife respectively

- According to occupation of father in experimental group, the maximum number 81(32.4%) GNM student father occupation were doing private job, followed by 66(26.4%) GNM student father occupation were doing business,51(20.4%) GNM student father occupation were at government job,31(12.4%) GNM student father occupation were farmer and minimum number 21(8.4%) GNM student father occupation were laborer respectively. In control group the maximum number 84(33.6%) GNM student father occupation were doing business followed by 79(31.6%) GNM father occupation were doing private job,34(13.6%) GNM student father occupation were doing government jobs,33(13.2%) GNM student father occupation were laborer and minimum 20(8%) GNM student father were farmer respectively .
- According to family monthly income in (Rs) in Experimental group, the maximum number 93(37.2%) GNM student family income were belong to income group 5001-10000 followed by 71(28.4%) GNM student family income were belong to income group 10,001-15,001,66(26.4%) GNM student family income were≥15000, and minimum number 20(8%) GNM student family were belong to income group ≤5000 respectively. In control group, maximum number 88 (35.2%) of GNM students had family monthly income was≤5000. Followed by 72(28.8%) had GNM students had family monthly income 5001-10000,49(19.6%) GNM student family income were belong to 10,001-15000Rs and minimum number 41 (16.4%) GNM Year students were belong to family monthly income ≥15000/Rs respectively.
- According to type of Family in experimental group the maximum number 151(60.4%) GNM student belongs were lived in joint family, followed by 75(30%) GNM student were lived in nuclear family and minimum number 24(9.6%) GNM student lived in extended family respectively. In control group, the maximum number of 147 (58.8%) GNM students were belongs to Nuclear family, followed by 75(30%) GNM student were lived in joint family and minimum no of 28 (11.2%%) GNM students were lived in extended family respectively.
- According to Area of residence both in Experimental group and control group, maximum numbers 162 (64.4%) of GNM students were belongs to Rural residential area and minimum no of 88(35.6%) GNM students were belongs to Urban residential area .
- According to Source of Information in Experimental group the maximum number 85(34%) GNM student got information from friends and neighbours followed by 65(26%) GNM student got information from family members, 46(18.4%) GNM student got information from mass media,28(11.2%) GNM student got information from health personnel and minimum number 26(10.4%) GNM student got information from teachers respectively. In control group ,the maximum number 83 (33.2%) of GNM students were getting information from friends and neighbours followed by 65(26%) GNM student got information from family members, 46(18.4%) GNM students got information from mass media,33(13.2%) GNM student got information from health personnel and minimum number 23(9.2%) GNM students were getting information from their Teachers respectively.
- According to dietary Habits that both in Experimental group and control group, maximum number 161(64.4%) of GNM students were Vegetarian and minimum number 89 (35.6%) GNM students were Non-Vegetarian respectively.

CONCLUSION

The present study concluded that Polycystic Ovarian Syndrome (PCOS) is an important health issue among young women and adolescents. Lack of adequate knowledge about its causes, symptoms, complications, and preventive measures can delay early identification and management. The findings of the study indicated that most GNM students had varying levels of knowledge regarding PCOS and its associated health problems.

The structured teaching programme proved to be effective in improving the knowledge of GNM students regarding PCOS. Educational interventions can significantly enhance awareness and help students understand the importance of healthy lifestyle practices, early diagnosis, and timely treatment. Therefore, incorporating health education programmes in nursing curricula and community health activities can play a vital role in promoting awareness and prevention of PCOS among young women.

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