International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

A Descriptive Study to Assess the Knowledge and Attitude Regarding Polycystic Ovarian Syndrome (Pcos) Among Adolescent Girls in Selected Institutes of Bangalore with A View to Provide an Educational Pamphlet.

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Abstract

Background of the study: Polycystic ovary syndrome (PCOS) is a condition in which the ovaries produce an abnormal amount of androgens, male sex hormones that are usually present in women in small amounts.

PCOS a significant public health problem and is one of the commonest hormonal disturbances affecting women of reproductive age. The condition affects an estimated 8–13% of women of reproductive age, and up to 70% of cases are undiagnosed.

Aim: The overall aim of the study is to assess the knowledge and attitude regarding PCOS among adolescent girls.

Methods: A quantitative research approach with descriptive design was used for the study to accomplish the objectives. The study consisted of 100 adolescent girls who were selected by using simple random sampling technique in selected Institutes, Bangalore.

Data was collected by using structured knowledge questionnaire and attitude scale (Likert Scale) regarding PCOS. The data was analysed by descriptive and inferential statistics.

Results: The result shows that 64 per cent of the subjects' possessed inadequate knowledge, 36 per cent of subjects' possessed moderate knowledge and none of the subjects had adequate knowledge regarding PCOS. With regard to PCOS, 32 per cent of subjects have an unfavourable attitude, 68 per cent of subjects have a moderate attitude and none of the subjects have favourable attitude.

Interpretation and conclusion: The overall findings of the study show that the adolescent girls were having more inadequate knowledge and unfavourable attitude regarding PCOS. The proper dissemination of education and information regarding PCOS among adolescent girls in selected Institutes of Bangalore can help to develop awareness regarding PCOS and prevent further complications.

Keywords: Knowledge, Attitude, Polycystic Ovarian Syndrome (PCOS), Adolescent Girls.

INTRODUCTION:

The World Health Organization (WHO) defines an adolescent as any person between ages 10 and 19.

This age range falls within WHO's definition of young people, which refers to individuals between ages 10 and 24. The nature and quality of young people's future lives depend on how successfully they negotiate the passage through this critical period. The challenges for young people are greater today than ever before.[1] The name "Polycystic Ovarian Syndrome" refers to the appearance of small cysts along the outer edge of the enlarged ovaries of women with this condition. It is a common health problem among adolescents and young women.[2] It affects 5-10% of women of reproductive age.[3] Polycystic ovarian syndrome is a condition in which woman has an imbalance of female sex hormones. This may lead to changes in the menstrual cycle, cyst in the ovary, failure to conceive and other health problems. If it is not treated on time, it can lead to serious health problems.[4]

Now days PCOS is recognized to be a metabolic syndrome. It is also known as Hyperandrogenic Anovulation and Stein-Leventhal Syndrome. The major features of PCOS are androgen excess, ovarian dysfunction, amenorrhea, oligomenorrhea, dysfunctional uterine bleeding, acne, hirsutism, obesity and last but not the least is infertility. As per studies 6-15% Infertility is because of PCOS. Although associated with obesity, the syndrome is also often seen in women with normal body mass index (BMI).[5]

PCOS has a wide range of presentation in adolescents as menstrual irregularity, hirsutism, acne and acanthosis nigricans. It is important to make an early diagnosis in order to prevent early and late sequel of the syndrome. The pathophysiology responsible for the development of polycystic ovaries has puzzled gynaecologists and endocrinologists for many years and has proven very difficult to define. However, the main pathogenesis still could be hormonal imbalance and insulin resistance. PCOS is associated with increased metabolic and cardio-vascular risk factors due to increased insulin resistance. In more than 40% of cases, PCOS is associated with obesity, as well as impaired glucose tolerance, type 2 diabetes, and the metabolic syndrome.[6]

According to a research by the polycystic ovarian syndrome organisation, one in every ten women in India has polycystic ovarian syndrome, or prevalent endocrine system problem among women of reproductive age. Six teenage girls are diagnosed with polycystic ovarian syndrome for every ten women. According to the AIIMS department of endocrinology and metabolism, roughly 20-25 percent of Indian women of reproductive age have polycystic ovarian syndrome, and 60 percent of women with polycystic ovarian syndrome are obese 35- 505 and have a fatty liver. In India, it affects around one million people, usually between the ages of 14 and 40.[7]

Methodology:

Research approach: Quantitative research approach

Research design: Descriptive design

Sample size: the study consists of 100 adolescent girls studying at selected Institutes of Bangalore.

Sampling technique: Simple random sampling technique.

Sample selection criteria:

Inclusion Criteria

- Adolescent girls available at the time of data collection.
- Adolescent girls who are willing to participate the study.

Exclusion Criteria

- Adolescent girls who are not willing to participate in the study.

- Adolescent girls who are absent during the study.

Development and description of tool:

Section A: It consists of socio demographic variables which include age, religion, area of residence, type of family, father's educational status, mother's educational status, family's monthly income, previous knowledge regarding PCOS and history of PCOS in family.

Section B: Structured knowledge questionnaire to assess the knowledge regarding Polycystic Ovarian Syndrome (PCOS) which comprises of anatomy and physiology of uterus, general information on menstruation and PCOS, causes and risk factors, sign and symptoms, diagnosis, treatment and prevention and complications.

Score interpretation:

Sl. No.	Knowledge level	Percentage
1.	Inadequate knowledge	0-17%
2.	Moderate knowledge	18-26%
3.	Adequate knowledge	27-35%

Section C: Rating scale to assess attitude on PCOS which comprises of 15 statements on PCOS. Each of the statement has three options: favourable, moderate and unfavourable under which participants can tick the suitable statement.

Score interpretation:

Sl. No.	Attitude index	Percentage
.	Unfavourable	0-15%
.	Moderate	16-22%
.	Favourable	23-30%

Results:

Descriptive and inferential statistics were used to analyse the data collected. The findings have been tabulated according to the plan for data analysis and interpreted under the following objectives:

1. To assess the level of knowledge of adolescent girls regarding Polycystic Ovarian Syndrome (PCOS) using Structured Knowledge Questionnaire.
2. To assess the level of attitude of adolescent girls regarding Polycystic Ovarian Syndrome using Likert scale.
3. To determine the association between level of knowledge of adolescent girls regarding Polycystic Ovarian Syndrome with selected demographic variables.

4. To determine the association between scores of attitude scale of adolescent girls regarding Polycystic Ovarian Syndrome with selected socio-demographic variables.

TABLE 1: DISTRIBUTION OF SOCIO-DEMOGRAPHIC VARIABLES SUCH AS AGE, RELIGION, AREA OF RESIDENCE, TYPE OF FAMILY, FATHER AND MOTHER'S EDUCATION, FAMILY'S MONTHLY INCOME, PREVIOUS KNOWLEDGE OF PCOS AND HISTORY OF PCOS IN FAMILY.

Socio demographic data	Category	Respondents	
		Frequency (f)	Percentage (%)
Age group (in years)	13-14	0	0
	15-16	69	69.0
	17-18	31	31.0
Religion	Hindu	74	74.0
	Muslim	16	16.0
	Christian	10	10.0
	Others	0	0
Area of Residence	Urban	68	68.0
	Rural	32	32.0
Type of Family	Nuclear	76	76.0
	Joint	24	24.0
	Extended	0	0
Father's educational status	No formal education	14	14.0
	Primary	20	20.0
	Secondary	42	42.0
	Graduation	15	15.0
	Post-graduation	9	9.0
Mother's educational status	No formal education	21	21.0
	Primary	21	21.0
	Secondary	50	50.0
	Graduation	8	8.0
	Post-graduation	0	0
Family's monthly income	<₹50,000	72	72.0
	₹50,001-70,000	19	19.0
	₹70,001-90,000	9	9.0
	>₹ 90,001	0	0
Source of knowledge regarding PCOS	Teachers	16	16.0
	Peer group	19	19.0
	Seminar/Conferences	4	4.0
	Mass media	28	28.0
	Others	33	33.0
History of PCOS in family	Yes	11	11.0

	No	89	89.0

TABLE-2: DISTRIBUTION OF KNOWLEDGE SCORES OF SUBJECTS REGARDING POLYCYSTIC OVARIAN SYNDROME n=100

Sl. No.	Knowledge Level	Scores	Respondents	
			Frequency (f)	Percentage (%)
1.	Inadequate Knowledge	0- 17	64	64.0
2.	Moderate Knowledge	18 – 26	36	36.0
3.	Adequate Knowledge	27 – 35	0	0.0
Total			100	100.0

FIGURE-1: CLASSIFICATION OF SUBJECTS KNOWLEDGE LEVEL ON PCOS

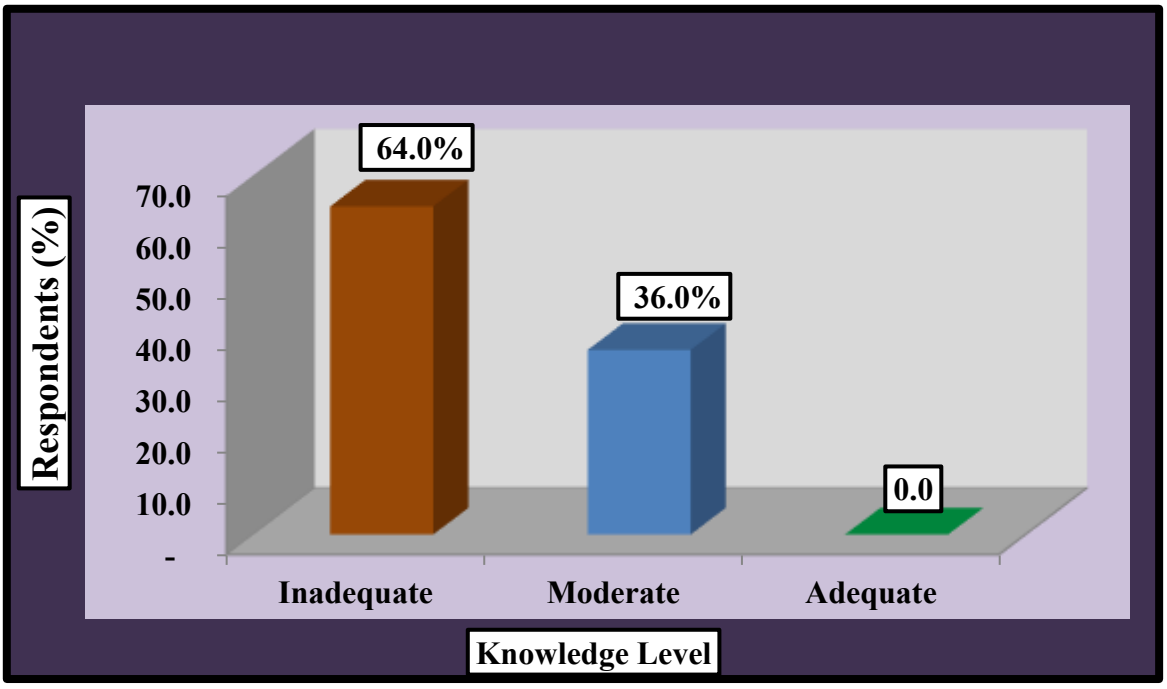

TABLE-3: OVERALL MEAN KNOWLEDGE SCORES ON PCOS n=100

Knowledge	Statements	Maximum score	Knowledge scores			
			Mean	SD	Mean (%)	SD (%)
Overall	35	35	14.32	3.66	40.9	10.5

TABLE-4: DISTRIBUTION OF ATTITUDE SCORES OF SUBJECTS REGARDING PCOS N=100

Attitude level	Scores	Respondents	
		Frequency (f)	Percentage (%)
Unfavourable	0-15	32	32.0
Moderate	16-22	68	68.0
Favourable	23-30	0	0.0
Total		100	100.0

FIGURE-2: CLASSIFICATION OF SUBJECTS ATTITUDE LEVEL ON PCOS.

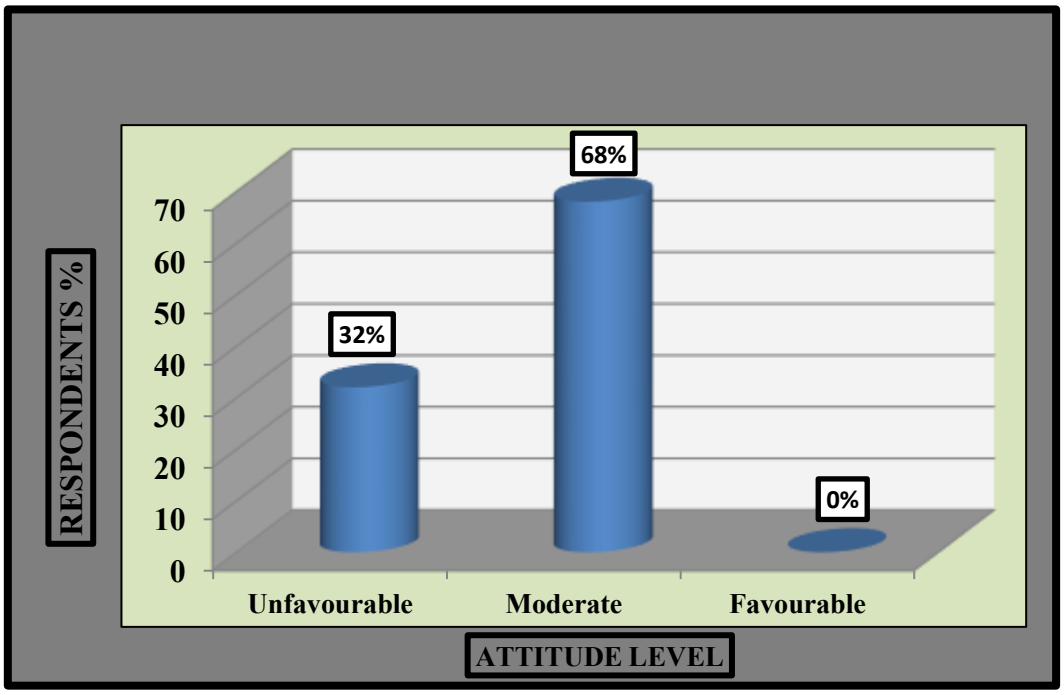

TABLE- 5: OVERALL MEAN ATTITUDE SCORES OF SUBJECTS ON PCOS

Attitude	Statements	Maximum score	Attitude scores			
			Mean	SD	Mean (%)	SD (%)
Overall	15	30	17.61	3.45	58.7	11.5

TABLE-6: CHI SQUARE TEST SHOWING THE ASSOCIATION BETWEEN KNOWLEDGE SCORES AND SELECTED DEMOGRAPHIC VARIABLES n=100

Demographic variables	Category	Sample	Knowledge level				X^2 value	P Value
			Inadequate		Moderate			
			F	%	F	%		
Age group (in years)	15-16	69	39	56.5	30	43.5	4.40*	P<0.05 (3.841)
	17-18	31	25	78.1	7	21.9		

Religion	Hindu	74	47	63.5	27	36.5	1.54 NS	P>0.05 (5.991)
	Muslim	16	9	56.3	7	43.8		
	Christian	10	8	80.0	2	20.0		
Area of residence	Urban	68	48	70.6	20	29.4	4.00*	P<0.05 (3.841)
	Rural	32	16	50.0	16	50.0		
Type of family	Nuclear	76	41	53.9	35	46.1	13.89*	P<0.05 (3.841)
	Joint	24	23	95.8	1	4.2		
Father's educational status	No formal education	14	7	50.0	7	50.0	8.98 NS	P>0.05 (9.488)
	Primary	20	12	60.0	8	40.0		
	Secondary	42	33	78.6	9	21.4		
	Graduation	15	9	60.0	6	40.0		
	Post-graduation	9	3	33.3	6	66.7		
Mother's educational status	No formal education	21	13	61.9	8	38.1	16.50*	P<0.05 (7.815)
	Primary	21	14	66.7	7	33.3		
	Secondary	50	37	74.0	13	26.0		
	Graduation	8	0	0.0	8	100		
Family's monthly income	<Rs.50,000	72	50	69.4	22	30.6	7.75*	P<0.05 (5.991)
	Rs.50,001-70,000	19	12	63.2	7	36.8		
	Rs.70,001-90,000	9	2	22.2	7	77.8		
Source of knowledge regarding PCOS	Teachers	16	9	56.3	7	43.8	0.82 NS	P>0.05 (9.488)
	Peer group	19	12	63.2	7	36.8		
	Seminar/ Conferences	4	3	75.0	1	25.0		
	Mass media	28	19	67.9	9	32.1		
	Others	33	21	63.6	12	36.4		
History of PCOS in family	Yes	11	8	72.7	3	27.3	0.41 NS	P>0.05 (3.841)
	No	89	56	62.9	33	37.1		

Significant at 5% Level
NS: Non-significant
Note: Figures in the parenthesis indicate Table value

TABLE-7: CHI SQUARE TEST SHOWING THE ASSOCIATION BETWEEN ATTITUDE SCORES AND SELECTED DEMOGRAPHIC VARIABLES n=100

Demographic variables	Category	Sample	Attitude level				X^2 value	P Value
			Unfavourable		Moderate			
			F	%	F	%		
Age group (years)	15-16	69	27	39.1	42	60.9	5.20*	P<0.05 (3.841)
	17-18	31	5	16.1	26	83.9		
Religion	Hindu	74	25	33.8	49	66.2	2.56 NS	P>0.05 (5.991)
	Muslim	16	6	37.5	10	62.5		
	Christian	10	1	10.0	9	90.0		
Area of residence	Urban	68	17	25.0	51	75.0	4.78*	P<0.05 (3.841)
	Rural	32	15	46.9	17	53.1		
Type of family	Nuclear	76	20	26.3	56	73.7	4.70*	P<0.05 (3.841)
	Joint	24	12	50.0	12	50.0		
Father's educational status	No formal education	14	4	28.6	10	71.4	1.29 NS	P>0.05 (9.488)
	Primary	20	8	40.0	12	60.0		
	Secondary	42	14	33.3	28	66.7		
	Graduation	15	4	26.7	11	73.3		
	Post-graduation	9	2	22.2	7	77.8		
Mother's educational status	No formal education	21	6	28.6	15	71.4	2.54 NS	P>0.05 (7.815)
	Primary	21	11	52.4	10	47.6		
	Secondary	50	13	26.0	37	74.0		
	Graduation	8	2	25.0	6	75.0		
Family's monthly income	<Rs.50,000	72	28	38.9	44	61.1	6.67*	P<0.05 (5.991)
	Rs.50,001-70,000	19	3	15.8	16	84.2		
	Rs.70,001-90,000	9	1	11.1	8	88.9		
Source of knowledge regarding PCOS	Teachers	16	6	37.5	10	62.5	3.37 NS	P>0.05 (9.488)
	Peer group	19	5	26.3	14	73.7		
	Seminar/ Conferences	4	2	50.0	2	50.0		
	Mass media	28	6	21.4	22	78.6		
	Others	33	13	39.4	20	60.6		
History of PCOS in family	Yes	11	7	63.6	4	36.4	5.68*	P<0.05 (3.841)
	No	89	25	28.1	64	71.9		

Significant at 5% Level
NS: Non-significant

Note: Figures in the parenthesis indicate Table value

Discussion:

The findings of the research project are discussed in terms of objectives and hypothesis stated for the project.

Characteristics of demographic variables:

- 69 per cent of the subjects belong to the age group 15-17 years, and 31 per cent of the subjects belong to the age group of 17-18 years.
- 74 per cent of the subjects are Hindus, 16 per cent of the subjects are Muslims and 10 per cent of the subjects are Christians.
- 68 per cent of the subjects are from Urban and 32 per cent of the subjects are from Rural.
- 76 per cent of the subjects belong to nuclear family and 24 per cent of the subjects belong to joint family.
- 14 per cent of the subjects' fathers' have no formal education, 20 per cent of the subjects' fathers' have obtained primary education, 42 per cent of the subjects' fathers' have obtained secondary education, 15 per cent of the subjects' fathers' are graduates and 9 per cent of the subjects' fathers' are post graduates.
- 21 per cent of the subjects' mothers' have no formal education, 21 per cent of the subjects' mothers' have obtained primary education, 50 per cent of the subjects' mothers' have obtained secondary education, 15 per cent of the subjects' mothers' are graduates and none of the subjects' mothers' are post graduates.
- 72 per cent of the subjects' family income is less than ₹50,000/-, 19 per cent of the subjects' family income is between ₹50,001-₹70,000/-, 9 per cent of the subjects' family income is between ₹70,001-₹90,000/- and none of subjects' family income is more than ₹90,001/-.
- 33 per cent of the subjects have received previous knowledge from other sources, 28 per cent of the subjects have received from mass media, 19 per cent of the subjects have received from peer group, 16 per cent of the subjects have received from teachers and 4 per cent have of the subjects have received from seminars/conferences.
- 89 per cent of the subjects have no history of PCOS in family and the remaining 11 per cent of the subjects have history of PCOS in the family.

To assess the level of knowledge of adolescent girls regarding Polycystic Ovarian Syndrome (PCOS) using Structured Knowledge questionnaire.

In order to achieve the first objective, the analysis and distribution of structured knowledge scores of subjects' obtained has been done on the basis of standard knowledge questionnaire and also by using frequency and percentage method.

In the present study, the overall knowledge of the subjects reveals that none of the subjects' possessed adequate knowledge, 36 per cent of the subjects' possessed moderate knowledge and 64 per cent of the subjects' possessed inadequate knowledge regarding Polycystic Ovarian Syndrome (PCOS). The overall mean knowledge scores of the subjects' regarding the knowledge on Polycystic Ovarian Syndrome are 40.9 per cent.

To assess the level of attitude of adolescent girls regarding Polycystic Ovarian Syndrome using Likert scale.

In order to achieve the second objective, the distribution of the attitude scores of the subjects' obtained has been done on the basis of attitude statement.

In the present study, the scores of the students revealed that 32 per cent of subjects have an unfavourable attitude and 68 per cent of subjects have a moderate attitude and none of the subjects have a favourable attitude regarding Polycystic Ovarian Syndrome (PCOS). The overall mean attitude scores of the subjects regarding the attitude on Polycystic Ovarian Syndrome are 58.7 per cent.

To determine the association between level of knowledge of adolescent girls regarding Polycystic Ovarian Syndrome with selected demographic variables.

In order to achieve the third objective, the distribution of the knowledge scores of the subjects' obtained has been done on the basis of standard knowledge questionnaire and also by using chi-square test.

The data shows that there is a significant association found between the knowledge scores and selected socio-demographic variables like age group (p=4.40), area of residence (p=4), type of family (p=13.89), mother's educational status (p=16.50), and family's monthly income (p=7.75) at 0.05 level and there is no significant association found between the knowledge scores and selected socio-demographic variables like religion (p=1.54), father's educational status (p=8.98), source of knowledge regarding PCOS (p=0.82), and history of PCOS in the family (p= 0.41) at 0.05 level.

To determine the association between scores of attitude scale of adolescent girls regarding Polycystic Ovarian Syndrome with selected socio-demographic variables.

In order to achieve the fourth objective, the distribution of the attitude scores of the subjects' obtained has been done on the basis of attitude statements and also by using chi-square test.

The data shows that there is a significant association found between attitude scores and selected socio-demographic variables like age group (p=5.20), area of residence (p=4.78), type of family (p=4.70), family's monthly income (p=6.67) and history of PCOS in the family (p=5.68) at 0.05 level and there is no significant association found between attitude scores and selected socio-demographic variables like religion (p=2.56), father's educational status (p=1.29), mother's educational status (p=2.54), and sources of knowledge on PCOS (p=3.37) at 0.05 level.

Conclusion:

The main aim of the research project is to determine the knowledge and attitude regarding Polycystic Ovarian Syndrome (PCOS) among adolescent girls studying in selected Institutes of Bangalore.

With reference to the assessment of knowledge level, none of the subjects possessed adequate knowledge, 36 per cent of subjects possessed moderate knowledge and 64 per cent of subjects possessed inadequate knowledge regarding Polycystic Ovarian Syndrome (PCOS).

The attitude score of the subjects regarding PCOS includes that 32 per cent of subjects have an unfavourable attitude and 68 per cent of subjects have a moderate attitude and none of the subjects have favourable attitude regarding PCOS.

Recommendations: In the direction of the findings of the study following recommendations are suggested for further studies as follows:

- The same study can be implemented by using a probability sampling technique and increase respondent size.

- A study can be conducted to compare the effectiveness of different methods of teaching on Polycystic Ovarian Syndrome.
- Various educational strategies can be implemented to increase the knowledge and awareness about the Polycystic Ovarian Syndrome.

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