RESEARCH ARTICLE

"A STUDY TO EVALUATE THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME IN KNOWLEDGE REGARDING POLYCYSTIC OVARIAN SYNDROME (PCOS) AMONG 1ST YEAR BScNURSING STUDENT OF SMT. NAGARATHNAMMA COLLEGE OF NURSING, BENGALURU"

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Manuscript Info	*Abstract*
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(PCOS/PCOD), originally described in 1935by Stein and Leventhal, is a complex, heterogeneous disorder of uncertain etiology, with alarge degree can be classified as a genetic disease. It is thought to be the most frequentendocrineproblem of women in reproductiveage. In India nearly 40% of the women are affected by polycystic ovarian syndrome or disease(PCOD). But among then only 60% come to hospital for treatment, when they recognize thattheyhavegot infertility. This study was undertaken to assess the effectiveness of structured teaching program onknowledgeregardingpolycysticovariansyndromeamong1styearBscnursingstudentsatSmt.Nagarthnammacollege of nursing, Bengaluru. Theobjectivesof"Astudytoevaluatetheeffectivenessofstructuredteaching programon knowledge regarding polycystic ovarian syndrome (PCOS) among 1st year Bsc nursingstudentof Smt. Nagarathanammacollegeand schoolof nursing, Bengaluru."

1. Toassesstheexistingknowledgeregardingpolycysticovariansyndrome amongthestudentsof1st yearBScnursing students ofSmt. Nagarathanammacollegeof nursing,Bengaluru.
2. To calculate the effectiveness of structured teaching program on knowledge regardingpolycystic ovarian syndrome among 1st year BSc nursing students of Smt. Nagarathanammacollegeofnursing.
3. To find an association between pre-test and post-test knowledge score regarding polycysticovarian syndrome among 1st year BSc nursing students of Smt. Nagarathanammacollege ofnursing.

Result:
Therewassignificantimprovementintheknowledgeofstudentsfollowingtheadministrationofstructuredteaching programonPolycysticOvarian Syndrome.

Conclusion: The present study attempted to assess knowledge regarding polycystic ovarian syndrome.The study findings showed that the post test score was higher than the pre-test score and

BackgroundStudy: Polycystic Ovaria

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wasconcludedthatstructureteachi
ngprogramonpolycystic
ovariansyndrome waseffective.

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Introduction:-

"Femaleadolescenceisuniversallyanemotionallyandpsychologicallyintenseperiod"
-CaitlinFlanagan.

AnatomyandPhysiology:

Polycystic ovary syndrome (PCOS) is a set of symptoms caused by a problem with awoman's hormones. It affects the ovaries. These are the small organs that store a woman'seggs. But it can also affect the rest of the body. PCOS is a very common condition in womenofchildbearing age.Insome cases,it canlead toserious healthissues ifnottreated.[1]

Ovulation happens when a mature egg is released from an ovary. This happens so it can befertilized by a male sperm. If the egg is not fertilized, it is sent out of the body during yourperiod.

In some cases, a woman doesn't make enough of the hormones needed to ovulate. Whenovulation doesn't happen, the ovaries can develop many small fluid-filled sacs (cysts). Thesecystsmakehormonescalledandrogens.Androgensareatypeofhormonefound inabundancein men, but women normally have them in smaller amounts. Women with PCOS often havehighlevelsofandrogens.Thiscancausemoreproblemswithawoman'smenstrualcycle. Anditcan causemany ofthesymptoms of PCOS.[1]

History:

The condition was first described in 1935 by American gynecologists Irving F. Stein,Sr. and Michael L. Leventhal, from whom its original name of Stein–Leventhal syndrome istaken.SteinandLeventhalfirstdescribedPCOSasanendocrinedisorderintheUnitedStates,andsincethen,ithasbecomerecognizedasoneofthemostcommoncausesofoligoovulatoryinfertilityamong women.[2]

Incidence:

StudiesofPCOSinIndiacarriedoutinconveniencesamplesreportedaprevalenceof
3.7%to22.5%,[3,4]with9.13%to36%prevalenceinadolescentsonly.[5,6]Thewidevariationinprevalencemightbeduetoheterogeneouspresentationofsymptoms,diagnosticcriteriapracticed,limitations in diagnosis, agegroups,andethnicpopulations studied.[2]

Definition:

Polycystic ovary syndrome (PCOS) is a hormonal disorder common among women ofreproductive age. Women with PCOS may have infrequent or prolonged menstrual periods orexcess male hormone (androgen) levels. The ovaries may develop numerous small collectionsoffluid (follicles) andfail to regularly releaseeggs.[3]

Causes:

Theexact causeofPCOSisn'tknown. Factorsthatmightplay aroleinclude:

Excessinsulin.

Insulinisthehormoneproducedinthepancreasthatallowscellstousesugar,yourbody'sprimaryenergysupply.
Ifyourcellsbecomeresistanttotheactionofinsulin,thenyour blood sugar levels can rise and your body might produce more insulin. Excess insulinmightincreaseandrogenproduction, causingdifficulty with ovulation.

Low-grade inflammation.

This term is used to describe white blood cells' production ofsubstances to fight infection. Research has shown that women with PCOS have a type of low-gradeinflammationthatstimulatespolycysticovariestoproduceandrogens,whichcanleadtoheartand blood vessel problems.

Heredity.

ResearchsuggeststhatcertaingenesmightbelinkedtoPCOS.

Excess androgen.
The ovaries produce abnormally high levels of androgen, resulting inhirsutismand acne.[3]

SignandSymptoms:
Signsand symptomsof PCOS are:
1. irregularornomenstrualperiod
2. heavyperiods
3. excessbodyandfacialhair
4. acne
5. pelvicpain
6. difficultygettingpregnant
7. patchesofthick, darker, velvetyskin

Menstrual disorders:
PCOS mostly produces oligomenorrhea(fewer than nine menstrualperiods in a year) or amenorrhea (no menstrual periods for three or more consecutivemonths),but othertypes ofmenstrual disorders may also occur.[21]

Infertility:
Thisgenerally resultsdirectlyfromchronicanovulation(lackof ovulation).[21]

High levels of masculinizing hormones:
Known   as   hyperandrogenism,   the   most   commonsignsareacneand   hirsutism (malepatternofhairgrowth,suchasonthechinorchest),butitmayproduce   hypermenorrhea (heavyandprolongedmenstrualperiods), androgenicalopecia (increased hair thinning or diffuse hair loss), or othersymptoms.[21][27]Approximately three-quarters of women with PCOS (by the diagnosticcriteriaofNIH/NICHD 1990)haveevidenceofhyperandrogenemia.[28]

Metabolicsyndrome:
Thisappearsasatendencytowards   centralobesity   andothersymptomsassociatedwith insulinresistance,includinglowenergylevelsandfoodcravings.[21]Serum   insulin,insulinresistance,and   homocysteine levelsarehigherinwomen with PCOS.[29]

Polycystic Ovaries:
Ovaries might get enlarged and comprise follicles surrounding theeggs.As result, ovaries might fail to function regularly[4].

Treatment:
PCOS has no cure, as of 2020. Treatment may involve lifestyle changes such as weightloss and exercise. Metformin and anti-androgens   may   also   help.   Other   typical   acne   treatmentsandhairremovaltechniquesmaybeused. Effortstoimprovefertilityincludeweightloss, clomiphene, ormetformin.[5].

Needforstudy
"We   know   that   birth   takes   a   woman   from   one   place   in   her   life   to   another,   changes herviewpointofherselfandalsooftheworld,butawallofsilencesurroundsthewomanwhoarechildless,whetherby   choiceor bycircumstances."

-AnnCorinthians
Adolescent health plays an important role in a nation's health condition. In India 35% ofadolescents are suffering from PCOS.   It   is   mainly   due   to   the   lifestyle   changes.   There   are twomainreasonsfortheincreaseofPCOSincidencesinIndianwomen–
theadoptionofunhealthyeatinghabitsandsedentarylifestyle.Whereasoldergenerationsofwomeneattraditional,low-calorie foods with less sugar. Many young Indian girls today eat a steady diet of junk food.Within the past two decades, India began   relying   on   western   diets   and   lifestyle.   It   is   predictedthattheymayseeeuptoasix- foldincreaseinobesityprevalenceinthenexttenyearsespeciallyfor India who has already the highest rates of diabetes in the world in the world (WHO 2009).The proper awareness helps them in prevention and early identification of PCOS, therebyreducingits complicationslike diabetes, hypertensionand cardiovasculardiseases.[7]"

Basicand clinicalresearchintothecausesofpolycysticovariansyndromehasledtoadvancesin the care of women with this disorder and also early detection of PCOS. Additional studieshaveconfirmedthatwomenwithPCOShaveincreasedriskofdevelopingmetabolicdisturbances,includingtype2diabetes andlipid(bloodfat)abnormalities.WomenwithPCOSalso have high rate of obstructive sleep apnoea, a breathing disorder. Researchers have alsofound that obese women are having a hard time conceiving. It is also the leading cause offemaleinfertilityandputswomenatincreasedriskofcancers,heartdiseases,strokeandkidneyproblems. This means PCOS contributes to some of the leading causes of disability in womentoday[8].

Objectives:-
1. To assess the existing knowledge regarding polycystic ovarian syndrome among first yearnursingstudents of smt.Nagarathnamma college ofnursing at Bengaluru-07.
2. evaluatetheeffectivenessofstructuredteachingprogrammeonknowledgeregardingpolycystic ovarian syndrome among first year Bsc nursing students of smt.Nagarathnammacollegeof nursing at Bengaluru-07.
3. Tofindassociationbetweenpre-testknowledgescoresregardingpolycysticovariansyndrome   and   selected sociodemographic variables among first year Bsc nursing students ofsmt.Nagarathnammacollegeof nursing at Bengaluru -07.

Researchapproach
Accordingtothenatureoftheproblemsselectedforthestudy,anevaluativeresearchapproachwas appropriate.
 Evaluatoryapproachwasusedinthisstudy,itaimedtoassesstheknowledgeregardingthepolycysticovary syndrome[25].

Researchdesign
Itisdefinedas"Aresearchoverallforobtaininganswertotheresearchquestionsorfortesting thehypothesis"

The research design is the plan, structure and strategy of investigations of answering theresearch questions in the overall plan or blueprint the researchers select to carry out theirstudy[26].

Preexperimental onegroup pre-testandpost-testdesign wasadapted forthis study.

Samplesize
Thesampleis thesmallportion of thepopulationforobservation andanalysis.
Inthepresentstudy,samplesizeconsistsofaround40studentsof1[st]yearBscnursinginSmt.Nagarthnammacollegeof   nursing, Bengaluru.

Samplingtechniques
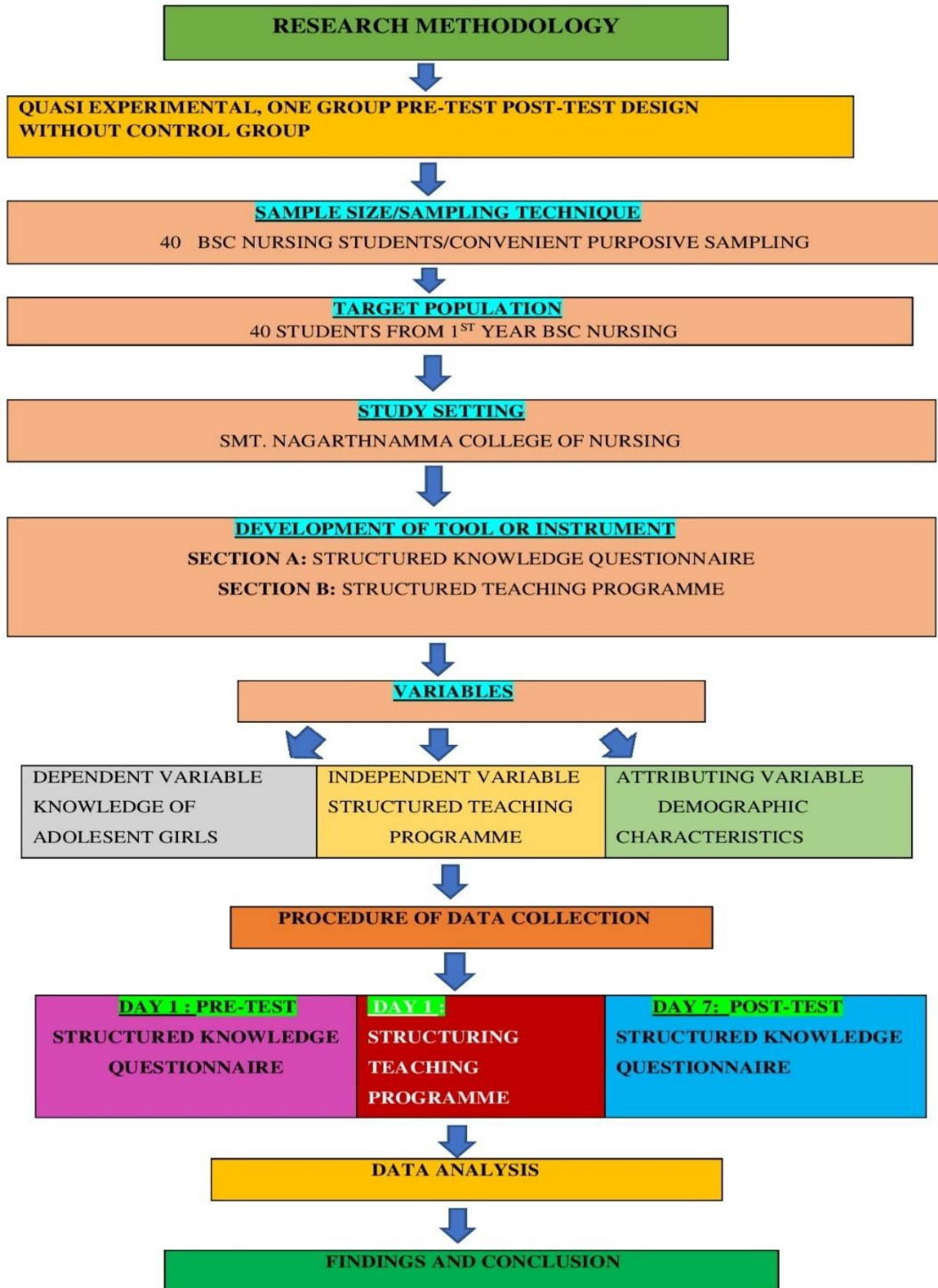Nonprobabilitypurposivesamplingtechniquewasusedforthisstudy.

Result:-
Section A:

Table1:- Distributionof1[st]yearBScNursingstudentsaccordingtotheirageandpercentageof demographic variables.

AGE   n=40

DEMOGRAPHIC VARIABLES	NO.OFSTUDENTS	PERCENTAGE(%)
16Years	0	0
17Years	0	0
18Years	4	10
19andabove	36	90

RESEARCH METHODOLOGY

⬇

QUASI EXPERIMENTAL, ONE GROUP PRE-TEST POST-TEST DESIGN WITHOUT CONTROL GROUP

⬇

SAMPLE SIZE/SAMPLING TECHNIQUE

40   BSC NURSING STUDENTS/CONVENIENT PURPOSIVE SAMPLING

⬇

TARGET POPULATION

40 STUDENTS FROM 1ST YEAR BSC NURSING

⬇

STUDY SETTING

SMT. NAGARTHNAMMA COLLEGE OF NURSING

⬇

DEVELOPMENT OF TOOL OR INSTRUMENT

SECTION A: STRUCTURED KNOWLEDGE QUESTIONNAIRE

SECTION B: STRUCTURED TEACHING PROGRAMME

⬇

VARIABLES

⬇   ⬇   ⬇

DEPENDENT VARIABLE	INDEPENDENT VARIABLE	ATTRIBUTING VARIABLE
KNOWLEDGE OF	STRUCTURED TEACHING	DEMOGRAPHIC
ADOLESENT GIRLS	PROGRAMME	CHARACTERISTICS

⬇

PROCEDURE OF DATA COLLECTION

⬇

DAY 1 : PRE-TEST	DAY 1 :	DAY 7: POST-TEST
STRUCTURED KNOWLEDGE	STRUCTURING	STRUCTURED KNOWLEDGE
QUESTIONNAIRE	TEACHING	QUESTIONNAIRE
	PROGRAMME	

⬇

DATA ANALYSIS

⬇

FINDINGS AND CONCLUSION

Theabovetableshowsthatmajorityofthesubjecti.e.,90%wereintheagegroupof19yearsandabove,   10%werein theagegroupof 18years.
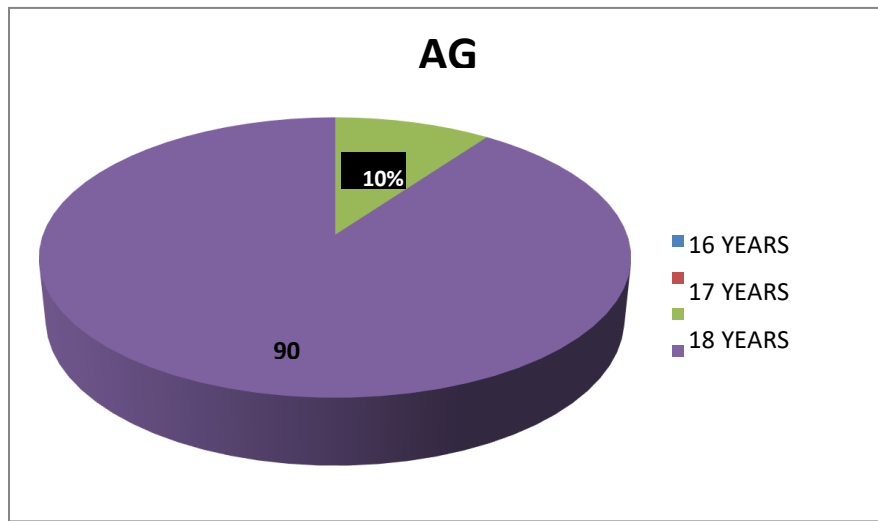

Fig1:- Distributionofrespondentsaccordingtotheirage.

Table8:- Overallpretest scoreonknowledgeof subjectsonPCOS.

Group	Mean	Mean%	Standarddeviation
Overall pre-testscore	10.7	53.5%	3.09

Theabovetableshowsthemean,meanpercentageandstandarddeviationforpretestknowledgeof subjects on PCOS.

Table9:- Distributionofsubjectsby levelof knowledgeonPCOS(pre-test).

Levelofknowledge	Category	Number ofres pondents	Percentage
Inadequate	<50%score	19	47.5%
Moderate	51-75%score	20	50%
Adequate	>75%score	1	2.5%
Total		40	100%

Theabovetableshowsthepretestlevel ofsubjectsis adequateinallrespondents.

Pre-Testknowledgescore
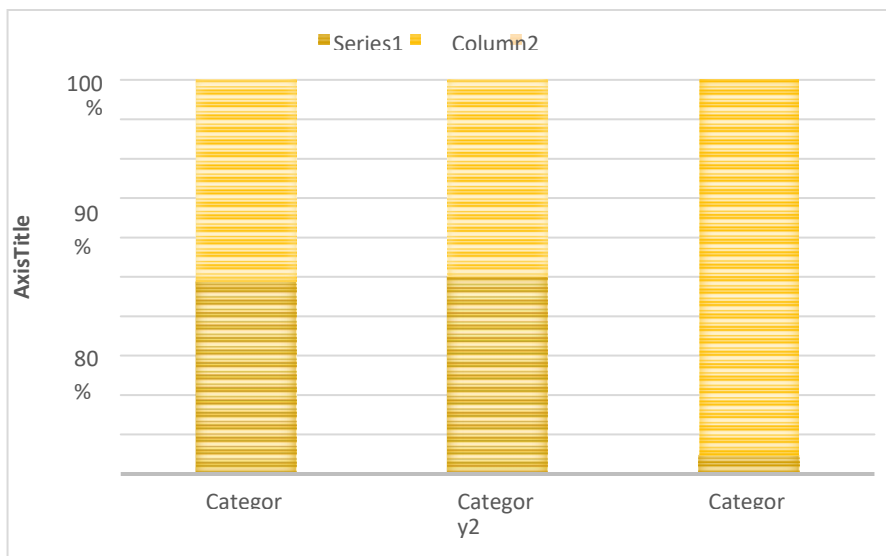
Theabovetableshowsthatinadequate(category1)isof47.5%,Moderate(category2)isof50%，adequate (category 3)is of 2.5%.

Table13:-
Comparisonofknowledgescorepercentageonpolycysticovariansyndrome(PCOS)beforeandafteradministrationof structured teachingprogramme.

PRE-TEST				POST-TEST				KNOWLEDGEENHANCEMENT%
Mean	Mean%	SD		Mean	Mean%	SD		
10.7	53.5%	3.09		17.6	88%	2.09		
								34.5%

The above table shows the knowledge percentage on polycystic ovarian syndrome among thestudentsstudyingin1styearBscnursinginSmt.Nagarathnammacollegeandschoolofnursingbefore and after the administration of structured teaching programme. The overall percentageofpre-test was53.5%and thepost-test was88%.Thereisanenhancementof34.5%.

Hypothesistesting
Researchtesting-2
H2:Thereissignificantassociationbetweenthepost-testknowledgescoreregardingpolycysticovariansyndromewith theirselected demographicvariable ofthesamples.

Nullhypothesis
H02:Therewillnotbesignificantassociationbetweenthepost-testknowledgescoresregardingpolycysticovariansyndromeamong1styearBscnursingstudentswiththeirselecteddemographicvariables ofsamples.

Implicationsofthe Study:
The findings of the study have implications for Nursing Education, Nursing ResearchandNursing Administration.

Nursingeducation:
1. Nursingeducationshouldpreparethenursesforimpartinghealthinformationeffectively,efficientlyto thecommunity people.
2. NursingcurriculumshouldincludemorehoursonknowledgeregardingPolycysticOvarianSyndrome.
3. Studentnursesneedtodeveloptheirskillsinpreparinghealthteachingmaterials.
4. ThehealtheducationalmaterialsespeciallyStructuredTeachingProgrammepreparedforthisstudycan beutilized by thenursing students to learn about thedisease.

Nursingresearch:
1. Thisisareferencefortheresearch scholar.
2. Helpsinmotivatingtheresearchscholars.
3. Anabstractoftheresearchcanbepublishedinnursingjournalsothatfurtherresearchcanbemadeuseful[28].

Nursingadministration:
1. The main focus of nursing administration is to organize seminars and workshop and othereducationalprogramsforstaffnursesandschoolhealthnursesasapartofin-serviceeducationprogramssincethey havedirect contact with the adolescent girls[28.]
2. Nursing administrator should take part in the health policy making and developing protocolsNursing administrators should concentrate on the proper selection placement and effectiveutilizationofthe nurses in all areasby givingproper guidance[29].

Recommendations:-
Onthebasisofthefindingsofthestudyofthefollowingrecommendationshasbeent made:
1. Asimilarstudycan be replicatedonlarger sampletogeneralizefindings.
2. Asimilarstudycanberecommendedbyusingdifferentteachingmethod.

3.   StudentnursecanutilizetheStructuredTeachingProgrammetoconducteducationalprogramsand teach patients.

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