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RESEARCH ARTICLE

“A STUDY TO ASSESS THE KNOWLEDGE ON URINARY TRACT INFECTION REGARDING ITS PREVENTION AND MANAGEMENT AMONG THE 1ST YEAR B.SC NURSING AT SMT. NAGARATHNAMMA COLLEGE OF NURSING, BENGALURU”

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Abstract

Good health is the fundamental right of every human being and it is essential to lead a successful life. The preamble to the WHO constitution also affirms that it is one of the fundamental rights of every human being is to enjoy ‘‘ The highest attainable standards of health’’. Moreover, emphasis is based on health promotion and preventive healthcare. Good physical and mental health of children and adolescents makes for good health in adulthood. Agreeably, adolescence is a transitional period from dependent childhood to independent adulthood, that is, age group from 10-19 years. About one-fifth of India’s population is in the adolescence age group and this is the earliest age where we can prevent morbidity in later life by means of health. According to 2022–2023-year statistical data, the human body gets rid of liquid waste products through the urinary system, and so, it is important to protect this system from infections. Urinary tract infections are the second most common bacterial disease which accounts for more than eight million office visits per year. More than one lakh (1,00,000) people are hospitalized annually because of urinary tract infection and it is an important cause of morbidity and mortality in Indian subjects. Young age and female sex are the two important factors that contribute to the development of urinary tract infection and therefore it is the most common infection among adolescent girls, which distresses them, concerns their parents, and may cause permanent kidney damage, if there is any delay in treatment. According to the National Institute of Health and Clinical Excellence guidelines urinary tract infection is defined by a combination of clinical symptoms of urinary tract infection that usually include frequency, dysuria, pyuria, abdominal pain, back pain, fever, or urgency. Most urinary tract infections result from ascending infection by single gram-negative bacteria such as *Escherichia coli*, *Klebsiella*, *Proteus*, *Enterobacter*, or *Pseudomonas*. Staphylococcal infections, especially due to *Staphylococcus saprophyticus* are common cause of urinary tract infection among adolescent girls. The two broad categories of urinary

tract infection are pyelonephritis or upper urinary tract infection and cystitis or lower urinary tract infection. Lower urinary tract infections are common among adolescent girls.

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Introduction:-

Need for the study

In the present scenario, the lifestyle of adolescent girls has made a tremendous change in their habits such as lack of personal hygiene, inadequate consumption of fluids, and less intake of nutritious foods. Adolescents live in a world of fantasy and they are not aware of their health needs and many diseases in adulthood are rooted to either childhood or adolescence. So, a researcher being in nursing profession felt the need to educate adolescent girls in selected pre-university college to impart appropriate knowledge regarding the prevention of urinary tract infection.

A cross-sectional descriptive study conducted to find epidemiological differences of lower urinary tract symptoms among female subpopulation and group level interventions in Karimnagar, Andhra Pradesh. Samples selected for the study were 75 working women and 180 adolescent girls. Data collection was done by a structured questionnaire. The study results show overall prevalence of lower urinary tract infection among three groups was 18.5% and in that, the prevalence among adolescent girls, housewives and working women was 29%, 21%, and 13% respectively. The high prevalence in adolescent girls appears to be due to the use of unsanitary pads during menstruation, practicing improper anal washing technique, having vaginal discharge, malnourishment, having pinworms in stools and using bad toilets. The educational interventions done through adolescent girls were successful in reducing the risk factors. The researcher concluded that adolescent girls had less knowledge regarding the prevention of urinary tract infection and by providing planned teaching interventions the occurrence of urinary tract infection in adolescent girls can be prevented.

In India, the National Family Health Survey 2000 reported the prevalence of urinary tract infection among adolescent girls (10-19 years) as 16.6% and the risk of bacteremia developing in adolescent girls as 5-10%. Common risk factors for adolescent UTI are poor hygiene, dysfunctional voiding patterns, use of synthetic underwear and panty hose, tight jeans, wet bathing suits, allergies/irritants, feminine hygiene sprays, bubble baths, perfumed toilet paper, sanitary napkins and soaps may aid in the development of cystitis. Lack of adequate knowledge and practices related to maintenance of health leads to various genital/urinary infections during adolescence. Thus, it is very essential to initiate health interventions/measures for the prevention and control of UTI among adolescents. Urinary tract infection is among the leading causes of adolescent girls visiting a doctor. We in this small study have tried to analyze the etiological factors and practices which predispose the young girls to UTI.

Objectives of the study-

- 1). To assess the existing knowledge regarding Urinary Tract Infection, its prevention and management among the 1st year B.Sc. Nursing girls, Smt. Nagarathnamma college of Nursing, Bengaluru.
- 2). To evaluate the effectiveness and structured teaching program on knowledge regarding Urinary Tract Infection, its prevention and management among the 1st year B.sc Nursing girls at Smt. Nagarathnamma college of Nursing, Bengaluru.
- 3). To find an association between post-test knowledge scores and socio-demographic variables regarding Urinary Tract Infection, its prevention and management among the 1st year B.sc Nursing girls at Smt. Nagarathnamma college of Nursing, Bengaluru.

Research Approach

This section of research approach is the basic procedure for the conduct of research inquiry.

The research approach helps the researcher to determine what data to collect and how to analyze it. It also suggests possible conclusions to be drawn from the data.

A descriptive approach was considered to be the most appropriate and adopted for the present study in order to assess the knowledge of urinary tract infection among adolescent girls in selected PUC colleges of Bangalore.

Research Design

Research design is defined as the overall plan for collecting and analyzing data including specifications for enhancing the internal validity of the study. The selection of the research design depends upon the purpose of the study, research approach and variables to be studied. Descriptive research design was adopted to achieve the objectives of the study.

Variables:**Independent variable:**

Prevention and management of urinary tract infection

Dependent variable:

Knowledge of adolescent girls regarding urinary tract infection studying in PU college.

Hypotheses:

There will be significant relationship in the knowledge score on urinary tract infection regarding its prevention and management with demographical variables of the subject.

Sampling procedure

In this study, a type of probability sampling, that is, simple random sampling is found to be appropriate and the samples will be selected on basis of inclusion criteria.

Sectiona:**Distribution of demographic variables**

Table I:- Frequency and percentage distribution of students according to their age group.

Sl.No	Demographic Variables	Frequency	Percentage
1.	Age group (in years)	18 Years	17
		19 Years	35
		20 Years	7
		21 Years	1

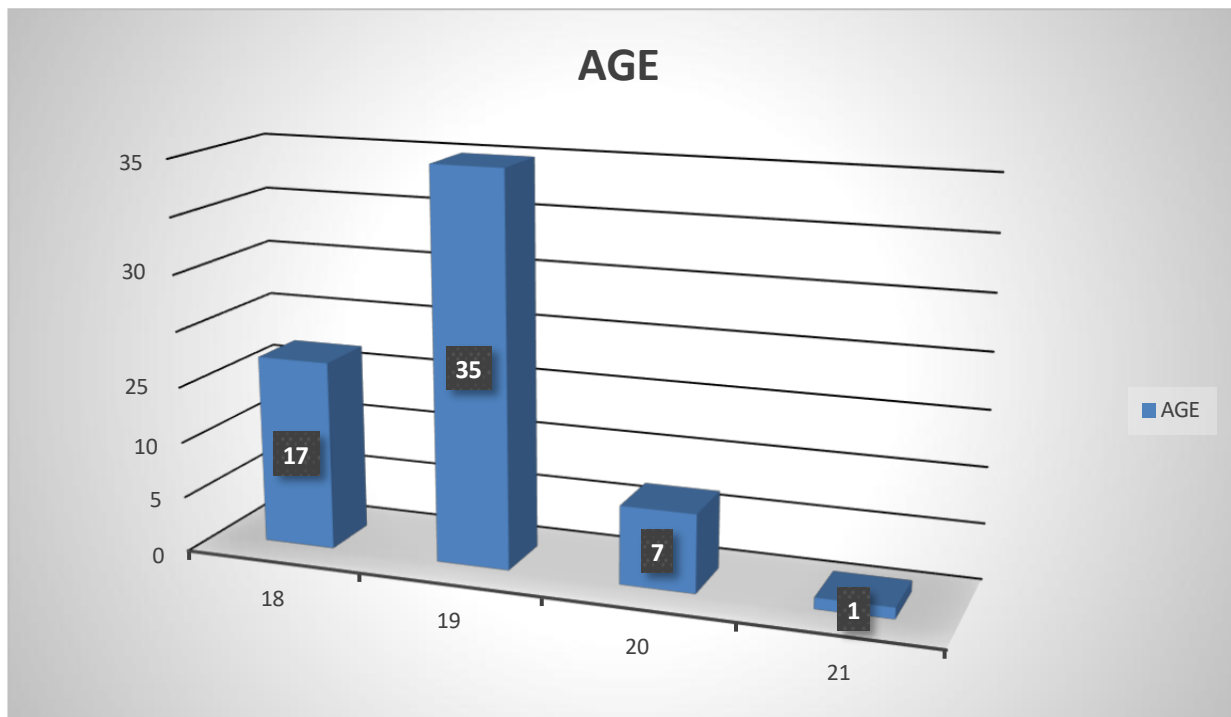


Figure1:- Above figure shows the distribution of age group among the students.

According to the figure (Figure 1), shows that there were 17 students in age group of 17, 35 students in age group of 19, 7 students in age group of 20 and 1 students in age of 21.

SectionB:AssessingTheKnowledgeOfStudentsOnUriaryTract Infection Regarding Its Prevention And Management Among Adolescent's Girls.

Table6:- Frequencyandpercentagedistributionofvariouslevelsofknowledge.

Knowledgelevel	Category(score)	Respondents	
		Frequency	Percentage
Inadequate	Below50%	33	55%
Average	50-70%	16	27%
Adequate	Above75%	11	18%

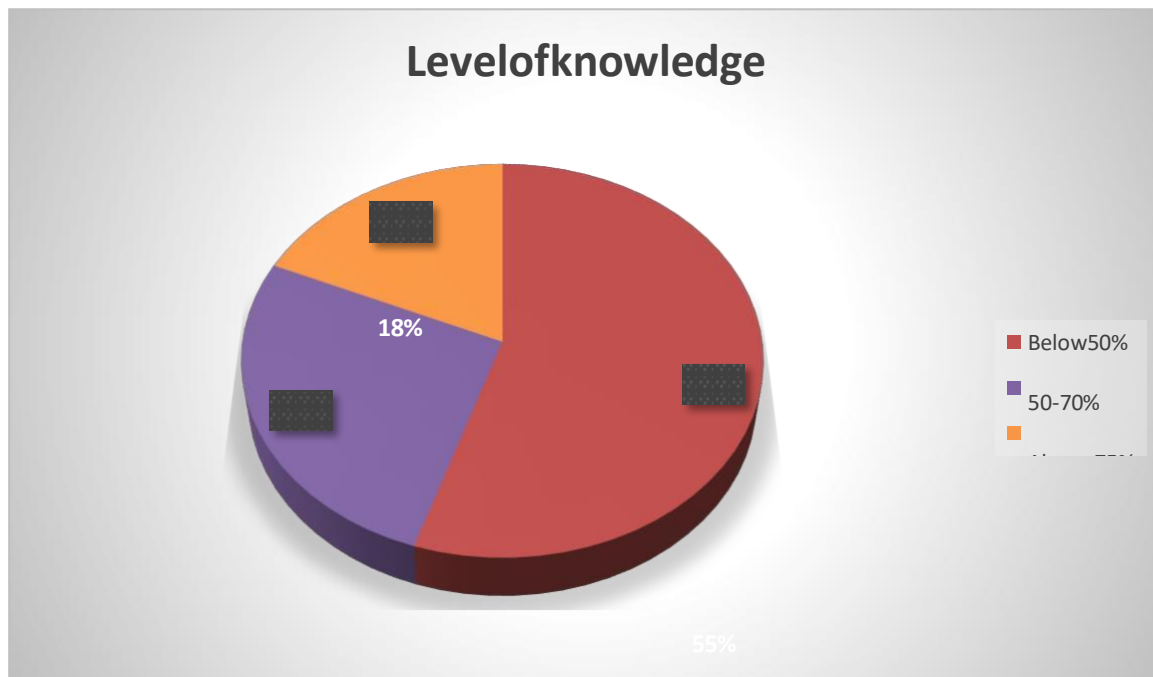


Figure6:- Theabovepie chartdepicts thedistributionofstudents accordingtotheirlevelof knowledge.

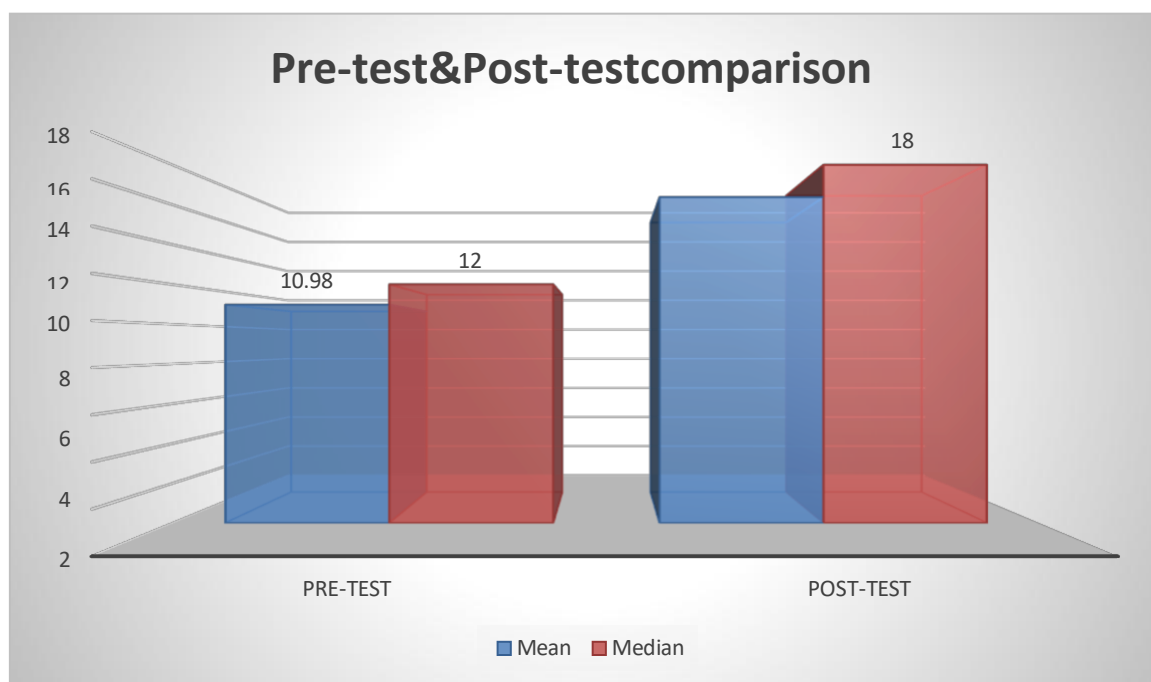
The figure above shows that the majority (88%) of students have inadequate knowledge, where 10% has average knowledge and 2% have adequate knowledge on Urinary tract infection regarding its prevention and management.

Table11:- Comparisonbetweenpre-testandpost-test result.

Thebelowgraphshowsthetotalmeanandmedianofthepre-testandpost-testandthelevelof knowledge comparison

Aspects Deviation	Mean	Median
Pre-test	10.98	12
Post-test	16.94	18

The below graph shows the total mean and median of the pre-test and post-test and the level of knowledge comparison



Section A: Description of demographic profile.

It shows that 30 students were in the age group of 17 and 18 years and there were 0 students in the age of 15 and 16. With 17 age group were from 11 standard and 18 age group were from 12 standard. In terms of family type, 20% belongs to small family,

60% belongs to nuclear family, 18% belongs to joint family and 2% belongs to blended family. With regard to family income, 7% have family income of below 10,000/month, 15% have family income of 10,000- 20,000/month, 58% have family income of 20,000- 30,000/month and 20% have family income of above 30,000/month. As we see about the previous knowledge 86% of them have no knowledge about urinary tract infection, where 12% of them know from books and 2% have knowledge through internet.

Section B: To assess the knowledge regarding prevention and management of urinary tract infection.

The present study attempted to assess the knowledge level on prevention and management of urinary tract infection among the 1st year B.Sc. Nursing girls at selected Smt. Nagarathamma college of Nursing, Bengaluru.

The table above shows that the majority (88%) of students have inadequate knowledge, where 10% has average knowledge and 2% have adequate knowledge about the prevention and management of urinary tract infection.

A non-experimental design and descriptive approach were used in the study. The data was collected from 60 samples from PU college in Soldevanahalli Bangalore through convenient sampling technique. The data collected was subjected to analysis using descriptive statistics in terms of frequencies and percentage.

Major findings of the study

The analyzed data in the study revealed that majority of students were from 17-18 years of age, most of them belonged from nuclear family (60%) with moderate socio-economic condition of 20,000-30,000/month (56%). Majority (86%) of them having no previous knowledge of urinary tract infection.

Implications of the study

The findings of the study have implications in various areas of nursing namely nursing practice, nursing education, nursing administration and nursing research.

As per the knowledge rate of the adolescent's girls regarding urinary tract infection is very less which is 88%. Awareness can be created among the adolescent's girls providing knowledge about prevention and management.

Nursing practice

This study emphasizes in assessing the knowledge on urinary tract infection regarding prevention and management among adolescent's girls.

The nurses are the key point person of the health team, who plays a major role in health promotion and maintenance. Nursing care is an art and science in providing quality care and health promotion. This study implies the basis for developing standards of health promotion in the hospital as well as community.

Nursing education

1. Nurse Educators should emphasize more on preparing students to impart health information to the public regarding urinary tract infection.
2. The curriculum of nursing education should enable student nurse to equip themselves within the knowledge of urinary tract infection.
3. Thenursing education should give more importance to the application of theory into a practice.
4. The curriculum of nursing education should enable student nurse to equip themselves within the knowledge of prevention and management of urinary tract infection.

Nursing-Administration

1. Nurse as an administrator should take limitation in formulating policies and protocols for short- and long-term health teaching.
2. The nursing administration should motivate the subordinate for participating in various educational programmes and improve their knowledge and skills.
3. The administrator serves as a reserve person for young nursing students, parents and school teachers
4. for providing knowledge on urinary tract infection.
5. The nurse administrator has the power to formulate pamphlet and flashcards for the awareness on prevention and management of urinary tract infection.

Nursing research

1. This study helps nurse researcher to develop appropriate health education tool to provide information on urinary tract infection.
2. The study will motivate the novice researcher to conduct same study with different variables on a large scale. The public and private agencies should also encourage research in this field through materials and funds.

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