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RESEARCH ARTICLE

EFFECTIVENESS OF COMPREHENSIVE NURSING INTERVENTION ON KNOWLEDGE REGARDING SELF-CARE MANAGEMENT AND SELF-REPORT PRACTICES RELATED TO DYSMENORRHEA AMONG ADOLESCENT GIRLS: A QUASI EXPERIMENTAL STUDY.

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Key words:-

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Abstract

Introduction: Adolescence is a period of transition from complete dependence to relative independence stage. Onset of menarche brings major physiological changes which is often associated with problems of irregular menstruation, excessive bleeding and dysmenorrhea.

Objectives: Study aimed to assess the effectiveness of comprehensive nursing intervention in improving adolescent girls' knowledge and practices regarding dysmenorrhea.

Methods: Study design is quasi experimental non randomized pre-test and post-test control group, 60 adolescent girls (30 in control and 30 in experimental group) from selected schools of district Sirmour, H.P. Data was collected by self-administered questionnaire and self-report practice check list.

Results: In experimental group, Mean \pm SD of knowledge score was 8.27 ± 2.864 for pre-test and 29.57 ± 2.956 and 13.10 ± 2.482 respectively for two post-test, whereas in control group, it was 8.43 ± 2.909 for pre-test and for post-test it was 8.50 ± 2.921 and 8.27 ± 2.924 respectively. Self-report practice score for pre-test and two post-tests were 3.63 ± 1.866 , 5.67 ± 1.322 and 8.70 ± 1.643 in experimental group. While in control group practice scores for pre-test and two post-tests were 4.20 ± 2.058 , 4.20 ± 2.024 and 4.33 ± 2.073 . Repeated ANOVA was used to find out the relationship between pre-test, post-test 1 and post-test 2 at $p \leq 0.05$ level of significance. Chi test was used to find out the association at $p \leq 0.05$ level of significance. There was no association found between

Conclusion: The result of the study suggested that there was improvement in the knowledge and practice of adolescent girls after the implementation of comprehensive nursing intervention.

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Introduction:-

An adolescent is a period from childhood to adulthood characterized by changes in physical, endocrinal, emotional, mental growth, from complete dependence to relative independence.¹ The WHO (World Health Organization) has

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defined adolescents between the ages of 10-19 years. Adolescent girls constitute about one-fifth of the female's population in the world.² National health policy (2002) has defined adolescents as an underserved vulnerable group that needs to be addressed especially by the provision of information on reproductive health.³

One of the major physiological changes that take place in adolescent girls is the onset of menarche which is often associated with problems of irregular menstruation, excessive bleeding and dysmenorrhea. Problems can occur at any point in the menstrual cycle, which is influenced by anatomical abnormalities, physiological imbalances, and lifestyle. Knowledge regarding normal menstrual parameters is essential for the assessment of menstrual cycle experiences and disorders. Out of this dysmenorrhea is one of the common problems experienced by many adolescent girls.

The term dysmenorrhea is derived from the Greek words „dys“ meaning difficult/painful, „Meno“ meaning month and „rrhea“ meaning flow.⁴ Dysmenorrhea is painful menstruation most common form of gynaecological dysfunction.⁵ It may begin soon after the menarche, after which it often improves with age; or it may originate later in life, after the onset of an underlying causative condition. It is the most common gynaecological disorder in women of reproductive age. Dysmenorrhea is the medical term for pain with menstruation. There are two types of dysmenorrhea: primary and secondary.⁶ The treatment aims mainly at the cause rather than the symptoms. The type of treatment depends on the age, severity, and the parity of the patient.⁷

Need Of The Study

The adolescent's dysmenorrhoeal problems are common throughout the country. Adolescent girls are more vulnerable groups, particularly in developing countries where they are traditionally married at an early age and are exposed to a greater risk of acquiring reproductive diseases.⁸ As a researcher we should put efforts into creating awareness about managing the dysmenorrhea symptoms. Cramps are part of the primary dysmenorrhea which is associated with back pain, headaches, nausea, vomiting, dizziness, and diarrhoea. These symptoms can appear a day before the actual flow or after the usual flow and they usually peak by the second day of flow.⁹ Previous studies so far have emphasized mainly on the medicinal management of dysmenorrhea. But medicines always have unwanted side effects. However, in most of the cases, the drugs are taken without prescription thus multiplying the risks of consuming a banned or even a wrong drug. Which ultimately leads to more complications than the original disease and may even be fatal.

In terms of non-pharmacological treatments, there is a large body of studies conducted evaluating the effectiveness of no pharmacological interventions on dysmenorrhea. According to these studies, acupressure, acupuncture, specific exercise, use of dietary ginger, hot water bottle, and a few dietary modifications have proved to be effective in primary dysmenorrhea. Such a trail if proved successful will make adolescent girls confident and it will also help women empowerment.¹⁰

Statement Of The Problem

“Effectiveness of comprehensive nursing intervention on knowledge regarding self-care management and self-report practices related to dysmenorrhea among adolescent girls: A quasi experimental study”

Objectives Of The Study

1. To assess the knowledge regarding self-care management and self-report practices related to dysmenorrhea among adolescent girls of experimental and control group.
2. To develop and administer comprehensive nursing intervention for improving the self-care management and self-report practices related to dysmenorrhea among adolescent girls of experimental group.
3. To evaluate the effectiveness of comprehensive nursing intervention on knowledge regarding self-care management and self-report practices related to dysmenorrhea among adolescent girls of experimental group and control group.
4. To find out the association between knowledge and practice of adolescent girls with the selected socio demographic variables of experimental and control group.

Material And Method:-

Research approach-

Quantitative research approach

Research Design-

Quasi experimental (Non-randomised control group)

Research setting-

The study was conducted in two Government schools out of which 30 students were selected from Government Girls Senior Secondary School Nahan and 30 students were selected from Government high School Tokiyon.

Schools were selected because of investigators' familiarity with the setting, availability of sample subjects and feasibility to conduct study.

Population-

Adolescent girls studying in 9th Standard in the selected schools of distt. Sirmour.

Sample-

Adolescent girls studying in Government Senior Secondary School, Nahan and Government high School, Tokiyon

Sampling technique-

Convenient sampling

Inclusion criteria:

Adolescent girls of age group 13-18 years who were present at the time of data collection and willing to participate were selected.

Exclusion criteria:

The study sample will not include girls who have not attained menarche.

Description of tool:

Self-administered questionnaire was used for the study which consisted three sections.

Section 1 assess information about socio-demographic profile and menstrual profile of participants. Sociodemographic profile includes questions like age, residency, total income of parents, literacy status of mother, knowledge on menstruation, sources of knowledge, dietary habits. On the other hand, menstrual profile assess about menarche, menstrual cycle, bleeding length, no. of pads, sanitary material, feeling of pain, location, measures to control, absent from school, and leave due to pain.

Section 2: Self-administered questionnaire to assess the Knowledge regarding self-care management.

Section 3: Check list to assess the self-report practices related to dysmenorrhea

Procedure for data collection**Step 1:**

A formal permission was obtained from the Principal of the Akal College of Nursing and Principal of Government High school, Tokiyon. The participants (experimental group) were selected from class 9th. On **day 1**, a written informed consent was taken from the study participants. The Researcher explained the purpose of the study. After that tool was administered to the study subjects. Participants were given 30minutes to fill the questionnaire.

Comprehensive nursing intervention was administered to experimental group on **day 2**, which included brief introduction about reproductive tract, menstrual cycle and common menstrual problems and its management. On **day 3** demonstration of exercises were given along with education regarding importance of sunlight, waste disposal method and personal hygiene. Return demonstration was taken on **day 4** of experimental group.

Step 2:

On **day 6** formal permission was obtained from the Principal of Government Girls Senior Secondary School, Nahan. Participants (control group) were selected from class 9th. A written informed consent was taken from the study participants. The Researcher explained the purpose of the study. After that tool was administered to the study subjects. Participants were given 30minutes to fill the questionnaire. On **day 8** post test of experimental group was conducted. On **day 12** post test of control group was conducted.

Step 3:

After 2months Post-test was taken from both the groups (experimental and control)

Data analysis:

The data analysis was done according to the objective of the study. Both descriptive and inferential statistics was used.

Descriptive statistics:

Frequency, mean percentage and standard deviation

Inferential analysis:

Repeated ANOVA and Chi square was used.

Findings Of The Study

Findings related to socio-demographic variables-

Almost 19(63.3%) and 14(46.7%) of adolescent girls in experimental and control group respectively were in the age group 15-16years. From experimental group 30(100%) adolescent girls were from urban area and 30(100%) adolescent girls were from rural area. Almost 16(53.3%) and 19(63.3%) of girl's family type were nuclear in experimental and control group respectively. In experimental group and control group most of the adolescent girls were having total monthly income of parent's ≤5000 with 22(73.3%) and 18(60%) respectively in both the groups. Whereas literacy status of mother was primary education in experimental group and control group with 16(53.3%) and 17(56.7%) respectively. Girls in experimental group and control group had 30(100%) and 30(100%) knowledge regarding menstruation respectively. As per source of information regarding menstruation 15(50%) were informed by their mothers and 15(50%) by teacher in experimental group whereas 15(50%) were informed by their mothers and 12(40%) by teachers in control group. In both the groups maximum of adolescent girls were vegetarian i.e 21(70%) in experimental group and 21(70%) in control group.

Findings related to menstrual data-

Almost 18(60%) and 15(50%) of adolescent girls in experimental and control group respectively had attained their menarche at 13-14years. In both the groups majority had menstrual cycle between 21-28days with experimental group having 15(50%) and control group having 21(70%) In experimental group 14(46.7%) and in control group 17(56.7%) had their bleeding length between 2-6days. In experimental group and control group 18(60%) and 19(63.3%) respectively changes pads ≤ 2 in a day. Girls in experimental group and control group uses sanitary material from market with 19(63.3%) and 22(73.3%) respectively. While in both experimental and control group girls were having pain during menstruation with 25(83.3%) in experimental group and 27(90%) in control group. The location of pain was common for both the groups" i.e. lower abdomen with 16(53.3%) in experimental group and 19(63.3%) in control group. In both experimental and control group no measure was taken to control the pain with 11(36.7%) and 18(60%) respectively. While in experimental group 15(50%) of the girls were absent and 15(50%) were not but in control 14(46.7%) were absent and 16(53.3%) were not. In experimental group 15(50%) took leave for 1 day in a month 15(50%) never took leave and in control group 14(46.7%) took leave for 1 day in a month and 16(53.3%) never took leave.

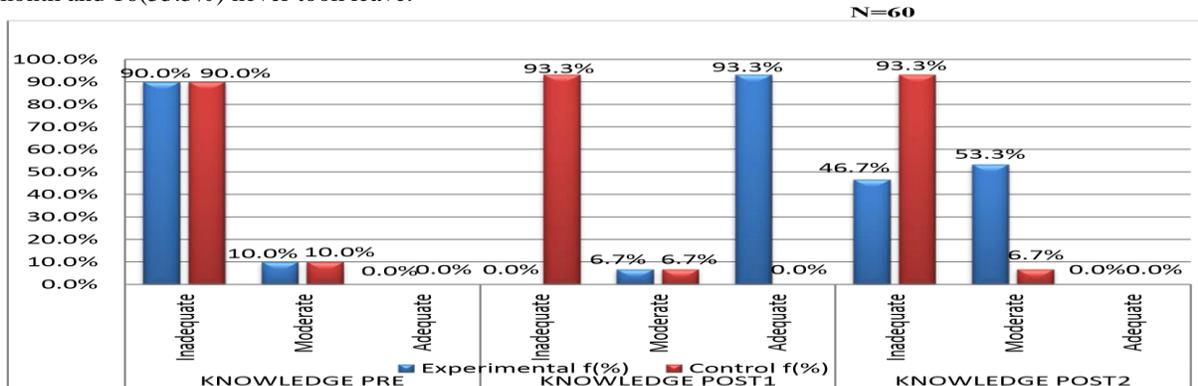


Figure 1:-shows percentage distribution for level of knowledge score among adolescent girls in experimental and control group.

The Main study findings showed that in pre-test of experimental group had (10%) moderate knowledge and (90%) had inadequate knowledge. In 1st post-test of experimental group (93%) had adequate knowledge (6.7%) had moderate knowledge. Whereas in 2nd post-test of experimental group (53%) had moderate knowledge and (46.7%) had inadequate knowledge. While in pre-test of control group (90%) had inadequate knowledge and (10%) had moderate knowledge. In 1st post-test of control group (93.3%) had inadequate knowledge and (6.7%) had moderate knowledge. Whereas in 2nd post-test of control group (93.3%) had inadequate knowledge and (6.7%) had moderate knowledge

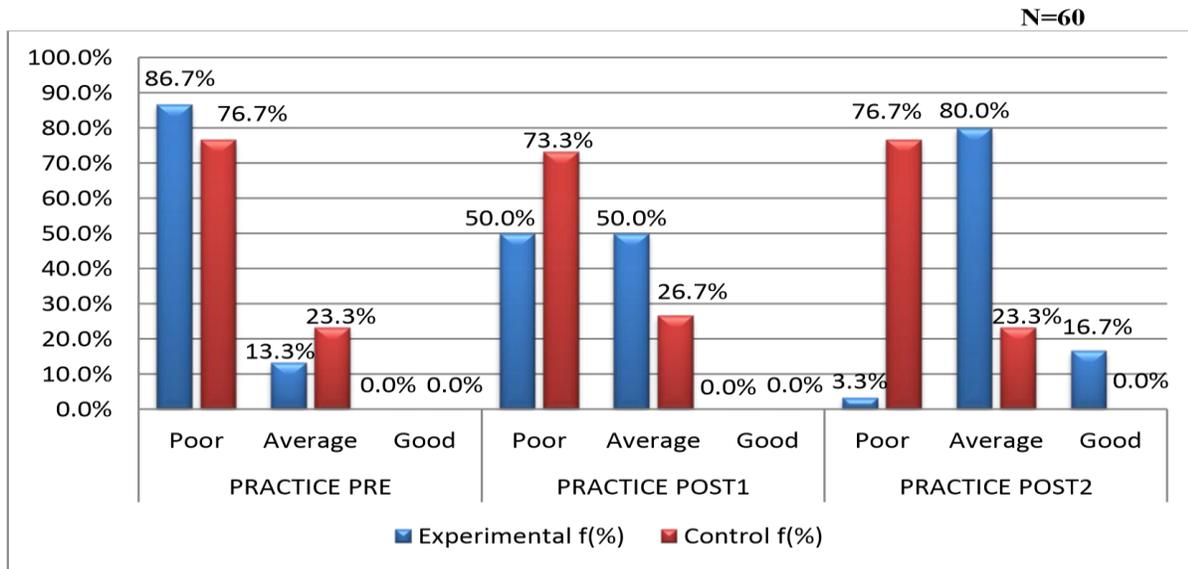


Figure 2:-shows percentage distribution for level of practice score among adolescent girls in experimental and control group.

Whereas in pre-test of experimental group (86.7%) had poor practices and (13.3%) had average practices. After 1st post test of experimental group (50%) had poor practices and (50%) had average practices. Whereas in 2nd post-test of experimental group (3.3%) had poor practices and (80%) had average practices and (16.7%) had good practices. While in pre-test of control group (76.7%) had poor practices and (23.3%) had average practices. In 1st post-test of control group (76.3%) had poor practices and (26.7%) had average practices.

Table 1:-Repeated anova to find out relationship between pre-test, post-test 1 and post-test 2 of knowledge in experimental group

Experimental Knowledge	Mean ± SD	F value	df	p value
Pre test	8.27±2.864			
Post-test 1	29.57±2.956	628.36	2	0.000*
Post-test 2	13.10±2.482			

*Indicates level of significance at p<0.05

Table 1 Shows the mean pre-test, post-test 1 and post-test 2. The results depict that the Mean ± SD for pre-test, posttest 1 and post-test 2 were 8.27±2.864, 29.57±2.956 and 13.10±2.482 respectively. The degree of freedom was 2, F value was 628.36 and p value was 0.000 which was significant at p<0.05 level of significance.

The above explained table clearly shows the increase in the knowledge of adolescent girls after the administration of comprehensive nursing intervention. Thus H₁ has significant difference in the pre-test and post-tests knowledge scores of experimental group at p<0.05 level of significance is accepted.

Table 2:-Repeated anova to find out relationship between pre-test, post-test 1 and post-test 2 of knowledge in control group

Control Knowledge	Mean±SD	F value	df	p value
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Pre test	8.43±2.909			
Post-test 1	8.50±2.921	1.47	2	0.238 ^{NS}
Post-test 2	8.27±2.924			

^{NS} Indicates not significant at p<0.05

Table 2 Shows the mean pre-test, post-test 1 and post-test 2. The results depict that the Mean ± SD for pre-test, posttest 1 and post-test 2 were 8.43±2.909, 8.50±2.921 and 8.27±2.924 respectively. The degree of freedom was 2, F value was 1.47 and p value was 0.238 which was not significant at p<0.05 level of significance.

Table 3:-Repeated anova to find out relationship between pre-test, post-test 1 and post-test 2 of practice in experimental group

Experimental Practice	Mean ± SD	F value	df	p value
Pre-test	3.63±1.866			
Post-test 1	5.67±1.322	169.85	2	0.000*
Post-test 2	8.70±1643			

*Indicates level of significance at p<0.05

Table 3 Shows the mean pre-test, post-test 1 and post-test 2. The results depict that the Mean ± SD for pre-test, posttest 1 and post-test 2 were 3.63±1.866, 5.67±1.322 and 8.70±1643 respectively. The degree of freedom was 2, F value was 169.85 and p value was 0.000 which was significant at p<0.05 level of significance. The above explained table clearly shows the improvement in the practices of adolescent girls after the administration of comprehensive nursing intervention. Thus H₂ has significant difference in the pre-test and post-tests practice scores of experimental group at p<0.05 level of significance is accepted.

Table 4:-Repeated anova to find out relationship between pre-test, post-test 1 and post-test 2 of practice in control group

Control Practice	Mean±SD	F value	Df	p value
Pre-test	4.20±2.058			
Post-test 1	4.20±2.024	2.83	2	0.067 ^{NS}
Post-test 2	4.33±2.073			

^{NS} Indicates not significant at p<0.05

Table 4 Shows the mean pre-test, post-test 1 and post-test 2. The results depict that the Mean ± SD for pre-test, posttest 1 and post-test 2 were 4.20±2.058, 4.20±2.024 and 4.33±2.073 respectively. The degree of freedom was 2, F value was 2.83 and p value was 0.067 which was not significant at p<0.05 level of significance.

Association between knowledge and practice of adolescent girls with selected socio-demographic variables.

Chi test was used and there was no association between pre-test knowledge and pre-test practice score of experimental group and control group with selected socio-demographic variables of adolescents at p<0.05 level of significance.

Discussion:-

Menstruation is a natural process and it is linked with several perceptions and practices. Women having better knowledge regarding menstrual hygiene and safe menstrual practices are less vulnerable to reproductive tract infections and other complications.¹¹ Out of this dysmenorrhea is one of the common problems experienced by many adolescent girls.¹²

Therefore, increased knowledge about menstruation right from childhood may strengthen the practices and may help in reducing the suffering of millions of women.¹³

Present study assessed the poor knowledge and practices regarding dysmenorrhea. These findings are in compliance with the findings of other studies.¹⁴⁻¹⁶

Present study also assessed the effectiveness of comprehensive nursing intervention on knowledge and practices regarding dysmenorrhea. The level of knowledge improved but long term effect of intervention was not observed as, after two months the knowledge level decreased. While assessing the practices there was improvement after two months. These findings are in compliance with the finding of other studies.¹⁷⁻²¹ Efforts should be made to create more awareness regarding dysmenorrhea by incorporating this sensitive area in school curriculum. In the present study there was no association between knowledge and practice of adolescent girls with selected socio-demographic variables. These findings are in compliance with the study done by Kavuluru P. to assess the effectiveness of ginger preparation on dysmenorrhea among adolescent girls concluded that there was no association of pre- interventional and post-interventional dysmenorrhea among adolescent girls with selected socio-demographic variables.²² On the contrary a study done by Kanika showed significant association of knowledge on dysmenorrhea and its treatment with course of Nursing.¹⁴

By choosing suitable intervention at appropriate time can decrease the symptoms. Although many alternative and complementary therapies are increasingly popular and used in developed countries like yoga, acupuncture, exercise, meditation, therapeutic touch all help in relieving menstrual discomfort by increasing vasodilation and subsequently decreasing ischemia which ultimately leads to the release of beta-endorphins, which suppresses prostaglandins. Nutrition also plays a very important role in decreasing the symptoms associated with dysmenorrhea. However, for an intervention that is so cheap and free of side effects little efforts should be taken to modify the life style so as to improve the adolescents health status for healthy contribution towards the nation.

Conclusion:-

Adolescent's dysmenorrhoeal problem is common throughout the country. The result shows that there was an average increase in knowledge regarding self-care management and improvement in the self-report practices. Adolescent girls are more vulnerable group and they represent the future of country. As a researcher, we should put efforts in creating innovative strategies to educate and aware adolescents regarding management of dysmenorrhea.

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