Universe International Journal of Interdisciplinary Research
(International Peer Reviewed Refereed Journal)
DOI No. – 08.2020-25662434

© UIJIR | ISSN (O) – 2582-6417
AUGUST 2024 | Vol. 5 Issue 3
www.uijir.com

A PRE-EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO ASSISTING TEACHING PROGRAMME ON KNOWLEDGE REGARDING SURYA NAMSKAR ON DYSMENORRHEA AMONG ADOLESCENT GIRLS IN SELECTED SCHOOL OF MEHSANA DISTRICT.

Author's Name: Niki Patel[1], Patel Disha[2], Dhruv Makwana[2], Sajan Bhatol[2], Priti Makwana[2], Aryan Chaudhary[2]

Affiliation:

1. HOD of Medical Surgical Nursing department, Merchant Nursing College, Basna, Mehsana, Gujarat, India.
2. 3rd Year B.sc Nursing student, Merchant Nursing College, Basna, Mehsana, Gujarat, India.

Corresponding Author Name and Email ID: Patel Disha, dishapatel2963@gmail.com

ABSTRACT

OBJECTIVE: The aim of the study is to determine the effect of Surya Namaskar in primary dysmenorrhea. It is found that the burden of dysmenorrhea is greater than any other gynecological problem and is associated with significant impact. Many studies have stated that Yoga has a positive impact on primary dysmenorrhea. The present study was conducted to determine whether the practice of Surya Namaskar alone is able to reduce the pain in primary dysmenorrhea. STUDY DESIGN: Pre and post Experimental study. METHOD: 30 subjects between the ages of 14 to 25 years who were diagnosed with primary dysmenorrhea participated in the study. They were given Surya Namaskar according to school of Yoga for three menstrual cycles. Intensity of pain was calculated with N.P.I. scale at baseline and at the onset of each menstrual cycle. Menstrual symptoms were also noted using the Menstrual Symptom Questionnaire. RESULT: There was significant reduction (P<0.0001) in the intensity of pain in primary dysmenorrhea during the subsequent visit. The spasmodic and congestive components of primary dysmenorrhea was also reduced (P<0.001) significantly. CONCLUSION: Practice of Surya Namaskar alone helps reduce the intensity of pain and improve the symptoms in primary dysmenorrhea.

Keywords: Assess, Knowledge, Prevalence, Structure Teaching Programme, Asanas, Dysmenorrhea, Meditation, Menstrual Pain, Pranayama, Yoga..

DOI Link :: https://doi-ds.org/doilink/08.2024-82915676/UIJIR

Universe International Journal of Interdisciplinary Research
(International Peer Reviewed Refereed Journal)
DOI No. – 08.2020-25662434
© UIJIR | ISSN (O) – 2582-6417
AUGUST 2024 | Vol. 5 Issue 3
www.uijir.com

INTRODUCTION

"Snow and adolescence are the only problems that disappear if you ignore them long enough"

Karl Wilson

The blossoming of adolescence in each generation is as fascinating a sight as the unfolding offspring each year predictable and repetitive. Adolescents belong to vital age group, not only because they are the entrant population to parenthood but also because they are in the threshold between childhood and adulthood. As they attempt to cross this stage, they face various physiological, psychological and developmental changes.1

According to UNICEF (2011), In India about 243 million (20%) of adolescents are in the age group of 10 - 19 years in total population. Adolescents today represent a significant proportion of the world population and they constitute 18% of the world population. 2

Dysmenorrhea is defined as pain or discomfort (cramps) during or just before a menstrual period. Two types of dysmenorrhea are primary and secondary dysmenorrhea. When the menstrual cycle begins prostaglandins are released by the endometrial cells as they are shed from the uterine lining causing the uterine muscles to contract. If excessive prostaglandin is present, the normal contraction response can become strong and painful spasm. Uterine muscles deprive for oxygen and cause cramps. (D.C.Dutta, 2006) 6

The period of adolescence for a girl is a period of physical and psychological preparation for safe motherhood. As they are direct reproducers of future generations, the health of adolescent girls influences not only their own health, but also the health of the future population. 17

Primary dysmenorrhea usually begins within the first six months after menarche, once the ovulatory cycles are established. The causes of primary dysmenorrhea are strong uterine contractions which are usually stimulated by increased production of the prostaglandin by the lining of the uterus (endometrium). Dysmenorrhea may also be due to emotional instability, anxiety, a faulty outlook on sex and menstruation, or due to the imitation of mother's feelings about menstruation. 7

The first menstrual period is called menarche. It usually starts between the ages 11 and 14. Though the menstruation is normal, some women experience dilemma during their monthly periods. The most commonly experienced problem by the women is cramping pain during menstruation, known as Dysmenorrhea. Cramping pain is experienced by most of the women, out of which 50% experience some form of pain like low back pain, abdominal pain, etc., and 10% of them face severe symptoms which necessitating time off from work or school. It is the common cause of sickness absenteeism (13 to 51%) from classes by students' community. 4

Menstrual disorders are commonly present in late adolescence. Almost 75% of girls experience some

DOI Link :: https://doi-ds.org/doilink/08.2024-82915676/UIJIR

© UIJIR | ISSN (O) – 2582-6417
AUGUST 2024 | Vol. 5 Issue 3
www.uijir.com

problems associated with menstruation. Dysmenorrhea, or pain during menstruation, has been described as one of the most common complaints seen in medicine. It is probably the most frequent of all symptoms seen in gynecological disorders (Novak, Jones and Jones, 1965; Ogden et al., 1970). Dysmenorrhea can be explained as a cramping pain accompanying menstruation and primary dysmenorrhea refers to the one that which is not associated with any pelvic pathology". Primary dysmenorrhea is the most common associated with any pelvic pathology". Primary dysmenorrhea is the most common gynecological disorder among female adolescents with a prevalence of 70% to 90% It is also a leading cause of the poor quality of life among adolescent girls. 7

The Sanskrit name Surya refers to the Sun and Namaskara means 'salutations'. Surya Namaskar word is a combination of two words, one is Surya and other one is Namaskar. It means Surya is form of fire and Namaskar is form of respect. Surya Namaskara has been handed down from the enlightened sages of Vedic Age. Sage Samarth Ramdas and the Marathas have performed Surya Namaskara as a physical training to develop fit bodies. 7

The sun symbolizes spiritual consciousness and in ancient times was worshipped on a daily basis. In yoga, the sun is represented by pingala or surya nadi. Surya Namaskar is not regarded as being a traditional part of hatha yoga, as it was added to the original asan group at a later time. However, it is an effective way of loosening up, stretching, massaging and toning up of all the joints, muscles and internal organs of the body. The practice of Surya Namaskar comprises of actions such as flexion, extension, forward bending, back ward bending, stretching, inhalation, exhalation, squeezing, and compression of almost all the muscles of the body. By these actions, the physiological effects are obtained. Its versatility makes it one of the most useful methods of inducing a healthy, vigorous and active life. The practice of surya Namaskar, at the same time helps for spiritual awakening and the resulting expansion of awareness. 8

Surya Namaskara is a complete sadhana and spiritual practice in itself as it includes asana, pranayama, mantra and meditation techniques. It is an excellent set of asanas with which to start morning practice. Regular practice of Surya Namaskara regulates pingala nadi, whether it is under active or over active. Regulation of pingala nadi leads to a balanced energy at both mental and physical levels. Surya Namaskara is composed of three elements: form, energy and rhythm. The twelve asanas generate prana, the subtle energy which activates the psychic body. The performance of the asanas in a steady, rhythmic sequence reflects the rhythms of the universe; the twenty-four hours of the day, the twelve zodiac phases of the year and the biorhythms of the physical body. 8

DOI Link :: https://doi-ds.org/doilink/08.2024-82915676/UIJIR

NEED OF THE STUDY

Lowdermilk (2004) had highlighted that the dysmenorrhea is a common gynecological problem in women in all ages. Most adolescence experience dysmenorrhea in the first 3 years after menarche. Young adult women ageing 17 to 24 years are most likely to report painful menstruation. Of them 50% to 80% report some level of discomfort while 10% to 18% complained severe dysmenorrhea. It has been estimated that up to 10% of women have severe pain which interfere with their normal functioning for 1-3 days a month.34

Primary dysmenorrhea has a biochemical basis and arises from the release of prostaglandin (PG) with menstruation. During the luteal phase and subsequent menstrual flow PGF2 alpha increases and amplitude to the increase frequency of uterine contractions and causes vasospasm of the uterine arterioles, resulting in ischemia and cyclic lower abdominal cramps.30

The degree of discomfort is related to the duration of menstrual flow but not to cycle length.32

Systemic responses to PGF2 alpha include back ache, sweats and gastrointestinal symptoms. Pain begins at the onset of the menstrual flow and lasts for 12 to 48 hours.33

Although primary dysmenorrhea is not normal, it is not caused by underlying pathologic disorders; rather it is the occurrence of a physiologic alteration.37

Banikarim et al (2007) had found that the overall prevalence of dysmenorrhea in high school population was 79.2%. It was determined that the prevalence of dysmenorrhea among adolescents has impact on academic performance, school attendance, sports, social activities and its management. Among 706 participants who had a menstruation in the previous 3 months, 85% reported dysmenorrhea. Out of that 38% reported missing school due to dysmenorrhea, 33% reported missing individual classes. Further, the study also revealed that the activities affected by dysmenorrhea include class concentration (59%), sports (51.1%) and homework (35%).40

Although it is not life-threatening, dysmenorrhea can be debilitating and psychologically taxing for many women. Some choose to self-medication at home and never seek medical attention for their pain.29

Pharmacotherapy can be used to treat dysmenorrhea. Taking pain medicine can help but only temporarily. It simply masks the pain instead of addressing the root of the cause. Using NSAID drugs as first-line treatment but it has limitation because of adverse reactions such as gastrointestinal side effects, immunohaemolytic anaemia and nephrotoxicity. Overdose is accompanied by central nervous system toxicity and convulsions which mandates the selection of alternative therapeutic modalities.28

Relaxation and hatha yoga therapy used successfully to decrease menstrual discomfort (Lowdermilk et.al.). And Medical Online had recommended that yoga is releaving menstrual pain.27

Dr. Hema.S (2003) had highlighted that yoga balances the function of organs. The organs are stimulated

DOI Link :: https://doi-ds.org/doilink/08.2024-82915676/UIJIR

if it is under working. It is suppressed if it is overworking. No other exercise does this. Mind is calmed in yoga. It occurs in other system.39

Usha and Madhavi (2013) had analyzed the effect of yoga and meditation as alternative therapy for primary dysmenorrhea in young students and its outcome on school absenteeism. The study group was subjected to do yoga, pranayama and meditation for three months. The findings observed a significant ($p<0.0001$) reduction in the perceived pain after yoga intervention in study group. 83.33% of the study group reported complete pain relief and 11.66% reported mild pain. No reduction of pain was found in the control group.40

Hence the investigator preferred to undertake this study in a rural setting and also, she came across during her clinical and teaching experience students were absent for college and clinical area every month because of dysmenorrhea.22

So, the investigator interested to take this study and teach yoga to the school students which is one of the alternative therapies for management of primary dysmenorrhea and see the effectiveness on dysmenorrhea.24

Though yoga is one of the alternative therapies to treat primary dysmenorrhea there are limited research. studies done in this area. So, investigator took one step ahead and selected this topic.24

STATEMENT OF THE PROBLEM

A pre experimental study to assess the effectiveness of video assisting teaching program on knowledge regarding surya namskar on dysmenorrhea among Adolescent girls in selected schools of mehsana district**.**

OBJECTIVE OF THE STUDY

• To assess the level of knowledge regarding surya namskar on dysmenorrhea among adolescent girls at selected school of Mehsana district.

• To assess the effectiveness on video assisting teaching programmeon knowledge regarding surya namskar on dysmenorrhea among adolescent girls at selected school of Mehsana district.

• To find out the association of the present knowledge score with selected demographic variables.

HYPOTHESES

H0: There will be a significant difference between in the level of knowledge among adolescent girls regarding surya namskar before and after video assisting teaching programme.

H1: There will be significant association between the level of knowledge and their selected demographic variables.

DOI Link :: https://doi-ds.org/doilink/08.2024-82915676/UIJIR

© UIJIR | ISSN (O) – 2582-6417
AUGUST 2024 | Vol. 5 Issue 3
www.uijir.com

MATERIAL AND METHOD

Pre-experimental one group pre-test post-test research design and Quantitative Approach. Effectiveness of video assisting teaching programme on knowledge regarding surya namskar on dysmenorrhea among adolescent girls in selected schools of Mehsana district. The data was collected from 60 schoola1 students. “Non Probability Purposive” sampling technique were used. A structured knowledge questionnaire was selected to assess the knowledge regarding surya namskar on dysmenorrhea.

RESULT

Demographic data was analyzed using frequency and percentage. Frequencies, percentage, mean, mean percentage (%) and standard deviation was used to determine the knowledge score. The “t” value was computed to show the effectiveness of video assisting teaching programme and chi-square test was done to determine the association between the pre-test knowledge of adolescent girls with selected demographic variables.

Finding related to demographic data

In this study overall Among the 60 school students, the majority of the samples 38(63.33%) were in the age group of 15-18 years, 60 (100%) of the sample were in the female gender,60(100%) of the sample in religion, 20(33.33%) of the sample were in the stream of education.

Finding related to pre and post knowledge score

Pre-test prior to the administration of video assisting teaching programme,34% of school students poor knowledge (score:20) and 34% school students had average knowledge (score:20) regarding surya namskar on dysmenorrhea among adolescent girls.

Post-test that was marked improvement in the knowledge of adolescent girls with (10%) of Nursing student gained poor knowledge (score 6) and (90%) gained average knowledge (score 54) regarding surya namskar on dysmenorrhea among adolescent girls. It was inferred from the below table that the video assisting teaching programme was effectiveness in improving knowledge regarding surya namskar on dysmenorrhea among adolescent girls.

DOI Link :: https://doi-ds.org/doilink/08.2024-82915676/UIJIR

© UIJIR | ISSN (O) – 2582-6417
AUGUST 2024 | Vol. 5 Issue 3
www.uijir.com

Finding related to effectiveness of planned teaching programme

Table 1: Distribution of subject on paired 't' test between pre-test and post-test knowledge score regarding surya namskar on dysmenorrhea.

PARAMETER	MEAN	SD	MEAN	"t" VALUE
Pre test	11.63	2.38	5.34	32.64
Post test	16.97	2.73		

Finding related to association between pre-test knowledge score of Nursing students with their selected demographic variables:

To find out the pre-test knowledge score with selected demographic variables were found by using chi-square test. The results of the present study showed that there is no any significant association found between pre-test knowledge score and selected demographic variables like Age, gender, stream of education, religion, and evaluate the knowledge regarding Placenta previa. So, the research fulfills study objective.

CONCLUSION

The present study aims to evaluate the effectiveness of video assisting teaching programme on Knowledge regarding surya namskar on dysmenorrhea among the adolescent girls at selected schools. The study conducted by using a pre-experimental one group pretest-posttest Research Design. Selected area is there in study for sample collection at Mehsana. The sample size was 60 adolescent girls. The tool used for the study is self-structured knowledge questionnaire. The response was reanalyzed through descriptive (mean, frequency, percentage distribution, standard deviation) and inferential statistics (t test, Chi square). The findings were completed on the objective of the study.

DOI Link :: https://doi-ds.org/doilink/08.2024-82915676/UIJIR

REFERENCE

1. Sabar UJ. The effect of prostaglandins in myometrial tissue; a functional and lipidomic study. The influence of the hormonal milieu on the functional response to prostaglandins and ex vivo lipid biosynthesis in myometrial tissues (Doctoral dissertation, University of Bradford).

2. Kamath AJ, Nalini M. The Mystery behind Relaxation Therapy: Adieu to Premenstrual Syndrome.

3. Bergsjø P. Socioeconomic implications of dysmenorrhea. Acta Obstet Gynecol Scand. (1979) 58(sup87):67–8. 10.3109/00016347909157793 [PubMed] [CrossRef] [Google Scholar]

4. Maia H, Jr, Casoy J. Non-contraceptive health benefits of oral contraceptives. Eur J Contracept Reprod Health Care. (2008) [PubMed] [CrossRef] [Google Scholar]

5. Lewers D, Clelland JA, Jackson JR, Varner RE, Bergman J. Transcutaneous electrical nerve stimulation in the relief of primary dysmenorrhea. Phys Ther. (1989) 69(1):3–9. 10.1093/ptj/69.1.3 [PubMed] [CrossRef] [Google Scholar]

6. Woodyard C. Exploring the therapeutic effects of yoga and its ability to increase quality of life. Int J Yoga. (2011) 4(2):49–54. 10.4103/0973-6131.85485 [PMC free article] [PubMed] [CrossRef] [Google Scholar]

7. Li X, Guo S, Chen Z, Ren K, Zhang H, Yu S, et al. Regulation of mild moxibustion on uterine vascular and prostaglandin contents in primary dysmenorrhea rat model. Evidence-Based Complementary Altern Med. (2021) 2021:9949642. 10.1155/2021/ [PMC free article] [PubMed] [CrossRef] [Google Scholar]

8. Hawkey CJ. Nonsteroidal anti-inflammatory drug gastropathy. Gastroenterology. (2000) 119(2):521–35. 10.1053/gast.2000.9561 [PubMed] [CrossRef] [Google Scholar]

9. Ferenczy A. Pathophysiology of endometrial bleeding. Maturitas. (2003) 45(1):1–4. 10.1016/S0378-5122(03)00068-9 [PubMed] [CrossRef] [Google Scholar]Rosenwaks Z, Seegar-Jones G. Menstrual pain: its origin and pathogenesis. J Reprod Med. (1980) 25(4 Suppl):207–12. PMID: . [PubMed] [Google Scholar]

10. Morrison BW, Daniels SE, Kotey P, Cantu N, Seidenberg B. Rofecoxib, a specific cyclooxygenase-2 inhibitor, in primary dysmenorrhea: a randomized controlled trial. Obstet Gynecol. (1999) 94(4):504–8. [PubMed] [Google Scholar]

11. Vincenzo De Sanctis M, Soliman A, Bernasconi S, Bianchin L, Bona G, Bozzola M, et al. Primary dysmenorrhea in adolescents: prevalence, impact and recent knowledge. Pediatric Endocrinology Reviews (PER. (2015) 13(2):465–73. PMID: . [PubMed] [Google Scholar]

12. Durain D. Primary dysmenorrhea: assessment and management update. J Midwifery & women's health. (2004) 49(6):520–8. 10.1016/j.jmwh.2004.08.013 [PubMed] [CrossRef] [Google Scholar]

13. Hayes SG. Neural control of the cardiovascular and ventilatory systems during exercise. Davis:

DOI Link :: https://doi-ds.org/doilink/08.2024-82915676/UIJIR

University of California; (2001). [Google Scholar]

14. Abreu-Sánchez A, Parra-Fernández ML, Onieva-Zafra MD, Ramos-Pichardo JD, Fernández-Martínez E. Type of dysmenorrhea, menstrual characteristics and symptoms in nursing students in southern Spain. InHealthcare. (2020) 8(3):302. MDPI. 10.3390/healthcare8030302 [PMC free article] [PubMed] [CrossRef] [Google Scholar]

15. Åkerlund M. Pathophysiology of dysmenorrhea. Acta Obstet Gynecol Scand. (1979) 58(sup87):27–32. 10.3109/00016347909157786 [PubMed] [CrossRef] [Google Scholar]

16. Doroshenko M, Turkot O, Horn DB. Sympathetic nerve block. [PubMed]

17. Jabbour HN, Kelly RW, Fraser HM, Critchley HO. Endocrine regulation of menstruation. Endocr Rev. (2006) 27(1):17–46. 10.1210/er.2004-0021 [PubMed] [CrossRef] [Google Scholar]

18. Denney DR, Gerrard M. Behavioral treatments of primary dysmenorrhea: a review. Behav Res Ther. (1981) 19(4):303–12. 10.1016/0005-7967(81)90051-6 [PubMed] [CrossRef] [Google Scholar]

19. Harel Z. Dysmenorrhea in adolescents and young adults: an update on pharmacological treatments and management strategies. Expert Opin Pharmacother. (2012) 13(15):2157–70. 10.1517/14656566.2012.725045 [PubMed] [CrossRef] [Google Scholar]

20. Bettendorf B, Shay S, Tu F. Dysmenorrhea: contemporary perspectives. Obstet Gynecol Surv. (2008) 63(9):597–603. 10.1097/OGX.0b013e31817f15ff [PubMed] [CrossRef] [Google Scholar]

21. French L. Dysmenorrhea. Am Fam Physician. (2005) 71(2):285–91. [PubMed] [Google Scholar]

22. Hosseinlou A, Alinejad V, Alinejad M, Aghakhani N. Effects of fish oil capsules and vitamin B1 tablets on duration and severity of dysmenorrhea in students of high school in Urmia-Iran. Glob J Health Sci. (2014) 6(7):124. 10.5539/gjhs.v6n7p124 [PMC free article] [PubMed] [CrossRef] [Google Scholar]

23. Aboualsoltani F, Bastani P, Khodaie L, Fazljou SM. Non-pharmacological treatments of primary dysmenorrhea: a systematic review. Arch Pharma Pract. (2020) 11(S1):136–42. [Google Scholar]

24. El Geziry A, Toble Y, Al Kadhi F, Pervaiz M, Al Nobani M. Non-pharmacological pain management. Pain Management in Special Circumstances. (2018):1–4. [Google Scholar]

25. Proctor M, Latthe P, Farquhar C, Khan K, Johnson N. Surgical interruption of pelvic nerve pathways for primary and secondary dysmenorrhoea. Cochrane Database Syst Rev. (2005) 4:1–27. 10.1002/14651858.CD001896.pub2 [PMC free article] [PubMed] [CrossRef] [Google Scholar]

26. Vercellini P, Fedele L, Bianchi S, Candiani GB. Pelvic denervation for chronic pain associated with endometriosis: fact or fancy? Am J Obstet Gynecol. (1991) 165(3):745–9. 10.1016/0002-9378(91)90322-I [PubMed] [CrossRef] [Google Scholar]

27. Fugh-Berman A, Kronenberg F. Complementary and alternative medicine (CAM) in reproductive-age women: a review of randomized controlled trials. Reprod Toxicol. (2003) 17(2):137–52. 10.1016/S0890-6238(02)00128-4 [PubMed] [CrossRef] [Google Scholar]

© UIJIR | ISSN (O) – 2582-6417
AUGUST 2024 | Vol. 5 Issue 3
www.uijir.com

28. Ganesh BR, Donde MP, Hegde AR. Comparative study on effect of slow and fast phased pranayama on quality of life and pain in physiotherapy girls with primary dysmenorrhoea: randomized clinical trial. Int J Physiother Res. (2015) 3(2):960–5. 10.16965/ijpr.2015.115 [CrossRef] [Google Scholar]

29. Satyanand V, Hymavathi K, Panneerselvam E, Mahaboobvali S, Basha SA, Shoba C. Effects of yogasanas in the management of pain during menstruation. J Med Sci Clin Res. (2014) 2(11):2969–74. [Google Scholar]

30. Nag U, Dip P, Kodali M. Effect of yoga on primary dysmenorrhea and stress in medical students. IOSR J Dent Med Sci. (2013) 4(1):69–73. 10.9790/0853-0416973 [CrossRef] [Google Schola

DOI Link :: https://doi-ds.org/doilink/08.2024-82915676/UIJIR