



“A Study to Assess the Effectiveness of a Health Awareness Programme Regarding Acupressure on Dysmenorrhic Pain Among Adolescent Girls Studying in Higher Secondary Schools in Selected Community Areas of Jabalpur.”

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Abstract: Background: Dysmenorrhea is a common gynecological problem among adolescent girls that negatively affects physical health, emotional well-being, academic performance, and daily activities. Limited awareness of non-pharmacological pain management often leads adolescents to rely on home remedies. Acupressure is a safe, simple, and cost-effective complementary therapy for managing menstrual pain. Objectives: To assess menstrual discomfort, dysmenorrhic pain intensity, knowledge regarding acupressure, and the effectiveness of a structured health awareness programme among adolescent girls. Methods: A quantitative pre-experimental one-group pre-test and post-test design was conducted among 60 adolescent girls aged 14–17 years in selected higher secondary schools of Jabalpur using purposive sampling. Data were collected using the WaLIDD dysmenorrhea scale and a structured knowledge questionnaire. Results: The mean knowledge score significantly increased from 15.45 to 22.96 ($t=4.74$, $p<0.05$), demonstrating the effectiveness of the intervention. Conclusion: Health awareness programmes on acupressure effectively improve knowledge and may promote safe, non-pharmacological management of dysmenorrhic pain among adolescent girls.

Keywords: Dysmenorrhea, Acupressure, Health Awareness Programme, Adolescent Girls, Menstrual Pain, School Health Nursing, Non-pharmacological Intervention.

Introduction

Dysmenorrhea is one of the most common menstrual disorders among adolescent girls, affecting their physical, emotional, and academic well-being. In India, its high prevalence often results in school absenteeism, reduced concentration, and impaired quality of life. Although medications such as NSAIDs are effective, concerns about adverse effects have increased interest in non-pharmacological approaches. Acupressure, particularly stimulation of the Sanyinjiao (SP6) point, is a safe, simple, and cost-effective method shown to reduce menstrual pain. However, awareness of this therapy remains limited. Therefore, this study evaluated the effectiveness of a

structured health awareness programme regarding acupressure on dysmenorrhic pain among adolescent girls in selected higher secondary schools of Jabalpur.

Need for the Study

Dysmenorrhea is a common menstrual disorder among adolescent girls that adversely affects physical health, emotional well-being, academic performance, and daily activities. In India, a large proportion of adolescents experience moderate to severe menstrual pain, yet many do not seek treatment because of cultural taboos, misconceptions, and limited awareness. Although non-steroidal anti-inflammatory drugs are effective, prolonged use may cause adverse effects. Acupressure, particularly at the



Sanyinjiao (SP6) point, is a safe, simple, and cost-effective non-pharmacological intervention for pain relief. Therefore, this study aimed to evaluate the effectiveness of a structured health awareness programme on acupressure among adolescent girls in selected higher secondary schools of Jabalpur.

Statement of the Problem

A study to assess the effectiveness of a health awareness programme regarding acupressure on dysmenorrhic pain among adolescent girls studying in higher secondary schools in selected community areas of Jabalpur.

Objectives of the Study

The objectives of the study were to:

1. Assess the menstrual discomfort experienced by adolescent girls studying in higher secondary schools.
2. Assess the intensity of dysmenorrhic pain among adolescent girls.
3. Assess the pre-test knowledge regarding acupressure for dysmenorrhic pain.
4. Assess the post-test knowledge regarding acupressure following the health awareness programme.
5. Evaluate the effectiveness of the health awareness programme by comparing pre-test and post-test knowledge scores.
6. Determine the association between the intensity of dysmenorrhic pain and selected demographic and clinical variables.
7. Determine the association between pre-test knowledge regarding acupressure and selected demographic variables.

Hypotheses

The following hypotheses were tested at the 0.05 level of significance.

H1: There will be a significant difference between the mean pre-test and post-test knowledge scores regarding

acupressure among adolescent girls after the health awareness programme.

H2: There will be a significant association between the intensity of dysmenorrhic pain and selected demographic and clinical variables.

H3: There will be a significant association between pre-test knowledge regarding acupressure and selected demographic variables.

Review of Literature

The review of literature provides scientific evidence supporting the present investigation and helps identify existing knowledge gaps regarding dysmenorrhea and acupressure.

Dysmenorrhea affects approximately 50–90% of adolescent girls worldwide, making it one of the leading causes of recurrent pain during adolescence. Studies conducted in India have consistently reported prevalence rates exceeding 70%, indicating that menstrual pain remains an important adolescent health concern. Severe dysmenorrhea is associated with absenteeism, poor concentration, reduced academic achievement, impaired physical activity, and emotional distress.

Previous studies have shown that many adolescents continue to manage menstrual pain using home remedies such as hot water application, rest, herbal preparations, and self-medication. Only a small proportion seek professional healthcare because menstrual pain is often considered a normal physiological event. Consequently, many girls experience recurrent untreated pain that affects their quality of life.

Several investigators have evaluated complementary therapies for dysmenorrhea. Acupressure has demonstrated considerable effectiveness in reducing menstrual pain intensity by stimulating specific pressure points, particularly the SP6 acupoint. The proposed mechanism includes improved pelvic blood circulation, relaxation of uterine muscles, reduction of prostaglandin-mediated contractions, and stimulation of endogenous endorphin release. Clinical trials have consistently demonstrated reductions in pain



severity, analgesic use, and associated symptoms following regular acupressure practice.

Educational interventions have also shown significant improvements in adolescents' knowledge, attitudes, and self-care behaviors regarding menstrual health. School-based health education programmes increase awareness regarding menstrual hygiene, reproductive physiology, and evidence-based pain management techniques. Community health nurses play a vital role in implementing these programmes and promoting healthy reproductive practices among adolescents.

The existing literature indicates that although acupressure is an effective complementary therapy, awareness regarding its application remains inadequate among school-going adolescents. Therefore, structured educational interventions are essential for improving knowledge and encouraging safe self-management practices.

Methodology

Research Approach

A quantitative evaluative research approach was adopted to assess the effectiveness of a structured health awareness programme regarding acupressure on dysmenorrhic pain among adolescent girls.

Research Design

The study employed a **pre-experimental one-group pre-test and post-test design**, enabling comparison of knowledge scores before and after implementation of the health awareness programme.

Setting of the Study

The study was conducted in selected higher secondary schools located in community areas of Jabalpur.

Population

The target population comprised adolescent girls aged 14–17 years studying in higher secondary schools who experienced dysmenorrhic pain.

Sample

The study included **60 adolescent girls** who fulfilled the inclusion criteria and consented to participate.

Sampling Technique

A **non-probability purposive sampling technique** was employed to recruit participants based on predefined eligibility criteria.

Sampling Criteria

Inclusion Criteria

- Adolescent girls aged 14–17 years.
- Students studying in selected higher secondary schools.
- Girls experiencing dysmenorrhic pain.
- Participants willing to provide informed consent.

Exclusion Criteria

- Girls diagnosed with secondary dysmenorrhea or major gynecological disorders.
- Students absent during data collection.
- Participants unwilling to continue throughout the study period.

Description of the Research Instrument

The data collection tool consisted of four sections.

Section A: Socio-demographic Variables

This section included information regarding:

- Age
- Age at menarche
- Father's education
- Mother's education
- Monthly family income
- Type of family
- Family history of dysmenorrhea
- Dietary pattern
- Effect of dysmenorrhea on daily activities
- Effect of dysmenorrhea on sleep

Section B: Clinical Variables

Clinical information included:

- Hemoglobin status
- Menstrual cycle length
- Duration of menstrual bleeding
- Amount of menstrual blood flow
- Symptoms associated with dysmenorrhea
- Presence of abdominal pain
- Medication use
- Exercise habits



- Home remedies practiced
- Site of maximum pain

Section C: WaLIDD Dysmenorrhea Scale

The WaLIDD (Working Ability, Location, Intensity, Days of Pain, Dysmenorrhea) scale was used to assess the severity of dysmenorrhic pain.

Section D: Structured Knowledge Questionnaire

A structured questionnaire comprising **30 multiple-choice questions** assessed participants' knowledge regarding acupressure for dysmenorrhea.

Knowledge scores were classified as:

- **Poor:** 1–10
- **Average:** 11–20
- **Good:** 21–30

Pilot Study

A pilot study was conducted among six adolescent girls (10% of the final sample) in a similar setting before commencement of the main study. The pilot study assessed the feasibility of the research design, adequacy of the instruments, clarity of the questionnaire, and practicality of data collection procedures. No major modifications were required, and the study protocol was found feasible for implementation.

Ethical Considerations

Prior to data collection, ethical approval was obtained from the concerned Institutional Ethics Committee and administrative authorities. Written permission was secured from school authorities, and informed consent was obtained from all participants. Confidentiality and anonymity were maintained throughout the study, and participants were informed that their involvement was entirely voluntary.

Results

A total of **60 adolescent girls** aged 14–17 years participated in the study. The findings are presented according to the objectives of the study.

Socio-demographic Characteristics

Among the participants, 50% belonged to the age group of 14–16 years, while the remaining 50% were between 16 and 17 years. Nearly 45% had attained menarche between 14 and 16 years of age. Regarding parental education, 50% of

fathers had completed postgraduate education, whereas 41.66% of mothers were graduates. More than half (58.33%) of the participants belonged to families with a monthly income of less than ₹20,000. Half of the respondents belonged to joint families, while 33.33% belonged to nuclear families. A majority (60%) reported no family history of dysmenorrhea, and 60% followed a vegetarian diet. Dysmenorrhea affected the daily activities of 60% of participants, while 66.66% reported disturbances in sleep due to menstrual pain.

Clinical Characteristics

Equal proportions of participants had hemoglobin levels of 9–11 g/dL, 12–14 g/dL, and above 15 g/dL. Half of the participants reported a menstrual cycle length of 28–30 days. Most participants (75%) experienced menstrual blood loss between 30 and 100 mL, and 70% reported a menstrual duration of 3–5 days. Lower abdominal pain was the predominant symptom (66.66%), followed by nausea and vomiting (16.66%) and backache (11.66%). Approximately 80% experienced abdominal pain during menstruation, whereas only one-third used medications for pain relief. The majority (88.33%) did not perform regular exercise, and 70% commonly used a hot water bag as a home remedy.

Intensity of Dysmenorrhic Pain

Pain severity was assessed using the **WaLIDD dysmenorrhea scale**. The majority of participants (66.66%) experienced **moderate dysmenorrhic pain**, 26.66% experienced severe pain, and only a small proportion reported mild pain. These findings indicate that dysmenorrhea represents a substantial health problem among adolescent girls and affects their routine activities.

Knowledge Regarding Acupressure Before the Intervention

Before implementation of the health awareness programme, all participants demonstrated only **average knowledge** regarding acupressure for dysmenorrhea. None of the participants achieved a good knowledge score, indicating limited awareness regarding this complementary therapy.

Knowledge After the Health Awareness Programme

Following the educational intervention, knowledge scores improved considerably. Eighty-five percent of participants achieved a **good level of knowledge**, while the remaining



15% demonstrated average knowledge. No participant remained in the poor knowledge category.

Effectiveness of the Health Awareness Programme

The effectiveness of the programme was evaluated by comparing pre-test and post-test knowledge scores.

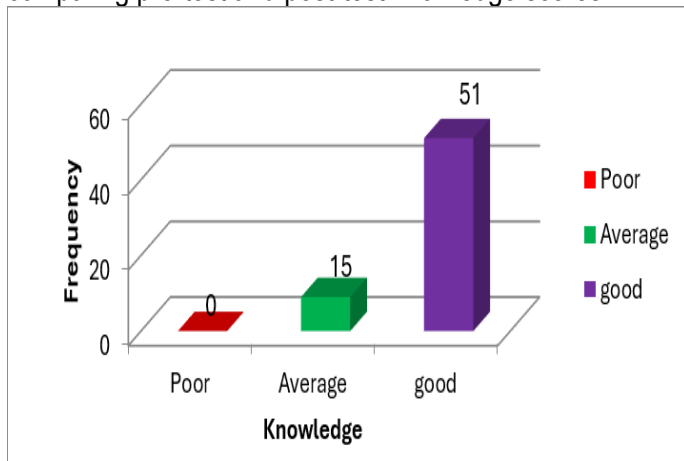


Figure. 1 Distribution of subjects according to posttest knowledge of the samples

The mean pre-test knowledge score was **15.45**, whereas the mean post-test score increased to **22.96**. Statistical analysis using the paired *t*-test demonstrated a calculated *t*-value of **4.74**, which exceeded the critical table value (1.984) at the 0.05 level of significance.

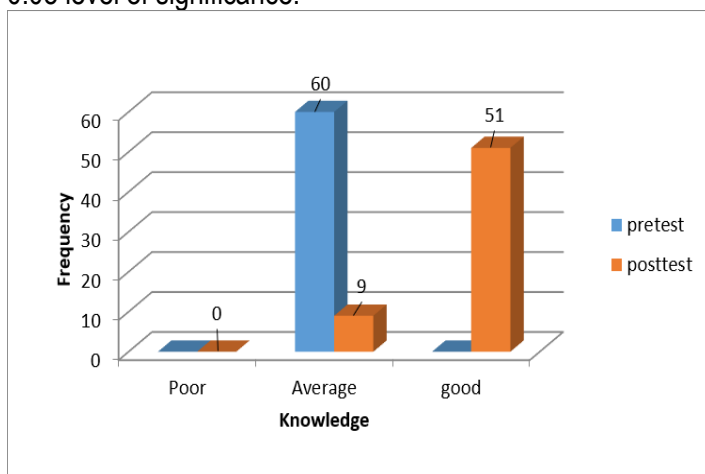


Figure 2: Distribution of subjects according to Effectiveness of knowledge of the samples

These findings indicate that the health awareness programme significantly improved participants' knowledge regarding acupressure for dysmenorrhic pain. Therefore, the first research hypothesis (H_1) was accepted.

Association Between Variables

Chi-square analysis demonstrated a statistically significant association between age group and pain intensity. Similarly, age and family history of dysmenorrhea showed significant associations with pre-test knowledge scores. Other demographic variables were not significantly associated with knowledge or pain intensity.

Discussion

The present study was conducted to evaluate the effectiveness of a structured health awareness programme regarding acupressure on dysmenorrhic pain among adolescent girls studying in higher secondary schools.

The demographic findings revealed that dysmenorrhea affected adolescents across both age groups equally. Most participants belonged to families with modest monthly income and reported that menstrual pain interfered with routine activities and sleep. These findings reinforce previous research indicating that dysmenorrhea is highly prevalent among adolescents and substantially affects physical, emotional, and educational well-being.

The majority of participants experienced moderate dysmenorrhea according to the WaLIDD pain scale. Lower abdominal pain emerged as the most frequently reported symptom, followed by nausea, vomiting, and backache. Similar findings have been reported in several national and international studies, which identify lower abdominal pain as the hallmark symptom of primary dysmenorrhea.

The baseline assessment demonstrated inadequate knowledge regarding acupressure among participants. Before the intervention, all respondents exhibited only average knowledge, reflecting limited awareness regarding non-pharmacological pain management strategies. This observation highlights the need for structured educational interventions targeting adolescent reproductive health.



Following the implementation of the health awareness programme, there was a marked improvement in knowledge. The post-test results showed that 85% of participants achieved good knowledge scores. The significant increase in the mean knowledge score indicates that structured educational programmes effectively enhance awareness regarding complementary therapies for menstrual pain management.

The paired *t*-test confirmed a statistically significant improvement between pre-test and post-test knowledge scores. These findings support the effectiveness of the health awareness programme and are consistent with previous studies demonstrating that educational interventions significantly improve adolescents' knowledge and self-care practices related to menstrual health.

The present findings also support research indicating that acupressure is an effective complementary therapy for dysmenorrhea. Acupressure is inexpensive, non-invasive, easy to learn, and free from major adverse effects. By educating adolescent girls regarding the correct location and application of the SP6 acupoint, nurses can empower them to independently manage menstrual discomfort.

The observed association between age and knowledge suggests that maturity and educational exposure may influence adolescents' understanding of menstrual health. Similarly, the association between family history and knowledge may reflect the influence of family discussions and prior experiences regarding menstrual pain.

Overall, the study demonstrates that structured health education delivered by nursing professionals can substantially improve knowledge regarding acupressure and promote evidence-based self-care practices among adolescent girls.

Implications for Nursing

The findings have important implications for nursing education, clinical practice, administration, and research.

Nursing Practice

Community health nurses should incorporate menstrual health education and acupressure training into school health programmes. Demonstrations of SP6 acupressure can help

adolescent girls adopt safe self-management techniques for dysmenorrhea.

Nursing Education

Nursing curricula should emphasize complementary therapies, adolescent reproductive health, and health education strategies to prepare future nurses for school and community health settings.

Nursing Administration

School administrators and nursing supervisors should organize regular menstrual health awareness programmes and ensure availability of educational resources promoting non-pharmacological pain management.

Nursing Research

Further randomized controlled trials involving larger and more diverse populations are needed to evaluate the long-term effectiveness of acupressure and compare it with pharmacological interventions.

Limitations

The study had several limitations.

- The sample size was relatively small.
- Participants were selected using non-probability purposive sampling.
- The study was confined to selected schools in Jabalpur, limiting generalizability.
- The post-test was conducted only one week after the intervention.
- Actual practice of acupressure and reduction in pain intensity over multiple menstrual cycles were not evaluated.

Recommendations

Based on the findings, the following recommendations are proposed:

1. Similar studies may be conducted with larger sample sizes.
2. Randomized controlled trials should be undertaken to establish stronger evidence.
3. Comparative studies between acupressure and pharmacological interventions are recommended.



4. Longitudinal studies may evaluate sustained knowledge retention and long-term pain reduction.
5. School health programmes should routinely include menstrual health education and acupressure demonstrations.
6. Awareness programmes should also involve parents and teachers to promote supportive environments for adolescent girls.

Conclusion

Dysmenorrhea continues to be one of the most common health problems affecting adolescent girls and significantly interferes with their academic performance, physical activity, emotional well-being, and quality of life. Despite its high prevalence, awareness regarding safe and effective non-pharmacological management remains limited.

The present study demonstrated that a structured health awareness programme significantly improved knowledge regarding acupressure among adolescent girls. The substantial increase in post-test knowledge scores confirms the effectiveness of educational interventions in promoting complementary pain management strategies. Acupressure, particularly stimulation of the SP6 point, offers a simple, safe, cost-effective, and non-invasive approach for managing dysmenorrhic pain.

Community health nurses, school health nurses, and nursing educators have an important responsibility in promoting menstrual health awareness and empowering adolescents with practical self-care skills. Integrating structured health education programmes into school health services can improve menstrual health literacy, encourage healthy behaviors, and ultimately enhance the quality of life of adolescent girls.

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Conflict of Interest

The author declares that there is **no conflict of interest** related to this study.

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