

**EFFECT OF KINESIOLOGY TAPING VERSUS DRY NEEDLING ON PRIMARY
DYSMENORRHEA AMONG COLLEGE GOING GIRLS**U. V. Mahisree Bharathi^{1*} MPT and RNV Deepthi² MPT¹Assistant Professor, School of Physiotherapy, VISTAS, Chennai, India.²Assistant Professor, Dr. MGR Educational and Research Institute, Chennai, India.***Corresponding Author: U. V. Mahisree Bharathi**

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ABSTRACT

Dysmenorrhea is one of the most common and important health problems among girls. It is a common cause of absenteeism and reduced quality of life in women. It badly affects the daily activities and quality of life which lead to depression in many girls. Hence this study aims to reduce the dysmenorrhea and also to compare the effectiveness of kinesiology taping and dry needling in reducing pain for college going girls. 40 subjects are randomly divided into 2 groups of 20 subjects in each group. Group A was given kinesiology taping. Group B was given Dry Needling. Pre test and Post test values was recorded using MOOS MDQ. Data obtained were analysed using SPSS version 22.0. The significant difference between groups was compared using Paired T test. Differences were considered as significant at $P < 0.005$. This study concludes that application of Kinesiology Taping is more effective than Dry Needling in reducing menstrual pain among college going girls.

KEYWORDS: Dysmenorrhea, kinesiology taping, dry needling, modified moos menstrual distress questionnaire.**INTRODUCTION**

Dysmenorrhea is one of the common gynecological problems among all women regardless of age or race. More than half of women who menstruate have pain for 1–2 days each month. It is an extremely common and sometimes fragile condition for women of reproductive age. Its prevalence varies from between 16 to 91% in reproductive age women. Dysmenorrhea is classified as primary and secondary dysmenorrhea. Primary dysmenorrhea is defined as cramping pain in the lower abdomen before or during the menstruation period in the absence of any pelvic pathology. It is the leading women hood problem that affects 90% of adolescent girls and more than 50% menstruating women.^[1] Published studies revealed spasmodic rates of dysmenorrhea ranging from 16% to 91%, with higher rates reported in adolescents populations.^[2] Furthermore, the prevalence rate is estimated to be 85% in the United States of America^[3], 84.1% in Italy^[3], and 40.7% in India.^[4] Dysmenorrhea is associated with significant impairment in quality of life between 16% to 29% of women. Furthermore, 12% of the monthly school and work activities are lost due to absenteeism because of dysmenorrhea.

The pathophysiology of primary dysmenorrhea is not well understood, but seems to be due to increased or abnormal uterine activity as a result of increased production and release of prostaglandins. Prostaglandin F₂alpha (PGF-2a) and Prostaglandin PGF₂ increases the uterine tone, and also causes high – amplitude

contractions of the uterus. The uterine contractility is observed to be more prominent in the first two days of the menstrual period. Progesterone levels drop before menstruation, which leads to increased production of PGs triggering dysmenorrhea. The clinical feature of Primary Dysmenorrhea is frequent and crampy pain which mainly affects the lower abdomen and radiates to the back or thigh.

The causes of primary dysmenorrhea were not well studied, but the common risk factors area positive family history of dysmenorrhea, smoking, higher severity of bleedings, shorter/longer menstrual period interval, stress, and menstrual cycle irregularity. Daily activity limitation, absenteeism from school/work, social withdrawal, decrease academic performance, and increased health care medical costs are the negative effect of primary dysmenorrhea. Use of oral contraceptives, non-steroidal anti-inflammatory medications, herbal medicines, massage, and lifestyle modification are treatment strategies to reduce dysmenorrheic pain.

MATERIALS AND METHODS

This is a comparative study done among college girls to find the effects of Kinesiology Taping and Dry needling for menstrual pain. A total of 40 students were selected based on inclusion criteria and were divided into 2 groups with each group containing 20 members.

INCLUSION CRITERIA

- Females
- Age between 18– 25 years
- Subjects with moderate to severe dysmenorrhea
- Subjects with primary dysmenorrhea

EXCLUSION CRITERIA

- Non willing patients
- Subjects allergic to kinesiology taping
- Subjects with no or mild dysmenorrhea
- Subjects with irregular menstrual cycle
- Subjects with secondary dysmenorrhea

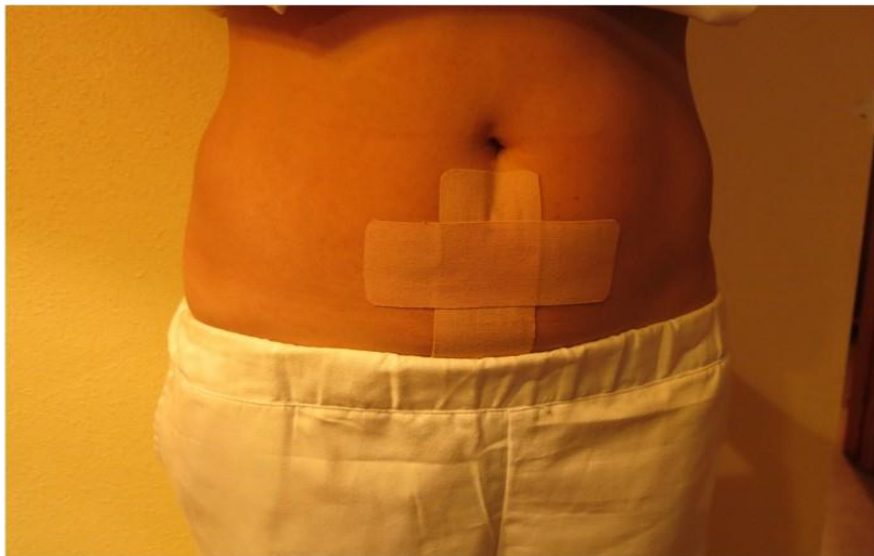
Among 40 samples, 20 will be assigned for kinesiology taping group and 20 will be assigned for dry needling group randomly.

GROUP A – subjects were applied with Kinesiology Taping for 2 days a week for 3 weeks.

GROUP B – subjects were given Dry needling in 2 sites for 2 days a week for 2 weeks.

STUDY PROCEDURE**KINESIOLOGY TAPING**

- The sample is positioned in supine lying with the area (abdomen) uncovered which is to be treated.
- For the kinesio taping group, a piece of kinesio tape 5 cm in width and 7-8cm in length will be applied right from below the navel and will reach to where the pubic hair begins.
- Another piece of tape 10 cm in length will be applied to make a cross shape with the first piece.
- A tape of 20cm in length will be placed horizontally to the lower back.
- If skin irritation does occur, advise patient to remove tape immediately and wash the area with warm soapy water to remove any residual adhesive and advice to apply any talcum powder to avoid redness.

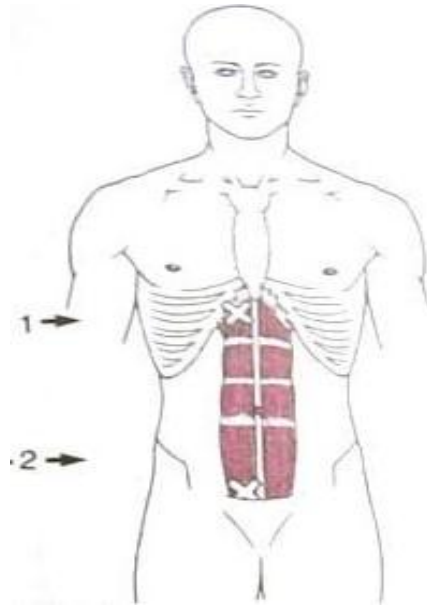


DRY NEEDLING

Needling procedure for rectus abdominis

The patient was made to comfortably lie down in a supine position on an examination couch and myofascial trigger point was confirmed by flat palpation and marked.^[5] After disinfecting the area with isopropyl ethyl alcohol, a 0.25 x 50 mm needle was angulated perpendicular to the MTrPs. The needle penetrates into skin and adipose tissue, and face initial resistance by deep fascia that overlies t4.

The muscle is penetrated. The needle is further advanced for a few millimeters to reach MTrPs and moved around slightly to elicit local twitch response (LTR). After eliciting the local twitching response, the needles are removed and disposed of using specific protocols for disposal of sharps.^[6]



NEEDLING PROCEDURE FOR EXTERNAL OBLIQUE

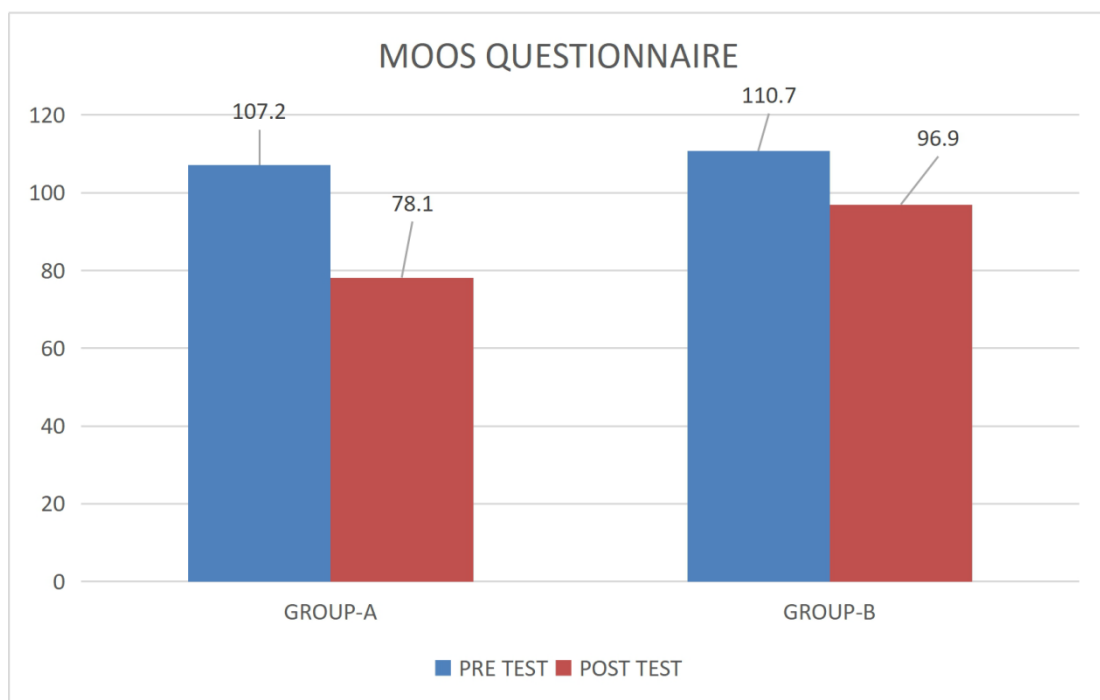
The subjects were positioned in lateral decubitus, which offers a benefit of letting the abdominal organs sag down so that the muscle can be easily targeted. Using 0.25 x 50 mm needle, a flat or pincer grasp is used to fix the point before inserting the needle.^[7] After the treatment, patients were briefed about the possibility of mild soreness that may last for a day.

DATA ANALYSIS

A total of 40 samples were enrolled in this study. The pain was measured using MOOS MDQ.

Table-1: Comparison of Moos Questionnaire Score Between Group-A And Group-B.

MOOS QUESTIONNAIRE	GROUP A		GROUP B		t-TEST	SIGNIFICANCE
	MEAN	SD	MEAN	SD		
PRE TEST	107.20	32.6	110.70	32.7	0.339	.737*
		1		5		
POST TEST	78.10	33.1	96.90	31.9	1.824	.076*
		9		8		



Graph-1: Comparison of Moos Questionnaire Score Between Group- A And Group- B.

RESULTS

On comparing the mean values of MOOS scale after 4 weeks of intervention between Group A and Group B, it shows that there was a highly significant difference in mean value. It shows that Group A is more effective than Group B ($p \leq 0.001$). Hence the alternate hypothesis is accepted.

DISCUSSION

The present study was conducted to compare the effectiveness of Kinesiology Taping and Dry Needling for primary dysmenorrhea among college-going girls. It was noticed that all age group female experiences dysmenorrhea and their severity differs. Based on the findings, the prevalence of dysmenorrhea was estimated to be higher among college going girls with the mean of 107.20. In previous research, the prevalence of dysmenorrhea worldwide ranges 15.8–89.5%, with higher prevalence rates reported in the adolescent population.^[8] Moreover, in India, it was reported to be 87.87% among Indian adolescent girls. These findings were in consistent with the results reported in our study.^[9] The collected data were tabulated and analyzed using both descriptive and inferential statistics. All the parameters were assessed using statistical package for social science (SPSS) version 22.0. Paired t-test was adopted to find the statistical difference within the groups & Independent t-test was adopted to find the statistical difference between the groups.

Our result showed that the mean of dysmenorrhea prevalence among college girls was 107.20 respectively. This shows that the prevalence of dysmenorrhea among college going girls was higher. Based on the results between the groups and within in the groups, the t test was 0.339 which is statistically significant at $P = 0.000$. This is because of adaptation to the severity of symptoms with respect to their frequency.

The previous study showed that the higher intensity of dysmenorrhea was associated with younger ages, and some previous studies confirmed that the intensity of primary dysmenorrhea decreased as age increased.^[11] The severity of dysmenorrhea among two groups was measured using Modified MOOS Distress Questionnaire. This test reveals that the severity of dysmenorrhea reduced in Group A who received Kinesiology Taping session compared to Group B who received Dry Needling session. On comparing these data values between the two groups, it reveals that the results of Group A are more effective than the results of Group B who are suffering more by the severity of dysmenorrhea.^[12]

Sharma et al concluded that the burden of dysmenorrhea was found much more than menorrhagia and irregular cycles in our university. A large proportion of young girls suffer from dysmenorrhea, though only a few seek treatment. High prostaglandin levels, psychosocial factors, young age at menarche, oppressive relationships,

menorrhagia and pre menstrual syndrome are found associated.

However, there is little evidence to explain the aetiology of dysmenorrhoea. Dysmenorrhoea is not a trivial complaint, as a result of high. Prevalence and adverse impact on mental health. It should be considered a target for reproductive health programme.

Premenstrual syndrome (67%) and dysmenorrhea (33%) were perceived by the study subjects as the most distressing problems associated with menstruation. The most common effect of menstrual problems on daily routine reported by the study subjects was in the form of prolonged resting hours (54%) followed by inability to study (50%). More than half (52%) of the subjects discussed their problems with their mother, and 60% of the study subjects were opted for all opathic treatment for their menstrual problems.^[13]

One of the findings revealed a statistically significant relationship between the age of respondents and their health care-seeking behavior towards dysmenorrhea. It also indicates the need to design regular reproductive health programs for female undergraduates including information on how to monitor and manage menstrual problems^[14] Menstrual pain is a common complaint in Iranian women. The inverse association between fruit and vegetable intake and dysmenorrhea, and reduction of stress and depression need to be further explored and considered in terms of recommendation to reduce dysmenorrhea.^[16] The strength of our study is that it includes two groups who received two different interventions with the moderate size of samples. This study can be further investigated with a large number of sample and on relation to age of menarche, lifestyle, and dietary pattern. The result suggested that stretching program and pelvic floor muscle strengthening can be used as an alternative for pain relief medicines in primary dysmenorrhea.^[16]

CONCLUSION

Result of this study shows that kinesiology Taping reduces menstrual pain when compared to Dry Needling. This suggests that Kinseiology Taping could be more effective in reducing menstrual pain. Due to the effectiveness of Kinesiology Taping, it can be also used for school going girls and postpartum women to alleviate the menstrual pain.

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