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Effectiveness of acupressure therapy on menstrual pain perception among adolescent girls with primary dysmenorrhea

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Abstract: Acupressure is one of the most popular alternative modality which is been practiced worldwide presently. Activating "The Acupoint Sp6 or San Yin Jiao or Spleen 6" point by pressing and releasing every day as a preventive measure for reducing the problems like pre-menstrual syndrome, dysmenorrhea, irregular menstruation. The present study was conducted to assess the effectiveness of acupressure therapy on menstrual pain perception among adolescent girls with primary dysmenorrhea in Peoples College of Nursing, Bhanpur, Bhopal, M.P. Totally 60 samples were taken by using Purposive sampling technique. The research design selected for present study was one group pre-test post-test design. Result- The pre-test pain score mean was 6.18 and post-test pain score mean was 1.88. The calculated value of 't' was 7.41 which was very much higher than the tabulated 'p' value <0.005 at 5 % level of significance. This shows that there was very high significant difference between the pain score of pre- test and post-test. There is a no significant association found between the pain score with selected socio demographic variable.

Key words: Acupressure therapy; dysmenorrhea; adolescent girls

Introduction

Acupressure is an ancient healing art that uses fingers to press key points on the surface of the skin to stimulate body's natural self-curative abilities. Acupressure is a Traditional Chinese Medicine (TCM), and it is a therapeutic technique of applying digital pressure in a specified way on designated point on the body to relief pain, produces analgesia, or regulates body function.

Menstrual pain or dysmenorrhea is the pain in the lower abdomen before or during menstruation. The pain sometimes radiates to the lower back or thigh area and can range from mild to severe. Other symptoms may include nausea, vomiting, loose stools, sweating, and dizziness. Pain can typically last 12 to 72 hours.[2]

Painful menstruation also called as primary dysmenorrhea is characterized by spasmodic or colicky pain and is worse on I, II, III days of menses. It usually occurs in girls and young females and tends to decrease with increasing age.

Adolescent girls constitute one-fifth of the female population in the world. Girls below 19 years comprise one quarter of India's population. There are estimated 105 million adolescent girls in India. Dysmenorrhea incidence is 33.5% among adolescent girls in India. The incidence of dysmenorrhea is 49.5% in South India and 87.87% in Karnataka. It has also been reported that Probably 5-10% of girls in their late teens suffer from severe spasmodic dysmenorrhea interrupting their educational and social life. A study conducted among Taiwanese college of nursing students showed that 85% of nursing students were suffering from dysmenorrhoea. This was affecting their curricular, co-curricular activities as well as their clinical practice.

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Materials and Methods

Research design

Pre-experimental one group pre-test post-test design

Population

Target population: adolescent girls having dysmenoorhea during the first day of menstruation.
Accessible population: adolescent girls of Peoples College of Nursing.

Sampling technique

Purposive sampling technique.

Sample size

Sample consisted of 60 nursing student of Peoples College of Nursing & Research Centre, Bhopal

Setting

Peoples College of Nursing & Research Centre, Bhopal

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Inclusion Criteria

- Adolescent girls, who are aged between 14-25 years.
- Adolescent girls, who are have a complaint of dysmenorrhea.
- Adolescent girls, who are willing to participate in the study.
- Adolescent girls, who are able to read, write and understand English.

Exclusion Criteria

- Adolescent girls, who are not mentally healthy.
- Adolescent girls, who are not available at the time of study.
- Adolescent girls, who are not given consent for the study. 2010.

Section I: Socio-demographic variables

Section II - Association between the socio demographic variables and pretest pain score regarding dysmenorrhea.

Section III: Analysis of significance difference between pretest and posttest intensity of pain score regarding dysmenorrhea among adolescent girls.

Result and Discussion

Section I: Socio-demographic variables

Table 1: Frequency and percentage distribution of subject according to demographic variables.

S.no.	Demographic variables	Frequency	Percentage
1.	**Age in years**		
	14 - 16	0	0%
	17 – 19	19	31.66%
	20 - 22	39	65%
	23 - 25	2	3.33%
	Total	60	
2.	**Year of study**		
	1st year	1	1.66%
	2nd year	19	31.66%
	3rd year	12	20%
	4th year	28	46.66%
	Total	**60**	
3.	**Age at menarche**		
	11 - 12	4	6.66%
	13 - 14	33	55%
	15 - 16	20	33.33%
	Above 17	3	5%
	Total	**60**	
4.	**Menstrual duration**		
	2 days	1	1.66%
	3 days	12	20%
	4 days	30	50%
	≥5 days	17	28.33%
	Total	**60**	
5.	**Menstrual cycle**		
	Within 15 days	3	5%
	Within 21 days	1	1.66%
	Within 28 days	44	73.33%
	Within 36 days	12	20%
	Total	**60**	
6.	**Dysmenorrhea starts**		
	Before menses	22	36.66%
	With menses	35	58.33%
	After menses	3	5%
	Total	**60**	
7.	**Duration of dysmenorrhea**		
	Lasting for first 1 – 6 hours	19	31.66%
	Lasting for 7 – 12 hours	4	6.66%
	Lasting for 1 day	20	33.33%
	Lasting for 2 days	4	6.66%
	above 2days	13	21.66%
	Total	**60**	
8.	**Pain severe in**		
	Sitting	17	28.33%
	Standing	38	63.33%

	Lying	5	8.33%
	Total	**60**	
9.	**Pain aggravates during**		
	Day	51	85%
	Night	9	15%
	Total	**60**	
10.	**Location of pain**		
	Lower abdominal pain	40	66.66%
	Lumbar area	12	20%
	Pubic area	2	3.33%
	All of the above	5	8.33%
	Any other …	1	1.66%
	Total	**60**	
11.	**Type of pain**		
	Continuous	21	35%
	Intermittent	24	40%
	Spasmodic	12	20%
	colicky	3	5%
	Total	**60**	
12.	**The measure taken to get rid of pain**		
	Prone position	26	43.33%
	Knee- chest position	12	20%
	massaging	16	26.66%
	Any other….	6	10%
	Total	**60**	
13.	**Usage of medicine**		
	Yes	13	21.33%
	No	47	78.33%
	Total	**60**	

Section II: It includes analysis of data to find the association between pre-test and post-test pain intensity score with selected socio demographic variables by using chi square test. The data depicted that the chi square value is significantly compared to the tabulated value at 0.05 level of significance and reveals that there is no relationship between the pretest pain intensity score with socio demographic variables.

Table 2: Association between the socio demographic variables and pretest pain score regarding dysmenorrhea.

S.no.	Demographic variables	Intensity of dysmenorrhea				Total	Chi square	df	P- value	Result
		No	Mild	moderate	severe					
1.	**Age in years**									
	14 - 16	0	0	0	0	0				
	17 – 19	0	0	10	9	19				
	20 - 22	0	1	24	14	39	3.984	9	16.92	NS
	23 - 25	0	0	0	2	2				
	Total	0	1	34	25	60				
2.	**Year of study**									
	1st year	0	0	1	0	0				
	2nd year	0	0	8	11	19				
	3rd year	0	1	6	5	12	7.535	9	16.92	NS
	4th year	0	0	19	9	28				
	Total	**0**	**1**	**34**	**25**	**60**				
3.	**Age at menarche**									
	11 - 12	0	0	2	2	4				
	13 - 14	0	1	18	14	33	1.028	9	16.92	NS
	15 - 16	0	0	12	8	20				
	Above 17	0	0	2	1	3				
	Total	**0**	**1**	**34**	**25**	**60**				
4.	**Menstrual duration**									
	2 days	0	0	1	0	1	3.382	9	16.92	NS
	3 days	0	0	7	5	12				
	4 days	0	0	17	13	30				
	≥5 days	0	1	9	7	17				
	Total	**0**	**1**	**34**	**25**	**60**				
5.	**Menstrual cycle**									
	Within 15 days	0	0	1	2	3	9.908	9	16.92	NS
	Within 21 days	0	0	0	1	1				
	Within 28 days	0	0	29	15	44				

	Within 36 days	0	1	4	7	12				
	Total	**0**	**1**	**34**	**25**	**60**				
6.	**Dysmenorrhea starts**									
	Before menses	0	0	12	10	22	5.62	6	12.59	NS
	With menses	0	1	22	12	35				
	After menses	0	0	0	3	3				
	Total	**0**	**1**	**34**	**25**	**60**				
7.	**Duration of dysmenorrhea**									
	Lasting for first 1 – 6 hours	0	1	8	10	19	4.78	12	21.03	NS
	Lasting for 7 – 12 hours	0	0	2	2	4				
	Lasting for 1 day	0	0	12	8	20				
	Lasting for 2 days	0	0	3	1	4				
	above 2days	0	0	9	4	13				
	Total	**0**	**1**	**34**	**25**	**60**				
8.	**Pain severe in**									
	Sitting	0	1	8	8	17	4.07	6	12.59	NS
	Standing	0	0	24	14	38				
	Lying	0	0	2	3	5				
	Total	**0**	**1**	**34**	**25**	**60**				
9.	**Pain aggravates during**									
	Day	0	1	30	20	51	1.917	3	7.82	NS
	Night	0	0	4	5	9				
	Total	**0**	**0**	**34**	**25**	**60**				
10.	**Location of pain**									
	Lower abdominal pain	0	0	23	17	40	5.21	12	21.03	NS
	Lumbar area	0	0	7	5	12				
	Pubic area	0	0	2	0	2				
	All of the above	0	0	2	3	5				
	Any other ……	0	1	0	0	1				
	Total	**0**	**1**	**34**	**25**	**60**				
11.	**Type of pain**									
	Continuous	0	0	11	10	21	2.66	9	16.92	NS
	Intermittent	0	1	15	8	24				
	Spasmodic	0	0	6	6	12				
	colicky	0	0	2	1	3				
	Total	**0**	**1**	**34**	**25**	**60**				
12.	**The measure taken to get rid of pain**									
	Prone position	0	1	16	9	26	2.167	9	16.92	NS
	Knee- chest position	0	0	6	6	12				
	massaging	0	0	9	7	16				
	Any other….	0	0	3	3	6				
	Total	**0**	**1**	**34**	**25**	**60**				
13.	**Usage of medicine**									
	Yes	0	0	4	9	13	5.25	3	7.82	NS
	No	0	1	30	16	47				
	Total	**0**	**0**	**34**	**25**	**60**				

Section III: It includes the analysis of data related to effectiveness of acupressure therapy on intensity of dysmenorrheal pain score of adolescent girls.

Table 3: Analysis of significance difference between pretest and posttest intensity of pain score regarding dysmenorrhea among adolescent girls.

Group	Mean	S.D	N	T -value	df	P –value
Pre- test pain	6.18	1.28	60	7.41	59	P < 0.05
Post- test pain	1.88	0.85	60			

The data depicted the effectiveness of acupressure therapy through pre and posttest difference. The level of pain before acupressure therapy was 6.18 and after the administration of acupressure therapy was 1.88.

Conclusion

On the basis of findings, it has been concluded that the acupressure therapy is effective in reduction in the severity of menstrual pain perception among adolescent girls with primary dysmenorrhea. The mean score obtained by the samples in the pretest phase was 6.18 and in the post – test phase. It had decreased to 1.88. Mean post- test score1.88 which is lower than pre-test score 6.18 and dispersion of pretest score SD 1.28 is less then that of their post test score S.D 0.85 and computed paired 't' 7.41 is more than tabled value (t= 2.01) at the level of 0.05.

Further to know the statistical significant between pretest and posttest pain score paired t test was computed. the paired t value (t-0.05,7.41 p>0.05 level) showed that there was a significant difference between pretest and posttest pain score, on the whole, the study showed that acupressure

therapy is very effective. These findings suggest that decrease pain was the effect of acupressure therapy.

The chi square value is significant compared to the tabulated value at 0.05 level of significance and reveals that there is relationship between the pain score with Age of student, Year of study, Age at menarche, Menstrual duration, Menstrual cycle, Dysmenorrhea starts, Duration of dysmenorrhea, Pain is severe in, Pain aggravates during Location of pain, Type of pain. The measure taken to get rid of pain, Usage of medication.

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