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RESEARCH ARTICLE

EFFECTIVENESS OF SAMVAHAN VIBRATIONAL THERAPY ON BODY DISCOMFORT: QUASI EXPERIMENTAL STUDY FROM WESTERN MAHARASHTRA INDIA AMONG HEALTH EMPLOYEES AND NURSING STUDENT WORKING AT K.I.M.S DEEMED UNIVERSITY, KARAD

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Abstract

Objective: To assessed the level of body discomfort before and after providing the Samvahan Vibrational Therapy.
Methodology: The study design was quasi experimental includes health employees and nursing students. The sample was 63 health professionals on the basis of non-probability convenient sampling technique. Information was collected on selected demographic, pain and stress variables according to pre tested structured scale. Data was collected by personal interview methods and analyzed by Wilcoxon match paired test.
Result: revealed that, by using Wilcoxon match paired test there was significant difference between pre-test and post-test pain score in teachers (A) for, shoulder,lower back, left thigh, right thigh, left leg .Student (B) for head, neck, shoulder, mid back , lower back, right leg , left leg and staff nurse (C) for shoulder, lower back , right leg , left leg because ($p<0.05$). The median of pre-test, pain of shoulder for staff nurse (7) was significantly higher than student (6) which was followed by teachers (4.5) because ($p<0.05$).Similarly lower back pain for a staff nurse (7.5) was significantly higher than teachers (6) and doctor (6), which was followed by student (5) because ($p<0.05$). similarly of right thigh for staff nurse (7) was significantly higher than teachers (5) because ($p<0.05$). The post-test pain of all the 4 groups was zero that means not significant. It also indicates that vibration therapy was effective that the reducing pain and stress among the health professionals.
Conclusion: The study concluded that samvahan therapy was to be effective for body discomfort among health professionals.

Introduction:-

The heavy workload of health professionals is a major problem for the health care system. In a study conducted in western countries like USA, back pain is considered to be a leading cause of disability. A study conducted by B.Supreet, et.al.(2013), and their finding showed that the prevalence of low back pain was found 51% out of 400 population having Symptoms of low back ache which is mainly arise due to work acitivies.[1]

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Health professional experiencing stress and burnout may not be able to perform efficiently and effectively because their physical and cognitive resources may be reduced; this suboptimal performance may affect quality of care and patient's safety so objective of my study is to assessed the level of body discomfort before and after providing the Samvahan Vibrational Therapy.

In India, Dr. Bhosle's established Samvahan vibrational therapy in 1930. Since 1930 he started this therapy in India. He supplements this method when necessary with hydrotherapy, Ayurveda, chiropractic, electric vibration, urine therapy and aromatherapy. Mr. Michal Trembath received training of "Samvahan Vibration Therapy" by late Dr. Ram Bhosle [2]. Samvahan vibration therapy is useful for both physical and mental well-being. It calms the central nervous system, reduces muscle tension, improves sleep patterns and helps in healing process.[2] it is a gentle massage-like soothing, musical, and meditative treatment that physically amplifies the internal vibration of our body.[3]

There are many alternative therapies to reduce stress and pain, In that samvahan therapy is one of them. Samvahan practitioners primarily use their hands to transmit vibrations. Samvahan also serves as a powerful key to unlock emotional trauma trapped with our subconscious. For pain relief, the vibrations can also be aimed directly at the site of pain or tightness**.** Samvahan Therapy can be highly helpful in treating Physical ailments and Emotional issues like Stress and Depression.[2]

Material And Method:-

An evaluative approach used in this study. Quasi-Experimental one group pre-test, post-test research design used to conduct the study. In this study, Samvahan Vibration Therapy was independent variable and body discomfort was dependent variable. The study was conducted in a specific prepared Vibrational Therapy Room at Krishna Institute of Nursing Sciences, Karad, India. 63 Health professionals working in Krishna institute of Medical Science Deemed University, Karad and who were having body discomfort those samples selected by using a non probability convenient sampling technique. Health professionals & female samples were included in this study and those who were having chronic Medical problem,(i.e chest pain, abdomen pain, trauma, spinal injury), pregnant women were excluded from this study. The standard pain scale, body discomfort scale used for data collection. The constructed tool along with objectives and item evaluation criterion was submitted to seven experts in the field of nursing and medicine for content validity. Content validity of the tool was measured by using SPSS software. The Cronbach's alpha value was 0.845. This value was significant, that means the tool was reliable.

Method Of Data Collection:-

The investigator obtained a written permission from the concerned authority from KIMSDU, Karad. Data collection period was 20/01/2017to 11/02/2017.

1) Initially personal interview of each subject was taken.
2) Participants who were having body discomfort & who were willing to participate in this study were selected.
3) Appointment was given to each subject & pre test was conducted.
4) Before giving therapy each subject was introduced with vibration room and therapy and then Samvahan Vibration therapy given.
5) After relaxing 15 to 20 minute post-test was taken.
6) After 7 days, follow-up was taken of each sample to find out the effect of one setting of Samvahan Vibration Therapy.

Ethical Consideration:-

On the date of 20/01/2016 in front of ethical committee synopsis presentation was done and the statement was approved by intuitional ethical committee. Which was included the secretary of institutional ethics committee and chairman of institutional ethics committee KIMSDU Karad. The researcher obtained permission from the present institution to conduct the research study. Written consent was taken from the subjects before data collection. The subject informed that the confidentiality of data will be maintained.

Plan For Data Analysis:-

The collected data was organized, tabulated, and statistically analyzed by using Microsoft excel and (INSTAT). For quantitative data, the range, mean, and standard deviation was used. The difference between two means was statistically analyzed by Nonparametric paired test, was used as a test of significant ($p<0.05$) for interpretation of the result. Body discomfort scale analyzed after the data collection.

Result:-

Section I:- Distribution of subject according to demographic variable.

Srno	Demographic variable	Category	Teachers		Student		Staff Nurse		Doctor	
			n = 24		n = 24		n = 10		n = 07	
			F	%	F	%	F	%	F	%
1	Age	< 35	12	50			3	30		
		>35	12	50			7	70		
		<21			14	58.33			0	0
		>21			10	41.67				
									7	100
2	Type of family	Joint	14	58.33			4	40		
		Nuclear	10	41.67			6	60		
3	Income	<50,000	18	75						
		>50,000	6	25						
4	Occupation	Nursing	19	79.17						
		Other	5	20.83						

Table 1:- Demographic variable wise distribution of subjects.

In this study demographic variable wise distribution of subjects (Table no 1) showed that maximum 12(50%) teachers, 3(30%) staff nurses were in the age group of below 35 years. Maximum 14(58.33%) students were in the age group of below 21 years. All of 7 (100%) subjects were in the age group of above 21 years. Maximum 14 (58.33%) teachers belongs to joint family and maximum 6(60%) staff nurses belongs to the nuclear family. 18(75%) teachers were having below 50, 000 thousand income.

Section II:- To assess the level of body discomfort before and after providing Samvahan Vibration therapy.

Discomfort site	Teachers				Student				Staff nurse				Doctor			
	N = 24				N = 24				N = 10				N = 07			
	Pre test		Post test		Pre test		Post test		Pre test		Post test		Pre test		Post test	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Head	2	8.3	1	4.17	6	25	5	20.83	1	10	0	0	0	0	0	0
Neck	9	37.55	5	20.83	10	41.67	4	16.67	5	50	3	30	0	0	0	0
Shoulder	10	41.67	4	16.67	10	41.67	2	8.33	6	60	4	40	3	42.86	3	42.86
Upper arms	1	4.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
lower arms	1	4.17	1	4.17	0	0	0	0	0	0	0	0	0	0	0	0
Upper back	5	20.83	4	16.67	4	16.67	1	4.17	0	0	0	0	3	42.86	1	14.29
Mid back	2	8.33	2	8.33	9	37.5	3	12.5	1	10	1	10	1	14.29	1	14.29
Lower back	**14**	**58.33**	**8**	**33.33**	**13**	**54.17**	**4**	**16.67**	6	60	2	20	4	57.14	1	14.29
Buttocks	0	0	0	0	1	4.175	1	4.17	3	30	2	20	0	0	0	0
Right thigh	6	25	3	12.5	0	0	0	0	4	40	2	20	1	14.29	1	14.29
Left thigh	6	25	4	16.67	1	4.17	0	0	3	30	1	10	1	14.29	0	0
Right legs	10	41.67	4	16.67	12	50	2	8.33	6	60	2	20	**5**	**71.43**	**2**	**28.57**
Left legs	13	54.17	10	41.67	**13**	**54.17**	**1**	**4.17**	**7**	**70**	**3**	**30**	**5**	**71.43**	**1**	**14.29**

Table 2:- Site wise distributions between pre test and post test pain of subject.

Table no 2 showed, In group A, 14(58.33%) teachers had lower back pain out of 24. In group B 13 (54.17%) students had lower back pain and left Leg pain. In group C 7(70%) staff nurses had left leg pain. In a group D maximum 5 (71.43%) Doctors had Right & left leg pain. After administered the Samvahan Vibration Therapy the pain was significantly reduced i.e 8(33.33%) teachers had lower back pain. 4 (16.67%) Students had lower back pain

and 1(4.17%) student had left leg pain. 3(30%) Staff nurses had left legs pain. 2(28.57%) Doctors had Right Leg & 1(14.29%) Doctor had left leg pain.

Teachers (Group A)							
n =24							
Discomfort site	Pre test		Post test		W	'p' value	Inference
	Mean	SD	Mean	SD			
Neck	5.55	1.59	2.11	2.47	45	0.0039	S
Shoulder	4.4	1.84	1.3	2.11	55	0.0020	S
Upper back	3.2	1.30	2	1.87	8	0.2500	NS
Lower back	5.14	2.21	1.4285	1.79	91	0.0002	S
Right thigh	3.83	2.32	1	1.27	19	0.0625	NS
Left thigh	4.67	1.37	1	1.265	21	0.0313	S
Right leg	5.43	0.98	1.71	1.704	28	0.0156	S
Left leg	6	1.58	2.077	1.656	91	0.0002	S

Table 3:- Site wise comparisons between pre-test pain score and post-test pain score of the teachers.

W- Non parametric paired test (Wilcoxon matched pair test)
(Table no 3) Showed Non parametric paired test (Wilcoxon matched pair test) (W) was significantly difference between pre test pain score and post test pain score among teachers for neck, shoulder, lower back, left thigh and right and left legs because ($p<0.05$).

Student (Group B)							
n =24							
Discomfort site	Pre test		Post test		W	'p' value	Inference
	Mean	SD	Mean	SD			
Head	6	2.89	2	1.414	21	0.0313	S
Neck	5.1	2.13	0.8	1.135	45	0.0039	S
Shoulder	5.2	2.25	0.3	0.675	55	0.0020	S
Upper back	5.5	1.29	0.5	1	10	0.1250	NS
Mid back	5.55	2.007	0.44	0.726	45	0.0039	S
Lower back	5.307	1.93	0.615	1.044	91	0.002	S
Right leg	6	1.907	0.67	1.5	78	0.0005	S
Left leg	5.846	1.91	1.109	0.308	78	0.0005	S

Table no 4:- Site wise comparisons between pre-test pain score and post-test pain score of the students.

W- Non parametric paired test (Wilcoxon matched pair test)
(Table no 4) Showed Non parametric paired test (Wilcoxon matched pair test) (W) was significantly difference between pre test pain score and post test pain score among student for head, neck, shoulder, mid back, lower back, right and left legs was significant because ($p<0.05$).

Staff nurse (Group C)							
n =10							
Discomfort site	Pre test		Post test		W	'p' value	Inference
	Mean	SD	Mean	SD			
Neck	6.8	1.304	0.8	1.304	15	0.0625	NS
shoulder	7.16	1.47	1.833	2.229	21	0.0313	S
Lower back	7.67	0.81	1.333	2.805	21	0.0313	S
Right thigh	7.25	1.26	2	2.449	10	0.1250	NS
Right legs	7.33	1.64	0.833	1.329	21	0.0313	S
Left leg	7.714	1.79	1.574	2.299	28	0.0156	S

Table 5:- Site wise comparisons between pre-test pain score and post-test pain score of staff nurse.

W- Non parametric paired test (Wilcoxon matched pair test)

(Table no 5) Showed Non parametric paired test (Wilcoxon matched pair test) (W) was significantly difference between pre test pain score and post test pain score among staff nurse for shoulder, lower back and right and left legs was significant because ($p<0.05$).

Doctor (Group D)							
n =07							
Discomfort site	Pre test		Post test		Wilcoxon match paired test	'p' value	Inference
	Mean	SD	Mean	SD			
Upper back	4.33	1.528	0.66	1.15	6	0.25	NS
Lower back	5	2.648	0.166	1.155	6	0.25	NS
Right leg	4.6	1.949	0.4	0.5477	15	0.6625	NS

Table 6:- Site wise comparisons between pre-test pain score and the post-test pain score of a Doctor.

W- Non parametric paired test (Wilcoxon matched pair test)

(Table no 6) Showed Non parametric paired test (Wilcoxon matched pair test) (W) was not significantly difference between pre test pain score and post test pain score among doctor for upper back, lower back & right leg because ($p >0.05$).

Section II:- Correlation between type of job and body discomfort before and after therapy.

Pre test (Shoulder)

Sr no	Subject	No of subject	Median	Minimum	Maximum	K.W statistic	'p' value	Inference
1	Teachers	10	4.5	2	8	6.170	0.0457	S
2	Student	10	6	2	8			
3	Staff nurse	6	7	6	10			

Post test (Shoulder)

Sr no	Subject	No of subject	Median	Minimum	Maximum	K.W statistic	'p' value	Inference
1	Teachers	4	3	1	6	1.013	0.6028	NS
2	Student	2	2	1	2			
3	Staff nurse	4	1	1	6			

*K.W non parametric one way ANOVA (Kruskal Wallis test)

These table showed that pre – test shoulder pain among all group found significant. The post test shoulder pain found no significant because maximum subject had zero pain, means the samvahan vibrational therapy was effective.

Pre test (Lower back)

Sr no	Subject	No of subject	Median	Minimum	Maximum	KW statistic	'p' value	Inference
1	Teachers	14	6	0	7	8.605	0.0350	S
2	Student	13	5	2	8			
3	Staff nurse	6	7.5	7	9			
4	Doctor	4	6	3	8			

Post test (Lower back)

Sr no	Subject	No of subject	Median	Minimum	Maximum	K.W statistic	'p' value	Inference
1	Teachers	8	2	1	5	0.2242	0.9736	NS
2	Student	4	2	1	3			
3	Staff nurse	2	4	1	7			
4	Doctor	1	2	2	2			

*K.W non parametric one way ANOVA (Kruskal Wallis test)

These table showed that pre – test lower back pain among all group found significant. The post test lower back pain found no significant because maximum subject had zero pain, means the samvahan vibrational therapy was effective.

Pre test (Right thigh)

Sr no	Subject	No of subject	Median	Minimum	Maximum	Mann-Whitney U paired test	'p' value	Inference
1	Teachers	6	5	2	6	0.500	0.0189	S
2	Staff nurse	4	7	3	9			

Post test (Right thigh)

Sr no	Subject	No of subject	Median	Minimum	Maximum	U statistic	'p' value	Inference
1	Teachers	3	0.5	0	3	14.5	0.6655	NS
3	Staff nurse	2	1.5	0	5			

* U- (Non parametric unpaired test) (Mann Whitney statistics)

These table showed that pre – test right thigh pain among all group found significant. The post test right thigh pain found no significant because maximum subject had zero pain, means the samvahan vibrational therapy was effective.

Discussion:-

Author has extensively searched all electronic and hard copy data which was available in a library but the study on samvahan therapy and its effects were not available. But there were some studies on massage and vibration therapies. Author has searched 32 reviews of literature out of that two studies compared with pain, stress, and anxiety.

A study conducted to find out the Efficiency of traditional Thai massage for the treatment of chronic pain: A Systematic Review. The result showed that six research articles met the inclusion criteria. All of the studies found a pre- to post-treatment pain reductions, varying from 25% to 80% and was also associated with improvements in disability, perceived muscle tension, flexibility, and anxiety.[4]

A study conducted at Virginia hospital surgical units to find out the effects of adjunctive Swedish massage and vibration therapy on short-term postoperative. The randomized controlled trial the treatment group was 1) Usual postoperative care (UC) 2) UC plus massage therapy 3) UC plus vibration therapy. The result shows that On the day of surgery, massage was more effective than UC for affective ($p = 0.0244$) and sensory pain ($p = 0.0428$), and better than vibration for affective pain ($p = 0.0015$). On a postoperative day 2, massage was more effective than UC for distress ($p = 0.0085$), and better than vibration for sensory pain ($p = 0.0085$). Vibration was also more effective than UC for sensory pain ($p = 0.0090$) and distress ($p = 0090$). However, after controlling for multiple comparisons and multiple outcomes, no significant differences were found.[5]

Conclusion:-

The present study concluded that the samvahan therapy is effective for body discomfort among health professionals.

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Place:

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