

Mind Sound Resonance Technique for Perceived Stress and Activities of Daily Living among Senior Citizens

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KEY WORDS

Mind Sound Resonance Technique
Perceived Stress
Daily Living

ABSTRACT

Background: Some of the common problems that senior citizens face are stress and reduced efficiency in Activities of Daily Living. Mind Sound Resonance Technique (MSRT) is an advanced relaxation technique which is developed by Swami Vivekananda Yoga Anusandhana Samsthana [SVYASA], Bengaluru, India.

Purpose: To know the effectiveness of MSRT on Perceived Stress and Activities of Daily Living on Senior Citizens.

Methods: It was a Quasi-Experimental study. The study was conducted on 40 senior citizens of Chandigarh having no serious health ailment. The sample was bifurcated into two groups i.e. an experimental group and a control group, having 20 senior citizens in each group. Baseline scores were collected on the Perceived Stress questionnaire and Activities of Daily Living questionnaire. 10 sessions on the Mind Sound Resonance Technique (MSRT) intervention were offered for 20 minutes per session per day to 20 senior citizens of the experimental group whereas another 20 senior citizens of the control group were observed with routine activities. The total period of study was six months till the submission of data. The Pre-test and Post-test scores of Perceived Stress and Activities of Daily Living were analyzed.

Results: A significant difference ($P < 0.05$) was found in the Pre and Post-test of Perceived Stress scores and Activities of Daily Living scores of the experimental group as compared to the control group. A significant difference was also found between the Post-test scores of the experimental group and control group for Perceived Stress and Activities of Daily Living.

Conclusion: A regular practice of the Mind Sound Resonance Technique brought a significant reduction in stress and improvement in the functioning of activities of daily living among senior citizens.

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Introduction

The proportion of the senior citizen population in India has been increasing and is likely to increase to 13.1 percent in 2031 (1). Some of the common problems that senior citizens face are perceived stress and there is a reduction in efficiency in Activities of Daily Living. *Stress* is defined as the physiological or psychological response to internal or external stressors. It brings about changes in almost all the systems of the body. Besides, it also influences how people feel and behave (2). Sources such as disease, and financial constraints (3) when causing a threat to an individual give way to perceived stress (4).

Activities of Daily Living include self-care activities e.g., dressing, eating, attending to hygiene, toileting, and walking. These activities are a measure of a functional status of an individual (5). A study was conducted in Mumbai, Panvel, and Thane cities on a total of 2049 aged population with an age range of 60 years and above in which 23.67% of the participants reported reduced daily activities (6). Mind Sound Resonance Technique (MSRT) is an advanced relaxation technique developed by Swami Vivekananda Yoga

Anusandhana Samsthana [SVYASA], Bengaluru, India. This MSRT technique requires the practitioners to experience the inner vibrations and resonance with closed eyes while chanting the syllables A, U, M, Om, and *Mahamrityunjaya mantra* sounds (7).

The practice of MSRT is beneficial for many health-related problems. Nagendra mentions that MSRT provides relief from cancer (8). Some studies revealed that MSRT has improved cognitive functions in patients with Type-2 diabetes (9) and school students (10). The purpose of the present study was to assess the effectiveness of MSRT on Perceived Stress and Activities of Daily Living of Senior Citizens in Chandigarh.

Objectives of the study

1. To compare the Pre and Post-test scores of the MSRT experimental group and control group on Perceived Stress.
2. To compare the Pre and Post-test scores of the MSRT experimental group and control group on the Activities of Daily Living.

Methods

The researcher conducted the present study on senior citizens residing in Chandigarh. Snowball sampling was used to collect the sample. Out of the 62 senior citizens who were approached from parks and old age homes of Chandigarh within three months, 55 geriatrics had given consent to participate in the experiment. These participants were screened on a PGI health questionnaire to know their level of health. A total of 50 senior citizens having no serious health ailment were selected for the study and were divided into two groups i.e. the Experimental group (n = 25) and the Control group (n = 25). The age range of the selected sample was from 60–90 years and senior citizens with severe hearing problems/serious health issues i.e. hospitalized were excluded from the study.

The authors instructed and made to do practice of the Mind Sound Resonance Technique intervention (MSRT) with the experimental group for 10 sessions per 20 minutes. In contrast, the control group was instructed to continue with their routine activities. MSRT intervention was practised at a venue according to the choice of participants and intervention was given through pre-recorded audio.

The authors assessed the pre-test and post-test scores of the sample by using the Perceived Stress scale (PSS) and Activities of Daily Living (ADLs) questionnaire, in the beginning i.e. before using MSRT intervention and after completion of 10 sessions of exercising MSRT intervention on a selected sample of both groups. The period of the study was six months. The experiments were undertaken with the written consent of each subject as per the Panjab University guidelines.

Measures/tools

Health: Verma, Wig and Pershad (Revised in 2016) (11) developed the questionnaire to assess the level of health of an individual. This questionnaire consisted of 38 items and was divided into two parts: Part A (Physical distress) and Part B (Psychological distress). The authors used the questionnaires to know the level of health of a selected sample of senior citizens and those were having poor health were excluded from the study.

Perceived Stress: It is evaluated by using the Perceived Stress Scale (PSS) (12) of Cohen and Williamson (1988). It contains 10 items that evaluate the perceived stress of an individual with a scale of 1 to 5 scores. It is considered a reliable and valid tool used for a healthy population.

Activities of Daily Living: The activities of daily living were assessed by using the Activities of Daily Living questionnaire (ADLs) (13) developed by Singh, Multani and Verma in 2007. Activities of daily living (ADLs) comprise seven items related to self-care activities e.g. dressing, toileting, eating, etc.

Statistical techniques

The Statistical Package for Social Sciences (SPSS version) was used for data analyses. The distribution of scores and difference of pre-test scores (before starting the intervention) and post-test scores (after its completion) of PSS and ADLs was calculated for both groups i.e. the experimental group and the control group. The statistical techniques used were paired t-test and independent sample-test for the Perceived Stress Scale, and ADLs were evaluated by applying the Wilcoxon Signed-Rank test and Mann-Whitney U test.

Procedure of experiment

The authors followed the following steps of MSRT (8):

1. Performing loud chanting of prayer- Mrtyunjaya Mantra.
2. a) Performing chanting of A, U, M, and AUM loudly sequentially i.e. one by one which completes one round. A total of three rounds of the loud chanting in the above mentioned sequence were completed. The complete body resonance was to be felt at every step.
b) Āhata–Anāhata rounds of A, U, M, and AUM: It included chanting of A- U- M –AUM loudly and chanting of A-, U-, M, –AUM mentally. Each loud chanting of sound was followed by its chanting in the mind. This was called Āhata–Anāhata sound. The completion of Āhata–Anāhata with each sound in a series i.e. A-, U-, M –AUM; one round got completed. In this way, three (3) rounds were completed. The resonance was to be felt in every step.
3. a) Chanting of ‘Mrtyunjaya Mantra’ loudly was done (MM)(three rounds). The pattern of resonant waves was to be felt throughout the body.
b) Āhata–Anāhata of Mrtyunjaya Mantra (MM): It included chanting of Mrtyunjaya Mantra (MM) loudly and chanting of Mrtyunjaya Mantra (MM) mentally. Each time the loud chanting of Mrtyunjaya Mantra (MM) was followed by its chanting in the mind. This was called Āhata–Anāhata method. The three (3) rounds of Āhata–Anāhata with Mrtyunjaya Mantra (MM) were completed in this way. The resonance was to be felt in every step. The pattern of resonant waves was to be felt throughout the body.
4. Anāhata AUM: AUM sound was chanted nine times in the mind. The resonant waves were to be felt throughout the body.
5. Ajapājapa AUM to silence: The nine rounds of chanting of AUM were to be felt inside. The resonant waves of ‘OM’ growing and expanding throughout the body and merging into silence were to be felt.
6. The silence was to be felt.
7. The resolution was to be taken in a state of silence.
8. The practice ended with the closing prayer.

Twenty participants in the age range of (age 71.31 ± 7.51 years) completed the experiment in the experimental group and 20 senior citizens in the age range of (age 71.85 ± 5.28 years) completed the control group.

Results

Results and interpretation are given below chronologically:

Table 1: Means and standard deviations of PSS scores pre- and post-intervention in MSRT group and Control group (paired samples t-test)

Group	Measures	Mean \pm SD		t value	P-value
		Before	After		
MSRT	PS	18.50 \pm 5.64	12.65 \pm 5.44	4.593	0.01*
Control	PS	10.85 \pm 4.71	10.90 \pm 5.11	-0.042	0.967

PS = Perceived stress; MSRT = Mind sound resonance technique; Paired samples t-test; *P < 0.05.

Table 1 shows that perceived stress scores were significantly reduced in the MSRT group (PS; P < 0.05; Table 1), whereas no significant reduction in Perceived Stress scores was observed in the Control group (P = 0.967). Thus, it is concluded from the above observations that MSRT intervention has an impact on the sample.

Table 2: Median of Independent ADLs scores pre- and post-intervention in MSRT group and Control group (Wilcoxon signed-rank test)

Group	Measures	Median		Z value	P-value
		Before	After		
MSRT	ADLs	7	7	-2.33	0.02*
Control	ADLs	7	7	-1.73	0.08

ADLs = Activities of daily living; MSRT = Mind sound resonance technique; Wilcoxon signed-rank test; *P < 0.05.

Table 2 reveals that independent ADLs scores significantly improved after MSRT intervention in the experimental group (ADLs; P < 0.05; Table 2), whereas no significant improvement was found in independent ADLs of the Control group (P = 0.08), therefore, it is concluded that activities of daily functioning improve after the MSRT intervention.

Table 3: Post-test PS (Perceived Stress) scores on the MSRT group and Control group

Group	Measures	Mean \pm SD	t value	P-value
MSRT	Change in PS	-5.85 \pm 5.69	3.381	0.02*
Control		0.05 \pm 5.34		

PS = Perceived stress; MSRT = Mind sound resonance technique; Independent samples t test; *P < 0.05.

Table 3 shows that the post-test Mean of Perceived Stress scores of the experimental group is more than the post-test Mean Perceived Stress scores of the control group. It is

significantly different at a 0.05 level of significance (P < 0.05) as the calculated value of P value (0.02) is less than the 0.05 significance level value so it is revealed that there is a significant difference between the experimental and control group and as the experimental group has less Mean scores as compared to control group thus it revealed that Perceived Stress was reduced after the MSRT intervention. From the results of Table 1 and Table 3, it is implied that Perceived Stress was reduced after the MSRT intervention. Thus, it is concluded that MSRT has an impact on the sample.

Table 4: Post-test ADLs scores of the MSRT group and Control group

Group	Measures	Median	U value	Z value	P-value
MSRT	Change in ADLs	0	149.50	-2.07	0.038*
Control		0			

ADLs = Activities of Daily Living; MSRT = Mind sound resonance technique; Mann Whitney U test; *P < 0.05.

The post-test Independent ADLs scores of the MSRT group and the Control group have a significant difference at 0.05 level of significance as the calculated p-value (P = 0.038) is less than the 0.05 significance level value [Table 4]. Therefore, it is concluded that there is a significant difference between the control and experimental group i.e. MSRT intervention affected the Daily living activities. It can also be observed from the results of Table 2 and Table 4 that activities of daily living functioning activities improve after the MSRT intervention. Thus, MSRT had an impact on Activities of Daily Living.

Discussion

Our study results show that 10 days of practice of MSRT helps in reducing stress and improving the functional status of ADLs as pre-test and post-test scores were found significantly different. A study on the effect of MSRT among female teachers reported that when participants were given MSRT for 30 minutes for 5 days for one month, it facilitated in reducing the stress, anxiety, fatigue, and psychological distress in primary school female teachers. Furthermore, it improved the self-esteem and quality of sleep of primary school female teachers (14). Same way Deo and Rani (15) conducted a study on elderly women and gave the practice of MSRT for twenty minutes per day for one (1) month and found that perceived stress had reduced. Thus, both studies supported the present study i.e. MSRT intervention has an effect on senior citizens in reducing perceived stress.

Conclusion

Mind Sound Resonance Technique (MSRT) is an advanced relaxation technique developed by Swami Vivekananda Yoga Anusandhana Samsthana [SVYASA], Bengaluru, India. The present study was a Quasi-Experimental study. The study was conducted on 40 senior citizens bifurcated into two groups i.e. an experimental group and a control group having 20 senior citizens in each group. After collecting baseline

scores on the Perceived Stress questionnaire and Activities of Daily Living questionnaire, 10 sessions of the Mind Sound Resonance Technique (MSRT) intervention for 20 minutes per session each day to the experimental group were given whereas 20 senior citizens of the control group followed routine activities. The total period of study was six months. A significant difference ($P < 0.05$) was found in the pre and post-test Perceived Stress scores and pre and post-test Activities of Daily Living scores of the experimental group whereas there were no significant changes observed in the control sample. Regular practice of the Mind Sound Resonance Technique brought a significant reduction in stress and improvement in the functioning of activities of daily living among senior citizens. Intervention may be introduced as the routine of senior citizens. Regular practice of the Mind Sound Resonance Technique can bring about significant improvement in stress and activities of daily living among Senior Citizens.

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Authors' contribution

PJ: collected data, analyzed the data, and wrote the manuscript; AS: conceptualized the manuscript.

Abbreviations

ADLs	Activities of Daily Living
Mdn.	Median
MSRT	Mind Sound Resonance Technique
MM	Mrtyunjaya Mantra
PS	Perceived Stress
PSS	Perceived Stress Scale
SVYASA	Swami Vivekananda Yoga Anusandhana Samsthana

Ethical statement

This research paper is my original work and all ideas and references have been duly acknowledged. This research paper is a part of my research thesis that has been approved by the Research Development Committee (RDC), Department of Community Education and Disability Studies, Panjab University, Chandigarh.

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Conflict of interest

There is no conflict of interest.

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