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Summating effects of MSRT and DRT on mental health, stress alleviation and daily functioning among elderly

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Abstract

Elderly encounter physiological and psychological changes that significantly impact their well-being. But yoga relaxation techniques like Mind Sound Resonance Technique and Deep Relaxation Technique, as practiced by SVYĀSĀ may help them improve their well-being. The present research paper presents a summation of quantitative findings and qualitative observations of the effects of these relaxation techniques on mental health, stress alleviation and daily functioning among the elderly. The study adopted an experimental approach. Participants were selected through non-probability sampling techniques. Non-parametric techniques were used for quantitative analysis and views of participants were noted. MSRT significantly enhanced mental efficiency and its dimensions and perceived stress among the elderly. Conversely, DRT notably alleviated depression and perceived stress. Qualitative experiences reported improved confidence levels, enhanced abilities in daily activities, better sleep quality, stress reduction, and increased social interaction. Integrating these techniques may help the elderly improve their well-being.

Keywords: Mind sound resonance technique, deep relaxation technique, mental efficiency, perceived stress, activities of daily living, views of participants

1. Introduction

Elderly undergo many physical, mental, emotional, and social changes that affect their overall well-being. Unfortunately, these changes often lead to health deterioration despite the advancements in services for the elderly and their medical care. It is essential to empower the elderly to lead healthy lives independently, minimizing the challenges associated with aging. Non-pharmacological relaxation techniques, particularly yoga-based relaxation methods like Mind Sound Resonance Technique (MSRT) and Deep Relaxation Technique (DRT), have been useful in promoting holistic health. These techniques are as practiced at Swāmi Vivekānanda Yoga Anusandhāna Samsthāna (SVYĀSĀ) Bangalore and affiliated centers.

Mental efficiency, stress management, and daily functionality commonly pose challenges for older individuals. Implementing the relaxation techniques i.e., MSRT and DRT could potentially help them maintain their independence and support healthy aging.

MSRT, an advanced yogic relaxation method, was developed by SVYĀSĀ. It centers on mindfulness and draws its principles from traditional texts like the Māndukya Upanishad and Hatha Yoga Pradīpikā. It involves chanting specific sounds (A, U, M, and AUM) and mantras such as the Mahā Mr̥tyunjaya Mantra and the Pranava mantra. Aligned with Patanjali's definition of yoga as mastery over mental modifications, MSRT intends to improve health, concentration, memory, induce relaxation, and elevate overall life quality ^[1, 2, 3, 4].

In contrast, the Deep Relaxation Technique (DRT), as practiced by SVYĀSĀ, emphasizes fostering body and mind awareness. This technique includes directing focused attention to different body parts while chanting sounds like A, U, M, AUM, and OM. DRT aims to promote relaxation and awareness by combining mindfulness with the relaxation of specific body areas ^[5]. The present research paper presents the summation of the quantitative findings and qualitative observations of the effects of yoga relaxation techniques i.e., MSRT and DRT on Mental Health, Stress Alleviation and Daily Functioning among Elderly.

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The findings and observations in the present paper shall significantly contribute to existing body of knowledge on MSRT and DRT. This paper is a part of the thesis entitled "Effect of Mind Sound Resonance Technique and Deep Relaxation Technique on Mental Efficiency, Perceived Stress and Activities of Daily Living among Geriatrics".

2. Materials and methods

The study was experimental and used pre-test post-test randomized control group design. The participants were selected by using snowball and purposive sampling. The final sample was obtained in five phases:

- **Phase I:** The researcher contacted elderlies from governmental and non-governmental organizations and communities from different sectors of Chandigarh. The purpose and importance of the study was explained.
- **Phase II:** 264 elderlies were contacted. The researcher informed about the scope, duration, and interventions. Of 264, only 131 verbally agreed to participate in the research project.
- **Phase III:** The researcher screened 131 elderly for specific inclusion and exclusion criteria, of which 117 were eligible candidates. The elderly with no hearing impairment or with mild hearing loss or using hearing aids for severe hearing loss, with no bias for chanting of mantras, agreed to undergo 15 sessions of yoga relaxation techniques and 60 to 80 years of age were part of the study. Elderlies who did not follow instructions, were hospitalized during the study duration, had a severe mental illness, and were unwilling to give written consent were excluded from the research.
- **Phase IV:** The health status of the 117 elderly was assessed using the PGI Health Questionnaire (PGIH.Q.). Those ranging from moderate to extremely good health were included in the study. A total of 108 individuals met this health criterion.
- **Phase V:** The 108 qualified elderly participants were divided equally into three groups by using a simple random method (lottery). However, in between the sessions, approximately five to six participants dropped out from each group for various reasons. Consequently, the final count per group was 30 participants in the Mind Sound Resonance Technique Experimental Group-I (MSRT-EGI), 30 in the Deep Relaxation Technique Experimental Group-II (DRT-EGII), and 31 in the Control Group (CG).

2.1 Tools used

The study utilized the following assessment tools:

1. PGI Health Questionnaire N-1 (PGIH.Q.N-1-vwp) [6], revised in 2016, developed by Dr. Santosh K. Verma, Dr. N.N. Wig, and Dr. Dwarka Pershad.
2. PGI Battery Assessment of Mental Efficiency in the Elderly [7] (PGI-BAMEE) [2016] developed by Dr. Adarsh Kohli, Dr. S. K. Verma, and Dr. Dwarka Pershad.
3. Perceived Stress Scale-10 (PSS-10) [8] developed in 1988 by Sheldon Cohen and Gail M. Williamson; adapted into Hindi by the researcher.
4. Activities of Daily Living (ADLs) [9] and Instrumental Activities of Daily Living (IADLs) [9] developed in 2007 by Sonia Singh, N.K. Multani, and S.K. Verma; these were adapted into Hindi by the researcher.
5. Mind Sound Resonance Technique [1] and Deep Relaxation Technique [10] developed by Swāmi Vivekānanda Yoga Anusandhāna Samsthāna (SVYĀSĀ),

Bangalore. These were adapted into Hindi by the researcher for the study.

The assessment tools i.e., PGI-BAMEE, PSS-10, ADLs and IADLs were employed as pre-tests and post-tests for Intervention Groups and Control Groups.

2.2 Procedure

The study's interventions included administering MSRT to Experimental Group-I (MSRT-EGI) and DRT to Experimental Group-II (DRT-EGII). Meanwhile, CG did not undergo any specific intervention and continued with their regular activities.

The procedure began with conducting pre-tests using the standardized tools of Mental Efficiency, Perceived Stress, and Activities of Daily Living (mentioned above) for elderly participants of three groups i.e., MSRT-EGI, DRT-EGII, and CG. MSRT-EGI participants were given a structured 15-session program of MSRT wherein each session spanned 45 minutes. During this session, 10 minutes were given for instructions and addressing queries, while the remaining 35 minutes were devoted to practicing MSRT. On the other hand, DRT-EGII participants gradually practiced DRT in a structured 15-session format. The researcher delivered instructions in Hindi for MSRT and DRT as it is a commonly understood language in the region.

Post-tests were conducted after completing 15 sessions with the same tools as pre-tests. The post-test for CG participants was carried out after 15 days. The data collection duration for this study spanned approximately one year, due to the necessity of providing interventions to elderly participants individually at some places.

2.3 Assessment method

The Wilcoxon Signed-Rank test and the Non-Parametric Quade Ranked ANCOVA [11,12] were used for quantitatively analysing the data.

The researcher noted the experiences, observations, and perspectives of elderly participants of the intervention groups on their engagement with the relaxation techniques. Various observation parameters were used like assessing facial changes, observing bodily movements during breathing, and monitoring body posture during and after the yoga relaxation techniques i.e., MSRT and DRT. Stress-inducing factors like familial issues and financial constraints were also noted. Additionally, feedback from closely associated family members or guardians was collected to gauge perceived alterations in memory, depression, stress, and daily activities.

3. Results and Discussion

3.1 Summating effects of MSRT and DRT quantitatively

The Wilcoxon signed-rank test was used for within-group analysis. It showed that MSRT significantly boosted Mental Efficiency in totality, Mental Functions, Mental Status, Percept and Motion Equity, Depression, and Perceived Stress, while showing no significant effect on Activities of Daily Living in totality, Basic Activities of Daily Living, and Instrumental Activities of Daily Living. Conversely, DRT notably alleviated Depression and Perceived Stress, Activities of Daily Living but without significant impact on Mental Efficiency, Mental Functions, Mental Status, Percept and Motion Equity, and dimensions of Activities of Daily Living. Non-Parametric Quade Ranked ANCOVA was used for between-group analysis. It indicated that MSRT was a suitable technique for improving Mental Functions, Mental

Status, Percept and Motion Equity, Depression, and Mental Efficiency in totality among 60-80-year-old elderly participants. Meanwhile, DRT showed better efficacy in reducing Perceived Stress in the same age group. Nevertheless, similar results were observed in the three groups for Activities of Daily Living in totality, Basic Activities of Daily Living, and Instrumental Activities of Daily Living.

3.2 Summating effects of MSRT and DRT qualitatively

The qualitative experiences of the participants have been summarized under the following themes:

3.2.1. Mental efficiency and physiological effects

Participants reported positive physiological and cognitive effects due to these interventions.

View of a participant-

"A 70-year-old female participant encapsulated the outcome of 15 MSRT sessions as an experience of inner joy. She perceived improvements in her cervical area, head, and nerves, feeling a surge of energy and newfound confidence in life post-session."

3.2.2 Stress reduction and sound sleep

This theme highlights that MSRT and DRT are useful in managing stress, and induce feelings of calmness and relaxation. These techniques reduce perceived stress among the elderly and give them sound sleep.

View of participants-

"A 60-year-old female participant expressed a reduction in her stress levels and attributed it to MSRT sessions."

"A 67-year-old female participant said she felt relaxed and had sound sleep after a DRT session."

3.2.3 Physical health and autonomy in daily activities

This theme highlights that participants observed improvements in physical health and ability to perform daily activities independently. MSRT, in particular, was associated with enhanced autonomy in daily tasks, such as eating and climbing stairs without assistance.

View of a participant-

"A 72-year-old female participant previously cured of cancer required aid for eating and stair climbing. Her family revealed that she refused to accept help in climbing stairs and eating, and made efforts to manage independently during MSRT sessions."

3.2.4 Social interaction and confidence

This theme highlighted that the interventions seemed to break social isolation, leading to more interaction with others and improved self-confidence. The views align with qualitative views reported in studies by Tew, Howsam, Hardy, & Bissell (2017) ^[13] and Sinha and Kumari (2021) ^[14]. This theme underscores the social benefits, showing how the techniques may re-foster a sense of community and boost confidence among the elderly.

"An 80-year-old educated female participant, residing with her daughter post her husband's demise, had withdrawn into silence. During the MSRT sessions, her daughter observed a breakthrough; the participant's face became radiant and social interaction increased."

"A 65-year-old DRT technique female participant happily shared that participating in the relaxation intervention fostered a sense of togetherness and provided an opportunity for social interaction."

3.2.5. Rejuvenation, inner joy and personal growth

This theme captures the subjective experiences which included feelings of rejuvenation, inner joy, and personal growth.

"A 62-year-old MSRT technique female participant described the experience as rejuvenating and beneficial. She appreciated the opportunity to focus on herself amidst her hectic routine and reported feeling relaxed post-intervention."

"A 64-year-old male participant mentioned his unfamiliarity with the Mahā Mr̥tyunjaya Mantra (महामृत्युंजय मंत्र) before undergoing the MSRT sessions. Post-intervention, he displayed a notable change by affixing the teaching-learning material containing the written Mantra on his wall and reciting it daily."

3.2.6 Sleep Quality

This theme highlighted highlighting how relaxation techniques can contribute to better sleep hygiene and overall restfulness.

"A 65-year-old female participant felt tense and frustrated during most of the day previously. However, she felt happy after doing DRT and experienced a sense of relaxation."

"A 75-year-old male participant described that he was feeling very relaxed and enjoying restful sleep during the DRT sessions."

The above themes collectively highlight the multifaceted benefits of MSRT and DRT for the elderly, encompassing cognitive, emotional, physical, social, and subjective dimensions of well-being. Each theme provides a lens to understand the holistic impact of these yoga-based techniques on the participants' lives. The viewpoints expressed by participants are concurrent with the results and views of studies by Kim (2014) ^[15], Nagaraj (2020) ^[16], and Satish, Shah, & Mathur (2021) ^[17].

Thus, it can be concluded that the Mind Sound Resonance Technique and Deep Relaxation Technique significantly contributed to enhancing Mental Efficiency, enabling greater independence in Daily Activities, and reducing Perceived Stress among the elderly participants.

4. Conclusion

Overall, the Mind Sound Resonance Technique (MSRT) and Deep Relaxation Technique (DRT) significantly aided the elderly participants in enhancing mental efficiency, reducing perceived stress and performing daily activities. MSRT and DRT are useful techniques for the overall well-being of the elderly.

5. Recommendations

MSRT and DRT offer holistic health benefits for the elderly. Implementing these techniques can globally benefit elderly health.

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7. References

1. Subarna M, Kashinath M, Nagaratna R, Nagendra HR. Immediate effect of mind sound resonance technique (MSRT—a yogic relaxation technique) on cognitive

- functions in type 2 diabetes. *Voice Res.* 2015;4(1):44-45. ISSN 2277-7733.
2. Nagendra HR. *Mind sound resonance technique.* Bangalore, India: Swami Vivekananda Yoga Prakashana; c2010.
 3. Shah MR, Zala K. Effectiveness of mind sound resonance technique versus progressive muscle relaxation in common neck pain individuals: A comparative study. *Int J Health Sci Res.* 2019;9(4):62-67. Available from: https://www.researchgate.net/publication/332395220_Effectiveness_of_Mind_Sound_Resonance_Technique_versus_Progressive_Muscle_Relaxation_in_Common_Neck_Pain_Individuals_A_Comparative_Study.
 4. Singh S, Vijaya Kumar PS, Sahana AU, Rathod T, Rathod K, Patel V, *et al.* Effect of mind sound resonance technique (MSRT) on fatigue level among type 2 diabetics. *Paripex - Indian J Res.*, 2022, 11(06). Available from: https://www.worldwidejournals.com/paripex/article/effect-of-mind-sound-resonance-technique-msrt-on-fatigue-level-among-type-2-diabetics/Mzc0ODU=.
 5. Deshpande S. Influence of yoga on quality of life: A randomized control study. PhD thesis, Swami Vivekananda Yoga Anusandhana Samsthana, Bangalore, India; c2008. Available from: <http://hdl.handle.net/10603/9350>.
 6. Verma SK, Wig NN, Persad D. *PGI Health Questionnaire N-1.* Agra, India: National Psychological Corporation; c2016.
 7. Kohli A, Verma SK, Pershad D. *PGI battery for assessment of mental efficiency in the elderly.* Agra, India: National Psychological Corporation; c2016.
 8. Cohen S, Williamson GM. Perceived stress in a probability sample of the United States. In: Spacapan S, Oskamp S, editors. *The Social Psychology of Health.* Newbury Park, CA: Sage; c1988. Available from: <https://www.cmu.edu/dietrich/psychology/stress-immunity-disease-lab/publications/scalesmeasurements/pdfs/cohen,-s.-williamson,-g.-1988.pdf>.
 9. Singh S, Multani NK, Verma SK. Development and validation of geriatric assessment tools: A preliminary report from the Indian population. *J Exerc. Sci. Physiother.* 2007;3(2):103-110. Available from: https://www.researchgate.net/publication/275714782_Development_and_Validation_of_Geriatric_Assessment_Tools_A_Preliminary_Report_from_Indian_Population.
 10. Nagarathna R, Nagendra HR. *Yoga for bronchial asthma.* Bangalore, India: Swami Vivekananda Yoga Prakashana; c2010. p. 133-135, 141-148.
 11. Cangür S, Sungur MA, Ankarali H. The methods used in nonparametric covariance analysis. *Düzce Tıp Fakültesi Dergisi / Duzce Med J.* 2018;20(1):1-6. Available from: <https://dergipark.org.tr/tr/download/article-file/542296>.
 12. Ur Rehman. A non-parametric ANCOVA (Quade's test) in SPSS [Video File]; c2020. Available from: <https://www.youtube.com/watch?v=jozx59H5IHw>.
 13. Tew GA, Howsam J, Hardy M, Bissell L. Adapted yoga to improve physical function and health-related quality of life in physically inactive older adults: A randomized controlled pilot trial. *BMC Geriatr.* 2017;17:131. Available from: <https://bmcgeriatr.biomedcentral.com/articles/10.1186/s12877-017-0520-6#citeas>.
 14. Sinha A, Kumari S. Effect of short duration integrated classroom yoga module on physical, cognitive, emotional, and personality measures of school children. *Yoga Mimamsa.* 2021;3:100-108. DOI: 10.4103/ym.ym_55_21.
 15. Kim J. The efficacy of Christian devotional meditation on stress, anxiety, depression, and spiritual health with Korean adults in the United States: A randomized comparative study. Ph.D. thesis, Liberty University, Lynchburg, Virginia; c2014. Available from: <https://digitalcommons.liberty.edu/doctoral/904>.
 16. Nagaraj M. Enhancing psychological well-being among distressed and death-anxious institutionalized elderly through relaxation training. Ph.D. thesis, Periyar University, Salem, India; c2020. Available from: <http://hdl.handle.net/10603/394891>.
 17. Satish L, Shah D, Mathur P. Chanting as a healing practice – qualitative analysis of subjective experiences. *Int J Sci. Consciousness.* 2021;7(1):1-18.