



ORIGINAL RESEARCH PAPER

Yoga

EFFECT OF MIND SOUND RESONANCE TECHNIQUE (MSRT) ON FATIGUE LEVEL AMONG TYPE 2 DIABETICS

KEY WORDS: MSRT: Mind Sound Resonance Technique, FSS: Fatigue severity scale, VAFS: Visual analogue fatigue scale.

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ABSTRACT

Background: Fatigue represents a common complaint of patients with diabetes as it can be reported in up to 60% of patients, prominent in patients with type 2 diabetes. It is a major health problem, affects approximately 6% of the world's adult population, and is increasing in epidemic proportions. Evidence suggests that MSRT a yoga-based relaxation techniques significantly reduces anxiety, stress, fatigue and psychological distress. **Objective:** The aim of the study was to study the effect of MSRT on fatigue levels among type-2 diabetes patients. **Materials and Methods:** In this interventional study with a pre-post design on 100 type-2 diabetes patients, were taught MSRT. Assessment were carried out on the 1 and 30 day of the program, using FSS, VAFS. **Results:** Significant reduction in fatigue levels in both FSS and VAFS respectively (p<0.00). **Conclusion:** This study provides evidence that MSRT practice is an effective, economical and noninvasive method to combat fatigue in diabetes patients.

INTRODUCTION

Fatigue has largely been defined as either a subjective symptom or an objective performance decrement [1], but has also been identified as a syndrome into itself (chronic fatigue syndrome). Fatigue is generally acknowledged to be complex and/or multifaceted [2], encompassing physiological, psychological, and situational components, such as life or work events [3]. Fatigue is a common and distressing complaint among people with diabetes, and likely to hinder the ability to perform daily diabetes self-management tasks. Fatigue is a frequently encountered symptom in the general practice management of diabetes. Fatigue is a widespread clinical complaint among adults with type 2 diabetes (T2DM) [4] and is likely a key barrier to has been directly related to poor self-reported health [5] successful self-management of diabetes [6]. Despite this, there are few data describing the magnitude, severity, or etiology of diabetes related fatigue. This lack of research is surprising due to the number of physiological, psychological, and lifestyle factors that could predispose patients with T2DM to high levels of fatigue. Mind sound resonance technique is one of the mindfulness-based relaxation techniques, in which resonance is generated by chanting the mantras. It leads to deep relaxation of the mind and body. Practice of MSRT enhances the relaxation, wellbeing, will power etc. [7]. The practice of MSRT has demonstrated to improve stress, anxiety, depression, self-esteem, Facilitates a state of relaxation [8]. blood pressure, and heart rate in clinical and non-clinical populations [9]. This technique uses mantras/chanting to generate resonance, which induces deeper relaxation for both mind and body [10]. This technique is economical and non-invasive which could be practiced by diabetics even with severe complication to combat the fatigue levels.

MATERIALAND METHODS

Hundred Type -2 diabetes patients who had enrolled in a thirty days MSRT program. Their ages ranged between 50 and 70 years (group average ±S.D., 13.4±3.3 years). We have fully explained the potential risks and benefits in the study before written informed consent was provided by participants, the study was approved by the ethics committee of the institution, Lakulish yoga university, located in Ahmadabad, Gujarat, India. The selection criteria included: absence of a disease which could have contributed to Fatigue (e.g., hypothyroidism, cardiac diseases, renal failure, COPD etc.), and those on psychiatric medications were excluded. In this study we adopted a convenient sampling method to recruit the subjects from societies within the Ahmadabad city, Both genders, Age group 50 to 70 years, a single group pre-post design was used. The 30 days study was successfully completed by 100 participants.

INTERVENTION

Mind sound resonance technique (MSRT) is one of the advanced guided yoga relaxation techniques developed by SVYASA, Bangalore. that can be practiced in supine or sitting posture for achieving the goal of positive health, will power concentration and deep relaxation. This technique uses mantras/chanting to generate resonance, which mainly works on the Manomaya Kosha to induce deeper relaxation for both mind and body [10]. Mind sound resonance technique is one of the mindfulness-based relaxation techniques, in which resonance is generated by chanting the mantras. It leads to deep relaxation of the mind and body. This advance yoga technique was developed using the concepts from traditional texts that talk about the power of Om (Mandukya Upanishad) and Nadanusandhana (Hatha Yoga Pradipika) for achieving

internal mastery over the modifications of the mind (Patanjali's definition of yoga). MSRT opens up the secret of traditional chants called Mantras.

Outcome measures

Fatigue severity scale (FSS): consists of 9 items, each is scored using a Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). Total score is the sum of these items divided by the number of items. High scores indicate high levels of fatigue. A score of ≥ 4 indicates fatigue [11]

Visual analogue fatigue scale (VAFS): for fatigue was administered twice with an interval of 30 days, at the same time of the day to prevent possible effects of diurnal variation on fatigue. VAS was applied using a Likert-type scale ranging from 0 to 10 on a horizontal line that corresponds to their degree of fatigue. Higher scores indicate higher degree of fatigue. [12]

RESULTS

Mind Sound Resonance Technique (MSRT) was given to 100 participants having type 2 diabetes. The pre and post data was collected from all the 100 yoga participants and was sorted out and a tableau was prepared showing before and after scores of Fatigue severity scale (FSS) and Visual analogue Fatigue scale (VAFS). It has been found that highly significant reduction (P< 0.05) in Fatigue levels (62.7%) shown on FSS score and significant reduction (P< 0.00) in Fatigue levels (61.08%) showed on Visual analogue scale scores (VAFS).

FSS: FATIGUE SEVERITY SCALE

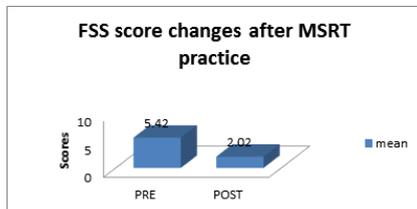
Effect of MSRT practice showed on FSS Scores [Table 5.1], that 62.7% highly significant reduction (P< 0.05) in fatigue levels showed

Table 5- 1: FSS Changes after MSRT practice

FSS scores	MSRT practice		% change	P- value
	Before	After		
FSS	5.42±1.09	2.02 ±0.83	62.7%	0.001***

*Significant at P<0.05, ** significant at P<0.01, ***significant at P<0.00 (paired sample test and Wilcoxon Signed Ranks Test)

Graph 1: FSS Changes after MSRT practice



VAFS: VISUAL ANALOGUE FATIGUE SCALE

After MSRT Practice it showed that 61.08% significant reduction (P< 0.00) in Fatigue levels showed on Visual analogue scale scores (VAFS). [Table 5.2].

Table 5-2 :VAFS Changes after MSRT practices

VAFS scores	MSRT practice		% change	P- value
	Before	After		
VAFS	7.58±0.94	2.95±0.99	61.08%	0.000***

*Significant at P<0.05, ** significant at P<0.01, ***significant at P<0.00 (paired sample test and Wilcoxon Signed Ranks Test)

DISCUSSION

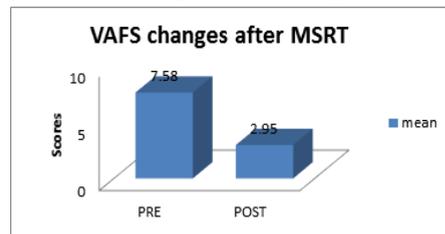
Present study was design to assess the efficacy of Mind Sound Resonance Technique (MSRT) on fatigue levels, its one of the yoga-based relaxation techniques that uses mantra to generate resonance, which is used to induce deep relaxation for mind and body. MSRT can be practiced for improving well-

being, concentration, willpower, and relaxation.[7] The most prevalent symptoms of Type 2 diabetes (T2DM) were acute and chronic pain, depression and fatigue [13]. Findings suggest that Fatigue is pervasive among patients with T2DM, but the causal mechanism is not well understood. In patients with T2DM, fatigue has been associated with depression and diabetes distress [14]. Results of this study are supported by an Earlier findings demonstrated that a month-long intervention of MSRT facilitates a reduction in stress, anxiety, fatigue, and psychological distress. [15] Prior studies examined the possibility of relationship between poor glucose control and fatigue, diabetes distress and depressive symptoms [14]. Previous studies have highlighted that yoga could lessen fasting blood glucose (FBG) and glycosylated hemoglobin A1c (HbA1c) as well as reduce the lipid levels while improving the quality of life of T2DM patients. [16] The present trial can be considered preliminary, requiring a further randomized controlled trial and a follow-up to determine the long term impact of MSRT practice on fatigue levels in type-2 diabetics. These results suggest that MSRT practice play a vital role in reducing fatigue levels.

CONCLUSION

Fatigue is a complex condition and thus treatment modalities should be of holistic in nature. The finding of the study demonstrate that MSRT is a suitable approach for reducing fatigue levels, as indicated in FSS & VAFS scores compared with baseline values. Future investigations are demanded to establish and expand the results of the present study and to compare the effectiveness of MSRT with those of conventional approaches.

Graph 2:VAFS Changes after MSRT practice



SOURCE OF FUNDING

None

CONFLICT OF INTEREST

None

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