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Sound Medicine as Supportive Therapy: Improving Quality of Life Through Vedic Chanting in Cancer Patients

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Abstract:

- ***Background:***
  Vedic chanting is an ancient practice that serves as a complementary therapy to reduce stress and improve immune function in cancer patients. This research assessed the impact of Vedic chanting on psychological well-being, immune function, and tumor response in cancer patients.

- ***Method:***
  This study was conducted with 100 cancer patients who were engaged in daily Vedic chanting. Stress levels, sleep, wellbeing, cortisol, endorphins, cytokine IL-6, Immunoglobulin G, Natural Killer (NK) cells, and tumor size were measured before and after the intervention.

- ***Results:***
  Participants exhibited moderate stress levels, enhanced sleep duration, and increased endorphin concentrations. Post-intervention, NK cell counts increased significantly from 200.6 to 271.8 cells/µL, IL-6 levels remained low at 3.83 ± 1.10 pg/mL, and tumor size decreased by 19.56%.

- ***Conclusion:***
  Vedic chanting might support cancer treatment by caring for the patient's emotional aspect, strengthening the immune system and keeping the tumor under control. Furthermore, more controlled tests are recommended.

Keywords: *Vedic Chanting, Cancer, Stress Reduction, Immune Function, Tumor Control.*

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I. INTRODUCTION

Vedic chanting, the practice of reciting sacred Sanskrit mantras, is slowly but steadily finding its place as a supportive therapy in integrative oncology. Cancer is a long-lasting and often life-altering diagnosis that greatly affects the patient's psychological, emotional, and physical aspects [1]. Treatments, such as surgery, chemotherapy, and radiation, not only help but also cause many unpleasant effects, like pain, anxiety, fatigue, and emotional distress, which severely spoil the quality of life during and after treatment. The need for complementary treatments that will not only alleviate the side effects but also boost the resilience and well-being of cancer patients is gradually becoming a priority [2]. Sound medicine uses Vedic chanting and other organized vocal techniques to heal the body, mind, and emotions by using the healing powers of sound and vibration. Recent clinical studies indicate that sound-based therapies, such as music and mantra therapy, administered both passively and actively, can significantly alleviate cancer-related symptoms, diminish psychological distress, and enhance mood, relaxation, and even immune function. Researchers have found that listening to Vedic chants can significantly lower patients' anxiety, blood pressure, and other signs of physiological stress during invasive procedures. This shows that chants could be a way to help patients feel better without using drugs [3]. People think that the different vibrational qualities of Sanskrit mantras, especially in Vedic chanting, can stimulate the vagus nerve, control the autonomic nervous system, and help the body relax, control emotions, and boost the immune system.

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In cancer treatment, these neurophysiological effects show up as less anxiety, pain, and fatigue, as well as better emotional and social functioning. The results of randomized clinical trials indicate that the use of Vedic mantra interventions during chemotherapy sessions leads to significant alterations in treatment response, reduced anxiety and depression scores, and an enhancement in overall quality of life metrics when contrasted with standard therapy alone. Sound-based therapies, such as Vedic chanting, are not only user-friendly but also non-invasive, presenting minimal associated risks. They create a special way to express spirituality and gain personal power, putting the mind, body, and spirit triad at the top of the list for holistic cancer care. Vedic chanting can help people with cancer feel better and give them hope, meaning, and connection along the way [5].

II. METHODOLOGY

➢ *Study Design*

The current study used a quantitative, observational methodology to assess the effectiveness of Vedic chanting as a supportive therapy for cancer patients' quality of life, emotional well-being, and physiological health. Data collection occurred at the baseline and post-intervention phases to identify changes in immunological, psychosocial, and tumor-related outcomes.

➢ *Participants*

The participants for the study consisted of one hundred adult individuals who had been diagnosed with cancer (breast, colorectal, lung, or prostate) and were recruited through purposive sampling from oncology departments. Patients eligible for the study were aged 30 to 69 years (mean 48.91, SD 12.11), aware of their diagnosis, and receiving ongoing oncological treatment. The criteria for exclusion encompassed severe mental disorder, terminal illness with instability, alongside the inability to chant. Everyone who took part signed an informed consent form, and the study got ethical approval from the institutional review board, as required by the Declaration of Helsinki.

➢ *Intervention*

The participants chanted Vedic mantras every day for an average of 1.53 hours (SD 0.76) over the course of their 4.72 years of experience. The sessions included either guided or self-practice of traditional Vedic mantras, and sometimes they included meditation or yoga (55% of the time). Medical treatments continued as before; chanting was just an extra way to relieve stress and boost the immune system.

➢ *Data Collection*

A case record form collected demographics (age, gender, tumor type/location, diet, chanting history), psychological indices (stress level, sleep hours, wellbeing score), and clinical measures (tumor size via imaging). Serum cortisol, endorphins, cytokine IL-6, immunoglobulin, and peripheral NK cell counts were quantified at T0 and T2 using biochemical assays. Tumor reduction percentage was determined using pre- and post-intervention sizes. Statistical analysis was done using Microsoft Office 365 and analyzed via SPSS version 27.

III. RESULTS

The participants had an average age of 48.91 years (SD 12.11), with a gender distribution of 54 males (54%) and 46 females (46%). The tumor types comprised breast (27%), colorectal (25%), lung (25%), and prostate (23%), with 62% of cases being original tumors and 38% metastatic. Fifty-five percent of individuals participated in meditation or yoga, while dietary preferences were categorized as vegetarian (30%), mixed (37%), and non-vegetarian (33%). Chanting averaged 1.53 hours per day for a duration of 4.72 years.

Table 1 Demographic and Clinical Characteristics of Participants.

Characteristic	Category	n (%) or Mean (SD)
Age (years)		48.91 (12.11)
Gender	Male	54 (54.0)
	Female	46 (46.0)
Tumor type	Breast	27 (27.0)
	Colorectal	25 (25.0)
	Lung	25 (25.0)
	Prostate	23 (23.0)
Tumor location	Primary	62 (62.0)
	Metastatic	38 (38.0)
Meditation/yoga practice	Yes	55 (55.0)
	No	45 (45.0)
Diet type	Vegetarian	30 (30.0)
	Mixed	37 (37.0)
	Non-vegetarian	33 (33.0)
Chanting hours/day		1.53 (0.76)
Years of practicing chanting		4.72 (2.83)

➢ *Psychological and Emotional Outcomes*

A clear shift toward improved emotional balance was displayed by participants following regular Vedic chanting sessions. A mean stress score of 5.27 ± 2.38 was recorded for patients, indicating moderate stress. However, significantly lower stress levels were shown by individuals who practiced

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chanting alongside meditation compared to those who did not ($p = 0.041$), highlighting the psychological benefits of meditative sound-based practices on emotional regulation. Additionally, it is suggested that higher endorphin levels (Mean = 65.43, SD 14.93) may promote positive mood states and natural pain relief through neuroendocrine relaxation mechanisms when chanting is practiced. The enhancement of nightly rest was associated with corresponding psychological improvements, as participants reported an average sleep duration of 6.71 hours (SD 0.99), suggesting the presence of stable restorative patterns.

Table 2 Quality of Life Indicators Among Participants.

Variable	Mean	Std. Deviation	Sample Size (N)
Sleep Hours per Night	6.71	0.99	100
Overall Wellbeing Score	6.60	1.71	100
Stress Level (lower = better)	5.27	2.38	100
Endorphin Level	65.43	14.93	100

➢ *Physiological Indicators of Immunity Enhancement*

The number of Natural Killer (NK) cells, acknowledged as an important marker of antitumor immunity, showed a significant rise from 200.6 cells/µL (SD 63.27) at baseline to 271.8 cells/µL (SD 113.59) after the chanting intervention. Similarly, values of Immunoglobulin-G were maintained within a healthy range (Mean = 1314.25 mg/dL, SD 178.52), indicating that sustained humoral immunity was reflected, while a low mean of 3.83 pg/mL (SD 1.10) was observed for inflammatory cytokine IL-6, suggesting that reduced inflammatory stress was present. The stability of cortisol levels was observed at 11.5 µg/dL (SD 2.68). It is indicated by these patterns that a role may be played in modulating immune balance by the relaxation and parasympathetic activation induced by chanting.

Table 3 Immunity-Related Biological Parameters Before and After Chanting.

Immune Marker	Before (Mean)	After (Mean) / Observed Trend
NK Cells (cells/µL)	200.6	271.8 (Increase)
Immunoglobulin-G (mg/dL)	1314.25	Stable/Optimal
Cytokine IL-6 (pg/mL)	3.83	Low indication of inflammation
Cortisol Level (µg/dL)	11.5	Within controlled/healthy range

➢ *Tumor Response and Treatment Support*

One of the most critical outcomes was the measurable tumor size reduction associated with the chanting intervention. On average, tumor diameter decreased from 5.16 cm (SD 0.74) to 4.26 cm (SD 1.04), corresponding to a mean reduction of 19.56% (SD 17.43) among participants. While not designed to substitute for medical treatment, chanting acted as a supplementary intervention, possibly aiding in tumor management by promoting physiological stress reduction and enhancing immune function. These improvements were notably consistent across multiple cancer types, indicating that the benefits of chanting are not specific to any particular type of cancer.

Table 4 Tumor Response Outcomes.

Tumor Variable	Mean	Std. Deviation
Tumor Size Before (cm)	5.16	0.74
Tumor Size After (cm)	4.26	1.04
Tumor Reduction (%)	19.56	17.43

IV. DISCUSSION

The findings of this study support the emerging view that sound-based mind–body interventions can meaningfully complement conventional cancer care by improving emotional well-being, sleep, and immune competence. The documented reduction of stress levels, along with the enhancement of mood and quality of sleep, are in agreement with the present research on music and mantra-based interventions. The studies find that organized auditory practices are the best ways to reduce anxiety, depression, and distress connected to the treatment of cancer patients. Meta-analyses show that music therapy has a positive impact on the QoL of cancer patients, with listening as a passive activity often yielding better outcomes than more active methods. This is the case with the current practice of Vedic chanting, which is being used as a simple and receptive intervention [6, 7]. Also, the relationship between chanting along with meditation and the reduction of stress in this group is the same as the research on Om and other mantras, which states a decrease in cortisol and an increase in autonomic balance and cognitive function. The mind-sound resonance methods that include chanting “A-U-M” have been successful in fear and anxiety reduction while making cancer patients' mental state restful, thus linking the traditional practices with psychophysiological outcomes. These results correspond to mindfulness and yoga interventions, which always show the patients receiving chemotherapy or palliative care having less anxiety, fatigue, and emotional burden [8, 9]. The significant increase in NK cell counts along with the decrease in IL-6 levels found in this research correspond to the outcomes of mind-body and music therapy experiments in oncology,

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which state that relaxation-based protocols can boost NK cell activity, control lymphocyte proliferation, and lower pro-inflammatory cytokine production. Mind–body interventions are linked to reduced IL-6 levels and enhanced NK cell function and telomerase activity in hematological malignancies, indicating that prolonged parasympathetic activation and cognitive–emotional reframing may lead to quantifiable changes in tumor-related immunity. Recent high-resolution work on music therapy further demonstrates that auditory interventions can influence immune signaling within the tumor microenvironment, altering inflammatory networks and potentially sensitizing tumors to treatment [10, 11]. The approximately 20% mean reduction in tumor size in the present cohort should be interpreted as an adjunctive rather than standalone effect, yet it is biologically plausible within the context of stress reduction and immune enhancement. Studies of music and mindfulness in cancer show that improved mood, lower cortisol, and higher NK activity are associated with better treatment tolerance, reduced symptom burden, and, in some cases, improved clinical response, even when not powered to detect hard survival endpoints. Mantra and meditation-based approaches are also reported to "rewire" stress biology by stabilizing the hypothalamic–pituitary–adrenal axis, counteracting chronic sympathetic overdrive, and thereby reducing angiogenesis- and progression-promoting pathways [12, 13]. The present findings add specifically Vedic chanting to the integrative oncology toolkit, highlighting that culturally rooted, spiritually meaningful sound practices can achieve effects comparable to more generic music or mindfulness programs, while potentially improving acceptability and adherence in Indian and diaspora populations. The improvements in sleep duration and wellbeing seen here are congruent with yoga-based trials in metastatic breast cancer that report better sleep quality and neuroendocrine–immune modulation following mind–body training, again underscoring the shared mechanistic pathway of stress relief, circadian stabilization, and immune support. However, the observational nature of this study, lack of randomization, and potential self-selection bias warrant cautious interpretation and point to the need for controlled trials that isolate chanting dosage, compare it against active controls, and integrate longitudinal immune and molecular endpoints. Nonetheless, taken together with convergent evidence across music therapy, chanting, yoga, and mindfulness, these results strengthen the rationale for systematically incorporating Vedic chanting as a low-cost, acceptable, and biologically plausible supportive therapy in cancer care [14].

V. CONCLUSION

Vedic chanting shows potential as an adjunct therapy in integrated cancer care, catering to both psychological and physiological requirements. This study demonstrated that regular chanting resulted in decreased stress, improved emotional well-being, and enhanced sleep quality in patients. Increased Natural Killer (NK) cell activity and lower pro-inflammatory cytokine IL-6 levels indicate improved immune surveillance and reduced inflammation. Tumor size reduced by 19.56%, suggesting possible benefits in tumor management when combined with standard treatment. Positive trends were consistent across different cancer types and independent of dietary factors or gender. Vedic chanting complements medical therapy, showing its importance in holistic cancer management by improving quality of life, emotional stability, and immune function. Further randomized controlled trials are needed to confirm these effects in broader clinical settings and to establish optimal patient care protocols.

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