

# OM CHANTING AND MEDITATION AS A THERAPEUTIC INTERVENTION: A SYSTEMATIC REVIEW

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## **Abstract:**

OM is a sacred sound that is considered the greatest of all the mantras, especially in the spiritual practices of Hinduism, also in Buddhism, Jainism, and many other religions. According to the Upanishads, Om is the essence of the entire cosmos. This review article aims to gain insight into the studies conducted specifically on the effectiveness of Om chanting or Om meditation on health. Databases that were used for literature searches were PubMed, DOAJ, and Google Scholar. The search was conducted until January 2024. The findings of nineteen studies were included on the basis of PRISMA guidelines. Data extracted from the studies was: study design, country of affiliation, characteristics of participants, interventions used in the study (duration of intervention, control/comparator group, etc.), assessment, and outcomes. The studies were assessed for their quality and rated by the Methodological Quality Rating Scale (MQRS). Findings of the Effect of Om Chanting and Meditation were categorised under cardiovascular, psychological, and cognitive functions and on EEG waves. The findings of the studies suggested parasympathetic enhancement, psychophysiological relaxation, decreased systolic and diastolic pressure, pulse rate, depression, anxiety, stress, and improvement in altruism, life satisfaction, social cohesion, spatial and verbal memory, and mood scores. The methodological quality of the included studies was evaluated to be medium to low, as there was no blinding of participants and follow-up was not done in most of the studies. Therefore, large-scale, properly designed, randomized trials of Om chanting are needed to justify these findings efficiently.

**Keywords:** Om, Chanting, Om Meditation, Health Benefits.

## **1. Introduction:**

Om a sacred sound and syllable, is the essence of the cosmic world. It is often found at the beginning and end of chapters in the Vedas, Upanishads, and other Hindu texts, ensuring the retention of learned texts in memory (Jones & Ryan, 2006),(Wilke & Moebus, 2011),(Parpola, 1981). OM, is also called *Pranav* and *maha vakya* or the Great Sound. It pervades the entire creation and is

imperishable and infinite, like God Himself. In Vedic philosophy, it is called Vibration of the Vedas and often attached to the beginning of Vedic mantras as *bīja* (seed) (Mukundananda, 2013).

1.1 Om and its significance in ancient scriptures: *Chandogya Upanishad*, explains that the essence of earth, water, plants, man, speech, *Rigveda*, and

*Samaveda*, is *Udgitha(Om)* and meditating on it leads to a gratifier of desires and a state of fearlessness and immortality (Maharara & Sabar, 2020). *Mandukya Upanishad* posits that the whole universe is the syllable Om, including everything that transcends time, space, and causation. *Atman*, is also Om and operates through four aspects: Waking state, dreaming state, deep sleep state, transcendental state (Om Mantra's soundless aspect)(Krishnananda, 1996). *Katha Upanishad* mentions Om as the ultimate reality, the highest, and those who understand it achieve their desires. The Upanishad seeks to understand its essence (Paul Deussen, 1980). The *Mundaka Upanishad* uses the bow-arrow analogy to describe the *Pranava* as the bow, the Atman as the arrow, and the *Brahman* as its mark. The syllable "Om", when purified through repetition, allows the Atman to enter the Brahman(Jha, 1898). In the *Shrimad Bhagwad Gita*, Sri Krishna asserts that chanting the syllable Om, leads to Moksha. And he says that, "Om Tat Sat" symbolizes Supreme Truth, originating from creation and guiding priests, scriptures, and sacrifice (Mukundananda, 2013). In Patanjali Yoga Sutra, Pranava is mentioned as "Tasya vachakah pranavah", meaning that Pranava is virtually Ishwara (God). Patanjali suggests that by mental repetition of Om, one understands the self, and the obstacles of the path vanish(Swami, 1976).

**1.2 Chanting and meditation for healing:** The state of consciousness that is entirely distinct from either the regular waking, sleeping, or dreaming states can be attained via the practice of meditation. The Yoga Sutras of Patanjali emphasize upon the importance of Dharana (focusing the mind on a single place), dhyana (where the internalized object fills the entire consciousness space), and samadhi (state of meditation where only formless object exists). These are the three phases of a continuous process called Samyama (Swami, 1976). Objects of meditation as

mentioned in various yogic texts are chakra (Energy centres), breath, nada (sound), imagery of a divine figure or one's guru, mantra, etc.

A mantra is a set of transcendental sounds designed to free the mind from all forms of fear. Chanting of mantras can help release trapped energy and bring us back to our natural resonance condition, which can lead to healing (Dudeja, 2017). Chanting could be done as Vaikhari japa (loudly spoken), Upamshu japa (whispering), or Manasika japa (recited in the mind) (Saraswati, 1981).

A study found that chanting significantly increases neural oscillations in the low frequency delta-band, particularly in the posterior cingulate cortex, affecting cardiac activity compared to resting state (Gao et al., 2019). Chanting has been found to improve symptoms of stress, mood, anxiety, depression, and post-traumatic stress disorder, as well as activate brain areas related to self-awareness, cognition, and memory. And establish cardiorespiratory synchronisation (Perry et al., 2023), (Peng et al., 2004) , (Pathak, 2022).

**1.3 Need for the review:** This systematic review focuses on the therapeutic value and effects of Om (chanting or meditation) on health. Since, most of the studies use Om in combination with other yogic practices, this systematic review was done to explore and present the interventional studies solely done on Om as the intervention. It helps to deliver a comprehensive overview of available evidence on the same. It will help in identifying research gaps in the current understanding of the practice. The review could highlight methodological concerns in research studies that could be used to improve future work on this topic. It could be used to know if further research is needed or not, given the available evidence in the area.

## 2. Methodology:

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement guided the current research.

PICO format was applied as: Participants: Individuals of any age; Intervention: Om chanting and meditation; Comparisons: Within group, between group and compared to control groups; Outcomes: Indicators of health; Study Design: Any empirical design

### 2.1 Information sources and Search Strategy:

Databases that were used for literature search were PubMed, DOAJ and Google Scholar. Search was conducted till January, 2024. No limitations of publication date and restrictions of languages in the database were enforced during the search.

PubMed advanced search builder was used with the query: (((((((om chanting [Title/Abstract]) OR (om meditation [Title/Abstract])) OR (omkar chanting [Title/Abstract])) OR (omkar meditation [Title/Abstract])) OR (omkara chanting [Title/Abstract])) OR (omkara meditation [Title/Abstract])) OR (aum chanting [Title/Abstract])) OR (aum meditation [Title/Abstract])) OR (pranav mantra)) OR (om mantra).

For DOAJ and google scholar, Advanced search was done with the same keywords mentioned above, using the strategy, With all of the words, in the title of the article. Mendeley a reference manager software was used to Manage searching processes and results and cite the information source. In addition, reference lists of included papers were screened for additional eligible papers.

### 2.2 Selection of studies:

#### **Inclusion criteria:**

- Literatures which were in English language
- Only empirical studies were included.
- The studies done specifically on Om chanting or Om meditation and its Effects and Benefits on Health-related outcomes were included.
- Studies conducted on healthy as well as patient populations were considered eligible

#### **Exclusion criteria:**

- Dissertations or Theses, conference abstracts, review papers, website articles, research protocols, bibliometric analyses were excluded from the Study.
- The studies that have been done on Om chanting and meditation in combination with any other practice were excluded.
- Studies with sample size 10 or less were excluded.

### 2.3 Data Extraction:

After the exhaustive search and selecting the studies on the basis of inclusion criteria, Data extraction was carried out using MS Excel, reflecting the information about each included study. The extracted details were: study design, country of affiliation, characteristics of participants (sample size and demographic details), Interventions used in the study (duration of intervention, control/comparator group, etc.), assessment, and outcomes. Then the studies were assessed for their quality and rated by Methodological Quality Rating Scale (MQRS) (Miller & Wilbourne, 2002).

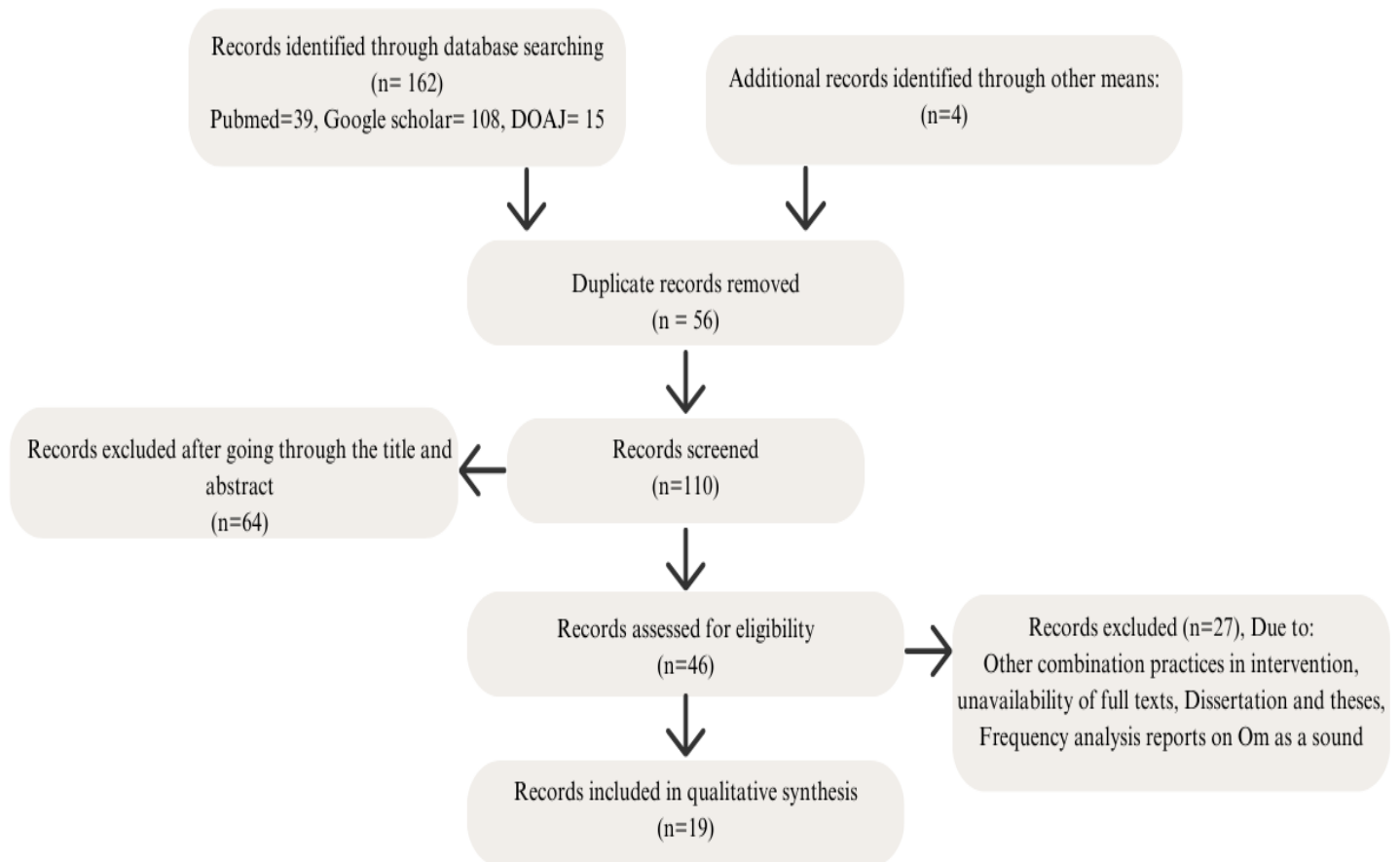
### 2.4 Data synthesis:

Following the data extraction, the data synthesis was done by categorizing the study findings of Effect of Om chanting and meditation, under cardiovascular, psychological, and cognitive functions and on EEG waves.

## 3. Results:

A Prisma flow diagram (Figure 1) completely depicts the search process and study selection approach for the present

review, considering the inclusion and exclusion criteria



**Figure 1: The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analyses) flow diagram of the literature.**

3.1 Study Characteristics: Total of 19 studies were finally included in the review. All the studies were empirical in nature, and the intervention given in the studies was Om chanting and meditation. Studies were designed differently, seven studies came under the spectrum of RCTs, eight studies used one of the various designs of Quasi experimental study designs, rest studies broadly mentioned the design as experimental in their methodology section. The summary of selected studies is mentioned in Table 1:

Citation & Study characteristics	Intervention	Variables measured and Tools for Assessments	Results
(Naidu et al., 2014) 60 healthy female school children aged 12-15 years; Design: RCT; Country: India	OM chanting for 30 minutes daily in morning, for 12 weeks.	Memory; Spatial and verbal memory test was used.	Significant improvement in both spatial and verbal memory was observed in intervention group when compared to control group.
(Amin et al., 2016) 40 Elder women (age 50–60 years) with blood pressure values of 120–179/≤109 mmHg; Design: RCT; Country: India	Om chanting once in a day at 7:30 daily at Sattva cultural space for 6 months.	Depression, anxiety, stress, pulse rate, blood pressure, cognition; Sphygmomanometers, pulse oximeter, Depression Anxiety Stress Scale (DASS), Mini Mental State Examination (MMSE)	following six months of Om chanting, systolic and diastolic pressure, pulse rate, depression, anxiety, stress decreased significantly. MMSE scores improved significantly followed by Om chanting.
(Surlya et al., 2020) 80 students, students, aged 18-30 years; Design: Double matched group design; Country: India	Om meditation daily for 30 minutes in the evening, for 3 months.	Stress; Perceived Stress Scale	Significant difference in the stress level of students due to Om Mantra chanting, during Examination.
(kumar et al., 2015) 40 MBBS students aged, 17-22 years; Design: RCT; Country: India	Practiced Om Meditation for 20 minutes, six days a week for a period of 12 weeks.	Verbal, visual and working memory; Rey's Auditory Verbal Learning Test (RAVLT), Rey's complex figure test (CFT) and Wechsler Memory Scale (WMS) – spatial span and Stroop test	Meditation group improved significantly in RAVLT: Total score, average, immediate recall and delayed recall; CFT: delayed recall; spatial span - forward and backward.
(Anand, 2014) 100 female students aged, 15-24; Design: Static group research design; Country: India	Om chanting meditation, 20 minutes every morning, for 1 month, Except Sunday or holidays.	Psychological wellbeing; P.G.I wellbeing scale and Diener's Life Satisfaction Scale	There was significant positive effect of Om meditation on psychological wellbeing of students in experimental group as compared to control group.
(Kar & Kumar Kar, 2023) 36 healthy students (age range: 18 to 25 years); Design: Experimental method design; Country: India	Once a day, 20 minutes duration Assessments, taken at baseline and the after 15, 30, 45, 60, 75, 90, 105, 120 and 135 days.	Psychological health; Depression, Anxiety and Stress Scale (DASS-21)	A time dependent decrease in depression, anxiety and stress scores was seen among the engineering college student.
(Alasyam et al., 2021) 80 cases of pre-hypertensive women, aged 25-40 years;	Structured Om chanting and listening for 17 min, once a day for 5 days in a week,	Depression, Anxiety, and Stress; Depression, Anxiety and Stress Scale	Significant decrease in the depression scores, anxiety scores, and stress scores in the

Design: A randomized waitlist control trial; Country: India	for 3 months.	(DASS-21)	intervention group when compared with the waitlist group.
(Verma et al., 2022) 50 young adults (18-25 years), students; Design: Controlled clinical trial; Country: India	Om chanting in morning for 20-30 minutes daily, for 1 month.	Anxiety; Sinha's comprehensive Anxiety test (SCAT)	The result of study shows significant effect of Om mantra chanting in decreasing the Anxiety level of young adults.
(Sudharkodhy & Balan.K, 2022) 60 MBBS students age range: 18 and 25 years; Design: RCT; Country: India	Om chanting, every day 30 min for a period of one month in sitting posture.	Heart rate, Blood pressure, parameters of HRV; HRV analyser Software (PHYSIOPAC)	Heart rate and mean RR intervals showed significant changes. Significant decrease in the RMSSD, SDNN and PNN50 in the male population. HRV of female subjects displayed changes suggestive of parasympathetic enhancement with decrease in heart rate and higher mean RR intervals.
(Pavani & Berad, 2019) 30 healthy individuals in age group 18-20 were selected. Design: single group pretest-posttest design; Country: India	OM meditation for 30 minutes daily for 3 months. Average of 3 readings were taken as pre-test GSR value. On Last 3 days of the intervention, GSR values were recorded as post-test GSR values.	Galvanic skin response (GSR); GSR recording was taken for period of 3 minutes as the polygraph gives a continuous monitoring of GSR.	Increase in GSR values shows the relaxation and decrease in stress level. Findings reveal that the meditation affects the skin resistance of an individual. GSR values as an effect of meditation which suggested the psychophysiological relaxation.
(Aalasyam Naveen et al., 2022) Healthy volunteers (n=20; nine men and 11 women) who were right-handed, aged 25–55 years Design: RCT; Country: India	Om chanting in Sukhasana for 20 min, 5 days a week, for 12 weeks.	reaction time and spatial and verbal memory; Spatial and verbal memory test, Auditory and visual reaction time was assessed using the RT apparatus manufactured at Anand Agencies, Pune, India.	There was a significant improvement in the spatial memory scores, the auditory reaction time for high and low pitch sounds, and the visual reaction time for red and green light in the intervention group when compared with control group.
(C et al., 2021) 30 young adults with type D personality, Male and females within the age group of 18–25. Design: waitlist control trial Country: India	Om chanting was performed once a day, daily for 16 weeks. Post Intervention values were recorded after 8 weeks and 16 weeks of intervention in both groups.	Stress and cognition; perceived stress scale, Spatial and verbal memory test	Spatial memory and Verbal memory significantly improved after the intervention in the intervention group. Stress score was significantly decreased after the intervention in the intervention group.
(Arora & Dubey, 2018) 50 cases (28 males and 22 females) of moderate essential HTN under medication who were in the age group of 40–60 years.	“Om” chanting for 5 min accompanied with the expert facilitator. All participants were asked to perform loud chanting of OM for 5 min, and their assessments were taken before and after	Systolic and diastolic B.P. and pulse rate; mercury manometer and stethoscope Radial pulse was counted for 1 min.	Systolic B.P dropped from $152.57 \pm 11$ mm of Hg to $138.27 \pm 10$ mm of Hg and diastolic B.P dropped from $90.8 \pm 8.3$ mm of Hg to $85.4 \pm 6.8$ mm of Hg. The PR also dropped after Om chanting and showed mean difference of 6

Design: single group pretest-posttest design; Country: India	the chanting.		beats/min in just 5 min of intervention.
(Inbaraj et al., 2022) 19 yoga practitioners (9 females and 10 males; group mean age, 25.9 years and 17 yoga naïve persons (8 females and 9 males; group mean age 24.8 years; Design: Quasi Non-equivalent experimental; Country: India	5 min of loud OM chanting, approximately 30 cycles of chanting in total and assessments were taken before and after the chanting.	HRV measures; Electrocardiogram (ECG)	Yoga practitioners exhibit an increased vagal tone at rest. Significant improvement in HF Power in the experienced yoga participants compared to naïve participants. Except for HF Power, there were no significant differences in the HRV measures.
(Bhatt & Gupta, 2013) 20 student's age ranged between 17-25; Design: single group pretest-posttest design; Country: India	Aum chanting practiced for 30 days for 45 minutes every day.	Stress; Stress management scale prepared by Dr. Pushpraj Singh and Dr. Anjali Shrivastava (Rewa).	There was significant relationship between “Aum chanting” and Stress reduction.
(Kanuga et al., 2023) 20 healthy young females with a normal menstrual cycle, aged between 18-25 years; Design: Quasi-experimental study; Country: India	Meditation group practiced OM meditation for 10 minutes, 3 times during the menstrual, proliferative, and secretory phases. Data collection: before and immediately after each intervention.	Body Mass Index (BMI), Blood Pressure (BP), Heart Rate (HR), and HRV; BP monitoring device (OMRON HEM-7111), ECG recording was performed using digital polygraph.	Practising Om meditation for 10 minutes can induce beneficial changes in HRV by reducing sympathetic activity and shifting the autonomic balance towards parasympathetic dominance
(Perry et al., 2023) 16 participants in the vocal condition and 18 participants in the silent condition (n=34 total). Design: Experimental study; Country: Australia	The experimental phase of the study involved vocally chanting with (vocal group) or (silent group) a recording for 12 min	Cortisol, Anxiety, Altruism; Saliva samples were collected before and after chanting to assess cortisol levels, State Trait Anxiety Inventory (Perry et al., 2023b)(STAI-S) and the Adapted Self-Report Altruism Scale.	Decreased stress (cortisol levels), anxiety and increased altruism. Notably, self-reported anxiety reduction was more pronounced during vocal chanting compared to silent chanting
(Harne & Hiwale B, 2019) A total of 23 naive meditators, between the age group of 18–22 years Design: single group pretest-posttest design; Country: India	Subjects were asked to perform OM chanting for a duration of 30 minutes.	EEG signals recorded using monopolar montages, (international standard 10-20 from 16 channels using the RMS India system with a 256 Hz sampling frequency)	An increase in theta power in all regions of the brain has been observed. Raised theta denote a reduction in cortical arousal. The condition of deep relaxation is correlated with a decrement in cortical arousal.
(Saini et al., 2023) 20 adult male subjects with a mean age of $27.5 \pm 7.5$ years. Design: single group pretest-posttest design Country: India	Verbal and listening to “OM” chanting of 5 min each and a 5-min relaxation period in between.	Electroencephalography recording was done using a 128-channel geodesic sensor net with band-pass filtered at 1–70 Hz.	Both verbal and listening to “OM” chanting induced common activated areas: frontoparietal, dorsal attention, and default mode network areas and induced a relaxed state and improve attention simultaneously.

**Table 1: Included Studies (n=19) and their summary**

The included studies were assessed for their quality using the scale derived from some of the measures of MQRS (Methodological Quality Rating Scale). The scoring was done and the details are given in the Table 2 and Table 3.

Scale	Scoring
Group Allocation	4 = Randomization
High = 4	3 = Within S counterbalanced
High = 3	2 = Case control/matching
Medium = 2	1 = Quasi-experimental design, arbitrary assignment,
Low = 1	sequential cohorts
Low = 0	0 = Violated randomization or non-equivalent groups
Quality control	1 = Treatment standardized by manual, specific training,
High = 1	content coding
Low = 0	0 = No standardization of treatment specified
Follow up rate	2 = 85-100% follow-ups complete
High = 2	1 = 70-84.9% follow-ups complete
Medium = 1	0 = < 70 % follow up complete
Low = 0	
Follow-up length	2 =12 months or longer
High = 2	1 = 6-11 months
Medium = 1	0 = Less than 6 months or unspecified
Low = 0	
Independent	1= Follow-up conducted by independent interviewers blind
High = 1	to group
Low = 0	0 = Follow-up by non blind, unspecified, or questionnaire
	data only

**Table 2 Methodological Quality Rating Scale (MQRS) and scoring**



Study	Group Allocation	Quality control	Follow up rate	Follow up length	Independent	Total Score
1	4	1	0	0	0	5
2	4	1	0	0	0	5
3	2	1	0	0	0	3
4	4	1	0	0	0	5
5	1	1	1	1	0	4
6	1	1	0	0	0	2
7	4	1	0	0	0	5
8	1	1	0	0	0	2
9	4	1	0	0	0	5
10	1	1	0	0	0	2
11	4	1	0	0	0	5
12	1	1	0	0	0	2
13	1	1	0	0	0	2
14	1	1	0	0	0	2
15	1	1	0	0	0	2
16	1	1	0	0	0	2
17	4	1	0	0	0	5
18	1	1	0	0	0	2
19	1	1	0	0	0	2

**Table 3: The MQRS score of the included studies**

As we can see the scores, presented in Table 3 were observed to be medium and low for the studies, reasons for this were no single or double blinding, was mentioned in any of the studies and no follow-up was done in most of the studies, except for one study. And not all the studies were RCTs, only seven studies fall into the umbrella of being a RCT study. Due to this heterogeneity in the study designs, any other methodological quality assessment tool, suitable for both mixed designs and for Yoga/ meditation related studies, could not be implied.

### 3.2 Effect on Cardiovascular measures:

Five studies showed effect of Om chanting and meditation on the cardiovascular health. Where two studies (Amin et al., 2016), (Arora & Dubey, 2018) were done on subjects with hypertension, aging between 40-60 years. Om chanting significantly decreased the pulse rate and blood pressure after the intervention. A study (Sudharkodhy & Balan.K, 2022) on students used HRV to infer that the vagal dominance in females gets further enhanced on doing OM Chanting with a reduction in sympathetic tone in males with overall vagal overpronouncement in the females. Another study (Inbaraj et al., 2022) which used HRV measures and Electrocardiogram (ECG) showed Significant improvement in HF Power in the experienced yoga participants compared to non-experienced participants. Practising Om meditation for 10 minutes suggested beneficial changes in HRV by reducing sympathetic activity and shifting the autonomic balance towards parasympathetic dominance among 20 women with normal menstrual cycle (Kanuga et al., 2023).

### 3.3 Effect on Psychological measures:

Two studies (Alasyam et al., 2021), (Amin et al., 2016) used DASS-21 to assess depression, anxiety and stress among women with hypertension, with 3 and 6 month of Om chanting intervention, respectively and showed significant decrease in the depression, anxiety, and stress scores after the intervention. Three studies (Surlya et al., 2020), (Anand, 2014), (Kar & Kumar Kar, 2023) were done on students, where 80 students practiced om meditation for 3 months followed by significantly reduced stress. 100 female students, after practicing Om chanting, showed improved levels of life satisfaction and psychological wellbeing. A time dependent decrease in psychological parameters viz. depression, anxiety and stress scores were seen among 36 engineering college students. 30 healthy individuals showed Increase in GSR

values after practicing for 3 months om chanting, suggested the psychophysiological relaxation. Findings reveal that the meditation affects the skin resistance of an individual (Pavani & Berad, 2019). Among 30 young adults with type D personality, Stress score was significantly decreased after the intervention (C et al., 2021). There was significant relationship between “Aum chanting” and Stress reduction among the students (Verma et al., 2022), (SWADESH BHATT & MANISH GUPTA, 2013). Another study (Perry et al., 2023) conducted on 34 participants, ranging in age from 18 to 49 years revealed that a short group chanting intervention, whether vocal or silent, decreased stress (cortisol levels), anxiety and increased altruism.

### 3.4 Effect on Cognitive measures:

60 healthy female school children aged 12-15 years after practicing 30 minutes of om chanting for 12 weeks showed Significant improvement in both spatial and verbal memory (Naidu et al., 2014). 40 Elder women (age 50–60 years) with diagnosed hypertension were observed with significantly improved MMSE scores, followed by 6 months of Om chanting (Amin et al., 2016). 40 MBBS students aged, 17-22 years, after practice of Om Meditation had improved significantly in RAVLT: Total score, average, immediate recall and delayed recall; CFT: delayed recall; spatial span - forward and backward (kumar et al., 2015). 20 Healthy volunteers who were right-handed, showed significant improvement in the spatial memory scores, the auditory reaction time for high and low pitch sounds, and the visual reaction time for red and green light after practicing 20 minutes of om chanting for 12 weeks (Alasyam et al., 2021). Another study conducted on 30 young adults with type D personality revealed significant improvement in Spatial memory and Verbal memory after the intervention (C et al., 2021).

### 3.5 Effect on EEG waves:

EEG signals were recorded for 23 naive meditators with a mean age of 20.99 years, after practicing 30 minutes of om chanting. Which showed an increase in theta power in all regions of the brain. Raised theta denote a reduction in cortical arousal (Harne & Hiwale B, 2019). Another EEG study (Saini et al., 2023), with 20 adult male subjects with a mean age of 27.5 ± 7.5 years, showed that both verbal and listening to “OM” chanting induced common activated areas that are classified into frontoparietal, dorsal attention, and default mode network areas also such flexible switching between these RSNs could induce a relaxed state and improve attention simultaneously.

#### 4. Discussion:

As observed in the results above, the included studies which were specifically done with the intervention of Om chanting and Meditation, imparted beneficial health related outcomes. The outcome measures, though were categorized into different domains, lead us to a common insight that is, parasympathetic enhancement and psychophysiological relaxation. Therefore, we observed, decreased systolic and diastolic pressure, pulse rate, depression, anxiety, and stress. And improvement in altruism, life satisfaction, social cohesion, Spatial and verbal memory, and mood scores. Electroencephalography recordings also suggested a decrement in cortical arousal and improved attention simultaneously. Skilled meditators have shown better results as compared to naïve practitioners. In the studies exploring the effect of verbal chanting and silent (mental) chanting, the anxiety and measures of mood and cohesion, showed more promising results with the practitioners in the Vocal/ Verbal chanting group.

When recordings of Electroencephalography were evaluated, both verbal and listening to “OM” chanting induced common activated areas of the brain, that are frontoparietal (FPN), dorsal attention (DAN), and default mode

network (DMN) areas. There is a significant positive correlation between functional integration of the frontoparietal network and overall cognitive ability, indicating that the strength of functional integration of the frontoparietal network and the rest of the brain is crucial for supporting superior cognitive functioning (Sheffield et al., 2015). And reduced connectivity between the DAN and the Frontoparietal network is associated with major depressive disorder (Kaiser et al., 2015). Thus the regular practice of Om chanting could help keep depression at bay, and could improve the cognitive functioning. Default mode network areas (DMN), is best known for being active when a person is not focused on the outside world and the brain is at wakeful rest (Jang et al., 2011). Through the practice of OM chanting, there could be induced relaxed state and improved attention simultaneously with the possible role of the frontoparietal network. Number of studies have been published with similar results connected to other types of mantras chanting or meditation practices.

The population among all the studies consisted of , women with hypertension, college students, women with normal menstrual cycle, healthy individuals, and experienced meditators. Eight of the studies were done for the period ranging from 3 to 4 months. One study was conducted for 6 months. Four studies were done for 1 month of time and seven studies saw immediate effect of the intervention. Methodology design and approach for the studies were different. Due to this heterogeneity, the studies are discussed descriptively as they could not be pooled to a meta-analysis. Other than the evidence-based results, spiritually significant benefits of the sacred sound of OM have been also discussed in the introductory part of the study. Combining the results from both the areas, we can conclude that a practice as simple as chanting a syllable, when adapted in our daily routine, could impart beneficial effects on our health.

## Conclusion and Recommendations:

Based on the current review, we can say that chanting Om and practicing Om meditation generally improved cardiovascular, psychological, and cognitive health and showed positive effects on certain parts of the brain through EEG recordings. Even if the chosen studies had certain limitations, in order to better understand the impacts of Om

Chanting, future research should address those constraints by maintaining a larger sample size and longer-term follow-ups. More studies should assess the sole effect of the sacred sound of OM on other domains of health. Furthermore, to improve results and support meta-analyses, more thorough, thoughtfully planned randomised controlled trials are required in this field.

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