Language in India www.languageinindia.com ISSN 1930-2940 Vol. 26:6 June 2026

Singing Voice Handicap Index (M-SVHI) in Geriatric Bhajan Singers in Maharashtra

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ABSTRACT

Bhajan (devotional) singers in Maharashtra undergo intense vocal load alongside age related vocal decline. Despite these risks, their vocal health remains largely unexamined. Singing voice handicap index (SVHI) is used to evaluate singers' self-perceived vocal difficulties. This study aimed to evaluate self-perceived singing voice handicap among geriatric bhajan singers in Maharashtra using the Marathi version of the Singing Voice Handicap Index (M-SVHI) and examine its correlation in 60 elderly bhajan singers aged 50-75 years in Maharashtra. Data were analysed using descriptive statistics and Karl Pearson's correlation coefficient. The results revealed high rates of vocal distress with 71.7% experiencing nervousness, 65% felt frustrated and 53.3% felt handicapped by their voice and strong positive correlation between age and SVHI scores ($r = 0.944$, $p < 0.001$) indicating that vocal handicap increased with age. The findings highlight factors affecting vocal health in devotional singers and underline the importance of targeted vocal care.

Keywords: Bhajan, Singing voice handicap index, (M-SVHI), Maharashtra

INTRODUCTION

Voice plays a vital role in daily communication and also serves as a key instrument of artistic expression. The major way of expressing one's unique individuality and influencing society is through voice (Sataloff, 2006). For singers, their voice becomes a means of expressing inner devotion, emotion and identity.

In India, bhajans (devotional songs) are important devotional practices that encourage emotional expression through song (Nikky & Tiwari, 2025). Within Maharashtra this tradition holds profound cultural significance, particularly among geriatric populations that actively participate in community based Bhajan singing. Unlike singers of classical genres like Hindustani or Carnatic or commercial styles like jazz, pop and light music, bhajan singers encompass a unique category of vocal performers. Their styles are characterized by continuous phonation, intense emotional expression and extended singing hours. This extensive vocal loading can strain their vocal mechanism making them prone to voice impairments.

Vocal changes can manifest across lifespan due to different etiologies. However, the aging process can cause a progressive decline in vocal efficiency characterized by breathiness, hoarseness, increased pitch in men and so on (Çiyiltepe & Şenkal, 2017 ; Mezzedimi , Di Francesco , Livi , Spinosi & De Felice, 2017 ; Rapoport , Menier & Grant, 2018). When these age-related physical declines intersect with the intense physical demands of devotional bhajan singing, the risk of developing singing voice handicap increases significantly.

Despite this, the vocal health of bhajan singers remains largely unexplored. To systematically assess these potential vocal challenges, a validated tool like the Singing Voice Handicap Index (SVHI) becomes essential.

The Singing Voice Handicap Index (SVHI) was developed to assess singers' perception of their vocal issues (Cohen, Jacobson, Garrett, Noordzij, Stewart, Attia, Ossoff & Cleveland, 2007). The SVHI is a 36 item self-assessment tool designed to evaluate how singers perceive their vocal difficulties. It measures the impact of voice impairment across 4 domains: physical, emotional, social and economic. Individuals rate each item using a five-point Likert scale from 0 (never) to 4 (always) resulting in a cumulative score between 0 and 144. Higher overall scores reflect a greater degree of singing voice handicap (Cohen, Witsell, Scearce, Vess & Banka, 2008).

BACKGROUND

SVHI has been widely used and validated globally across numerous languages emphasizing its significance in evaluating vocal health. Within the Indian context the tool has undergone regional adaptation to guarantee cultural and linguistic relevance which includes Kannada adaptation (Gunjawate, Aithal, Guddattu, & Bellur, 2017), Malayalam adaptation (Sudarsanan & Kumaraswamy, 2025) and the most recent Marathi version (Sanjay & Kumaraswamy, 2026). Similarly, the Hindi SVHI-10 (Jaswal & Khemka, 2025) and Tamil SVHI-10 (Rangarajan, Santhanam & Selvaraj, 2020) showed that the shortened, culturally adapted versions of SVHI maintain high sensitivity and specificity for detecting singing voice handicap in Indian languages.

Devadas, Jose and Gunjawate (2016) conducted a study among Mar Thoma priests in Kerala and revealed a high prevalence of voice problems with 47.8% of participants suffering from vocal difficulties at some point during their careers. They also observed several contributing risk factors including asthma, allergies and habitual throat clearing which were associated with the increased incidence of voice disorders.

Gunjawate, Aithal, Devadas and Guddattu (2017) assessed singing vocal health in Yakshagana singers using the Kannada version of SVHI-10 and their finding revealed higher total SVHI scores in singers with voice complaints compared to those without any voice problems.

Sarıca (2018) revealed that 36.6% of imams in Turkey experienced voice disorders attributing these issues to factors such as reflux, throat infections and lack of vocal training.

Devadas, Hegde and Maruthy (2019) focused on Hindu temple priests and observed that 43% of participants experienced occupational voice disorders. The chief contributors identified in this group were chanting during episodes of throat infections, dry mouth and the frequent need to modify voice quality during ritualistic chanting practices.

Büyükatalay, Gökmen, Yıldırım and Dursun (2020) found that Islamic religious officials despite having lower vocal loads exhibited higher rates of vocal abuse and poorer vocal hygiene awareness compared to school teachers.

Moura, Gadenz, Lemos, Bos and Cassol (2021) analysed the SVHI in 110 elderly choristers aged 60 or above and results revealed that physical issues like throat dryness, difficulty with

high notes were common and that older adults over 75 years of age had a greater voice handicap when compared to younger ones.

Sharma, Nayak and Devadas (2021) conducted a survey on Indian church choir singers and found that 84% of participants reported multiple vocal symptoms including pitch breaks, hoarseness and vocal fatigue either during or after singing.

The above studies collectively highlight the vocal demands and health risks associated with religious singing and chanting. However, despite the cultural significance of bhajan singing in Maharashtra, there remains a notable lack of focused research addressing the vocal health of bhajan singers in this region. To address this gap in research on devotional singers, the present study aims to evaluate the vocal health of bhajan singers in Maharashtra using the M-SVHI. This tool allows for assessment of self-perceived voice handicap, providing valuable insights into the unique vocal challenges faced by this population.

METHODOLOGY

Aim: The aim of the study was to analyse the item wise responses of Marathi version of SVHI (M-SVHI) and examine the relationship between age and perceived voice handicap among geriatric bhajan singers in Maharashtra.

Subjects: A total of 60 professional Marathi bhajan singers in the age range of 50-75 years were selected randomly from Maharashtra to participate in this study.

Inclusion criteria:

- Native Marathi bhajan singers
- Regularly singing bhajans for minimum of two years
- Singers within the age range of 50 and 75 years.

Exclusion criteria:

- Bhajan singers who have less than 2 years of experience.
- Subjects with a history of psychiatric, neurological impairments and those unable to read or understand Marathi.

- Individuals who had undergone laryngeal surgery or major voice treatment unrelated to the study within the past six months.

Stimulus: The Marathi version of SVHI adapted by Sanjay & Kumaraswamy (2026) which was originally developed by Cohen et al (2007) was used for the present study.

Procedure: The M-SVHI, consisting of 36 questions covering physical, emotional and functional aspects of singing voice difficulties was distributed to bhajan singers and were instructed to carry out a self-assessment. All subject completed the questionnaire individually as instructed.

Statistical analysis

The collected data was subjected to statistical analysis. Data was summarized using frequency, percentage, mean and standard deviation (SD). Karl Pearson's correlation coefficient analysis was conducted to examine the relationship between singer's age and their total M-SVHI scores. The level of statistical significance was considered at 5% ($p < 0.05$).

RESULT AND DISCUSSION

The aim of present study was to analyse item wise of bhajan singers and age related correlation using M-SVHI and the results are discussed below.

Table 1

Shows The Frequency, Percentage, Mean and Standard deviation Of Bhajan Singers In Maharashtra Using M-SVHI

	NEVER		ALMOST NEVER		SOMETIMES		ALMOST ALWAYS		ALWAYS		Total	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Mean	SD
It takes a lot of effort to sing.	5	8.3%	14	23.3 %	16	26.7%	12	20.0 %	13	21.7 %	2.23	1.27
My voice cracks and breaks.	2	3.3%	3	5.0%	53	88.3%	2	3.3%	0	0.0%	1.92	.46
I am frustrated by my singing.	21	35.0 %	0	0.0%	39	65.0%	0	0.0%	0	0.0%	1.30	.96
People ask, "What is wrong with your voice?" when I sing.	0	0.0%	22	36.7 %	30	50.0%	8	13.3 %	0	0.0%	1.77	.67
My ability to sing varies day to day.	0	0.0%	0	0.0%	21	35.0%	38	63.3 %	1	1.7%	2.67	.51

My voice "gives out" on me while I am singing.	0	0.0%	0	0.0%	35	58.3%	24	40.0 %	1	1.7%	2.43	.53
My singing voice upsets me.	0	0.0%	0	0.0%	37	61.7%	23	38.3 %	0	0.0%	2.38	.49
My singing problems make me not want to sing/perform.	29	48.3 %	1	1.7%	9	15.0%	0	0.0%	21	35.0 %	1.72	1.82
I am embarrassed by my singing.	0	0.0%	20	33.3 %	25	41.7%	15	25.0 %	0	0.0%	1.92	.77
I am unable to use my "high voice."	0	0.0%	5	8.3%	33	55.0%	15	25.0 %	7	11.7 %	2.40	.81
I get nervous before I sing because of my singing problem.	0	0.0%	2	3.3%	15	25.0%	28	46.7 %	15	25.0 %	2.93	.80
My speaking voice is not normal.	10	16.7 %	20	33.3 %	28	46.7%	2	3.3%	0	0.0%	1.37	.80
My throat is dry when I sing.	0	0.0%	0	0.0%	54	90.0%	2	3.3%	4	6.7%	2.17	.53
I have had to eliminate certain songs from my singing/performance.	0	0.0%	0	0.0%	55	91.7%	4	6.7%	1	1.7%	2.10	.35
I have no confidence in my singing voice.	0	0.0%	2	3.3%	35	58.3%	18	30.0 %	5	8.3%	2.43	.70
My singing voice is never normal.	0	0.0%	5	8.3%	25	41.7%	29	48.3 %	1	1.7%	2.43	.67
I have trouble making my voice do what I want it to.	0	0.0%	1	1.7%	32	53.3%	25	41.7 %	2	3.3%	2.47	.60
I have to "push it" to produce my voice when singing.	0	0.0%	7	11.7 %	28	46.7%	19	31.7 %	6	10.0 %	2.40	.83
I have trouble controlling the breathiness in my voice.	0	0.0%	1	1.7%	47	78.3%	11	18.3 %	1	1.7%	2.20	.48
I have trouble controlling the raspiness in my voice.	0	0.0%	7	11.7 %	39	65.0%	14	23.3 %	0	0.0%	2.12	.58
I have trouble singing loudly.	0	0.0%	4	6.7%	47	78.3%	6	10.0 %	3	5.0%	2.13	.60
I have difficulty staying on pitch when I sing.	0	0.0%	1	1.7%	37	61.7%	18	30.0 %	4	6.7%	2.42	.65
I feel anxious about my singing.	0	0.0%	1	1.7%	29	48.3%	26	43.3 %	4	6.7%	2.55	.65
My singing sounds forced.	2	3.3%	11	18.3 %	24	40.0%	12	20.0 %	11	18.3 %	2.32	1.08
My speaking voice is hoarse after I sing.	2	3.3%	11	18.3 %	25	41.7%	17	28.3 %	5	8.3%	2.20	.95
My voice quality is inconsistent.	0	0.0%	2	3.3%	20	33.3%	22	36.7 %	16	26.7 %	2.87	.85
My singing voice makes it difficult for the audience to hear me.	0	0.0%	2	3.3%	28	46.7%	27	45.0 %	3	5.0%	2.52	.65

My singing makes me feel handicapped.	1	1.7%	20	33.3 %	7	11.7%	29	48.3 %	3	5.0%	2.22	1.03
My singing voice tires easily.	0	0.0%	2	3.3%	33	55.0%	16	26.7 %	9	15.0 %	2.53	.79
I feel pain, tickling, or choking when I sing.	0	0.0%	5	8.3%	24	40.0%	31	51.7 %	0	0.0%	2.43	.65
I am unsure of what will come out when I sing.	0	0.0%	2	3.3%	24	40.0%	15	25.0 %	19	31.7 %	2.85	.92
I feel something is missing in my life because of my inability to sing.	2	3.3%	5	8.3%	24	40.0%	18	30.0 %	11	18.3 %	2.52	1.00
I am worried my singing problems will cause me to lose money.	13	21.7 %	22	36.7 %	3	5.0%	19	31.7 %	3	5.0%	1.62	1.28
I feel left out of the music scene because of my voice.	7	11.7 %	17	28.3 %	7	11.7%	23	38.3 %	6	10.0 %	2.07	1.25
My singing makes me feel incompetent.	0	0.0%	13	21.7 %	28	46.7%	19	31.7 %	0	0.0%	2.10	.73
I have to cancel performances, singing engagements, rehearsals or practices because of my singing.	3	5.0%	24	40.0 %	28	46.7%	5	8.3%	0	0.0%	1.58	.72

Table 1 shows that among 60 bhajan singers aged between 50-75 years from Maharashtra, 43 singers stated they 'almost always' or 'always' get nervous before singing. 25 singers feel that singing 'almost always' or 'always' requires effort while 39 reported frustrations with their singing. Vocal unpredictability is a major concern as 58 singers feel unsure of what will come out when they sing and 58 report inconsistent voice quality. 32 individuals feel that their voice 'almost always' or 'always' makes them feel handicapped and 29 state that they 'almost always' feel left out of the music scene.

Table 2

Shows the correlation of age and the overall handicap score

	N	**Karl Pearson Correlation**	**p**
AGE & M-SVHI(0 - 144)	60	0.944	0.000, HS

*HS = High significance

The Karl Pearson's correlation coefficient showed a strong positive association between age and SVHI scores ($r = 0.944$, $p < 0.001$) indicating that the result is highly significant.

DISCUSSION

The present study aimed to analyse the item wise responses among bhajan singers in Maharashtra using the M-SVHI and examined the correlation between age and perceived voice handicap among bhajan singers in Maharashtra. The results revealed that many singers reported notable voice challenges impacting their singing and well-being and also showed that age has a stronger positive correlation with singing voice handicap which is in accordance with Moura et al (2021) and Sudarsanan and Kumaraswamy (2025) who also reported greater vocal difficulties in older choristers.

SUMMARY AND CONCLUSION

Voice is essential role for effective communication and voice disorders should be therefore identified especially in singers who are highly sensitive to vocal impairments. This study aimed to analyse the item wise responses of bhajan singers in Maharashtra using the M-SVHI and to examine the correlation between age and perceived voice handicap among them. The M-SVHI was administered on a total of 60 elderly bhajan singers aged 50-75 years. The results showed that many participants experienced challenges such as vocal fatigue, inconsistent voice quality and nervousness before singing. A strong positive correlation was found between age and SVHI scores indicating that perceived vocal handicap increased with age. These findings emphasize the need for implementing age and health specific vocal care strategies for devotional singers.

LIMITATIONS

- Sample size is limited.
- Selection of participants were random.

FUTURE DIRECTION

- Comparative studies can be conducted between bhajan singers and other singing population.
- Similar studies can be conducted to evaluate voice handicap ion bhajan singers from different age group and other states of India to explore regional differences.

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