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SINGING VOICE HANDICAP INDEX IN MARATHI (M-SVHI)

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ABSTRACT

Voice serves a fundamental role in daily communication and self expression. Vocal quality of singers directly dictates both their artistry and livelihood. This study aims to translate, adapt and validate the 36 item Singing voice handicap index (SVHI) into Marathi (M-SVHI). A total of 52 professional Marathi singers aged 18 to 50 years, including 32 singers with self-reported voice problems and 20 normal singers without voice problems participated in this study. Phase 1 involved forward/backward translation and expert validation. Phase 2 assessed content validity. Phase 3 evaluated test - retest reliability (14 -day interval, Pearson's r). Mann-Whitney U test compared differences between group ($p<0.001$). Test-retest reliability was excellent yielding an Intraclass Correlation Coefficient (ICC) of 0.992 for singers with voice problems and 1.000 for the control group ($p < 0.001$). Moreover, a statistically significant positive correlation ($p < 0.05$) confirming the M-SVHI as a valid and reliable tool for assessing voice handicap in Marathi singers.

KEYWORDS: Marathi, Singers, Singing voice handicap index, (M-SVHI).

INTRODUCTION

Human voice serves as a dual-purpose mechanism functioning as a fundamental tool for daily communication and the primary instrument for artistic impression. Any change in voice quality may result in significant functional, emotional and occupational impairments. The quality of singer's voice is fundamental aspect of both the artistry and livelihood.

Professional singers are at the risk for laryngeal pathologies related to vocal misuse, edema, polyps and so on (Kwok & Eslick, 2019). Singers are more sensitive to early symptoms of voice dysfunction and are most likely to seek help and report problems related to their singing voice (Rangarajan, Sathanam & Selvaraj, 2020). Compared to non-singers they tend to have high impact on their quality of life (Cohen, Noordzij, Garett & Ossoff, 2008). Therefore, it is crucial to have tools to assess the impact of voice disorders on singers.

Singing Voice Handicap Index (SVHI) was developed to assess singers' perception of their vocal issues (Cohen, Jacobson, Garrett, Noordzij, Stewart, Attia, Ossoff & Cleveland, 2007) which is a 36 item self reported outcome measure that assess singing voice across 4 domains physical, emotional, social and economic. Each item is rated on a five point Likert scale (0 = never,1 = almost never, 2 = sometimes, 3 = almost always, 4 = always) yielding a score ranging from 0 to 144. SVHI is a validated tool for measuring treatment outcomes in singers. A higher total score indicates a greater degree of singing voice handicap (Cohen, Witsell, Scearce, Vess & Banka, 2008).

SVHI has been widely validated across both academic and clinical settings through systematic reviews and empirical validations. Additionally, SVHI has been widely adapted and validated across various languages including Spanish (García-López, Núñez-Batalla, Gavilán Bouzas & Górriz-Gil, 2010), Korean (Lee & Sim, 2013), Italian (Baracca, Cantarella, Forti, Pignataro & Fussi, 2013), Kannada (Gunjawate, Aithal, Guddattu, & Bellur, 2017), Persian (Ghaemi, Dehqan, Mahmoodi-Bakhtiari & Sobhani-rad, 2020), Turkish (Denizoglu,

Şahin, Kazancıoğlu & Dağdelen, 2016), Quebec French (Harati, Martineau, Paquin, Brisebois, Martel-Sauvageau, & Leclerc, 2024), Japanese (Okui, Nimura, Komazawa, Kanazawa, Konomi, Hirosaki, Okano, Nishida & Watanabe, 2024) and Malayalam (Sudarsanan & Kumaraswamy, 2025) demonstrating its cross cultural applicability across diverse singing contexts.

Sielska-Badurek, Sobol, Cioch, Osuch- Wójcikiewicz, Rzepakowska and Niemcyzk (2017) conducted an adaptation and validation to establish the Polish version of the SVHI and their findings confirmed its strong psychometric properties, supporting its reliability in assessing singing-specific voice problems among Polish speaking population.

Sobol, Sielska-Badurek and Osuch- Wójcikiewicz (2020) established a global normative value of 20.35 and a confidence range between 10.6 and 30.1 for the SVHI providing a reference range for interpreting normal versus pathological singing voice handicap across languages.

Ahmadi, Rajati, Vasaghi-Ghara Malaki, Ebadi, Ebrahimi Takamjani, Verdolini Abbott and Torabinezhad (2022) developed and validated a revised Persian version of the SVHI and confirmed its reliability for use among Persian traditional singers with voice disorders.

Amir and Shteinberg (2025) validated the Hebrew version of SVHI and found excellent internal consistency and strong external validity confirming its utility among both professional and student singers in Israel. 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.

Sudarsanan & Kumaraswamy (2025) developed the Malayalam version of SVHI and confirmed its validity and reliability for assessing voice handicap in Malayalam speaking singers. Similarly, research in Italian (Baracca et al, 2013) and Turkish (Denizoglu et al, 2016) adaptations of SVHI has shown that language-specific versions allow accurate diagnosis and enhanced clinical outcomes, providing a foundation for similar work in Marathi. Beaton, Bombardier, Guillemin and Ferraz (2000) provided guidelines requiring a strict process for cross-cultural adaptation. This ensures the tool retains its original meaning and concepts.

According to 2011 census, in India about 83 million people speak Marathi primarily in Maharashtra and neighbouring regions such as Goa. The government of India has officially recognized Marathi as a classical language (Vivek & Roy, 2024). The linguistic and cultural value of Marathi language is deeply interwined with music and performance traditions. The adaptation of Marathi version of the SVHI (M-SVHI) is thus essential for providing singers who use Marathi language for singing with a relevant and reliable tool for self-assessment.

METHODOLOGY

Aim: The aim of the study was to translate and adapt the SVHI into the Marathi language.

Subjects: A total of 52 professional Marathi singers in the age range of 18 to 50 years were selected randomly and further divided into 32 with self-reported voice problems and 20 normal singers with no voice problems.

Inclusion criteria

- Native Marathi speaking singers
- Singers with minimum of two years of formal vocal training
- Singers within the age range of 18 and 30 years.

Exclusion criteria

- 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: SVHI developed by Cohen et al (2007) was the stimulus used for the present study.

Procedure: The study was mainly conducted in three phases.

Phase 1: Translation and content Validation

The original English version SVHI was translated into Marathi by two native Marathi speakers fluent in English - a professional translator and a professor. They independently translated the entire English SVHI questionnaire including instructions and response options into Marathi. Their versions were reconciled into one draft as per standard cross-cultural adaptation protocols to maintain semantic and conceptual equivalence. An independent bilingual expert, unaware of the original, back-translated it to English for validation against the source. A panel of five SLPs then reviewed everything for clarity, accuracy and cultural fit finalizing the Marathi SVHI (M-SVHI) based on their input.

Phase 2: Administration

The Marathi translated version of SVHI was distributed among 52 Marathi speaking singers, including 32 with self-reported voice problems and 20 normal singers with no voice problems. They were instructed/requested to carry out a self-assessment in quiet setting. All subjects completed the questionnaire individually as instructed.

Phase 3: Test-Retest Reliability and Concurrent validity

The test-retest reliability was done on 20 professional voice users with voice problems and 10 normal individuals who completed the M-SVHI again after a 14 days' time interval. For concurrent validity a subset of 20 subjects completed both M-SVHI and the original English SVHI. The collected data was tabulated, analysed and subjected for statistical analysis to test if the Marathi SVHI is reliable and valid.

Statistical Analysis

The collected data was accumulated and later subjected to statistical analysis. The test-retest reliability was evaluated using the Intraclass Correlation Coefficient (ICC) while internal consistency reliability was assessed using Cronbach's alpha (α). Mann-Whitney U test was performed to do the comparison between groups. And the correlation between the Marathi and original English versions of the SVHI were examined using the Pearson correlation coefficient (r). A p-value < 0.05 was considered statistically significant.

RESULT AND DISCUSSION

The aim of the study was to translate and adapt SVHI into Marathi and the results are discussed below.

Table 1: Shows Test-retest reliability of M-SVHI questionnaire.

Intraclass Correlation Coefficient				
GROUP	**Intraclass Correlation**	**95% Confidence Interval**		**F Test p value**
		Lower Bound	**Upper Bound**	
Singers with voice problem	.992	.980	.997	.000, HS
Singers without voice problem	1.000	1.000	1.000	.000, HS.

*HS = Highly significant

The Intraclass correlation coefficient(ICC) was used to assess test-retest reliability revealing a strong agreement among singers with voice problems (ICC = .992,p < 0.001) and singers without voice problems (ICC = 1.000,p < 0.001).

Table 2: *Shows the comparison of cumulative scores of M-SVHI responses between the singers with and without voice problem.*

GROUP		**N**	**Mean**	**Std. Deviation**	**Median**	**IQR**		**To compare between the groups: Mann Whitney test**		
						Lower	**Upper**	**Z value**	**p**	
M-SVHI total scores	Singers with voice problem	32	57.00	26.004	70.00	29.50	80.50	-6.027	0.000	HS
	Singers without voice problem	20	3.45	3.900	2.00	1.00	4.00			

*HS = Highly significant

The table 1 presents a comparison of M-SVHI responses between singers with and without voice problems. There was a high significant difference in the the scores of M-SVHI responses between the groups: Singers with voice problem and Normal singers without voice problem.

Table 3: *Shows the reliability analysis of M-SVHI questionnaire.*

	Number of items	**α**
M-SVHI responses	36	0.973

The above table shows that the M-SVHI questionnaire with 36 items has a high internal consistency reflected by a α = 0.973. Since the reliability coefficient is greater than 0.70, the questionnaire is considered reliable.

Table 4: *Shows the relation between M-SVHI score and original English version score.*

			Correlation		
	Mean	**Std. Deviation**	**r value**	**p**	
M-SVHI scores	48.05	21.09	0.554	0.011	S
Original English version scores	48.45	21.10			

("r" = Pearson correlation coefficient), S = significance

The coefficient: ("r") was used to find the relation between M-SVHI score and original English version score. There was a positive correlation (p < 0.05) between M-SVHI score and original English version score.

DISCUSSION

SVHI meets the specific demands of singers in evaluating their voice handicap (Cohen et al,2007). The present study aimed to adapt and validate the SVHI into Marathi. The M-SVHI demonstrated excellent internal consistency ($\alpha = 0.973$) and strong test-retest reliability indicating it is a reliable tool. Significant differences in scores between singers with and without voice problems confirm its effectiveness in identifying perceived voice handicap. A stastically significant positive correlation ($r = 0.554$, $p < 0.05$) with the original English SVHI supports the cultural and linguistic equivalence of the Marathi version. These results are in accordance with Sudarsanan and Kumaraswamy (2025) who translated and adapted the Malayalam version of SVHI and similarly confirmed its validity and reliability for assessing voice handicap in Malayalam singers. Overall the Marathi SVHI is a valid and reliable tool for assessing singing voice handicap in Marathi singers which is useful for both clinical and research settings.

SUMMARY AND CONCLUSION

Voice plays an essential role for effective communication and consequently voice disorders should be identified especially in singers who are particularly sensitive to vocal impairments using appropriate tools. The present study aimed to translate, adapt and validate the English version of SVHI into Marathi language. The M-SVHI was administered on a total of 52 professional Marathi singers in the age range of 18 to 50 years and further divided into 32 with self-reported voice problems and 20 normal singers with no voice problems. The Marathi SVHI demonstrated.

- High internal consistency ($\alpha = 0.973$).
- Strong test-retest reliability ($p < 0.001$).
- Significant correlation with the original English version ($r = 0.554$, $p < 0.05$).
- Effective discrimination between singers with and without voice problems ($p < 0.001$).

These findings confirm that the M-SVHI is a reliable and valid tool for assessing self-perceived voice handicap among Marathi professional singers.

LIMITATIONS

- Sample size is limited.
- Selection of participants were random.
- Singers from age range 18-50 years were only selected.

FUTURE DIRECTION

- Adapt and validate the SVHI for other regional languages and dialects in India.
- Administration of M-SVHI can be conducted in different singing population.
- Comparative studies can be conducted using M-SVHI to evaluate voice handicap across different age groups of singers.

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APPENDIX
MARATHI SINGING VOICE HANDICAP INDEX (M-SVHI)
SANJAY AND KUMARASWAMY (2026)
NAME: ________________________________ DATE: ____________

INSTRUCTIONS FOR BELOW:
These are statements many people have used to describe their voices and the effects of their voices on their lives. Tick the response that indicates how frequently you have the same experience.

[illegible]:
[illegible] कर [illegible]

0=Never - [illegible], **1=Almost never -** [illegible], **2=Sometimes -** [illegible], **3=Almost always - जवळजवळ** [illegible], **4=Always -** [illegible]

NO.	QUESTION / [illegible]	0	1	2	3	4
1.	**It takes a lot of effort to sing.** [illegible]					
2.	**My voice cracks and breaks.** [illegible]					
3.	**I am frustrated by my singing.** [illegible]					
4.	**People ask "What is wrong with your voice?" when I sing.** [illegible]					
5.	**My ability to sing varies day to day.** [illegible] बदलत [illegible]					
6.	**My voice "gives out" on me while I am singing.** [illegible]					
7.	**My singing voice upsets me.** [illegible]					
8.	**My singing problems make me not want to sing/perform.** [illegible]					
9.	**I am embarrassed by my singing.** [illegible]					
10.	**I am unable to use my "high voice."** [illegible]					
11.	**I get nervous before I sing because of my singing problem.** [illegible] दडपण [illegible]					
12.	**My speaking voice is not normal.** [illegible]					
13.	**My throat is dry when I sing.** [illegible]					
14.	**I have had to eliminate certain songs from my singing/performance.** [illegible]					
15.	**I have no confidence in my singing voice.** [illegible]					
16.	**My singing voice is never normal.** [illegible]					
17.	**I have trouble making my voice do what I want it to.** [illegible]					

18.	**I have to "push it" to produce my voice when singing.**					
19.	**I have trouble controlling the breathiness in my voice.**					
20.	**I have trouble controlling the raspiness in my voice.**					
21.	**I have trouble singing loudly.**					
22.	**I have difficulty staying on pitch when I sing.**					
23.	**I feel anxious about my singing.**					
24.	**My singing sounds forced.**					
25.	**My speaking voice is hoarse after I sing.**					
26.	**My voice quality is inconsistent.**					
27.	**My singing voice makes it difficult for the audience to hear me.**					
28.	**My singing makes me feel handicapped.**					
29.	**My singing voice tires easily.**					
30.	**I feel pain, tickling, or choking when I sing.**					
31.	**I am unsure of what will come out when I sing.**					
32.	**I feel something is missing in my life because of my inability to sing.**					
33.	**I am worried my singing problems will cause me to lose money.**					
34.	**I feel left out of the music scene because of my voice.**					
35.	**My singing makes me feel incompetent.**					
36.	**I have to cancel performances, singing engagements, rehearsals or practices because of my singing.**					