International Journal of Research in Engineering and Science (IJRES)
ISSN (Online): 2320-9364, ISSN (Print): 2320-9356
www.ijres.org Volume 10 Issue 10 ǁ October 2022 ǁ PP. 257-268

Comparison of Vocal Hygiene Awareness among Male Pastors and Female Pastors in Kerala

Febha Mary Chacko, Mrs. Vini Abhijith Gupta

Date of Submission: 24-09-2022 Date of acceptance: 08-10-2022

I. INTRODUCTION

Voice is the major element of human speech production. (Stemple,RoyandNelson,2014).

The voice is magnified in the upper airway cavities of the neck and head, where the vocal folds are vibrated by the air stream. Resonance describes this amplification. The vibratory signal that speech is carried on is provided to the speaker by the speech element known as voice. Production of voice is viewed as both a powerful communication tool and an artistic medium. It acts as the melody of our speech and gives our daily spoken thoughts expression, feeling, aim, and mood. (Stemple, Royand Nelson, 2014).

The vocal folds vibrate to produce voice, or phonation. This phonation is created by lungs' expiratory airflow travelling through the approximated vocal folds. (Boone,Farlaneand Stephen, 2010).The vocal folds that create speech and singing sounds are located in the larynx, which is also known as the body's "voice box. The larynx is a complex organ that functions as a biological valve to regulate phonation. Vocal fold vibration happens when air from the lungs is driven into the trachea, bronchi, and adducted vocal folds. Vocal fold vibration occurs when an infra-glottis power source induces airflow through closed vocal folds. (Dworkin and J.P, 1997).

The term "vocal hygiene" refers to a broad category that often includes all elements of good voice health. Vocal hygiene is used therapeutically as a behavioural treatment that focuses on the patient and involves changing vocal patterns and putting ideas into practise that will promote better vocal health. Vocal hygiene is a term used to describe the routines you follow to keep your voice healthy, powerful, and strong. Vocal hygiene focuses on the proper use of the vocal organs, the significance of enhanced hydration, and the removal of throat clearing as part of an effective vocal hygiene programme.

The maintenance and nourishment of the voice might be referred to as "vocal hygiene." It alludes to the actions we take to maintain the health of our voices. Through voice treatment, we aim to improve the larynx's functionality, but it's also critical to take good care of the body and use the voice properly.

Vocal hygiene is important for all performers, not only singers, actors, or musicians. Everyone needs their voice to complete daily duties, including teachers, salespeople, doctors, bankers, and stay-at-home mothers. Voice therapy and adequate vocal hygiene programmes can alter behaviour to prevent harm to the vocal folds.

Any person whose voice is necessary for their employment qualifies as a professional voice user. They are the ones who demand a specific voice tone to influence others. Professional voice users include singers, actors. Pastors are also a professional voice user, who uses their voice for their livelihood. Preacher voice is essentially a parody of a generic, possibly platonic, preacher. It has an odd cadence and is louder, dramatic, more authoritative, formal, stilted, and more resonant.

Franco and Andrus (2007) studied common diagnosis and treatments in professional voice users and concluded that professional voice users are more likely to get microvascular lesions, along with the related vocal fold bleeding and laryngitis, from overusing their voice. The negative effects that voice issues have on their capacity to work, on their general sense of well-being, and occasionally even on their fundamental sense of self, are much more prevalent among professional voice users. The diagnosis and available therapies for these and other issues faced by professional voice users are reviewed in this article, along with the pertinent functions of medical care, voice therapy, and surgery.

Voice abuse or misuse should be suspected, especially in patients who complain of voice fatigue brought on by voice use, whose voices get worse at the end of a working day or week, and in any patient who is consistently hoarse. (Sataloff, 2006).

When we use our voice inappropriately, it can exacerbate laryngeal diseases or even be the direct cause of them. This is known as voice abuse or misusewhich will result in the injuredof one or more of the vocal cords due to sprain or strain in voice.When our vocal folds are forced to come together (adduct) too forcefully, it is called vocal misuse or abuse and it causes your laryngeal process to act excessively. This hyper function may

lead to laryngeal tissue tension, maladaptive behaviour, and changes in your laryngeal musculature if it is habitual or repetitive. Loud talking or shouting excessively are two aggressive behaviours associated with hyper function.

Voice disorders are more likely to develop in professional voice users. The ability to talk normally is impacted by voice abnormalities. Laryngitis and paralysed vocal cords are examples of these conditions. When a person's quality, pitch, and loudness are different from those of people who are comparable in age, gender, culture, ethnicity, and place, it is said to have a voice issue. A voice issue may also develop if the laryngeal mechanism's structure, function, or both stops meeting the speaker's set standards for the mechanism. When psychological pressures cause habitual, maladaptive aphonia or dysphonia, voice quality may also be impacted. Psychogenic voice disorders or psychogenic conversion aphonia/dysphonia are the names given to the ensuing voice disorders.

Voice therapy can be used to address some voice abnormalities. Surgery or medications are used to address other vocal abnormalities. Voice treatment is frequently recommended following surgery and, on occasion, both before and after. Learning new vocal production habits and patterns while letting go of old ones make up voice therapy. Vocal cord healing and vocal behaviour improvement are made possible by voice therapy for those with voice disorders. The treatment makes our voice sound more powerful and more like it did before the voice condition. Voice issue may be avoided with voice therapy.

Voice treatment seeks to resolve or ameliorate issues with the larynx's ability to produce vocal sounds.Our voice should be stronger and sound more like it did before we started therapy. Voice therapy can also be used to train our voice so that we can completely avoid such issues.

Weekly, Carroll, Korovin and Fleming (2018) described vocal health survey among amateur and professional voice users and concluded that a variety of reactions when faced with voice health difficulties, some of which prompt people to seek help from conventional or complementary health practitioners, as well as a combination of both. Professional voice users are those who employ their voice professionally. There are various voice users in the professional world. Pastors are under the second tier of professional voice users in this context. The present research attempt to assess to compare theawareness about vocal hygiene awareness among female and male pastors in Kerala

II. REVIEW OF LITERATURE

Professional voice users are those who make use of their voice on a regular basis. Both male and female pastors utilise their voices professionally. For these a person, speaking out is crucial. They employ their voice in daily life. Any person whose voice is necessary for their employment qualifies as a professional voice user. They are the ones who demand a particular vocal tone to have an impact on others. Voice is one of the most important tools of communication. The majority of individuals today rely on their voice to make a living. Most people require their voice for regular social interactions.

A vocal problem might result from excessive voice use. Koufman& Isaacson (1991) suggested a 'vocal usage' classified into four levels:Level 1: Performers include professional singers and actors. Those who severely uses their voice. Level 2: Professional voice users like clergy, public speaker or politicians, lectures, telephone operators, airline reservationists etc. Those who moderately use their voices. Level 3: Non vocal professionals like doctors, lawyers, business persons, sales person. Level 4: Non vocal professionals include factory worker, labourer and clerk.

A voice issue can also result from vocal abuse. Voice abuse can result in the calluses or blisters known as nodes and polyps on the vocal cords. When we overuse or abuse our voice, it can exacerbate laryngeal disorders or even be the root cause of them. This means that we injure one or more of our vocal cords when we sprain or strain our voice. Voice issue can be brought on by overusing the voice, bacterial or viral infections, or irritants like chemicals breathed or stomach acid. Identification and treatment of vocal abnormalities is very important. The profession which involved voice evaluation are: otolaryngologist, SLP, neurologist, paediatrician, general physician etc.

Poor vocal hygiene may have a significant role in the development of voice issues. The first stage of voice therapy programmes therefore involves hygienic voice therapy. Vocal problems frequently get better without direct voice subsystem manipulation when bad hygiene habits are changed. The improper use of voice components on a regular basis is another example of poor vocal hygiene. Hygienic voice treatment aims to create good vocal habits in the patient. Vocal hygiene techniques are used to focus on maintaining the health of the vocal fold cover, so avoid using dehydrating substance excessively such as alcohol and caffeine, daily increase in water consumption in order to lessen coughing and clearing of throat. Avoid whispering, yelling/ screaming, excessive talking in noisy environment. Avoid smoking, reduce the use of spicy eatables.

Behlau& Oliveira (2009) investigated on vocal hygiene for the voice professional. The study revealed that the use of vocal hygiene as a management strategy for those with voice issues. The effectiveness of vocal hygiene as a preventive measure is difficult to evaluate because programmes are sometimes expensive and produce little data. Vocal hygiene alone has had modest but effective effects in the therapy of voice problems.

Vocal hygiene's impact as a part of a full therapy programme can be challenging to separate. However, certain aspects of vocal hygiene, such as vocal rest and hydration, have been linked to better treatment results.

Voice problems in professions requiring high demands on the vocal mechanism were primarily caused by vocal abuse and misuse, either alone or in conjunction with biological and psychosomatic factors. This can lead to chronic or acute vocal attrition symptoms like vocal fatigue, hoarseness, throat discomfort or pain, and benign mucosal lesions.

Timmermans, Vanderwegen&Bodt(2005) examined the outcome of vocal hygiene in singers and higher voice demands necessitate more thorough and structured voice care, therefore accurate medical diagnosis and recommendations tailored specifically for singers must be given. Vocal hygiene used to be associated negatively; it is now advised to have a more encouraging and supportive approach to voice care, paying closer attention to the singer.

Western Studies

Mattiske, Oates & Greenwood (1998) reviewed prevalence, causes, prevention, and treatment of vocal problems among teachers andthere are many teachers who have voice issues, but the causes and contributing factors are not clear.

Orlova, Vasilenko, Zakharova&Kozlova (2000) studied the prevalence, causes and specific features of voice disturbances in teachers and concluded that teachers have been found to link vocal abnormalities to a variety of subjective emotions that make their work challenging, in addition to variations in voice timbre. The main causes of voice disruptions include vocal overloads, which vary among teachers with different specialties, their incapacity to use their voices, psycho emotional pressures, recurrent colds, as well as a number of elements working in concert.

Lawrence, Treole, McCabe& Toppin (2000) studied the effects of preventive vocal hygiene education on the vocal hygiene habits and perceptual vocal characteristics of training singers and that minor adjustments to vocal hygiene practises and perceptual voice qualities. However, the individuals did claim a substantial amount of benefit and learning.

Sataloff, Ackah& Hawkshaw (2007) studied clinical anatomy and physiology of the voice and the supraglottic vocal tract serves as a resonator, the subglottic vocal tract as a power source, and the vocal folds as the oscillator of the vocal tract. Voice creation is the result of complicated interactions.

Hinton&Middleton (2008) investigated on vocal behaviors and characteristics of female pastors and concluded that female pastors are in need of relevant information provided by professionals so that voice problems can be eliminated or prevented.

Bolbol, Zalat, Hammam &Elnakeb (2017) investigatedrisk factors of voice disorders and impact of vocal hygiene awareness program among teachers in public schools in Egypt. The study revealed that Egyptian teachers who work in public school deal with courses with several students in each one. Inadequate facilities and little available resources for assistance are additional challenges they face. Their chance of developing voice-related diseases is therefore very significant. Enhancing their level of work and reducing any long-term impairments and/or disabilities will be made possible by raising awareness about healthy behaviour with the voice in their professions.

Lobo, Madazio, Badaro&Behlau (2018) investigated male preachers' knowledge of various aspects of vocal hygiene and health came to the conclusion that male preachers have good knowledge of these topics, they also have a high risk of developing vocal disorders because of their frequent talkativeness and loud vocalisations at work.

Ibekwe (2019) studied the hoarseness of voice among Preachers in Port Harcourt Metropolis and the knowledge of voice hygiene among preachersand concluded that majority of the preachers lack knowledge of voice care and hygiene.

Pomaville,Tekerlek& Radford (2020) studied the effectiveness of vocal hygiene education for decreasing at-risk vocal behaviors in vocal performers. The study revealed that the vocal hygiene education programme has the potential to improve participants' at-risk phono traumatic habits and raise participants' knowledge of voice care. They concluded that participation in a vocal hygiene education programme will increase knowledge about voice production and vocal hygiene in vocal performers is supported by the study's findings.

Ravall&Simberg (2020) investigated the voice disorders and voice knowledge in choir singers and concluded that choir singers appear to have a prevalence of voice disorders that is comparable to that of professional voice users.

Porcaro &Gollery (2021) investigated impact of vocal hygiene training on teacher willingness to change vocal behaviors. The results revealedthat significant changes in participant readiness to use vocally hygienic behaviours were seen as a result of the vocal hygiene instruction.

Indian Studies

Boominathan, Rajendran, Nagarajan&Gnanasekar(2008) did a survey on vocal abuse and vocal hygiene practices among different level professional voice users in India and concluded that the highest point prevalence and frequency of voice issues were seen in politicians and business people.

Achary a, Sahoo, Sreedharan& Pathak (2008) did a case report on rare causes of voice hoarseness and revealed that it is important to receive antitubercular medication as soon as possible after a diagnosis of tuberculosis because doing so leads to full recovery and the reversal of vocal hoarseness.

Gunjawate (2020) investigated a pilot survey of warm – up practices and perceptions among Indian classical singers and concluded that vocal hygiene, voice care, and management advice will be beneficial for vocalists.

Balasubramanian, Divya, Ramar& Anand (2020) studied on vocal hygiene program for information technology enabled service professionals and concluded that when compared the results between pre and post vocal hygiene program a very good positive result showing the awareness of the vocal hygiene program.

Nallamuthu, Boominathan, Arunachalam &Mariswamy (2021) investigated outcomes of vocal hygiene program in facilitating vocal health in female school teachers with voice problem and concluded that although vocal hygiene program helped teachers become more aware of potentially dangerous phono traumatic behaviours and their vocal health, its effectiveness in enhancing teachers' voices physiologically was limited.

Rahul &Winston (2021) studied social representation of vocal hygiene in India and Bhutan: a cross-sectional study. The study revealed that between the two populations (India and Bhutan), there were differences in the professional voice use pattern, but not in the recreational or/and personal voice use patterns.

Gautam, Nayak & Devadas (2022) studied perception of primary school teachers towards voice problems and vocal health seeking behaviors: a qualitative study. The study revealed that teachers ignore their voice issues because they believe they are common, unavoidable, and a necessary part of their job, despite being aware of the negative repercussions of voice issuesand were hesitant to seek medical doctors unless something is seriously affecting them because of their hectic work schedule and lack of support from management.

NEED FOR THE STUDY:

The way that professional voice users use their voices is greatly influenced by their vocal hygiene habits. Vocal hygiene practises must be prioritised for people who use their voices professionally.It is clear from the review above how significant self-reported voice issues are, as well as how they affect people who use their voices professionally. Professional voice users, such as clergy, are under level 2, and also pastors fall under this category. Pastors of both genders have equal responsibilities and speak out equally. They place a high value on good vocal hygiene.

Pentecostal churches are led by pastors, who must deliver sermons virtually every day of the week, often travelling and frequently delivering them at outdoor gatherings. Pastors are viewed as leaders in Christian traditions; they may be found giving sermons at significant gatherings or serving in administrative capacities.

Pastors setting up conventions, conferences, bible studies, and missionary activities. In addition to preaching for hours on end, they occasionally have to conduct services in numerous places with low air humidity and with or without amplification, increasing the likelihood that they may need to use loud voices for extended periods of time.

The purpose of this study was to compare and assessto learn more about how male and female pastors use their voices and how aware they are about the voice usage. The current study collected information from male and female pastors before creatingawareness about the anatomy and physiology of the voice, the causes of voice issues, and vocal hygiene advice. The response was then collected following the awareness training.

III. METHOD

AIM:

The aim of the study was to compare the vocal hygiene awareness among male pastors and female pastorsin Alappuzha district, Kerala.

PARTICIPANTS:

15 male pastors and 15 female pastors participated in the present study. All participants were Malayalam native speakers and were from Alappuzha district in Kerala.

INCLUSIVE CRITERIA:

- Male pastors and female pastors should be native speaker of Malayalam

EXCLUSIVE CRITERIA:

- Participants should not have any speech, language and/or hearing problem

STIMULUS USED:
A closed-ended (yes/no) questionnaire which developed and validated by SLP's.
The study was carried out inthree phaseswhich include developing questionnaire,administering a questionnaire and executing a vocal hygiene awareness programme.

PHASE 1
DEVELOPING QUESTIONNAIRE:
In order to determine the level of awareness in vocal hygiene between male pastors and female pastors of 30 closed-set (yes/no) questions were created. All of these questions were validated by speech-language pathologist with more than five years of experience in the area. The correction and suggestion advised by SLP's were incorporate and final questionnaire was ready to administer.
30 closed - ended questions (yes/no questions) were divided into following sections
a) Demographic data
b) Section A: Anatomy and physiology of larynx
c) Section B: Causes of voice disorders
d) Section C: Vocal hygiene tips

PHASE II& III
ADMINISTERING A QUESTIONNAIRE AND EXECUTING A VOCAL HYGIENE AWARENESS PROGRAMME:
15 female pastors and 15 male pastors participated in the study. The participants were required to answer pre-test and post-test questionnaires following the demonstration programme. The objective was to assess the knowledge of many areas of voice and voice production system. The pre-test questionnaire was given for evaluating prior information of vocal hygiene awareness. The female pastors and male pastors took 10-15 minutes to complete questionnaire. A video was shown after the self-administration of pre-test questionnaire. The effectiveness of the vocal hygiene program was evaluated based on the participants' ability to respond to the same question prior to and following vocal hygiene awareness.
SCORING:
Pre-test and post-test responses from 30 participants were individually graded. For correct answer score of 1 was given and wrong response of 0 was given. The obtained scores were tabulated and statistically analysed for pre and post-test.
STATISTICAL ANALYSIS:
The obtained data was statistically analysed by using the method McNemer Test.

IV. RESULTS AND DISCUSSION

The present study aims to evaluate the awareness of vocal hygiene awareness program among male pastors and female pastors. The scores obtained on pre and post awareness were subjected to statistical analysis and results obtained are discussed below.

Table 4.1:
Showing the vocal hygiene awareness of female and male pastors.

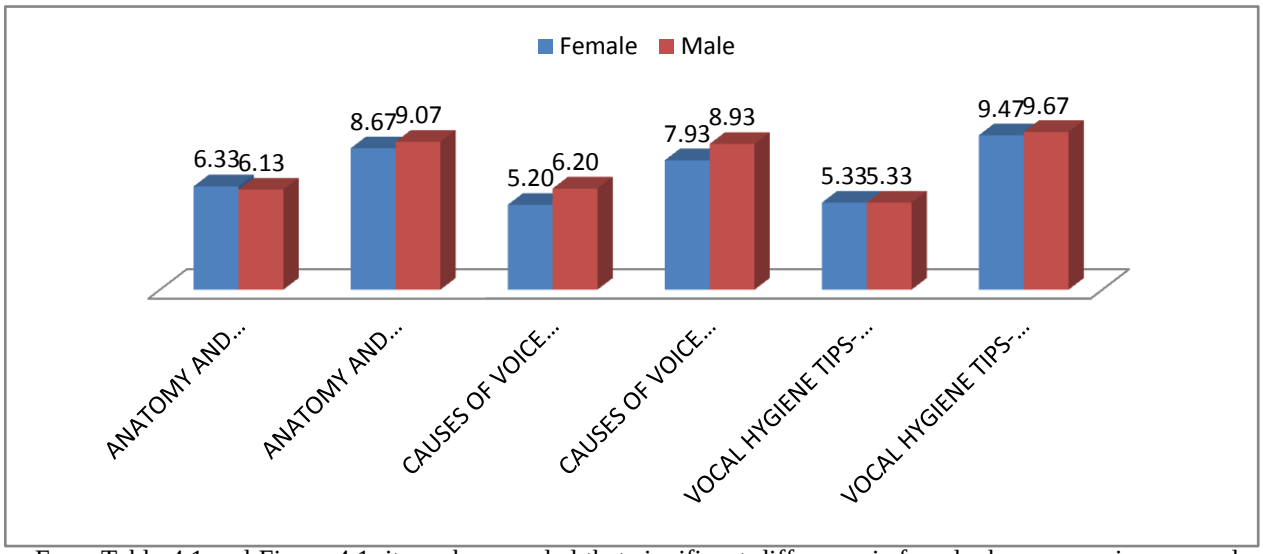
Gender		Mean	Std. Deviation	Paired t test - p value	Significance
Female	ANATOMY AND PHYSIOLOGY OF LARYNX-Pre	6.33	1.799	0.001	Sig
	ANATOMY AND PHYSIOLOGY OF LARYNX-Post	8.67	1.291		
	CAUSES OF VOICE DISORDERS-Pre	5.20	2.933	0.008	Sig
	CAUSES OF VOICE DISORDERS-Post	7.93	2.219		
	VOCAL HYGIENE TIPS-Pre	5.33	0.900	0.000	Sig
	VOCAL HYGIENE TIPS-Post	9.47	1.302		
	Over all-Pre	16.87	4.658	0.000	Sig
	Over all-Post	26.07	3.731		
Male	ANATOMY AND PHYSIOLOGY OF LARYNX-Pre	6.13	2.416	0.002	Sig
	ANATOMY AND PHYSIOLOGY OF LARYNX-Post	9.07	0.961		
	CAUSES OF VOICE DISORDERS-Pre	6.20	2.007	0.001	Sig
	CAUSES OF VOICE DISORDERS-	8.93	0.884		

	Post				
	VOCAL HYGIENE TIPS-Pre	5.33	1.047	0.000	Sig
	VOCAL HYGIENE TIPS-Post	9.67	0.900		
	Over all-Pre	17.67	3.478	0.000	Sig
	Over all-Post	27.67	2.350		

***Sig - significance**

Figure 4.1

Showing the vocal hygiene awareness among two populations.



From Table 4.1 and Figure 4.1, it can be revealed that significant difference is found when comparing pre and post overall vocal hygiene awareness program in both females and male pastors.

Vocal hygiene awareness in female pastors

Table 4.2

Showing the comparison of pre-post vocal hygiene awareness in female pastors.

Gender Female								
			Yes				McNemer test p value	Significance
			Pre		Post			
			Count	Row N %	Count	Row N %		
Parameter	ANATOMY AND PHYSIOLOGY OF LARYNX	Q1	14	93.3%	15	100.0%	0.318	NS
		Q2	8	53.3%	14	93.3%	0.020	Sig
		Q3	9	60.0%	14	93.3%	0.040	Sig
		Q4	9	60.0%	14	93.3%	0.040	Sig
		Q5	12	80.0%	13	86.7%	0.628	NS
		Q6	13	86.7%	14	93.3%	0.548	NS
		Q7	5	33.3%	13	86.7%	0.006	Sig
		Q8	14	93.3%	15	100.0%	0.318	NS
		Q9	3	20.0%	5	33.3%	0.416	NS
		Q10	8	53.3%	13	86.7%	0.056	NS
	CAUSES OF VOICE DISORDERS	Q1	12	80.0%	14	93.3%	0.292	NS
		Q2	8	53.3%	14	93.3%	0.020	sig
		Q3	8	53.3%	13	86.7%	0.056	NS

		Q4	5	33.3%	13	86.7%	0.006	sig
		Q5	2	13.3%	3	20.0%	0.628	NS
		Q6	7	46.7%	13	86.7%	0.028	sig
		Q7	12	80.0%	14	93.3%	0.292	NS
		Q8	7	46.7%	14	93.3%	0.009	sig
		Q9	9	60.0%	9	60.0%	1.000	NS
		Q10	8	53.3%	12	80.0%	0.133	NS
	VOCAL HYGIENE TIPS	Q1	15	100.0%	15	100.0%	1.000	NS
		Q2	6	40.0%	14	93.3%	0.004	sig
		Q3	10	66.7%	13	86.7%	0.206	NS
		Q4	8	53.3%	14	93.3%	0.020	sig
		Q5	6	40.0%	15	100.0%	0.001	sig
		Q6	5	33.3%	13	86.7%	0.006	sig
		Q7	7	46.7%	14	93.3%	0.009	sig
		Q8	10	66.7%	14	93.3%	0.079	NS
		Q9	6	40.0%	15	100.0%	0.001	sig
		Q10	7	46.7%	15	100.0%	0.003	sig

***NS- No Significance Sig- Significance**

Figure 4.2

Showing the comparison of pre-post vocal hygiene awareness in female pastors.

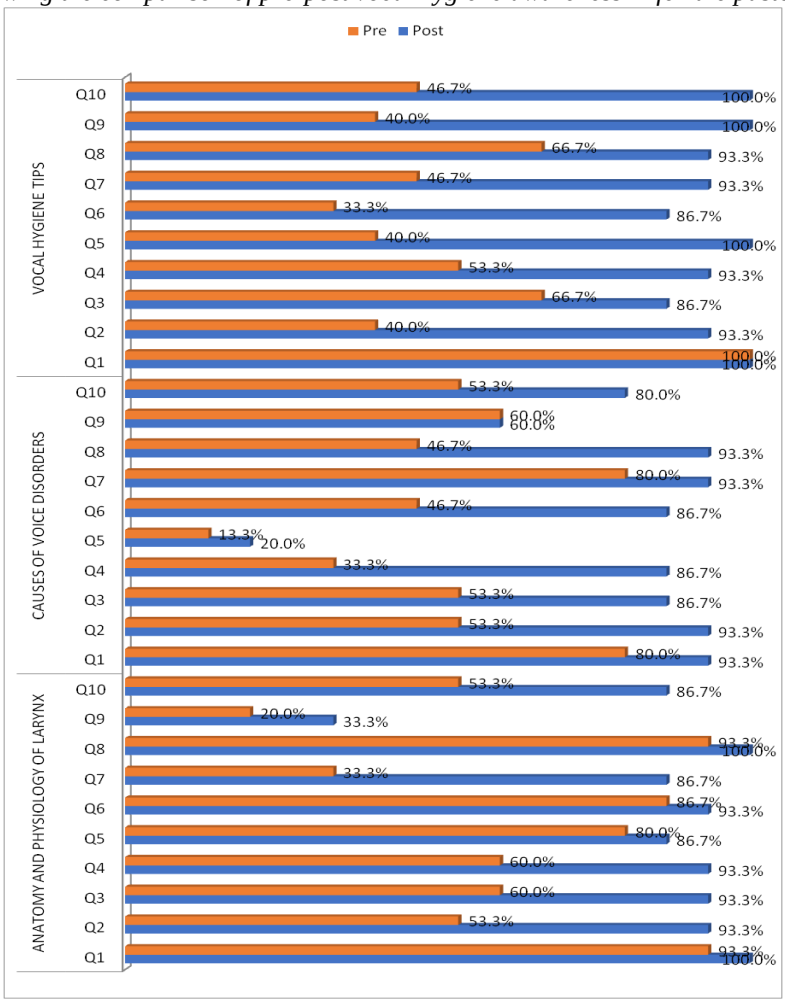


Table 4.2 and Figure 4.2 showing Pre and Post awareness of vocal hygiene in female pastors. The results revealed that significant difference is seen in 4 questions (q2, q3, q4, q7) related to anatomy and physiology of larynx, 4 questions (q2, q4, q6, q8) related to cause of voice disorders and 7 questions (q2, q4, q5, q6, q7, q9, q10) related to vocal hygiene tips.

Vocal hygiene awareness in male pastors

Table 4.3

Showing the comparison of pre-post vocal hygiene awareness in male pastors.

Gender Male								
			Yes				McNemer test p value	Significance
			Pre		Post			
			Count	Row N %	Count	Row N %		
Parameter	ANATOMY AND PHYSIOLOGY OF LARYNX	Q1	13	86.7%	15	100.0%	0.154	NS
		Q2	7	46.7%	14	93.3%	0.009	sig
		Q3	10	66.7%	15	100.0%	0.021	sig
		Q4	7	46.7%	13	86.7%	0.028	sig
		Q5	9	60.0%	15	100.0%	0.011	sig
		Q6	14	93.3%	15	100.0%	0.318	NS
		Q7	6	40.0%	14	93.3%	0.004	sig
		Q8	14	93.3%	15	100.0%	0.318	NS
		Q9	0	0.0%	5	33.3%	0.021	sig
		Q10	12	80.0%	15	100.0%	0.079	NS
	CAUSES OF VOICE DISORDERS	Q1	12	80.0%	14	93.3%	0.292	NS
		Q2	11	73.3%	15	100.0%	0.040	sig
		Q3	10	66.7%	15	100.0%	0.021	sig
		Q4	6	40.0%	14	93.3%	0.004	sig
		Q5	6	40.0%	6	40.0%	1.000	NS
		Q6	8	53.3%	15	100.0%	0.005	sig
		Q7	14	93.3%	15	100.0%	0.318	NS
		Q8	6	40.0%	15	100.0%	0.001	sig
		Q9	10	66.7%	10	66.7%	1.000	NS
		Q10	10	66.7%	15	100.0%	0.021	sig
	VOCAL HYGIENE TIPS	Q1	11	73.3%	13	86.7%	0.369	NS
		Q2	7	46.7%	14	93.3%	0.009	sig
		Q3	9	60.0%	15	100.0%	0.011	sig
		Q4	7	46.7%	15	100.0%	0.003	sig
		Q5	10	66.7%	15	100.0%	0.021	sig
		Q6	4	26.7%	15	100.0%	0.000	sig
		Q7	6	40.0%	14	93.3%	0.004	sig
		Q8	14	93.3%	15	100.0%	0.318	NS
		Q9	8	53.3%	15	100.0%	0.005	sig
		Q10	4	26.7%	14	93.3%	0.001	sig

***NS- No Significance Sig- Significance**

Figure 4.3

Showing the comparisonof pre-post vocal hygiene awareness in male pastors.

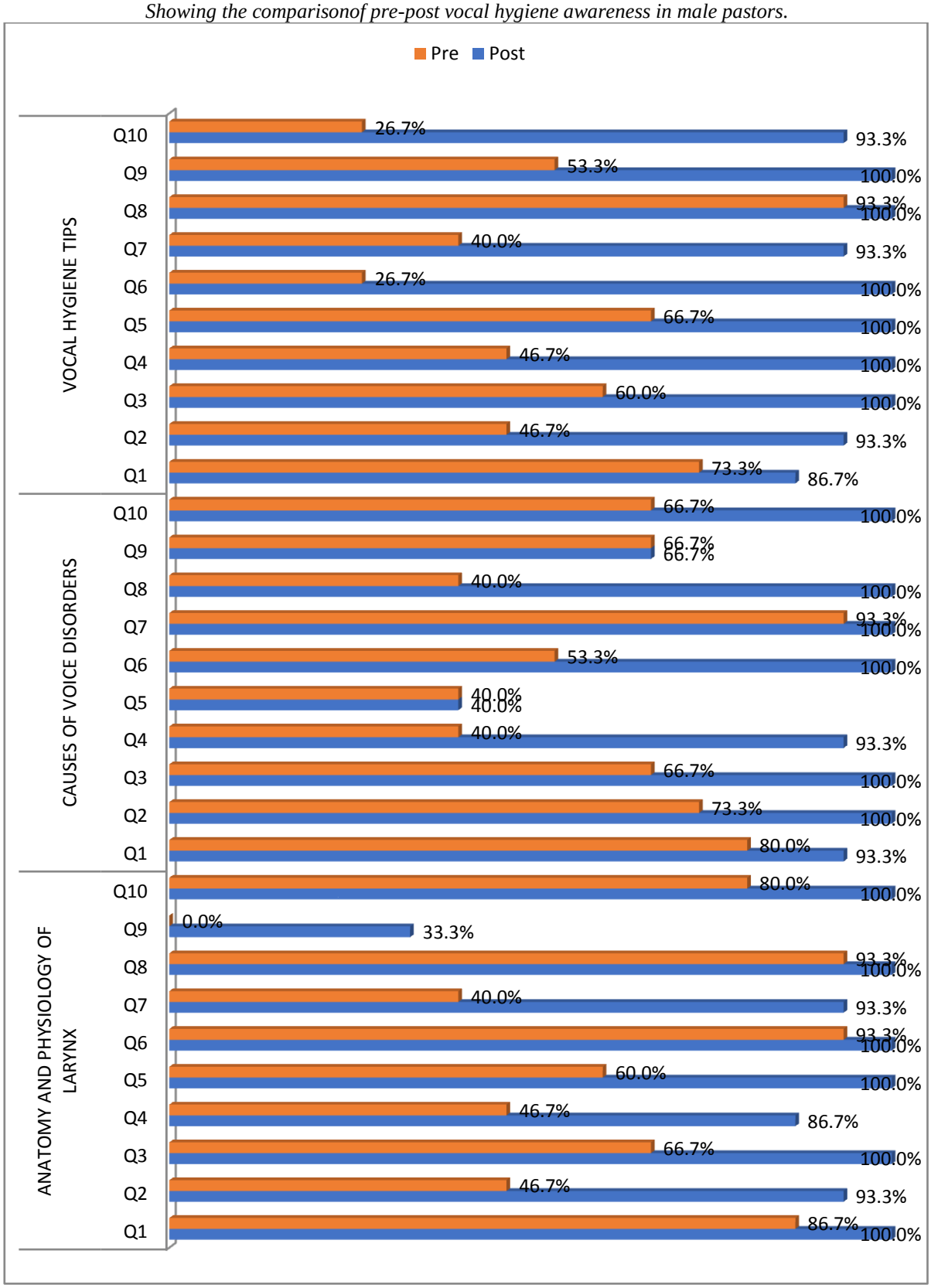


Table 4.3 and Figure 4.3 showing Pre and Post awareness of vocal hygiene in male pastors. The results revealed that significant difference is seen in 6 questions (q2, q3, q4, q5, q7, q9) related to anatomy and physiology of larynx, 6 questions (q2, q3, q4, q6, q8, q10) related to cause of voice disorders and 8 questions (q2, q3, q4, q5, q6, q7, q9, q10) related to vocal hygiene tips.

Table 4.4
Showing the comparison between the female and male pastor groups.

		Mean	Std. Deviation	t test p-value	Significance
ANATOMY AND PHYSIOLOGY OF LARYNX-Pre	Female	6.33	1.799	0.983	NS
	Male	6.13	2.416		
ANATOMY AND PHYSIOLOGY OF LARYNX-Post	Female	8.67	1.291	0.353	NS
	Male	9.07	0.961		
CAUSES OF VOICE DISORDERS-Pre	Female	5.20	2.933	0.325	NS
	Male	6.20	2.007		
CAUSES OF VOICE DISORDERS-Post	Female	7.93	2.219	0.217	NS
	Male	8.93	0.884		
VOCAL HYGIENE TIPS-Pre	Female	5.33	0.900	0.726	NS
	Male	5.33	1.047		
VOCAL HYGIENE TIPS-Post	Female	9.47	1.302	0.44	NS
	Male	9.67	0.900		
Over all-Pre	Female	16.87	4.658	0.66	NS
	Male	17.67	3.478		
Over all-Post	Female	26.07	3.731	0.211	NS
	Male	27.67	2.350		

* **NS- No Significance**

From the table 4.4 the result suggests that there is no significant difference in the awareness among female and male pastors related to 3 sections of questionnaire related to vocal hygiene program.

V. DISCUSSION

Professional voice users include actors, singers, media professionals and entertainers. They also include clergy, politicians, lawyers, professors and teachers. Koufman and Isaacson (1991) suggested a 'vocal usage' classified into four levels and clergy, public speaker or politicians, lectures, telephone operators, airline reservationists, Information Technology Enabled Services etc those who moderately use their voices are comes under the level 2. Female pastors and male pastors are come under clergy for whom their voice is important factor that keeps their work going.

The present study aimed to assess the vocal hygiene awareness among fifteen female pastors and fifteen male pastors in Alappuzha district. The participantswere required to fill out a post-test questionnaire following the lecture and demonstration session. The results revealed that there is lack of awareness of vocal hygiene within the group of female and male Pastorsbefore conducting vocal hygiene awareness program which is consistent with the study by Ibekwe (2019) on preachers which revealed that the knowledge of voice hygiene among preachers that majority of the preachers lack knowledge of voice care and hygiene before undergoing vocal hygiene awareness programme.The present study also revealed that male pastors and female pastors are equally knowledgeable about the programme for vocal hygienewhich is contradicting to the study by Hinton and Middleton (2008). The prevailing high literacy rates in Kerala maybe the soul reason that establishes the quality knowledge expressed by pastors of both genders which has enabled them to give a positive response even to the most anatomy-based questions in the questionnaire.

The findings of the current study helped those who use their voices professionally to keep them stable and clear throughout the day. As a result, it is essential for the speech-language pathologist to prioritise vocal health and optimal vocal effectiveness when treating voice problems and as part of their duty to promote vocal health.

VI. SUMMARY AND CONCLUSION

The voice needs meticulous and accurate attention on all dimensions because it is the result of a multifaceted mechanism. Pastors, who use their voices professionally, need to take extra care of them because maintaining a healthy voice is a need for remaining in this line of work. For professional voice users and voice

disorder sufferers, voice care was offered in the form of a vocal hygiene package for the prevention and treatment of voice disorders.

The aim of the current study was not to observe any behavioural changes as a result of the lecture but rather to investigate the voice hygiene awareness programme among male and female pastors. The participants were fifteen female and fifteen male pastors from Kerala district who are fluent in Malayalam.

The pre- and post-questionnaires were completed by the female pastors and male pastors in 15-20 minutes. The hour-long awareness event featured power point and video presentations. The anatomy and physiology of voice production, causes of voice problem, overuse and abuse of the voice, and dos and don'ts were all covered in the video presentations and PowerPoint. The effectiveness of the participants' responses was evaluated based on their capacity to respond to the same questions before and after the awareness training.Theresults revealed notable difference of vocal hygiene awareness between the scores obtained by both genders in pre and post questionnaire.Both female pastors and male pastors are equally conscious about proper vocal hygiene.As a result, the programme for vocal hygiene helped people develop good for protecting their voice.

Implication of the study

The study helps to find the vocal hygiene awareness among the female pastors and male pastors.

Limitations

- Limited sample size.
- The samples were exclusively collected from Alappuzha district in Kerala.

Further studies:

- Sample size can be increased.
- The study can be administered in pastors of other districts in Kerala.

REFERENCES

[1]. Acharya, V. K., Sahoo, R., Sreedharan, S., Anand, R., & Pathak, R. (2008). Rare causes of voice hoarseness: A case report. Nepal Medical College Journal, 10(2), 141-143.

[2]. Behlau, M., & Oliveira, G. (2009). Vocal hygiene for the voice professional. Current Opinion in Otolaryngology &Head and Neck Surgery, 17(3), 149-154.

[3]. Bolbol, S. A., Zalat, M. M., Hammam, R. A., &Elnakeb, N. L. (2017). Risk factors of voice disorders and impact of vocal hygiene awareness program among teachers in public schools in Egypt. Official Journal of the Voice Foundation and the International Association of Phonosurgery, 31(2), 251-e9.

[4]. Boominathan, P., Rajendran, A., Nagarajan, R., Seethapathy, J., &Gnanasekar, M. (2008).

[5]. Vocal abuse and vocal hygiene practices among different level professional voice users in India: a survey. Asia pacific journal of speech, language and Hearing, 11(1), 47-53.

[6]. BOONE, Daniel R and Mc FARLANE, Stephen. (2010). Voice and voice therapy, 4th ed. p.6.

[7]. Broaddus-Lawrence, P. L., Treole, K., McCabe, R. B., Allen, R. L., & Toppin, L. (2000). The effects of preventive vocal hygiene education on the vocal hygiene habits and perceptual vocal characteristics of training singers. Official journal of voice foundation and the international association of phonosurgery, 14(1), 58-71.

[8]. DWORKIN, J.P. (1997). Vocal Pathologies. p.8.

[9]. Franco, R. A., & Andrus, J. G. (2007). Common diagnoses and treatments in professional voice users. Otolaryngologic Clinics of North America, 40(5), 1025-1061.

[10]. Gautam, R., Nayak, S., & Devadas, U. (2022). Perception of Primary School Teachers Towards Voice Problems and Vocal Health-Seeking Behaviors: A qualitative study.Official Journal of the Voice Foundation and the International Association of Phonosurgery.

[11]. Gunjawate, D. R. (2020). A pilot survey of warm-up practices and perceptions among Indian classical singers.Official Journal of the Voice Foundation and the International Association of Phonosurgery, 34(1), 156-e15.

[12]. Koufman JA, Isaacson G. (1991). The spectrum of vocal dysfunction. Otolaryngol Clinic North America. 199;24:985-88.

[13]. Lobo, B. P. L., Madazio, G. M. V., Badaró, F. A. R., &Behlau, M. S. (2018, April). Vocal risk in preachers: talkativeness, vocal loudness, and knowledge about vocal health and hygiene. Journal of CoDAS(Vol. 30).

[14]. Mattiske, J. A., Oates, J. M., & Greenwood, K. M. (1998). Vocal problems among teachers: a review of prevalence, causes, prevention, and treatment. Official journal of voice foundation and the international association of phonosurgery, 12(4), 489-499.

[15]. Middleton, R. L., & Hinton, V. A. (2009). A preliminary investigation of the vocal behaviours and characteristics of female pastors. Official journal of voice foundation and the international association of phonosurgery, 23(5), 594-602.

[16]. Nallamuthu, A., Boominathan, P., Arunachalam, R., &Mariswamy, P. (2021). Outcomes of vocal hygiene program in facilitating vocal health in female school teachers with voice problems.Official Journal of the Voice Foundation and the International Association of Phonosurgery.

[17]. Orlova, O. S., IuS, V., Zakharova, A. F., Samokhvalova, L. O., & Kozlova, P. A. (2000). The prevalence, causes and specific features of voice disturbances in teachers. Journal of Vestnikotorinolaringologii, (5), 18-21.

[18]. Pomaville, F., Tekerlek, K., & Radford, A. (2020). The effectiveness of vocal hygiene education for decreasing at-risk vocal behaviors in vocal performers.Official Journal of the Voice Foundation and the International Association of Phonosurgery, 34(5), 709-719.

[19]. Porcaro, C. K., Howery, S., Suhandron, A., &Gollery, T. (2021). Impact of vocal hygiene training on teachers' willingness to change vocal behaviors. Official Journal of the Voice Foundation and the International Association of Phonosurgery, 35(3), 499-e1.

[20]. Rahul, A., & Winston, J. S. (2021). Social Representation of 'Vocal Hygiene' in India and Bhutan: A Cross-Sectional Survey.Official Journal of the Voice Foundation and the International Association of Phonosurgery.

[21]. Ravall, S., &Simberg, S. (2020). Voice disorders and voice knowledge in choir singers. Official Journal of the Voice Foundation and the International Association of Phonosurgery, 34(1), 157-e1.

[22]. Robert T. Sataloff. (2006). Vocal health and Pedagogy, Volume 11. p.9.
[23]. Robert T Sataloff, Yolanda D Heman-Ackah, Mary J Hawkshaw (2007).Clinical anatomy and physiology of the voice. National centre for biotechnology information 40(5):909-29, v. doi: 10.1016/j.otc.2007.05.002.
[24]. Sivaranjani Balasubramanian, Perumal Santhanam Divya, AbinayaRamar, Dikshitha Anand (2020). Vocal Hygiene Program for Information Technology Enabled Service Professionals.International Journal of Health Sciences and Research Vol.10; Issue: 12.
[25]. STEMPLE, Joseph C., Roy, Nelsonand KLABEN, BernicevK. (2014). Clinical Voice Pathology: Theory and Management, 5th ed. p.5-6.
[26]. Timmermans, B., Vanderwegen, J., & De Bodt, M. S. (2005). Outcome of vocal hygiene in singers. Current opinion in otolaryngology & head and neck surgery, 13(3), 138-142.
[27]. Weekly, E. M., Carroll, L. M., Korovin, G. S., & Fleming, R. (2018). A vocal health survey among amateur and professional voice users.Official journal of voice foundation and the international association of phonosurgery, 32(4), 474-478.