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Teacher's Attitude Towards Voice Related Quality of Life and Treatment Seeking Behavior

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ABSTRACT

Background: Voice is produced by using vocal cords. If there is any hindrance in production of voice overall communication is barred causing significant impact in quality of life of an individual. In the field of teaching frequent voice production is observed more than 6 to 7 hours per day. In this case, vocal complaints are clearly observed among primary school teachers.

Objective: Teacher's Attitude Towards Voice Related Quality of Life and Treatment Seeking Behavior

Methods: A Cross sectional study was conducted in Lahore teacher's community. Convenient sampling technique was used. The sample size was N=174. Sample population included both male and female primary school teachers with five years of teaching experience. However, it excludes university professors and other professional occupation. Voice handicapped index and Treatment seeking behavior questionnaire was filled by participants and data has been collected. The Voice Handicap Index (VHI) consists of 30 items that are grouped into three subscales: Functional, Physical, and Emotional. Each item is assessed using a 5-point Likert scale, ranging from 0 (never) to 4 (always). The total score for the VHI can vary from 0 to 120, with higher scores indicating a more significant perceived impact on voice-related quality of life. Each subscale (Functional, Physical, and Emotional) has a scoring range of 0 to 40.

Treatment Seeking Behavior Questionnaire appears to be designed to assess individuals' perceptions, experiences, and behaviors related to their voice problems and treatment-seeking attitudes. Treatment Seeking Behavior Questionnaire, can calculate the frequency distribution for each response option ("Very much," "Somewhat," "Very low," "Not applicable") for each question.

Data collected from the Voice Handicap Index (VHI) and Treatment Seeking Behavior Questionnaire was imported into SPSS 26. Categorical variables, such as gender and treatment-seeking behavior, were ensured to have consistent coding.

Frequencies and percentages were calculated for categorical variables like gender. Distribution of scores were calculated for each subscale (Functional, Physical, Emotional). The overall VHI score and its descriptive statistics were calculated. Frequency distribution and percentages were calculated for each response option of the questionnaire items.

Results: In this study predominantly female (86.2%), aged between 18 to 50 years, findings revealed varied attitudes towards seeking voice therapy. Despite of vocal issues reported by a significant portion of participants, only 35% showed willingness to seek voice therapy, while 42% had a positive attitude towards treatment and others are no interested in getting treatment. Factors such as lack of family support; awareness of available resources cause decreased motivation toward treatment-seeking behavior is observed. 73% teachers face difficulty of being heard due to their voice issue and 75 % people have issue with voice clarity.

Conclusion: According to the results of the study primary school teachers who showed voice complaints who come with voice complaints shows hesitation for getting voice therapy.

Key words: Voice problems, teacher vocal complaints, vocal hygiene, Treatment of voice problems, voice therapies, seeking behaviors.

INTRODUCTION

Voice is a fundamental component of communication. Voice impacts the careers of educators. Environmental, physiological, and psychological elements influence the voice. The field of vocoergonomy, which investigates the voice, places emphasis on the variables that regulate vocal burden in accordance with the health of the voice user [1] .

Epidemiological studies indicate vocal abuse by educators is pervasive. Vocal abuse increased tension on the subglottic region and the muscles of the neck and shoulders. Voice difficulties may arise due to psychological and physical conditions present in the workplace. In a variety of professional domains, the voice is an invaluable asset [2] . Undoubtedly, this is how more than 25% of Finland's workforce operates[3] . Although professions differ, verbal demands also differ.

Despite the fact that voice problems can hinder the performance of educators, many are unable to obtain medical treatment due to logistical obstacles. Teachers who fail to address vocal concerns in the early stages and only consult a professional for assistance when they have a substantial negative impact on their teaching and daily activities[4] . Voice issues have a substantial negative effect on professional performance, attendance, and retention. Regardless of gender or attendance, student achievement is harmed by teachers' voice issues[5] . Difficulties with the voice of educators may hinder the speech processing and education of children. Furthermore, these children are falling behind academically due to difficulties in understanding spoken language[6] . Instructors with voice impairments have a higher rate of absenteeism and a greater propensity to change professions. Sound fatigue and excessive sound utilization are prevalent concerns among students undergoing teacher preparation. Early childhood educators are deficient in the competencies necessary to administer effective instruction[7] . Prolonged voice consumers are more prone to experiencing voice difficulties. As a result of improper sound usage and additional physical, environmental, personal, and occupational factors, voice difficulties are more prevalent among educators. Structured vocal hygiene programs (VHP) improve the sound health of educators and decrease sound trauma[8] .

Proper vocal health is a prerequisite for a functional vocal apparatus in all vocal professions. Educators ought to contemplate sound health (VH) as they gain knowledge of the potential for sound impairment[9] . Classrooms are dominated by oral discourse, and instruction is continuous. Extreme sound usage is known as vocal overload. Educators in the control group of the study reported greater verbal manifestations, fatigue, and difficulties with swallowing and wheezing[10] . A growing number of experts consider voice congestion to be a risk factor.

To impede auditory perception, in the classroom, (Fundamental frequency) F0 frequencies are utilized. The influence of sound loading may be discerned by comparing pauses and end-of-workday periods. Instructors have reported an increase in voice problems since beginning their careers. Another researcher was the first to propose it. Fifty percent of educators surveyed appeared to have vocal attrition symptoms. 6 and 22%, respectively, had voice problems that prevented them from using their voice[1] .

Voice difficulties were more prevalent among women (38% vs. 26%), putting physical education instructors at risk. Due to frequent voice use, leading to vocal overuse or strain. Studies show that female teachers are more likely to report voice problems than their male counterparts, likely due to both vocal demands and biological factors. This can result in hoarseness, vocal fatigue, and a reduced vocal range A study identified the major voice related symptoms[11, 12] . A study highlighting a high risk of vocal health issues among teachers and the influence of gender, age, and prior voice problems on their vocal well-being. This underscores the importance of implementing vocal training programs to ensure teachers maintain healthy and sustainable voice use throughout their careers[12] . A comprehension of this correlation can additionally assist medical decision-making in the context of voice control concerns and the necessity for a course of action. Professional class instructors are most susceptible to voice disorders, which result in difficulties with instruction, communication, and social and emotional functioning. A study identified predictors of treatment for vocal impairment in singers[13] . CCM vocalists sought assistance from physicians, singing instructors, and coaches for voice problems. Additionally, vocal abnormalities affect teachers' attendance and participation in class, according to one study.

A study proposed a method for predicting treatment seeking for voice disorders. Treatment norms are deduced from the viewpoints of individuals within one's social group or the "other" component[14] . A survey was completed by 125 singing instructors regarding their voice difficulties and utilization of medication or therapy. Two cohorts of research subjects reported comparable vocal challenges. Voice issues were significantly more prevalent among singing instructors compared to the control group. Voice disorders, medication, and dehydration were risk factors[15] .

Voice education programs may help optimize how teachers use their voices. This study compared the effects of voice training (VT) and a voice hygiene lecture (VHL) in 60 randomly assigned female teachers. All participants attended the lecture, while 30 also completed a short training course. Researchers recorded text readings in working environments, analyzing fundamental frequency (F0), equivalent sound level (Leq), alpha ratio, jitter, shimmer, and perceptual quality. They also registered self-reports of vocal well-being.

In the VHL group, an increase in F0 and difficulty of phonation were observed. The VT group showed decreased perturbation, an increased alpha ratio, easier phonation, and improved perceptual and self-reported voice quality. Both groups equally reported an increase in voice care knowledge. These results suggest that vocal well-being improved after training[16] .

The use of validated tools such as the Voice Handicap Index (VHI) and a tailored Treatment Seeking Behavior Questionnaire provides a robust framework for assessing both the functional and emotional impact of voice disorders, thereby enriching the understanding of how these issues affect teachers' professional lives.

The findings suggest that factors such as lack of family support and awareness of available resources significantly influence teachers' attitudes towards seeking help, which echoes previous research that emphasizes the need for targeted interventions to promote vocal health among educators

Materials and Methods

This cross sectional study recruited N=174 participants from private schools using convenient sampling technique. Study was conducted over a period of 6 months July to January 2023, after the approval of Research & Ethics Committee of Riphah International University with reference no: REC/RCR-AHS/22/0640.After the approval from the Research & Ethics Committee of Riphah International University the sample size was N=174, calculated online through Roasoft software

calculator while using population size 390 with confidence level 92 %, anticipated frequency and margin error of 5% [17] . Sample population included both male and female primary school teachers with five years of teaching experience. However, it excludes university professors and other professional occupations. This ensures a concentrated examination of teaching techniques in a primary school environment.
Voice Handicap Index was used for voice assessment and Questionnaire that used to check the treatment seeking behavior. Treatment Seeking Behavior Questionnaire appeared to be designed to assess individuals' perceptions, experiences, and behaviors related to their voice problems and treatment-seeking attitudes. Treatment Seeking Behavior Questionnaire, can calculate the frequency distribution for each response option ("Very much," "Somewhat," "Very low," "Not applicable") for each question. This questionnaire was developed on the bases of literature and expert opinion. The content validity of this questionnaire was 0.08. The Voice Handicap Index (VHI) consists of 30 items that are grouped into three subscales: Functional, Physical, and Emotional. Each item is assessed using a 5-point Likert scale, ranging from 0 (never) to 4 (always). The total score for the VHI can vary from 0 to 120, with higher scores indicating a more significant perceived impact on voice-related quality of life. Each subscale (Functional, Physical, and Emotional) has a scoring range of 0 to 40 [18].

Data collected from the Voice Handicap Index (VHI) and Treatment Seeking Behavior Questionnaire was analyzed through SPSS 26. Categorical variables, such as gender and treatment-seeking behavior, were ensured to have consistent coding. Frequencies and percentages were calculated for categorical variables like gender. Distribution of scores were calculated for each subscale (Functional, Physical, Emotional). The overall VHI score and its descriptive statistics were calculated. Frequency distribution and percentages were calculated for each response option of the questionnaire items.
The data collection Performa was used in order to evaluate voice related issues by using Voice Handicap Index and with the consent of participants self-designed questionnaire was filled.

RESULTS

TABLE 1 DEMOGRAPHIC INFORMATION OF PARTICIPANTS (N=174)

Gender of respondent	**Frequency-Percentage**
Male	24 (13.85%)
Female	150(86.2%)
Age of respondents	
18 to 22	34(19.5%)
23 to 27	71(40.8 %)
28 to 33	39 (22.4%)
34 to 39	22 (12.6%)
40 to 45	4 (2.3%)
45 to 50	4 (2.3%)
Marital status	
Married	70 (40.2%)
Unmarried	104(59.8%)

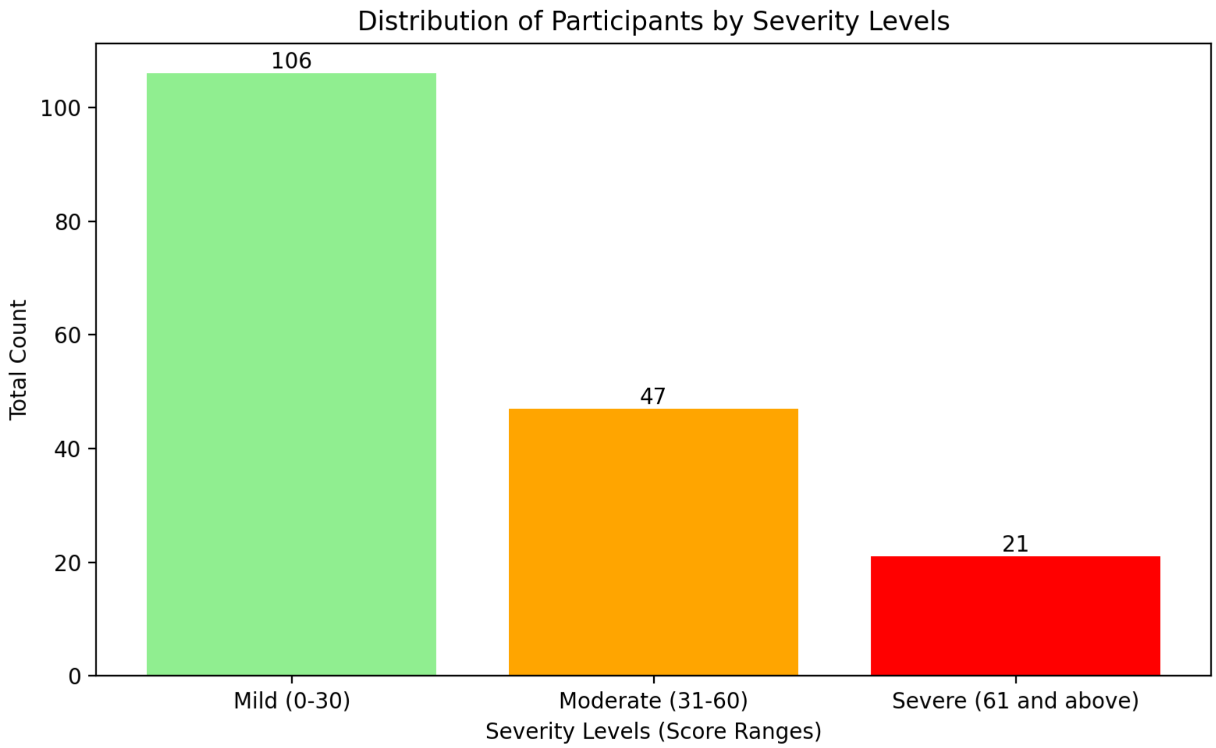
TABLE 2 VOICE RELATED PROBLEMS

This study aimed to identify the most common vocal complaints among participants and their treatment-seeking behavior towards voice therapy. The data from 174 participants provided insight into various vocal issues, including difficulties in being heard, understanding speech in noisy environments, and the impact of vocal problems on social and personal life. Below is a cumulative table summarizing the frequency and percentage of responses for each question.

Following results are derived from according to the scoring method of Voice Handicap Index.

Distribution of Scores according to Voice handicap index scoring:

1. **Mild (0-30):**
   - Total Count: 106 individuals
   - Most common score range within Mild: 0-10 (many scores are exactly 0, indicating no perceived handicap).
2. **Moderate (31-60):**
   - Total Count: 47 individuals
   - Most common score range within Moderate: 31-50.
3. **Severe (61 and above):**
   - Total Count: 21 individuals
   - Highest recorded score: 90 (severe impact on voice function).



By considering the mild category in Table. 2 with a wide range of scores from very low (0) to the upper limit of Mild (30). This suggests that a significant portion of the participants experience a relatively low impact on their voice-related quality of life. However, in the moderate category shows considerable variability, and it includes individuals whose voice function is moderately impacted. Many scores cluster between 31-50, showing moderate voice handicap. Severe category is indicating that a subset of the participants has a severely impacted voice function. The range here starts from 61 and includes some very high scores close to the maximum of 90.

The scores indicate that participants vary widely in how their voice issues affect them functionally, physically, and emotionally. High scores in the emotional part suggest a significant psychological impact on some individuals.

There are several instances with scores of zero in all parts, indicating no perceived voice handicap in some participants. This can be seen as positive but also suggests variability in how individuals perceive or report their voice issues

The statistical programmed SPSS 26 was used to evaluate the data in this study the result was analyzed in frequencies

TABLE 3 TREATMENT SEEKING BEHAVIORS

A large number of respondent's experience voice-related issues, with many reporting their voice as problematic and experiencing physical discomfort while speaking. Hydration habits are generally adequate, and voice breaks are not a common issue for most. Sore throats and shortness of breath while talking are somewhat common, but many do not consider voice therapy or avoid speaking due to their complaints. Family and friend support is moderate, and while there is some positive attitude towards voice therapy, long and intensive therapy sessions may demotivate individuals. Overall, voice problems are a notable concern for many, but there are mixed attitudes and behaviors towards seeking and undergoing treatment.

No	Questions	Very much	somewhat	very low	Not applicable
1	**Is your voice sound problematic?**	99%	54%	14%	7%
2	**Does your voice cause you any physical pain when you speak?**	18%	59%	35%	62%
3	**Do you drink sufficient number of glass of water?**	60	69	39	6
4	**Does your voice break when you talk?**	20	33	36	85

5	**Did you get a sore throat often?**	23	52	56	43
6	**Do you ever experience shortness of breath when you talk constantly?**	33	56	38	47
7	**Have you ever considered voice therapy if you have voice complaints?**	27	26	40	81
8	**Do you avoid speaking because of your voice complaints?**	11	47	58	58
9	**Do you feel tired while talking?**	17	47	66	44
10	**Do you think your voice problem is caused by any medical condition?**	22	38	30	84
11	**Do you ever think to treat your voice issue?**	19	52	39	64
12	**Are your family and friend supportive if you want to treat your voice complaints?**	44	52	30	48
13	**Do you feel less motivate due to long period of therapy session if you are taking?**	25	49	38	62
14	**Do you feel exertion due to intensive therapeutic exercise of voice if you are taking?**	23	45	42	64
15	**Do you have positive attitude towards voice therapy if you are taking?**	35	42	38	59

DISCUSSION

These findings align with current research in the field of voice disorders. For example, a study by highlighted that individuals with voice disorders often experience significant social and emotional consequences, reinforcing the importance of comprehensive treatment approaches including voice therapy[19]

The voice is the most important feature to communicate and express properly. Functional voice disorders (FVDs) have a significant relevance in the field of voice disorders due to their high prevalence. They are also of interest in the area of mental health because of the existing co-morbidity. This vocal pathology is classified into three types of presentations: psychogenic voice disorders, primary and secondary muscle tension voice disorders[20] .

Compared to vocally healthy adults, the surveyed teachers were three times more likely to experience vocal tiredness or avoid using their voices, also report physical discomfort related to their voices. The VFI (Vocal Fatigue Index) revealed higher levels of vocal fatigue among teachers, with females reporting significantly more symptoms than males. Because the VFI highlighted elevated complaints (between normal and dysphonic) in this population, it may be useful for identifying early signs of voice issues and tracking recovery[21] .Females are more likely to experience lasting vocal problems than male. In addition, the current research has found that female educators are more likely to experience voice disorders, which necessitates the need for voice treatment for them.

A study conducted in India that shows significant numbers of teachers reporting voice issues. Due to their vocal fatigue and voice related problems they are more likely to take sick leaves, switch their jobs, retire early, reduce overall communications, avoid talking to people in person as well as over the telephone. It reduced their actively participation in social activities. They got easily upset and were dissatisfied with their job performance. Also they are less motivated for the treatment of their voice issues[22] . Current study also highlighted the issue of decrease motivation toward the treatment seeking behavior because of lack of awareness.

After the vocal assessment from 174 participants their feedback also recorded. Most of the teachers faced vocal issue in noisy environment. There were 73.6% teachers faced this issue and remaining teachers always encounter the voice problem specially in public. This suggests that educators who report voice difficulties have more obstacles in their day-to-day work, are more likely to report vocal discomfort, and are more likely to experience emotional reactions related to their voice issues[23] . According to current research, voice abnormalities in educators mostly affect their physical health, with less of an effect on their mental health. Many teachers attribute their vocal problems to unnoticeable changes in their voice and pain in their larynx when speaking. Teachers who suffer from voice issues usually feel that their illness limits their options in their personal and professional lives, makes it difficult for them to communicate with their loved ones, and prevents them from fully engaging in school activities. Vocal issues have an impact on teachers' mental and emotional health. In the classroom, introverted teachers are more prone to act as though their students don't comprehend them. They feel ashamed of themselves because of their voice problems.

Many people don't even realize they have voice issues until they take the Vocal Handicap Index (VHI) test. When people realize the everyday effects of voice problems in their life, they will change the external factors that affect their vocal abilities as well as their own actions[24] . By recognizing the effects of vocal issues, people can assess their perspective on vocal health.

Some therapy plans can also be introduced to treat the voice related issues. For the preservation and transmission of the new habit, effective voice treatment requires both physical and cognitive learning processes. A study suggested 4 weeks of exercise demonstrated significant changes in phonation volume, flow rate, maximum phonation time, and frequency range Exercises for improving vocal function can help pinpoint exactly how it affects how well a therapy works[21] . Since maximally maintained phonation is now known to be a key component of vocal function exercises, this study has determined its role in these exercises. A study Also highlights the most common vocal complaints among teachers by using VHI Voice handicap index. The most common severe problems observed among teachers were a tired and an effortful voice that can impaired their social communication skills[25] .

The results of current study in which VHI and treatment seeking behavior questionnaire indicates that voice problems are a significant concern for many individuals, with a notable number of respondents reporting that their voice makes it difficult for people to hear them or understand them in noisy environments. Physical discomfort while speaking, such as pain and tiredness, is also reported frequently. VHI highlights specific situational difficulties, such as challenges in being heard over the phone or in noisy rooms, and the impact of voice issues on social interactions, personal life, and even income. The treatment seeking behavior questionnaire focuses on behaviors and attitudes toward voice therapy. While many people acknowledge their voice issues and sometimes consider treatment, a significant portion does not actively pursue voice therapy.

CONCLUSION

Addressing the vocal health needs of teachers is crucial not only for their personal well-being but also for maintaining effective communication in educational settings. Enhanced support systems and educational initiatives could potentially improve treatment-seeking behaviors and overall voice quality among primary school teachers.

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Conflicts of Interest

No conflict of interest.

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