A Comparative Study of Iranian Female Primary School Teachers' Quality of Life With and Without Voice Complaints

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Summary: Objectives/Hypothesis. As the largest group of professional voice users, teachers are more likely to face voice disorders because of their specific job conditions. This study aimed to compare the quality of life in female teachers with and without voice complaints.

Study Design. This is a cross-sectional descriptive-analytical study.

Methods. This was a cross-sectional study of samples of primary school female teachers with (n = 60) and without (n = 60) voice disorders. All teachers were serving in Tehran, Iran. Professional background information was obtained through interviews, and quality of life was measured using the 36-item Short Form Health Survey questionnaire. A comparison was made between the study groups to analyze the data.

Results. The mean age of teachers was 44 (standard deviation = 3.95) years. There were no significant differences between the two groups regarding their professional background. However, significant differences were observed between the two groups in all subscales of the 36-item Short Form Health Survey, including physical and social functioning, role limitations because of either physical or emotional problems, bodily pain, general health, vitality, and mental health ($P < 0.05$).

Conclusion. Findings of this study point to the effect of voice complaint on quality of life and showed that teachers with voice complaints suffer from poor health-related quality of life. Therefore, both voice-specific and unspecific assessment methods are required for clinical diagnostics.

Key Words: quality of life–voice complaints–primary school–teachers–Iranian female.

INTRODUCTION

Voice cane be considered as one of the main aspects of communication with emotional, social, and economic aspects. The complexity of voice structure causes problems in individuals' daily life.[1–4] Like people's appearance, voice varies from person to person, and emotional, physical, and environmental factors can have it changed.[5] Voice disorders would negatively impact quality of life if job and social satisfaction is highly dependent on voice.[6–10] Teachers have been so far the subject of many studies conducted in this area because they form one of the largest groups of professional voice users and therefore are more vulnerable to suffer from voice disorders due to their specific job requirements.[8,11] Not only do voice disorders affect speech clarity, functionality, and its acceptability in terms of its aesthetic impact, but also it can have severe negative consequences on personal, social, occupational, and economic aspects of people's life. Thus, teachers' voice disorders can also create health concerns to varying degrees resulting in social, communicative, physical, and emotional problems in their professional life, job satisfaction, and personal lives. The severity and extent of this impact depends on the use of teachers' voice throughout the day.[12]

Today, quality of life is used to define a framework to allocate services and resources[13] and it is regarded as an essential indicator of health.[14] Hence, it covers multiple dimensions of life such as physiological, operational, and personal aspects.[15] Improving quality of life is so crucial that some have considered it as the most important target of therapeutic intervention. Quality of life consists of a range of needs that can be met through how well one can understand his or her personal well-being. According to the World Health Organization, quality of life is a person's understanding of his conditions, according to the goals, expectations, standards, and concerns in the context of culture and value systems in which he lives, including the person's attitudes toward his physical and mental level of independence, social relationships, and his personal interaction with environmental conditions.[16] Not only does good quality of life mean the absence of disease, but also it includes the sense of well-being in several psychological, social, and emotional functions.[14] Many factors such as physical and mental health have an impact on quality of life and these factors might be affected as voice problems begin.[17,18]

Voice disorders can adversely affect social, physical, and emotional aspects of quality of life in those who use their voice professionally.[6,18] Health-related quality of life (general) is not well understood in people with voice disorders because there is not much study conducted in this area;[19] however, the limited body of research that has been conducted suggests that not only do benign voice disorders affect quality of life in general,[20] but also voice-related quality of life is specifically influenced by them.[21]

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Quality of life can be assessed using various tools such as the 100-item World Health Organization Quality of Life questionnaire, the short form of the World Health Organization Quality of Life questionnaire, the 36-item questionnaire to measure general health (Short Form Health Survey [SF-36]), etc, each of which measures the quality of life in a variety of physical and mental conditions.[14] Although many questionnaires were developed to assess health-related quality of life, the World Health Organization Quality of Life questionnaire such as SF-36 is preferable because of its unique properties.[14] Studies show that one of the best tools for measuring quality of life is the SF-36, which includes eight dimensions of health, namely physical functioning, social functioning, role limitations due to physical problems, role limitations due to emotional problems, bodily pain, general health, mental health, and vitality.[14] It is also frequently used by researchers to assess quality of life among different groups of Iranian subjects, and its validity and reliability was confirmed in Montazeri et al's study.[14]

The concept of quality of life has recently been a significant health indicator. Furthermore, voice complaints or disturbances play an important role in quality of life. Taking all these indicators into consideration can prove useful in better understanding and planning treatment of voice disorders. Therefore, this indicator (such as voice handicap index and SF-36) can be used to assess the effects of voice problems on teachers with and without voice complaints. Because of the important role teachers play in primary education and the effect of voice health on teaching and learning quality, it seems necessary to promote research on health-related quality of life in these patients. In this study, we tried to determine and compare the health-related quality of life in female teachers with and without voice complaints because there does not seem to be much research conducted in this area.

METHODS

This was a cross-sectional, nonintervention study. One hundred and twenty female teachers working in different primary schools in Tehran were studied in two groups (n = 60), with and without voice complaints. Their demographic characteristics are presented in Table 1.

Each group comprise 60 teachers; subjects with voice complaints aged from 30 to 50 years of age (44.5 ± 3.5)[22] and subjects without voice complaints aged between 30 and 50 (43.5 ± 3.4). All subjects were asked whether they had experienced any voice complaints because of teaching, and then two groups, namely with and without voice complaints, were formed based on teachers' claims and examiner's descriptions.[22]

The first step was explaining the purpose of the study to participants and obtaining each participant's personal and demographic information through interviews and saving the acquired data in the forms according to numbers and names. Next, teachers who were qualified potential entry after meeting inclusion criteria were instructed to answer the questionnaire. The inclusion criteria were being in the 30–50 age range, more than 10 years' teaching experience in primary schools, no experience of speech therapy for voice disorder, etc. Finally, an interview was conducted and a questionnaire concerning demographic characteristics, general health status, medical history, and history of neurological or audiological diseases was completed for each subject.

The general quality of life questionnaire SF-36 was used in this study. The SF-36 is a 36-item scale constructed to survey health status and quality of life. Questions and concepts of this questionnaire are divided into three levels as follows:

1—questions; 2—eight scales that include questions from 2 to 10: physical functioning, role physical functioning, bodily pain, general health, vitality, social functioning, role emotional functioning, mental health; 3—two summary measures that are achieved through integrating scales includes physical health (physical functioning, role physical functioning, bodily pain, general health) and mental health (vitality, social functioning, role emotional functioning, mental health).

The scale scores range from 0 to 100, indicating a scale of 0 as the worst and 100 as the best. We used the Persian version of the SF-36 questionnaire in this study.[14] It takes the subjects 5–15 minutes to answer and each subscale score is calculated from 0 to 100.[14]

Statistical analysis was conducted using *SPSS Statistics* 16 (IBM, Armonk, New York) and the data were distributed using the Kolmogorov-Smirnov test. Measure of central tendency (mean and standard deviation) was obtained for each studied variable. Independent sample *t* test was used to compare subscales of SF-36 questionnaire in the groups with and without voice complaints. The significance level was set at 0.05 and 95% confidence interval.

RESULTS

The result of the parametric *t* test that are peresented in Table 1 showed no significant difference in groups with and without voice complaints. ($P > 0.05$). Means and standard deviations for each subscale of the SF-36 questionnaire were evaluated in two groups with the use of descriptive statistics, and the results of statistical tests were established separately for subjects with

TABLE 1.
Demographic Features of Studied Teachers' Groups With and Without Voice Complaints

	Group With Voice Complaints (n = 60)				Group without voice complaints (n = 60)				
Demographic Characteristics	Mean	SD	Min	Max	Mean	SD	Min	Max	*P*
Age (years)	44.38	4.29	31	50	43.68	3.57	34	50	0.158
Teaching experience (years)	21.89	3.79	12	30	22.04	3.28	11	30	0.592
Teaching hours (per week)	23.55	1.98	19	26	24.47	2.53	18	23	0.906