Original Research Paper Medical Science

# Vocal Attrition and Psychosocial Disorders among Arab Teachers in Israel

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ABSTRACT

Vocal attrition or psychological disorders may interfere with a teacher's ability to properly carry out his or her function as a result of repeated absence from work or a negative perception of their profession. They may also affect the teacher's long-term view of teaching as a profession. Based on the literature in the field, the author constructed a study model to correlate the level of noise in the classroom to the teacher's experience vis a vis the development of vocal attrition symptoms and negative psychological effects This study is aims to examines a number of aspects regarding Vocal attrition, psychological disorders and factors that influenced the development of Vocal attrition in Arab teachers. The population included 1420 macro teacher,

Some work and others studying towards a teaching diploma at the College of Sakhnin for Teacher Education. The analyses were done using conventional statistical procedures that verified the validity of the individual hypotheses and the model in general. The study indicated that nearly 50% of participants had experienced at least three symptoms of vocal attrition.

**KEYWORDS** Vocal attrition, psychological disorders, noise level of noise

**Background**

Teachers are faced with high requirements for use voice as part of their profession. They need flexible voice to teach, to take care of classroom problems, to clarify, and to attract interest and to enhance attention. The increased of load on the voice and influence of this load on the voice, notable when comparing teachers and other professional groups, which are use a lower voice demands (Sala, Laine, Simberg, Pentti, & Suonpaa, 2001). Occupational risks among teachers include, inter alia, developing symptoms of vocal attrition and psychological disorders (Nerriere, Vercambre, Gilbert, & Kovess-Masfety, 2009). Vocal attrition describes the pathology of reduced vocal function manifested by one or more of these symptoms: hoarseness, difficulty in producing steady sounds, loss of vocal flexibility and the ability to sing, dryness, pain or a burning sensations in the throat, an ongoing need to clear the throat, and chronic cough. These symptoms may be a result of behavioral (faulty speech habits), biogenetic (menstrual cycle, allergies, chronic inflammation of the respiratory tract), and psychosomatic (anxiety, stress, mood disorders) factors (Sapir, 1993). Vocal attrition or psychological disorders may interfere with a teacher's ability to properly carry out his or her function as a result of repeated absence from work or a negative perception of their profession. They may also affect the teacher's long-term view of teaching as a profession. Teacher dropout results in losing good teachers even during their initial years in the profession.

**Methodology**

**Research Process**

In the absence of research regarding these problems amongst the Arab sector in Israel, this author believed that a study of the phenomenon of voice burnout within this population was called for. Based on the literature in the field, the author constructed a study model to correlate the level of noise in the classroom to the teacher's experience vis a vis the development of vocal attrition symptoms and negative psychological effects.

The study is based on a research model that examines a number of aspects regarding voice burnout, psychological disorders and factors that influenced the development of these phenomena.

Gender differences were examined as a factor, with the hypothesis being that women would exhibit a higher risk of developing such occupational problems as a result of, among other reasons, their dual roles as teacher and homemaker.

Another factor is the importance of teacher seniority as a variable. The opinions expressed in the literature on this shows a difference of opinion regarding the nature and direction of any correlation between job seniority and developing the above-mentioned symptoms, and this current study thus includes an attempt to examine this correlation in depth.

The amount of noise in the classroom was also considered a factor. Based on the assumption that age of the students directly affects the amount of noise in the classroom, a further hypothesis suggested differences in voice burnout between pre-school and elementary-school teachers, and between these teachers and junior- and high-school teachers, with the assumption that preschool teachers would be most likely to exhibit symptoms of vocal attrition .

Because the literature repeatedly points to comorbidity between vocal attrition symptoms and psychological disorders (Gundel, Busch, Ceballos-Baumann, & Seifert, 2007), this was another aspect upon which we focused.

It has been suggested that resilience factors (high self-esteem and social support) reduce the negative impact of stressful factors for educational personnel and teachers in particular. We studied these factors to ascertain whether they moderate any initial correlation observed between classroom noise intensity and psychological problems and vocal attrition.

Finally, in order to reduce any impact of lifestyle habits (smoking, allergies, unhealthy habits, etc.) on the development of vocal attrition, an attempt was made to statistically neutralize impact of these habits.

**Population and Sample**

Participants for this pioneering study were recruited from teachers undergoing in-service training or attending teachers meetings at the Sakhnin Academic College for Teacher Education, and by distributing questionnaires to preschool teachers using the "snowball" method. All the teachers were members of the Arab population from three major areas of the coun-

try (the Galil, the Triangle, and the Negev), were between the ages of 22 to 62, and they provided a suitable representation of male and female populations, organizational frameworks (preschools, elementary school, junior high, high school), and levels of seniority.

We initially sampled 1420 participants. Data was collected through the use of questionnaires (in Arabic) that allowed anonymous feedback and were compiled in accordance with reliable, validated tools for analyzing the relevant factors dictated by the research model. An examination of the participants' data showed clear variances in the prevalence of the 12 symptoms of vocal attrition depending on whether the participants were suffering from any ailment that could affect symptoms. In fact, 322 were determined to have ailments that could compromise the data and were released from the study, leaving a final sample set of 1098 teaching personnel apparently healthy individuals.

**Data analysis**
The analyses were done using conventional statistical procedures that verified the validity of the individual hypotheses and the model in general.

The hypothesis regarding comorbidity between vocal attrition and psychological disorders were tested in two ways. The first conformed to the accepted method as described in the literature (Roy, Merrill, Thibeault, Gray, & Smith, 2004; Sampaio, dos-Reis, Carvalho, Porto, & Araujo, 2012; Sapir, Keidar, & Mathers-Schmidt, 1993). Teachers were divided into three groups according to the number of symptoms of vocal attrition they reported: in group one were teachers who did not report any symptoms, in group two were teachers with one or two symptoms, and group three were teachers who reported having three or more symptoms. The second method counted the number of symptoms of vocal attrition without dividing teachers into categories.

**Results**
The results suggest the following: a) The higher the frequency at which the teacher suffers from vocal attrition, and the higher the incidence of habits and work conditions that can explain the vocal attrition that are not due to teaching, the higher were the number of symptoms arising from teaching. b) The higher the seniority of the teacher and the greater the incidence of negative psychological effects (especially depression, burnout and extreme anxiety), the greater the number of symptoms of vocal attrition. c) As the symptoms of vocal attrition increase, teachers tended to feel greater negativity regarding the teaching experience. In particular, they felt more problems with functionality and expressed fewer positive attitudes, although it must be noted that the rate of positive attitudes seemed to be correlated only with the variable of number of symptoms. d) Correlation between noise intensity in the classroom and the number of symptoms was found to be marginally significant when examined using only the variable of categorical symptoms, and therefore, the model implying interplay between classroom noise and the teacher's experience based on vocal attrition symptoms, was not confirmed. e) No correlation was observed between the number of symptoms with gender and the number of symptoms with the learning institution (preschool compared to regular school, or preschool and primary school compared to junior high and high school).

Regarding the relationship between classroom noise and psychological wellbeing and how teachers regarded their teaching experience, the data suggested the following: a) the higher the noise was reported to be, the more negative psychological effects the teacher experienced. In particular they reported feeling social anxiety, state-trait anxiety or neurosis and, to some extent, a sense of exhaustion; b) the existence of a correlation between noise intensity and social anxiety was found to be depend on the extent of the teacher's self-esteem, so that a correlation was less pronounced among those with high self-esteem; c) a correlation between noise intensity and the fear of social anxiety was found to be less among those teachers who experienced good social support; d) there was no clear correlation between classroom noise intensity and the number of symptoms of vocal attrition based on the teachers' self-estimation. and social support was not found to be clear; e) the higher the noise, the worse teacher's experience was – they reported a lower frequency of positive attitudes and a higher number of functional problems, which seemed to be (partially) linked to vocal attrition and factors of state-trait anxiety or neurosis; and f) preschool teachers experience loader noise than school teachers, and preschool and elementary school teachers experience louder noise than teachers in junior high, but this factor was found to be marginally significant.

The following other observations were also made: a) the lower the seniority, the higher the incidence of fear of social anxiety but the lower the factors that lead to state-trait anxiety or neurosis, b) the fatigue factor of the burnout rate is higher among women than men, and the factor of lack of effectiveness is lower among women than among men, and c) the greater the negative psychological effects, the more negative the teacher experience –positive attitudes were less frequent and the number of functional problems were higher.

**Discussion and conclusions**
The purpose of this study was to investigate the relationship between symptoms of vocal attrition which caused due to vocal instruction in educational workers and the possible vocal attrition factors, adverse psychological effects on the teaching employee and the teaching employee experience.

The study involved 1420 teaching staff (kindergarten teachers, teachers of different age groups). Following the finding significant differences in the frequency of symptoms of vocal attrition among teaching staff who reported an illness that affected the last two weeks and voice teaching staff not reporting such disease, 322 teachers were eliminated from the study, and the final sample statistical analyzes were performed which stood at 1098 people. Symptoms of vocal attrition number of voice arising from teaching were examined both as a continuous variable and categorical variable in three levels: no symptoms, symptom or two and three or more symptoms.

The current study included particular teaching staff of the Arab sector. Current knowledge about the prevalence of vocal attrition among teachers in Israeli Arab society, and about how the incidence of such behavior may be associated with certain voice and other etiological factors is very limited, despite the uniqueness of this population. The teaching profession is considered to be the primary and preferred course among the Arab population and Arab women in particular (Abu-A'sba, 2008), and the Arab sector teaching staff employed in the system, in which a large classroom overcrowding and with many tasks. This creates a constant pressure among teaching staff and especially among those working with the young age group (Lavie, 1997).

This study indicated that nearly 50% of patients experienced at least three symptoms of vocal attrition. In the study of (Bistrisky & Frank, 1981) participants who did not undergo voice therapy also reported a long number of symptoms and high severity of symptoms of vocal attrition. However, the researchers examined by Israeli teachers of primary schools alone, with teaching experience of at least two years. In this study we included teachers and kindergarten teachers, only from the Arab sector, with a variety experience teaching. In addition, the current study has not a comparison between the treatment group and the control group and the number of participants was much higher. Importantly, in addition to the difference in years between the two studies. In the 80s, which were conducted earlier studies on Jewish populations, the proportion of male teachers in the Hebrew education was lower than that of female teachers, so the teachers in the Hebrew education rate in 1990 was 89.7%. But in the Arab sector on the other hand, the past rate of male teachers was more

than the female teachers, so the rate male teachers in the Arab education in 1990 stood at 49.5% (CBS, 2005). Nowadays there is a reverse trend and female teachers rate higher than the rate of male teachers, so that in 2012 the rate of female teachers in the Arab sector stood at 68.7% (CBS, 2013). Perhaps that is why the difference exists in the composition of samples of the two studies.

Looking at the distribution of symptoms resulting from teaching in this sample, you can see a high percentage of different symptoms. In fact, more than 60% of the symptoms, prevalence in this sample was more than 30% of the participants. In his study of Sapir et al. (1993), which the current study based on, also found a high prevalence for some of the symptoms, but these frequencies were lower than in the current study. The difference in frequencies between the two studies strengthens the argument about the uniqueness of the Arab sector in the context of vocal attrition and importance of this study. The study shows that among the Arab population there are indeed vocal attrition rates relatively high to other populations that were tested in previous studies.

| The prevalence of symptoms of vocal attrition in the present study compared to the research of Sapir et al., 1993 | | |
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| Sapir et al., 1993 | the current research | Symptoms of vocal attrition arising from teaching |
| 43% | 49.9% | I suffer more vocal fatigue |
| 33% | 36.6% | I suffer more pain in the throat |
| 28% | 37.1% | I suffer more hoarseness |
| 29% | 39.4% | My voice is weaker |
| 17% | 33.5% | My voice is getting uglier |
| 19% | 33.1% | I find it hard to talk |
| 16% | 39.2% | My voice is less stable |

In this study we received a number of interesting findings regarding to the hypothesized relationships. First, is that as the seniority of the teaching work at work was higher, and have more negative psychological effects (specifically depression, burnout and anxiety), then a number of symptoms of the vocal attrition was greater. Secondly, it was found that as the prevalence of symptoms of chronic vocal attrition, and work habits and conditions that can explain grinding sound does not emanate from teaching were higher, then the number of symptoms arising from teaching was greater.

Finally, it was found that if the number of symptoms of vocal attrition were a more, so that the employee experience will be more negative, meaning it had more dysfunction and less positive attitudes toward work.

Apart from these connections, we received a number of findings which relate to connections between the sense of noise in the classroom and the negative experience of psychological effects of working in teaching: It was found that if the teacher has more higher feeling of noise in the classroom, so the negative psychological effects (social anxiety, state anxiety-trait and to some extent eroded, the breasts ) were larger, but the relationship between sound and sense of avoidance measure of social anxiety existed only among those with high self-esteem, and a sense of connection between the noise and the measure of social anxiety fear existed only among those with low social support. It was also found that the more a sense of noise was higher that the psychological effects of negative (Abrasives and officials of state anxiety-trait) were stronger and the experience of working in teaching was more negative - the frequency of positive attitudes was lower and the number of problems the function was greater (partial mediation). Finally, it was found that a sense of noise that had a high sense of horticulture was a noise that experienced teachers, and that sense of noise which experienced kindergarten teachers and elementary school staff was high sense of noise that experienced staff and junior high schools (which is a definite difference in marginal).

Other findings which were received regarding to the relations between the negative psychological effects and causes of vocal attrition, and experience of teaching indicated that: (a) A fatigue index of vocal attrition was higher among women than among men, and causes a lack of self-realization was lower among women than among men, (b) as far as the negative psychological impact were higher, so the experience of the teacher was more negative - the frequency of positive attitudes was lower and the number of problems the function was higher, and (c) as the seniority at work was lower then the fear measure of social anxiety was higher and situational factors-trait anxiety were lower.

**Research Implications**

It should be noted that this study has important implications pedagogically as it addresses problems of teachers' health and wellbeing. Vocal

Attrition, with its hoarse, weak, or other abnormal voice, may certainly have a detrimental effect on teachers' performance, work efficiency, and physical and psychological health (Sapir, Atias, Shahar &, 1990; Sapir, 1993). In addition, it may cost students academically if it hampers their understanding of the teacher and prevents them from focusing on the teacher's words, understanding them and remembering them.

Although there is ample literature that addresses the symptomatic development and psychological effects of Vocal attrition amongst teachers worldwide and in Israel in particular, there have been no other studies that have focused on the Arab-Israeli population of educational personnel, implying that this study is one that was certainly required.

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