Research Article

Different Personality Traits in Non-Organic Voice Disorders

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Abstract

Background and objective: it is uncertain whether personality and psychological problems contribute to particular voice disorder, or that voice disorder creates psychological problems and personality effects Cognitive affective, neurophysiological and behavioral aspects culminate in the development of these complex voice disorders. The purpose of the present study was to asses the effect of personality on voice disorders. **Subjects and methods:** The current study included 100 subjects. Fifty subjects had change of voice and diagnosed as non-organic voice disorders, and fifty subjects served as the control group. We use Eysenek Personality Questionnaire to asses' different types of personality. **Results:** the personality traits may affect voice disorders either as a cause or as a result with statistical significant differences between the study group and control group as regard the three parameters of EPQ (neurotism, extraversion, psychoticism) $P < 0.005$. **Conclusion:** The personality of patients with non-organic voice disorders can be described as somewhat, anxious, shying away from conflict and over-respecting social norms, with emotional adjustment problems and difficulty in self-assertion and expressing of feelings. It appears that individuals with these traits seem to be especially susceptible to non-organic voice disorders, rather than that changes of personality are a consequence of a voice disorders

Key words: personality and psychological problems, Non-Organic Voice Disorders

Introduction

A non-organic voice disorder (Functional dysphonia) is defined as a condition where there is impaired voice sound and/or reduced vocal capacity in the absence of organic lesions or organic laryngeal pathology. Psychogenic causes, psychological disequilibrium and increased tension of the laryngeal muscles are presumed to be one end of the spectrum of possible factors leading to the development of the disorder (Ruotsalainen et al., 2008).

Non-organic (functional) dysphonia is sometimes broadly synonymous with the hysterical, psychogenic, conversion psychosomatic, muscle misuse, or tension dysph onia (Aronson and Bless, 2009).

Kotby, (1986) has classified non- organic (functional) voice disorder into habitual voice disorders and psychogenic voice discarders.

A) Habitual voice disorders, which are further, subdivided in to:

1- Hyperfunctional childhood dysphonia.
2- Mutational voice disorders.
3- Hyperfunctional dysphonia.
4- Hypofunction dysphonia.
5- Ventricular dysphonia.
6- Phonasthenia.
7- Functional Habitual aphonia.

B) Psychogenic voice disorders may be described under:

1- Psychogenic dysphonia.
2- Psychogenic aphonia.

Roy et al., (2000) reported that, it is uncertain whether personality and psychological problems contribute to - particular voice disorder, or that voice disorder creates psychological problems and personality effects. Baker (2008) reported that cognitive, affective, neurophysiological and behavioral aspects culminate in the

development of these complex voice disorders

It is feasible that both the personality traits and voice disorders stem from a common underlying neuro-physiological mechanism, so that specific personality traits are merely markers and indicators of this shared mechanism (Roy at al., 2000)

The personality of patients with non-organic voice disorders can be described as somewhat, anxious, shying away from conflict and over-respecting social norms, with emotional adjustment problems and difficulty in self-assertion and expressing of feelings. It appears that individuals with these traits seem to be especially susceptible to non-organic voice disorders, rather than that changes of personality are a consequence of a voice disorder.

There are 'Big Three' personality traits which represent the most general level in classification according to Roy et al., (2000) and it consists of:
**Extraversion or Positive Emotionality (E/PEM):* includes primary traits such as affiliation and dominance, involves the willingness to engage and confront the social environment. At the other extreme, introverts tend to be reserved and socially distant and are more reluctant to actively engage their environment.
**Neuroticism or Negative Emotionality (N/NEM):* has been conceptualized as general emotional reactivity or a temperamental sensitivity to negative stimuli. They report a tendency to worry, to be anxious, and to feel victimized.
*High *Constraint:* individuals are cautious and restrained (i.e. refrain from risky adventures, and accept the conventions of society, plan carefully before acting and avoid risky or dangerous situations**.**

Several studied concerning the link between personality traits in voice disorders are made, White, et al., (1997) used the Eysenck Personality Questionnaire (a Big-Three inventory) and found increased scores on the N/NE (punishment avoiding), decreased scores on the E/PE (reward blind), and decreased CON (behavioral inhibition) in those with non-organic voice disorders compared to healthy controls. Also Gerritsma (1991) found similar results when he administered the Amsterdam Biological Questionnaire to individuals with non-organic voice disorders and healthy controls.

Patients and Methods

Subjects

The current study included 100 subjects. Fifty subjects had change of voice and diagnosed as non-organic voice disorders, and fifty subjects served as the control group.

Group of non-organic voice disorders patients had mean age of 33.32±37.86 and age range between 13 and 78 years old. They had change of voice and were not suffering from any previous psychological disorders. These patients were selected randomly from outpatient clinic of Phoniatrics, Minia University Hospital, in the period from May 2014 to November 2016.

The control group included 50 subjects with their age and sex distribution matched with the study group. The subject is not suffering either from change of voice or previously diagnosed with psychological disorder. They were selected randomly from outpatient clinic of Internal medicine, Minia University Hospital.

Methods

Each individual of both groups was subjected to the following protocols of assessment:-

[A]- The full voice evaluation protocol in the Phoniatric Unit, Minia University Hospital (Kotby, 1995) which includes:

I- Elementary Diagnostic Procedures:

I) Patient Interview: This includes personal data of the patient (name, age, sex, residence, marital status, number of children, and their ages, education and occupation). Then analysis of the patient's complaint as regards the onset, course and duration followed by asking about the phonasthenic symptoms. Predisposing factors for voice disorders are evaluated by asking about: Type of job, excessive use of voice, temperament, emotional stress, smoking, spirits, repeated upper respiratory tract infection and its frequency, allergic

tendencies, hyperacidity, reflux, medicaments, surgical interference and trauma.

II) Auditory Perceptual Assessment (APA): After careful listening to the patient's voice, the grade of dysphonia, character of voice, pitch changes, loudness, glottal attack and affection of associated laryngeal functions could be determined using the modified GRBAS scale ***(Kotby, 1986).***

II- Clinical Diagnostic Aids: Full Laryngeal examination including telescopic laryngeal evaluation.
All patients in the study underwent Telescopic rigid fibero laryngoscopy in the phoniatric department at Minia University using rigid fiberoptic laryngoscope Henke-Sass Wolf angle 90.

[B]- Eyseneck personality Questionnaire (EPQ) (Eysenck and Eysenck, 1975). The Arabic version of EPQ was prepared by Abdel-khalek and Eysenck (1983): It underwent a series of reliability testing and is standardized for Arabic culture. The EPQ is a forced-choice 90-item instrument. The items on the EPQ are answered "yes" or "no" according to the applicability (or otherwise) of each item to the respondent; "yes" was scored as 1 and "no" was scored as 0. This questionnaire describes personality along the following dimensions: Extroversion, Neuroticism and Psychoticism.

The typical extravert obtains a high score on the E scale. He is sociable and has many friends. He is fond of excitement and tends to be impulsive and to take chances. He jokes a lot and needs to talk to other people. While the typical introvert, on the other hand, scores low on E, and he is quiet, introspective and reserved. He tends to plan his actions and is generally serious-minded.

The term neuroticism (N) or emotionality refers to the stability/instability dimension of personality. The typical high N scorer is given to worrying and moodiness. He is generally anxious, although he may suffer from depressive episodes. He sleeps badly and tends to suffer from psychosomatic complaints. He has an excessive emotional reaction to stimuli and has difficulty regaining his equilibrium after an emotionnally arousing experience. The typical high psychoticism score is given to aggressiveness, assertiveness He is egocentric, manipulative, and unsympathetic.

Results

I- Demographic data and history:
The control group consisted of 50 subjects. There were 21 males (42%) and 29 (58%) females .Age of the control group ranged from 16 years to 51 years; average was 28.2 years and SD was 7.27 years. The study group consisted of 50 patients. There were 26 males (52%) and 24 (48%) females. Age of study group ranged from 13 years to 78 years, average was 33.2 years and SD was 37.86 years.

II- Laryngoscopic examination :
Laryngeal examination of the study group that was suffering from change of voice revealed, 8(16%) of them had hyperfunction dysphonia, 11(22%) of them had psychogenic dysphonia/aphonia, 7(14%) had incomplete mutational voice disorder, 7(14%) had phonathenia, 4(8%) had spasmodic dysphonia, 6(12%) had chronic habitual hyperfunctional childhood dysphonia, 7(14%) had ventricular dysphonia. while, Laryngeal examination for the control group revealed bilateral freely mobile both vocal folds .

III- Eyseneck personality Questionnaire (EPQ):
In the study group, 42(84%) had high level of psychoticism and 8(16%) are within normal. Post Hoc Tukey correction, revealed a significant difference between control group, who 16(32%) of them had high level of psychoticism and 34(68%) were within normal

As regard of the level of extraversion, Post Hoc Tukey correction revealed statistical significant difference between the study group and control group, In the study group 1(2%) of patient had high level of extraversion and 41(82%) were within normal while. In the control group 6(12%) of individuals had high level of extraversion and 44(88%) were within normal.

As regard of the level of neurotism, Post Hoc Tukey correction revealed statistical significant difference was obtained between the study group and the control group, In the study group 24(48%) of patients had high level of neurotism and 26(52%) were within normal while, In the control group 10(20%) of individuals had high level of neurotism and 40(80%) were within normal.

Discussion

There were significant differences between the study group and the control group as regard of personality, 42(84%) for patients with non-organic voice disorders had high level of psychoticism in comparison to 16(32%) for the control group This result is explained by the patients in the study group tend to be aggressive, assertive, egocentric, unsympathetic and Tough-minded,

Also 46(46%) for the patients had high level of neuroticism in comparison to 10 (20%) for the control group. This result may be explained by patients in our study were noticed to be easily nervous, have high levels of negative affect such as depression and anxiety, unable to inhibit or control their emotional reactions and experience negative affect in the face of very minor stressors, Guilt Feelings, Low self-esteem, Moody, and obsessive, this result go with Goldman and colleagues (1996) who compared patients with vocal nodules, patients with functional dysphonia, and healthy controls using standardized and non-standardized psychological inventories, They found personality patterns in those with functional dysphonia and vocal nodules that differed from those of healthy controls. They also suggested that psycho-social factors, specifically the amount of vocal expression, anxiety, and stress might be important in the development of dysphonia in these groups and that, in turn, these could influence the presence or absence of laryngeal pathology, Also white et al. (1997) used the Eyzenek Personality Questionnaire and found increase in the score of neuroticism, decrease in the score of extraversion and decrease the score of psychoticism in those with non-organic voice disorders (functional dysphonia).

There were significant differences between the study group and the control group as regard of the level of extraversion, In the study group 1(2%) of patient had high level of extraversion and 41(82%) were within normal while. In the control group 6(12%) of individuals had high level of extraversion and 44(88%) were within normal. Our result can be explained by patients with non-organic voice disorders have were described as having interpersonal sensitivity or estrangement and distrust of others high neuroticism leading to voice misuse and abuse with a compensatory increase on the vocal fold tension. This muscle tension often arises from the overactivity of the autonomic and voluntary nervous system when arousal or anxiety occurs; poorly regulated laryngeal muscle activity patterns may be present. Our results go with Roy et al., (2000) who reported patients with non-organic voice disorders have high level of psychoticism suggesting their tendency to inhibit their behaviors in comparison to patients with vocal nodules that have low score of psychoticisem suggesting their tendency to over express their behavior, Also individuals with vocal fold nodules were extroverts while extroversion score) the majority of individuals with non-organic dysphonia were introverts (low extroversion score).

Conclusion

The personality of patients with non-organic voice disorders can be described as somewhat, anxious, shying away from conflict and over-respecting social norms, with emotional adjustment problems and difficulty in self-assertion and expressing of feelings. It appears that individuals with these traits seem to be especially susce-ptible to non-organic voice disorders, rather than that changes of personality are a consequence of a voice disorders.

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