

Assess the Impact of Puberphonia in the Society

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Abstract: Puberphonia is a voice disorder which is distinguished by the habitual and continuous use of prepubertal high-pitched voice of a child even after puberty. It is not a rare disorder; it is followed by a synopsis of current approaches to treat puberphonia in males. The impact of voice disorder varies greatly from person to person, environment, occupation, family members and overall personality. These are all the variables that can affect the way voice disorder affect a particular person. In general, people with puberphonia tend to encounter problems that include emotional, psychological, social and professional difficulty. To assess the impact of puberphonia in levels of society, the study was carried out as a descriptive simple purposive sampling technique used and was able to treat 476 cases in our puberphonia clinic by using self-administered questionnaire. As investigators, we found out the impact of puberphonia. Puberphonia treatments are discussed in terms of pharyngeal resonance manipulation, fire breathing techniques and habituation. The study was analyzed for the social impact of puberphonia on marriage and job opportunity. The study was concluded that, other problems of puberphonia includes depression, loneliness, cowardice, low self-esteem and inferiority complex and thinking of suicide which would be the take home message from our long experience of 29 years in treating puberphonia. We discussed thoroughly further knowledge about puberphonia among the society and health professionals.

Keywords: Puberphonia, Pharyngeal Resonance Manipulation, Breathe of Fire Yoga, Voice Care, Suicide Tendency

1. Introduction

Puberphonia is a voice disorder which is distinguished by the habitual and continuous use of prepubertal high-pitched voice of a child even after puberty. It is not a rare disorder, in which the patient manifests higher register voice than others of their same age group. Previous report says that the prevalence is 1 in 900,000 population [3, 14]. The impact of voice disorder varies greatly from person to person, environment, occupation, family members and overall personality. These are all the variables that can affect the way voice disorder affect a particular person. In general, people with puberphonia tend to encounter problems that include emotional, psychological, social and professional difficulty [12] and a research conducted by Wilson et. al. has emphasized the importance of Quality of life measures in an otolaryngology and voice assessment [16].

Puberphonia affected individuals may suffer from social impediments that can markedly affect their quality of life.

Voice therapy is invariably offered as a main treatment modality with a successful outcome. Other treatment modalities include laryngeal framework surgery, cricothyroid muscle chemo denervation, and injection laryngoplasty. [15]

Presently treatment for puberphonia is voice or speech therapy, which requires a consultation with speech therapist, which is not available in many cities of India. This also requires repeated training with speech therapist, which is time consuming [13] Techniques which were commonly used are humming while gliding down the pitch scale, phonation of vowel sounds, use of vegetative sounds like cough or throat clear to initiate voicing, production of glottal fry, digital manipulation of thyroid cartilage during vowel production, the external digital pressure over the thyroid cartilage also helped in improvement of the voice quality [12], relaxation thyroplasty [1], voice injections, voice implants. Patient's deep voice is heard spontaneously during coughing and laughing [2]. Our technique of treating puberphonia is pharyngeal resonance manipulation with breath of fire breathing technique [7].

The investigator used pharyngeal resonance manipulation training and breath of fire voice technique for treating puberphonia. Pharyngeal resonance is created by the movement of the tongue and soft palate inside the mouth and pharynx and thus, it brings resonant power to a voice. It gives great amounts of control over dynamics, registration, speed, tonal accuracy, vibrato rate, and flexibility. Manipulation training improves overt speech production, accuracy of trained words, specifically for puberphonia. The second procedure is breath of fire; a breathing training for puberphonia follow up. They refer physical manipulation of the breath that often pass in ignorant circles in the resonating chambers.

An impact of puberphonia in males includes:

1. Physical/ mental health
2. Destroys their self esteem
3. Leads to low confidence, self doubt, anxiety and depression
4. Anxious avoidance behavior
5. Obsessive thoughts about self image
6. Eating disorder like anorexia and binge eating
7. Delayed or no marriage
8. Live lonely or leave the home
9. Live with friends
10. Suicide tendency

The supportive studies found a social problem of puberphonia and other treatment methods [6, 9, 11], and investigator with his personal experience of treatment conclude that many other psychosocial impacts such as job and marriage issues arise in the society. This motivates him to find out the intervention in success and treatment of puberphonia and further analysis of his study conducted to assess the impact of puberphonia.

Objective/Purpose: To explain the impact of puberphonia on levels of society.

2. Methods

2.1. Materials and Description of Tool

The study was carried out as a descriptive simple purposing sampling technique. A self-administered questionnaire on impact of Puberphonia in the society was used. Demographic variables such as age, gender, religion, sex, birth order, educational qualification, occupation, income marital status and personal address proof such as phone number, e-mail id, and questions raised in order to assess the impact of puberphonia such as reason for taking treatment, voice pitch analyzer test, telephone difficulty in talking to girls, difficulty in social interaction, difficulty in family relationships, difficulty in way of communication, psychological distress, different copying, family history, emotional status, etc.

2.2. Selection and Description of Participants

The target population of study comprised of age groups 15 years to 70 years. Sample selection criteria were based on

who ever willing to participate in the study. Study samples were selected by using convenient sampling technique based on sample selection criteria

2.3. Data Collection and Treatment Method

After getting the ethical consideration of verbal and written permission from each sample, the structured questionnaire was used to assess the impact of puberphonia on society by interview method. Even though the investigator has found his own simple method of puberphonia relief in 1990 [4], vigorous propaganda is done since 11 November 2016. In a short period in our center we got 476 cases which indicates that prevalence of puberphonia is high. The investigator have done the treatment of" Pharyngeal resonance manipulation" followed by breath of fire and breath yoga therapy of three to five days by the trained personal, and the effectiveness of treatment is daily assessed and guided them when needed. At the end of the data collection in puberphonia center we were able to collect 476 cases by the investigators.

3. Results

The assessment of impact of puberphonia on society among puberphonia in males from the age group of 15 to 70 years is depicted in figure 1 and figure 2 depicts the marital status report among puberphonia males. The results also revealed that there is a significant association between salaried versus dependent which is depicted in figure 3 and figure 4 shows the geographical location data of puberphonia male.

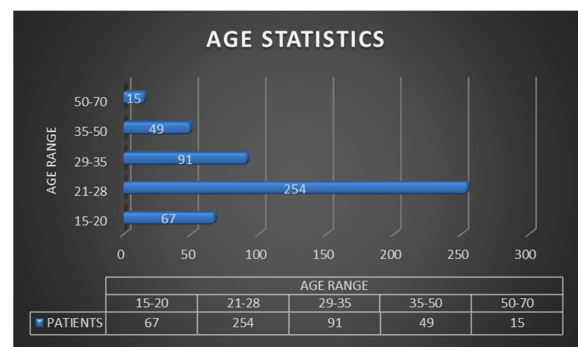


Figure 1. Percentage distribution of puberphonia cases from 15 to 70 years of age statistics.

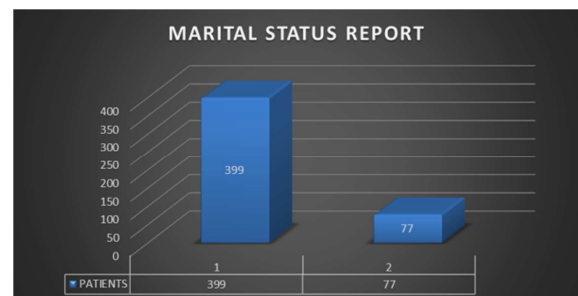


Figure 2. Percentage distribution of 476 cases out of which 77 married and 399 unmarried.

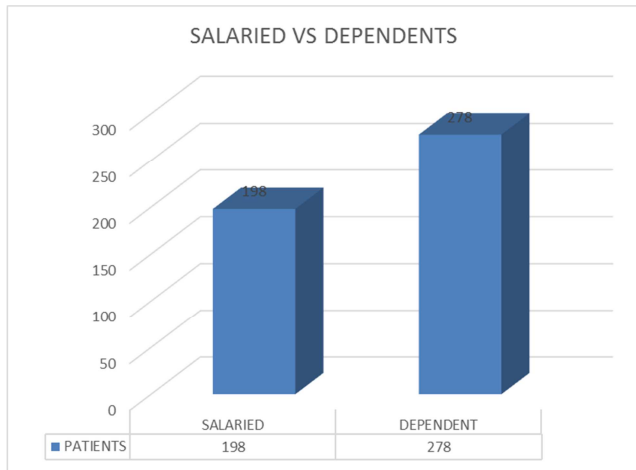


Figure 3. Percentage distribution of Social status of puberphonia patients among 476 cases treated 198 are salaried people, got employment (unfortunately low salary) and 278 cases are depended.

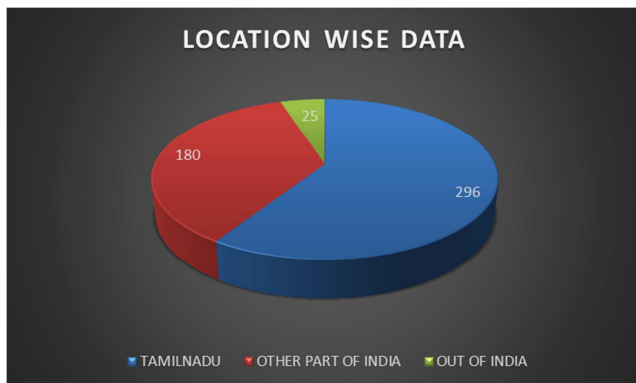


Figure 4. Percentage distribution of Geographical location data of puberphonia males.

4. Discussion

The first part of the questionnaire inquired about functional communication and social participation and second part focused on emotional responses. All participants filled out the puberphonia health questionnaire and also took part in individual interviews to gather in depth information. Conversing over the telephone was a problem for 100%, while 100% experienced difficulties when talking to same age girls. 100% reported difficulties in work place or place of education.

Among the participants, 10% communicated by writing on paper and 87% used text messages to communicate. 70% of the participants showed psychological distress with puberphonia. Different coping strategies are used to overcome these difficulties. Adolescents are more affected than young adults.

Apart from impact on voice of the puberphonia, this disorder also has impact on social and psychological level. The case history generally concerns about the level of psychological impact of the patient, but research has not yet address the change in the psycho-social behavior of the patient. There is lack of awareness about the disorder and also the treatment. It has also been noted that the patient with

puberphonia, has a tendency to be left out alone. There has been very little research in puberphonia patient's psychological and social behaviors. Supportive study revealed that participants filled out the General Health Questionnaire and also took part in individual interviews to gather in depth information. Conversing over the telephone was a problem for 87% while 73% experienced difficulties when talking to same age girls. 60% reported difficulties in work place or place of education. 77% had difficulties in social situations. Only 20% experienced difficulties when interacting with family members [10].

Now a day, suicide has become a major public health problem which can have a lasting effect on the family and the entire community. According to WHO, around 8,00,000 people die due to suicide every year [7]. National Institute of Mental Health states that suicide is the second leading cause of death among individuals ranging from 15 to 30 years [5]. People with suicidal tendency tend to have certain problems like mental disorders, depression or alcohol abuse may be due to financial crisis, life stress or even chronic pain and illness. One of the cause maybe puberphonia and rejection by opposite sex or by bullying. Such people do not openly talk about their problems and end up attempting/committing suicide. One of the major reasons for this problem is lack of awareness on treatment and could be done from this intervention to reduce suicide rates to create more awareness about it. As medical professions should identify puberphonia early and treat quickly and confidently with non invasive process.

Once we correct the voice in puberphonia, communication and quality of life improves. We find that patients socialize more and participate in more activities.

Highlights of puberphonia males- functional communication and social participation

1. Critical aspects of communication skills have been impacted by puberphonia.
2. Adolescents who are puberphonia are teased and bullied more than their fluent peers.
3. Adolescents may not find puberphonia voice a stigmatizing condition however they prefer not to discuss it with other people.
4. Families have experienced high levels of emotional strain in conducting the marriage for puberphonia boys and recognize the impact of puberphonia among boys.

Puberphonia can cause wide ranging psychosocial impact. This is particularly the case for adolescents who may face additional physical, emotional and personality changes as they become adults. This study reports the findings of an investigation into the social and communication impacts of puberphonia.

The following Message should be recognized by the public and medical professionals

1. Puberphonia is a very common problem.
2. It needs treatment and treatment available.
3. It is not a hormonal disease and physiological disease.
4. Puberphonia boys are smart and intelligent.
5. Bad parenting is not the etiology for puberphonia and.

6. Curable.
7. Patient talked immediately after treatment in phone or face to face. The third party recognized the voice of his father. Genetics also play a role in how our voices mature. Although how a child's voice develops owes something to mimicry of their parents, people from the same family will often sound alike because laryngeal anatomy is dictated by ancestral DNA just like every other physical trait.

5. Conclusion

The study concludes that the pharyngeal resonance manipulation and breath of fire therapy not only improves the voice, it is also improved the personality of puberphonia client and provides thorough further knowledge about puberphonia among the society and health professionals. The study also included that other problem of puberphonia of depression, loneliness, cowardice, low self-esteem, inferiority complex and thinking of suicide, which would be the take home message from our long experience of 29 years in treating puberphonia.

6. Recommendations

1. The study can be done with rural and urban puberphonia males.
2. The comparative study of impact of puberphonia among adolescent and adults.
3. The study can be done to assess the other problem of puberphonia.

Appendix

Puberphonia / health questionnaire – tool used.

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Ethical Approval: All procedures performed in studies involving human participants were in accordance with the institutional research committee (USWR ethic approval) and with the 1964 Helsinki declaration and its later amendments.

Informed consent: Informed consent was obtained from all individual participants and their parents included in the study.

Author Contributions

M. Kumaresan: Conceptualization of the study, collection, analysis of the data, writing the manuscript, finalized the manuscript and will act as the guarantor of the paper; MK. NB Conceptualization of the study, collection, analysis of the data, writing the manuscript, finalized the manuscript; MK: Edited and critically evaluated the manuscript.

Conflict of Interest

Author declares that they have no conflict of interest.

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References

- [1] Arjunan Karthikeyan, Balasubramanian Thiagarajan Case Report - Otolaryngology Online Journal (2012) Volume 2, Issue 4 Volume 2 Issue 4 2012 ISSN: 2250-0359 Relaxation Thyroplasty - A Classical Surgical Approach for Puberphonia.
- [2] Balasubramanian Thiagarajan Puberphonia Conservative approach A review Stanley Medical College Puberphonia Conservative approach A review Balasubramanian Thiagarajan Stanley Medical College.
- [3] Banerjee AB, Eajlen D, Meohurst R, Murty GE. Puberphonia -A Treatable Entity 1st World Voice Congress Oporto: Portugal; 1995.
- [4] Kumaresan M. Clinical and Practical Otorhinolaryngology: A Research work in Otorhinolaryngology. 1st edn. Madras: Paramkalyan printers. August 1992.
- [5] Lisa Horowitz. Suicide statistics: national institute of mental health. <https://www.nimh.nih.gov/health/statistics/suicide.shtml>.
- [6] Morrison M, Rammage L. The Management of Voice Disorders. San Diego Singular Publishing Group Inc: 1994.
- [7] Muthiah K. An immediate and permanent cure for Puberphonia. J Otolaryngol ENT Res. 2018; 10 (4): 231. DOI: 10.15406/joentr.2018.10.00351.
- [8] Peeter Värnik: Suicide in the World. Swedish Mental Health and Sociology Institute. Estonia *Int. J. Environ. Res. Public Health* 2012, 9 (3), 760-771; <https://doi.org/10.3390/ijerph9030760> Received: 2 February 2012 / Revised: 13 February 2012 / Accepted: 22 February 2012 / Published: 2 March 2012.
- [9] Pomme J. Functional Disorders of Voice Changing. Rev Laryngol Otol Rhinol 1971; 23; 137-56.
- [10] Premarathna, M. S. S.; Wijeratne, L. T.; Perera, I.; Wickremasinghe, A. R. Psychosocial Impact of Puberphonia. URI: <http://repository.kln.ac.lk/handle/123456789/5471>.
- [11] Roy N, Bless DM, Heisey D, Ford CN. Manual Circumlaryngeal therapy for functional dysphonia: an evaluation of short and long term outcomes. J Voice 1997; 11: 321-31.
- [12] Scott S., Wilson J. A., Robinson K., et al Patient reported problems associated with dysphonia. Clinical Otolaryngology 1997; 22: 37-40.
- [13] Sudhakar Vaidya*, G. Vyas Indian Journal of Otolaryngology and Head and Neck Surgery Vol. 58, No. 1, January-March 2006. Puberphonia: a novel approach to treatment.
- [14] Thiagarajan B. S. Puberphonia conservative approach-A review. Otolaryngology Online journal. https://www.researchgate.net/publication/273338124_Puberphonia_Conservative_approach_A_review.

- [15] Hamdan AL, Khalifee E, Ghanem A, Jaffal H. Injection Laryngoplasty in Patients With Puberphonia. *J Voice*. 2019 Jul; 33 (4): 564-566. doi: 10.1016/j.jvoice.2018.02.017. Epub 2018 Oct 29.
- [16] Wilson J, Deary I, Millar A. et al The quality of life impact of dysphonia. *Clinics of Otolaryngology*, 27 (3), 179-82.

Biography



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