

Treatment of Vocal Abuse in Pediatric and Adult Populations

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Introduction

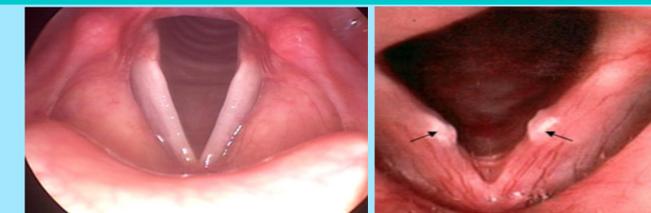
In both adult and pediatric populations, vocal abuse is a common issue. Vocal abuse can lead to the formation of vocal nodules. It is important that both populations participate in voice therapy to remove vocally abusive behaviors. Some techniques used to help treat vocal abuse are shown in Figure 1 (De Bodt et al., 2007).

Connection Between Vocal Nodules and Vocal Abuse

Vocal nodules are very common in both adult and pediatric populations. Vocal nodules are benign lesions or growths on the vocal folds. They are usually bilateral, and can be caused by various vocally abusive behaviors. The vocal nodules add mass to the vocal folds, which cause incomplete vocal fold adduction. Normal vocal folds and vocal folds with nodules are shown in Figure 2 (Boone, Mcfarlane, Von Berg, & Zraick, 2014).



Figure 2: Normal vocal cords and vocal nodules



Normal Vocal Folds

Vocal Fold Nodules

Pediatric Vocal Abuse

The pediatric population is in the learning stage of life. This population is learning how to communicate with others while developing important skills when speaking to someone, such as: appropriate loudness when speaking, awareness of vocal abuse, and relaxing when speaking. Some other vocal abusive behaviors are listed below.

- Making vocal noises
- Increase of vocal quality during childhood activities
- Excessive crying
- Chronic Coughing (Martins et al., 2012).

Figure 1: Therapeutic Techniques (Boone, et al., 2014).

Techniques	Description
Relaxation	It is important for the clinician to help the client learn relaxation methods. These relaxation methods will not only help the client feel relaxed, but will also help relax the vocal tract. Learning to react well to stressful situations is important, and can help eliminate vocally abusive behaviors. Relaxation is most often achieved when the patients think of a calm, peaceful setting, and capture those feelings. Patients with vocal hyperfunction tend to exemplify certain vocal behaviors that are harmful to the vocal mechanism. Some of these vocal reactions are elevated pitch and multiple throat clearing episodes. These patients can benefit from this technique (Boone et al., 2014).
Change In Loudness	Many patients use inappropriate loudness when speaking. Exceeding typical loudness is an abusive behavior, and it can cause damage to the vocal folds. This can also cause vocal nodules to appear. It is important to make the patient aware of the loudness of their voice (Boone et al., 2014).
Counseling and Eliminating Vocally Abusive Behaviors	It is very important to identify the abusive vocal behaviors the patient is using. The clinician should demonstrate appropriate behaviors to the patient (Boone et al., 2014).
Yawn-Sigh Technique	This technique is highly effective, as it allows the alleviation of tension in vocal hyperfunction. Some characteristics associated with vocal hyperfunction are a raised larynx, and tightly compressed vocal folds. This technique helps lower the larynx and release tension (Boone et al., 2014).
Respiration Training	While this therapy is useful for all populations, it is more prevalent for professionals such as teachers and singers. This therapy operates by increasing abdominal muscle participation. It is important to work on good posture, which will develop good expiratory control. It is also important to explain that an increase in air volume will allow for more speech per breath, which can be done without having a strained quality at the end of a phrase (Boone et al., 2014).

Implementation of Treatment for Pediatrics

Treatment for pediatrics is important because vocally abusive behaviors can affect involvement in classroom activities, cause the child to be unintelligible and even feel embarrassed (Senkal & Ciyiltepe, 2013). Many parents believe that their child will outgrow the voice problem that emerged from vocal abusive behaviors. Although this may be the case for some children, it is not for all. Children with vocal fold nodules are more likely to act out, and feel like they attract attention because of their voice (Abbott, 2013).

- Respiration Training:** For this technique, a good tool when working with the pediatric population is a pinwheel. This will help the child practice extending the length of exhalation (Boone et al., 2014).
- Elimination of Vocal Abuse:** For children, it is helpful to use a story to review abusive and non-abusive behaviors (Boone et al., 2014).
- Family counseling is very important in this population. Family counseling can help parents and other family members learn how to help the child avoid vocal abusive behaviors. The parents should not encourage yelling, avoid shouting to the child from a distance, and encourage the child to come closer to speak at a comfortable volume (Kollbrunner and Seifert, 2013). At the start of therapy, it is important for the clinician to take baseline measurements regarding how many times abusive behaviors are used. If this data is difficult to receive, siblings and other peers are great resources for finding how frequent the abusive behavior is used (Boone et al., 2014). Although it is important to involve the family, it is crucial to have the child understand that helping his or her voice is their own responsibility. It is also important to incorporate extrinsic rewards in therapy such as stickers. It is important to remember to reward the child in order to keep the motivation and attention in therapy (Abbot, 2013).
- Change in Loudness:** For children who abuse their voice and speak too loudly, it is important that they learn to control the volume. During treatment, it would be beneficial to have the child differentiate between loudness levels, in order to develop an understanding of various intensities (Boone et al., 2014).
- Yawn-Sigh:** The clinician uses a story with pictures to explain the technique, along with demonstrations of yawning. This technique is used to teach control and relaxation to the population (Boone et al., 2014).

Adult Vocal Abuse

In adult populations, most of the vocally abusive behaviors come from certain occupations. The two most popular occupations related to vocal abuse are teachers and singers (Verdolini & Ramig, 2001).

- **Teachers:** Teachers speak for long periods of time, and do not realize the abuse that is being done to the vocal folds. Many teachers do not stay hydrated while talking for long periods of time and experience vocal fatigue (Verdolini & Ramig, 2001).
- **Singers:** Singers use their voice much more frequently, and in a more demanding way than most other professions (Verdolini & Ramig, 2001).

Implementation of Treatment for Adults

The adult population may experience behaviors that can be abusive to the vocal folds. This is very common while in a job environment. Many adults with voice problems feel that it negatively affects function at work. Patients experience an increase in depression, social isolation, and have a hard time communicating in background noise (Verdolini & Ramig, 2001).

- Counseling and Eliminating Vocal abusive behaviors:** Busy schedules often interfere with availability to attend voice therapy. Family involvement is not as crucial for adult populations as it is for pediatrics. For adults, it can be beneficial to plot daily vocal abuse on a graph. This can help increase awareness of how many times abusive behaviors are being used (Boone et al., 2014).
- Respiration-** This is very important when working with professional voice users, such as teachers and singers. Breath support is very important when working on respiration, especially for vocal performers. Formal respiration may be needed for singers and teachers. It is important for the client to be aware that the abdominal cavity gets smaller on exhalation, and larger on inhalation. Greater air volume will decrease the strain on the vocals cords, allowing for greater ease of speaking (Boone et al., 2014).
- Yawn-Sigh:** For this population it is important to explain and educate how the yawning helps, what the yawn represents, and what the yawn should feel like. A light phonation can be added to the yawn, and the patient can feel a comfortable, easy phonation (Boone et al., 2014).

Conclusion

Treatment of vocal abuse in both pediatric and adult populations is very important. Even though the treatment methods are similar, the way treatment is implemented needs to be adjusted to the population. It is important that clients in both populations take the techniques learned in therapy and apply them in everyday life (Senkal & Ciyiltepe, 2013).