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A singing teacher's exploration into how professional practice could be further developed to support the effects vocally, of sleep deprivation and eating disorders in adolescent singing students.

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Part One: Project Portfolio

Introduction

Most of my work as a singing teacher is with the adolescent aged population. Teaching singing to this age group brings a wealth of complexity. A singing teacher would be expected to tackle issues such as voice change, peer pressure, performance anxiety and chaotic lifestyles to name but a few. All of these can, and do affect the singing voice (Gebhardt, 2016).

Whilst there are some issues such as dehydration, singing the wrong repertoire and sleep deprivation that could be experienced with students on a daily basis, there are others that a singing teacher may only experience rarely which could include drug misuse or eating disorders.

However, it is important that a singing teacher of this age group should be aware of the signs and symptoms that may point towards a vocal issue. Singing teachers must also be aware of how to deal with these vocal issues, either themselves if skill sets allow, or via other professional intervention. This is vital, as vocal issues that develop during the adolescent stage may be evident throughout the rest of the singer's life (Spiegel, Sataloff, Emerich, 1997). On reflection I can see times in my teaching career when I have missed clear signs of vocal issues in my adolescent pupils.

In my previous master's module, I explored various physiological and psychological factors that could affect an adolescent singing voice. I found my studies to be very informative and helpful for further development of my teaching. However, I found two of the areas I researched particularly interesting and helpful for my teaching practice. These were the effects of sleep deprivation and eating disorders on the adolescent voice.

I found the effects of sleep deprivation on the voice interesting, because this is almost certainly something that every adolescent singing student will experience. Studies have shown that up to one fourth of adolescents do not obtain the 8-10 hours of sleep per night needed to be adequately rested (Wolfson & Carskadon, 1998. Roberts, Roberts, Duong, 2009). I am aware that many of my adolescent aged pupils are sleep deprived to some extent. This is often more obvious during exam season when the need to revise takes over the time available to sleep for some students.

Due to the prevalence of this issue with adolescents and the limitations of my previous module, I felt there was more information to be gathered on this topic. Further knowledge gained will not only benefit my adolescent singing students, but also my wider community of singing students as around 20% of adults are also thought to be sleep deprived (Adams, 2015).

In a similar way, I found I was unable to explore in adequate depth the effects on the singing voice of eating disorders. Earlier in the year one of my adolescent singing students was diagnosed with anorexia nervosa. In my previous module I concluded that the changes in this student's voice caused by the anorexia had been evident for some time. I however, had put their vocal symptoms down to voice change. I now realise that I was uneducated on the signs and symptoms of an eating disorder not only physically, but also vocally. I had missed clear physical signs like the fact this student would not remove their coat in lessons even on a warm day and that they no longer wanted to take part in any performances as they didn't want people to look at them. And maybe even more obviously the fact that this student spent much of their lesson with me looking at themselves in the full-length mirror that was on the wall in my practice room.

As I was only able to briefly look into the effects of these 2 topics on the adolescent voice in my previous module, I have taken the decision to carry them forward with me. I hope that I can further deepen my knowledge and be a more effective teacher to my adolescent pupils that suffer with these conditions.

Planned Program of Study

Context

Adolescence is a time of much change. It is a period of both biological and psychological changes, as a person grows toward adulthood (Sawyer et al, 2018). Susaman and Rogol (2014) describe the adolescent period (for males and females) as one of the most profound biological transitions that a person will experience in a lifetime.

It is also a time of much pressure externally from society, often referred too as social stress or anxiety (Reynolds et al, 2013). This may include the pressures of academic work, peer pressure, pressure from parental/home life, finding a life path and career choices and many more (Marshall, 2007).

These pressures and changes can often bring about a change in an adolescent's behaviour. For some this may just manifest as a lack of sleep due to time constraints. But for others it may result in risk taking behaviour which may display as drug or substance abuse, or behaviours to try and take back some control in life which may include eating disorders or self-harming (Richards, et al, 2015).

Many of the above factors can, and do, affect the vocal apparatus. My intention is to look at sleep deprivation and eating disorders from a vocal health point of view, in order to better understand how to help, guide and educate singing students suffering from these ailments. However, it will be necessary to take a holistic viewpoint as well, remembering the student as a whole person, not just a voice.

Aims

- To examine in detail sleep deprivation and eating disorders in adolescents. This will include researching how they affect adolescents holistically in order to understand the possible impact vocally.
- To examine the impact of the topics on vocal health and to learn in detail the effects and symptoms that a singing teacher should be looking for.
- To identify best practice for educating pupils who may suffer the effects of sleep deprivation and eating disorders vocally.

Objectives

- To use literature to become more familiar with vocal health issues surrounding sleep deprivation and eating disorders.
- To critically evaluate the literature written on these topics in order to:
 - A. Form strategies to further enhancing my teaching skills that will help me guide pupils through vocal health issues that may arise during this life stage.
 - B. Be more knowledgeable about available literature, so I am able to direct students towards relevant vocal health information and mental or physical health providers.

Timeline

- July/August 2025 - Aim to choose topic & read around topic and start to collect useful literature.

- September/October 2025 – Aim to write component 1.
- October/November – Aim to write component 2.
- 1st December – Aim to have a complete draft to hand in, draft marked and any changes needed to be implemented.
- 15th December 2025 – Hand in final finished document for marking.

Methodology

I will be undertaking my research as a narrative review. I feel this method best suits my paper as there is a broad spectrum of research on both my topic areas. A narrative review will allow me to compile and compare suitable literature in a flexible way, in order to find the best information on the vocal issues caused. I will also be able to identify any gaps in the literature which is useful for future research.

My paper will also inevitably include elements of autoethnography which I feel fits well with a narrative review and will allow me to critically analyse my current teaching practices. As I am a teacher of the age group in question, I will be able to bring some of my own experiences and insights into the paper.

As an insider researcher, I will need to ensure that my work is within ethical guidelines and will not disclose any information about a pupil that could lead to them being identified.

As there is much research available on my topics, it will be necessary to be selective concerning which sources I choose. I will have to take into account the assignment limitations and ensure only relevant literature is used. In the first instance the aim will be to use peer reviewed literature from journals.

There are also many useful books written on my topics that will add helpful insight into my research. This information will be included where relevant, trying to ensure that where possible, I am using the most recent edition of the book and authors that are well known in the vocal adolescent health circle. I may also look to include PHD or Masters work if relevant. This research will be helpful as it may come from other singing teachers in an autoethnographically situation such as mine. However, I will be mindful that these sources are not peer reviewed and may contain errors or bias.

I will be using a pragmatic approach for my paper. I feel this paradigm best suits my work as it is often referred to as a mixed method paradigm. It works outside of a ridged framework

and flexibly works to find answers and solutions to research questions (Revez, Borges 2019). I believe it will allow me to look deeply into my areas of research and will support me in finding new ways to adapt my teaching.

Allemang et al. (2022) state that the pragmatic approach is helpful in dealing with complicated social issues that need a multifactor approach in order to reach solutions or conclusions. This fits well with my research as no two students are alike and their issues can be complex. Therefore, a flexible approach is always needed in teaching anyone to sing.

Allemang et al. (2022) continues, stating that this paradigm allows solutions and conclusions to be reached by using multiple source's and either quantitative or qualitative data collections. This will be useful for my work as I will inevitably use quantitative and qualitative literature and research data. This will be used alongside my own teaching experience, that of my singing pupils and potentially that of other singing teachers.

Part Two - Written Assignment

Introduction

Adolescence is a time of complex physical growth as a young person grows toward adulthood (Salmela-Aro, 2011). It is also a time of physiological growth. Young people will begin to explore their personalities, and start to assess how they fit into society. (Ozdemir, Utkualp, Pallos, 2016).

As a young person develops into an adult, they must start to learn how to look after themselves mentally and physically. As such, it is a time when it is vital that adolescence's receive support and guidance from parents, teachers, carers etc. (Apter, 2002) to ensure they are able to develop into a responsible adult.

Similarly, it is imperative that a young person who partakes in any form of vocal use activity is well educated in its use and care. This education should include correct or appropriate vocal use and good vocal health, thus ensuring that good vocal habits are formed that will last into adulthood. (Chapman, 2021).

In this paper I will aim to provide an overview of the effects of sleep deprivation and eating disorders on the adolescent voice. Whilst my main focus will be vocal effects, I will also aim to outline some generally useful information on each topic. This information is included in order to best educate and inform singing teachers.

Sleep Deprivation

General Information

Sleep is important to all humans regardless of age (Walker, 2017). However, sleep is particularly important to the adolescent due to their ongoing physical and physiological development (Wiggins & Freeman, 2014). Sleep deprivation amongst this age group is associated with behavioural and emotional issues as well as poor academic performance and a rise in risk taking behaviour (Mitru, Millrood & Mateika, 2002). Brand and Kirov (2011) suggest that poor adolescent sleep could lead to physical or psychiatric conditions that can remain with the person into adulthood. More recent studies have even implied that insufficient sleep at this age could have long term effects on the neurocognitive development of a person (Speyer, 2022).

Most medical experts estimate that on average adolescents should aim to have between 8 and 10 hours of uninterrupted sleep per night (Evans-Whipp & Gasser, 2018). Research in America showed that up to 91.9% of adolescents who took part in a sleep study, did not obtain adequate sleep on a school night (Noland, et al. 2009), and another study in 2012 reported that 40.5% of adolescent participants were sleep deprived (Leger, et al. 2012). Therefore, it can be concluded that this is a widespread issue amongst the adolescent population. This data tends to support my own thoughts that a large proportion of my adolescent singing students are sleep deprived. I would go as far to say that around 70% or more of my students are affected.

Sleep deprivation can be separated into two strands. Total sleep deprivation which equates to no sleep at all, or partial sleep deprivation which is best described as interrupted sleep or a reduction of sleep (Icht, et al, 2020).

Sleep Deprivation - functioning and quality of the voice and general performance.

Acoustic effects-

Bagnall, Dorrian & Fletcher (2011) noticed during their research, that a person may comment 'You sound tired' in conversation. They reflected on what sound or quality in a person's voice may have caused this comment. They concluded that this 'tired' sound comprised of a croaky, rough, dull or flat sounding voice. Even from this very simple comment it starts to become clear that sleep deprivation does negatively affect the voice. It should be noted that this research was referring to the spoken voice not the singing voice. However, as singing is widely acknowledged to be an extension of speaking it is fair to conclude that similar qualities will be found in the singing voice of a sleep deprived person (Connor, 2022).

Sleep deprivation, total or partial, causes both mental and physical fatigue (Icht, 2020). Rocha and Behlau (2018) explain that a symptom of physical fatigue is muscle fatigue. This in turn can cause fatigue during phonation and can affect the jitter and shimmer (or the acoustic qualities) of the voice. Muscle fatigue can cause decreased tension and a reduction of vibration in the vocal folds (Krajewski, Wieland, Batliner, 2008. Bagnall, Dorrian, Fletcher, 2011).

The below table explains the jitter and shimmer that should be found in a voice and the effects on the vocal sound when these acoustics sounds are altered by sleep deprivation for example.

Voice Acoustic sound	What is it?	Effect if normal levels are altered
Jitter	The variation of fundamental frequency of the voice. All voices will have small amounts of jitter evident, typically less than 1%	An increase in jitter can cause the voice to sound rough or hoarse, and can point towards an underlying vocal condition
Shimmer	The variation of the amplitude, or loudness of the voice. Analysis of the shimmer in a voice can offer an understanding into how the vocal folds are vibrating and can point towards a possible vocal irregularity.	An increase in Shimmer can cause the voice to sound croaky or hoarse.

(Figure 1. Information derived from Backstrom et al, 2022. Farrus, Hernando, Ejarque, 2007. Phonelyze, 2025).

Pitch instability-

Reduced sleep has also been attributed to the disturbance of respiration rates, most notably by increasing the heart rate (American College of Cardiology, 2016). In their research Larroy-Maestri and Morsomme (2014) analysed the effects of a raised heart rate, due to a stressful situation. This research is particularly interesting as the singing voice, rather than speaking voice was analysed. They found that pitch precision was negatively affected in all participants. Although this research was carried out on participants in a stressful situation which elevated their heart rate, it could be concluded that it is relevant to all situations where the heart rate is elevated which for adolescent singers may include, for example, a concert or singing exam situation. Larroy-Maestri and Morsomme noted that more research was needed to further support their findings.

Dehydration-

Dehydration can be prevalent amongst adolescents (Zborowski & Skotnicka, 2025). Studies show that more than half of America's adolescents are dehydrated, with about 25% reported as not drinking any water daily (Kenny et al. 2015). Dehydration can be caused by not drinking adequate water, illness, physical activity, climate and many other factors (National Library of Medicine, 2024). But it can also be caused by external factors such as consumption of certain levels of caffeine and alcohol (Irwin et al. 2013; Maughan, Griffin, 2003).

Georgalas, et al. (2023) note that sleep deprived people often turn to caffeine to help alleviate their symptoms. Research shows low levels of caffeine consumption do not generally cause dehydration, but that high doses may (Ruxton, 2008). Adolescents may also partake in alcohol consumption. The World Health Organization's European survey of adolescent's alcohol drinking habits (2024), showed that 57% of those adolescents surveyed had tried alcohol at least once and 37% stated that they had consumed alcohol in the last 30 days. Therefore, it is likely that many adolescent singers will partake in alcohol consumption. Hydration is key to the correct functioning of the vocal apparatus (Alves et al, 2019). The vocal folds are a complex layered structure which rely on mucus to hydrate them so they are able to open and close correctly in order for stable phonation to occur (Miri, Barthelat, Mongeau, 2012). Dehydration of the vocal folds can be attributed to many factors such as mouth breathing, an illness, certain medications, climate conditions or the consumption of alcohol or caffeine (Yang et al. 2017).

Inadequate hydration of the vocal folds has been linked with the development of vocal nodules, cysts, polyps and the disturbance of acoustic qualities of the voice causing hoarseness or a need for increased vocal effort in order to phonate (Miller & Verdolini, 1995; Zou et al, 2019). When I have had sleep deprived students in the past, I have mistakenly continued to teach them as normal. This has included vocal warm ups and sometimes singing of demanding repertoire for long periods of time. I now understand this was putting them at risk of potential vocal fold damage.

Given all this information I must endeavour to impart to my students the need for adequate hydration and encourage them to take drink breaks in singing lessons. I could also provide water to them when they have not brought their own. Leading by example could also be prudent, ensuring my singing students see me drinking in lessons frequently.

Reduction in emotion-

As well as the physical vocal effects, there may also be some external effects of sleep deprivation on the voice. Franzen, Siegle, and Buysse (2008) reported a link between sleep deprivation and negative emotion and mood. Considering much of what a singer does in a performance is linked to expression and emotion this could have a negative impact on the singers vocal and physical performance.

In order to further research this McGlinchey, et al (2011) undertook a study of 38 adolescents. They allowed their participants only 2 hours sleep and then undertook a series of recorded interviews in order to analyse the change in pitch, jitter and shimmer in the voice. Whilst this research was undertaken on the speaking voice, it will hold much useful information for the singer as well.

All participants reported a decrease in positive emotion, and during this decrease the pitch of the spoken voice lowered and vocal energy levels decreased.

They found that adolescents were particularly sensitive to these voice changes when compared to the adults. As many adolescent singing students struggle to achieve adequate expression and emotion in their singing, this is a concerning finding. Some of the inability to display emotion may be due to a lack of self-confidence, perfectionism, peer pressure or general embarrassment (Kenny & Osborne 2006). However, some of this may also be attributed to a lack of sleep causing inhibition of vocal expression and energy levels. As sleep deprivation also causes heightened levels of anxiety and distress, it could be concluded that this added to a public singing performance such as a singing exam or school concert, could put a singer under undue stress that would negatively affect their whole performance both acoustically and physically (Columbia University Department of Psychiatry, 2022).

I have concluded that in singing lessons I have expected sleep deprived students to perform with as much animation and energy as a non-sleep deprived student. I now realise that this is not possible and I must adjust my expectations on days when students are clearly sleep deprived. This may include changing the shape or plan of my singing lesson. If, for example, a student presents as clearly sleep deprived instead of intensive singing, I may choose to centre the lesson around foreign language text pronunciation, new repertoire choosing or music theory skills for example.

Sleep Deprivation Conclusions

It is clear for adolescents who regularly use their singing voice there are some alarming consequences of sleep deprivation that must be taken into consideration.

It is imperative that I, and singing teachers in general, must be aware of these issues and be watchful for pupils who could be displaying symptoms of sleep deprivation. Singing teachers should also be ready to adjust their expectations towards sleep deprived pupils. For example, I have concluded that asking a student to sing a long passage of opera which requires an agile, expressive and healthy voice may be beyond what a sleep deprived voice can manage safely, and may indeed cause vocal dysphonia or damage (National Institute on Deafness and other Communication Disorders, 2025). I must consider how best to incorporate education on the importance of sleep to students in their lessons, in order to better equip them and to achieve better vocal health awareness. I would hope that with increased education into the effect of sleep deprivation on the voice, my students may reconsider their sleeping habits, especially around the time of an important performance or singing exam.

As has been previously noted, much research around sleep deprivation and the voice centres around the speaking voice. Therefore, more specific research into the singing voice and sleep deprivation would be beneficial and informative moving forwards.

Eating Disorders

General Information

Eating disorders are described as a psychiatric impairment of normal eating behaviour through methods of purging, starvation or bingeing (Treasure, Duarte, Schmidt, 2020 ;Rome, Ammerman, 2015).

Eating disorders can include Anorexia Nervosa, Bulimia Nervosa, Binge eating disorder, Pica, Rumination, Night eating syndrome and various other unclassified manifestations of eating malfunctions (National Library of Medicine, 2023).

Eating disorders have been listed by the World Health Organisation (WHO, 2025) as one of the most prevalent mental health disorders that an adolescent may experience. It is widely acknowledged that eating disorders are complex and affect the sufferer mentally and physically on many levels (Suarez-Albor, Galetta, Gomez-Bustamante, 2022). Eating

disorders are often misdiagnosed or go untreated in the adolescent age group (Campbell, Peebles, 2014).

Research shows that adolescent eating disorders continue to increase globally, especially in high income countries, such as much of Asia (Pastore et al, 2023). Most of these reported cases were in females, although the number of males affected is also noted to be on the increase (Chen, et al. 2024). In my 25 years as a singing teacher, I have been aware of 2 pupils with a diagnosed eating disorder and one who had a suspected undiagnosed eating disorder. However, because data shows eating disorders to be on the rise, I must expect that I will experience a rising number of students experiencing this ailment.

Adolescents suffering from an eating disorder have a substantially raised risk of mortality, with those who suffer from Anorexia nervosa thought to be at the highest risk (Arcelus, et al, 2011).

Physical complications of an eating disorder can occur to all areas of the body. These can include dental erosion, heart conditions, organ failure, disturbed hormone levels, osteoporosis, skin conditions, decreased concentration, fatigue and sudden death (Winston, 2008. Zam, Saijari, Saijari, 2018. Cavoli, Mule, Rotolo, 2011). As eating disorders starve the body of its needed nutrients, they therefore cause an impact on the physical development of an adolescent (Ruuska, 2006).

Eating Disorders - functioning and quality of the voice and general performance

As seen above eating disorders can affect and cause damage to the body in many ways. As phonation production requires many physical factors, it is unsurprising that eating disorders can greatly affect the singing voice both acoustically and physically (Maciejewska et al, 2023).

Impediment of vocal apparatus growth-

Maciejewska et al's, study (2016) looked at the effect of anorexia on 41 female adolescents speaking and singing voices. They also undertook all the same studies on a control group of adolescent females who did not suffer from an eating disorder. All anorexic subjects were reported to have underdeveloped or incorrectly formed larynx muscles, with 55% of them displaying an immature larynx for their age. Ferreria (2010) supports this finding, and notes that the dehydration and nutrient deficiencies caused by eating disorders can cause significant abnormalities in the growth and development of the larynx. Maciejewska et al's

(2016) also found that some of the females studied had shorter than normal vocal folds, and most had a limited vocal range with a shallow breath range resulting in shorter phonation time. The glottis was also reported to be omega-shaped rather than the normal v shape (Cleveland Medical Clinic, 2024). Whilst it was noted that the vocal folds themselves seemed to be unaffected, the frequency with which they vibrated was noted to be slightly decreased when compared with that of the control group. However, other research has concluded that the vocal folds can be directly affected. Kim, Yoo & Park, (2023) reported that malnutrition can lead to a weakness or wasting away of the vocal folds, and that this causes changes to the quality of the voice.

Maciejewska et al, also noted that the underdevelopment of the vocal apparatus listed above, lead to an immature sounding singing voice compared to the actual age of the singer. They concluded that in some cases the underdevelopment of the vocal apparatus could be corrected by hormone replacement therapy and phoniatic care, so the damage may not be permanent if treated correctly. The researchers concluded that further research needed to be undertaken in this area in order to further understand the implications and possible interventions needed.

When I have taught students with eating disorders, I have not fully appreciated the extent to which the singing apparatus were affected and could be under developed. I realise now my lack of knowledge could have caused potential harm to the student's voice and in the future, I need to find alternative approaches such as changing to less a demanding repertoire.

Physical damage of the vocal apparatus-

Bulimia nervosa is thought to affect around 1.5% of women in their lifetime and 0.5% of men. Around 1-4% of the female adolescent population of America are thought to be affected by bulimia (UR Medicine, 2025).

The National Institute of Mental Health (2025) describes bulimia as recurrent food bingeing episodes followed by the use of induced vomiting or laxatives to compensate for the overeating. The self-induced vomiting associated with bulimia, can be a cause of vocal harm and laryngeal changes (Ferreria et al, 2010). This damage can include vocal fold haemorrhages, scarring of the vocal folds as well as dilated blood vessels on the surface of the mucous membrane in the glottis (Morrison, Morris, 1990). Self-induced vomiting can also bring about occurrences of acid reflux where the stomach acid travels up towards, and sometimes into, the throat (National Health Service 2023). This acid irritates and causes inflammation of the vocal folds as well as giving rise to changes to the structures of the

larynx, the pharynx, trachea and lungs (Sataloff et al, 2020; Mitrano, 2001). Research has shown that singers who suffer with repeated attacks of acid reflux report a hoarseness and a decrease in the overall quality of the singing voice (Lenti et al, 2019).

Once again, this area appears to be under researched and many of the research papers mentioned above conclude with a phrase to encourage more work in this area.

Reduction of general stamina-

Although eating disorders may manifest many physical symptoms that affect a singer's voice, they also affect the general stamina of the person (Ghoch et al, 2013). As a singer's body contains their instrument, a good level of overall physical fitness and stamina is required (Chandler, 2022). A good performance will include good breath management requiring the use of the respiratory muscles and cardiovascular system (Baliga, 2024). It also requires good physical health as often long periods of practice, moving and maintain good posture are required. This can involve the use of many muscles within various parts of the body (Sundberg, 2018). After any extended use, the vocal muscles may need recovery time requiring the body to be able to heal itself (Michael, 2012). All of the above require a healthy fully functioning body, which is often not evident in a person with an eating disorder (Padierna et al, 2002). Therefore, it may be concluded, that aside from the acoustic sound of the voice being affected by the eating disorder, the ability to perform and the quality of the performance may also be affected.

I had not appreciated how great the lack of general stamina was for my students who suffer with an eating disorder. I realise now a change of approach in lessons may be needed which might include letting the student sit to sing, or changing the way my lessons are structured so that less time is spent on demanding repertoire.

Body Dysmorphic Disorder (BDD) –

Body dysmorphia is a psychiatric disorder that occurs when a person has a distorted or imagined view of their body. This, for example, can make a person think they are larger than they physically are, or that they have more physical flaws in their appearance than they actually do (Vashi, 2016).

BDD patients often have a poor quality of life and socially isolate themselves (Veale, 2004). Body dysmorphia is often evident in adolescents and the numbers of those affected by it are thought to be rising due to increasing social media influences of the perfect body image

(Himanshu et al, 2020). A recent study (Jolanta & Tomasz, 2020) looked at 36 adolescents with anorexia nervosa. Although this was only a small study, they found that at least 25% of participants showed symptoms of not only the eating disorder but also BDD.

Singers and teachers of singing should be aware that mental and emotional disorders, such as BDD, do have an effect on the singer's performance (Brown, 2021). A singer who has BDD and believes that they are too large could try to hide their stomach which may affect the workings of the diaphragm. A singer who feels they are too short may try to raise their shoulders or head in order to feel taller. This will affect the sound of the voice and cause tension around the throat, shoulders and vocal apparatus. A singer who believes they are too tall may have a poor and slumped posture causing the diaphragm to not work effectively and therefore affecting breath control. General anxiety concerning people seeing and judging you perform once on stage caused by BDD, can also lead to anxiety. This in turn can cause tension in many areas of the body which will affect the breath control and sound that the singer produces (Wilson, 2019. Rubin et al, 2017).

In light of my recent student with an eating disorder, I have made changes to my practice room to help remove issues of BDD. I have removed the full-length mirror from the room and tried to ensure that the student stands away from the window when they sing as they were very conscious about people seeing them. Further to this I would like further sound proofing to be available as the student is also very aware that other people can hear them singing when they feel their voice is not under control or at full capacity.

Eating Disorders Conclusions and Ethical Considerations

It is clear from all literature above that eating disorders cause major stress on the production of the voice, and have many implications for the performance of a singer as well. Once again, the education of the singing teacher into this area is vital.

It has been noted that adolescent vocal students who suffer with an eating disorder are often likely to want to stop singing lessons as they no longer want to be 'seen' or 'heard' for fear of judgement of them and their bodies, or because they have overly critical thoughts of themselves (Carter-Patkau, 2024. Rodman, 2010). However, recent research has shown that singing is an excellent therapy for eating disorder sufferers. In a study (Pavlaou, 2009) 8 eating disorder sufferers were asked to take part in 6 sessions of group singing. The sessions consisted of stretches and vocal warm ups, group singing in unison or rounds, easy repertoire at the start gradually building to slightly more complex songs towards the end of

the sessions. No prior vocal knowledge or ability to read music was required. After the 6 sessions each participant took part in a semi-structured interview asking them how they felt the sessions had affected them physically and mentally. Although the study was only relatively small with 8 participants, the findings of the research showed that participants had overwhelmingly positive outcomes from taking part. Many reported they felt more in touch with their bodies, more relaxed and less stressed. The group singing provided escapism from their troubles and participants felt they could express themselves freely. Their confidence grew and they felt more socially engaged. Whilst it should be noted that this research was undertaken in a group singing environment, there are many positives that could surely be taken into an individual singing lesson also.

As a singing teacher with adolescent pupils with eating disorders I must be ready to adjust my expectations of the pupil on a weekly basis. This will involve choosing repertoire that is suitable and not going to cause damage to a weakened body, and being aware that the vocal apparatus may be immature in relation to the singer's age. The student may need more praise and less negative feedback, and the teaching room should be friendly to the pupil by the removal of mirrors for example. It maybe that the students just need to be allowed to have fun in singing lessons and enjoy their singing during this period (Rodman, 2010), on reflection this is something that I feel I personally need to take onboard in my teaching.

Singing teachers should also be acutely aware that they are not (in most cases) a medical professional and they cannot and should not be expected be able to always spot an undiagnosed eating disorder. It should be remembered that their responsibility to the student whilst holistic in one sense, is primarily voice based. Other matters, whether they be physical, emotional or mental, should be referred to a relevant professional. Even voice-based matters should be dealt with with caution, and may need to be referred onwards to another professional.

The relationship between singing teacher and pupil is often a deep one, thus the teacher should also be ready to show compassion and be ready to listen to the student, but this must always be within safeguarding guidelines.

It is important to note that there is a safeguarding and ethical side to a singing teacher's profession when dealing with issues such as eating disorders.

Singing teachers need to be aware of safeguarding protocols within their workplace and how, when and to whom, concerns arising should be reported. If a teacher suspects a student may have an eating disorder, it may not be appropriate for them to broach this subject within a lesson with the pupil directly. In fact, it may be detrimental and cause further issues. Rather the teacher should follow the safeguarding pathway their workplace sets out. If self-employed the teacher should contact the relevant medical professional or advisory board for advice and help, and also potentially approach the parents. It is recommended that all self-employed singing teachers should develop a safeguarding policy to help when matters such as this arise (Widdison & Boyle, 2022). Many unions related to music teaching are able to help with the production of such a document (tes, 2025). This is something I must look into for my own teaching practice.

Conclusion

Gunter (1992) wrote,

“The voice reflects all the problems and emotions that a person has in his private life” (1992, p.6). This quote emphasises the connection between a singers physical and mental health and their ability to sing and perform well. This has been highlighted extensively in my research into sleep deprivation and eating disorders.

In almost all research literature I found on my topics, there were statements about the research of both these areas only being in its infancy. Furthermore, much of the available research covers only the spoken voice rather than the singing voice, and I felt this was a gap in the literature.

It is clear that more singing voice research needs to be undertaken, with larger participant numbers, in order for us to fully understand the implications sleep deprivation and eating disorders have on the adolescent singing voice.

I feel I have been able to achieve my aim to better my knowledge on my chosen subjects. However, the ability to impart this knowledge into my teaching may take more thought, time and experience than I had anticipated and will be ongoing over my career.

I had initially overlooked the ethical and safeguarding considerations that come especially with pupils with eating disorders. Whilst I am well aware of my school's safeguarding policies, I am now also aware that as a private teacher I must have a policy in place to be followed in situations where it is necessary.

It is my hope that in drawing together some of this information myself, and singing teachers and singers alike, may be more informed of the importance of education and awareness of vocal health needed in these two areas.

Critical Reflection

I was very clear as I approached my work that I wanted to find out much more about how sleep deprivation and eating disorders affect the adolescent singer, both in terms of their general health, performance and the acoustics of the voice. This knowledge could then be used to improve my teaching skills.

I felt that by giving the reader some general education on the disorders it would help to set the scene, while not assuming any prior knowledge.

I then felt my work would be best ordered under sub headings to assist the reader navigate their way through the paper with ease.

There was very little research available in some areas, and vast amounts in others. Where there was much literature, I aimed to use white literature which is peer reviewed. But where there was little available, I was forced to use what I could find. This often included using older sources, papers about the spoken voice only, or non-peer reviewed literature. Sorting through papers often took many hours of reading.

As a result of my research, I feel my professional understanding of both ailments has been transformed and lifted to a much higher level. I now feel able to teach students to a more educated and accurate level that will ensure their vocal health is protected. I also feel more able to impart my knowledge to my students, in order for them to be able to maintain good vocal health long after I have ceased teaching them. I also feel confident to impart my knowledge to other singing teachers.

I have chosen to use Gibbs' Reflective Cycle (1998) as an aid to reflect on my work. I felt this model best aided my work as it is one I am familiar with due to use in prior modules. It also allows the researchers personal thoughts and feelings to be taken into account, which as an insider researcher who is a singing teacher of adolescents aided my work.

Gibbs' cycle consists of 6 points which aided my research.

1. Description – In a previous module I had undertaken some research on physiological and psychological conditions that may affect the vocal health of adolescent singers. This work consisted of several strands of research which helped me as a teacher deepen my understanding on these subjects. However, two of them particularly caught my attention and I wanted to look in

more detail at them in order to enhance my vocal education and teaching skills. These were sleep deprivation and eating disorders.

2. Feelings – I found my findings in my previous module very interesting and helpful, yet I felt I still needed to know more for my teaching to be fully informed and improved. I felt that sleep deprivation especially, was a topic that affected almost all of my pupils at some point. To have as much knowledge as possible on this topic was desirable. I felt a compulsion to learn more in order to protect my own, and my pupil's vocal health.
3. Evaluation – There is much general literature available on both sleep deprivation and eating disorders and how they affect adolescents in general. However, there was much less research available on how they specially affect the voice and the singing voice more particularly. This often slowed down my work as it took time to search for information or to piece together various bits of research into one thought or conclusion. Some of the papers were very hard for me to read and understand as they contained medical language that I was not familiar with. However, I enjoyed the process of writing this paper and feel I have learnt a lot through the process.
4. Analysis – The common theme of my writing was that singing teachers must be educated in both sleep deprivation and eating disorders and how they affect the singing voice. This is imperative for the vocal health of their students. It is also important that singing teachers keep an up-to-date knowledge of these matters as new research is being conducted into both topics regularly. Ethical and safeguarding considerations must also be taken into account. Each singing teacher should have a clear pathway to follow when issues like eating disorders arise in a pupil.
5. Conclusions – In the past I had found that my topics were too wide and I was therefore unable to deal with them in any depth. However, this time I felt that just tackling two topics allowed me the scope to look much more deeply into them and so to learn in a fuller fashion. I will endeavour to take this conclusion with me into any future work.
6. Action Plan – I feel it would be useful to share my work with other singing teachers. I also acknowledge that I need to endeavour to keep my knowledge current on these two topics. This may require a subscription to a vocal journal for example. I need to reflect how to best impart my new knowledge to my students in a manner that they will understand and respond too. I also need to consider if my self-employed teaching practice should have a safeguarding pathway for me to follow if and when needed.

Research Practice Learning Cycle.

Research is undertaken for various reasons, but at the core of it is the desire to enhance existing knowledge and acquire new knowledge to enable the problems to be solved (Nelson, 2022). I felt this was very much the case with this research. Whilst I may not solve all of a student's problems with my research, I needed to gain knowledge on the subjects of sleep deprivation and eating disorders so that I could enhance my teaching skills.

Nelsons triangular framework helped me to conduct my research in a way that kept me focused on the outcome I required, rather than it just turning into a fact-finding exercise.

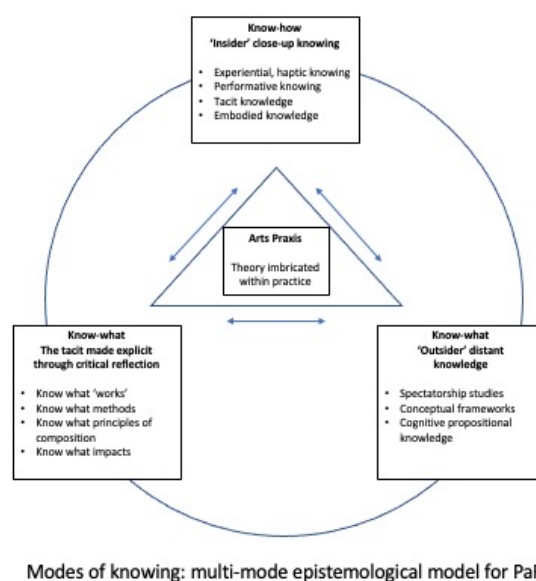


Figure 2. Taken directly from Nelson (2013).

Know-how-

Prior to my research I had not fully understood how much both sleep deprivation and an eating disorder could affect the singing voice. My lessons with students who suffered with both ailments were not tailored to meet the students' specific needs. For example, my pupil who suffered with an eating disorder was keen to continue to work towards a singing exam. This student struggled with the work the exam required of them and often became frustrated as they felt they could no longer control their voice, or sing the demanding repertoire the exam required. I have now learnt that removing all pressure from lessons is beneficial, just letting the student explore new repertoire and sing for fun in lessons until they are well enough to resume their normal curriculum.

I have also become aware that I cannot be expected to spot every sign of sleep deprivation or eating disorders in my students, or solve all of the related vocal issues on my own. It is imperative that I refer the student for further help once the limit of my skill set has been reached, and that I know where to find this help.

I have also concluded that I must engage a safeguarding strategy for the students I teach outside of a school setting.

Know-what-

In practice I feel this research was very successful. I have gained much knowledge and have been able to adapt my teaching practices to suit the requirements of current students who suffer from these two ailments. I feel this will benefit my students greatly and help guard their vocal health and keep them singing into the future. However, I must note that this research was limited as it only dealt with two issues, and my students will experience many more than these.

Know-that-

There was much general literature available on both of my subjects. However, some of it was only relevant to the spoken voice which in some cases limited its use for my work as a singing teacher. Much of the research was limited, with only small participant numbers, or a short time span covered for example. It is clear that more research is needed in both subject areas. This research is ever developing and expanding. Therefore, in order to keep my teaching practices relevant, I must continue to explore new research even after my paper is finished.

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