

THE UNIVERSITY OF NORTH CAROLINA AT PEMBROKE

A Comparative Study of Perceptions of Vocal Health in Singing the Gospel Style

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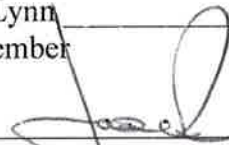
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### Abstract

The contemporary gospel style is defined as a mixture of various styles which include blues, jazz, rhythm and blues, rap, hip hop, soul, rock, contemporary jazz, contemporary jazz and blues, spoken word, and urban gospel styles. The first purpose of this study is to explore the perception of vocal health of music educators and individuals with outside occupations who currently sing the contemporary gospel style. The second purpose of this study is to examine the relationship between vocal usage during employment hours, and self- reported vocal quality when singing the contemporary gospel style.

*Keywords: gospel style, vocal health, music education*

### Research Questions

1. To what extent do vocally trained music educators at the primary and secondary levels believe that teaching within the public school setting affects vocal health?
2. How do music educators and non-music education professionals view the effects of occupation on vocal quality when singing the contemporary gospel style?

# A Comparative Study of Perceptions of Vocal Health in Singing the Gospel Style

## Chapter 1

### Introduction

This thesis is a report of a descriptive qualitative study concerning the vocal quality of music educators, teachers of non-musical subjects, and individuals employed outside of academia during occupational hours and when singing contemporary gospel. This study was based solely on the self-reported perception of respondents' vocal health. There are several factors that may possibly influence the perception of vocal health when speaking during occupational hours, and singing contemporary gospel during recreational hours. Years of teaching experience, number of classes taught in a week, number of students in each class, and non-teaching duties. Included in the factors that may influence the perception of vocal health when singing contemporary gospel are vocal training, years of experience in singing contemporary gospel, vocal health conditions, vocal technique, and vocal health regimen. This research explores these aforementioned factors via the perceptions of vocal health of music educators, teachers of non-musical subjects, and those employed in occupations outside of education. This study will analyze the similarities and differences of self-reported perceptions of vocal quality when singing contemporary gospel.

The first research question this study seeks to answer is whether teaching in the public school setting affects vocal health of educators. The topic of vocal health is a major concern among music educator vocalists because of its importance during occupational hours. A healthy voice enables a music teacher to function daily in the demands of normal teaching duties. Normal teaching duties include but are not limited to

speaking incessantly for the duration of a teacher workday, singing soprano, alto, tenor, and bass (SATB) vocal parts for choral ensembles, and performing non-teaching related duties such as cafeteria duty. It is possible that this type of consistent use of the vocal cords may lead to vocal loading, or excessive use of the voice.

Previous studies have shown that educators have reported more vocal health issues than individuals employed in professions outside academia (Hunter & Titze, 2010). The second research question this study seeks to answer is whether there is a difference in the way educators and non-educators perceive vocal quality as related to their professions. There is significant research pertaining to the vocal health of educators and the effects of the teaching profession on vocal health. There is a lack of research, however, in the field of vocal health and the effects of singing contemporary gospel on the voice. In addition to answering the research questions, the goal of this study is to provide a solid foundation for future studies related to the condition of vocal health when singing the contemporary gospel style upon.

## Chapter 2

### Review of the Literature

A diverse body of literature, related to the topic of vocal health provided the foundation for this study. Articles related to vocal health, gospel singing and vocal health, occupation as it relates to vocal health, and the history of gospel music were heavily relied upon as sources for this study. The history of gospel music is outlined very heavily in the literature view due to the unique research topic. The research topic made it necessary to include the history of gospel music in order to explain its importance and relevance in the American culture.

The first article in this review addressed various aspects of vocal health as it pertains to voice care. In Morrison's article, "The Singing Lesson," the author explained that posture, breathing, sound production, tension, and overall health are several factors that have an influence on vocal quality. When addressing posture, Morrison explained that feet should be flat, the joints should be flexible, and the head should be in alignment with the body (2006). Good posture will allow the singer to breathe freely while singing. According to Morrison (2006), when the singer inhales the diaphragm should contract, the lower ribs should expand out, and the air is taken into the lungs. Also, the waist should expand. During this breathing cycle, the inhale should always be silent. Morrison explained that a silent inhale is indicative of an open throat, and an open throat is a sign that there is no unwanted muscle tension (2006). The next part of the breathing cycle, as explained by Morrison, is the exhale. It is during the exhale that the diaphragm relaxes, the waist contracts, and the chest and lungs return to their original starting position (2006). According to Morrison, it is important to free the body of tension when singing

as it can negatively affect the quality of the voice. Morrison offered specific techniques to remedy tension while singing. One technique offered by Morrison involves imagination. The author explained that much of the tension experienced by a singer can be avoided by constantly imagining continuous movement in the joints (2006). The last factor that influences sound production, according to Morrison, is a healthy lifestyle. A healthy diet, hydration, exercise, and the use of steam as a remedy for a cold or sore throat can contribute positively to vocal quality (Morrison 2006).

In addition to simple and effective techniques that may enhance the quality of the singing voice and prevent vocal health symptoms, Wiest explained the phases that occur in sound production. Concerning vocal techniques, Wiest explained the importance of good posture, drinking water, and abdominal breathing. According to Wiest, voice loss, throat pain, or a husky vocal quality, may be a result of over singing or overuse of speaking voice (1997). The four main vocal components for creating sound as explained by Wiest are articulation, sound production, breathing, and vibrating sound. According to Wiest, choral directors should watch for poor vocal health practices such as throat clearing, coughing, hoarseness, or breathiness (1997). Such vocal issues may eventually result in a voice loss. Wiest stated "listen for loss or reduction of vocal intensity in the higher ranges, blatant and excessive change in vocal quality between the head and chest registers, or inconsistent vocal color. In conclusion, Wiest advised choral directors to listen for inconsistencies in sound production that includes an unusually loud speaking voice, sound that is forced, glottal attacks, abnormal pitch breaks, limited range, or extreme effort to sustain pitch or quality (1997).



LaPine's article also examine various physical aspects of producing sound with the voice as well as identified how each affects the awareness and quality of vocal health. LaPine (2008) addressed the topics of how the healthy voice operates, vocal abuse, the effects of vocal abuse on the larynx, the issues that affect the larynx, and suggestions for vocal health. Concerning the healthy operation of the voice, there are three stages the vocal folds go through with sound production which are the open, closed, and open stages. LaPine (2008) explained that in phase one, air pressure builds up below the vocal folds, in phase two, the vocal folds are blown apart by the air pressure, in phase three, the folds vibrate to produce sound as the air in the lungs decrease. The stages do not occur as they should when the voice is misuse. In professions requiring the use of the voice to communicate to a group of people, misuse can occur due to excessive raising of the voice, yelling, and throat clearing. According to LaPine (2008), teachers, professors, drama coaches, choir directors, and individuals with occupations that requires much vocalization can suffer from vocal abuse or misuse.

Equally important to the sound production process as described by LaPine is the vocal production process in gospel singing. In Turner's article, "Getting Gospel Going," she addressed gospel vocal production and offered an explanation of healthy gospel singing. In Turner's article, she expressed that the basic concept of singing gospel is to use the belting vocal technique. Turner explained that a vocalist would have to belt in order to get a gospel sound (2008). The singer would have to use the chest voice when singing in the upper register (Turner, 2008). The author not only offered belting as a vocal technique used in gospel singing, but also added two more vocal techniques to include the bel canto singing style along with the appoggio breathing technique (2008). In

bel canto singing, the singer uses the head voice for most vocal production. Turner not only mentioned the use of the head voice as a component of the bel canto style, but also adds the use of the chest voice as a part of this style. Turner (2008) explained that when more guttural sounds are required for a gospel selection, the chest voice is activated. Turner (2008) continued to point out that these more guttural sounds can be created in a healthy fashion. McKinney suggested that the breathing is the foundation of singing (2005). McKinney also specified that solid breath support is imperative when producing the gospel sound (2005). Solid breath support would enable a singer to sing with different techniques commonly used in gospel singing. Turner expressed that when singing with vocal sounds such as squalls, shakes, and wails, she uses the light mechanism, bel canto (head voice), for the lower vocal register, passaggio zones, and upper register.

Some of the singing techniques explained by Turner are used when singing sounds commonly vocalized in gospel singing. According to Legg, there are many sounds that have never been defined but are regularly practiced in gospel singing. The gospel style that is known and practiced across America today has a trademark sound that requires these specific vocal sounds. Some examples of vocalizations that create the sound of the gospel style are moans, gravel/grunt, and shouts. According to Legg, the gospel moan is performed using a closed mouth while producing a sound similar to a cry (2010). Legg described gravel and grunt vocal approaches to create emphasis and add passion to a word or phrase in gospel music (2010). Legg explained that these vocalizations produce sounds of rasp, grit, or hoarseness (2010). Legg also explained

that the scream and shout sounds are an expression of great joy, passion, and declaration (2010).

Vocal production that involves screaming and shouting can possibly lead to vocal health disorders which are addressed in Simber's, Sala's, Laine's, and Ronnema's article entitled "A fast and Easy Screening Method for Voice Disorders Among Teacher Students." Simber et al. (2001) used methods consisting of a questionnaire, a perception based test of the quality of the voice by a nurse, a perception based test of voice quality by a speech therapist, and an examination performed by a phoniatician within a clinic. The results concluded that a nurse with very brief training in assessing voice quality can accurately judge the vocal health of an individual. Vocal symptoms examined were morning hoarseness, voice loss, clearing the throat of coughing, whether or not the voice gets low pitched, vocal fatigue, voice breaks, aching or lump in the throat, and difficulty with audibility.

Similar to Simber et al., Sapir, Keidar, and Mathers-Schmidt also (1993) assessed the occurrence of vocal health problems among teachers in the United States of America. Sapir et al. explained that educators are considered high risk for vocal health issues mainly because of the extreme demands on their voice and the unfavorable working environment (1993). A total of 237 female teachers from various regions of the USA completed a survey. Results indicate that over half of the teachers who completed the survey experienced vocal health issues. Sapir et al. further explained that most educators are assigned extra duties that affect vocal health. These duties include but not limited to playground duty, lunch duty, and hall duty (1993). Results also showed that

teachers had to miss work, visit a doctor, and were regularly frustrated due to vocal health issues.

Russel, Oates, and Greenwood's study provides further information regarding vocal health among teachers in their article "Prevalence of Voice Problems in Teachers." Russel et al. conducted a research study about the occurrence of vocal health issues among teachers over a period of time. The researchers used a survey instrument which was emailed to 1,168 teachers (preschool- 12th grade) in South Australia. As part of the survey, educators were asked to note voice issues experienced the day they completed the survey, the current year in their teaching profession, and issues encountered over the span of their entire teaching career. Results indicated that more females than males reported vocal health issues. Out of those surveyed, 16% experienced vocal health issues on the day that they completed the survey. Out of those surveyed 20% experienced vocal health issues during their current year in the teaching profession, and 19% experienced vocal health problems over the span of their entire teaching career. The research of Russel et al. also indicated that 22% of teachers experienced vocal health issues that interfered with their ability to vocalize as they wished (1998).

Although vocalization levels of teachers were examined thoroughly by researchers Russel et al., in the next article, Hunter and Titze examined the vocal use of teachers in more depth. The researchers conducted a study in which they examined the occupational and non-occupational voice usage of teachers. Their study consisted of 57 teachers and was conducted over a two week time period. The researchers Eric J. Hunter and Ingo R. Titze used a National Center for Voice and Speech (NCVS) teacher dosimeter to measure the different degrees of voice usage throughout the day from

9:00am-10:00pm. According to the researchers, it was important to include occupational and non-occupational voice usage because the non-occupational voice usage could be affected by the occupational voice use during the teaching day. According to Hunter and Titze (2010), Occupational voice intensity was slightly louder than the non-occupational voice intensity. An additional key finding was that occupational voice use was twice as much as non-occupational voice use. It is Hunter and Titze's belief that non-occupational voice use is added to an already overloaded voice. Furthermore, Hunter and Titze suggested that extracurricular activities may have an impact on the voice. Examples of extracurricular activities provided by the researchers were involvement in after-school community and volunteer activities including, but not limited to: coaching a Little League team, singing in the church choir, or being a Girl Scout troop leader (Hunter & Titze, 2010). Hunter and Titze's study also proved that gender played a role in vocal usage on the job. According to Hunter and Titze, female teachers vocalized 10% more than male educators during non-occupational voice use (2010).

According to previous research, gender plays a major role in vocal health of males and females. In the article "Prevalence of Voice Disorders in Teachers and the General Population," Roy, Merrill, Thibeault, Parsa, Gray, and Smith (2004) stated it would be critical to discover whether or not reported gender differences in vocalization is related to the higher number of complaints of voice problems from female teachers. Female teachers not only use their voice excessively in the school environment, but also in the domestic setting. Roy et al. (2004) conducted a study that found that the vocal chords of a female collide 40% more than that of a male.

The next article, "Quality of Life and Voice: Study of a Brazilian Population Using the Voice-Related Quality of Life Measure" by Behlau, Hogikyan, and Gasparini's (2007) described the quality of the life of a large number of the Brazilian population. Behlau et al. distributed survey instruments to 2,214 people who were given five questions from the physical operating domain and five questions from the social-emotional operating domain. The people were divided into two groups of those who experienced vocal dissatisfaction, and those who did not experience vocal dissatisfaction. Their professions were separated into four divisions, which were dependent on how much they used their voice. Four groups were elite vocal performers (professional singers and actors), professional voice user (teachers, clergy, lecturers, and receptionists, non-vocal professional (lawyers, physicians, businessmen, others), and non-vocal nonprofessional (clerks, laborers, others). All people in the study self-rated their voice on a scale ranging from poor to excellent. The results show that professional voice users to include teachers reported the most vocal complaints and that most non-vocal and non-professionals reported no vocal complaints.

The ability to accurately rate one's own vocal health is relied upon by many researchers conducting when utilizing survey instruments. As in the study by Behlau et al., Benrstorff and Burk (1996) investigated ability of subjects involved in the study to predict the quality of the voice experienced by teaching professionals as a result of teaching music at the elementary school level within the classroom. The three categories observed in this study were years of teaching experience, schedule, and classroom noise level. The researchers that conducted this study allowed the subjects to rate their vocal

health by completing the Voice Conservation Index. Results from the VCI were predictive of the results found after being examined by an otolaryngologist.

In the next study conducted by Lamarch, Verduyck, and Ternstrom, it was determined that vocal damage, if any, experienced by each subject would be a result of vocal loading or misuse during work hours. This study included 96 singers with no vocal problems and 30 singers with vocal health issues. The scores of the subjects involved in this study were compared to earlier studies of the relationship between occupation and vocal health. The authors concluded that singers with vocal health issues had dissimilar scores than those who were vocally healthy. Factors that did not have an impact on scoring of the Swedish singer adaptation of the VHI were singing genre and performance level. The genre addressed in this study is gospel.

In regards to genre, it is important to understand why gospel music's position in American history is so critical. Harvey (1987) stated the history of Black Gospel Music is interwoven with the experience of black people in America. The researchers who have specialized in this topic outline the chronological growth of the style as it relates to the following: influences of the gospel style throughout American history, birth of an evolved style of gospel music, and vocal techniques used in the gospel style as they relate to vocal health.

According to Walker (2004), prior to the Civil War, slaves would sing and worship in invisible churches. These invisible churches were places of refuge for an oppressed people that spanned 200 years in America. It is out of this oppression that the precedents, spirituals and work songs, leading to gospel music derived. Harvey (2001) supported this by stating that gospel music arose from the trials, tribulations, and

afflictions of a deprived people. Walker (2004) further stated that following the civil war, church members began recording spiritual in an effort to document them. These recorded lyrics serve as an American history lesson that tells the story of the faith of the black people in this country. The roots of gospel singing, which are spirituals and work songs, have been a valuable component of the African American community since the existence of slavery in the American society. Turner stated that the roots of gospel originated in American slavery as spiritual melodies and work songs that slaves sang while working in the fields (2008). Gospel music is more than a style of music serving merely as entertainment; it is a part of the culture of the African American.

With the roots of gospel dating as far back as slavery in American history, it has now evolved into what is known as the contemporary gospel style. The roots of this style began with Thomas Dorsey who is regarded as the Father of Gospel. Thomas Dorsey is known as the Father of Gospel because he combined secular music sacred music (Turner, 2008). According to Turner, the growth of gospel music is divided into four stages: the developmental years, the golden age, the contemporary era, and the urban era. According to Wise, the 1920s and 1930s were the developmental years of gospel music (Turner, 2008). In this stage of gospel music, hymns, sacred songs, and spirituals were combined with rhythms and harmonies adapted from the jazz and blues genres (Turner, 2008). In the golden age (1940s-1960s), the gospel choir was formed and the gospel sound was established (Turner 2008). The contemporary era (1960s-1980s), is known for its use of seconds, sevenths, and dissonance (Turner 2008). According to Turner, the present stage is the urban era (1990s-present). In this stage, the sound of gospel music became more of a global sound. Although Turner labels the present stage of gospel music as urban,



Robinson-Martin defines it differently. Robinson-Martin describes gospel music in the present stage as contemporary gospel, which is inclusive of the urban style among others. "The contemporary gospel style is defined as a mixture of various styles which includes blues, jazz, rhythm and blues, rap, hip hop, soul, rock, contemporary jazz, contemporary jazz and blues, word, and urban gospel styles (Robinson-Martin, 2009).

The gospel genre is not only performed by African Americans, but by different ethnicities. Walker (2003) stated It is a misunderstanding that gospel choirs exist solely for African American students. Walker's choir consisted of Caucasian, African, African-American, Asian, and Hispanic students. The evolution into this newer style of gospel is not only practiced in the African American culture, but is now a part of the culture of many Americans today. In the church setting today, one will find individuals with many years of experience singing the contemporary gospel style. The individuals singing this style vary in age, gender, ethnicity, and socio-economic status. The individuals singing this style are similar because the majority of them have been trained to sing the contemporary gospel from a very young age into late adulthood. This training for the most part did not occur in a voice studio, but in the community churches. The individuals sing with experience in singing gospel music have diverse jobs that may or may not affect their vocal quality or vocal health.

## Chapter 3

### Methodology

This study examines the vocal health of music educators, teachers of non-musical subjects, and those employed outside of education in North Carolina and Virginia. The participants involved in this study reported their perception of vocal health during occupational hours and while singing contemporary gospel. Surveys along with consent forms were distributed to each participant (See Appendix 1).

Each consent form and survey was completed by each participant willing to be a part of the research. The survey results were categorized by music teacher, teacher of non-musical subjects, and those with outside occupations (See Appendix 2). Of the 40 participants surveyed, 30 were female, 9 were male, and 1 participant did not specify gender. The occupational make up of this group included 16 music educators, 2 teachers of non-musical subjects, and 22 participants with outside occupations. The study was conducted in Fayetteville, NC and the participants reside in Fayetteville, NC, and the surrounding area. The majority of respondents identified as being within the age ranges of 25 to 34 and 45 to 54 years of age.

After approval was gained from the Arts Supervisor in the Cumberland County School System, a mass email was sent to music educators employed within the county to inform them of the research. Attached to this email was the survey instrument, and anyone willing to complete the survey gave their consent to be included in the study. In addition, music educator respondents experiencing technical difficulties completing the form online were given the opportunity to complete it by hand prior to a professional development meeting.

The group with participants employed outside of occupation consisted professions ranging from homemakers to retail positions. The surveys gathered from this group were administered to two local church choirs in Fayetteville, NC. After choir directors and pastors approved the distribution of the survey instrument, it was distributed among the choir members prior to scheduled rehearsals. The subjects had to meet the minimum age requirement of 18 years and there was no maximum age limit for this study.

#### Survey Instrument

The data collection method utilized in this study included a survey instrument (Refer to Appendix 3.) The survey consisted demographics, general teaching information, voice applicable items, voice problems, vocal technique, and vocal health regimen. In the demographics and general teaching sections of the survey, participants were asked to circle the applicable answer. In the vocal symptoms, vocal technique, and vocal health regimen sections, participants rated their experience based on the following Likert-type scale with 1 meaning never, 2 meaning sometimes, or 3 meaning always. In the demographic section of the survey participants were asked to state their current profession, age, gender, place of residence, educational background, voice part, and years of experience in singing the gospel style. The ages and professions of the non-teaching population were diverse.

In the general teaching information section, participants were asked to identify total years of teaching experience. Subjects that were not in the teaching profession were instructed to surpass this section of the survey and move to the next section. Teachers were asked to identify licensure status as licensed, lateral entry, or other. Participants were also asked to identify the total number of classes they teach in a week from the

choices provided. The choices consisted of one to 10, 11 to 20, 21 to 40, 41 to 60, 61 or more. Subjects were then asked to identify the average class time length from the following options: 10 to 30 minutes, 31 to 60 minutes, or 60 minutes or more. They were then asked to identify the average number of students in each class. Class sizes varied from one to 10, 11 to 20, 21 to 30, 31 to 40, 41 to 50, or 51 or more. Teachers were also asked to identify other duties assigned to them to include bus duty, lunch duty, hall duty, or other.

In the next section of the survey, participants were asked to answer whether or not having experienced post nasal drip/allergies that affect the voice, acid reflux problems, trauma/surgery to the larynx, voice training at any time, voice care program during college training, and voice problems at work. The following section of the survey addressed voice symptoms experienced in recreational time. Participants used the 3-point Likert-type scale to report the frequency of vocal issues by choosing 1 meaning never, 2 meaning sometimes (three out of seven days/week), and 3 meaning always. The symptoms included on the survey instrument were breathy/weak voice, hoarse voice, dry/scratchy throat, increased amounts of coughing, increased amounts of throat clearing, difficulty singing high notes, difficulty singing low notes, difficulty projecting voice, throat tightness, throat pain/discomfort when singing, complete loss of voice, voice breaks when singing.

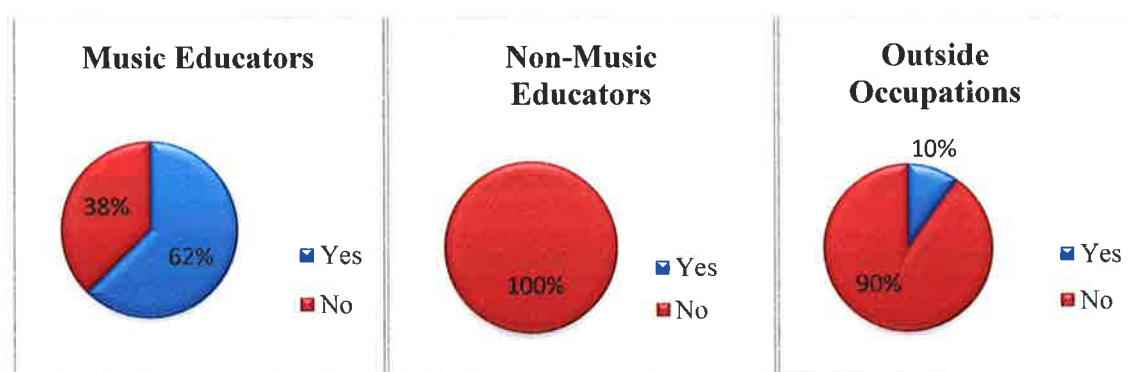
In the Vocal Technique and Vocal Health Regimen sections, subjects had to use the same Likert-type scale utilized in the prior section to answer questions related to breath support while singing, good posture when singing high notes, use of chest voice when singing high, warming up the voice before you singing, use a microphone when

you singing a solo, drinking eight or more glasses of water a day, use of honey and tea, consumption of caffeinated drinks, smoking habits, medicine that dries the throat, and eating dairy before singing. At the conclusion of the survey, participants had an open ended portion section that asked them to describe any further issues they would like to share concerning how their occupation affects their vocal health when singing the gospel style (Refer to Appendix 4).

## Chapter 4

## Results

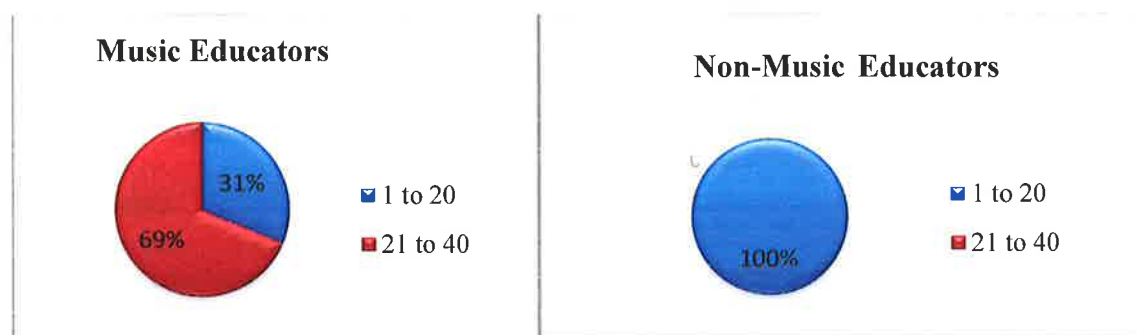
Music educators, teachers of non-musical subjects, and those with occupations outside of education were surveyed about vocal health issues experienced during work hours. *Figure 4.1* indicates that 62.5% of music educator respondents and only 10% of respondents with occupations outside of education reported experiencing vocal problems while at work. Since music educators are required to constantly vocalize during the course of a workday, from modeling SATB voice parts, to classroom management requiring speaking or calling over groups of singers, this finding suggests that music educator respondents experience more stress on the vocal cords as a result of more vocalization in comparison with respondents with occupations outside of education.



*Figure 4.1* Percentage of respondents reporting vocal health issues at work.

Music educator respondents and non-music educator respondents were asked to specify the number of classes taught during a typical work week. The numbers of classes educators teach determines the amount of time the voice is utilized. More classes taught in a week likely results in more stress on the voice than fewer classes taught per week. Nearly two thirds of music educator respondents reported teaching 21 to 40 classes per week, while 100% of teachers of non-musical subjects reported teaching 1 to 20 classes

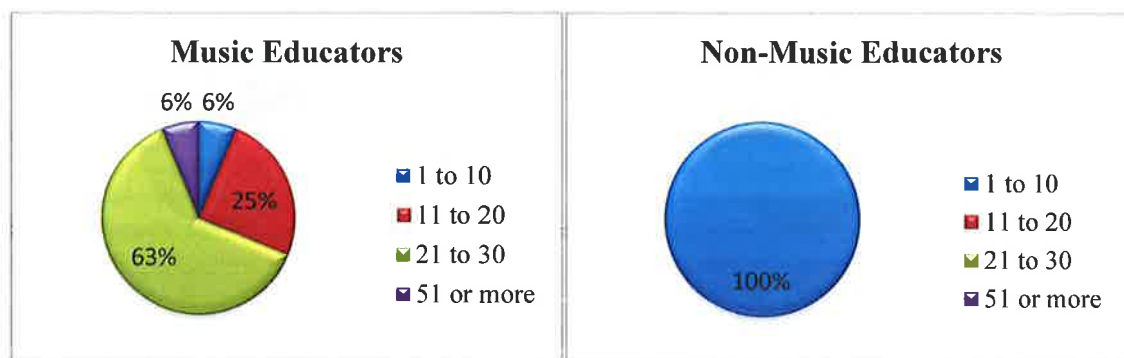
per week (*Figure 4.2*). The results suggest, based on the number of classes taught per week, music educator respondents are required to vocalize more frequently than non-music teachers. Such higher rates of vocalization may correspond with higher levels of vocal health issues. This implies that music educators vocalize more than teachers in other fields, or than respondents in fields outside of education.



*Figure 4.2* Number of classes taught in a week by each participant.

The more students in a class, the more an educator will likely be required to use a louder speaking voice in effort to reach all students, and or address classroom management issues. In a classroom with fewer students, however, an educator may only need to use a speaking level voice. Because class size can have a significant bearing on vocal use, respondents were asked to identify the average number of students in each class. A total of 65% of music educator respondents reported having 21 to 30 students in each music class, while 100% of non-music teachers reported having small classes only containing 1 to 10 students (*Figure 4.3*). This implies that music educators are at risk of experiencing vocal health issues due to large classes and required vocal projection during instruction. These findings illustrate the potential stress on the voice of a music teacher

that can possibly be brought on by the average number of students in their classes.



*Figure 4.3* Average number of students enrolled in each of the classes taught by the respondents.

In addition to the number of students in a class, many teachers are required to take on extra duties that may require an increase in vocalization. All subjects were asked to identify assigned extra duties during the work week. These extra duties frequently call for educators to oversee, manage, and maintain order of the student population. A majority of music teachers reported having a duty not specified on the survey instrument, while almost one third reported having hall duty. Non-music teacher respondents were equally divided with 50% reporting hall duty while the remaining subjects reported a duty not specified on the survey instrument (*Figure 4.4*). The results suggest that all educators experience similar vocal usage during non-teaching duties. There are no significant findings regarding this inquiry of non-teaching duties.



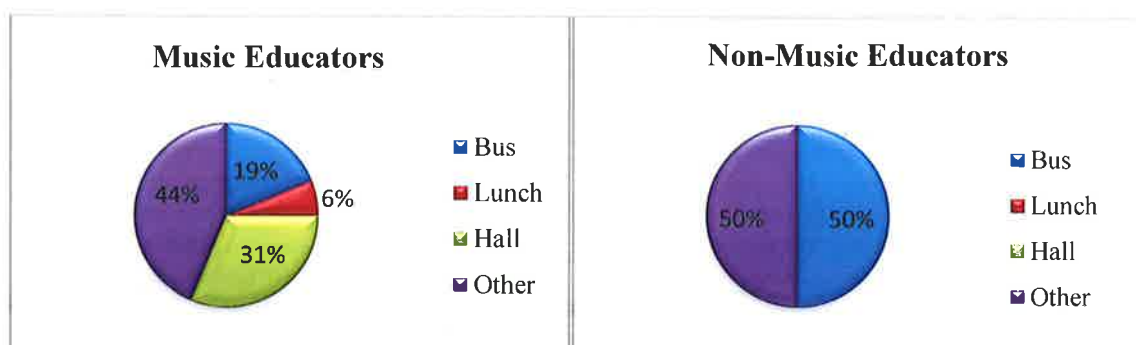


Figure 4.4 Percentage of non-teaching duties among educators

Aside from reporting extra non-teaching duties, all educators were asked to specify the average length of their classes. This is important because the length of class directly relates to the amount of time the voice is used. Voice usage by subjects is a factor to consider when examining the class lengths of subjects. Music teachers generally vocalize more than teachers of non-musical subjects. For instance, educators in fields other than music often use cooperative learning groups which allow the students to teach each other while the educator monitors and guides instruction when necessary. Music educators, however, must constantly guide instruction, constantly assess student performances, speak over instrument ensembles, and model vocal production for a SATB choir. A total of 75% of music educator respondents reported having class lengths ranging from 31 to 60 minutes, while a small percentage reported class lengths of over an hour (*Figure 4.5*). Half of non-music teachers reported class lengths from 10 to 30 minutes, while the remainder reported class lengths of 31 to 60 minutes.

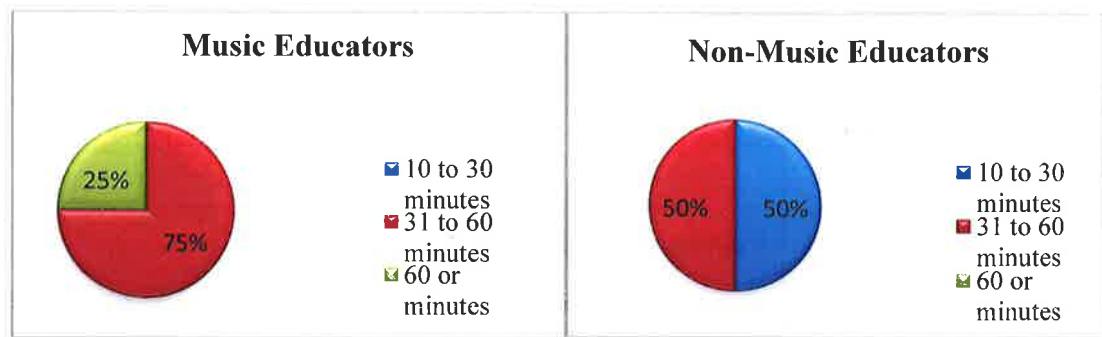
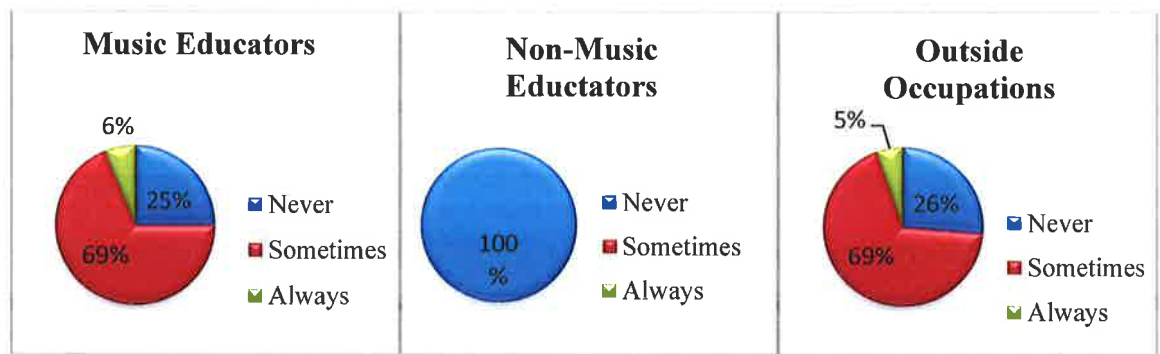


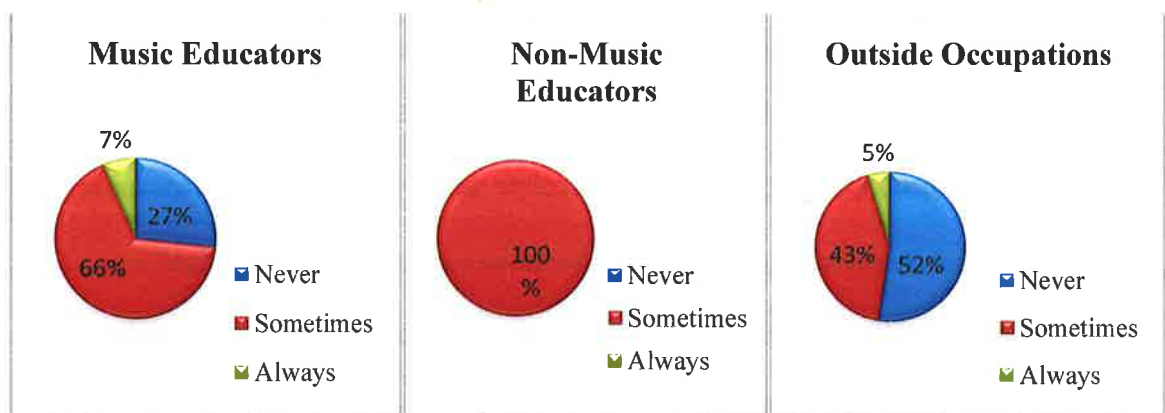
Figure 4.5 Reported average length of each class taught by respondents.

Next, music teachers, teachers of non-musical subjects, and those with outside occupations were asked to identify experiences with a variety of vocal health symptoms when singing contemporary gospel. These vocal issues include a breathy or weak voice, hoarse voice, throat clearing, difficulty with high notes, difficulty with vocal projection, throat tightness, throat pain, and voice breaks when singing. A breathy or weak voice is a sign of vocal cord damage. Causes of this vocal health symptom include but are not limited to speaking in noisy environments, not using amplification when needed, and speaking for long periods of time. When subjects were asked to identify experience with a breathy or weak voice, the results indicate that music educators and those with outside occupations have had similar issues (*Figure 4.6*). Non-music educator respondents were the only subjects reported never experiencing a breathy and/or weak voice when singing contemporary gospel. It is possible that teachers of non-musical subjects do not vocalize as frequently as music educators and respondents with occupations outside of education.



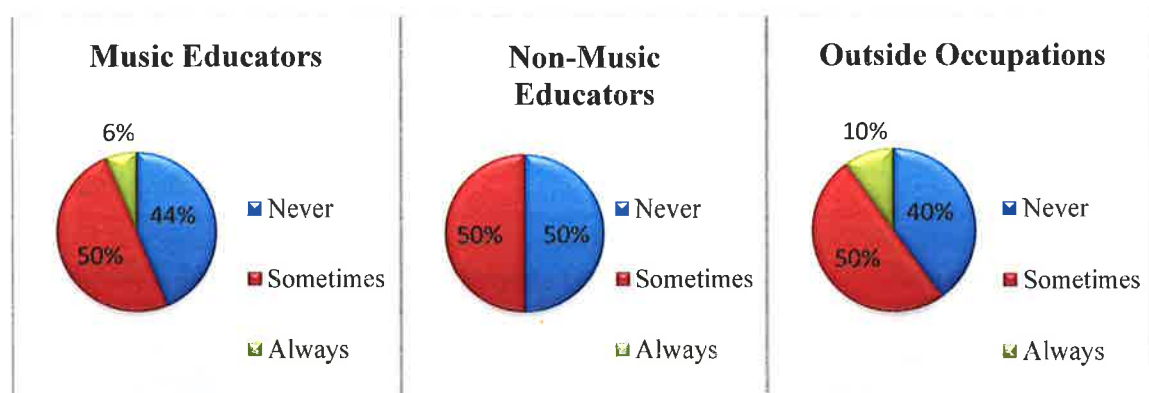
*Figure 4.6* Respondents reporting experience with a breathy and or weak voice while singing contemporary gospel.

Vocal techniques within the gospel genre have classifications different from those in more formal classical styles. Words used in the gospel genre to describe vocal sounds include but are not limited to belts, shouts, moans, and grunts. These sounds must be executed with a foundation of proper breath support in order to avoid vocal damage. Respondents were asked to specify experiences with a hoarse voice when singing contemporary gospel. In *Figure 4.7*, those with outside occupations reported experiencing a hoarse voice less often when singing contemporary gospel than music educators and teachers of non-musical subjects.



*Figure 4.7* Percentage of respondents experiencing a hoarse voice while singing contemporary gospel.

Another vocal health issue that subjects were surveyed about is throat clearing. Throat clearing is a common practice when there is excessive mucus on the vocal cords. This quick method of freeing the vocal cords of accumulated phlegm, eventually leads to vocal damage due to the vocal collisions occurring in this process. Respondents were asked to specify the frequency of throat clearing while singing contemporary gospel. *Figure 4.8* indicates non-music educator respondents reported the highest percentage of having never practiced throat clearing. This finding suggests that non-music educator respondents clear their throats less than other respondents in this study due to previous vocal training received in their undergraduate career.



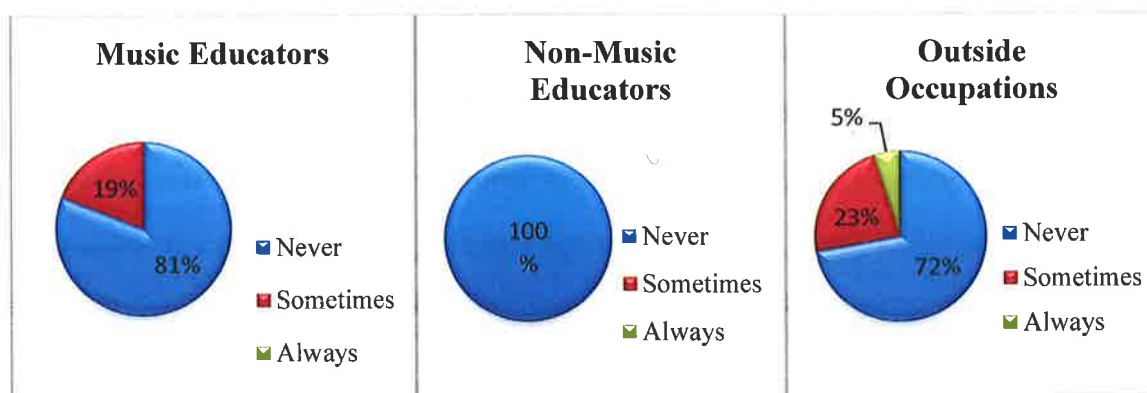
*Figure 4.8* Percentage of respondents experiencing throat clearing while singing contemporary gospel.

Vocal flexibility is essential in singing with vocal freedom when singing contemporary gospel as well as other styles. In the contemporary gospel genre a singer may sing a high note using the head voice or belt it out using the chest voice. A vocalist would solely use the chest voice to execute low notes. When using the head or chest voice to sing high notes, the pitch must be supported with good vocal practices such as breath support and good posture. One consequence of unhealthy vocal production practices is tension in the throat. Respondents were asked to identify difficulty with

vocal flexibility in singing high and low notes in contemporary gospel. A total of 31.3% of music educator respondents expressed never experiencing difficulty singing high notes, opposed to only 10% of respondents with outside occupations (*Figure 4.9*). These findings indicate that more music educator respondents than respondents with outside occupations are able to sing high notes without difficulty. However, over 50% of each group experienced difficulty when singing high notes in this style. When asked about difficulty singing low notes, 31% of music teachers, and 10% of respondents with outside occupations reported never experiencing difficulty (*Figure 4.10*). The results indicate that more music educators than other respondents are able to sing low notes when singing contemporary gospel. Respondents reporting difficulty singing high or low notes may have had a hoarse voice, lack improper breath support, practice poor posture, or possess self-doubt when singing.

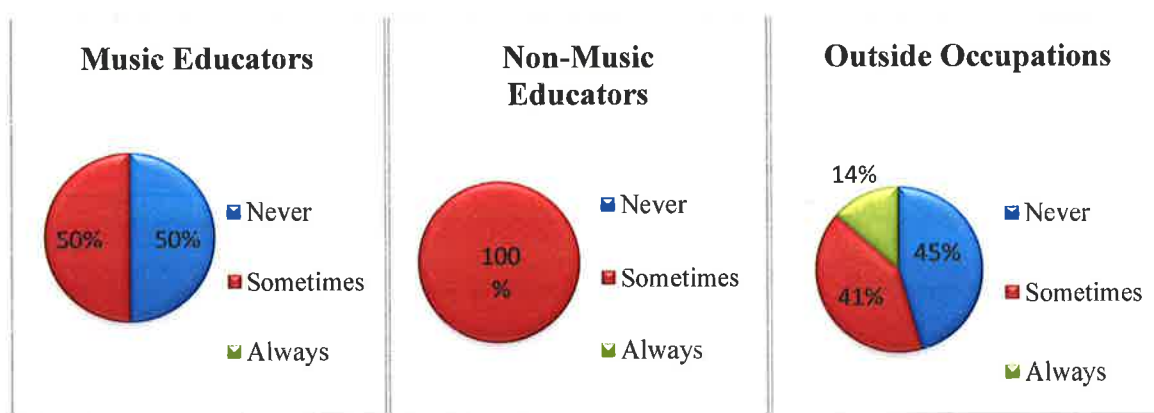


*Figure 4.9* Percentage of respondents expressing difficulty singing high notes in the contemporary gospel style.



*Figure 4.10* Percentage of respondents expressing difficulty singing low notes in the contemporary gospel style.

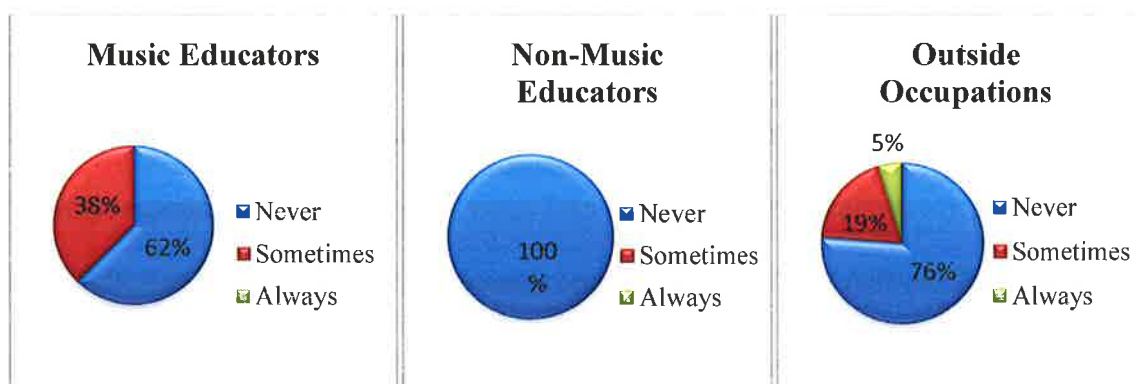
The ability to project, or sing with more volume, allows the vocalist to follow the dynamic direction of the director when performing or practicing a vocal selection. Subjects were asked to identify the degree of difficulty with projecting the voice when singing contemporary gospel. Results indicate that more music educator respondents than respondents with outside occupations reported never experiencing difficulty when projecting the voice (*Figure 4.11*). The results suggest that most non-music educator respondents and those with outside occupations either experience vocal health issues or lack healthy vocal production practices when singing contemporary gospel.



*Figure 4.11* Percentage of respondents expressing difficulty projecting the voice while singing contemporary gospel.



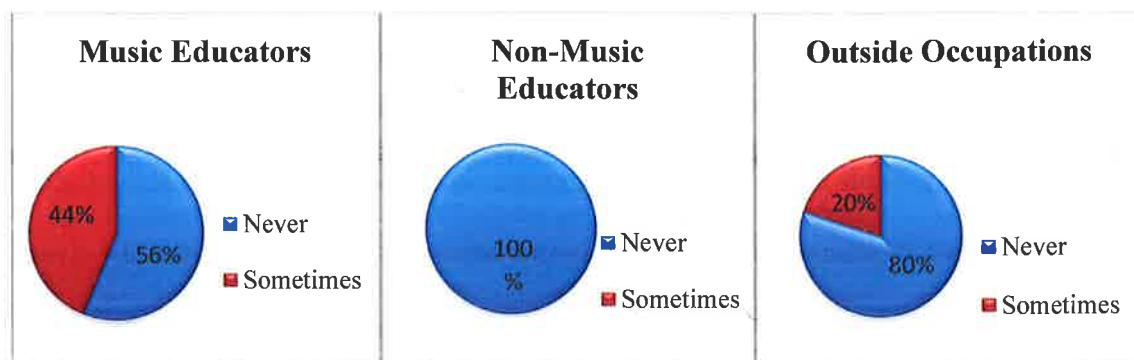
Respondents were asked to express any experience with throat tightness when singing contemporary gospel. Throat tightness while singing is a sign of tension in the throat that leads to painful and improper vocal production. In the absence of throat tightness is the ability to sing with vocal freedom. On the contrary, when throat tightness is present the voice may sound strained when singing. *Figure 4.12* indicates that non-music educators were the only respondents that never experienced throat tightness while singing contemporary gospel. Results also indicate that 38% of music teachers and 19% of those with outside occupations reported experiencing throat tightness 3 to 7 days out of the week. While only 5% of those with outside occupations reported always experiencing throat tightness.



*Figure 4.12* Percentage of respondents experiencing throat tightness while singing contemporary gospel.

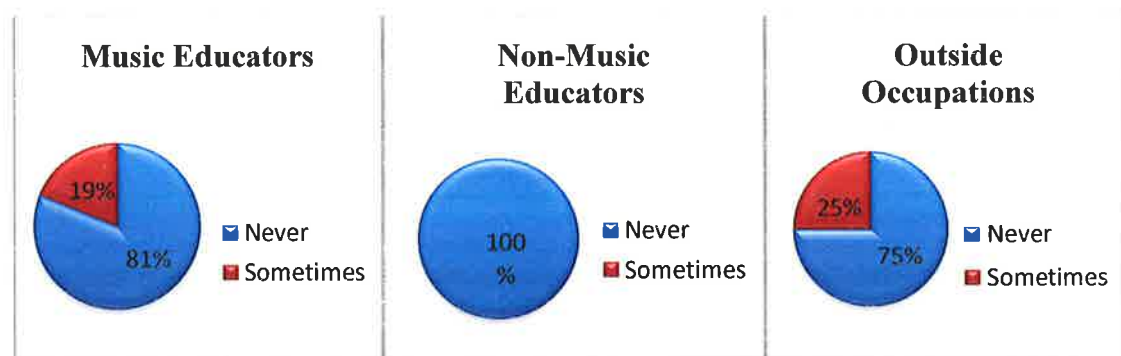
Throat pain and discomfort may be a symptom of throat tightness, illness, shouting, or singing with too much pressure on the vocal cords. Respondents were asked to specify experience with throat pain and discomfort when singing contemporary gospel. Over 56% of music educators, 80% of respondents with outside occupations, and 100% of teachers of non-musical subjects reported never experiencing throat pain and

discomfort (*Figure 4.13*). The results indicate that non-music teachers may avoid unhealthy vocal practices when singing contemporary gospel.



*Figure 4.13* Percentage of respondents reporting throat pain and/or discomfort while singing contemporary gospel.

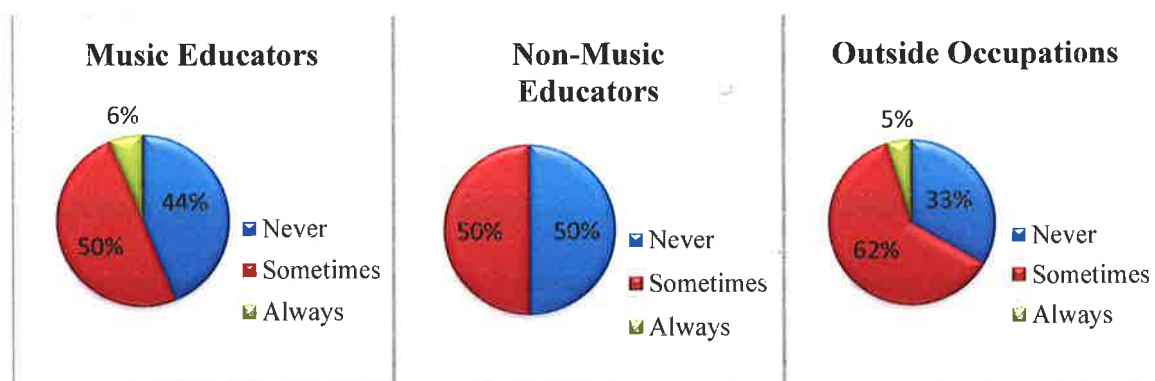
One consequence of damage to the vocal cords is complete voice loss, which is the inability to sing or speak for a period of time. This vocal health issue may arise while singing contemporary gospel with an unsupported tone. Respondents were asked to identify experiences with complete voice loss when singing contemporary gospel. *Figure 4.14* indicates that 81% of music educator respondents, 100% of non-music educators, and 75% of those with outside occupations reported never experiencing complete voice loss.



*Figure 4.14* Percentage of respondents experiencing complete loss of voice while singing contemporary gospel.

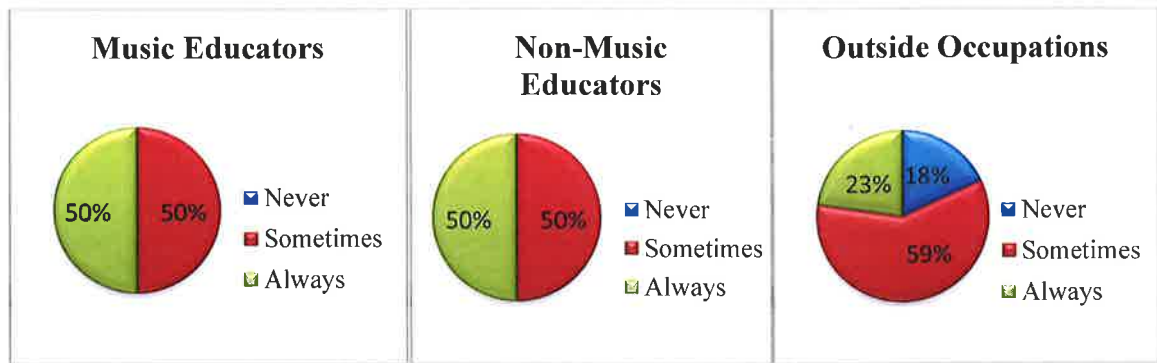


A voice break occurs when vocal production ceases in the midst of a performance; this vocal health issue is unplanned. Respondents were asked to identify experiences with voice breaks while singing contemporary gospel. The results in *Figure 4.15* indicate that 44% of music educators, 50% of non-music teachers, and 33% of those with outside occupations never experience voice breaks. These findings suggest that non-music educator respondents sing with voices that are more connected, meaning no voice breaks, than other respondents.



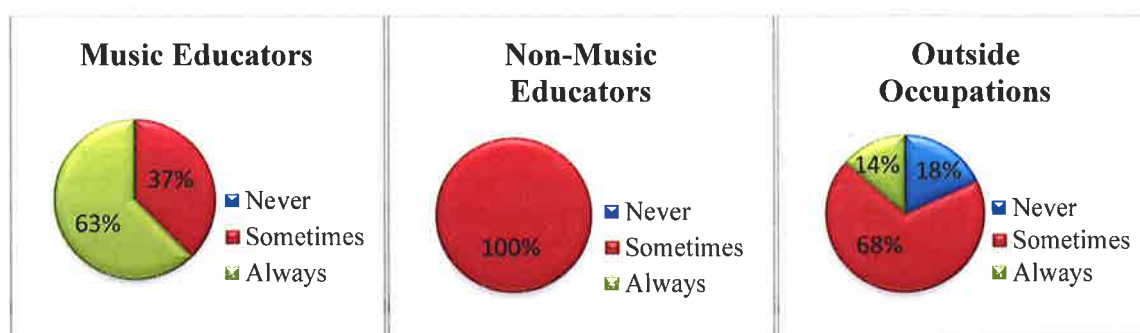
*Figure 4.15* Percentage of respondents experiencing voice breaks while singing contemporary gospel.

Correct posture requires a straight back, level head, and flat feet to allow the diaphragm to function properly while singing. Subjects were asked to identify choices reflecting healthy singing habits during contemporary gospel performance that include posture, breath support, vocal warm ups, and hydration. When asked about how often the respondents practiced correct posture, the results in *Figure 4.16* suggest that more music educator respondents as well as non-music educator respondents always practice better posture than respondents with outside occupations. Respondents with outside occupations were the only group that reported never practicing correct posture while singing gospel.



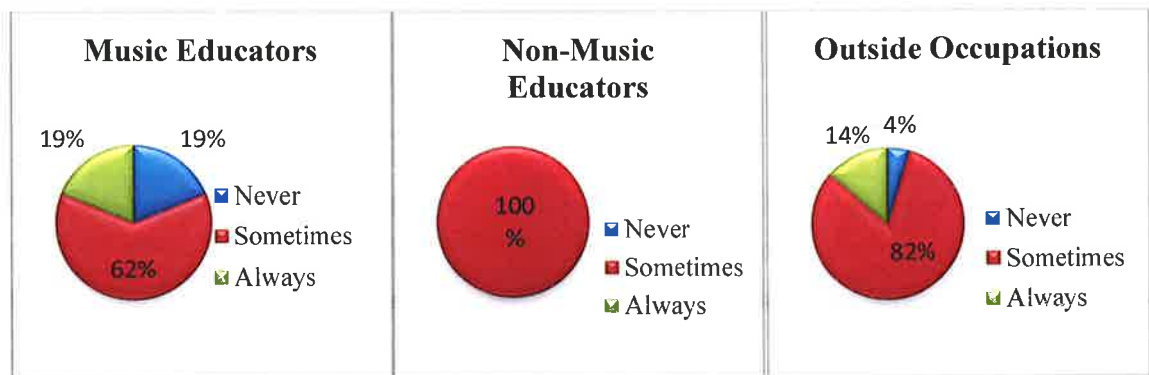
*Figure 4.16* Percentage of respondents reported practicing good posture when singing contemporary gospel.

A lack of breath support may lead to vocal health issues that negatively affect the tone of the voice as well as the condition of the vocal cords. Respondents were asked to report how often breath support is practiced. Breath support is extremely important when singing because it is the foundation of proper vocal production. When producing sound, the throat may overcompensate for the lack of support resulting in a sore throat. Breath support is also imperative when singing full musical phrases without unnecessary pauses. *Figure 4.17* indicates a much higher percentage of music educator than respondents with outside occupations reported always using good breath support. Of the non-music teachers, 100% reported using good breath support sometimes. Overall, results suggest that music educator respondents use good breath support more often than other respondents. This makes sense because of vocal training received during their undergraduate training.



*Figure 4.17* Percentage of respondents practicing good breath support while singing contemporary gospel.

Warming up the vocal cords is a healthy practice that prepares the voice for singing. The respondents were asked to report how often vocal warm-ups were performed prior to singing. In *Figure 4.18* a slightly higher percentage of music educator respondents than those with outside occupations always performed vocal warm ups prior to singing contemporary gospel. On the other hand, more respondents with outside occupations than music educator respondents reported warming up sometimes. When combining results from the sometimes and always response categories, more respondents with outside occupations than music educators warm up their voice before singing. This is an unexpected finding considering the educational background of music educator respondents. This may be due to the music educator warming up with classes during the typical workday. These respondents may feel there is no need to warm up a voice that has been vocalized during work hours. Of the non-music educator respondents, 100% reported only sometimes warming up prior to singing contemporary gospel.



*Figure 4.18* Percentage of respondents reporting warming up the voice before singing contemporary gospel.

In comparing vocal hygiene, respondents were asked to identify vocal health regimen tendencies in the vocal health regimen section of the survey. Water is essential in vocal health because it lubricates the vocal cords and allows them to function properly in sound production. When asked how often the respondents consumed eight glasses of water a day, the results in *Figure 4.19* indicate that a higher percentage of respondents with outside occupations consume eight glasses of water than other respondents. More music educators than respondents with outside occupations reported consuming eight glasses of water always. When combining percentages of respondents that reported consuming water always and sometimes, those with outside occupations reported the highest percentage.

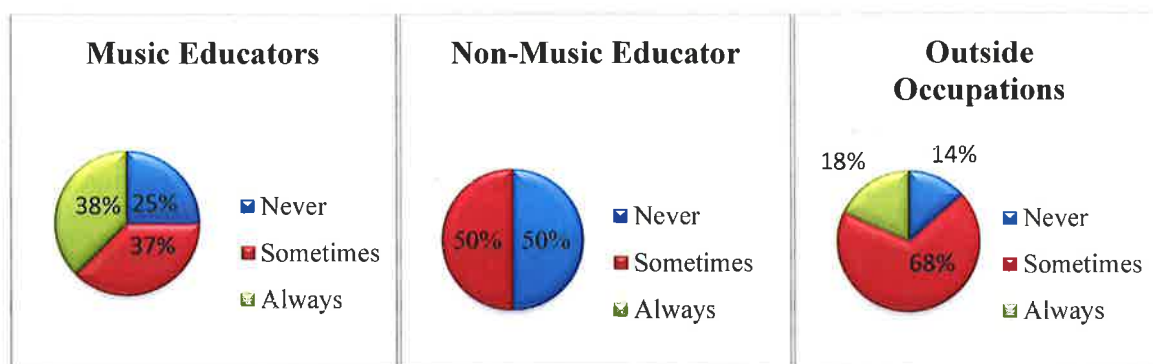


Figure 4.19 Percentage of respondents reporting drinking eight or more glasses of water a day.

With allergies, post nasal drip, and many other health conditions that may affect the vocal folds, respondents were asked about taking medicine that dried out the throat. Medicines for these health issues tend to dry the vocal cords out which causes them not to vibrate properly during sound production. Results in *Figure 4.20* indicate that a 69% of music educators, 100% of non-music educators, and 59% of respondents with outside occupations responded never using medicine. The non-educator group was the only group that responded always taking medicine that dries the throat. Perhaps more respondents with outside occupations experience a dry throat while singing which may explain why this group reported the highest percentage for water consumption.

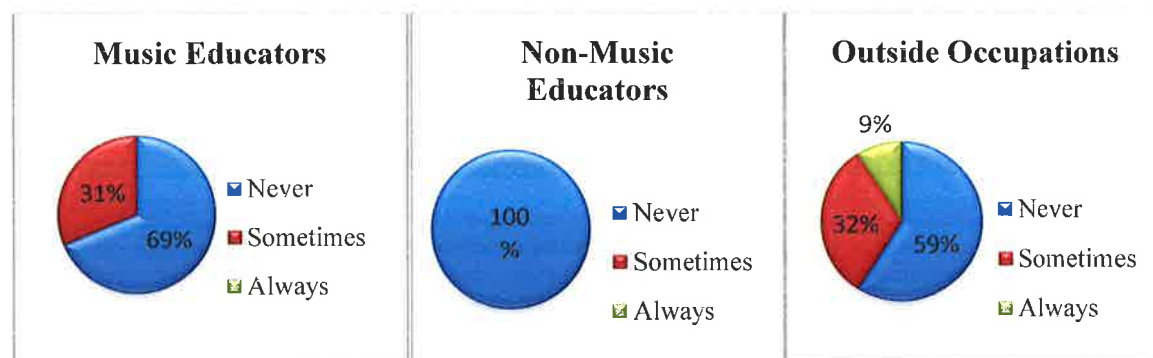
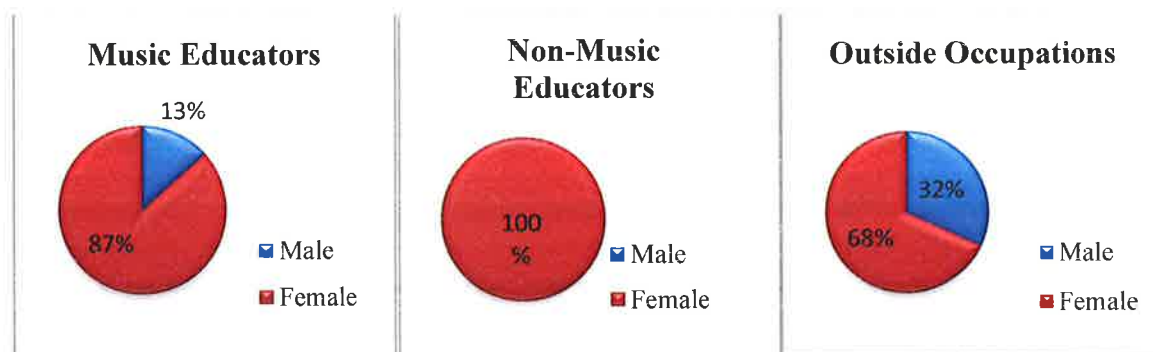


Figure 4.20 – Percentage of respondents reporting taking medicine that dries the throat.

In addition medicines that dry the throat, another factor that may affect the voice is gender. *Figure 4.21* indicates that a majority of the respondents were females. To be more specific, music educators had a lower percentage of male respondents than those with outside occupations. Also, *Figure 4.21* indicates there is a higher percentage of women in the music educator occupation than in the non-educator occupation. Studies have shown that females experience more vocal health issues than males due to increased vocalization. In a study conducted by Hunter and Titze (2010), results indicated that female teachers vocalized more than male teachers.



*Figure 4.21* Percentages of groups in each gender as reported by respondents.

In comparing participation in a voice care program in college, a much higher percentage of music educators responded participation in this program than those with outside occupations. *Figure 4.22* suggests that voice care was present in the education of near two thirds of music educator respondents, zero percent of teachers of non-musical subjects, and 5% of those with outside occupations.

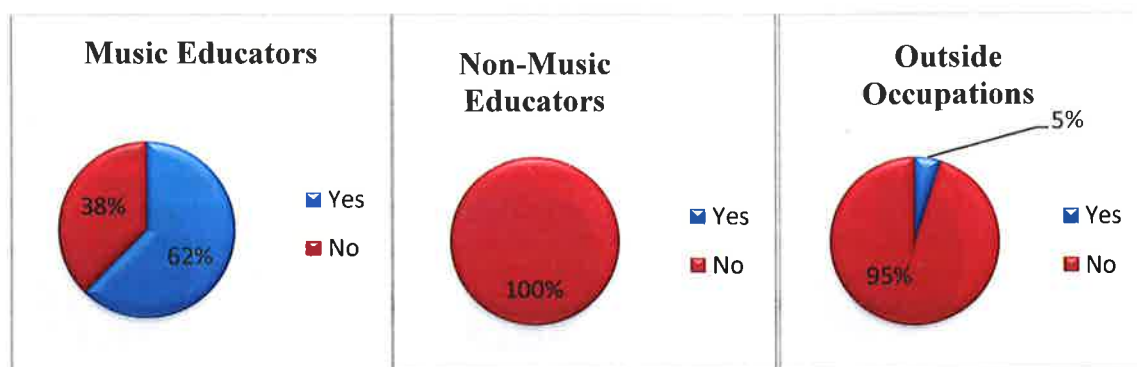


Figure 4.22 Percentage of respondents reporting involvement in a voice care program in college.

When respondents were asked to identify years of experience in singing contemporary gospel, there was a disparity among all subjects. Nearly half of the respondents with outside occupations and 94% of music educators reported having 11 or more years of experience singing contemporary gospel, while 100% teachers of non-musical subjects reported only having 1 to 5 years of experience. As indicated in Figure 4.23, of all groups, music educator respondents have the most experience singing contemporary gospel. This finding may suggest that music teachers are more familiar with the techniques of this style than other respondents and can produce sound in a healthy manner.



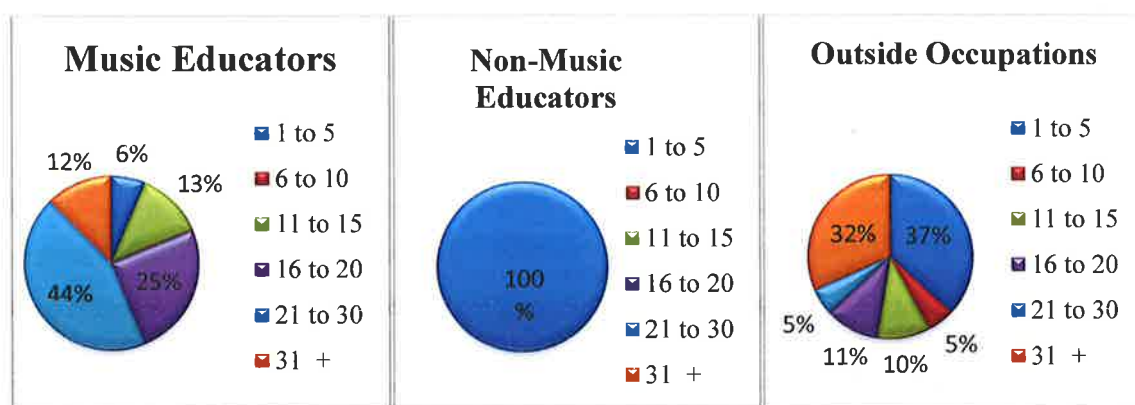


Figure 4.23 Number of years of experience in singing contemporary gospel as reported by respondents.

North Carolina is known for its many allergens. An allergy for a vocalist is detrimental when singing due to the nasal congestion or buildup of phlegm on the vocal folds. When respondents were asked about experience with post nasal drip and or allergies, there were very close findings. Results displayed in Figure 4.24 indicate 47% of music educators, 50% of non-music educator respondents, and 41% of respondents with outside occupations reported experiencing post nasal drip and or allergies.

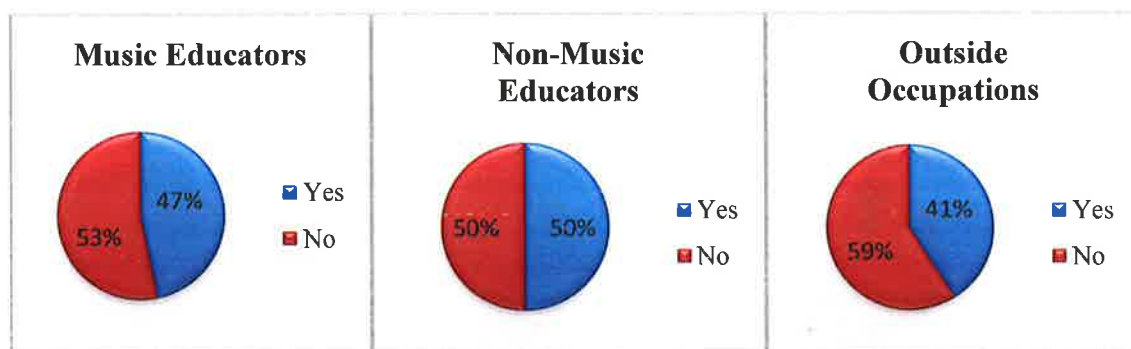
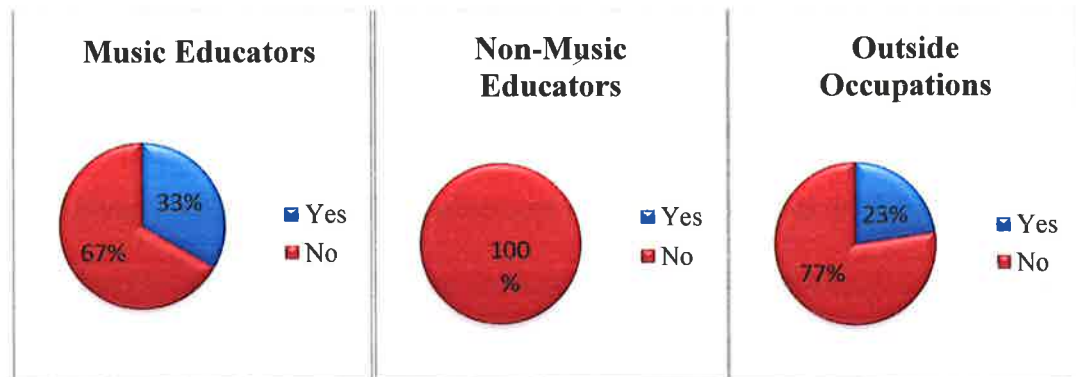


Figure 4.24 Percentage of respondents reporting experienced post nasal drip and or allergies.

Acid reflux is a throat problem that may cause a sore throat or hoarseness. When respondents were asked about any experience with acid reflux, most music educators,

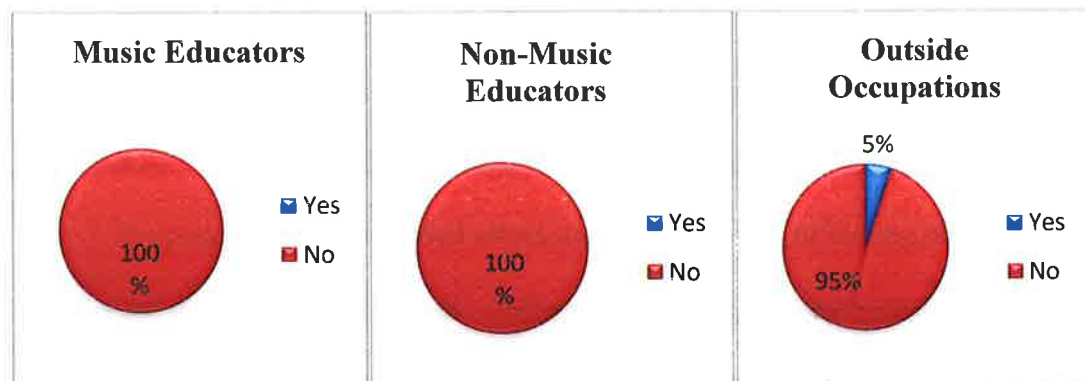


teachers of non-musical subjects, and respondents with outside occupations reported never experiencing this vocal health issue. Results in *Figure 4.25* indicate that only 33.3% of music educator respondents and 22.7% of respondents with outside occupations reported suffering from acid reflux.



*Figure 4.25* Percentage of respondents reporting experienced acid reflux.

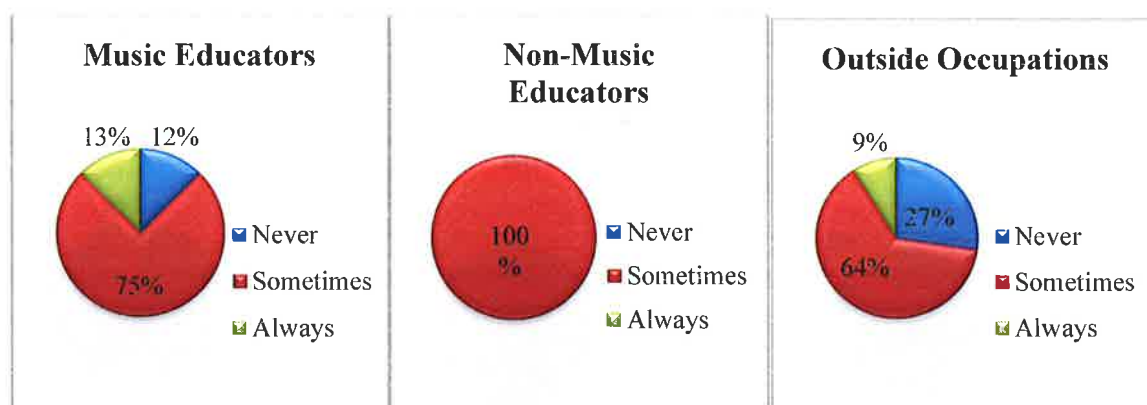
As shown in *Figure 4.26*, only 4.8% of respondents with outside occupations reported having experienced trauma or surgery to the larynx. All other groups reported having never experienced trauma or surgery to the larynx.



*Figure 4.26* Percentage of respondents reporting experienced trauma and or surgery to larynx.

It is thought among singers that tea is a cure for vocal health issues. Warm tea and honey is a vocal remedy that many singers utilize to soothe the throat when

experiencing vocal health issues. Although honey coats and soothes the throat, the caffeine in tea has a drying effect on the vocal cords. Herbal teas lack caffeine and would be the best option for vocalist. On the survey instrument, the question concerning this item should have been described as herbal tea as opposed to tea. As shown in *Figure 4.27*, music educator respondents and teachers of non-musical subjects consume tea and honey more often than those with outside occupations. Slightly more music educators than respondents with outside occupations reported “always and sometimes” drinking tea and honey, while all non-music educators reported sometimes drinking tea and honey. The results to this survey item are ambiguous because it is not known if the respondents consumed herbal tea or caffeinated tea.



*Figure 4.27* Percentage of respondents reporting consumption of honey and tea.

Respondents were asked to select the answer choice reflecting how often caffeinated drinks were consumed. Caffeinated beverages dehydrate the vocal folds and should be avoided when singing. As indicated in *Figure 4.28*, the combined percentages in the “sometimes and always” categories indicate that respondents with outside occupations than music educator drink caffeinated beverages.

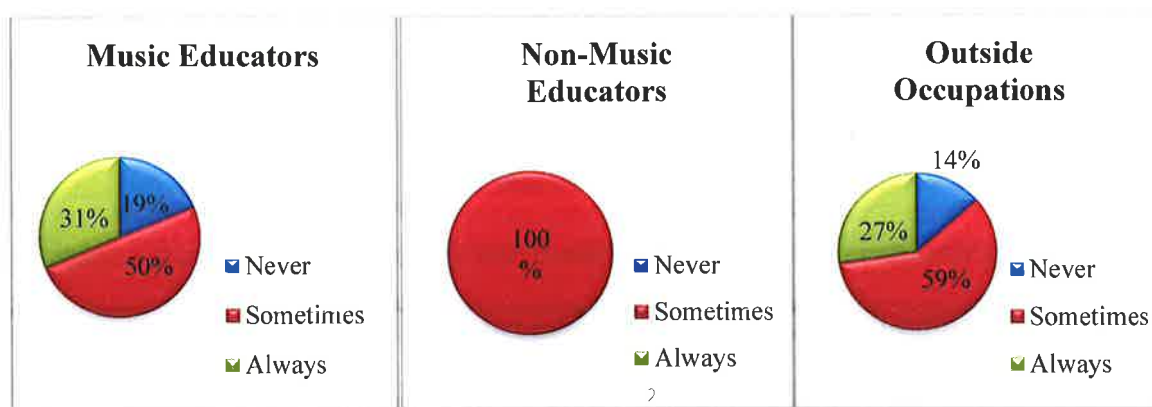


Figure 4.28 Percentage of respondents reporting consumption of caffeinated drinks.

Like caffeine, smoking irritates and dries out the vocal cords and should be avoided. Of respondents who sing contemporary gospel, 14% of those with outside occupations and 6% of music educators reported smoking three to seven days per week (Figure 4.29).

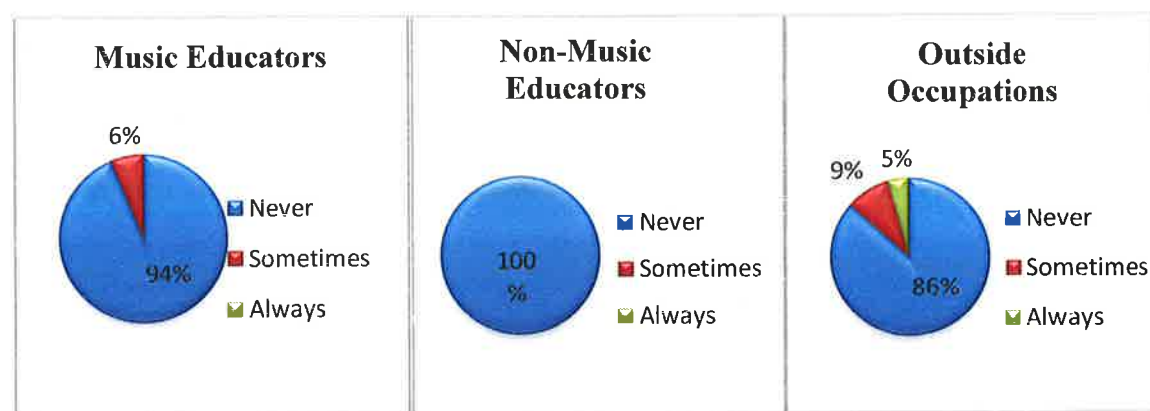


Figure 4.29 Percentage of respondent smokers.

## Chapter 5

### Conclusion

The first research question of this study addressed the perception of vocal health of music educators and individuals with outside occupations who currently sing the contemporary gospel style. The second purpose of this study examined the relationship between vocal usage during employment hours, and self-reported vocal quality when singing the contemporary gospel style. All participants involved in this study regularly sang contemporary gospel music in a church choir. The initial design of this included only music educators and those employed in outside occupations. Two of the 40 participants, however, were teachers of non-musical subjects. The populations sample including the teachers of non-musical subjects was not large enough for establishing comparison with the other subgroups making this a limitation of the study.

Findings of vocal health issues among participants during employment hours indicate that music educators had a higher percentage of self-reported vocal health issues than any other group surveyed. It is possible that vocal demands indicated in this study by factors such as large class sizes, extra duties, and a large number of classes per day influence teacher's vocal health. This finding was expected considering the excessive vocalization of music educators during a typical workday, and the high percentage of females in this group. Also it is possible for music educators to have rigorous teaching schedules that require excessive vocal use.

These findings also support previous studies which suggest that female teachers experience more vocal health issues than male teachers. Vocal health issues among female teachers may be attributed to vocalization outside of the school setting. These

voice issues may be caused by activities such as coaching, caring for children, or any other recreational activity requiring vocal use.

The next part of this study sought to compare the perception of how occupation affects vocal quality when singing contemporary gospel. Although the perception of vocal quality while singing contemporary gospel was addressed in this study, the correlation concerning how occupation affects the voice when singing this style was not addressed. In a future study, inclusion of the second research question as a survey item would provide information regarding the perception of how occupation affects the voice when singing contemporary gospel music. This study did, however, reflect the subjects' perception of vocal quality when singing contemporary gospel. Of all groups surveyed, the highest percentage of participants reporting voice problems were music educators. The second highest percent of participants reporting voice problems comes from respondents with occupations outside of education. The findings of this study suggest that teachers of non-musical subjects had a better awareness of their vocal health issues when singing contemporary gospel than other groups surveyed.

In addition to vocal health issues experienced when singing contemporary gospel, subjects reported different factors that may affect the voice like vocal health regimen and vocal technique. According to the survey results, of all groups surveyed, a higher percentage of respondents with outside occupations reported not practicing good posture and breath support. As expected, more music teachers than teachers of non-musical subjects practiced good breath support and were able to sing high notes while singing gospel. Since music educators practiced good breath support, this would explain why more music teachers were also able to sing higher and lower notes. Respondents with

outside occupations also reported experiencing more acid reflux, and surgery of the larynx. A higher percentage of respondents with outside occupations reported consuming eight glasses of water. Also, respondents with occupations outside of education were the only group that responded always taking medicine that dries the throat. Perhaps more respondents with outside occupations experience a dry throat while singing which may explain why this group reported the highest percentage for water consumption.

Further studies could focus on vocal health issues while singing contemporary gospel and include a group of contemporary gospel singers who monitored their vocal health over the course of at least four rehearsals. At the beginning of the each rehearsal, before singing would occur, the group could complete a short vocal health survey to document the condition of their voice upon entering the rehearsal. At the end of each rehearsal, the group could complete a vocal health survey to document the condition of their voice.

Results of this study indicate that music educators reported more vocal health issues during occupational hours and while they sang contemporary gospel music. It is possible that voice usage experienced during work hours may have attributed to the perceptions of vocal health when singing contemporary gospel. Since music educators surveyed in this particular study were vocally trained, it likely that vocal health issues reported when singing contemporary gospel might be attributed to the extent of vocal use during occupational hours. In an effort to gain deeper insight into vocal health as it relates to occupation and the contemporary gospel style, future studies are still needed in understanding the effects of voice usage and its effect on singing contemporary gospel

music. Additional research can focus on the length of time participants vocalize, differences and similarities in music educators' speaking and singing voices, and differences in voice usage between highly trained vocalist and novice singers.

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## Appendix 1

**University of North Carolina at Pembroke  
Consent to Participate in a Research Study  
Adult Participants  
Social Behavioral Form Example**

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**IRB Study #** 12-02-013

**Consent Form Version Date:** 2-24-12

**Title of Study:**

A Comparative Study of Perceptions of Vocal Health in Singing the Gospel Style

**Principal Investigator Contact Information:**

You may contact LaSherrie Draughon at 910-224-5413 or by email at ldd004@bravemail.uncp.edu if you have any questions concerning this research topic.

**What are some general things you should know about this research?**

You are being asked to take part in a research study because you sing the contemporary gospel style. To join the study is voluntary. If you decide to participate, you will be asked to complete a survey.

This survey is being conducted at UNCP to help understand the perception of vocal health of music educators and non-music educators who currently sing the contemporary gospel style. The second purpose of this study is to examine the correlation between vocal usage during employment hours, and self-reported vocal quality when singing the contemporary gospel style. This survey will take approximately 10-15 minutes to complete. You may refuse to join, or you may withdraw your consent to be in the study, for any reason, without penalty.

**What are the risks or costs associated with participation?**

There are no anticipated risks associated with your participation in this survey. There are also no costs involved in this study.

**What are the benefits associated with participation?**

There are no personal benefits from your participation, however, your participation will benefit future research as it will provide a foundation for a more in-depth research study concerning the subject how occupational voice use may or may not affect vocal health.

**How will your privacy be protected?**

Participants will not be identified in any report or publication related to this study. If you have received this consent, and I have administered the survey via telephone, I will keep the information provided confidential.

**What if you have questions about this study?**

You have the right to ask, and have answered, any questions you may have about this research. If you have questions or concerns, you should contact the researcher listed at the top of this form.

**What if you have questions about your rights as a research participant?**

All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject you may contact, anonymously if you wish, the chair of the Institutional Review Board (Melanie Hoy, Ph.D.) at 910.775-4359 or by email to [irb@uncp.edu](mailto:irb@uncp.edu).

**Participant's Agreement:**

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

---

**Signature of Research Participant**

---

**Printed Name of Research Participant**

## Appendix 2

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Occupation * Breathy/Weak voice	37	92.5%	3	7.5%	40	100.0%
Occupation * Hoarse Voice	38	95.0%	2	5.0%	40	100.0%
Occupation * Dry/Scratchy Throat	40	100.0%	0	.0%	40	100.0%
Occupation * Coughing	38	95.0%	2	5.0%	40	100.0%
Occupation * Throat Clearing	38	95.0%	2	5.0%	40	100.0%
Occupation * Difficulty Singing High Notes	38	95.0%	2	5.0%	40	100.0%
Occupation * Difficulty Singing Low Notes	40	100.0%	0	.0%	40	100.0%
Occupation * Difficulty Projecting Voice	40	100.0%	0	.0%	40	100.0%
Occupation * Throat Tightness	39	97.5%	1	2.5%	40	100.0%
Occupation * Throat Pain/Discomfort When Singing	38	95.0%	2	5.0%	40	100.0%
Occupation * Complete Loss of Voice	38	95.0%	2	5.0%	40	100.0%
Occupation * Voice Breaks When Singing	39	97.5%	1	2.5%	40	100.0%

## Appendix 3

## Contemporary Gospel Vocal Health Survey Instrument

*The contemporary gospel style is defined as mixture of various styles which includes blues, jazz, rhythm and blues, rap, hip hop, soul, rock, contemporary jazz, contemporary jazz and blues, word, and urban gospel styles (Robinson-Martin, 2009).*

## A. Demographics

If you are *not* a current teacher, please list your current profession below,

**Current profession** \_\_\_\_\_

a. Circle the choice below that describes your age.

18-24      25-34      35-44      45-54      55-64

b. Please indicate your gender by circling the appropriate choice below.

male      or      female

c. What city and state do you live in? \_\_\_\_\_

d. What is your educational background?

Colleges attended \_\_\_\_\_

Degrees earned \_\_\_\_\_

e. Please indicate your voice part by circling one choice below.

soprano      alto      tenor      bass

f. Circle the choice that reflects your years of experience in singing contemporary gospel.

1 to 5      6 to 10      11 to 15      16 to 20      21-30      31 or more

*If you are not a current teacher, skip to section C.*

## B. General Teaching Information

a. Please circle the answer that contains the total number of years you have taught.

1 to 5      6 to 10      11 to 15      16 to 20      21 to 25      26 or more

b. Are you a licensed teacher or lateral entry teacher? Circle the applicable answer.

Licensed      lateral entry      other

c. In an average day, circle the highest number of classes you teach below.

1 to 4      5 to 9

d. Circle the answer that most accurately reflect the total # of classes you teach in a week.

1 to 20      21 to 40      41 to 60      61 or more

e. Circle the choice that most accurately reflects your average class time length.

10 to 30min      31 to 60min      over an hr.

f. Circle the choice that most accurately reflects the average # of students in each class.

1 to 10      11 to 20      21 to 30      31 to 40      41 to 50      51 or more

g. Please indicate other duties by circling a choice below.

bus      lunch      hall      other

C. Does any of the following apply to you? Please circle either yes or no for each.

Post Nasal Drip and other allergies that effect the voice	yes	no
Acid Reflux problems	yes	no
Trauma/surgery to larynx	yes	no
Voice training at any time	yes	no
Voice care program during college training	yes	no
Have you experienced what you consider a voice problem at work?	yes	no

D. In your recreational time, have you experienced any of the following symptoms while singing the contemporary gospel style?

Circle one of the following; 1=never, 2= sometimes (3 out of 7 days/week), 3=always

Breathy/weak voice	1	2	3
Hoarse voice	1	2	3
Dry/scratchy throat	1	2	3
Increased amounts of coughing	1	2	3
Increased amounts of throat clearing	1	2	3
Difficlutly singing high notes	1	2	3
Difficiutly singing low notes	1	2	3
Difficulty projecting voice	1	2	3
Throat tightness	1	2	3
Throat pain/discomfort when singing	1	2	3
Complete loss of voice	1	2	3
Voice breaks when singing	1	2	3

E. Vocal Technique

Circle one of the following; 1=never, 2= sometimes (50% of the time), 3=always

Do You....

Use good breath support while singing?	1	2	3
Use good posture when singing?	1	2	3
Strain your voice when singing high notes?	1	2	3
Use your chest voice when singing high?	1	2	3
Warm up your voice before you sing?	1	2	3
Use a microphone when you sing a solo?	1	2	3

F.Vocal Health Regimen

Circle one of the following; 1=never, 2= sometimes (50% of the time), 3=always

Do You...

Drink eight or more glasses of water a day?	1	2	3
Use honey and tea?	1	2	3
Drink caffeinated drinks (coffee/soda)	1	2	3
You smoke?	1	2	3
Take medicine that dries the throat?	1	2	3
Eat dairy before you sing?	1	2	3

Describe any further issues you would like to share concerning  
how your occupation affects your vocal health when singing the gospel style.

## Appendix 4

Seven participants responded in the open ended section of the survey. The responses are identified by survey number. Participant number three, a female music teacher, responded that "heat sometimes dries me out." Participant number 4, also a female music teacher, responded that "talking a lot throughout the day makes my voice hoarse." Participant number 5, a male music teacher, responded "very rarely do I have a considerable amount of issues with my voice when singing in the gospel style. However, I can tell that certain medication for which I have been prescribed, can tend to affect my voice in addition to seasonal allergies, etc. which can sometimes make it difficult to effectively sing in not gospel but all other genres of music to which I am accustomed to singing." Participant number 6, a female music teacher responded that "my vocal range has dropped due to teaching and acid reflux that was untreated for years." Participant number 20, a male criminal justice employee, reported that he experienced difficulty in singing high notes. Participant number 11, a female music teacher stated "In the classroom, I find it difficult when I'm always using my voice to correct behavior." Participant number 16, a female music teacher stated "sometimes I raise my voice at my students. I am interested in getting my larynx examined."