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ADOLESCENT MALES' MOTIVATIONS TO ENROLL OR NOT

ENROLL IN CHOIR

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

Doctor of Philosophy

By

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Norman, Oklahoma
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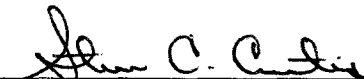
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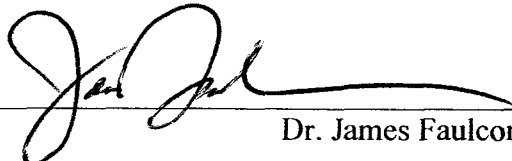
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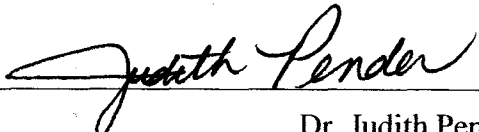
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CHAPTER ONE

INTRODUCTION

Background

There is a disparity between male and female enrollment in choir classes in the United States. For many years, choir teachers have bemoaned the lack of male singers in their ensembles. One need only view the vast number of articles in professional choral journals to see that males are all too often underrepresented as compared to females (Cochran, 2001; Demorest, 2000; Killian, 1988; Phillips, 1995; Sandene, 1994). Unless addressed, this disparity is likely to grow wider, giving fewer students of both genders the opportunity to experience choral music in a choir of balanced voices.

The ratio of fewer males than females in choirs has not always been the case in the United States. From colonial times to the twentieth century, male voices virtually dominated the landscape of choral singing. Men sang in fraternal organizations, taverns, and churches. Singing was socially reinforced for men, which is not presently the case (Gates, 1989). Authors disagree slightly on when the shift was made from a male-dominated to a female-dominated landscape. Gates indicates that in the 1930s a much more balanced ratio between males and females was seen. A gulf has gradually widened into the current disparity. However, a study of the first ten volumes of the Music Supervisors' Journal (1914-1924) indicates that even before the 1930s, boys did not particularly like to sing, and less so than girls (Koza, 1993). Another source notes that a questionnaire administered in 1919-1920 concerning the status of music in schools

indicated that there were a large number of boys' glee clubs, much to the surprise of many who felt that boys were not interested in singing (Wild, 1934).

The balance of voices is an important aspect in a good choral sound. It is in the best interest of male *and* female participants in choirs that a somewhat equal balance is struck between male and female voice parts. Take as an example a choir of 60 members. If the balance of voices were equal (15 soprano, 15 alto, 15 tenor, 15 bass), the director could choose from a wide variety of literature for the ensemble to perform. The ensemble could perform pieces for female or male voices only, in addition to the mixed voice (S.A.T.B.) music likely included in their repertoire. The flexibility of repertoire choice of the ensemble changes dramatically if the distribution of voices is unequal. If the makeup of the choir changes even slightly to include more female voices and fewer male voices (20 soprano, 20 alto, 10 tenor, 10 bass), the available choice of literature decreases. Now, the director must take into account an issue with choral balance. In plain terms, there are disproportionately more female voices than males, so if singing in a healthy manner, it is probable that the women will sound louder than the men. A more worrisome prospect is the thought of an even more overbalanced ensemble (25 soprano, 20 alto, 5 tenor, 10 bass). Unfortunately this ratio is all too often a reality in choirs of all ages. Of course there are ways to accommodate such an ensemble. However, each solution adds another problem. The director may ask some altos to sing tenor to help the choral balance, thus running the risk of causing vocal health problems and having an even more unbalanced female section. Another solution may be to reduce the number of female singers in a choir itself. But then, a number of female singers are left without the opportunity to sing with the ensemble. Regardless of the brilliance of the proposed

solutions to an unbalanced choir, the fact remains that having a proportionate number of male to female singers gives the ensemble the best opportunity for musical growth and a positive, healthy vocal experience.

On the whole, young women participate in school choirs at a higher rate than young men. However, recent publications on the participation rate of males and females in choir are limited. Only one study could be found that specifically outlined choir participation stratified by gender (Van Camp, 1988). Evidence of this disparity is mainly seen in the numerous articles in popular professional journals, other papers, and textbooks that deal with the recruitment and retention of males in choirs (Cochran, 2001; Demorest, 2000; Killian, 1988; Phillips, 1995; Sandene, 1994). In addition to numerous articles in practitioner journals, some empirical studies have been carried out with the intention of identifying reasons why males do or do not enroll in choir and strategies to recruit more males (Callistro-Clements, 2002; Castelli, 1986; Cross, 1975; Lucas, 2003). These studies provide evidence of the importance of this problem to the music education profession.

A lower participation rate of males than females in choirs does not mean that every effort should not be made to recruit females to sing in choirs. On the contrary, more and better ways to interest *all* persons in singing should be researched and advocated. It was, however, outside the scope of this research to address the overarching issue of choral participation by females in great detail here. The purpose of this study was to investigate the factors related to an adolescent male's choice to enroll or not enroll in choir.

Good choral directors know that an important part of programming literature for their ensembles is to locate music that best fits their groups. Most choral directors will admit that the number (and level of ability) of male singers in their ensembles directly affects that choice of literature. It is not uncommon in the United States to find choirs at every level that contain a smaller number of male voices than female voices (Gates, 1989; Stewart, 1991).

What then are the factors related to a young man's decision to participate in choir or not? That question was the focus of this research. Empirical research and popular professional articles rarely, if ever, indicate one factor as the only reason a person chooses to participate in choir (e.g. Cochran, 2001; Demorest, 2000; Killian, 1988; Phillips, 1995; Sandene, 1994). Yet when speaking to choral directors, many have opinions on what factor is most influential.

A common factor put forth by many in the field of choral music is the voice change and its effect both socially and physiologically. It is an accepted fact that when a boy's voice changes, he is likely to have difficulty singing certain notes for a period of time. This can discourage a young male at a time (often during grades 7 and 8) when he is first making the decision to take choir or not. The voice change also may make an adolescent male uncomfortable socially because of his seeming inability, at times, to control his voice. However, an argument can be made that although voice changes may be occurring earlier (Killian, 1999), boys' voices have *always* changed, yet the decline in boys' participation in choral singing did not occur in the United States until early in the twentieth century.

Researchers have noted other factors related to participation in music classes such as peer pressure, family influence, love of music, self-efficacy, scheduling, and teacher influence. This current study investigated an adolescent male's perceptions about each of these factors and how they relate to his decision to enroll or not enroll in choir.

Need for the Study

Adolescent males who are not participants in choirs have been generally absent from research pertaining to why young men do or do not enroll in choir. Studies in the past twenty years have focused on areas that lie on the periphery of the current research topic area, but no single research study has incorporated adolescent males in grades 7 and 8, both in choir and those not enrolled in choir.

Many studies can be found that deal with musical motivation and the attributes of success and failure in music (Asmus, 1986; Asmus & Harrison, 1990; Austin & Vispoel, 1992; Bowman, 1988; Leggette, 1998; Schmidt, 1995). These studies, however, do not address the question of why the subjects choose to enroll or not enroll in music classes.

Studies addressing factors influencing the music enrollment choices of students can be grouped into three categories according to the populations sampled: Instrumental students (Corenblum & Marshall, 1998; Cutietta & McAllister, 1997; Klinedinst, 1991; Werpy, 1995), students enrolled in choir (Miller, 1992; Neill, 1998; Sichivitsa, Barry, & Guarino, 2001; Tironi, 1996) or students from the general population of a school (Austin, 1990; Callistro-Clements, 2002; Gaskell, 1992; Koutz, 1987; Linch, 1993; Mizener, 1993).

Many of the aforementioned studies share one or two commonalities with the present study. Some studies sampled adolescents but differed from the present study

because the focus was on instrumentalists (Corenblum & Marshall, 1998; Cutietta & McAllister, 1997; Klinedinst, 1991). Others studied only those who were currently enrolled in choir (Lucas, 2003; Miller, 1992; Tironi, 1996) but did not also investigate those who had not chosen to participate in choir.

Three studies stand out as closely related to this present research. Sichivitsa (2001), Neill (1998), and Lucas (2003) all surveyed students concerning their reasons for singing in choir. Differences, however, do exist between these studies and this present research. Neill surveyed high school students, and Sichivitsa surveyed college students. Lucas (2003) is the most similar except for the fact that, like the Neill and Sichivitsa studies, surveys were completed by students who were currently in a choir. In other words, they had already made the choice to participate, and the researchers were attempting to ascertain the reasons they had made that choice. These three studies do not attempt to explain the reasons other students have chosen not to participate in choir, as this current study does.

The study that is perhaps most like the present research is one that surveyed students in grade six who were in choir and who were not in choir in one school district in the northwestern United States (Callistro-Clements, 2002). It is similar to the current study in that subjects in the Callistro-Clements study were drawn from a single school district. This present study drew subjects from a single school district but one that is in a markedly different region of the United States. Yet, few of the variables studied in the present research were used in the Callistro-Clements study. That study focused on subjects of both genders who were in grade 6 when taking the survey. The researcher

then followed the survey with an analysis of those who did and did not enroll in choir the following school year.

The current study focused on adolescent males only, both choir participants and non-participants, in an effort to find out why they did or did not enroll in choir. No study could be found from the last 20 years that specifically addressed reasons males in grades seven and eight did or did not enroll in choir.

Purpose of the Study

The purpose of this study was to investigate the factors related to an adolescent male's choice to enroll or not enroll in choir. The results of this study will hopefully allow teachers to develop ways to empathize with these young men in an effort to recruit and retain more adolescent male singers in their choirs. As stated previously, all choir members benefit from a situation in which the male and female voices are more balanced in terms of number.

Research Questions

In order to achieve the purpose of this study, the following research questions were addressed:

1. What is an adolescent male's attitude about peer pressure, and how does it relate to his decision to enroll or not enroll in choir?
2. What is an adolescent male's attitude about the influence of his family, and how does it relate to his decision to enroll or not enroll in choir?
3. What is an adolescent male's attitude about the influence of teachers, and how does it relate to his decision to enroll or not enroll in choir?

4. What is an adolescent male's attitude about his voice change, and how does it relate to his decision to enroll or not enroll in choir?
5. What is an adolescent male's attitude about gender stereotypes concerning males and singing, and how does it relate to his decision to enroll or not enroll in choir?
6. What is an adolescent male's attitude about his singing voice, and how does it relate to his decision to enroll or not enroll in choir?
7. What is an adolescent male's level of enjoyment in music, and how does it relate to his decision to enroll or not enroll in choir?
8. What is an adolescent male's attitude about school scheduling procedures, and how does it relate to his decision to enroll or not enroll in choir?
9. Is there a combination of perceived influences that best predicts an adolescent male's decision whether or not to enroll in choir?

Definitions

The following definitions were used in this study:

Gender Stereotype	The belief that it is not masculine to sing.
Middle School	The terms middle school and junior high are used interchangeably in this document and refer to students in grades 7 and 8.
Peer Pressure	The extent to which an adolescent male's peers affect his attitude toward choir.
Popular Professional Articles	Refers to articles in non-refereed journals based on

	personal and/or anecdotal experiences.
Self-Efficacy	The perception of an adolescent male as to how well he sings.
Vocal Music Class	This term is used interchangeably here with the term choir.
Vocal Mutation	This term is used interchangeably with the term voice change in this document.
Voice Change	The physiological, psychological, and sociological process an adolescent male goes through in which the range of notes he speaks and sings lowers.

Delimitations

The following delimitations were made concerning the study:

1. Participants in the study were drawn from a single school district. The Norman, Oklahoma public school district was chosen due to its administrators' willingness to participate and to the convenient location to the researcher. The ability to generalize the results may be limited to school districts of similar size, demographics, and regional and national location.
2. The focus of the study was adolescent males. Because of this, only males participated in the study.
3. Males in grades 7 and 8 were chosen as participants. Males in grade 6, although located in the same building, were excluded, because the participating school

district did not allow students in grade 6 the choice of enrolling in choir class for an entire year, or even a semester.

Organization of the Study

This study contains five chapters. Following this introductory chapter, Chapter Two is a review of the related literature. Sources related to motivation, attribution theory, voice change, peer pressure, family influence, love of music, musical self-efficacy, scheduling, teacher influence, and gender stereotypes in music are discussed. Chapter Three provides a description of the procedures of the study, including the selection of subjects, the development of the quantitative research instrument, the types of data analysis used, and the significance of the study. Chapter Four includes a statistical interpretation of the data collected from the quantitative questionnaire. Chapter Five includes a summary of the study, discussion of results, conclusions, implications of the research, and recommendations for further study.

CHAPTER TWO

REVIEW OF THE LITERATURE

Background

This chapter provides a review of the literature that deals with the motivations of adolescent males to enroll or not enroll in choir. In most cases, there is a disparity in choir enrollment between males and females in the United States with female participants outnumbering male participants. Research into the factors affecting the enrollment status of adolescent males is an important step in developing recruitment and retention strategies.

The chapter begins with an overview of participation in the arts in the United States, the disparity of male enrollment versus female enrollment, and the decline of male enrollment in choirs. Following the overview is a review of literature pertaining to motivation. This section looks in detail at literature dedicated to the motivation of people of all ages to participate or not participate in music. The final portion of this chapter will review literature dedicated to suggestions for recruiting, retaining, and teaching adolescent males.

Statistics provide evidence of the disparity between males and females involved in music. Estimates are that only 9-15% of students perform in school-sponsored music ensembles (Reimer, 1997). While available data are limited, the National Center for Education Statistics (NCES) provided some statistics on participation in music. That group's "National Education Longitudinal Study of 1988 Academic Year by Selected Student Characteristics" surveyed 24,599 students in the 8th grade, their parents, teachers, and school administrators. The study used data from the survey as separated by

participation, gender, and type of school. According to the NCES survey, 43.5% of all eighth-grade males reported taking music classes, and 52.1% of females reported the same. The report did not indicate which specific areas of music constitute the overall category, but it may be fair to assume that at least the areas of band, choir, and orchestra are represented by the category. The same data on participation by eighth-grade students in music were stratified by four other areas: Eighth-grade students from public schools who reported taking music class (Male=40.9%, Female=49.8%), eighth-grade students from Catholic schools who reported taking music class (Male=67%, Female=75.4%), eighth-grade students from independent private schools who reported taking music class (Male=60.8%, Female=70.0%), and eighth-grade students from other private schools who reported taking music class (Male=52.3%, Female 52.8%). The difference in the number of students in each category should be noted: public schools (19,372); catholic schools (2,578); independent private schools (1,635), and other private schools (1,014). The data are quantitative evidence of what music teachers have been discussing for years: that males are participating at a lower rate than females. This present study investigated the reasons for this difference.

Another source for statistics on male and female participation in music is taken from the NCES Digest of Education Statistics Tables and Figures 2005. Data taken from a longitudinal study indicated that 20.1% of high school sophomores in 1990 reported taking music, art, or dance class at least once a week. The male/female breakdown indicated the same disparity shown by other data. Data showed 15.3% of sophomore males in 1990 took music, art, or dance class at least once a week compared to 24.8% of sophomore females. The same study indicated that in the year 2002 sophomores again

were asked about their involvement in these activities. Although the figure of 20.1% remained the same 12 years later, the gender disparity widened. Data revealed that in 2002 13.9% of sophomore males took music, art, or dance class at least once a week compared to 26.4% of females.

The total percentage of eighth-grade students participating in music and arts classes was reported in a 1999 document taken from the National Assessment of Educational Progress (NAEP) 1997 Arts Assessment for eighth-grade students. Data showed that 22% of the eighth-grade students taking the assessment reported they participate at their school in a choir, 18% reported they play in a band, and 3% indicated they play in an orchestra. Van Camp's (1988) nationwide study surveyed male participation in choral music. The researcher used a stratified random sample of 966 members of the American Choral Director's Association (ACDA) who taught secondary or college choral music. Ten to twenty ACDA members were chosen from each state, and were asked to fill out a survey card indicating, among other things, the level of participation in their ensembles by gender, and return it to the researcher. The researcher received 325 responses and found that teachers indicated their non-auditioned choirs were comprised, on average, of only 30% males. Auditioned groups taught by the same teachers were reported to be comprised, on average, of 40% males.

Later in this chapter the literature shows that some believe perceived level of ability is correlated with participation (Austin, 1990; Corenblum & Marshall, 1998; Klinedinst, 1991; Roberts, 1999; Svengalis, 1978). For example, if students believe they are good at an activity such as singing they will possibly be more likely to participate. The average scores on the aforementioned National Assessment of

Educational Progress (NAEP) 1997 Arts Assessment for eighth-grade students show male eighth-grade students scored lower than the national average and lower than female counterparts. This assessment measured eighth-grade students' abilities to create, perform, and respond to music (and other arts). Nationally, students were chosen whether they had studied music or not. Data for the "creating and performing" categories were reported by percentage from 0-100%. Data for the category "responding to music" were reported on a scale from 0-300. The national averages for creating, performing, and responding were 34%, 34%, and 150 respectively. Males in this study scored lower than the national average, with average male scores for creating, performing, and responding being 32%, 27%, and 140 respectively. Females in the study scored higher than the national average in every category, scoring 37%, 40%, and 160 on the three categories. If level of ability is truly correlated with rate of participation, these numbers provide a possible explanation of the disparity of male to female enrollment in music.

Declining enrollment

In the 1990s, the percentage of high school sophomores taking arts classes remained static, but the gender gap widened. According to the aforementioned NCES Digest of Education Statistics Tables and Figures 2005 data taken from a longitudinal study in 1990, 20.1% of high school sophomores indicated they took music, art, or dance classes at least once a week. Twelve years later the total percentage of participants had not changed, but the disparity between male and female participation had widened. It should be noted, however, that these data do not include differences in overall enrollment of sophomores between 1990 and 2002.

Hoffer (1980) analyzed data from an earlier NCES set of surveys that were similar to the 1990 and 2002 data. These data, under the title “Course Offerings, Enrollments, and Curriculum Practices in Public Secondary Schools,” were collected in two specific years, 1961 and 1973. Hoffer pointed out that the number of participants in music classes increased by 33.47% between 1961 and 1973, but that number does not take into consideration that the number of students attending schools increased considerably during those 12 years. Hoffer projected the number of participants in choir in 1973 based on the jump in regular enrollment. The difference between the actual 1973 enrollment and the projected enrollment indicates a loss of nearly 25% of enrollment in choir. In other words, the number of participants rose, but not in proportion with the pool of possible participants. Even though the raw numbers of participants in music classes grew in the decade of the sixties, the percentage of participants indicates the numbers did not keep up with the growing population, thus showing a proportionate drop in the number of students participating in music classes.

Adolescence is an important time for students to make decisions about future participation in music classes. Frakes (1984) developed a questionnaire for secondary music students and investigated factors influencing the attitudes of students in three categories: participants, dropouts, and non-participants. Studies investigating all three of these categories are much less common than studies investigating only one of the categories. Frakes noticed that most students dropped out of music programs during junior high. The researcher also observed a larger dropout rate in choral music in comparison with instrumental music. Important to this study is that she found grades 7 and 8 as critical for continuation in elective music education. More importantly she

found that adolescent males tended to be the most affected during this time. Frakes found that at the end of each year of junior high a number of students in her study dropped out of choral music and that a disproportionate number of these were males. When noting the fact that the number of male music non-participants in her study outnumbered females 16-1 she stated, "It appears that the junior high years, while being critical years for choosing to continue music participation for all students, were especially so for male students" (p. 95). It should be noted, however, that while the Frakes study is widely quoted and is an important work, the total number of participants in the study was only 83 high school graduates from one school in the years 1981-83.

Middle school is a period in which many students tend to discontinue the study of music. The number of students enrolled in music classes decreases between middle school and high school. One only has to look at the previously mentioned NCES data to see that the percentage of eighth-graders taking band, choir, or orchestra in 1988 ranged from 43.5% (males) to 52.1% (females) while another study shows between the years 1990 and 2002 the percentage of high school sophomores participating in music, art, and dance remained static at 20.1%.

A number of factors are believed to be the reasons for this decline in enrollment and participation in the arts from middle school to high school. Often this is the first time students are allowed to choose whether or not to participate. But the seeming decline in interest may begin before adolescence. Mizener (1993) examined the attitudes of elementary music students toward singing and participating in choir. Specifically she surveyed 542 students in grades three through six. Results from the study indicated that interest in singing and self-efficacy in singing decreased as grade level increased. Fifty-

four percent of females in the study responded favorably to the statement “I’m a good singer” (38% of females indicated true and 16% sometimes true). Males in the study indicated a similar favorable response rate (37% of males indicated true and 14% sometimes true). However, when asked, “do you want to sing in a choir?” 55 % of females answered yes while only 33% of males responded favorably. Other than the response to the statement “I’m a good singer,” males responded less favorably than females to every statement or question on the survey. To the question “do you like to sing?” females responded yes 87% in contrast to only 64% of males. Positive responses from both males and females to that question decreased as each grade level increased. In summary, according to this study nearly as many boys as girls in third through sixth grade believe they are good singers, but boys are not as interested as girls in participating in choir, and overall interest and participation decreases as grade level increases for both male and female students.

Motivation

For many years teachers and researchers have been interested in discovering the factors that motivate a student to make certain decisions about participation in music. While no researcher can prove that one or two factors are the only reasons students do or do not participate in music in school, some researchers have shown strong relationships between certain categories of factors and participation choice.

Attribution Theory examines the reasons students perceive success and failure in certain tasks (like music) in an effort to determine students’ motivations for continuing or discontinuing a task (Weiner, 1974). Peterson (2002) provides an excellent synopsis of Attribution Theory:

According to attribution theory, there are four general causes to which people attribute their success and failure: luck, effort, ability, and task difficulty. . . these attributions are divided into four categories: internal and external, and stable and unstable. Internal attributions (ability and effort) are generated from within the person, while external attributions (luck and task difficulty) originate from outside the person. Stable attributions (ability and task difficulty) are perceived to be unchangeable, while unstable attributions (effort and luck) are believed to vary with each attempt at a task (Peterson, 2002, p. 1).

Peterson suggests that choir directors should focus on skill and effort rather than talent when recruiting singers. For example, a large majority of humans are believed to be able to match pitch, but because some students perceive themselves to be less talented as singers (often because they are given that impression by a teacher or significant other), they are less inclined to want to participate in singing.

Asmus has been a leader in the field of Attribution Theory in music. His 1984 study on achievement motivation has contributed to this research area. The study involved 118 sixth-graders in general music classes at three schools. The students were asked to identify five reasons some students do well in music and five reasons some do not. About our society, Asmus states, it “tends to attribute musical skill as a unique gift granted to only a few” (p. 7). Results of this study indicate that the participants felt more internal responsibility toward success in music. Results indicate that responses skewed more toward internal-unstable reasons for failure. In other words, the students believed that with more effort they could change the outcome from failure to success.

Another study by Asmus (1986) built upon his previous research but was expanded to include students in grades four through twelve ($N=589$). He found that 80% of the reasons given by the students for success and failure were internal in nature,

perceived to be the responsibility of the student. Internal-stable reasons (they were simply born without sufficient ability to sing well) increased as age increased. Females tended to list more internal-stable reasons than did males. Asmus stated, “one cause of this. . . could be the generally feminine view society places upon music. Students may learn that it is all right to have musical ability, an internal-stable cause, if you are female, but not if you are male” (p. 271). Leggette’s 1998 study supports these results. Leggette asked 1,114 public school students in elementary, middle, and high school what caused success or failure in music. Overall, ability and effort were seen to be most important, and girls tended to perceive ability and effort as being more important than did males.

Internal-unstable reasons have been shown in other studies to be important predictors of motivation after failure in school music classes. One-hundred-seven instrumental students in fifth through eighth grades were given a scenario about a fictitious student who had failed in music. Responses were that lack of effort or strategy was more fitting than lack of ability (Austin & Vispoel, 1992).

Schmidt’s (1995) study of success and failure in choral music was based on the perceptions of teacher feedback. After watching a tape of a voice lesson that used various approval and disapproval remarks by the voice teacher, 127 students in a summer music camp were given a questionnaire. As in previous studies, Schmidt found that internal reasons were more significant predictors of success and failure in music than external reasons. What is perhaps most interesting about this study is what the researcher found about the differences in responses according to gender. He found that “girls were more responsive to adult praise than to praise from peers, whereas the opposite was found for

boys” (p. 326). The author suggests that use of praise should be modified according to gender.

Enjoyment of Music

Love of music often accounts for the participation choice of music students. Asmus and Harrison (1990) sought to investigate the reasons college-age students were musically motivated. By surveying 187 non-music majors enrolled in three sections of a music appreciation course, they found the main reason these students gave for being musically motivated was affect, or enjoyment, of music. They, like others (Lucas, 2003; Mizener, 1993; Neill, 1998; Sichivitsa, 2001), found that students are motivated to participate in something they love. The researchers, by comparing these results with Asmus’ earlier findings, suggested that musical motivations have stabilized by the time the student is of college age.

Three important studies, spanning different age groups, agree with the Asmus and Harrison results concerning enjoyment of music (Lucas, 2003; Neill, 1998; Sichivitsa, 2001). High school age students participate in choir because they consider it a fun activity. A survey of 1,020 high school choral students from Missouri used a 10-point Likert-type scale to investigate the degree of influence for motivational factors on students’ decision to enroll in choir. Subjects were members of high school choruses, including the 1998 Missouri all-state chorus, high school choruses performing at that year’s all-state convention, and members of other high school choral ensembles. The highest response among the subjects when asked to rate degrees of influence was “opportunity to sing” with a mean of 8.52. The lowest response was to “friend(s) decision to participate” with a mean of 3.85 (Neill, 1998).

Sichivitsa (2001) studied 150 college students at a large southeastern university. Using path analysis and applying the Tinto model of student retention/dropout (Tinto, 1993), the researcher studied reasons choir members persisted in music. Factors studied included parental musicianship and support, previous musical experience, self-concept of musical ability, value of music, academic integration, and social integration. Students with higher levels of social integration, defined as “students’ satisfaction with the opportunities for informal interactions with peers and the conductor” (p. 22) in choir and value of music indicated intentions to continue study in music. “Value of music,” defined by the researcher as “the importance of music to students” (p. 21) was the best predictor of participants’ intentions to participate in formal and informal musical activities in the future.

Lucas (2003) investigated the reasons males in grades seven and eight enrolled in choir as a class. Lucas surveyed 101 males in six schools in Kansas and Oklahoma who were at that time enrolled in choir at their schools. The survey was comprised of five research questions comprising a total of 24 statements on a 4-point Likert-type scale ranging from 1=strongly disagree to 4=strongly agree. The research question “What factors most influence an adolescent male to enroll in choir?” contained nine survey items. The highest rated responses were to the statements “I am in choir because it is fun (3.14)” and “I am in choir because I am good at it (3.01).” None of the other seven statements in the cluster rated a mean above 2.49. The statement “I am in choir because of the other guys at my school” had a mean of 1.95, and the statement “I am in choir because of the girls at my school” had a mean of 2.11.

These three studies of students in high school, college, and junior high indicate that students who are already enrolled in choir do so largely because they enjoy singing. At least two of the studies (Lucas, 2003; Neill, 1998) indicate that whether or not peers are involved plays very little if any part in influencing the student to enroll. It should be mentioned, however, that all of these studies dealt specifically with students who have already chosen to enroll in choir as a class. This current study included not only students who enrolled in choir but also students who chose to not enroll in choir as a class.

Students' attitudes about music may change as they grow older. In the three previously mentioned studies a longitudinal example of students' enjoyment of music, and how it may or may not change as the student gets older is not included. In Mizener's (1993) study of students in third through sixth grades, percentages of responses to the question "Do you like to sing?" were lower for each grade level, from a high in grade three of 86% to a low in sixth grade of 67%. Finally, students in grades three through six responded similarly to the statement "I am a good singer" with the rate of positive response lowering for each grade level above third. Positive responses from girls were considerably higher than positive responses from boys for both areas.

Self-Efficacy in Music

How a student views him or herself in terms of ability may affect his or her willingness to participate in a given activity (Austin, 1990; Corenblum & Marshall, 1998; Klinedinst, 1991; Roberts, 1999; Svengalis, 1978). Roberts (1999) states, "Physically we are our total instrument. We don't use reeds or strings, mouthpieces or bows and our art of communication is confounded musically by an interest, at least by the listener, in text" (p. 39). If a french horn player plays a wrong note he can look at his

horn as if to lay the blame on the instrument. Singers do not have that option, and therefore self-concept of one's vocal ability may play a part in whether he or she decides to enroll in choir or take voice lessons. Indeed, many students do not like activities that expose them individually in front of their peers (Bowman, 1988). Roberts' study included semi-structured interviews with music education students at universities in Canada. One of these students spoke about his abilities stating,

I felt I had a better chance at getting into voice than I would have on piano with all the piano majors who had practiced 5 hours a day. . . in voice I felt I had more natural ability, I had more advantage going through for voice (p. 41).

Empirical studies indicate self-concept in music plays a part in willingness of students to participate in music classes (Austin, 1990; Corenblum & Marshall, 1998; Klinedinst, 1991; Svengalis, 1978). Austin (1990) found that level of music self-esteem was a significant predictor of participation in both in-school and out-of-school music activities. Austin administered the researcher-based Self-Esteem of Musical Ability (SEMA) to 252 fifth and sixth grade students in three schools. Responses were given on a four-point Likert-type scale and then summed. Students were placed into three categories based on their level of participation: non-participants; participants in one musical activity (band was the most often listed in-school music activity), and participants in two musical activities. Results indicated that female students had a significantly higher level of music self-esteem than males. Austin suggests it may reflect stereotypical biases in teacher expectations. Regardless, if music self-esteem is truly a predictor of participation, the fact that males' musical self-esteem was rated lower is in line with the statistics listed in this literature review on the disparity between male and

female enrollment in music classes. In fact Austin states, “students with higher levels of music self-esteem tended to participate in a greater number of music activities” (p. 28).

Others have also indicated that musical self-concept plays a part in students’ willingness to participate in music classes (Svengalis, 1978). Klinedinst (1991) studied fifth-grade beginning instrumental students and found that, among other things, self-concept plays a part in student retention in musical groups. Klinedinst suggests teachers should be sensitive to how a student’s self-concept may affect his or her attitude and thus retention.

Student self-concept in music may be an even stronger predictor than students’ attitudes toward the given music class. Corenblum and Marshall (1998) administered a study attempting to predict students’ intentions to continue studying instrumental music. The researchers surveyed 253 ninth grade students who were enrolled in band programs in Winnipeg, Canada. The researcher-based survey contained 45 attribution questions. Results indicate that even though there was a negative correlation between students’ attitudes toward band and their decisions to enroll in band the following year, “the more favorably band teachers evaluated students’ musical competency, the more likely it was students said they would take band next year” (p. 137). In this case students who received positive feedback on their individual musical abilities were more likely to re-enroll than those who had a positive attitude about band.

Scheduling

Music teachers often speak of scheduling as being a reason for a drop in participation in their ensembles. Research has shown that scheduling conflicts play a part in a student’s decision to participate in music classes (Klinedinst, 1991). In an opinion

article in *Teaching Music*, Asmus and Blocher (2001) relayed the opinions of teachers they had interviewed, and suggested that scheduling issues such as block scheduling force students to make decisions about music participation. It should be noted, however, that scheduling is not a new concern. As far back as 40 years ago, studies indicated scheduling conflicts were an impediment to student participation (Martignetti, 1965). Lax (1966) investigated factors that influence instrumental music dropouts in Detroit and concluded that principals and counselors did not always actively encourage participation in music programs. Lax suggested principals and counselors could sway student enrollment by making scheduling decisions that created conflicts for the students.

Empirical studies have shown that scheduling can be a major factor in a student's decision to drop out of music classes. A study of dropouts from the instrumental music program of the Lincoln, Nebraska public schools indicated scheduling conflicts were the most significant reason for non-participation (Rawlins, 1979). The researcher interviewed 50 students who had dropped out of instrumental music and identified seven categories of reasons the students gave for dropping out. A majority (31 of 50) listed school pressures, problems, and conflicts as their main reasons for dropping out. The researcher then broke that category into nine subcategories. The subcategory of schedule conflict was reported by ten students as the primary reason and 11 students as a secondary reason they dropped out of instrumental music (Rawlins, 1979).

Allen (1981) studied student dropouts in orchestra programs in Arkansas and stated, "schedule conflicts did enter into the student's decision to withdraw from the orchestra program in the schools" (p. 71). Another study of instrumental music dropouts was conducted in the Kansas City public schools. The researcher developed a survey

inquiring about reasons students had dropped out of instrumental music. Two-hundred-seventy-five surveys were returned, and the most often cited reason for dropping out was conflict with other classes (33%). Results indicated the highest rate of dropout occurred in junior high school (Dunlap, 1981).

Kourajian (1982) conducted one of the few studies aimed at males and choral music. The researcher surveyed freshmen and senior boys to determine a rank order list of reasons for not joining choir. A random sample of 72 freshmen and 72 senior boys from six schools was chosen and interviewed. The researcher chose eight reasons for the boys to rank on a three-point Likert-type scale. The summed total scores revealed that the statement "My schedule was too full" was by far the highest rated statement.

Peer influence

One accepted opinion among teachers is that lack of student participation may be blamed on peer pressure. Practitioner articles on the topic of participation in music classes discuss peer pressure as a main reason students, especially male students, stay away from choir and band (Demorest, 2000; Hagner, 1985; Phillips, 1995; White & White, 2001). Tarrant, North, and Hargreaves (2001) studied Social Identity Theory among English adolescent males. Each of the 97 pupils (aged 14-15) was asked to identify whether an "in-group" or "out-group" would like certain types of music. Given six types of music ranging from the English pop band Oasis to Mozart, the students associated dance, pop, and indie music with the in-group and jazz, classical, and heavy metal music with the out-group. In addition, "they rated the in-group as more fun, more masculine, more sporty, less boring, less snobbish, and less weird" (p. 581).

Empirical research in the area of motivation and attitudes toward participation in music reveals mixed results when it comes to the influence of peers on students' feelings toward music. However, most of the studies listed here will show that peer influence generally rated low on the hierarchy of influences. One study stated, "while peer influence is a factor in the student's decision to withdraw from orchestra, other factors seem to exert more power" (Allen, 1981, p. 66). Another researcher studied factors influencing the attitudes of participants, dropouts, and non-participants in music. The list of factors included teacher, course content, self-perception, interest, family influence, peer influence, and time involvement. Of the seven factors, all but peer influence were found to correlate significantly with the students' attitudes toward participation in music (Frakes, 1984). Klinedinst (1991) states, "many times student dropout is influenced by external reasons, including peer pressure, conflicts with other activities, student-teacher relationships, and family considerations" (p. 235), yet the results of that researcher's own study of student retention did not indicate peer influence was part of the discriminant function which predicted student retention.

Four studies of choral music students indicate peer influence played either a very small or no role in students' decisions to either participate or continue with choral music classes (Kourajian, 1982; Lucas, 2003; Neill, 1998; Sichivitsa, 2001). Kourajian and Neill both studied high school students and their reasons for singing in choir or not. Neill's results indicated students' decisions to re-enroll in choir were least dependent on whether their friends decided to remain in the choir. Kourajian had students rank eight given reasons for not participating in high-school choir. "None of my friends are in the choir" ranked sixth out of eight. In Lucas' study, students were asked to respond on a

four-point Likert-type scale to the statements “I am in choir because of the other guys in my school” and “I am in choir because of the girls in my school.” Means of the responses to both statements, 1.95 and 2.11 respectively, were considerably lower than means to statements concerning enjoyment of music and self-efficacy. Sichivitsa’s results indicate a high level of intrinsic motivation among college-aged choir members. In her study, 93% of the results were accounted for by either love for singing (47%) or enjoyment received from being in choir (46%).

Callistro-Clements (2002) studied student participation in junior high school choir and found peer influence to be a significant factor in students’ initial decisions to participate in choir, although “students who did not choose to participate in school music activities appeared to be less influenced by their peers or those around them in decision making processes” (p. 122).

Practicing teachers and researchers are split on their opinions of how greatly peer influence impacts a student’s decision to participate in music. Neither side of the argument can be made with ultimate certainty. More research in the area is warranted.

Teacher influence

Teachers have been shown to influence both a student’s motivation to participate in, and their attitude about, music classes (Allen, 1981; Frakes, 1984). Teacher influence was one of the factors that Frakes found to correlate significantly with student attitude toward participation. A study of student dropouts in orchestral programs indicated that the strongest reason students gave for dropping out was changing teachers (Allen, 1981).

It is possible that individual teachers who develop successful music programs can wield great influence over students. Nolin and Vander Ark studied patterns of attitudes

toward school music experiences, self-esteem, and socioeconomic status in elementary and junior high students (1977). Sixth, seventh, and ninth grade students from two schools were chosen to participate in the study. Subjects included band and chorus members as well as those not in music classes. Results from the researcher-based instrument measuring attitude toward music experiences indicate seventh grade boys in one school had significantly higher scores in the areas of attitude and self-esteem. The author suggests the “highly specialized music program, emphasizing singing at the seventh-grade level along with a unique teacher personality” (p. 44) were major factors in raising the attitude scores of seventh-grade boys.

Veaco and Brandon (1986) performed content analysis on statements written by 1,305 students aged 12-14. Students were asked to nominate a middle school teacher for “Teacher of the Year.” Results of the content analysis reveal that the way a teacher interacts with the students, and the atmosphere the teacher creates may play a more important role in the students’ opinion than even the subject matter he or she is teaching. The preferred teacher was: nice; easy to talk to; fair; respectful; empathic, and did not show preferential treatment. Boys significantly preferred male teachers as opposed to female teachers. Girls in the study did not significantly favor either male or female teachers. Similar results were found in a study of 257 students ages 8-18. Students were classified according to musical achievement and were interviewed about their teachers. Researchers discovered “children who successfully acquire musical skills are likely to have regarded their initial teacher as a friendly, chatty, relaxed, and encouraging person, and they are likely to rate their teachers higher on these characteristics than did children who are less musically able” (Davidson, Moore, Sloboda, & Howe, 1998, p. 155).

Parental influence

Studies have indicated that parental influence can be a factor in participation choices of students in music classes (Corenblum & Marshall, 1998; Frakes, 1984; Miller, 1992). Sichivitsa, Barry, and Guarino (2001) studied influences of parental support in music, prior choral experience, self-efficacy, and formal and informal integration amongst college students at a large southeastern university. These researchers noted that parental support in music and teacher's professionalism and friendliness motivated students to stay in the choral music program. Sichivitsa, et al. measured parental support using the Parental Support in Music scale, which measured parental musicianship (parents participate in musical activities), involvement (parents attend performances and know other participants), and support (parents give approval and believe their children have musical talent) using statements and a Likert-type scale. Miller created a questionnaire to measure student attitude regarding reasons for choosing to participate in middle school vocal music. Sixth and seventh grade students currently in choir (1,177) indicated factors which affect their participation choices, including the influence of significant others. Zdzinski (1996), in a study of parental involvement in instrumental music, measured parental support in music as active involvement in musical activities with children. For instance, parents who attended concerts, took children to concerts, attended rehearsals and parent meetings, and provided transportation to rehearsals and concerts were considered highly involved in their children's musical activities. The 406 instrumental music students in this study were in grades four through twelve. Parental involvement was related to overall performance, affect, and cognitive musical outcomes. In terms of the affective outcomes the strength of the parental involvement increased as

the student age increased. Conversely, Mizener (1993) found that parental encouragement did not have any correlation with a student's decision to participate in choral music in middle school. Gaskell (1992), interviewed 47 female high school students to discover why they enrolled in certain courses. Gaskell's data indicate neither their counselors nor parents played a major role in their course decisions. About the parents' role in the course choice of the students in her study, Gaskell states, "Although they were given the official and legal responsibility for course choices, they were not part of the everyday processes of the school and thus were least likely to be well informed" (p. 41).

Sometimes people in varying roles have different perceptions of the causes of student interest or non-interest in music classes. Martignetti (1965) mailed questionnaires to instrumental music educators to determine the teachers' opinions on why students dropped out of instrumental music in elementary school. The researcher also interviewed children who had dropped out of the music programs in question, and the parents of students who had dropped out of the instrumental music program. Out of the three groups (teachers, students, and parents), each gave a different reason as the chief cause of dropouts. Teachers blamed a lack of support at home as the main reason for students dropping out while students and parents cited difficulty of the instrument and lack of time to practice, respectively.

The age at which students receive parental support and the level of support may affect their level of motivation. Davidson, Sloboda, and Howe (1995-96) interviewed 257 children between the ages of 8-18 and their parents. Each student had received instruction on at least one musical instrument. The researchers were attempting to

identify the role of parents and teachers in the success and failure of instrumental learners. What they found was that if children received significant parental support in music before the age of 11, and were later allowed to make decisions on their own they were more likely to continue studying music. The level of parents' music skills had no effect on this result, only the level of parental involvement. The inverse result was found for students whose parents had shown little parental support. Those students whose parents had shown little or no support early in the child's academic career, but put pressure on the students as they got older, tended to drop out of instrumental music.

Perceived Gender Roles

Historically, males have played a prominent role in American singing. In a comparison of singing by men and women in the United States, Gates (1989) points out that in colonial times singing happened in taverns, fraternal organizations, and service clubs that men frequented. This is less of a priority in American society today than it is in many other nations. Gates argues that it was only in the 1930s that the ratio of men to women who sing became balanced, and since the 1930s public singing has become more and more dominated by women. When discussing the place in society of singing she states, "Singing seems to have been reinforcing to early eighteenth-century men and early twentieth-century boys. We cannot draw this same conclusion about the American male's current interest in public singing" (p. 42). Gates warns that in America we are in danger of losing female participants as well, unless the value of public singing in our society becomes of greater importance.

Gates states, "singing is a female pursuit" (p. 37). This view is shared by many, including Koza, who writes of the problem of the "Missing Males" in choral music.

Koza completed a content analysis of the first ten volumes (1914-1924) of the *Music Supervisors' Journal* (now known as the *Music Educators Journal*). The analysis shows evidence that even before the 1930s boys did not particularly like to sing, and less so than girls. Koza's analysis indicates that the perception of singing as being a feminine activity was prevalent even during this early part of the 20th century. Some contributors to the journal advocated male role models to recruit boys while others blamed lack of proper repertoire as reasons for a lack of male singers (1993).

A recurring theme in articles on the decline of male participation in choirs is that young men, or boys, do not think singing is "masculine." Some speculate that boys do not want to be in music because it is perceived as more of a girl's activity (Cochran, 2001). One student interviewed by Phillips (1995) dropped out of choir because his brothers "made fun of him for singing 'like a girl'" (p. 28). These examples demonstrate the difficulty in classifying boys' lack of participation in singing. In the given example, one could say the boy dropped out because of peer, family, or gender stereotype reasons. White and White suggest that there are sociological perceptions about music and singing that prevent many males from participating in singing. They say that even if he enjoys singing, a young man will not do it if it is not "cool" (2001).

Others point to a boy's voice change as causing him to feel less manly. In a music education textbook, Miller (1988) instructs a teacher to have the boys whose voices have not changed sit near the girls (since they are singing the same part), but to call their section by the traditional male names in an attempt to "avoid giving any young man the stigma of singing a 'girl's' part" (p. 85). Another textbook for future music teachers states that the voice change is a difficult part of the male's adolescence, and that

it makes singing seem like, to them, a feminine activity (Hoffer, 1983). Demorest (2000) advocates using good vocal models to appeal to the boy's masculinity. He argues that for something to be "masculine" it needs only to be an activity that men do. Demorest argues that boys do not often see men singing, so more opportunities to model should be provided.

The aforementioned anecdotal journal articles and books (Demorest, 2000; Hoffer, 1983; Miller, 1988; Phillips, 1995; White & White, 2001) all state that singing is somehow not perceived as masculine. Articles from research journals are mixed on this subject. Killian (1997) studied the perceptions of the voice-change process from the point of view of both adult and adolescent males. After interviewing adolescent males about the voice change Killian indicated the boys felt that "standing with the girls or singing like a girl was considered a reason for extreme embarrassment" (p. 533). Young boys interact with mainly female music teachers. Because of this, and because they have few male role models when it comes to singing, they may believe singing is more for girls and may not expect to do well as singers (Trollinger, 1994). A teacher at the prestigious American Boychoir agrees that for young boys, singing can be difficult unless in the right setting. The teacher commented on the fact that the boys at the school would be made fun of in other environments for enjoying singing (Kennedy, 2004).

Many are of the opinion that we as an American society need to do something to make singing more attractive to young males (Cochran, 2001; Cooper, 1950; Demorest, 2000; Friar, 1999; Killian, 1988; Peterson, 2002; Phillips, 1995; Sandene, 1994; Swanson, 1984; White & White, 2001). In contrast to the above studies, Koza's (1994) content analysis of college choral methods textbooks indicated the belief that teachers

should get masculine male role models to help them recruit more boys into their choirs. On the other hand, Koza criticizes authors of choral textbooks who suggest getting athletes or other leading males to participate in music. Koza indicates she does not want education to become even more male-centered than she suggests it already is, arguing that nearly all the texts she examined “drew from and reinforced systems of ideas that tend to perpetuate unequal power relations and that foster the continued oppression of women and gay men” (p. 61).

Results of Roulston and Mills’ (2000) interviews with two male music teachers generally agree with Koza. The researchers were concerned with the public call in their native Australia for more male teachers in feminized areas such as music. Roulston and Mills find that the two teachers they interviewed used overtly masculine stereotypical words and gestures to draw in the boys they teach. They state, “here he is role modeling more than singing, he is modeling the hegemonic belief that boys can always do things better than girls (even feminized activities such as singing) when they put their minds to it” (p. 9). Roulston spends the first portion of the article laying the basis for the claim that most boys think singing is for girls or gay men, then painting a portrait of a successful male teacher who makes singing popular with young boys before finally saying the teachers’ “attempt to legitimize their involvement in music teaching by emphasizing their engagement with ‘normal’ masculine practices as well as music teaching will also serve to create what they seek to avoid—the signification of music as an unmasculine activity” (p. 11). Neither Koza, or Roulston and Mills offer suggestions on how to shift the paradigm of singing from being a feminine activity to a more inclusive model.

Many have advocated making singing more masculine. The implication seems to be that there is an attitude prevalent in society that males think singing is for girls, and that they are concerned about what others will think of them if they choose to sing. Dews and Williams (1989) surveyed 201 music students from three schools of music in differing geographical locations in the United States. The researchers' interest was to identify the main stresses on music students. They identified 22 sources of stress for musicians and asked the students to respond to them on a five-point Likert-type scale (a response of five being something that extremely concerns them, and a response of one being something that does not concern them at all). Out of the 22 sources of stress listed, male respondents indicated that "sex stereotype" was less important to them. In fact the mean of 1.6 was ranked 21 out of the 22 listed sources of stress. The mean for the males' response to "public misunderstanding" was 2.095 and was ranked 16 out of the 22 possible sources of stress. The Dews and Williams study is one of the few that got answers about the question of gender stereotypes in singing directly from males. It is, in fact, the only source here that is represented by empirical research with quantitative data.

Voice Change

The voice change, or vocal mutation process, has been a frequent topic of interest among choral educators for the past century. While the scope of the current study precluded comprehensive review of the literature dealing with voice change, a thorough knowledge of the main facets of the study of the vocal mutation process is necessary. What follows is a review of the seminal authors and researchers in this area, an historical view of how ideas about the vocal mutation process have evolved, empirical studies

involving the vocal mutation process, and how vocal mutation is possibly related to a boy's decision to participate in vocal music.

Literature on voice change can be grouped into the following categories: Seminal authors and works (Cooper, 1950, 1953; Cooper & Kuersteiner, 1965; McKenzie, 1956; Swanson, 1959), historical perspectives on the voice change and research in the area of vocal mutation (Collier, 1981; Hoffer, 1983; Friar, 1999; Moller, 1985), empirical studies (Barresi, 1986; Cooksey, 1999; Emge, 1996; Groom, 1979; Kennedy, 2004; Killian, 1997; Ruffer, 1995), and how vocal mutation has been seen to related to a boy's decision to participate in choir (Adler, 1999; Koza, 1994; Sandene, 1994).

Seminal authors and their works

The boy's changing voice has been an issue of concern for musicians for centuries. From the barbaric process of creating castrati singers, prevalent in the seventeenth century (Collier, 1981), to the current debate about whether an adolescent male's voice drops suddenly or over a longer period in predictable stages, musicians and researchers have attempted to uncover ways to "fix" what so many have deemed a problem.

Until the early part of the twentieth century, directors of boychoirs, mainly from England, released a boy from his choir when the boy reached puberty and his voice began to change. The belief at the time was that the boy should then refrain from singing anything for quite some time, or else run the risk of damaging his voice. In contrast, at the turn of the twentieth century in the United States choir for adolescent males was available in schools. Rather than advise vocal rest, American music teachers expected

the boys to sing and so began the interest of music teachers in finding the best way to classify and train these young men's voices (Collier, 1981).

Three leaders in this area of research emerged during the 1950s and 60s. Irvin Cooper directed junior high school choirs, lectured, and conducted clinics with many ensembles of this age (Collier, 1981). Cooper wrote in an article in the *Music Educators Journal* about the fallacies he saw in the treatment of adolescent males' voices. Among the things he lists as fallacies is the thought "that the boy's voice 'breaks' during adolescence, and from thereon must be treated as though it were sick" (Cooper, 1950, p. 20). Cooper suggests that teachers tend to paint all boys with "broken" voices with the same brush. One of Cooper's main innovations was coining the term "cambiata" (Italian for changing) to denote boys' voices that are in the midst of change and are unable to sing the alto-tenor range effectively, but sound lower than they are actually singing. At least one source suggests there was no empirical evidence from a clinically controlled experiment to back Cooper's claims (Hoffer, 1983).

Duncan McKenzie disagreed with Cooper's cambiata plan and advanced his own "alto-tenor" plan. The alto-tenor plan is defined by McKenzie (1956) as "the term used to describe and classify the boy's voice after it has lowered to the stage when the changed voice begins to develop" (p. 19). McKenzie also believed that the rate at which the boy's voice changed determined which voice part he would eventually settle into. Boys who changed rapidly were to be basses, and those who changed gradually, tenors.

Frederick Swanson, for years the director of the Moline, Illinois Boy's Choir, believed that boys' voices changed very rapidly, not gradually at all. He believed that the voice dropped at least an octave immediately upon mutation. Swanson's dissertation

(1959) was a study in guiding the development of boys during vocal mutation. He, like others, saw that there was a disparity of enrollment between boys and girls in choir. His research attempted to produce a method of teaching that would help boys to become more effective singers and therefore be interested in taking music class. Swanson studied 185 eighth grade boys, 85 in an experimental group and 100 in the control group. Boys in the control group attended music class as normal, with boys and girls together in a class of about 30. Boys in the experimental group were assigned to classes based on their rating of sexual maturity (as judged by the Davenport scale). Results from an attitudinal questionnaire showed improvement in the experimental group and regression in the control group. The majority of the boys in the experimental group preferred being separated from girls in music classes and were “favorably inclined to developing their voices for future singing. . .” and “. . .interested in continuing in vocal music groups either in ninth grade or in high school” (p. 229). Swanson’s ideas are not widely accepted by choral pedagogues. One article that outlines the history of the treatment of the vocal mutation process lists McKenzie, Cooper, and many important musicians following them without mentioning Swanson (Friar, 1999). His assertion that boys’ voices break suddenly rather than gradually and according to a predictable pattern may be reason for some to discount his theories.

Historical Perspectives on the voice change

The sources in this category range from short and very concise overviews of the history of research in vocal mutation (Collier, 1981) to extensive research into the development of the voice over hundreds of years (Moller, 1985). Hoffer’s (1983) text on teaching music in secondary schools includes a section on the history of research in the

vocal mutation process and proposed solutions for handling it with adolescent males. A master's thesis on the topic of voice change not only summarizes the history of research in vocal mutation, but also outlines the physiological aspects of the male singing voice and suggests rehearsal techniques to advocate the adolescent male vocal sound (Collier, 1981). Friar's (1999) article in the *Music Educators Journal* is an excellent source for information on changing voice, both male and female, with one exception. As noted previously it leaves out any mention of the important, if somewhat controversial, work of Frederick Swanson.

It is important to know the changes that have taken place in the timing of physical maturity of adolescents during the recent history of music. One researcher shows evidence that the age of physical (and therefore vocal) maturation has been earlier and earlier, from an average age of 17 years old in the time of J.S. Bach to as early as 13 years old 200 years later. Other evidence presented indicates that during times of famine, when nutrition was lacking for many, vocal maturation was delayed (Moller, 1985).

Empirical studies

A number of musicians have researched the vocal mutation process, but the majority of studies focus on the physiological change rather than the sociological/psychological implications the voice change may have on an adolescent male's decision to participate in a choir. Two music educators that have taken up the research begun by Cooper, McKenzie, and Swanson are Anthony Barresi and John Cooksey. Barresi (1986) produced a video in which he relates his observations on the voice change, and its stages. He states that male vocal folds nearly double in length, growing one centimeter, accounting for an octave drop in speaking and singing, while the

female vocal folds grow only three to four millimeters, which is why there is little change in range. Barresi is the first to identify a vocal mutation process for girls as well as boys. His stages of vocal mutation (Pre-mutation, early mutation, high mutation, transitional mutation, and post mutational) are very similar to those of John Cooksey, another well-respected researcher in this generation after Cooper, McKenzie, and Swanson. Cooksey summarizes the ranges for specific stages of vocal mutation in his influential book *Working with Adolescent Voices* (1999). Cooksey's stages (pre-mutation, early mutation, high mutation, mutational climax stage, post mutational stabilizing stage, and post mutational development stage) outline a gradual process of vocal mutation. His text also outlines ways to classify voices easily according to what stage they are in, and program appropriate literature.

One study used Cooksey's identified vocal stages to investigate changes in adolescent males' voices during summertime (Groom, 1979). The study tracked 40 male students attending a junior high school and enrolled in choral music. They were tested in May and then the following October and each time placed into one of Cooksey's stages of vocal mutation. Groom noticed that the voice change in her subjects was both gradual in some students, as stated by Cooper and others, as well as sudden in others, as Swanson believed. This research supported the ranges and tessituras given by Cooksey (1999). Emge (1996) studied 61 eighth-grade boys in three junior high school choirs. Results from the study suggest that eighth-grade boys may be capable of singing with wider vocal ranges than commonly thought to be comfortable. Emge suggested that vocal teachers might be doing adolescent males a disservice by limiting them to singing only one vocal part.

Another study using Cooksey's stages of vocal mutation investigated whether boys' voices were changing earlier than previously indicated. Killian (1999) researched fifth and sixth grade boys and found that his stages were still accurate, but voices in this sample (99) were changing earlier than previously. In a separate study Killian had interviewed 141 men and boys about their voice changes (1997). A majority thought of voice change in a positive way, but many negative comments were also made. Only three of 77 boys interviewed had any memory of the voice change, even though it had happened recently. One is led to believe that boys this age are either not aware of their voice change or are reluctant to talk about it. Subjects in the study mentioned that girls were more likely to pay attention to them after their voices change, which was one of the reasons many thought the voice change was a positive experience. Students may have also considered it in a positive way because they felt embarrassed when forced to sing before their voices changed. The researcher wrote, "standing with the girls or singing like a girl was considered a reason for extreme embarrassment" (p. 533). Results indicated that some adult subjects remembered their voice change as gradual (Cooksey, 1999; Cooper & Kuersteiner, 1965; McKenzie, 1956) while others remember a sudden change (Swanson, 1959). Dearborn (1998) developed lesson plans specific to adolescent males' changing voices after researching the literature in the field. His master's thesis includes six lesson plans meant to offer assistance to teachers in the field who are unsure of how to treat boys whose voices are changing.

Even with research on vocal mutation available, some practicing teachers feel they are not adequately prepared to teach boys with changing voices. Ruffer observed ten choir teachers in an attempt to examine how well they were prepared to teach

adolescent males during the voice change. The researcher found that teachers believed their undergraduate training was insufficient, and that they only learned how to develop the adolescent male voice through trial and error (1995).

Influence of Voice Change on Choral Participation

Even if teachers learn proper vocal techniques for this age they must still be aware of the psychological effects the voice change can have on an adolescent male. Kennedy (2004) followed members and staff of the American Boychoir School when researching these effects. She reported one teacher commenting that the boys would be ridiculed in other environments for enjoying singing. The American Boychoir School is an all-male environment.

Contributors to the *Music Supervisors Journal* in its first 10 volumes (1914-1924) discussed voice change as a reason some males do not want to participate in choirs (Koza, 1993). In an article outlining ways to fight attrition in choral classes, Sandene (1994) writes that the problems a voice change generates may make them not want to sing. Adler stresses the need to be careful when categorizing adolescent males' voices. Adler believes teachers often mislabel male adolescent singers with changed voice labels (Soprano, Alto, Tenor, Bass) rather than gender-neutral labels (Treble, etc. . .). Adler's survey of teacher practices in working with male singers included responses from 70 music teachers, ranging from elementary to secondary schools (1999). The findings indicated that teachers in the field are not confident in their teaching of boys with changing and unchanged voices, not unlike results found by Ruffer (1995). Perhaps most worrisome to choral educators is Leck's observation that boys who stop singing during the voice change may lose some ability to manage their voice later on (2001). In an

opinion article on training teachers to work with changing male voices, White and White (2001) suggest that how the voice change is handled is a major factor in the recruitment and retention of these young men in choirs.

Teaching and recruiting strategies

A review of the literature confirms that whether studying elementary music students (Bowman, 1988; Frakes, 1984; Klinedinst, 1991; Mizener, 1993), middle school/junior high students (Allen, 1981; Callistro-Clements, 2002; Davidson, Moore, Sloboda, & Howe, 1998; Miller, 1992), high school students (Allen, 1981; Corenblum & Marshall, 1998; Kourajian, 1982; Koutz, 1987; Linch, 1993; Neill, 1998; Werpy, 1995), or college-aged/adult students (Sichivitsa, 2001), recruiting and retaining students in music is a problem and has been for quite some time.

Some of these researchers offer strategies for effectively teaching music students in an effort to retain them as participants. Some suggest the teacher can create a comfortable working atmosphere with the student (Davidson, Moore, Sloboda, & Howe, 1998) and boost their self-concept by being positive when evaluating them (Corenblum & Marshall, 1998; Klinedinst, 1991). Doing so may help the students develop a love for singing, which may influence their decision to participate in music (Lucas, 2003; Neill, 1998; Sichivitsa, 2001). Others suggest that the teacher work closely with parents, counselors, and principals to ensure scheduling of classes is not a barrier (Allen, 1981; Kourajian, 1982; Lax, 1966). Still other researchers indicate that the best way to retain students is by including strong parental influence (Davidson, Sloboda, & Howe, 1995-96). Mizener (1993) suggested using other male singers as role models to bring a more positive attitude about singing.

A large number of sources that outline strategies for recruitment and retention of music students are not based on empirical studies but rather personal experiences of teachers in the field. Teachers advocate establishing positive relationships with students (Peterson, 2002), although the present author cannot recommend the suggested procedures of Hagner (1985) who stated, "I think the child will last longer with music if you don't demand too much from him to begin with" (p. 36) or Mancuso (1983) who wrote about recruiting boys to show chorus by stating, "A wink of an eye and a hug around the neck may hypnotize some. . ." (p. 56). No empirical evidence suggests that less-challenging course material nets higher retention rates, and the implication of using physical flirtations as a recruiting tool is unethical at best.

Scheduling and voice classification have also been shown to be factors teachers consider important in this area. Teachers have been of the opinion that scheduling (Latten, 1998; Sandene, 1994) is very important. Many suggest that properly classifying adolescent males' voices and selecting appropriate literature for them is of the utmost importance (Barresi, 1986; Cooksey, 1999; Cooper, 1950; Dearborn, 1998; McKenzie, 1956; Swanson, 1959). In order to do this teachers must have proper training (Cross, 1975; Ruffer, 1995).

A large number of contributors to the literature on recruiting males into choirs suggest having male role models, and separating boys from girls in music classes (Demorest, 2000; Hoffer, 1983; Killian, 1988; Miller, 1988; Munson, 1998; Phillips, 1995; Swanson, 1984; Trollinger, 1994; White & White, 2001).

Summary

What then are the factors related to an adolescent male's decision to enroll in choir or not? That question was the focus of this research. Evidence taken from empirical research shows that there is a decline in interest and positive attitude about music as an elementary school student gets older (Bowman, 1988; Broquist, 1961; Mizener, 1993). There is a belief that the years of adolescence may be a critical point for participation choice (Austin, 1988; Casey, 1964; Corenblum & Marshall, 1998; Frakes, 1984; Gates, 1989; Neill, 1997; Sandene, 1994) and that if students eschew music classes at this age they may never return to the study of music. Many school systems require music classes up until the point of junior high school, giving students a choice of whether or not to participate in choral music for the first time when so many social and physiological factors are converging on them (Swanson, 1989; White & White, 2001). So the point at which young men are perhaps most vulnerable is the point at which they are asked to choose whether or not to sing in choir. The intent of this research was to investigate those factors related to an adolescent male's decision to either enroll or not enroll in school choir classes. The results of the study will hopefully allow teachers to develop ways to recruit and retain more adolescent male singers in their choirs.

CHAPTER THREE

METHODS AND PROCEDURES

Introduction

The purpose of this study was to investigate the factors related to an adolescent male's choice to enroll or not enroll in choir. Research questions included: What is an adolescent male's attitude about the following factors: affect for singing, musical self-efficacy, scheduling, peer influence, teacher influence, family influence, perceived gender roles, and voice change? Also of interest is how an adolescent male's attitude about the aforementioned factors is related to his decision to enroll or not enroll in choir. The results of a pilot project were evaluated and employed for revising the framework of the study and improving the research instrument.

Development of the Research Instrument

Based on readings of the related literature, a questionnaire was formulated to investigate the factors related to an adolescent male's choice to enroll or not enroll in choir in the school setting.

The questionnaire consisted of three sections:

1. Personal and background information (including opportunity for open-ended responses).
2. Subject response to a series of Likert-type statements.
3. Response to the statement, "Please add any additional comments about why you are or are not in choir at your school."

The preliminary questionnaire was presented to a panel of 21 music educators and administrators for suggestions. Responses were received from 19 music educators and administrators and revisions were made to the questionnaire. Due to suggestions by music educators, the cluster of items related to teacher influence was added to the questionnaire. Other comments helped the researcher to make the questionnaire more “friendly” to adolescent students. The resulting questionnaire formed the basis for the pilot study.

The Pilot Study

After receiving University of Oklahoma Institutional Review Board approval for research with human subjects, an anonymous pilot survey was conducted. Subjects for the pilot study were 22 males participating in the University of Oklahoma’s Horizon’s Unlimited summer camp for gifted and talented students in grades 6-8. Signed parental/guardian consent forms were received for each student taking the questionnaire. This group was chosen because of the age and availability of the students.

Cronbach’s Alpha was used to calculate inter-item reliability of scales in the pilot questionnaire. After reviewing the data, it was determined that 17 items on the questionnaire were not reliable. Fifteen of those items were dropped from the questionnaire due to the lack of correlation with the other items. Two items dealing with unique aspects of the choral music experience were left on the questionnaire due to their prominence in the literature, but each item was unique and did not fall into a cluster category (See Table 1).

The Research Instrument

As a result of the pilot data, the final research instrument included three sections. The first section consisted of personal and background information. In the second section participants were asked to respond to statements on a five-point Likert-type scale. The statements were grouped into the following operational scales: (a) Enjoyment of Music, (b) Self-Efficacy in Music, (c) Scheduling, (d) Peer Influence, (e) Teacher Influence, (f) Perceived Gender Roles, and (g) Voice Change. The final section of the research instrument was one open-ended question asking, "Please add any additional comments about why you are or are not in choir at your school."

Table 1 Inter-Item Reliability Analysis

Construct	Initial Version	Cronbach's Alpha (Initial)	Revised Version	Cronbach's Alpha (Revised)
Voice Change	1,8,12,20,22,27,32,37	-.38	1,8,22,27,32,37	.75
Masculinity/Gender Stereotyping	2,13,21,28,33,39,44,45,50,51,54,57,59	.50	2,28,33,44,45,50,51,59	.83
Peer Pressure	3,15,22,29,34,41,43,45,48,51,54,55,57,62	.52	3,15,22,29,34,41,45,51	.86
Scheduling	4,9,17,23,30,35,38,42,52,60,63	.47	35,38,42,52,60,63	.78
Musical Self-Efficacy	6,10,12,14,18,22,31,40,43,53,56,58,61,64	.65	6,10,12,14,18,22,31,40,53,56,58	.88
Teacher/Program Influence	5,7,11,18,19,25,26,49,58	.14	5,18,19,25,26	.73
Love of Singing	16,46	.85	16,46	.85
Parental Influence	47,53,56	.67	47,53,56	.67

Data Analysis

Data were recorded and analyzed using SPSS 11.0. Cronbach's Alpha was used to determine reliability of clusters of items representing various constructs. Descriptive statistics (frequencies, percentages, and means) were used to analyze data collected from the first section of the questionnaire. Frequencies and percentages were employed to provide a demographic profile of the participants in this study. Because these data were normally distributed, a Multiple Analysis of Variance (MANOVA) was used to compare survey attitude scale responses according to choir enrollment status. Open-ended questions were coded for response trends, were tabulated, and emerging themes were identified. Frequencies, percentages, and means were used to provide an overview of responses to the Likert-type items. Discriminant Analysis was employed to determine which combination of independent variables best predicted the categorical dependent variable of current enrollment in choir versus non-enrollment.

Administration of the Research Instrument

Subjects in the main study were males in grades 7 and 8 who attended Norman, Oklahoma Public Schools. Permission was gained from administrators in each of the four public middle schools in the district, as well as the Director of Fine Arts of the district and the governing board for research in the district. Approval for the study was also obtained from the University of Oklahoma Institutional Review Board for Research with Human Subjects (Appendix A).

The administration of the questionnaire took place at four separate times, one for each participating school. The researcher was available at the school during the administration of the questionnaire to answer questions, but did not personally administer

it. Advisory teachers in each participating school administered the questionnaire using a protocol devised by the researcher (Appendix E).

The schools involved had an “advisory” class that met daily for approximately 25 minutes. Every student in each building participated in an advisory class daily. The researcher provided each advisory teacher with blank copies of the parental/legal guardian consent form to distribute to the boys in his or her advisory class. The advisory teachers were asked to distribute the forms on a Monday and ask for them to be returned by the end of the week. The advisory teacher was asked to keep the signed, returned forms in an envelope provided by the researcher.

In each building, the advisory class with the highest rate of return of parental/legal guardian permission forms was given a pizza party on a date chosen by the class and teacher. The rate of return was calculated by comparing the number of male students in the advisory class with the number of signed and returned parental/legal guardian permission forms and establishing a percentage of returned forms for the advisory class. In the event of a tie, every class with the highest percentage of return received the pizza party.

After consultation with each building principal, a date for the administration of the questionnaire was set for each building. On the date of the administration of the questionnaire, the advisory teacher reminded the male students which of them had been given parental/legal guardian permission to participate. Males who had returned signed parental/legal guardian consent forms were asked to read the assent document (Appendix D). The teacher informed them that if they were willing to participate they should sign the assent document attached to the survey. The teacher then read directions for

completing the survey. If a student had received parental/legal guardian permission but chose to abstain from participation he did not sign the form but turned in both forms to the box. No one except the student knew if he actually participated or not.

Participants were asked to complete a forty-six-item survey. Completion of the survey took approximately ten minutes. Attached to each questionnaire was a ticket for a drawing. At the end of the advisory period, each male student who was given an assent form and questionnaire placed it in the box with a slotted lid marked "surveys." Each student tore off one ticket to keep with him, and put the ticket with a matching number in a can marked "tickets," provided by the researcher.

The tickets, questionnaires, and envelope with signed parental/legal guardian permission forms were retrieved by the researcher at the end of the advisory period and brought to the main office of the participating middle school, where a school representative drew out a winning ticket. The subject whose ticket number matched the winning ticket received a \$25 iTunes gift certificate. The assent documents the subjects signed prior to completing the survey indicated that students wishing to withdraw from the research were allowed to remain in contention for the drawing.

The researcher matched names of students who received parental/legal guardian permission with signed assent forms returned for each advisory class. Once each match had been made, the assent form and questionnaire were separated into piles and were not linked in any way again. Any questionnaires returned by students who did not also have a matching parental/legal guardian permission form were destroyed immediately using a paper shredder.

Significance of the Study

Pedagogical texts, research articles, and articles in popular professional journals agree that there are fewer males than females enrolled in choir classes in the United States. Many authors and researchers believe adolescence is where this trend begins. There is a shortage of empirical research that seeks responses from adolescent males who are not involved with choir. This study obtained information from those students, as well as students who were currently involved with choir, or had been involved with choir in the past. This study was one step in research efforts that could eventually lead to developing a systematic approach to recruiting and retaining more males in choirs in the United States.

The results and data collected from administering the questionnaire are presented in Chapter Four. Chapter Five includes implications of this research, conclusions, and recommendations for further research.

CHAPTER FOUR

RESULTS OF THE STUDY

Introduction to the Data

The purpose of this study was to investigate the factors related to an adolescent male's choice to enroll or not enroll in choir in the school setting. The results of this study may contribute to the development of more effective recruiting techniques for teachers of adolescent male singers.

Based on readings of the related literature, a questionnaire was formulated to address the purpose of the study. The questionnaire consisted of three sections including descriptive information, Likert-type statements, and free response. A panel of music educators reviewed the instrument, and revisions were made accordingly. After use in a pilot study, the questionnaire was revised further. Unreliable items were removed from the scales representing the eight areas (affect for singing, musical self-efficacy, scheduling, peer influences, teacher influence, parental/familial influence, masculinity/gender stereotypes, and voice change).

Subjects in the main study were 226 males in grades 7 and 8 who attended one of the four Norman, Oklahoma public middle schools and who had returned signed parental/legal guardian permission slips. Homeroom, or "advisory," teachers assisted by administering the questionnaire according to a protocol set forth by the researcher. Incentives, such as a pizza party and a drawing for an iTunes gift certificate were given to encourage a high rate of return of parental/legal guardian permission slips.

Results

The results reported in this chapter were arranged according to statistical treatment and analysis, as well as by research question. These sections included: Participant Demographics; Reliability Analysis; Multiple Analysis of Variance; and Discriminant Analysis. Data from sections 1 and 2 were analyzed using SPSS 11.0. Open-ended responses in sections 1 and 3 were analyzed using hyperRESEARCH Qualitative Analysis Tool software version 2.7 to summarize group demographics and response trends.

The following statistical procedures were utilized to address the nine research questions. Means, ranges, and standard deviations were calculated. A one-way multivariate analysis of variance (MANOVA) was conducted to determine differences in attitude between the two categories of choral enrollment status (currently enrolled, not enrolled) for the scales representing peer pressure, family influence, teacher influence, voice change, perceived gender roles, self-efficacy in music, affect for singing, and scheduling. A series of eight MANOVA tests were utilized to determine differences between groups for each specific scale. Because multiple procedures were run on the same data set, a more stringent alpha level of .01 was used to protect against Type I error.

Discriminant analysis was performed on the survey data to determine the strongest predictor variables for adolescent males' choir enrollment choice. Analysis of open-ended questions was employed to further assess adolescent males' attitudes about singing in choir.

Participant Demographics

The first section of the questionnaire included five areas: I Age and Grade; II Enrollment status in Choir; Band, and Orchestra; III Information concerning private music study, and participation in music groups outside the school classroom; IV Future enrollment intentions for choir; and V Reasons for not enrolling in choir (completed only by participants not currently enrolled in choir).

Participants were asked to indicate their age and grade at the time the survey was taken. The researcher recorded the number of students from each participating middle school (see Table 2). The number ranged from a high of 90 (39.6%) from School B to a low of 26 (11.5%) from School D. A majority of the participants were between the ages of 12-14, the largest group (41.9%) being 13 years old. Of the 225 participants, 47.1% were in seventh grade and 52% were in eighth grade.

Table 2 School, Age, and Grade

Category	N	Percent
<i>School (N=226)</i>		
A	64	28.2
B	90	39.6
C	46	20.3
D	26	11.5
<i>Age (N=224)</i>		
10	1	0.4
11	2	0.9
12	51	22.5
13	95	41.9
14	68	30.0
15	7	3.1
<i>Grade (N=225)</i>		
7	107	47.1
8	118	52.0

Participants were also asked to list their current enrollment status in choir, band, and orchestra (see Table 3). Some participants chose to leave this section blank, therefore the number of participants ranges from 216-224, depending on the category. Of the participants, a majority were not enrolled in any of the three musical classes/ensembles. Choir was the most often listed class in which students were either currently enrolled, or in which they had previously been enrolled.

Table 3 Enrollment Status in Choir, Band, and Orchestra

Category	N	Percent
<i>Choral Participation Status (N=224)</i>		
Currently Enrolled	43	18.9
Previously Enrolled	53	23.3
Never Enrolled	128	56.4
<i>Band Participation Status (N=217)</i>		
Currently Enrolled	39	17.2
Previously Enrolled	23	10.1
Never Enrolled	155	68.3
<i>Orchestra Participation Status (N=216)</i>		
Currently Enrolled	25	11.0
Previously Enrolled	13	5.7
Never Enrolled	178	78.4

Participants were also asked to indicate whether they study music privately and whether they participate in a music group outside of school (see Table 4). A majority of participants indicated they did not study privately or participate in a music group outside of school.

Table 4 Outside Study and Participation

Category	N
<i>Do you study music privately? (N=225)</i>	
Yes	76
No	149
<i>Do you participate in a music group outside of school? (N=224)</i>	
Yes	51

No	173
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Participants were asked to indicate whether they planned to enroll in their school's choir the following year (see Table 5). Forty-three students (18.9%) were currently enrolled in choir, while thirty-four students (15%) indicated they intend to enroll in choir next year.

Table 5 Intentions for Future Enrollment in Choir

Category	N	Percent
<i>Intentions for future enrollment in choir (N=221)</i>		
I plan to enroll in my school's choir next year	34	15.0
I do not plan to enroll in my school's choir next year	187	82.4

Reliability

Eight constructs were represented by scales consisting of different combinations of items in section 2 of the questionnaire. Cronbach's Alpha was calculated to determine inter-item reliability of each scale (see Table 6). Results indicated reliability Alphas ranging from .52 to .82 for the questionnaire scales. The parental influence scale reliability Alpha was low (.52), suggesting it was not as reliable as the other scales. This may be due, in part, to the fact that only three statements make up the scale and that two of the statements are also included in the scale for musical self-efficacy. This error makes it impossible to consider the given scale distinct.

Table 6 Cronbach's Alpha for Inter-Item Reliability

* Indicates reverse coding

Construct	Item #	Statement	Cronbach's Alpha
Voice Change	1	My voice changed while I was enrolled in a choir class.	.66
	9	I was a good singer until my voice changed.	
	23	If my voice hadn't changed I would be in choir at my school.	
	29	The people I hang out with think it is good to be in choir.	
	35	I think my voice has been changing this semester.	
	40	My voice change affected my decision to take choir.	
Masculinity/ Gender Stereotyping	2	It is cool when guys sing.	.73
	10*	It is not cool for guys to sing.	
	11	The guys in my school think it's good for guys to sing in choir.	
	17	I know high school guys who sing in choir.	
	24	I know adult men who sing in a choir.	
	30	The most popular guys in my school sing in choir.	
	36	One of my male family members likes to sing.	
Peer Pressure	44	More guys should take choir.	.76
	3	Most of my friends are in choir.	
	11	The guys in my school think it's good for guys to sing in choir.	
	18*	The people I hang out with don't think it is good to be in choir.	
	25*	The people I hang out with don't think it is cool to sing.	
	29	The people I hang out with think it is good to be in choir.	
	30	The most popular guys in my school sing in choir.	
	31	The girls in my school think it's good for guys to sing in choir.	
	37	The people I hang out with think it is cool to sing.	

Scheduling	4 12 19 26 32 38	I planned my schedule so I could be enrolled in choir. I wish I had room in my schedule to add choir. I requested choir as a class at my school, but was not put in the class. I decided whether or not to be in choir based on my class schedule. I would take choir, but it doesn't meet the hour I have available. Choir doesn't fit into my schedule this year, but I'll take it when it does fit into my schedule.	.68
Musical Self-Efficacy	5 8 13* 16 20 21 27* 29 33* 41* 43*	I'm a good singer. My parents/guardians have told me I am a good singer. I'm not a good singer. When I sing, I can only hit certain notes. I have always been a good singer. A teacher has told me I am a good singer. My parents/guardians have told me I am not a good singer. The people I hang out with think it is good to be in choir. I don't sing in tune. I don't really like to sing. When I was in music class the teacher told me to just mouth the words, and not sing.	.76
Teacher Influence	7 14* 21 28 34*	The choir teacher at my school is good. I do not like the choir teacher at my school. A teacher has told me I am a good singer. I like the choir teacher at my school. A teacher has told me I am not a good singer.	.78
Love of Singing	6 22 45*	Singing is fun. I enjoy singing. I do not enjoy singing.	.82
Parental Influence	8 15* 27*	My parents/guardians have told me I am a good singer. My parents/guardians do not want me to take choir. My parents/guardians have told me I am not a good singer.	.52

Data Analysis

The second section of the questionnaire consisted of 46 statements, with responses measured by a five-point Likert-type scale. Means, ranges, and standard deviations were compiled for each of the 46 items comparing the three subgroups (currently in choir, previously in choir, never in choir). In an effort to better answer the research questions, the “previously in choir” and “not in choir” categories were combined, and the data were also analyzed according to two subgroups (currently in choir, not in choir). Means, ranges, and standard deviations were compiled for each of the 46 items (see Table 7) according to these two subgroups. Separate MANOVAs were run to determine the significance of each individual item in each of the eight scales. Individual items that were shown to have significant differences ($p < .01$) between students in choir and students not in choir are indicated with an asterisk.

Table 7 Means, Ranges, and Standard Deviations for Two Subgroups (In Choir, Not in Choir)

Item	All			Currently in choir			Not currently in choir		
	Mean	Range	SD	Mean	Range	SD	Mean	Range	SD
My voice changed while I was enrolled in a choir class.*	2.39	4.00	1.53	3.49	4.00	1.42	2.00	4.00	1.38
It is cool when guys sing.*	2.54	4.00	1.35	3.48	4.00	1.44	2.31	4.00	1.22
Most of my friends are in choir.*	1.81	4.00	1.18	2.57	4.00	1.48	1.60	4.00	0.99
I planned my schedule so I could be enrolled in choir.*	1.67	4.00	1.32	3.44	4.00	1.60	1.19	4.00	0.68
I'm a good singer.*	2.49	4.00	1.42	3.86	4.00	1.26	2.14	4.00	1.24
Singing is fun.*	2.64	4.00	1.49	4.07	4.00	1.16	2.27	4.00	1.34
The choir teacher at my school is good.*	3.41	4.00	1.51	4.49	4.00	0.94	3.10	4.00	1.50
My parents/guardians have told me I am a good singer.*	2.80	4.00	1.53	3.90	4.00	1.41	2.52	4.00	1.44
I was a good singer until my voice changed.	2.03	4.00	1.32	2.24	4.00	1.45	1.97	4.00	1.28
It is not cool for guys to sing.*	2.55	4.00	1.49	2.00	4.00	1.29	2.69	4.00	1.51
The guys in my school think it's good for guys to sing in choir.	2.11	4.00	1.20	2.24	4.00	1.09	2.07	4.00	1.23
I wish I had room in my schedule to add choir.*	1.90	4.00	1.34	3.00	4.00	1.66	1.64	4.00	1.11
I'm not a good singer.*	2.97	4.00	1.55	1.92	4.00	1.16	3.24	4.00	1.53
I do not like the choir teacher at my school.*	2.09	4.00	1.42	1.57	4.00	1.21	2.23	4.00	1.45
My parents/guardians do not want me to take choir.*	2.07	4.00	1.25	1.55	4.00	1.06	2.21	4.00	1.27
When I sing, I can only hit certain notes.	2.84	4.00	1.47	2.88	4.00	1.55	2.83	4.00	1.45

I know high school guys who sing in choir.*	2.20	4.00	1.60	2.72	4.00	1.72	2.05	4.00	1.53
The people I hang out with don't think it is good to be in choir.	2.59	4.00	1.36	2.57	4.00	1.15	2.59	4.00	1.41
I requested choir as a class at my school, but was not put in the class.	1.35	4.00	0.89	1.45	4.00	1.01	1.32	4.00	0.85
I have always been a good singer.*	2.25	4.00	1.40	3.33	4.00	1.46	1.97	4.00	1.24
A teacher has told me I am a good singer.*	2.62	4.00	1.65	4.12	4.00	1.28	2.20	4.00	1.50
I enjoy singing.*	2.59	4.00	1.53	4.00	4.00	1.33	2.22	4.00	1.36
If my voice hadn't changed I would be in choir at my school.*	1.69	4.00	1.20	2.29	4.00	1.63	1.55	4.00	1.03
I know adult men who sing in a choir.	2.48	4.00	1.66	2.95	4.00	1.71	2.35	4.00	1.63
The people I hang out with don't think it is cool to sing.	2.50	4.00	1.38	2.44	4.00	1.25	2.51	4.00	1.42
I decided whether or not to be in choir based on my class schedule.	2.25	4.00	1.45	2.21	4.00	1.32	2.27	4.00	1.49
My parents/guardians have told me I am not a good singer.	1.96	4.00	1.37	1.83	4.00	1.38	2.00	4.00	1.37
I like the choir teacher at my school.*	3.20	4.00	1.56	4.14	4.00	1.26	2.93	4.00	1.53
The people I hang out with think it is good to be in choir.*	2.28	4.00	1.22	2.93	4.00	1.28	2.09	3.00	1.13
The most popular guys in my school sing in choir.	1.77	4.00	1.14	2.16	4.00	1.34	1.66	4.00	1.05
The girls in my school think it's good for guys to sing in choir.*	2.70	4.00	1.28	3.34	4.00	1.24	2.52	4.00	1.23

I would take choir, but it doesn't meet the hour I have available.	1.68	4.00	1.11	1.65	4.00	1.03	1.68	4.00	1.14
I don't sing in tune.*	2.63	4.00	1.53	1.88	4.00	1.10	2.82	4.00	1.56
A teacher has told me I am not a good singer.*	1.80	4.00	1.24	1.34	4.00	0.84	1.93	4.00	1.31
I think my voice has been changing this semester.	2.99	4.00	1.51	3.44	4.00	1.39	2.86	4.00	1.53
One of my male family members likes to sing.*	2.56	4.00	1.69	3.12	4.00	1.78	2.41	4.00	1.64
The people I hang out with think it is cool to sing.*	2.27	4.00	1.23	2.95	4.00	1.21	2.07	3.00	1.16
Choir doesn't fit into my schedule this year, but I'll take it when it does fit into my schedule.	1.69	4.00	1.09	1.87	4.00	1.30	1.64	4.00	1.03
My voice change affected my decision to take choir.	1.85	4.00	1.22	2.07	4.00	1.35	1.79	4.00	1.18
I don't really like to sing.*	2.83	4.00	1.63	1.90	4.00	1.28	3.07	4.00	1.63
It would be better if there were two choir classes, one just for guys and one just for girls.	2.08	4.00	1.38	2.07	4.00	1.44	2.08	4.00	1.36
When I was in music class the teacher told me to just mouth the words, and not sing.	1.77	4.00	1.27	1.76	4.00	1.30	1.78	4.00	1.27
More guys should take choir.*	2.68	4.00	1.49	3.67	4.00	1.51	2.41	4.00	1.37
I do not enjoy singing.*	2.80	4.00	1.61	1.88	4.00	1.29	3.03	4.00	1.61
Either you can sing or you can't; it's something you're born with or not.	2.84	4.00	1.62	2.47	4.00	1.59	2.93	4.00	1.61

* Significant MANOVA $p < .01$

Students who were not currently enrolled in choir were asked to check boxes by statements indicating why they chose not to enroll (see Table 8). Participants were asked to check all categories that applied to their situation, therefore the cumulative percentage adds up to more than 100%. One hundred eighty-one students (not currently enrolled in choir) make up the sample size. One category, named “other” had a free response option. Responses categorized as “other” were coded and analyzed using HyperRESEARCH software. These results are reported in more detail later in this chapter.

Table 8 Non-Choir Students' Reasons for Not Enrolling in Choir

Reason	Total N=181		Never Enrolled N=128		Previously Enrolled N=53	
	N	Percent	N	Percent	N	Percent
I don't like to sing.	112	61.9	85	66.4	27	50.9
I am not a good singer.	85	47.0	65	50.8	20	37.7
My friends aren't in choir.	61	33.1	38	29.7	22	41.5
Singing is more for girls than guys.	47	26.0	36	28.1	11	20.8
My voice changed, and it is difficult to sing.	38	20.1	25	19.5	13	24.5
It doesn't fit into my class schedule.	32	17.7	23	18.0	9	17.0
I don't like the teacher.	20	11.0	15	11.7	5	9.4
The choir isn't very good.	16	8.8	12	9.4	4	7.5
My parents would rather I take other classes.	10	5.5	9	7.0	1	1.9
Other reason.	40	21.5	25	19.5	14	26.4

A one-way multivariate analysis of variance (MANOVA) was calculated examining the effect of choral participation status (in choir, not in choir) on each scale: peer pressure, family influence, teacher influence, voice change, gender stereotypes concerning males and singing, self-efficacy in singing, level of enjoyment in singing, and scheduling. A significant main effect was found ($\Lambda(10.94,8) = .689, p < .001$). Follow-up univariate ANOVAs indicated that each cluster area was significantly influenced by choral participation status (see Table 18).

Table 9 MANOVA Test of Between-Subjects Effects

Cluster Area (average)	Type III Sum of Squares	Df	F	Sig.
Masculinity/Gender Stereotype	17.01	1	24.79	.000
Enjoyment of Singing	74.58	1	50.61	.000
Parental Influence	24.88	1	29.02	.000
Peer Pressure	10.52	1	19.43	.000
Scheduling	13.29	1	26.20	.000
Self-Efficacy	28.72	1	63.79	.000
Teacher Influence	45.04	1	48.87	.000
Voice Change	17.40	1	30.50	.000

Research Question 1

What is an adolescent male's attitude about peer pressure, and how does it relate to his decision to enroll or not enroll in choir?

Eight items were included in the scale representing peer pressure (see Table 10). Overall group means for this scale representing peer pressure ranged from a low of 1.77 ("The most popular guys in my school sing in choir.") to a high of 2.70 ("The girls in my school think it's good for guys to sing in choir."). The mean was higher for each positively phrased statement among participants in choir than those students not in choir.

A one-way MANOVA was calculated examining the effect of choral participation status (in choir, not in choir) on the scale representing attitudes of adolescent males about peer pressure. A significant effect was found ($\Lambda(8,142) = .826, p < .001$).

Follow-up univariate ANOVAs indicated that adolescent males' attitudes were significantly influenced by the following items from the peer pressure scale: "Most of my friends are in choir" ($F(1,149) = 18.96, p < .01$), "The people I hang out with think it is good to be in choir" ($F(1,149) = 10.06, p < .01$), "The girls in my school think it's good for guys to sing in choir" ($F(1,149) = 11.67, p < .01$), and "The people I hang out with think it is cool to sing" ($F(1,149) = 10.58, p < .01$).

Responses from non-choir students on the final subsection of the first portion of the questionnaire reveal that "My friends are not in choir" had the third highest response rate, with 33.1% of respondents checking that category (see Table 8).

Table 10 Peer Pressure Means, Ranges, and Standard Deviations

Scale and Item	All			In choir			Not in choir		
	Mean	Range	SD	Mean	Range	SD	Mean	Range	SD
Peer Pressure									
Most of my friends are in choir.*	1.81	4.00	1.18	2.57	4.00	1.48	1.60	4.00	0.99
The guys in my school think it's good for guys to sing in choir.	2.11	4.00	1.20	2.24	4.00	1.09	2.07	4.00	1.23
The people I hang out with don't think it is good to be in choir.	2.59	4.00	1.36	2.57	4.00	1.15	2.59	4.00	1.41
The people I hang out with don't think it is cool to sing.	2.50	4.00	1.38	2.44	4.00	1.25	2.51	4.00	1.42
The people I hang out with think it is good to be in choir.*	2.28	4.00	1.22	2.93	4.00	1.28	2.09	4.00	1.13
The most popular guys in my school sing in choir.	1.77	4.00	1.14	2.16	4.00	1.34	1.66	4.00	1.05
The girls in my school think it's good for guys to sing in choir.*	2.70	4.00	1.28	3.34	4.00	1.24	2.52	4.00	1.23
The people I hang out with think it is cool to sing.*	2.27	4.00	1.23	2.95	4.00	1.21	2.07	4.00	1.16

* Significant MANOVA $p < .01$

Research Question 2

What is an adolescent male's attitude about the influence of his family, and how does it relate to his decision to enroll or not enroll in choir?

Three items were included in the scale representing family influence (see Table 11). Overall group means in the area of family influence ranged from a low of 1.96, associated with the negatively phrased statement, "My parents/guardians have told me I am not a good singer" to a high of 2.80, associated with the statement, "My parents/guardians have told me I am a good singer." As with the results from means on the peer pressure scale, participants currently enrolled in choir had higher means than those not in choir for positively phrased statements and lower means for negatively phrased statements.

A one-way MANOVA was calculated examining the effect of choral participation status (in choir, not in choir) on the scale representing attitudes of adolescent males about parental/family influence. A significant effect was found ($\Lambda(3,173) = .850, p < .01$). Follow-up univariate ANOVAs indicated that adolescent male's attitudes were significantly influenced by the following items from the parental/family influence scale: "My parents/guardians have told me I am a good singer" ($F(1,175) = 25.84, p < .01$), and "My parents/guardians do not want me to take choir" ($F(1,175) = 9.83, p < .01$).

Non-choir participants were asked to indicate why they are not enrolled in choir by checking as many boxes as apply. The box with the statement, "My parents would rather I take other classes" had the lowest response rate, with 5.5% checking that category (see Table 8).

Table 11 Family (Parental) Influence Means, Ranges, and Standard Deviations

Scale and Item	All			In choir			Not in choir		
	Mean	Range	SD	Mean	Range	SD	Mean	Range	SD
Parental Influence									
My parents/guardians have told me I am a good singer.*	2.80	4.00	1.53	3.90	4.00	1.41	2.52	4.00	1.44
My parents/guardians do not want me to take choir.*	2.07	4.00	1.25	1.55	4.00	1.06	2.21	4.00	1.27
My parents/guardians have told me I am not a good singer.	1.96	4.00	1.37	1.83	4.00	1.38	2.00	4.00	1.37

* Significant MANOVA $p < .01$

Research Question 3

What is an adolescent male's attitude about the influence of teachers, and how does it relate to his decision to enroll or not enroll in choir?

Five items made up the scale representing teacher influence (see Table 12).

Overall group means for positively phrased statements in this area ranged from a low of 2.62 ("A teacher has told me I am a good singer") to a high of 3.41 ("The choir teacher at my school is good"). Students in choir had a significantly higher mean (4.49) for that statement than students not in choir (3.10). Means for other positively phrased statements were above 4.00 among students currently in choir, and were lower for those participants not in choir. Two statements in this scale were phrased negatively. In each case, participants not enrolled in choir had higher mean scores than those in choir.

A one-way MANOVA was calculated examining the effect of choral participation status (in choir, not in choir) on the scale representing attitudes of adolescent males about teacher influence. A significant effect was found ($\text{Lambda}(5,173) = .709, p < .001$).

Follow-up univariate ANOVAs indicated that adolescent males' attitudes were significantly influenced by the following items from the teacher influence scale: "The choir teacher at my school is good" ($F(1,177) = 33.33, p < .01$), "I do not like the choir teacher at my school" ($F(1,177) = 8.49, p < .01$), "A teacher has told me I am a good singer" ($F(1,177) = 54.58, p < .01$), "I like the choir teacher at my school" ($F(1,177) = 21.93, p < .01$), and "A teacher has told me I am not a good singer" ($F(1,177) = 6.87, p < .01$).

Non-choir participants were asked to indicate why they are not enrolled in choir by checking as many boxes as apply. The box with the statement, “I don’t like the teacher ” had a response rate of 11% (see Table 8).

Table 12 Teacher Influence Means, Ranges, and Standard Deviations

Scale and Item	All			In choir			Not in choir		
	Mean	Range	SD	Mean	Range	SD	Mean	Range	SD
Teacher/Program Influence									
The choir teacher at my school is good.*	3.41	4.00	1.51	4.49	4.00	0.94	3.10	4.00	1.50
I do not like the choir teacher at my school.*	2.09	4.00	1.42	1.57	4.00	1.21	2.23	4.00	1.45
A teacher has told me I am a good singer.*	2.62	4.00	1.65	4.12	4.00	1.28	2.20	4.00	1.50
I like the choir teacher at my school.*	3.20	4.00	1.56	4.14	4.00	1.26	2.93	4.00	1.53
A teacher has told me I am not a good singer.*	1.80	4.00	1.24	1.34	4.00	0.84	1.93	4.00	1.31

*Significant MANOVA $p < .01$

Research Question 4

What is an adolescent male's attitude about his voice change, and how does it relate to his decision to enroll or not enroll in choir?

The voice change scale was represented by six statements (see Table 13). Means for this scale ranged from a low of 1.69 for the statement "If my voice hadn't changed I would be in choir at my school" to a high of 2.99 for the statement "I think my voice has been changing this semester." Predictably, the mean for the statement "My voice changed while I was enrolled in a choir class" was considerably higher (3.49) for those students currently enrolled in choir than those not enrolled (1.79).

A one-way MANOVA was calculated examining the effect of choral participation status (in choir, not in choir) on the scale representing attitudes of adolescent males about their voice change. A significant effect was found ($\text{Lambda}(6,139) = .730, p < .001$). Follow-up univariate ANOVAs indicated that adolescent males' attitudes were significantly influenced by the following items from the voice change scale: "My voice changed while I was enrolled in a choir class" ($F(1,144) = 38.38, p < .01$), "If my voice hadn't changed I would be in choir at my school" ($F(1,144) = 9.63, p < .01$), "The people I hang out with think it is good to be in choir" ($F(1,144) = 15.90, p < .01$), and "I think my voice has been changing this semester" ($F(1,144) = 8.13, p < .01$).

Non-choir participants were asked to indicate why they are not enrolled in choir by checking as many boxes as apply. The box with the statement, "My voice changed and it is difficult to sing" had response a rate of 20.1% (see Table 8).

Table 13 Voice Change Means, Ranges, and Standard Deviations

Scale and Item	All			In choir			Not in choir		
	Mean	Range	SD	Mean	Range	SD	Mean	Range	SD
Voice Change									
My voice changed while I was enrolled in a choir class.*	2.39	4.00	1.53	3.49	4.00	1.42	2.00	4.00	1.38
I was a good singer until my voice changed.	2.03	4.00	1.32	2.24	4.00	1.45	1.97	4.00	1.28
If my voice hadn't changed I would be in choir at my school.*	1.69	4.00	1.20	2.29	4.00	1.63	1.55	4.00	1.03
The people I hang out with think it is good to be in choir.*	2.28	4.00	1.22	2.93	4.00	1.28	2.09	4.00	1.13
I think my voice has been changing this semester.*	2.99	4.00	1.51	3.44	4.00	1.39	2.86	4.00	1.53
My voice change affected my decision to take choir.	1.85	4.00	1.22	2.07	4.00	1.35	1.79	4.00	1.18

*Significant MANOVA $p < .01$

Research Question 5

What is an adolescent male's attitude about gender stereotypes concerning males and singing, and how does it relate to his decision to enroll or not enroll in choir?

Eight statements represented the scale for masculinity/gender stereotyping (see Table 14). Seven statements were positively phrased and one statement was negatively phrased. Mean scores ranged from a low of 1.77 for the statement, "The most popular guys in my school sing in choir," to a high of 2.68 for the statement, "More guys should take choir." Students in choir had a higher mean score than those students not in choir for every positively phrased statement.

A one-way MANOVA was calculated examining the effect of choral participation status (in choir, not in choir) on the scale representing attitudes of adolescent males about masculinity/gender stereotyping. A significant effect was found ($\Lambda(8,167) = .803$, $p < .01$). Follow-up univariate ANOVAs indicated that adolescent males' attitudes were significantly influenced by the following items from the masculinity/gender stereotyping scale: "It is cool when guys sing" ($F(1,174) = 25.84$, $p < .01$), "It is not cool for guys to sing" ($F(1,174) = 4.84$, $p < .01$), "I know high school guys who sing in choir" ($F(1,174) = 7.28$, $p < .01$), "I know adult men who sing in a choir" ($F(1,174) = 7.33$, $p < .01$), "One of my male family members likes to sing" ($F(1,174) = 7.15$, $p < .01$), and "More guys should take choir" ($F(1,174) = 27.82$, $p < .01$).

Non-choir participants were asked to indicate why they are not enrolled in choir by checking as many boxes as apply. The box with the statement, "Singing is more for girls than guys" was the fourth highest ranked statement, with a response rate of 26% (see Table 8).

Table 14 Masculinity/Gender Stereotyping Means, Ranges, and Standard Deviations

Scale and Item	All			In choir			Not in choir		
	Mean	Range	SD	Mean	Range	SD	Mean	Range	SD
Masculinity/Gender Stereotyping									
It is cool when guys sing.*	2.54	4.00	1.35	3.48	4.00	1.44	2.31	4.00	1.22
It is not cool for guys to sing.*	2.55	4.00	1.49	2.00	4.00	1.29	2.69	4.00	1.51
The guys in my school think it's good for guys to sing in choir.	2.11	4.00	1.20	2.24	4.00	1.09	2.07	4.00	1.23
I know high school guys who sing in choir.*	2.20	4.00	1.60	2.72	4.00	1.72	2.05	4.00	1.53
I know adult men who sing in a choir.*	2.48	4.00	1.66	2.95	4.00	1.71	2.35	4.00	1.63
The most popular guys in my school sing in choir.	1.77	4.00	1.14	2.16	4.00	1.34	1.66	4.00	1.05
One of my male family members likes to sing.*	2.56	4.00	1.69	3.12	4.00	1.78	2.41	4.00	1.64
More guys should take choir.*	2.68	4.00	1.49	3.67	4.00	1.51	2.41	4.00	1.37

*Significant MANOVA $p < .01$

Research Question 6

What is an adolescent male's attitude about his singing voice, and how does it relate to his decision to enroll or not enroll in choir?

The scale for musical self-efficacy contained eleven statements (see Table 15). Six statements were phrased positively and five were phrased negatively. For the positively phrased statements, overall mean scores ranged from a low of 2.25 for the statement, "I have always been a good singer," to a high of 2.80 for the statement, "My parents/guardians have told me I am a good singer." Among statements phrased negatively the low overall mean score was 1.77 for the statement, "When I was in music class the teacher told me to just mouth the words, and not sing," and the high overall mean score was 2.97 for the statement, "I'm not a good singer." Again, those currently in choir rated the positively phrased statements higher than those not in choir. For negatively phrased statements, current choir students had means that were lower for each statement than those not in choir.

A one-way MANOVA was calculated examining the effect of choral participation status (in choir, not in choir) on the scale representing attitudes of adolescent males about their singing ability. A significant effect was found ($\Lambda(11,142) = .681, p < .001$). Follow-up univariate ANOVAs indicated that adolescent males' attitudes were significantly influenced by the following items from the musical self-efficacy scale: "I'm a good singer" ($F(1,152) = 45.61, p < .01$), "My parents/guardians have told me I am a good singer" ($F(1,152) = 33.78, p < .01$), "I'm not a good singer" ($F(1,152) = 19.41, p < .01$), "I have always been a good singer" ($F(1,152) = 32.70, p < .01$), "A teacher has told me I am a good singer" ($F(1,152) = 37.30, p < .01$), "The people I hang out with think it

is good to be in choir" ($F(1,152) = 12.27, p < .01$), "I don't sing in tune" ($F(1,152) = 7.55, p < .01$), and "I don't really like to sing" ($F(1,152) = 10.56, p < .01$).

Non-choir participants were asked to indicate why they are not enrolled in choir by checking as many boxes as apply. The box with the statement, "I am not a good singer" was the second highest ranked statement, with a response rate of 47% (see Table 8).

Table 15 Musical Self-Efficacy Means, Ranges, and Standard Deviations

Scale and Item	All			In choir			Not in choir		
	Mean	Range	SD	Mean	Range	SD	Mean	Range	SD
Musical Self-Efficacy									
I'm a good singer.*	2.49	4.00	1.42	3.86	4.00	1.26	2.14	4.00	1.24
My parents/guardians have told me I am a good singer.*	2.80	4.00	1.53	3.90	4.00	1.41	2.52	4.00	1.44
I'm not a good singer.*	2.97	4.00	1.55	1.92	4.00	1.16	3.24	4.00	1.53
When I sing, I can only hit certain notes.	2.84	4.00	1.47	2.88	4.00	1.55	2.83	4.00	1.45
I have always been a good singer.*	2.25	4.00	1.40	3.33	4.00	1.46	1.97	4.00	1.24
A teacher has told me I am a good singer.*	2.62	4.00	1.65	4.12	4.00	1.28	2.20	4.00	1.50
My parents/guardians have told me I am not a good singer.	1.96	4.00	1.37	1.83	4.00	1.38	2.00	4.00	1.37
The people I hang out with think it is good to be in choir.*	2.28	4.00	1.22	2.93	4.00	1.28	2.09	4.00	1.13
I don't sing in tune.*	2.63	4.00	1.53	1.88	4.00	1.10	2.82	4.00	1.56
I don't really like to sing.*	2.83	4.00	1.63	1.90	4.00	1.28	3.07	4.00	1.63
When I was in music class the teacher told me to just mouth the words, and not sing.	1.77	4.00	1.27	1.76	4.00	1.30	1.78	4.00	1.27

*Significant MANOVA $p < .01$

Research Question 7

What is an adolescent male's level of enjoyment in music, and how does it relate to his decision to enroll or not enroll in choir?

The scale for love of singing originally contained four items. One item was accidentally included twice ("Singing is fun"). The second appearance of this statement was excluded from the data analysis. The final analysis used three items for this scale (see Table 16). Two of the three statements were positively phrased, and ranged from 2.59 for the statement "I enjoy singing" to 2.64 for the statement "Singing is fun." "I do not enjoy singing" had an overall mean score of 2.80. Mean scores for students in choir were high for the two positively phrased statements, and relatively low for those never in choir. The opposite was the case for the one negatively phrased statement.

A one-way MANOVA was calculated examining the effect of choral participation status (in choir, not in choir) on the scale representing attitudes of adolescent males about their affect for singing. A significant effect was found ($\text{Lambda}(3,192) = .734, p < .001$). Follow-up univariate ANOVAs indicated that adolescent males' attitudes were significantly influenced by the following items from the affect for singing scale: "Singing is fun" ($F(1,194) = 67.62, p < .01$), "I enjoy singing" ($F(1,194) = 17.93, p < .01$), and "I do not enjoy singing" ($F(1,194) = 56.12, p < .01$).

Non-choir participants were asked to indicate why they are not enrolled in choir by checking as many boxes as apply. The box with the statement, "I don't like to sing" was the highest ranked statement, with a response rate of 61.9% (see Table 8).

Table 16 *Affect for Singing Means, Ranges, and Standard Deviations*

Scale and Item	All			In choir			Not in choir		
	Mean	Range	SD	Mean	Range	SD	Mean	Range	SD
Affect for Singing									
Singing is fun.*	2.64	4.00	1.49	4.07	4.00	1.16	2.27	4.00	1.34
I enjoy singing.*	2.59	4.00	1.53	4.00	4.00	1.33	2.22	4.00	1.36
I do not enjoy singing.*	2.80	4.00	1.61	1.88	4.00	1.29	3.03	4.00	1.61

*Significant MANOVA $p < .01$

Research Question 8

What is an adolescent male's attitude about school scheduling procedures, and how does it relate to his decision to enroll or not enroll in choir?

The scheduling scale contained six items (see Table 17) with overall mean scores ranging from a low of 1.35 for the statement, "I requested choir as a class at my school, but was not put in the class," to a high of 2.25 for the statement, "I decided whether or not to be in choir based on my class schedule." The one statement that is unique in this scale is "I planned my schedule so I could be enrolled in choir." It makes sense that those currently in choir would have a much higher mean score (3.44) than those not in choir (1.19).

A one-way MANOVA was calculated examining the effect of choral participation status (in choir, not in choir) on the scale representing attitudes of adolescent males about scheduling. A significant effect was found ($\Lambda(6,156) = .508, p < .001$). Follow-up univariate ANOVAs indicated that adolescent males' attitudes were significantly influenced by the following items from the scheduling scale: "I planned my schedule so I could be enrolled in choir" ($F(1,161) = 133.64, p < .01$), and "I wish I had room in my schedule to add choir" ($F(1,161) = 32.66, p < .01$).

Non-choir participants were asked to indicate why they are not enrolled in choir by checking as many boxes as apply. The box with the statement, "It doesn't fit into my schedule" had a response rate of 17.7% (see Table 8).

Table 17 Scheduling Means, Ranges, and Standard Deviations

Scale and Item	All			Currently in choir			Never in choir		
	Mean	Range	SD	Mean	Range	SD	Mean	Range	SD
Scheduling									
I planned my schedule so I could be enrolled in choir.*	1.67	4.00	1.32	3.44	4.00	1.60	1.19	4.00	0.68
I wish I had room in my schedule to add choir.*	1.90	4.00	1.34	3.00	4.00	1.66	1.64	4.00	1.11
I requested choir as a class at my school, but was not put in the class.	1.35	4.00	0.89	1.45	4.00	1.01	1.32	4.00	0.85
I decided whether or not to be in choir based on my class schedule.	2.25	4.00	1.45	2.21	4.00	1.32	2.27	4.00	1.49
I would take choir, but it doesn't meet the hour I have available.	1.68	4.00	1.11	1.65	4.00	1.03	1.68	4.00	1.14
Choir doesn't fit into my schedule this year, but I'll take it when it does fit into my schedule.	1.69	4.00	1.09	1.87	4.00	1.30	1.64	4.00	1.03

*Significant MANOVA $p < .01$

Research Question 9

Is there a combination of perceived influences that best predicts an adolescent male's decision whether or not to enroll in choir?

A discriminant analysis was conducted to determine whether the 46 items from the questionnaire could predict choral participation status. Originally, the data for choral participation status was coded in three parts (currently in choir, previously in choir, and never in choir). Data were recoded into two categories (in choir, not in choir) for the purpose of determining whether the items on the questionnaire accurately measure whether participants enroll in choir. One function was generated, and the overall Wilks' lambda was significant, $\lambda = .19$, $\chi^2 (46, N = 89) = 106.20$, $p < .001$. This test indicated that the predictors differentiated significantly between the two categories of choral participation status (in choir, not in choir). Casewise statistics indicated that this function was able to classify accurately 96.6% of the participants in the sample. However, 138 cases were excluded from this function because of missing variables or codes. A separate discriminant analysis was run to pare down the number of items while raising the overall N and keeping the classification percentage at a high level. Data indicated that a function which included six items (see Table 18) was significant, $\lambda = .48$, $\chi^2 (6, N = 155) = 110.21$, $p < .001$. Casewise statistics indicated that this function was able to classify accurately 90.3% of the participants in the sample, with only 72 missing cases, leaving an N of 155.

Table 18 Choral Participation Status Discriminant Analysis

Item	Structure Matrix
I planned my schedule so I could be enrolled in choir.	.88
My voice changed while I was enrolled in a choir class.	.54
Singing is fun.	.51
I'm a good singer.	.48
I wish I had room in my schedule to add choir.	.45
My parents/guardians have told me I am a good singer.	.42

In the preceding data analysis, the variable of choral participation status was recoded to represent the choral participation status of the participants at the time of the administration of the questionnaire. Participants also indicated their choral enrollment intentions for the next school year. It was determined that another discriminant analysis should be run using the variable of future enrollment status.

One function was generated, and the overall Wilks' lambda was significant, $\lambda = .19$, $\chi^2 (46, N=90) = 106.33$, $p < .001$. This test indicated that the predictors differentiated significantly between the two categories of future choral enrollment intentions (plan to enroll in choir, do not plan to enroll in choir). Casewise statistics indicated that this function was able to classify accurately 98.9% of the participants in the sample. However, 137 cases were excluded from this function because of missing variables or codes. A separate discriminant analysis was run to pare down the number of items while raising the overall N and keeping the classification percentage at a high level. Data indicated that a function which included six items (see Table 19) was significant, $\lambda = .55$, $\chi^2 (6, N = 179) = 102.20$, $p < .001$. Casewise statistics indicated that this function was able to classify accurately 84.4% of the participants in the sample, with only 48 missing cases, leaving an N of 179.

Table 19 Future Enrollment Intentions Discriminant Analysis

Item	Structure Matrix
I planned my schedule so I could be enrolled in choir.	.74
I wish I had room in my schedule to add choir.	.67
I enjoy singing.	.61
Singing is fun.	.58
More guys should take choir.	.56
It is cool when guys sing.	.47

Open-ended responses

Two parts of the questionnaire allowed for open-ended responses by the participants. In the first section, participants who were not currently enrolled in choir were asked to indicate reasons they chose not to enroll in choir. Participants were asked to finish the statement, “I am not currently in choir because. . .” Nine statements were shown, and participants were asked to check as many boxes as apply to them. Eight of the nine statements were representative of the eight scales developed from the literature. A ninth statement, “The choir isn’t very good,” was added because of anecdotal conversations the researcher had with colleagues in vocal music. A tenth category was simply titled “other,” and allowed participants to write in other reasons they were not in choir. The final section of the questionnaire filled the entire back page and stated, “Please add any additional comments about why you are or are not in choir at your school.”

Responses from these two open-ended sections were evaluated using HyperRESEARCH qualitative data research software. Seventy-seven responses were given, from which fifteen categories emerged (see Table 21). Eight categories, representing the eight scale areas determined by the literature, were automatically put into the database. Seven more emerged from the reading of the responses.

Responses indicated that many who chose not to enroll in choir simply did not enjoy singing, although most responses in this category also included other reasons. For example, one participant stated, “I am not in choir at school because I don’t like to sing and I think that singing is mostly for girls.” Another wrote, “Singing is something I don’t enjoy doing. I like playing baseball.”

Table 20 Open-Ended Responses

Category	Number of responses
Don’t like to sing*	14
Schedule*	12
Peer Pressure*	9
Masculinity Issues*	7
General Negativity	7
Singing in Front of Others	7
Sports	6
Boring	5
Self-Efficacy*	4
Voice Change*	4
Band	4
Repertoire	4
Teacher *	3
Church	2
Parents*	0

* Indicates a category associated with one of the scales on the questionnaire

Another category that received many responses was that of *scheduling*.

Participants stated, “I want to take explos and band,” and “I don’t have spare time.”

Another wrote, “I’m not in the school’s choir because it doesn’t fit my schedule, but next year I’ll take it.” Results were labeled *peer pressure* if statements indicated the participant was perceived to be influenced by other students. For instance, a participant wrote, “People would think differently of me,” and another stated, “I’m not in choir at my school because I didn’t know who would be in the class, and I don’t like to sing in

public.” *General negativity* was the code for responses that were clearly made by participants who were against choir. Responses from this category included, “Singing shouldn’t be taught at school. It’s a waist [sic] of funds,” “I think it’s the dumbest thing ever,” and, “It sucks.” Some responses indicated a feeling that singing was not a masculine activity. These were coded *masculinity* and statements included, “I think it’s kinda fruity and I would get embarrassed easily,” “I hate choir. All guys who do choir are gay,” and “At my school there are only 4 dudes in choir.” A number of students expressed nervousness about singing in front of others. Statements included, “I don’t like to sing, that much, in front of people,” and “I like to sing privately.” Even though sports were not a direct conflict with choir, it was an issue some participants wrote about. One student wrote, “Sports are better.” Others stated, “I like sports and I have to concentrate on them all the time,” and “I just don’t want to waste my time in choir. I have more important sports.” Other categories include: *Voice Change* (“I am not in choir because my voice is changing and I want to wait until it settles.”), *Boring* (“I hate singing. It’s boring.”), *Self-Efficacy* (“Tone def [sic].”), *Repertoire* (“I like singing, but not choir music.”), and *Band* (“I take band, so I don’t want to take choir too.”).

Two other categories were included. Two of the three responses for the Teacher Influence category were positive comments from students in choir. The category of Family Influence was included initially because it represents one of the areas the literature includes, and items representing that scale area appear on the final questionnaire. No responses were given in the open-ended sections of the questionnaire that related to a student’s family being an influence on his decision to take choir.

CHAPTER FIVE

DISCUSSION AND CONCLUSIONS

This study investigated the factors related to an adolescent male's choice to enroll or not enroll in choir. After evaluating the literature and completing a pilot study, eight factors were identified that may be related to an adolescent male's choral participation. The principal investigator developed the research instrument (Appendix B) to assess the attitudes of adolescent males in each of the eight areas.

Summary of Methods and Procedures

The preliminary questionnaire was presented to a panel of 21 music educators and administrators for suggestions. Their comments helped the researcher make the questionnaire more "friendly" to adolescent students. The resulting questionnaire formed the basis for the pilot study. The questionnaire was pilot tested and the results for each of the eight cluster areas were submitted for reliability testing. The feedback received from the pilot as well as reliability testing revealed items that needed modification or elimination.

Once modifications were made to the survey instrument, copies were taken to participating schools for completion by students from which parental/legal guardian permission had been secured. Upon completion, questionnaires, student assent forms, and parental/legal guardian permission forms were collected by the principal investigator.

The questionnaire consisted of three sections:

1. Personal and background information (including opportunity for open-ended responses).
2. Subject response to a series of Likert-type statements.

3. Response to the statement: "Please add any additional comments about why you are or are not in choir at your school."

Upon return of the completed questionnaires to the principal investigator, the results were entered into SPSS (Statistical Package for the Social Sciences) for statistical analysis. The statistical procedures used for the analysis of data in this study included descriptive statistics, multivariate analysis of variance (MANOVA), Cronbach's Alpha, and discriminant analysis.

Each of the eight scales was submitted to reliability testing (Cronbach's Alpha). No statements were found to be detrimental to the reliability of any of the eight scales. Summary statistics for each scale were submitted to a MANOVA test to see if there were any significant differences in the responses of students from the two levels of choral participation status (in choir, not in choir). A discriminant analysis was performed on the survey data to determine the strongest predictor variables for choral participation.

Discussion

A MANOVA test for each of the eight scales (peer pressure, parental/family influence, teacher influence, voice change, masculinity/gender stereotypes, self-efficacy, enjoyment of singing, and scheduling) revealed a significant difference ($p < .01$) in the responses of those currently in choir in comparison with those previously in choir or never in choir.

Initially, three categories represented choral participation status (currently in choir, previously in choir, never in choir). In an effort to more accurately answer the research questions, data were recoded to include only two categories (in choir, not in choir). Therefore, another MANOVA test of the scale means for each of the eight areas

was used to identify significant differences ($p < .01$) in the responses of the two subgroups (in choir, not in choir). The MANOVA test revealed significant differences between the two categories for each of the eight scales (peer pressure, family influence, teacher influence, voice change, masculinity/gender stereotypes, musical self-efficacy, affect for music, and scheduling).

The discussion will be organized according to the research questions.

Research Question 1

What is an adolescent male's attitude about peer pressure, and how does it relate to his decision to enroll or not enroll in choir?

A one-way MANOVA was calculated examining the effect of choral participation status (in choir, not in choir) on the scale representing attitudes of adolescent males about peer pressure. A significant effect was found ($\text{Lambda}(8,142) = .826, p < .001$).

Follow-up univariate ANOVAs indicated that adolescent males' attitudes were significantly influenced by the following items from the peer pressure scale: "Most of my friends are in choir" (in choir $M=2.57$, not in choir $M=1.60$), "The people I hang out with think it is good to be in choir" (in choir $M=2.93$, not in choir $M=2.09$), "The most popular guys in my school sing in choir" (in choir $M=2.16$, not in choir $M=1.66$), "The girls in my school think it's good for guys to sing in choir" (in choir $M=3.34$, not in choir $M=2.52$), and "The people I hang out with think it is cool to sing" (in choir $M=2.95$, not in choir $M=2.07$).

The peer influence results in this study indicate, not surprisingly, that adolescent males enrolled in choir have a significantly more positive perception of how their peers feel about being in choir than do adolescent males who are not in choir. However, no

statements concerning peer pressure were identified as part of the discriminant function predicting choral participation status, and only nine responses (out of 77 total) to open-ended questions were identified as relating to peer influence. However, significant MANOVA results indicated that the findings of this study support, to a degree, the many practitioner articles that indicate males students stay away from choir due to peer pressure (Demorest, 2000; Hagner, 1985; Phillips, 1995; White & White, 2001).

Allen (1981) found that peer influence was one reason students decided to withdraw from orchestra, but that “other factors seem[ed] to exert more power” (p. 66). In this study, non-participants were asked to identify reasons they do not participate in choir. Participants were asked to choose as many of the options as they like. Therefore, cumulative percentages sum to more than 100%. One-third (33%) of non-enrolled respondents ($N=181$) indicated they do not enroll in choir at least partially because “My friends aren’t in choir.” This result indicates that students are aware of what their friends are involved in, and that it may have an effect on them.

The results of this study seem to contradict four studies of choral music students that indicated peer influence played either a very small or no role in students’ decisions to either participate or continue with choral music classes (Kourajian, 1982; Lucas, 2003; Neill, 1998; Sichivitsa, 2001). Neill (1998) found that students’ decisions to re-enroll in choir were least dependent on whether their friends decided to remain in the choir. Kourajian (1982) had students rank eight given reasons for not participating in high-school choir. The statement, “None of my friends are in the choir” ranked sixth out of eight, a fairly weak indicator. Results from the current study contradict this finding, in that students listed “My friends aren’t in choir” as a reason to not be in choir at a rate of

33%, the third highest ranked statement. Lucas (2003) and Sichivitsa (2001) both studied only those who were currently enrolled in a choir class. Both found that peer influence was less important than intrinsic motivation. In the current study, choir students had a significantly more positive outlook than those not in choir, suggesting they may not be as influenced by their peers as those who are not in choir.

Callistro-Clements (2002) found peer influence to be a significant factor in junior high students' decisions to participate in choir. Results of the current study support Callistro-Clements' finding. Peer influence, although not one of the six statements comprising the discriminant function predicting choral participation status, was found to be a statistically significant factor in whether or not students choose to participate in choir.

Research Question 2

What is an adolescent male's attitude about the influence of his family, and how does it relate to his decision to enroll or not enroll in choir?

A one-way MANOVA was calculated examining the effect of choral participation status (in choir, not in choir) on the scale representing attitudes of adolescent males about parental/family influence. A significant effect was found ($\Lambda(3,173) = .850, p < .001$). Follow-up univariate ANOVAs indicated that adolescent male's attitudes were significantly influenced by the following items from the parental/family influence scale: "My parents/guardians have told me I am a good singer" (in choir $M=3.90$, not in choir $M=2.52$) and "My parents/guardians do not want me to take choir" (in choir $M=1.55$, not in choir $M=2.21$).

The statement, "My parents/guardians have told me I am a good singer" is included in the discriminant function predicting choral participation status. This result is in conflict with Mizener's finding that parental encouragement did not have any correlation with a student's decision to participate in choral music in middle school (1993). It also contradicts Gaskell's (1992) finding that parents did not play a major role in students' course decisions. It should be noted, however, that the students in Gaskell's study were female high school students, rather than middle school male students who made up the sample for the current study.

A number of studies have found that parental influence can be a factor in participation choices of students in music classes (Corenblum & Marshall, 1998; Frakes, 1984; Miller, 1992; Sichivitsa, Barry, & Guarino, 2001). The results of the current study support those findings.

It should be noted that two of the other measurements of the questionnaire yielded a low frequency of responses regarding family influence. Seventy-seven free responses from the survey were evaluated, and not one statement included anything pertaining to parents or family. When asked to check boxes indicating reasons for not participating in choir, non-participants only chose the statement, "My parents would rather I take other classes" 5.5% of the time. This was the lowest rate of response of any of the statements on the questionnaire.

Three statements were included in the family influence scale. Two of the statements were phrased negatively ("My parents/guardians do not want me to take choir" and "My parents/guardians have told me I am not a good singer"). Of the two, only the first produced a significantly different result between those in choir and those

not in choir. Results for that statement elicited a significantly more positive response among students not in choir, meaning they agreed with the statement at a higher rate. The other statement revealing significantly different results was phrased positively (“My parents/guardians have told me I am a good singer”). In that case, students in choir responded more positively. Based on the other measurements of the questionnaire it is possible that parental support and how well a student believes he sings are acting in concert to produce the choral participation status result. Because family influence exerted little to no response specifically from those not in choir on the other portions of the questionnaire, it is also possible that the family exerts more of an influence on those in choir than those who have made the choice to not participate.

Research Question 3

What is an adolescent male’s attitude about the influence of teachers, and how does it relate to his decision to enroll or not enroll in choir?

Five statements were included in the scale for teacher influence. A one-way MANOVA was calculated examining the effect of choral participation status (in choir, not in choir) on the scale representing attitudes of adolescent males about teacher influence. A significant effect was found ($\text{Lambda}(5,173) = .709, p < .001$). Follow-up univariate ANOVAs indicated that adolescent males’ attitudes were significantly influenced by the following items from the teacher influence scale: “The choir teacher at my school is good” (in choir $M=4.49$, not in choir $M=3.10$), “I do not like the choir teacher at my school” (in choir $M=1.57$, not in choir $M=2.23$), “A teacher has told me I am a good singer” (in choir $M=4.12$, not in choir $M=2.20$), “I like the choir teacher at my school” (in choir $M=4.14$, not in choir $M=2.93$), and “A teacher has told me I am not a

good singer” (in choir $M=1.34$, not in choir $M=1.93$). Responses from students in choir were more positive toward teachers. But responses from non-choir students, while significantly different from their in-choir counterparts, were not necessarily negative. Only 11% of non-choir students who were asked why they did not take choir indicated it was because “I don’t like the teacher.” Free responses included only three statements (out of 77) concerning teachers, and two of those statements (“I like the teacher” and “Mrs. ‘X’ is Bomb Diggity”) were positive in nature. No item from the teacher influence scale was determined to be part of the discriminant function predicting choral participation status.

Results from this study indicate that teacher influence is related to the choral participation status of adolescent males. However, based on mean responses to Likert-type items, it seems more closely related to the participation choices of those not currently in choir more than those in choir. It is possible that teacher influence is related to students in choir continuing with it, while those not in choir choose not to join choir because of teacher influence.

Allen (1981) studied dropouts from orchestral programs and found that the strongest reason students gave for dropping out was changing teachers. The results of the current study do not necessarily contradict Allen’s results because teacher influence in the current study was based on a relationship with one teacher, rather than changing from one teacher to another. The current study does support results from a study by Frakes (1984), who found that teachers have been shown to influence a student’s motivation to participate in music classes. More research on how teacher/student relationships affect participation in choirs by adolescent males is warranted.

Nolin and Vander Ark (1977) surveyed sixth, seventh, and ninth grade students, measuring their attitude toward music experiences and found that seventh grade boys in one of the participating schools had significantly higher scores in the areas of attitude and self-esteem. The author suggested that “unique teacher personality” was a major factor for these results (p. 44). MANOVA testing in the present study found significant differences between the four participating schools for the statements “Singing is fun,” “I like the choir teacher at my school,” and “The choir teacher at my school is good.” School “A” had significantly higher means for all three statements, supporting Nolin and Vander Ark’s findings that a specific teacher can be a major factor in students’ attitudes.

Research Question 4

What is an adolescent male’s attitude about his voice change, and how does it relate to his decision to enroll or not enroll in choir?

A one-way MANOVA was calculated examining the effect of choral participation status (in choir, not in choir) on the scale representing attitudes of adolescent males about their voice change. A significant effect was found ($Lambda(6,139) = .730, p < .001$). Follow-up univariate ANOVAs indicated that adolescent males’ attitudes were significantly influenced by the following items from the voice change scale: “My voice changed while I was enrolled in a choir class” (in choir $M=3.49$, not in choir $M=2.00$) and “If my voice hadn’t changed I would be in choir at my school” (in choir $M=2.29$, not in choir $M=1.55$).

The statement, “My voice changed while I was enrolled in a choir class” was determined to be a part of the discriminant function predicting choral participation status. However, the statement, “My voice change affected my decision to take choir” did not

produce significant differences between those in choir and those participants not in choir. Both groups rated the statement low (in choir $M=2.07$, not in choir $M=1.79$). However, over 20% of non-choir participants indicated on the questionnaire that voice change was a reason for them to not take choir (“My voice changed, and it is difficult to sing”), and yet only four written responses were categorized as pertaining to voice change. These seemingly contradictory results may be attributed to the fact that voice change is a very personal thing, and is something that many students often do not even realize is happening (Killian, 1997).

The results of this study indicate that voice change affects a student’s choral participation status. This supports Koza’s (1993) finding in an overview of the first 10 volumes of the *Music Supervisors’ Journal* (1914-1924). Contributors to those volumes identified voice change as a reason some males did not want to participate in choirs. The current findings also support Sandene’s position that the problems a voice change generates may make students not want to sing (1994).

The specific item included in the discriminant analysis predicting choral participation was “My voice changed while I was enrolled in a choir class.” It is very possible that how the voice change was handled by the student and teacher played a part in the enrollment status of the participant. This would support White and White’s suggestion that how the voice change is handled is a major factor in the recruitment and retention of young men in choir (2001).

Men’s voices have always changed, although the age at which the voice changes has grown younger and younger throughout the years (Killian, 1999; Moller, 1985), yet the attitude of males toward singing has grown more negative only in the last century

(Gates, 1989). More research is needed to determine the link between voice change and attitude and participation in choral music.

Research Question 5

What is an adolescent male's attitude about gender stereotypes concerning males and singing, and how does it relate to his decision to enroll or not enroll in choir?

A one-way MANOVA was calculated examining the effect of choral participation status (in choir, not in choir) on the scale representing attitudes of adolescent males about masculinity/gender stereotyping. A significant effect was found ($\text{Lambda}(8,167) = .803$, $p < .001$). Follow-up univariate ANOVAs indicated that adolescent males' attitudes were significantly influenced by the following items from the masculinity/gender stereotyping scale: "It is cool when guys sing" (in choir $M=3.48$, not in choir $M=2.31$), "It is not cool for guys to sing" (in choir $M=2.00$, not in choir $M=2.69$), "I know high school guys who sing in choir" (in choir $M=2.72$, not in choir $M=2.05$), "The most popular guys in my school sing in choir" (in choir $M=2.16$, not in choir $M=1.66$), "One of my male family members likes to sing" (in choir $M=3.12$, not in choir $M=2.41$), and "More guys should take choir" (in choir $M=3.67$, not in choir $M=2.41$).

None of the statements from the gender stereotype scale were included as part of the discriminant function predicting choral participation status. However, the significant MANOVA results, and the fact that 26% of students not in choir listed "singing is more for girls than guys" as a reason for not taking choir, indicates that gender stereotyping plays a part in adolescent males' attitudes about choral participation. Additionally, seven open-ended responses from the questionnaire were categorized as pertaining to gender stereotyping.

The results from this study indicate there is a significant difference in the perceptions of students in choir and those not in choir in terms of masculinity and gender stereotypes. Non-choir students seem to agree with Gates' conclusion that in our current society "singing is a female pursuit" (p. 37). Phillips (1995) interviewed a student that dropped out of choir because his brothers "made fun of him for singing 'like a girl'" (p. 28). Results of the current study included responses from students, including "I think singing is mostly for girls," "All guys who do choir are gay," and "Most of the time if there is a boy in choir they get made fun of behind their back." These statements support Kennedy's position that boys from the American Boychoir (a residential school for boy singers) would be ridiculed in other environments for enjoying singing. Despite the fact that, in the current study, masculinity issues were not part of the discriminant function predicting choral participation status, it is obvious there are gender stereotyping and masculinity issues at work. Dews and Williams (1989) surveyed 201 music students in an effort to identify the main stresses on them. The source listed as "sex stereotype" was ranked 21 out of the 22 sources listed. Results of the current study contradict the results of Dews and Williams' study, although it should be noted that the sample in Dews and Williams' study were older and not adolescent males.

The current results lend support to the many authors who believe that singing is not perceived as masculine (Demorest, 2000; Hoffer, 1983; Miller, 1988; Phillips, 1995; White & White, 2001), although it is more true of those not in choir than those young men who have decided to enroll in choir at their schools. Students who are in choir responded at a significantly higher rate to the statement, "I know high school guys who sing in choir." These results support the belief by Trollinger (1994) and others that

the perception that singing is for girls stems from the fact that boys at that age do not have male role models who sing. According to the results of the current study, boys currently in choir have significantly more knowledge of male role models who sing than do boys who are not in choir.

Research Question 6

What is an adolescent male's attitude about his singing voice, and how does it relate to his decision to enroll or not enroll in choir?

Eleven statements comprised the scale for musical self-efficacy. A one-way MANOVA was calculated examining the effect of choral participation status (in choir, not in choir) on the scale representing attitudes of adolescent males about their singing ability. A significant effect was found ($\Lambda(11,142) = .681, p < .001$). Follow-up univariate ANOVAs indicated that adolescent males' attitudes were significantly influenced by the following items from the musical self-efficacy scale: "I'm a good singer" (in choir $M=3.86$, not in choir $M=2.14$), "My parents/guardians have told me I am a good singer" (in choir $M=3.90$, not in choir $M=2.52$), "I'm not a good singer" (in choir $M=1.92$, not in choir $M=3.24$), "I have always been a good singer" (in choir $M=3.33$, not in choir $M=1.97$), "A teacher has told me I am a good singer" (in choir $M=4.12$, not in choir $M=2.20$), "The people I hang out with think it is good to be in choir" (in choir $M=2.93$, not in choir $M=2.09$), "I don't sing in tune" (in choir $M=1.88$, not in choir $M=2.74$) and "I don't really like to sing" (in choir $M=1.90$, not in choir $M=3.07$). No statement from the musical self-efficacy scale was determined to be part of the discriminant function predicting choral participation status. However, when asked to indicate why they do not take choir, nearly half of the non-choir participants (47%)

indicated “I am not a good singer.” These results support the views that how a student sees himself in terms of vocal ability may affect his willingness to participate in a music activity (Austin, 1990; Corenblum & Marshall, 1998; Klinedinst, 1991; Roberts, 1999; Svengalis, 1978).

A number of open-ended responses from the questionnaire showed that some adolescent males are nervous about singing individually in front of their peers (“I don’t like to sing that much, in front of others.” “I get nervous.” “I like to sing privately.” “I just feel weird singing in front of the people around me.” “Don’t like to sing in public.”). These statements lend support to Bowman’s assertion that many students do not like activities that expose them individually in front of their peers (1988).

The results of this study indicate that adolescent males who are enrolled in choir have a significantly higher perception of their singing ability than adolescent males who are not in choir. These results support the findings of many who have found musical self-concept to play a part in musical participation. Austin (1990) found that level of music self-esteem was a significant predictor of participation in both in-school and out-of-school music activities. Klinedinst (1991) found that self-concept played a part in student retention in musical groups. Lucas (2003) found that one reason adolescent males participated in vocal music was because they felt they were good at it.

Research Question 7

What is an adolescent male’s level of enjoyment in music, and how does it relate to his decision to enroll or not enroll in choir?

Research has shown that affect for music plays a part in the motivation of students in music (Asmus & Harrison, 1990; Lucas, 2003; Mizener, 1993; Neill, 1998; Sichivitsa, 2001).

In the current study, a one-way MANOVA was calculated examining the effect of choral participation status (in choir, not in choir) on the scale representing attitudes of adolescent males about their affect for singing. A significant effect was found ($\Lambda(3,192) = .734, p < .001$). Follow-up univariate ANOVAs indicated that adolescent males' attitudes were significantly influenced by all three items from the affect for singing scale: "Singing is fun" (in choir $M=4.07$, not in choir $M=2.27$), "I enjoy singing" (in choir $M=4.00$, not in choir $M=2.22$), and "I do not enjoy singing" (in choir $M=1.88$, not in choir $M=3.04$). Fourteen open-ended responses from the questionnaire were categorized as being related to affect for singing, making it the code with the most responses. Additionally, nearly two-thirds (61.1%) of all non-choir participants responded to the statement, "I am not currently enrolled in choir because. . . " by checking the box stating, "I don't like to sing." Also, the statement "Singing is fun" was determined to be part of the discriminant function predicting choral participation status.

These results strongly indicate that affect for singing is related to some students participating in vocal music while others do not. These results support the findings of many, including Asmus and Harrison (1990) who found that the main reason students gave for being musically motivated was affect of music. Others (Lucas, 2003; Mizener, 1993; Neill, 1998; Sichivitsa, 2001) also found that students are motivated to participate in something they love. The studies of both Lucas (2003) and Neill (1998) only included students who were already enrolled in choir. The strength of the current findings indicate

that more research is needed to identify the reasons non-choir participants do not like to sing.

Research Question 8

What is an adolescent male's attitude about school scheduling procedures, and how does it relate to his decision to enroll or not enroll in choir?

The results of this study indicate that scheduling is one reason adolescent males participate or do not participate in choir. A one-way MANOVA was calculated examining the effect of choral participation status (in choir, not in choir) on the scale representing attitudes of adolescent males about scheduling. A significant effect was found ($\text{Lambda}(6,156) = .508, p < .001$). Follow-up univariate ANOVAs indicated that adolescent males' attitudes were significantly influenced by the following items from the scheduling scale: "I planned my schedule so I could be enrolled in choir" (in choir $M=3.36$, not in choir $M=1.19$) and "I wish I had room in my schedule to add choir" (in choir $M=3.00$, not in choir $M=1.65$). This supports findings by Rawlins (1979) who determined that scheduling conflicts were the most significant reason for non-participation in a music class.

Seventeen percent of all non-choir participants responded to the statement, "I am not currently enrolled in choir because. . . " by checking the box stating, "It doesn't fit into my class schedule." The statements "I planned my schedule so I could be enrolled in choir" and "I wish I had room in my schedule to add choir" were both determined to be part of the discriminant function predicting choral participation status. It is not surprising that statements directly asking students about scheduling choir as a class were

determinants in whether or not they were in that class. The wording of the statement, "I planned my schedule so I could be enrolled in choir" may have slanted the results, simply because any student who was currently enrolled in choir would have *had* to plan his schedule to be in choir.

Although the results of this study indicate that scheduling is one reason adolescent males participate or do not participate in choir, one must be careful in analyzing this data. Results from students who had previously participated in choir, but were not currently in choir, were not significantly different than those who had never been in choir, indicating that adolescent males not currently in choir did not necessarily feel scheduling was the main reason they were not in choir.

Kourajian (1982) surveyed high school males and found that the statement "My schedule was too full" was the highest rated statement explaining why the boys did not join choir. In the current study MANOVA results were significant, and two statements from the scheduling scale were determined to be predictors for choral participation, yet the statement "It doesn't fit into my class schedule" was only the sixth highest ranked statement out of nine statements. However, analysis of the responses from the open-ended portion of the questionnaire revealed twelve statements from students coded for "scheduling." Many of the statements from these adolescent males indicated that being too busy was a reason they do not participate in choir ("I want to take explos and band," "I need to take Spanish," "No time. I've got basketball, track, etc. . . and with only 1 explo I've got to focus on what will help me later on," "I don't have spare time," "My schedule is way to [sic] busy"). These statements lend credence to Martignetti's finding that scheduling conflicts were an impediment to student participation in music (1965) and

Klinedinst's research that showed scheduling conflicts do play a part in a student's decision to participate in a music class (1991).

Research Question 9

Is there a combination of perceived influences that best predicts an adolescent male's decision whether or not to enroll in choir?

A discriminant analysis was conducted to determine whether the 46 items from the questionnaire could predict choral participation status. Data indicated that a function which included six items (see Table 18) was significant, $\lambda = .48$, $x^2 (6, N=155) = 110.21$, $p < .001$. Casewise statistics indicated that this function was able to classify accurately 90.3% of the participants in the sample.

Six statements were determined to be part of the discriminant function determining current choral participation status ("I planned my schedule so I could be enrolled in choir," "I wish I had room in my schedule to add choir," "I'm a good singer," "Singing is fun," "My voice changed while I was enrolled in a choir class," and "My parents/guardians have told me I am a good singer").

It was determined that another discriminant analysis should be run using the variable of future enrollment status. Data indicated that a function which included six items (see Table 19) was significant, $\lambda = .55$, $x^2 (6, N = 179) = 102.20$, $p < .001$. Casewise statistics indicated that this function was able to classify accurately 84.4% of the participants in the sample.

Six statements were determined to be a part of the discriminant function determining future choral participation status ("I planned my schedule so I could be

enrolled in choir,” “I wish I had room in my schedule to add choir,” “I enjoy singing,” “Singing is fun,” “More guys should take choir,” and “It is cool when guys sing”).

These results support previous studies indicating that an adolescent male who enjoys singing (Asmus & Harrison, 1990; Lucas, 2003; Mizener, 1993; Neill, 1998; Sichivitsa, 2001), believes he is good at it (Austin, 1990; Corenblum & Marshall, 1998; Klinedinst, 1991; Roberts, 1999; Svengalis, 1978), and is supported by his parents (Corenblum & Marshall, 1998; Frakes, 1984; Miller, 1992; Sichivitsa, Barry, & Guarino, 2001) is more likely to enroll in choir at his school. The results also support the idea that scheduling plays a part in music participation (Kourajian, 1982; Rawlins, 1979). The current results, however, contradict the findings of some that parental influence is not a major factor in music participation (Gaskell, 1992; Mizener, 1993).

The six statements included in the discriminant analysis are taken from five of the eight scales developed to measure student participation. These results indicate that no single factor can alone account for choral participation status. No existing study claims that a single factor can. Therefore, one must look at how the various factors interact, in an effort to create recruitment and retention strategies for adolescent males in choir.

Conclusions

The results from this study support the following observations:

1. The six best predictors for determining the choral participation status for adolescent males are (in rank order): “I planned my schedule so I could be enrolled in choir,” “My voice changed while I was enrolled in a choir class,”

“Singing is fun,” “I’m a good singer,” “I wish I had room in my schedule to add choir,” and “My parents/guardians have told me I am a good singer.”

2. Peer pressure, family, teachers, voice change, masculinity/gender stereotypes, musical self-efficacy, affect for music, and scheduling were significantly related to the choice of adolescent males to enroll or not enroll in choir.
3. Adolescent males enrolled in choir have a more positive perception of how their peers feel about being in choir than do adolescent males who are not in choir.
Significant differences between the two groups on the peer pressure scale suggest students in choir may not be as influenced by their peers than those who are not in choir.
4. Students enrolled in choir have a significantly higher opinion of the music teacher than do students not in choir. Students already in choir tend to be more influenced by music teachers to remain in choir than non-choir students are to enroll.
5. One school had significantly higher mean scores for the statements, “Singing is fun,” “I like the choir teacher at my school,” and “The choir teacher at my school is good.” This suggests that a situation where the teacher is both liked and respected will also produce students who enjoy singing.
6. The two main reasons non-choir students gave for not enrolling in choir were: “I don’t like to sing” (61.9%), and “I am not a good singer” (47.0%). Students enrolled in choir had a significantly higher perception of their singing ability than adolescent males who are not in choir.

7. There is a significant difference in the perceptions of students in choir and those not in choir in terms of masculinity and gender stereotypes. Non-choir students are more likely to see singing as not masculine. Adolescent males in choir are more likely than young men not enrolled in choir to know an older male role model who likes to sing and/or sings in a choir.
8. Affect for singing is a reason some students participate in vocal music while others do not.
9. No single factor accounts for choral participation status.

Recommendations for future research

The investigation of choral participation status of adolescent males has revealed the need for additional research in the following areas:

A replication of this study is recommended using adolescent males enrolled or not enrolled in band and orchestra. Additionally, a replication of this study is recommended using participants at the high school level.

Results from the current study indicate that students who are not enrolled in choir generally are not enrolled because they do not like to sing, and think they are not good at it. Further research is needed to determine *why* these adolescent males do not like to sing, and why they do not feel they are good at it. Additionally, research is recommended to uncover just what it is about singing that some adolescent males enjoy so much.

A study of how scheduling affects participation choice in music classes is recommended. The current study found that scheduling plays a part in the discriminant analysis predicting choral participation status. But the wording of the statement, “I

planned my schedule so I could be enrolled in choir” may have slanted the results, simply because any student who was currently enrolled in choir would have *had* to plan his schedule to be in choir.

The current study’s results showed that a teacher can influence students who are in choir to remain in choir, but that a teacher may not exert much influence over those not in choir. An experimental study is recommended in which vocal music teachers at the junior high school level test different recruiting strategies for adolescent males not enrolled in choir.

Results of the current study indicated that voice change was a reason for enrollment status in choir. Men’s voices have always changed, although the age at which the voice changes has grown younger and younger throughout the years (Killian, 1999; Moller, 1985), yet the attitude of males toward singing has grown more negative only in the last century (Gates, 1989). More research is needed to determine the link between voice change and attitude and participation in choral music.

Each of the eight scales found in this research were shown to have significant differences in responses from adolescent males in choir and those not in choir. Individual studies are recommended for each of the eight scales identified in this research.

Implications

The purpose of this study was to investigate the factors related to an adolescent male’s choice to enroll or not enroll in choir. The hope of the investigator was that results of this research would allow teachers to develop ways to empathize with these young men in an effort to recruit and retain more adolescent male singers in their choirs.

All choir members benefit from a situation in which the male and female voices are more balanced in terms of numbers.

The findings of this study reveal that all eight scales investigated in this study (peer pressure, family influence, teacher influence, voice change, masculinity/gender stereotypes, musical self-efficacy, affect for music, and scheduling) are significantly related to the choral participation status of adolescent males. It would be beneficial for teachers and researchers to attempt to identify ways to use the influence of these individual areas to recruit and retain more adolescent males in choir.

The results of the study indicate that teacher influence is seen in a significantly different way by those adolescent males in choir than those students not in choir. Middle school vocal music teachers should attempt to identify what they can do to exert more positive influence on students who are not enrolled in choir. In the current study Mrs. "X," the teacher from "School A," was both liked and respected at a significantly higher level than teachers from the other three participating schools. Students from "School A" also indicated a significantly higher affect for music. If "School A" was judged to have achieved a high level of success in the performance and academic areas, a teacher with success like this should be identified, and his or her skills used as a model to promote the same success at other schools, both in the same district and outside the district. This could be done through sharing at workshops and in-services.

Peer influence should be used in a positive way, to attract more adolescent males to enroll in choir. Often, it is easier for a current choir member to interest his peers in singing. Male members of Middle school vocal programs who have obtained a high level of musicianship should be encouraged to perform publicly with their peers in attendance.

This would be a positive way to show that singing is an accepted activity by males at the given school.

Middle school students currently enrolled in choir had a significantly higher level of knowledge of high school aged males who are in choir. Middle school vocal music teachers should strive to invite high school aged males who are at a high level of musicianship and are from local high schools perform for the entire student population of the Middle school if possible. In turn this may raise the level of awareness of male singers for those not currently enrolled in choir, and perhaps interest them in joining choir.

Scheduling was shown to be a factor related to the choral participation status of adolescent males. Middle school vocal music teachers should build healthy relationships with administrators, counselors, and other teachers, showing them the value of singing in the lives of adolescent males. Music teachers should ask these colleagues to assist with classes and performance, perhaps even to collaborate in a lesson plan integrating subjects other than music. The music teacher should also attempt to participate in school activities outside music to build these relationships. If this is achieved, adolescent males may benefit from the understanding that other adults in the school building believe that being in choir is of value. Additionally, by creating a visible presence in regular school activities the teacher may benefit from raising the perception of non-choir students about him or her.

Voice change has been shown to be significantly related to the choral participation status of adolescent males. Middle school vocal music teachers must attempt to educate all adolescent males about the voice change, and that while it may be

embarrassing, it is only temporary. Music teachers should impress upon adolescent males that the voice change is something that is not within their control. In essence, it's not their fault. Helping adolescent males understand that vocal mutation is not an internal attribute may help them to have more positive feelings about singing. This cannot be considered an easy task, especially communicating this with adolescent males who are not in choir. Music teachers should build on established relationships with other administrators, counselors, and other teachers to gain access to non-choir students in an attempt to educate them in a positive way about the voice change. Additionally, middle school vocal music teachers should choose repertoire that is appropriate for adolescent males whose voices are changing.

Before a music teacher can educate others about the voice change in a positive way, he or she must be educated about it. College level music educators must strive to educate the future music teachers in their programs about the voice change, and that it must be seen as an external attribute. It is the responsibility of the college level music educator to demonstrate proper techniques for nurturing the changing voice, including giving repertoire ideas geared toward middle school choirs that include adolescent males with changing voices. More coursework specifically targeting middle school vocal music is warranted at the collegiate level.

A majority of non-choir participants in this study indicated they do not enjoy singing, and that is why they do not enroll in choir. Nearly half of these students also indicated that they do not believe they are good singers. While it has been established that no one reason accounts for the choral participation status of adolescent males, these two areas have been shown to be major reasons for adolescent males who are currently

not in choir to decide against enrolling. It is of the utmost importance that upper elementary and middle school vocal music teachers attempt to identify why non-choir middle school students do not enjoy singing. Often, the music teacher does not have an opportunity to interact with these students unless he or she makes a sincere effort. The middle school vocal music teacher must make every effort to build relationships with students outside his or her classroom, in an attempt to discover whether they like to sing and if they believe they are good at it or not. Once a relationship is established, the music teacher can impress upon the non-choir student that choir is a class not unlike many of the student's other classes, and that the student can learn and improve, as in their other classes.

The purpose of this study was to investigate the factors related to an adolescent male's choice to enroll or not enroll in choir, in an effort to promote the recruitment and retention of adolescent males in choir. Chapter One outlined the need for more males in choir, and for more balanced participation between males and females.

The present research has found that many factors play a part in the choral participation status of adolescent males. Adolescent males are complex beings, affected by many factors simultaneously. This research shows that teachers and parents must use their influence with these young men to support singing as an activity at school. Adolescent males must be made aware that the voice change is a natural process that is not within their power to control, thus the inability at times to sing "correctly" is not their fault and it will pass. Older males should serve as positive role models when it comes to singing, so that adolescent males will not see it as an activity solely for girls. And finally, these young men must be led to discover the enjoyment of singing. If male singers

continue to participate at a lower rate than females, then neither gender will benefit from participating in a balanced choral setting in which all styles and types of music may be studied and performed. Therefore, it is imperative that parents and music teachers at all levels work together to create an atmosphere in which adolescent males feel comfortable participating in choir.

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Appendix A:

IRB Application

IRB Approval Letter

IRB#:
(for IRB office use only)

UNIVERSITY OF OKLAHOMA – NORMAN CAMPUS
INSTITUTIONAL REVIEW BOARD

INSTITUTIONAL REVIEW BOARD APPLICATION FOR EXEMPT, EXPEDITED AND FULL BOARD STUDIES

Please review the Exempt (Appendix B) and Expedited (Appendix C) Categories in the appendices for applicability.

Adolescent Males' Attitudes about Enrolling or Not Enrolling in Choir PROJECT TITLE*

Please note that handwritten and/or incomplete forms will be returned to you.

PART I - INVESTIGATOR and KEY RESEARCH PERSONNEL

1) PRINCIPAL INVESTIGATOR

(Graduate students must have a completed student PI worksheet: Appendix A)

(Undergraduate students cannot serve as Principal Investigator, but may be listed as a Co-Investigator.)

Name: **Mark Lucas** ☐ Dr. ☒ Mr. ☐ Ms. ☐ Professor
Highest Degree Completed: **M.M.**
Investigator Status: ☒ Faculty ☒ Graduate Student ☐ Staff
E-mail Address: **lucas@ou.edu**
College/Department: **School of Music**
Campus Mailing Address: **Catlett Music Center, Room #138**
Daytime Phone: **325-5390**

2) CO-INVESTIGATOR (if applicable)

Name: ☐ Dr. ☐ Mr. ☐ Ms. ☐ Professor
Highest Degree Completed:
Investigator Status: ☐ Faculty ☐ Graduate Student ☐ Undergraduate ☐ Staff
☐ Other
E-mail Address:
College/Department:
Campus Mailing Address:
Home Mailing Address:
Daytime Phone:

If more space is needed to list additional co-investigators or if a faculty sponsor is included, please identify them on the next page of this application.

*Note: The project title should be consistent with the title used in the consent document(s).

Please list additional co-investigators (or faculty sponsor) below if additional space was needed from page 1.

FACULTY SPONSOR (if applicable)

Name: **Nancy H. Barry** ☒ Dr. ☐ Mr. ☐ Ms. ☐ Professor
 Highest Degree Completed: **Ph.D.**
 E-mail Address: **barrynh@ou.edu**
 College/Department: **School of Music**
 Campus Mailing Address: **Catlett Music Center, Room #138**
 Home Mailing Address: **4009 Worthington Dr., Norman, OK 73072**
 Daytime Phone: **325-4146**

CO-INVESTIGATOR (if applicable)

Name: ☐ Dr. ☐ Mr. ☐ Ms. ☐ Professor
 Highest Degree Completed:
 Investigator Status: ☐ Faculty ☐ Graduate Student ☐ Undergraduate ☐ Staff
☐ Other
 E-mail Address:
 College/Department:
 Campus Mailing Address:
 Home Mailing Address:
 Daytime Phone:

CO-INVESTIGATOR (if applicable)

Name: ☐ Dr. ☐ Mr. ☐ Ms. ☐ Professor
 Highest Degree Completed:
 Investigator Status: ☐ Faculty ☐ Graduate Student ☐ Undergraduate ☐ Staff
☐ Other
 E-mail Address:
 College/Department:
 Campus Mailing Address:
 Home Mailing Address:
 Daytime Phone:

PART II – FUNDING INFORMATION

1) Check all of the appropriate boxes for funding sources for this research. Include pending funding source(s).

- ☐ Extramural ☐ OU-NC Research Council ☐ College ☐ Department
☐ Other:

P.I. of Grant or Contract:

Sponsor:

Contract/Grant No.

(if available):

Contract/Grant Title:

Please provide one complete copy of the proposal submitted to the sponsor with this application. Please note that submission of your grant application is a regulatory requirement and will be maintained for the record with your application. The IRB will not utilize the grant during the review process other than to confirm that the grant proposal is consistent with the IRB proposal. You must submit all necessary documentation for the application in addition to the copy of the grant.

PART III – EDUCATION AND TRAINING

All key research personnel (faculty, staff, graduate students working on a thesis or dissertation, anyone using data for purposes of independent research, faculty sponsors, persons receiving grant monies for human subject research or those personnel with management responsibilities) must complete this section.

1) Has all key research personnel completed the required IRB training? No ☐ Yes ☒

If No, DO NOT submit this application. Your application will not be considered until you have completed the IRB training and can provide a copy of your IRB course completion certificate.

If yes, please indicate date of completion as identified on IRB course completion certificate: **11/28/05** (Please include a copy/copies of your certificate(s) with this application.)

- You must attach your most recent IRB course completion certificate to each application submitted.

*Please note that this IRB training is a mandatory requirement to be done on an annual basis. The refresher course can be taken from year two forward.
(<https://www.citiprogram.org/default.asp>)*

PRINCIPAL INVESTIGATOR ASSURANCE

- I certify that the information provided in this application is complete and correct.
- I understand that as Principal Investigator, I have the responsibility for the conduct of the study, the ethical performance of the project and the protection of the rights and welfare of human participants.
- I agree to comply and to assure that all affiliated personnel comply with all OU-NC IRB policies and procedures, as well as with all applicable federal, state and local laws regarding the protection of human participants in research.
- I assure that this study is performed by qualified personnel adhering to the OU-NC IRB approved protocol. Student PI's must attach student PI worksheet, see appendix A.
- I assure that no modification to the approved protocol and consent materials will be made without first submitting for review and approval by the OU-NC IRB an amendment to the approved protocol.
- I agree to obtain legally effective informed consent from the research participants as applicable to this research and as prescribed in the approved protocol.
- I will promptly report unanticipated problems to the OU-NC IRB by using the appropriate form.
- I will adhere to all requirements for continuing review.
- I will advise the OU-NC IRB of any change of address or contact information as long as this protocol remains active.
- I assure that I have obtained all necessary approvals from entities other than OU-NC IRB that are necessary to conduct this research.

By my signature on this research application, I certify that I am knowledgeable about the regulations and policies governing research with human subjects and have sufficient training and experience to conduct this particular study in accordance with the research protocol.

Principal Investigator

Date (mm/dd/yyyy)

Co-Investigator

Date (mm/dd/yyyy)

Faculty Sponsor

Date (mm/dd/yyyy)

PART IV – ADMINISTRATIVE DATA

1) Proposed end date: **One year from approval date**

2) If this research will result in a thesis or dissertation, please check the appropriate box.

☐ Thesis ☒ Dissertation

3) Study population:

Age Range: **10 to 16** (include low/high age range)

Gender: ☒ Males ☐ Females

Site of Subject Recruitment: **Alcott Middle School, Norman, Oklahoma; Irving Middle School, Norman, Oklahoma; Longfellow Middle School, Norman, Oklahoma; Whittier Middle School, Norman, Oklahoma.**

Inclusion Criteria: **Male attendees who assent, and who have obtained signed parental/legal guardian consent.**

Will medical clearance or a medical screening be necessary for participants to participate because of tissue or blood sampling, administration of substances such as food or drugs, or physical exercise conditioning? No ☒ Yes ☐

If yes, explain how clearance will be obtained. If a screening instrument will be used, please attach a copy to the application.

Exclusion Criteria: **Male attendees who have not obtained signed parental/legal guardian consent.**

Maximum Number of Participants Proposed: **600**

Study Sites: ☒ OU-NC ☐ OUHSC ☐ OU-Tulsa ☐ Cameron University
☐ Other:

4) Potentially Vulnerable Populations:

Please check any groups included in the study.

- | | |
|--|---|
| <input checked="" type="checkbox"/> Children (under 18 years of age) | <input type="checkbox"/> Cognitively Impaired |
| <input type="checkbox"/> Pregnant Women | <input type="checkbox"/> Prisoners |
| <input type="checkbox"/> Elderly (65 & older) | <input type="checkbox"/> Native American Tribes and/or Tribal Organizations |
| <input type="checkbox"/> Psychologically Impaired | <input type="checkbox"/> Students enrolled in a class in which the instructor is the investigator |

5) Other Institutional Oversight:

Check the items listed below that apply to this research project:

- ☐ Radiation Safety (i.e., radiation exposure)
☐ Institutional Biosafety Committee (i.e., recombinant DNA)
☐ Appropriate Departmental Scientific Review Board

Note: This information will be forwarded to the appropriate University personnel and/or committee(s).

6) Conflict of Interest: <http://www.ou.edu/provost/pronew/content/disclosures.pdf>

Is there any potential or perceived conflict of interest between the researcher, sponsor and/or University of Oklahoma associated with this study? No ☒ Yes ☐

If yes, please explain:

Additional information may be needed by the full Board.

PART V – SUMMARY OF STUDY ACTIVITIES

Submission of a copy of a grant application does not replace completion of this form. Please respond to each item. Incomplete forms will be returned to you.

- 1) Provide background information for the study including the objective of the proposed research, purpose, research question, hypothesis and other information deemed relevant.

There is currently a disparity in choir enrollment between males and females in the United States. Female participants outnumber male participants. Research into the factors affecting the enrollment status of adolescent males is an important step to developing recruitment and retention strategies.

The purpose of this study is to investigate the factors that influence an adolescent male's choice to enroll or not enroll in vocal music in the school setting.

Research questions include:

What is an adolescent male's attitude about the following factors: Peer pressure, family influence, teacher influence, voice change, gender stereotypes, musical self-efficacy, musical enjoyment, and scheduling?

How does an adolescent male's attitude about the above factors influence his decision to enroll or not enroll in choir?.

- 2) Describe the research design of the study.

This study will be a descriptive, quantitative study. The data collection instrument will be a confidential questionnaire.

Descriptive statistics will be used to describe response trends of groups and subgroups. A Cronbach's Alpha will be computed to tests reliability of questionnaire item clusters.

Based on a reading of related literature and personal experience a questionnaire was developed in an attempt to answer the research questions. The questionnaire is in two parts.

The first part includes background information and demographics. The second part of the questionnaire includes statements the participants will respond to on a five-point Likert-type scale

A preliminary version of the survey was examined for bias and surface validity by a panel of twenty-one music educators working in the field. Responses were received by nineteen music educators and revisions were made to the questionnaire.

A pilot study was conducted in the summer of 2006 (IRB Number: 11326). Cronbach's Alpha was used to calculate inter-item reliability of clusters in the pilot questionnaire. After reviewing the data, it was determined that 17 items on the questionnaire were not reliable. Fifteen of those items were dropped from the questionnaire due to the lack of correlation with the other items. Two items dealing with unique aspects of the choral music experience were left on the questionnaire due to their prominence in the literature, but each item was unique and did not fall into a cluster category.

Participants will be male attendees of Alcott Middle School, Longfellow Middle School, Whittier Middle School, and Irving Middle School who assent and from whom the researcher has obtained signed parental/legal guardian consent.

- 3) Describe the tasks that participants will be asked to perform including a step-by-step description of the procedures you plan to use with your subjects. Provide the approximate duration of subject participation for each procedure. If data collection instruments will be used, indicate the time necessary to complete them, the frequency of administration, and the setting in which they will be administered, such as telephone, mail, or face-to-face interview. (You must submit a copy of each study instrument, including all questionnaires, surveys, protocols for interviews, etc.)

The schools involved have an "advisory" class that meets daily for approximately 25 minutes. Every student in the building participates in an advisory class daily.

The researcher will provide each advisory teacher with blank copies of the parental/legal guardian consent form to distribute to the boys in his or her advisory class. The advisory teachers will be asked to distribute the forms on a Monday and ask for them to be returned by the end of the week. The advisory teacher will be asked to keep the signed, returned forms in an envelope provided by the researcher

The advisory teacher will inform the male students which of them has been given parental/legal guardian permission to participate. Males who have returned signed parental/legal guardian consent to the researcher will be asked to read the assent document (see attached document). The teacher will inform them that if they are willing to participate they should sign the assent document attached to the survey. The teacher will then read directions for completing the survey (see attached script). If a student has received parental/legal guardian permission but chooses to abstain from participation he will not sign the form and will turn in both forms to the box. No one except the student will know if he actually participated or not.

The participants will be asked to complete a forty-six-item survey. Completion of the survey will take approximately ten minutes.

Attached to each questionnaire will be a ticket (see attached survey with ticket) for a drawing. At the end of the advisory period each male student who was given an assent form and questionnaire will place it in a box with a slotted lid and marked "surveys," provided by the researcher. As he does this he will tear off one ticket to keep with him, and put the ticket with a matching number in a can marked "tickets," provided by the researcher.

The tickets, questionnaires, and envelope with signed parental/legal guardian permission forms will be retrieved by the researcher at the end of the advisory period and brought to the main office of the participating middle school, where a school representative will draw out a winning ticket. The subject whose ticket number matches the winning ticket will receive a \$25 iTunes gift certificate. The assent document the subjects will sign prior to completing the survey will indicate that students wishing to withdraw from the research will be allowed to remain in contention for the drawing.

The researcher will match names of students who received parental/legal guardian permission with signed assent forms returned for each advisory class because he will be in possession of a box with returned assent forms/questionnaires and an envelope with signed parental/legal guardian permission forms for each advisory class. Once each match has been made, the assent form and questionnaire will be separated into piles and will not be linked in any way again. Any questionnaires returned by students who do not also have a matching parental/legal guardian permission form will be destroyed immediately using a paper shredder.

- 4) Describe the recruitment procedures. Attach a copy of any material used to recruit subjects (e.g., informed consent forms, advertisement, flyers, telephone scripts, verbal recruitment scripts, cover letters, etc.) Explain who will approach potential participants and take part in the research study and what will be done to protect the individual's privacy in this process.

The researcher contacted Ms. Dana Morris, Principal at Alcott Middle School, Ms. Darrian Quatrain-Moore, Principal of Longfellow Middle School, Sharon Dean, Principal of Whittier Middle School, and Mr. Jerry Privett, Principal of Irving Middle School to see if they were interested in allowing him to administer the questionnaire to willing participants at her school. All agreed to proceed with participation in the research (see attached documents).

Each Middle School has a 7th grade "team" and an 8th grade "team" that consists of advisory teachers and the students in their advisories. The researcher will address each team (two per Middle School) concerning the research, and ask for their assistance with the research.

Advisory teachers will be asked to read the directions for collection of signed parental/legal guardian permission forms and administration of the survey (see attached document) that explains the procedure for obtaining written parental/legal guardian consent.

PART VI – PRIVACY PROCEDURES

- 1) Will data be recorded by audiotape? No ☒ Yes ☐
 Will data be recorded by videotape? No ☒ Yes ☐
 Will photographs be taken? No ☒ Yes ☐

Please explain how the disposition of the tapes/photographs/negatives will be handled. Indicate if the tapes/photographs/negatives will be erased or destroyed after transcription/development/at the conclusion of the study. If you wish to retain the tapes/photographs/negatives beyond transcription/development, you must provide justification. Subjects must be informed of the disposition of the tapes/photographs/negatives via the informed consent process.

- 2) Please clarify how subjects will be identified in audio or videotaped responses.

- 3) Will you record any direct identifiers, names, social security numbers, addresses, telephone numbers, etc? No ☒ Yes ☐

If yes, explain why it is necessary to record findings using these identifiers. Describe the coding system you will use to protect against disclosure of these identifiers. Describe how subject identifiers will be maintained or destroyed after the study is completed.

- 4) Will you retain a link between the study code numbers and direct identifiers after the data collection is complete? No ☒ Yes ☐

If yes, explain why this is necessary and state how long you will keep this link.

- 5) Will you provide a link or identifier to anyone outside the research team? No ☒ Yes ☐

If yes, explain why and to whom.

- 6) Where, how long, and in what format (such as paper, digital or electronic media, video, audio or photographic) will data be kept? In addition, describe what security provisions will be taken to protect this data (password protection, encryption, etc). **All data will be kept in a file cabinet in an office locked at all times the researcher is not present throughout the duration of the research.**

- 7) Will you place a copy of the consent form or other research study information in the participant's record such as medical, personal or educational record? (This information should be clearly explained in the consent document and/or process) No ☒ Yes ☐

If yes, explain why this is necessary.

- 8) Will you obtain a Federal Certificate of Confidentiality for this research? No ☒ Yes ☐

If yes, submit documentation of application (and a copy of the Certificate of Confidentiality award if granted) with this application form.

If the data collected contains information about illegal behavior, visit the NIH Certificates of Confidentiality Kiosk <http://grants1.nih.gov/grants/policy/coc> for information about obtaining a Federal Certificate of Confidentiality.

PART VII – INFORMED CONSENT INFORMATION

1) Informed Consent: Please attach, as an appendix, an informed consent document to this application. If subject participation is anonymous, an information sheet or cover letter that contains all required elements <http://www.ouhsc.edu/irb-norman/InformedConsentChecklist.asp> of informed consent is recommended. If subject participation is not anonymous, you must attach a consent form to this application (please attach an assent form for children/youth participation and permission forms for parents/legal guardians; or consent forms for adult participation).

2) Request for Waiver of Informed Consent: Provide a written justification for a waiver of informed consent according to Section 46.116 of 45 CFR 46 (<http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.htm>). Are you requesting a waiver of informed consent?

No ☒ Yes ☐

If yes, please explain.

Request for Waiver of Documentation of Consent (*applies to studies that do not wish to have signatures of the participants, i.e. informed consent via a consent form cover letter: three options currently on website at www.ouhsc.edu/irb-norman/consent.asp: Provide a written justification for a waiver of documentation of consent according to Section 46.117 of 45 CFR 46 <http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.htm#46.117>. Are you requesting a waiver of documentation of consent?*

No ☒ Yes ☐

If yes, please explain.

PART VIII – RISKS AND BENEFITS

1) Does the research involve any of these possible risks or harms to subjects?

No ☒ Yes ☐

If Yes, independent scientific review may be required to determine if scientific merit justifies this risk.

Check all that apply:

☐ Use of deception*

**If deception is used, please describe in detail here. Also, describe the debriefing process and include the debriefing script. In addition, the principal investigator should offer the participant the opportunity to withdraw his/her data after finding out that deception was used in the study. Please include this information in the debriefing script submitted to the IRB.*

☐ Use of confidential records (e.g. education or medical records)

☐ Manipulation of psychological or social variables such as sensory deprivation, social isolation, psychological stressors

☐ Any probing for personal or sensitive information in surveys or interviews

☐ Presentation of materials which subjects might consider sensitive, offensive,

- threatening or degrading
- ☐ Possible invasion of privacy of subject or family
- ☐ Social or economic risk
- ☐ Legal risk
- ☐ Employment/occupational risk
- ☐ Other risks, specify:

Will any record of the subject's participation in this study be made available to his or her supervisor, teacher, or employer? No ☒ Yes ☐

If yes, please explain.

- 2) Describe the nature and degree of the risk or harm checked above. The described risks/harms must be disclosed in the consent form. **There are no risks or harms to subjects.**
- 3) Explain what steps will be taken to minimize risks or harms and to protect subjects' welfare. If the research will include protected populations (See Part IV, Item 4) please identify each group and answer this question for each group. **All data will be kept in a file cabinet in an office locked at all times the researcher is not present throughout the duration of the research. This is a confidential questionnaire. The privacy and welfare of each participant will be protected. The researcher will match names of students who received parental/legal guardian permission with signed assent forms returned for each advisory class because he will be in possession of a box with returned assent forms/questionnaires and an envelope with signed parental/legal guardian permission forms for each advisory class. Once each match has been made, the assent form and questionnaire will be separated into piles and will not be linked in any way again. Any questionnaires returned by student who do not also have a matching parental/legal guardian permission form will be destroyed immediately using a paper shredder.**
- 4) Describe the anticipated benefits of this research for individual participants in each subject group. If none, state "none". **Subjects will be eligible for a prize of a \$25 iTunes gift certificate. The Advisory class with the highest rate of return of parental/legal guardian permission forms will be given a pizza party by the researcher.**
- 5) Describe the anticipated benefits of this research for society, and explain how the benefits outweigh the risks. **This research will aid in developing recruitment and retention strategies for adolescent males in choir. Currently there is a disparity between male and female enrollment. Typically more females than males enroll in choir. If recruitment and retention strategies prove successful both male and female choir students will benefit from experiencing a choir situation with a more equally proportioned group.**

PART IX – COMPENSATION INFORMATION

- 1) Will any compensation or inducements, i.e. course credit, be offered to the subjects for their participation? No ☐ Yes ☒

If yes, describe those inducements and include a statement in the informed consent document explaining how compensation will be handled in the event the participant withdraws from the study. **Incentives will be given to participants in two ways:**

1. In each building, the advisory class with the highest rate of return of parental/legal guardian permission forms will be given a pizza party on a date chosen by the class and teacher. The rate of return will be calculated by comparing the number of male students in the advisory class with the number of signed and returned parental/legal guardian permission forms and establishing a percentage of returned forms for the advisory class. In the event of a tie, all classes with the highest rate of return will receive the pizza party.
2. Attached to each questionnaire will be a ticket (see attached survey with ticket) for a drawing. As each subject completes his survey he will place it in a box provided by the researcher. As he does this he will tear off one ticket to keep with him, and put the ticket with a matching number in a can provided by the researcher. When all participants in an advisory class have completed the survey the tickets will be brought to the main office of the participating middle school, where a school representative will draw out a winning ticket. The subject whose ticket number matches the winning ticket will receive a \$25 iTunes gift certificate. Part of the verbal assent the subjects will give prior to completing the survey will indicate that students wishing to withdraw from the research will be allowed to remain in contention for the drawing.

Checklist for Institutional Review Board Application Submission:

- ☐ Application Form with Signatures – **AT LEAST ONE COPY MUST HAVE ORIGINAL SIGNATURES**
- ☐ Protocol
- ☐ Solicitation Announcements/Recruitment Flyers
- ☐ Data Collection Instruments/Research Questions/Questionnaires/Surveys
- ☐ Informed Consent Documents
 - ☐ *Parental/Legal Guardian Permission Form*
 - ☐ *Child Assent Form*
- ☐ Approval from Study Sites
 - ☐ *Tribal Council Approval*
- ☐ Medical Screening Instrument
- ☐ Proposal and/or Contract or Grant
- ☐ Debriefing Plan
- ☐ Appendix A: Student as Principal Investigator Worksheet (if applicable)
- ☐ Appendix B: Exempt Categories (if applicable)
- ☐ Appendix C: Expedited Categories (if applicable)

Submit to:

Office of Human-Research Participant Protection
 660 Parrington Oval
 Evans Hall, Room 316
 Norman, OK 73019
 405-325-8110

Number of Copies to be Submitted:

Exempt	3
Expedited	3
Full Board	12

APPENDIX A: Student as Principal Investigator Worksheet

☒ Graduate: ☐ Masters ☐ PhD

This project has been reviewed to determine that the scope, anticipated risks and benefits, and methodology are appropriate for this research by:

- ☐ Approval of thesis/dissertation proposal by faculty committee
☒ My personal review and approval of research proposal
☒ Other: **Review of major professor**

The student researcher is qualified to conduct independent research based on the following credentials:

- ☒ has completed a graduate research methods course
☒ has experience as an independent or closely supervised research assistant
☒ has completed the OUHSC training in Responsible Conduct of Research
 (http://www.ouhsc.edu/irb/Education_MainPg.asp)
☒ Other: **Has completed a pilot study of this research, approved by the I.R.B.**

FACULTY SPONSOR'S ASSURANCE

By my signature as sponsor on this research application, I certify that the student or guest investigator is knowledgeable about the regulations and policies governing research with human subjects and has sufficient training and experience to conduct this particular study in accordance with the research protocol. Additionally,

- I hereby confirm that I have thoroughly reviewed this IRB application, including the protocol narrative, and deem it ready for submission.
- I agree to meet with the investigator on a regular basis to monitor study progress.
- I agree to be available, personally, to assist the investigator in solving problems, should they arise during the course of the study.
- I assure that the investigator will promptly report unanticipated problems and will adhere to all requirements for continuing review.
- If I will be unavailable, e.g. sabbatical leave, vacation, or resignation, I will arrange for an alternate faculty sponsor to assume responsibility during my absence, and I will advise the OU-NC IRB, in writing, of such changes.
- The research is appropriate in design.

Faculty Sponsor	Date (mm/dd/yyyy)
Print PI Name	
Signature of PI	Date (mm/dd/yyyy)

Note: To act as faculty sponsor you must be a member of the OU-NC, OU-Tulsa (non-medical), or Cameron University faculty. The faculty sponsor is considered the responsible party for legal and ethical performance of the project.

APPENDIX B: Criteria for Exempt Determination

Your research may qualify for exempt status if the only involvement of human subjects will be in one or more of the following categories. These categories are established by the Federal Regulations and require submission to the institutional designee to determine appropriateness. At the University of Oklahoma-Norman Campus the institutional designee is the IRB Chair or IRB Director.

Please check all boxes that you believe may apply.

1. ☒ Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as
 - a) research on regular and special education instructional strategies, or
 - b) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

2. ☒ Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior on subjects 18 years of age or older, unless:
 - a) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and
 - b) any disclosure of the human subjects' response outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

3. ☐ Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement) survey procedures, interview procedures or observation of public behavior that is not exempt under paragraph 2 (b) of this section, if:
 - a) the human subjects are elected or appointed officials or candidates for public office; or,
 - b) federal statute(s) require without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.

4. ☐ Research involving the collection or study of existing (i.e. on the shelf, already collected and/or banked prior to the date the study is to start) data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

5. ☐ Research and demonstration projects which are conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine:
- a) public benefit or service programs;
 - b) procedures for obtaining benefits or services under those programs;
 - c) possible changes in or alternatives to those programs or procedures; or
 - d) possible changes in methods or levels of payment for benefits or services under those programs.
6. ☐ Taste and food quality evaluation and consumer acceptance studies,
- a) if wholesome foods without additives are consumed or
 - b) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural, chemical, or environmental contaminant at or below the level found to be safe by the Food and Drug Administration or approved by the Environmental Protection Agency or Food Safety and Inspection Service of the U.S. Department of Agriculture.

NOTE: These categories represent minimal requirements of review by 45 CFR 46. The OU-NC Institutional Review Board reserves the right to require a more stringent review of any study as deemed appropriate.

APPENDIX C: Criteria for Expedited Review

Please check all boxes that you believe may apply.

1. ☐ Clinical studies of drugs and medical devices only when condition (a) or (b) is met.
 - a) Research on drugs for which an investigational new drug application (21 CFR Part 312) is not required. (Note: Research on marketed drugs that significantly increases the risks or decreases the acceptability of the risks associated with the use of the product is not eligible for expedited review.)
 - b) Research on medical devices for which (i) an investigational device exemption application (21 CFR Part 812) is not required; or (ii) the medical device is cleared/approved for marketing and the medical device is being used in accordance with its cleared/approved labeling.

2. ☐ Collection of blood samples by finger stick, heel stick, ear stick, or venipuncture as follows:
 - a) From healthy, nonpregnant adults who weigh at least 110 pounds. For these subjects, the amounts drawn may not exceed 550 ml in an 8 week period and collection may not occur more frequently than 2 times per week; or
 - b) from other adults and children, considering the age, weight, and health of the subjects, the collection procedure, the amount of blood to be collected, the frequency with which it will be collected. For these subjects, the amount drawn may not exceed the lesser of 50 ml or 3 ml per kg in an 8 week period and collection may not occur more frequently than 2 times per week.

3. ☐ Prospective collection of biological specimens for research purposes by noninvasive means.

Examples: (a) hair and nail clippings in a nondisfiguring manner; (b) deciduous teeth at time of exfoliation or if routine patient care indicates a need for extraction; (c) permanent teeth if routine patient care indicates a need for extraction; (d) excreta and external secretions (including sweat); (e) uncannulated saliva collected either in an unstimulated fashion or stimulated by chewing gumbase or wax or by applying a dilute citric solution to the tongue; (f) placenta removed at delivery; (g) amniotic fluid obtained at the time of rupture of the membrane prior to or during labor; (h) supra- and subgingival dental plaque and calculus, provided the collection procedure is not more invasive than routine prophylactic scaling of the teeth and the process is accomplished in accordance with accepted prophylactic techniques; (i) mucosal and skin cells collected by buccal scraping or swab, skin swab, or mouth washings; (j) sputum collected after saline mist nebulization.

4. ☐ Collection of data through noninvasive procedures (not involving general anesthesia or sedation) routinely employed in clinical practice, excluding procedures involving x-rays or microwaves. Where medical devices are employed, they must be cleared/approved for marketing. (Studies intended to evaluate the safety and effectiveness of the medical device are not generally eligible for expedited review, including studies of cleared medical devices for new indications.)

Examples: (a) physical sensors that are applied either to the surface of the body or at a

distance and do not involve input of significant amounts of energy into the subject or an invasion of the subject's privacy; (b) weighing or testing sensory acuity; (c) magnetic resonance imaging; (d) electrocardiography, electroencephalography, thermography, detection of naturally occurring radioactivity, electroretinography, ultrasound, diagnostic infrared imaging, doppler blood flow, and echocardiography; (e) moderate exercise, muscular strength testing, body composition assessment, and flexibility testing where appropriate given the age, weight, and health of the individual.

5. ☐ Research involving materials (data, documents, records, or specimens) that have been collected or will be collected solely for nonresearch purposes (such as medical treatment or diagnosis).
6. ☐ Collection of data from voice, video, digital, or image recordings made for research purposes.
7. ☒ Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.
8. ☐ Continuing review of research previously approved by the convened IRB as follows:
 - a) Where (i) the research is permanently closed to the enrollment of new subjects; (ii) all subjects have completed all research-related interventions; and (iii) the research remains active only for long-term follow-up of subjects; or
 - b) Where no subjects have been enrolled and no additional risks have been identified; or
 - c) Where the remaining research activities are limited to data analysis.
9. ☐ Continuing review of research, not conducted under an investigational new drug application or investigational device exemption where categories two (2) through eight (8) do not apply but the IRB has determined and documented at a convened meeting that the research involves no greater than minimal risk and no additional risks have been identified.

NOTE: These categories represent minimal requirements of review by 45 CFR 46. The OU-NC Institutional Review Board reserves the right to require a more stringent review of any study as deemed appropriate.



The University of Oklahoma

OFFICE FOR HUMAN RESEARCH PARTICIPANT PROTECTION

IRB Number: 11485
Approval Date: October 10, 2006

October 10, 2006

Mark Lucas
Music
500 W. Boyd Street, CMC 138
Norman, OK 73019

RE: Adolescent Males' Attitudes about Enrolling or Not Enrolling in Choir

Dear Mr. Lucas:

On behalf of the Institutional Review Board (IRB), I have reviewed and granted expedited approval of the above-referenced research study. This study meets the criteria for expedited approval category 7. It is my judgment as Chairperson of the IRB that the rights and welfare of individuals who may be asked to participate in this study will be respected; that the proposed research, including the process of obtaining informed consent, will be conducted in a manner consistent with the requirements of 45 CFR 46 as amended; and that the research involves no more than minimal risk to participants.

This letter documents approval to conduct the research as described:

Other Dated: October 08, 2006 Directions for collection of forms for teachers

Letter Dated: October 02, 2006 Letter of support - Norman Public Schools

Survey Instrument Dated: September 27, 2006

Consent form - Parental Dated: September 27, 2006

Assent Form Dated: September 27, 2006

IRB Application Dated: September 27, 2006

As principal investigator of this protocol, it is your responsibility to make sure that this study is conducted as approved. Any modifications to the protocol or consent form, initiated by you or by the sponsor, will require prior approval, which you may request by completing a protocol modification form. All study records, including copies of signed consent forms, must be retained for three (3) years after termination of the study.

The approval granted expires on October 09, 2007. Should you wish to maintain this protocol in an active status beyond that date, you will need to provide the IRB with an IRB Application for Continuing Review (Progress Report) summarizing study results to date. The IRB will request an IRB Application for Continuing Review from you approximately two months before the anniversary date of your current approval.

If you have questions about these procedures, or need any additional assistance from the IRB, please call the IRB office at (405) 325-8110 or send an email to irb@ou.edu.

Cordially,

E. Laurette Taylor, Ph.D.
Chair, Institutional Review Board

Appendix B:
Survey Questionnaire

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is a vertical margin line on the left side, creating a narrow left margin. The paper appears to be from a notebook or a standard ruled sheet of paper.

Adolescent Males' Motivation to Enroll or Not Enroll in Choir

I. Please circle the appropriate answer:

Age	10	11	12	13	14	15	16
Grade	6	7	8				

II. Please check one in each category:

☐ I am currently enrolled in my school's choir.

☐ I have been enrolled in my school's choir before, but am not right now.

☐ I have never been enrolled in my school's choir.

☐ I am currently enrolled in my school's band.

☐ I have been enrolled in my school's band before, but am not right now.

☐ I have never been enrolled in my school's band.

☐ I am currently enrolled in my school's orchestra.

☐ I have been enrolled in my school's orchestra before, but am not right now.

☐ I have never been enrolled in my school's orchestra.

III. Please check all that apply:

Do you study music privately (not during the school day)? ☐ Yes ☐ No

If yes, how many years? _____ What instruments/voice? _____

Do you participate in a musical group other than a school music class? ☐ Yes ☐ No

If yes, please check all that apply:

☐ Church

☐ Community music ensemble (Norman Children's Chorus, Oklahoma Youth Orchestra, etc. . .)

☐ School honor group (meets before or after school, not during the regular school day)

☐ Honor Ensemble (Circle the State with Song, C.O.D.A. Band, Jr. High All-State, etc. . .)

☐ Other - please list _____

IV. Please check the appropriate space:

☐ I plan to enroll in my school's choir next year.

☐ I do not plan to enroll in my school's choir next year.

V. Complete this section ONLY if you are NOT currently enrolled in choir:

I am not currently enrolled in choir because (check all that apply):

☐ My voice changed, and it is difficult to sing. ☐ The choir isn't very good.

☐ My friends aren't in choir. ☐ I don't like to sing.

☐ It doesn't fit into my class schedule. ☐ I don't like the teacher.

☐ Singing is more for girls than guys. ☐ My parents would rather I take other classes.

☐ I am not a good singer. ☐ Other _____

VI. Please select the most correct answer to the following statements. If a statement does not apply to you, or you do not wish to answer it, leave it blank.
1 = Strongly Disagree 5 = Strongly Agree

2. It is cool when guys sing.	1 2 3 4 5
4. I planned my schedule so I could be enrolled in choir.	1 2 3 4 5
6. Singing is fun.	1 2 3 4 5
8. My parents/guardians have told me I am a good singer.	1 2 3 4 5
10. It is not cool for guys to sing.	1 2 3 4 5
12. I wish I had room in my schedule to add choir.	1 2 3 4 5
14. I do not like the choir teacher at my school.	1 2 3 4 5
16. When I sing, I can only hit certain notes.	1 2 3 4 5
18. The people I hang out with don't think it is good to be in choir.	1 2 3 4 5
20. I have always been a good singer.	1 2 3 4 5
22. I enjoy singing	1 2 3 4 5

1 = Strongly Disagree 5 = Strongly Agree

24. I know adult men who sing in a choir.	1 2 3 4 5
26. I decided whether or not to be in choir based on my class schedule.	1 2 3 4 5
28. I like the choir teacher at my school.	1 2 3 4 5
30. The most popular guys in my school sing in choir.	1 2 3 4 5
32. I would take choir, but it doesn't meet the hour I have available.	1 2 3 4 5
34. A teacher has told me I am not a good singer.	1 2 3 4 5
36. One of my male family members likes to sing.	1 2 3 4 5
38. Choir doesn't fit into my schedule this year, but I'll take it when it does fit into my schedule.	2 3 4 5
40. My voice change affected my decision to take choir.	1 2 3 4 5
42. It would be better if there were two choir classes, one just for guys and one just for girls.	1 2 3 4 5
44. More guys should take choir.	1 2 3 4 5
46. Either you can sing or you can't; it's something you're born with or not.	1 2 3 4 5

Appendix C:

Informed Consent Parental/Legal Guardian Permission Form

PARENTAL/LEGAL GUARDIAN PERMISSION FORM FOR RESEARCH BEING CONDUCTED UNDER THE AUSPICES OF THE UNIVERSITY OF OKLAHOMA-NORMAN CAMPUS

PROJECT TITLE: Adolescent Males' Motivation to Enroll or not Enroll in Choir

PRINCIPAL INVESTIGATOR: Mark Lucas

Faculty Sponsor: Dr. Nancy Barry

CONTACT INFORMATION:

Mr. Lucas 405-325-5390

lucas@ou.edu

Dr. Barry 405-325-4146

barrynh@ou.edu

You are being asked to allow your child to participate in a research study. This study is being conducted at your child's middle school by researchers from the University of Oklahoma. Please read this form and ask any questions that you may have before agreeing to allow your child to take part in this study.

Purpose of the Research Study

The purpose of this study is to investigate the factors that influence an adolescent male's choice to enroll or not enroll in vocal music in the school setting.

Procedures

If you agree to allow your child to participate in this study, he will be asked to complete a short questionnaire concerning his attitudes about singing and choir. The questionnaire will take approximately ten minutes to complete.

Risks and Benefits of Being in the Study

There are no evident risks involved with this study.

This research will help choral teachers to develop recruitment and retention strategies for adolescent males in choir. The researcher believes this will benefit the males involved, and society in general. Another benefit to the student is the opportunity for him to enter a drawing for a \$25 iTunes gift certificate.

Compensation

Each questionnaire will have two identically numbered tickets attached to it. When the student turns in his questionnaire he will keep one of the two tickets and a drawing will be held in which one student will win a \$25 iTunes gift certificate.

Voluntary Nature of the Study

Participation in this study is voluntary. Your decision whether or not to allow your child to participate will not result in penalty or loss of benefits to which he is otherwise entitled. If you decide to allow him to participate, he is free to not answer any question or withdraw at any time without giving up his right to enter the drawing for the \$25 iTunes gift certificate.

Confidentiality

The records of this study will be kept private. The questionnaire itself is confidential. Your child will be asked to read and sign an assent form, but after the questionnaires are collected the assent form and questionnaire will be separated. In published reports, there will be no information included that will make it possible to identify the research participant. Research records will be stored securely in a file cabinet in a locked office and only approved researchers will have access to the records.

Contacts and Questions:

The researcher conducting this study can be contacted at 405-325-5390 or lucas@ou.edu. You are encouraged to contact the researcher if you have any questions or would like to see a copy of the survey. You may also contact the researcher's faculty advisor, Dr. Nancy Barry, at 405-325-4146 or barrynh@ou.edu.

If you have any questions about your child's rights as a research participant, you may contact the University of Oklahoma – Norman Campus Institutional Review Board (OU-NC IRB) at 405.325.8110 or irb@ou.edu.

STATEMENT OF CONSENT

Participants do not waive their legal rights by signing an informed consent form.

I have read the above information. I have asked questions and have received satisfactory answers. I consent to allow my child to participate in the study.

<u>Student Name (please print)</u>	<u>Date</u>
<u>Parent Name (please print)</u>	<u>Parent Signature</u>

Appendix D:
Student Assent Form

**ADOLESCENT MALES' MOTIVATION TO ENROLL
OR NOT ENROLL IN CHOIR
ANONYMOUS/CONFIDENTIAL SURVEY
ASSENT FORM**

Dear participants:

Today I will be asking you to fill out a survey for some research I am doing about guys and choir. This study is entitled Adolescent Males' Attitudes about Enrolling or not Enrolling in Choir. Basically, I'm trying to figure out why some guys take choir and other guys don't. The survey will take approximately 10-15 minutes to complete.

- You will be asked to read this form, and sign it if you wish to fill out the survey. Please do not put your name on the survey.
- When you're finished please put your survey down and wait till the end of the advisory period to turn it in. At the end of advisory time put the survey, including this top sheet, in the box marked "Surveys."
- When you turn in your survey you should tear off both of the attached tickets. Keep one of them with you and put the second ticket in the other box marked "Tickets." When everyone has finished we will have a drawing, and one person from your school will win a \$25 iTunes gift certificate.

Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time without losing your right to enter the drawing. The results of the research study may be published, but your name will not be used. In fact, the published results will be presented in summary form only. Your identity will not be associated with your responses in any published format. There will be no way for anyone to know which survey you filled out.

The findings from this project will provide information on how to recruit more guys to enroll in choir. It won't cost you anything except the time it takes to fill out the survey.

If you have any questions about this research project, please feel free to ask them now. You may also call me at (405) 325-5390 or send an e-mail to lucas@ou.edu. You may also contact my faculty advisor, Dr. Nancy Barry at (405) 325-4146 or send an email to barrynh@ou.edu. If you have questions about your rights as a research participant or concerns about the project you should contact the Institutional Review Board at The University of Oklahoma-Norman Campus at (405) 325-8110 or irb@ou.edu.

If you are willing to participate in this research please sign below.

Student Name (please print)	Date
Student Signature	Parent Name

Appendix E:

Directions for collection of signed parental/legal guardian permission forms and
administration of the survey.

ADOLESCENT MALES' MOTIVATION TO ENROLL OR NOT ENROLL IN CHOIR

Directions for collection of signed parental/legal guardian permission forms and administration of the survey

8/28/06

Advisory teachers:

Thank you so much for agreeing to help with this research. This study is entitled Adolescent Males' Attitudes about Enrolling or not Enrolling in Choir. Basically, I'm trying to figure out why some guys take choir and other guys don't. The survey will take approximately 10 minutes to complete. Below are instructions for the carrying out of the research:

Parental/Legal Guardian Permission Forms

You have been provided with blank forms to give to the male students in your 7th or 8th grade advisory class. Please hand them out to the males in your class at the beginning of the week, and ask them to have their parents or legal guardians sign them. Please ask them to return the forms to you by the end of the week. As they are returned, please keep them in the envelope provided.

You will notice on the envelope provided I have asked you to indicate the number of male students enrolled in your advisory class. Please write that number in the appropriate blank so I can calculate the percentage of forms returned per advisory class.

You may tell them about the various incentives provided by me for returning the signed forms.

Incentives:

1. In each building, the advisory class with the highest rate of return of parental/legal guardian permission forms will be given a pizza party on a date chosen by the class and teacher. The rate of return will be calculated by comparing the number of male students in the advisory class with the number of signed and returned parental/legal guardian permission forms and establishing a percentage of returned forms for the advisory class. In the event of a tie, all classes with the highest rate of return will receive the pizza party.

2. For each advisory team (7th grade team and 8th grade team) in each building, the advisory teacher with the highest rate of return in his or her class will be given a \$25 gift certificate to a local restaurant. In the event of a tie, all teachers with the highest rate of return will receive a gift certificate.

Administration of the Survey

When a date has been set for administration of the survey please do the following:

- Pass out the blank survey to the guys who have permission from their parents/legal guardians to complete it.
- Ask the students to read the assent form attached to the front of the survey. Remind them that even though they have been given permission by their parents they do not have to take the survey.
- Tell the students that if they wish to take the survey they must print and sign their name on the assent form.
- Tell the students that if they find a statement that does not apply to them, or they do not wish to answer it, they may leave it blank.
- Tell them that at the end of the advisory period they should deposit the survey and assent form together in the box provided and marked "surveys" even if they choose not to fill it out.
- Remind them to tear off the two tickets attached to the survey, place one in the box marked "tickets" and keep the other ticket. There will be a drawing for a \$25 iTunes gift card before the end of the school day.

At the end of advisory period I will come to your class to collect three things:

1. Surveys
2. Tickets
3. Envelope with permission forms AND number of males enrolled in your advisory class.

If you have any questions about this research project, please feel free to contact me. You may call me at (405) 325-5390 or send an e-mail to lucas@ou.edu. You may also contact my faculty advisor, Dr. Nancy Barry at (405) 325-4146 or send an email to barrynh@ou.edu

I again thank you for your help with this important research.

Sincerely,

Mark Lucas